

Committee of the Whole Meeting Agenda

**Monday, March 5, 2018 – 2:00 p.m.
Council Chambers, Guelph City Hall, 1 Carden Street**

Please turn off or place on non-audible all electronic devices during the meeting.

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Call to Order – Mayor

Disclosure of Pecuniary Interest and General Nature Thereof

Disclosure of Pecuniary Interest and General Nature Thereof

Presentations:

1. Recognition of the Ontario Public Works Association's 2017 Project of the Year for Historic Restoration/Preservation Award presented to the City staff project team.
 2. Recognition of the City staff recipient of the Ontario Public Works Association's 2017 Wally Wells Young Leader Award.
 3. Recognition of the Federation of Canadian Municipalities sustainable Neighbourhood Revitalization and Design Award presented to the City staff project team.
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Consent Agenda – Infrastructure, Development and Enterprise

Chair – Councillor Gibson

The following resolutions have been prepared to facilitate Council's consideration of various matters and are suggested for consideration. If Council wishes to address a specific report in isolation of the Consent Agenda, please identify the item. It will be extracted and dealt with separately as part of the Items for Discussion.

IDE-2018.32 2017 Annual & Summary Water Services Report

Recommendation:

That Guelph City Council approves the 2017 Annual & Summary Water Services Report.

IDE-2018.28 Municipal Class Environmental Assessment Reform

Recommendation:

That the Mayor be directed to send a letter to the Minister of the Environment and Climate Change (MOECC) requesting that:

- a. the response process for Part II Orders or 'Bump-Up requests' be expedited, as part of the s.61 review to improve MCEA process times and reduce study costs;
- b. changes to better integrate and harmonize the MCEA process with processes defined under the Planning Act be supported;
- c. the scope of MCEA reports and studies be amended to reduce duplication with existing public processes and decisions made under municipal Official Plans and provincial legislation.

IDE-2018.26 Sign By-Law Variance - 392 Silvercreek Parkway North

Recommendation:

1. That the request for a variance from Table 1, Row 1 of Sign By-law Number (1996)-15245, as amended, to permit a total sign face area of 27.86m² on the west building face of 392 Silvercreek Parkway North, be approved.
2. That the request for a variance from Table 1, Row 6 of Sign By-law Number (1996)-15245, as amended, to permit a building sign with an area of 9.75m² to be located on the first storey of a building face fronting an adjacent property at a distance of 3.5m from the property line of 392 Silvercreek Parkway North, be approved.

IDE-2018.27 Sign By-Law Variance - 848 Gordon Street

Recommendation:

That the request for variances from Table 2, Row 5 of Sign By-law Number (1996)-15245, as amended, to permit a non-illuminated freestanding sign with a height of 3.15m above the adjacent roadway and sign face area of 3.84m² on the property of 848 Gordon Street, be approved.

Items for Discussion – Infrastructure, Development and Enterprise

The following items have been extracted from Consent Agenda and will be considered separately. These items have been extracted either at the request of a member of Council or because they include a presentation and/or delegations.

St. Andrew's Presbyterian Church Delegation and Funding Request

Presentation:

John Groenewegen, JRG Consulting Group

IDE-2018.36 Parking Technology Selection and Implementation Metrics Study

Presentation:

Jamie Zettle, Program Manager, Parking

Recommendation:

1. That the Parking Technology Selection and Implementation Metrics Study dated January 2018, prepared by CIMA+ Canada Limited, be approved;
2. That staff operationalize a set of performance based parking metrics to provide reliable data with which to measure the performance of the parking operation, based upon the metrics identified in Table 1 : Proposed Parking Metrics of this report;
3. That staff establish a mechanism to review at established intervals the performance metrics of the parking system and work in partnership with the Downtown Advisory Committee when recommending any changes to parking policy and pricing;
4. That staff work with the Downtown Advisory Committee to create an implementation plan which addresses the key elements raised by stakeholders in the Stakeholder Survey;
5. That the implementation of the new on-street paid parking technology be scheduled for Fall 2019, following the opening of the Wilson Street Parkade.

IDE-2018.18 Commercial Policy Review: Vision and Principles

Presentation:

Joan Jylanne, Senior Policy Planner

Recommendation:

That the Commercial Policy Review vision and principles be approved as outlined in report IDE-2018-18.

IDE-2018.03 City Initiated Official Plan Amendment for Affordable Housing

Presentation:

Melissa Aldunate, Manager, Policy Planning Urban Design

Recommendation:

That staff be directed to initiate an amendment to the Official Plan to reflect the Council approved Affordable Housing Strategy.

IDE-2018.31 Sewer Abatement and Leak Forgiveness Credits Policies

Presentation:

Emily Stahl, Manager Technical Services Water Services

Recommendation:

1. That the March 5, 2018 report of the Deputy CAO of Infrastructure, Development and Enterprise entitled "Sewer Abatement Credit and Leak Forgiveness Credits Policies" be approved.
2. That the staff recommended Sewer Abatement Credit Policy be approved for implementation on July 1, 2018 as outlined in Attachment 1 to this report.
3. That the staff recommended Leak Forgiveness Credit Policy be approved for implementation on April 1, 2018 as outlined in Attachment 2 to this report.
4. That Council approve amendment to the Water and Wastewater Fees and Charges By-law Number (2017-20224) as outlined in Attachment 3 to this report.

Service Area Chair and Staff Announcements

Consent Agenda – Governance

Chair – Mayor Guthrie

The following resolutions have been prepared to facilitate Council's consideration of various matters and are suggested for consideration. If Council wishes to address a specific report in isolation of the Consent Agenda, please identify the item. It will be extracted and dealt with separately as part of the Items for Discussion.

CS-2018.33 Code of Conduct for Members of Council and Local Boards - Update

Recommendation:

That the revised Code of Conduct for Members of Council and Local Boards, included as ATT-1 to the report titled Code of Conduct for Members of Council and Local Boards – Update and dated March 5, 2018, be approved.

CS-2018.36 Procedural By-Law Update

Recommendation:

That the proposed Procedural By-law, included as ATT-1 to the report titled Procedural By-law Update, dated March 5, 2018, be approved and that By-Law (2016)-20087 be repealed.

Items for Discussion – Governance

The following items have been extracted from Consent Agenda and will be considered separately. These items have been extracted either at the request of a member of Council or because they include a presentation and/or delegations.

Smart Cities Submission Update

Presentation:

Barbara Swartzentruber, Executive Director, Strategy, Innovation,
Intergovernmental Services

Peter Cartwright, General Manager, Business Development & Enterprise Services

Consent Agenda – Corporate Services

Chair – Councillor Mackinnon

The following resolutions have been prepared to facilitate Council's consideration of various matters and are suggested for consideration. If Council wishes to address a specific report in isolation of the Consent Agenda, please identify the item. It will be extracted and dealt with separately as part of the Items for Discussion.

CS-2018.02 Procurement By-Law Update

Recommendation:

That report CS-2018-02 Procurement By-law Update be approved and adopted by by-law.

Service Area Chair and Staff Announcements

Mayor as Chair

Chair and Staff Announcements

Please provide any announcements, to the Chair in writing, by 12 noon on the day of the Council meeting.

Adjournment

Staff Report



To **Committee of the Whole**

Service Area Infrastructure, Development and Enterprise Services

Date Monday, March 5, 2018

Subject **2017 Annual & Summary Water Services Report**

Report Number IDE-2018-32

Recommendation

1. That Guelph City Council approves the 2017 Annual & Summary Water Services Report.

Executive Summary

Purpose of Report

The Annual & Summary Water Services Report Update (the Report) is a compilation of information that demonstrates to the water system Owner (City Council) and all stakeholders the ongoing delivery of an adequate and safe supply of drinking water to customers serviced by the City of Guelph Drinking Water System (Guelph DWS) and the Gazer Mooney Subdivision Distribution System (Gazer Mooney SDS, located in the Township of Guelph/Eramosa). Through the Report, system owners, senior leaders, and customers are informed of the performance of Water Services for the period of January 1 to December 31, 2017.

Key Findings

Water Services takes a proactive approach to utility compliance whereby associated records and processes are audited on an ongoing basis to ensure compliance with necessary standards. Should non-compliance be identified such results are communicated to the system owner (Council) and other stakeholders, and corrective actions are undertaken at the time of occurrence to support continuous improvement. Water Services maintains open communication with MOECC and WDGPH regarding system operations and compliance as well as actively cooperates with the Ministry through the formal annual drinking water system inspection process. Findings through this inspection process, if any, are communicated to the owner (City Council) and public via Water Services' Annual and Summary Report.

In 2017, Water Services continued to maintain a high level of regulatory compliance and fulfilled its mandate to deliver an adequate and safe supply of drinking water to its customers in the City of Guelph and Guelph/Eramosa Township, resulting in a 100% score for both respective systems.

Financial Implications

All financial implications related to the Report are accounted for in the 2017 Council approved Water Services Non-Tax Operating and Capital Budgets.

Report

Water Services is requesting that the Owners review the attached Annual & Summary Water Services Report – 2017. The full report is available on the City’s website at: <https://guelph.ca/wp-content/uploads/2017-Annual-Summary-Water-Services-Report.pdf>. Click on the link for “Annual & Summary Water Services Report: 2017”.

Significant highlights of the report are as follows:

- Water Services had no health-related exceedances of provincial water quality parameters.
- Water Services complied with all provincial regulations.
- Water Services maintained the requirements for Accreditation, as required under the provincial Municipal Drinking Water Licensing Program, with no significant issues.
- All mandatory regulatory microbiological and chemical quality samples were taken by certified operators.
- All tests were performed by accredited, licensed laboratories on water samples collected throughout the drinking water system.
- The system provided approximately 16.9 million cubic meters of treated water (16.9 billion litres) from Jan. 1 to Dec. 31, 2017.
- There were no incidents of non-compliance associated with the Guelph DWS and the Gazer Mooney SDS in 2017. A score of 100% was achieved in the 2016-2017 Ministry of the Environment and Climate Change (MOECC) Annual Inspection Report for both the Guelph DWS and the Gazer Mooney SDS.
- Water Services experienced five events that were considered “adverse water quality incidents” (AWQI’s) as defined by the Safe Drinking Water Act (described in Section B of the Report); these events were not confirmed by follow-up sampling and were resolved to the satisfaction of the MOECC.
- The third-party external on-site audit was completed on November 15 to 17, 2017. There were two minor nonconformities identified during this audit related to Continual Improvement (QMS 21) and Sampling, Testing and Monitoring (QMS 16). The Corrective Action Report, including the root cause analysis and action plan to address these minor non-conformances was submitted and approved by the auditor on December 2, 2017.

Financial Implications

All financial implications related to the Report are accounted for in the Council approved 2017 Water Services Non Tax Operating and Capital Budgets.

Consultations

In creation of the Annual and Summary Report, internal stakeholders were consulted to update individual sections. This included Engineering and Capital Infrastructure Services and Building Services. Once completed, the report will be available for public review at www.guelph.ca/water.

Corporate Administrative Plan

Overarching Goals

Service Excellence
Innovation

Service Area Operational Work Plans

Our Services - Municipal services that make lives better
Our People- Building a great community together
Our Resources - A solid foundation for a growing city

Attachments

ATT-1 2017 Annual & Summary Water Services Report
ATT-2 The full report is available on the City's website at:
<https://guelph.ca/wp-content/uploads/2017-Annual-Summary-Water-Services-Report.pdf>.

Click on the link for "Annual & Summary Water Services Report: 2017".

Departmental Approval

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Annual & Summary Report

For the period of:

January 1, 2017 – December 31, 2017

For:

Guelph Drinking Water System

[Corporation of the City of Guelph]

-And-

Gazer Mooney Subdivision Distribution System

[Township of Guelph/Eramosa]

Prepared by:



Water Services

Environmental Services Department

Revision Date: February 5, 2018

As per the Accessibility for Ontarians with Disabilities Act (AODA), this document is available in an alternate format by e-mailing waterservices@guelph.ca or by calling 519-837-5627.

Executive Summary

The purpose of this report is to provide information to system owners and 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 a safe, consistent supply of high quality drinking water to customers located within the City of Guelph and the Gazer Mooney Subdivision (located in the Township of Guelph/Eramosa).

Water Services is a municipally-owned and operated water utility established in 1879. The Guelph Drinking Water System (Guelph DWS) is a Class IV Water Distribution and Supply Subsystem and is composed of water supply and treatment facilities and a water distribution system. The Gazer Mooney Subdivision Distribution System (Gazer Mooney SDS) is a Class I distribution system supplied with water from the Guelph Drinking Water System.

Both the Guelph DWS and the Gazer Mooney SDS are required to comply with the Safe Drinking Water Act (SDWA) and Regulations as well as requirements contained in Permits to Take Water (PTTW), Municipal Drinking Water Licences (MDWL), and Drinking Water Works Permits (DWWP). Having met the quality management system requirements of the SDWA, Guelph Water Services is an accredited Operating Authority with an up-to-date Operational Plan (OP). The OP is available upon request from Guelph Water Services.

The source of Guelph's drinking water is a series of 21 operational groundwater wells and a shallow groundwater collector system; this system consists primarily of true groundwater sources, with some "groundwater under the direct influence of surface water with effective filtration" (GUDI-WEF) sources (Carter Well Field, Arkell 1, Arkell 15 and the Arkell Spring Grounds Collector System).

The City of Guelph has approximately 44,000 fully metered water service connections, 555 kilometres of underground watermains, and a population of approximately 135,000. The Gazer Mooney Subdivision has approximately 70 fully metered water service connections, 2 kilometres of underground watermains, and an approximate population of 200.

There were no incidents of non-compliance associated with the Guelph DWS and the Gazer Mooney SDS in 2017.

As the Operating Authority for both the Guelph DWS and Gazer Mooney SDS, Guelph Water Services is annually inspected by the MOECC for compliance with regulatory requirements. The Guelph DWS received a 100% score for the 2016-2017 inspection period. A score of 100% was also achieved in the 2016-2017 MOECC Annual Inspection Report for the Gazer Mooney SDS.

In 2017, Guelph Water Services reported five Adverse Water Quality Incidents (AWQIs) in the Guelph Drinking Water System – please refer to Section B - Adverse Water Quality Incidents and Table 1 Summary of Guelph Drinking Water System Adverse Water Quality Incidents. There were no AWQI's in the Gazer Mooney Subdivision Distribution System in 2017. In conjunction with Wellington-Dufferin-Guelph Public Health and the MOECC, all appropriate corrective actions and required reporting were completed with no health-based issues.

Water Services' risk assessment updates, emergency response testing, internal and external audits help facilitate continual improvement of Water Services' processes and programs through implementation of corrective actions.

The water system is operated to meet daily, seasonal, and other operational demands (including fire demands) with various combinations of supply sources in operation at any given time. A total of 16,921,444 cubic meters (16.9 billion litres) of water was treated and pumped to the system in 2017. The average daily water demand was 46,360 cubic metres (46.3 million litres). The maximum day production of water in 2017 was 54,421 cubic metres (54.4 million litres) and occurred on September 25, 2017. The minimum day production of water in the same time period was 36,821 cubic metres (36.8 million litres) and occurred on July 2, 2017.

All water provided to the Guelph Drinking Water System and the Gazer Mooney Subdivision Distribution System was treated with sodium hypochlorite (for chlorine disinfection) with some sources also using UV treatment. All supplied water was continually tested and met all regulatory standards.

City of Guelph Water Services maintained the drinking water system in a fit state of repair and followed best industry practices during the repair and maintenance of the system.

Details of ongoing and emerging water quality, supply, and distribution initiatives are outlined in Section J of this report and include successful programs related to: water conservation and efficiency, source water protection, and lead reduction.

Water Services continues to implement:

- Recommendations of the 2016 Water Efficiency Strategy.
- Source water protection based on an MOECC-approved Source Water Protection Plan.
- Arkell Springs Forest Stewardship Project investments (to protect the Arkell Wellfield's source water quality).
- The Lead Reduction Plan in accordance with the regulatory relief provisions of the SDWA.
- Facility asset management and infrastructure reviews to optimize priority projects.
- A robust backflow prevention program overseeing 2,818 properties with 6,439 backflow prevention devices installed. There were no reported backflow incidents.

The City has completed this Annual & Summary Report to satisfy the regulatory requirements of the Safe Drinking Water Act, O.Reg 170/03 (Section 11 and Schedule 22). For more information please review the online report at guelph.ca/water or contact Guelph Water Services at (519) 837-5627 or waterservices@guelph.ca.

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Introduction

Purpose

The purpose of this report is to provide information to several 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 a safe, consistent supply of high quality drinking water to customers located within the City of Guelph and the Gazer Mooney Subdivision (located in the Township of Guelph/Eramosa).

Scope

This Annual & Summary Water Services Report includes information from both the **Guelph Drinking Water System** and the **Gazer Mooney Subdivision Distribution System** for the period of January 1 to December 31, 2017 (unless otherwise noted). The information is required to be reported to the following:

- the Drinking Water System Owners (Guelph City Council, Chief Administrative Officer (CAO) and Deputy CAO – Infrastructure, Development and Enterprise, and the Township of Guelph Eramosa Council and CAO);
- Senior officials of Guelph Water Services and Township of Guelph/Eramosa; and
- the general public and interested stakeholders.

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

- Section 11, Annual Reports which includes:
 - o a brief description of the drinking water systems;
 - o a list of water treatment chemicals used;
 - o 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;
 - o a summary of adverse test results and other issues reported to the Ministry of the Environment and Climate Change (MOECC) including corrective actions taken;
 - o a description of major expenses incurred to install, repair or replace required equipment;
 - o the locations where this report is available for inspection.

And;

- Schedule 22, Summary Report which includes:
 - o list the requirements of the Safe Drinking Water Act, the regulations, the system's approval, Drinking Water Works Permit (DWWP), MDWL, and any orders applicable to the system that were not met at any time during the period covered by the report;
 - o for each requirement that was not met, the duration of the failure and the measures that were taken to correct the failure;
 - o 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.

This report satisfies applicable requirements for both the Guelph Drinking Water System and the Gazer Mooney Subdivision Distribution System.

A copy of this report is available for viewing at:

- **F.M. Woods Reception**, 29 Waterworks Place, Guelph;
- **Township of Guelph/Eramosa**, 8348 Wellington Rd. 124, Rockwood; and
- **Online** at guelph.ca/water.

Any inquiries can be made to:

- **City of Guelph Water Services** by e-mailing waterservices@guelph.ca or by calling 519-837-5627.
- **Township of Guelph/Eramosa Public Works – Water / Wastewater** by e-mailing general@get.on.ca or by calling 519-856-9596.

Notice:

Please note that every reasonable effort is made to ensure the accuracy of this report. This report is published with the best available information at the time of publication. In the event that errors or omissions occur, the online report will be updated. Please refer to the online version of the report for the most current version.

Please note that some hyperlinks in the document are linked to Guelph's electronic document management system (EDMS). *Note: EDMS is available for internal use only.*

Systems Overview

Guelph Drinking Water System

The City of Guelph is committed to providing customers with a safe, consistent supply of high quality drinking water while meeting or exceeding, and continually improving on legal, operational and quality management system requirements. Therefore, Water Services strives to provide reliable, cost-effective systems for the safe production and delivery of consistently high quality water and is a municipally-owned and operated water utility established in 1879.

The Guelph Drinking Water System is a Class IV Water Distribution and Supply Subsystem and is composed of water supply and treatment facilities and a water distribution system. As of December 31, 2017 thirty-three team members (23 operators, 1 manager, 4 supervisors, and 5 technical staff) held drinking water certificates to operate and maintain the water systems.

In 2017, Water Services maintained full scope accreditation to the Drinking Water Quality Management Standard after a successful on-site audit, conducted by a third-party accreditation body (NSF International Strategic Registrations). This full accreditation satisfies part of the requirements under the Municipal Drinking Water Licensing Program.

The distribution system (including watermains, valves, fire hydrants, services, and meters) serves a population of approximately 135,000 within the City of Guelph. All new system components meet NSF 61¹ requirements or approved equivalents and are installed and maintained in accordance with approved industry standards. Water system customers are fully metered and billed in accordance with the Water and Wastewater Customer Accounts by-law.

The Guelph Drinking Water System distribution system is comprised of the following infrastructure:

- 6.38 kilometres of 900-1,050 mm diameter water supply aqueduct;
- five underground storage reservoirs with a combined approximate capacity of 48,000 cubic metres (48 million litres);
- three water towers with a combined approximate capacity of 11,200 cubic metres (11.2 million litres);
- 555 kilometres of buried watermain with a diameter < 900 mm;
- 4,263 watermain valves;
- 2,783 fire hydrants; and
- approximately 44,000 water services and water meters.

The source of Guelph's drinking water is a series of 21 operational groundwater wells and a shallow groundwater collector system. The drinking water sources consist primarily of true groundwater, with some "groundwater under the direct influence of surface water with effective filtration" (GUDI-WEF) sources (Carter Well field, Arkell 1, Arkell 15 and the Arkell Springs Collector System). The Guelph

¹ NSF/ANSI Standard 61: Drinking Water System Components -- Health Effects

Drinking Water System uses 12 percent Sodium Hypochlorite (that is NSF 60² certified) for primary disinfection at 10 locations and for multi-barrier primary disinfection at four locations. At four locations, ultraviolet light is also applied as part of multi-barrier primary disinfection. At two locations (Helmar Well and Queensdale Well), NSF 60-certified sodium silicate is used for aesthetic purposes to sequester dissolved iron and manganese. In total, Water Services operates and maintains 31 facilities.

The replacement cost of the entire system (excluding Gazer Mooney Subdivision Distribution System) is estimated to be \$615.5 million or approximately \$4,663 per capita (2016). The Guelph Drinking Water System operations are funded directly from the sale of water, with minor additional funding through government grant programs. Property taxes are not used to fund operation or maintenance of the system.

A total of 16,921,444 cubic meters (16.9 billion litres) of water was treated and pumped to the system in 2017. The average daily water demand was 46,360 cubic metres (46.3 million litres). The maximum day production of water in 2017 was 54,421 cubic metres (54.4 million litres) and occurred on September 25, 2017. The minimum day production of water in the same time period was 36,821 cubic metres (36.8 million litres) and occurred on July 02, 2017.

In 2017, all regulatory microbiological and chemical quality samples were taken by certified operators and tests performed by accredited, licensed laboratories on water samples collected throughout the drinking water system. These tests include both regulatory and operational testing – in most cases only regulatory reporting is included in this report. In all cases, the drinking water supplied to all customers was confirmed safe and the water was of higher quality than all Ontario and Canadian health-related guidelines.

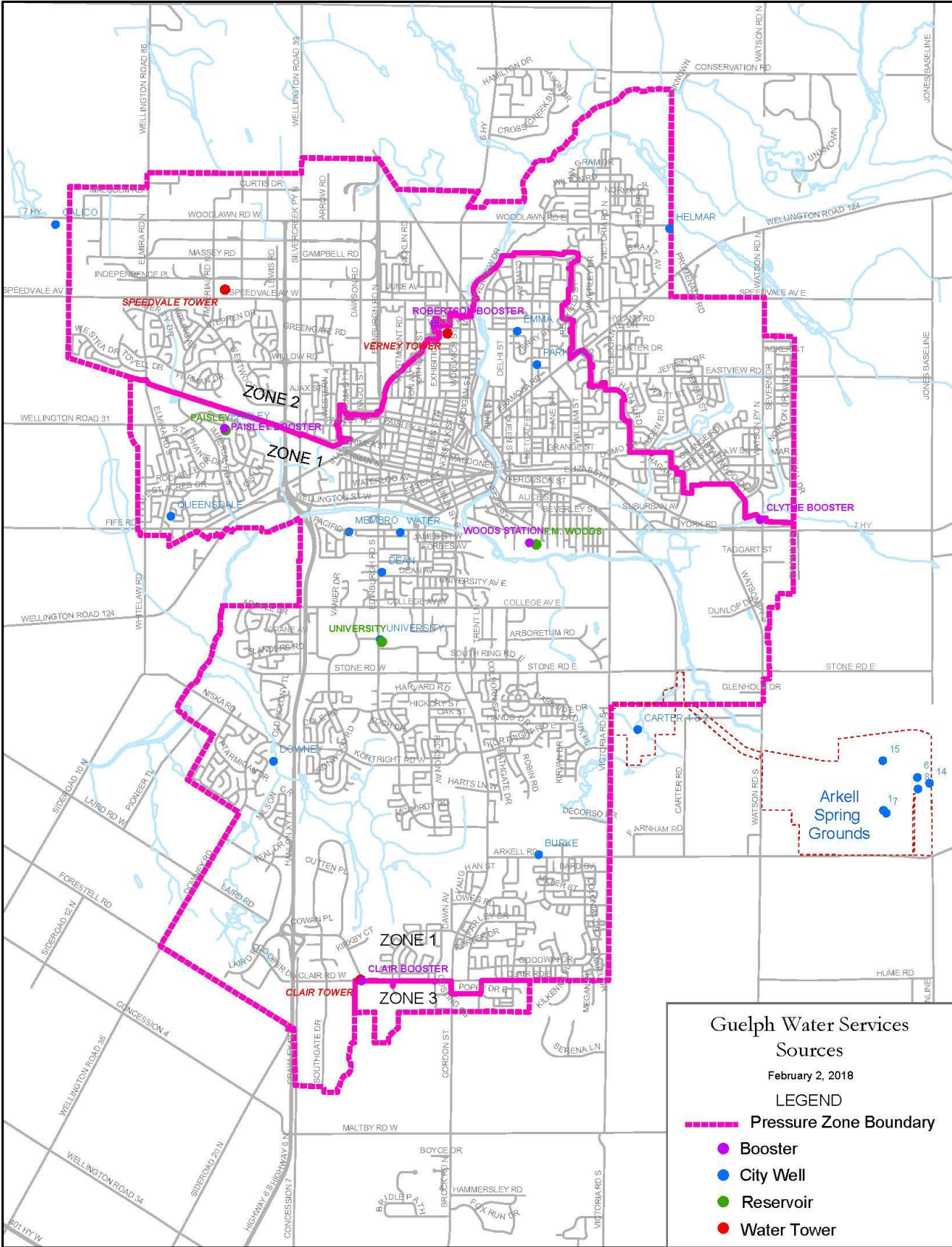
The Guelph Drinking Water System is defined as a large residential system operated under the regulatory requirements of the Safe Drinking Water Act and the Ontario Water Resources Act (accessed at <http://www.e-laws.gov.on.ca>). In 2017, the Guelph Drinking Water System operated under Municipal Drinking Water Licence (MDWL) 017-101 (Issue numbers 9 and 10) and the Drinking Water Works Permit (DWWP) 017-201 (Issue numbers 6 and 7).

The MDWL and the DWWP describe system-specific requirements that are supplementary to provincial regulations and act as licences for water supply and distribution operations. These documents outline specific conditions and requirements regarding operation, maintenance and upgrades that are required by the system and are considered regulatory in nature. These documents are available by request for viewing at 29 Waterworks Place, Guelph, ON.

Figure 1 presents the locations of the Guelph Drinking Water System facilities that were active in 2017.

² NSF/ANSI Standard 60: Drinking Water Treatment Chemicals -- Health Effects

Figure 1: Guelph Drinking Water System Facility Locations



Gazer Mooney Subdivision Distribution System

The Gazer Mooney Subdivision Distribution System is a Class 1 Distribution Subsystem that serves approximately 200 people, and is owned by the Township of Guelph/Eramosa. The system is operated by Water Services through 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.

All new distribution infrastructure components meet NSF 61 requirements or approved equivalents and are installed and maintained in accordance with approved industry standards. The system is fully metered.

The Gazer Mooney Subdivision Distribution System is comprised of the following infrastructure:

- approximately two kilometres of buried watermain with a diameter < 900 mm;
- six watermain valves;
- six fire hydrants; and
- approximately 72 water services and water meters.

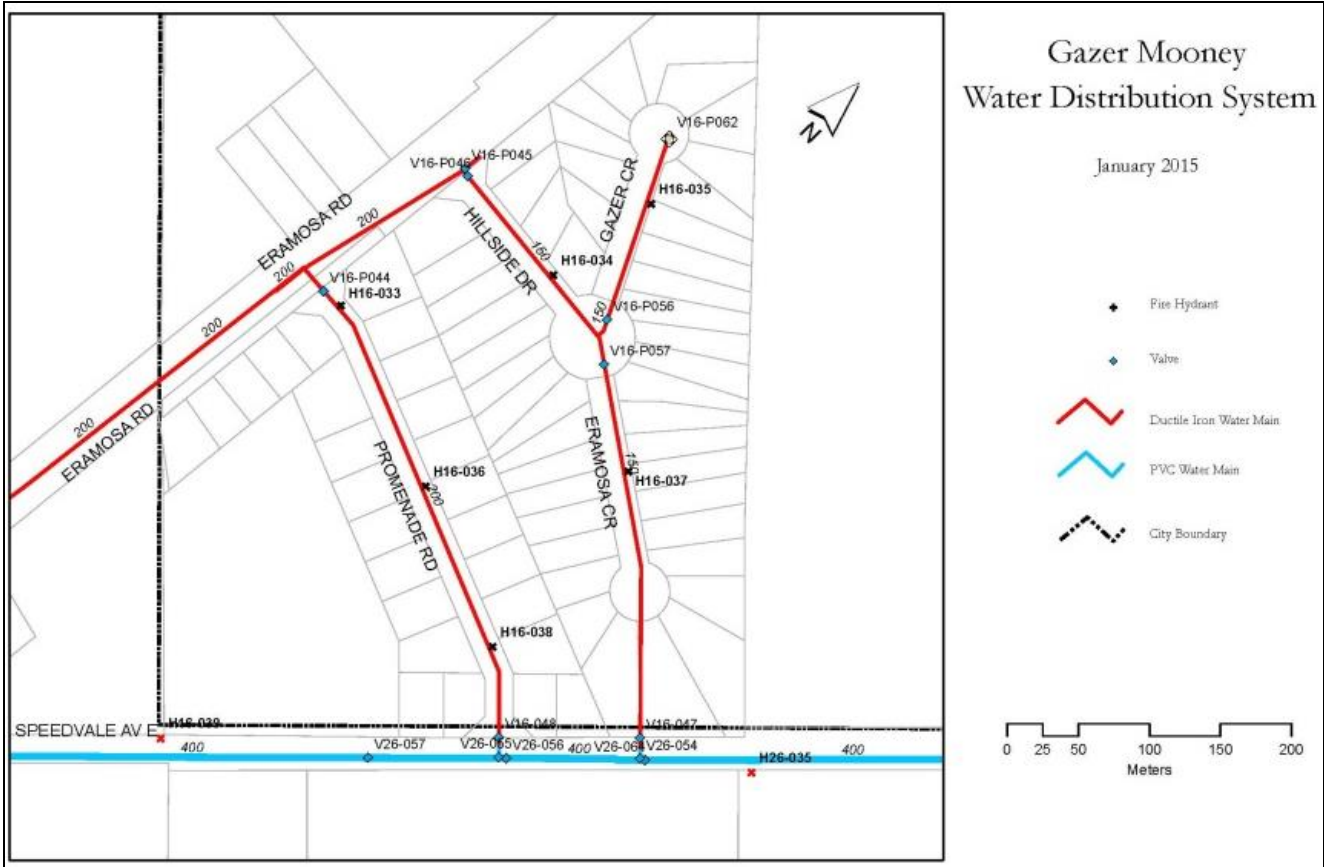
The cost of construction of the Gazer Mooney Subdivision Distribution System was listed as \$197,933 in 1980.

The Gazer Mooney Subdivision Distribution System is considered a small residential system and is operated under the regulatory requirements of the Safe Drinking Water Act and the Ontario Water Resources Act which may be found at <http://www.e-laws.gov.on.ca>.

In 2017, the Gazer Mooney Subdivision Distribution System operated under Municipal Drinking Water Licence No. 104-103 (issue number 2), and Drinking Water Works Permit No. 104-203 (issue number 2). These documents are available by request for viewing at 29 Waterworks Place, Guelph and at the Township of Guelph/Eramosa, 8348 Wellington Rd. 124, Rockwood.

Figure 2 shows the location of the Gazer Mooney Subdivision Distribution System.

Figure 2: Gazer Mooney Subdivision Distribution System



Annual & Summary Water Services Report

a) Incidents of Regulatory Non-Compliance

This section describes all incidents of non-compliance.

Guelph Drinking Water System

There were no incidents of non-compliance associated with the Guelph Drinking Water System in 2017.

A score of 100% was achieved in the 2016-2017 Ministry of the Environment and Climate Change Annual Inspection Report for the Guelph Drinking Water System.

Gazer Mooney Subdivision Distribution System

There were no incidents of non-compliance associated with the Gazer Mooney Subdivision Distribution System in 2017.

A score of 100% was achieved in the 2016-2017 Ministry of the Environment and Climate Change Annual Inspection Report for the Gazer Mooney Subdivision Distribution System.

b) Adverse Water Quality Incidents

This section describes all “Adverse Water Quality Incidents” (AWQI’s). 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 and at a certain instance in time, a water quality standard was not met. On average, the Guelph Drinking Water System processes four to five AWQI’s annually.

Many AWQI’s have proven to be the result of water sampling and testing problems rather than poor water quality. False positive results can be caused by contaminated sampling containers and equipment, improper sampling technique, handling and transportation, and sampling analysis errors. In almost all cases, mandatory follow-up sampling and analysis confirms that contaminants are not present in the water provided to customers.

Please note: The City was granted full regulatory relief from Schedule 15.1 of O.Reg. 170/03. Any residential tap lead sample results above 10 µg/L collected as per Lead Reduction Plan (LRP) are tracked and reported separately to Wellington-Dufferin-Guelph Public Health, the Ministry of the Environment and Climate Change (as per MDWL 017-101, Schedule D) and the customer. See Section J for more information.

Guelph Drinking Water System

In 2017, there were five adverse water quality incidents (AWQI’s #132381, #132617, #133265, #134654 and #134661) and a summary of these are included in Table 1.

Table 1: Summary of Guelph Drinking Water System Adverse Water Quality Incidents (2017)

#	Date	AWQI #	Location	Description	Corrective Action	Re-sample Results Good	Deviation from Critical Control Point ³
1	Feb. 08	132381	Clair Tower Sample Tap (D005)	Total Coliform (TC) result of 1 at D005	Wellington-Dufferin-Guelph Public Health (WDGPH), MOECC, and Spills Action Centre (SAC) were notified. Re-samples showed non-detect results for Total Coliforms (TC) at D005 plus upstream and downstream locations (S004 and D0250 respectively).	Yes	No
2	Mar. 10	132617	Victory Sample Tap (D0247)	Total Lead result of .088 mg/L at D0247	Wellington-Dufferin-Guelph Public Health (WDGPH), MOECC, and Spills Action Centre (SAC) were notified. Re-sample showed a non-detect result for Lead at D0247.	Yes	No
3	Jun. 06	133265	Paisley Inlet Sample Tap (D0248)	Total Coliform (TC) result of 1 at D0218	Wellington-Dufferin-Guelph Public Health (WDGPH), MOECC, and Spills Action Centre (SAC) were notified. Re-sample showed a non-detect result for Lead at D0218.	Yes	No
4	Jul. 26	134654	Severn Drive Sample Tap (D243)	Total Coliform (TC) result of 25 at D0243	Wellington-Dufferin-Guelph Public Health (WDGPH), MOECC, and Spills Action Centre (SAC) notified. Re-samples showed non-detect results for Total Coliforms (TC) at D0243 plus upstream and downstream locations (S048 and D217 respectively).	Yes	No
5	Jul. 27	134661	Robertson POE (S108)	Total Lead result of .036 mg/L at S108	Wellington-Dufferin-Guelph Public Health (WDGPH), MOECC, and Spills Action Centre (SAC) were notified. Re-sample showed a non-detect result for Lead at S108.	Yes	No

Gazer Mooney Subdivision Distribution System

There were no adverse water quality incidents in the Gazer Mooney Subdivision Distribution System in 2017.

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. These

³ Please see section C of this report for a description of "critical control points".

CCPs are in part stipulated by regulation and in part derived through risk assessment of the Drinking Water System.

Water Services' Critical Control Points include: primary disinfection; secondary disinfection; and backflow prevention. Additional information (e.g. critical control limits and response actions) is included in Appendix A - Summary of Critical Control Points and Critical Control Limits.

Deviations from the CCPs are reported to both the Owners and Top Management, and are summarized in the tables included in Section B of this report. There were no deviations from CCP Limits in 2017.

d) The Efficacy of the Risk Assessment Process

This section confirms the occurrence of reviews of the risk assessment process. The risk assessment process determines the effectiveness of identifying and appropriately assessing the risk of hazards and hazardous events. It also identifies the appropriate control measures; critical control points (CCPs); and related critical control limits (CCLs) related to the hazards and hazardous events.

The annual risk assessment review described in "QMS 07 Risk Assessment" was conducted by Water Services over several meetings between August 8 and 30, 2017. The updated risk assessment was subsequently approved at a Management Review Meeting on October 12, 2017. The results of the Risk Assessment are not made available to the public, but are made available to internal staff.

Through the risk assessment process, the following Water Services program or process aspects were added:

- Locations of watermains.
 - City-owned watermain break on private property (e.g. easements).
 - Private watermain break on private property.
- Contamination from unauthorized connection to distribution system or inappropriately set up temporary watermains.
- Infrastructure Repairs/Upgrades.
 - Third-party contractor compromises the water treatment or water distribution system.
- Future was defined as less than or equal to 10 years from the date of the risk assessment.

The following Water Services program or process aspects were removed, but were captured elsewhere:

- Negative/low pressure from local water usage (potential for backflow from container/truck).

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 internal staff. The purpose of audits is to evaluate the level of conformance of Water Services to the DWQMS. Audits identify both conformance and non-conformance with the Standard, as well as,

opportunities for improvement. Appendix "B" includes the past three years' internal and external audit plans and the plan for the upcoming year.

The last internal process audits were completed between May 26 to June 2, 2017. No non-conformities were identified during these internal audits. Various opportunities for improvement suggested by staff (such as improved document and records control, training, communications, essential services, staffing levels, move to utilizing more in-field technology, risk assessments, and standard operating procedure creation) were also noted in the internal audit report. Water Services continuously strives to address issues identified in internal audits. The next scheduled internal audit will take place between May 28 and June 1, 2018.

The 2017 third-party external on-site audit was completed between November 15 and November 17, 2017 by NSF International Strategic Registrations. There were two minor nonconformities identified during this audit related to Continual Improvement (QMS 21) and Sampling, Testing and Monitoring (QMS 16). The Corrective Action Report, including the root cause analysis and action plan to address these minor non-conformances was submitted and approved by the auditor on December 2, 2017.

Noted opportunities for improvement by the auditor were related to improving the following processes: Document and Records Control (QMS 5), Drinking Water System (QMS 6), Competencies (QMS 10), Personnel Coverage (QMS 11), Internal Audits (QMS 19), and Continual Improvement (QMS 21). The corrective actions issued and opportunities for improvement will be reviewed by the external auditor at the next on-site audit, scheduled between November 14 and 16, 2018.

f) Results of Emergency Response Testing

Emergency response testing is regularly completed as part of the Water Services' Quality Management System (QMS) to ensure that Water Services maintains a reasonable readiness to deal with emergencies and abnormal events. The ability to properly manage emergencies and unplanned failures is critical in demonstrating that Water Services has taken a diligent approach in its operations.

In 2017, Water Services took a proactive approach to emergency planning during the Paisley-Clythe Watermain Project. In conjunction with the contractor working on the project, contingency piping was installed and staff were trained in its operation. This was to ensure consistent water supply in the event where Water Services could not pump out of the existing pipes from F.M. Woods station, but could use the contingency piping instead.

Water Services' last emergency test exercise involved a scenario where there were excessive rainfall amounts, resulting in water monitoring wells becoming submerged under flood water, thereby causing sudden changes to the raw water quality characteristics. The emergency test exercise was held on December 8, 2017 and included representatives from the MOECC (Inspector and District Office Manager) and Wellington-Dufferin-Guelph Public Health (WDGPH) as well as Water Services and other City staff. All other Water Services' staff participated in sessions that took place between December 13, 2017 and January 26, 2018.

Feedback from emergency testing and from actual events is gathered during debriefing sessions throughout the emergency test exercises and improvement items are incorporated into the Emergency Plan and /or daily operations.

Table 2 includes the dates of Completed Emergency Response Tests for the past three years and planned tests for 2018.

Table 2: Emergency Response Tests

Hazardous Event / Hazard ⁴	2015	2016	2017	2018 (planned)
Long-term impacts of climate change		Summer (drought)	Dec. 8, 13 (test)	Jan. 26 (test)
Source water supply shortfall		Dec. 13 (test)	Jan. 20 (test)	
Extreme weather events (e.g. tornado, ice storm, flood)		Mar. 23-25, 2016 (ice storm)	Dec. 8, 13 (test)	Jan. 26 (test)
Sustained extreme temperatures (e.g. heat wave, deep freeze)	Feb-Apr, 2015 (frozen services)		Dec. 8, 13 (test)	Jan. 26 (test)
Chemical spill impacting source water				
Sustained pressure loss		Jan. 7, 2016 (test)		
Backflow / Cross-connection				December (planned test)
Terrorist threat				
Vandalism				December (planned test)
Sudden changes to raw water characteristics (e.g. turbidity, pH)	Rehabilitation: Membro Well / Carter Wells	Improvements: Membro Well / Carter Wells	Dec. 8, 13 (test)	Jan. 26 (test)
Failure of equipment or process associated with primary disinfection (e.g. UV, chlorination)				
Failure of equipment or process associated with secondary disinfection (e.g. chlorination)				
Loss or contamination of treated water supply		Jan. 7, 2016 (test)		December (planned test)
Loss of monitoring system		Jan. 14, 2016 (fibre network failure)		
City of Guelph Corporate-Level Test by the EOCG	Nov. 23, 2015 (test)	3 dates focusing on "recovery" Sep-Oct 2016	Nov. 23, 2017 (test)	September-October 2018 (planned test)

g) Operational Performance and Statistics

The following section describes Operational performance statistics within Water Services that includes:

- 2017 Totalized Pumpages as per the Municipal Drinking Water Licence and Permits to Take Water;
- 2017 Instantaneous Flows as per Permit to Take Water requirements;
- Water Production and Population;
- 2017 Collector Flows; and
- System Maintenance and Updates.

⁴ The Hazardous Event / Hazard list reflects MOECC's mandated "Potential Hazardous Events for Municipal Residential Drinking Water Systems to Consider in the Risk Assessment" document.

2017 Totalized Pumpages and Instantaneous Flows

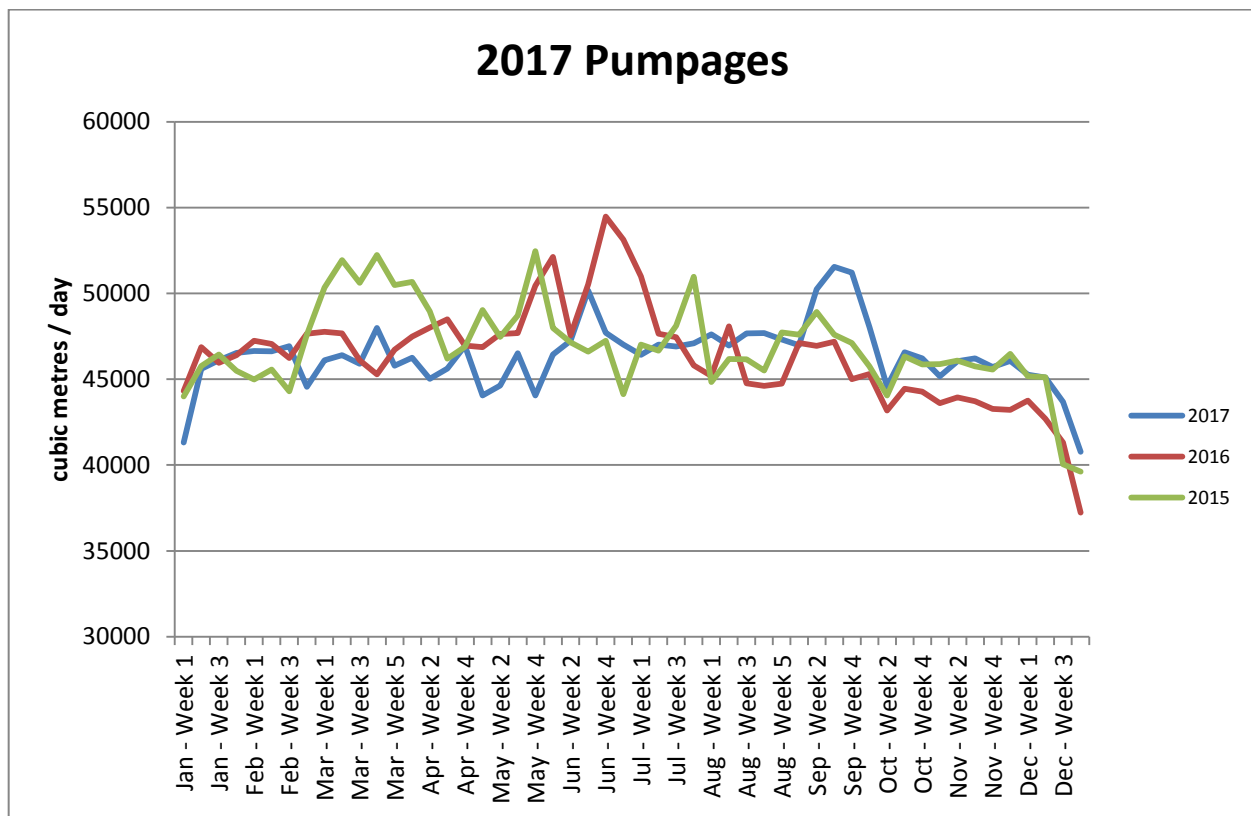
The Safe Drinking Water Act and the Ontario Water Resources Act each require that operating authorities record and report both water takings as governed by Permits-to-Take-Water, and water being supplied to the City of Guelph.

Summaries of total water pumped, instantaneous flows and capacity (flows and volumes compared to rated capacities) by the City of Guelph can be found in Appendix "C" – Total Water Pumped and Instantaneous Flows.

2017 Totalized Pumpages

Figure 3 below, depicts the water pumpage rate in cubic metres per day (m³/day) that is averaged each week.

Figure 3: 2017 Totalized Pumpages



Water Services processed 16,921,444 cubic metres (16.9 billion litres) of water to the distribution system in 2017. This represents 0.11 percent less water being supplied to the distribution system in 2017 as compared to the same time period in 2016 and 1.09 percent less water than in 2015.

The average daily water demand was 46,360 cubic metres (46.3 million litres). The maximum day production of water in 2017 was 54,421 cubic metres (54.4 million litres) and occurred on September 25,

2017. The minimum day production of water in the same time period was 36,821 cubic metres (36.8 million litres) and occurred on July 2, 2017.

Arkell Springs Collector System Source Water

The Arkell Springs Collector System Source Water ("Collectors"), one of Guelph's many water sources, consists of a gravity-fed, under-drain system that collects shallow overburden groundwater. This system has been in use since the early 1900s and can represent as much as 40 percent of the total city-wide daily water production. When the output of this source is reduced, Water Services is required to make up the difference from other water supplies. Throughout the year, the production from this water supply varies from an approximate low of 4,000 cubic metres (4 million litres) up to an approximate high of 20,000 cubic metres (20 million litres) per day.

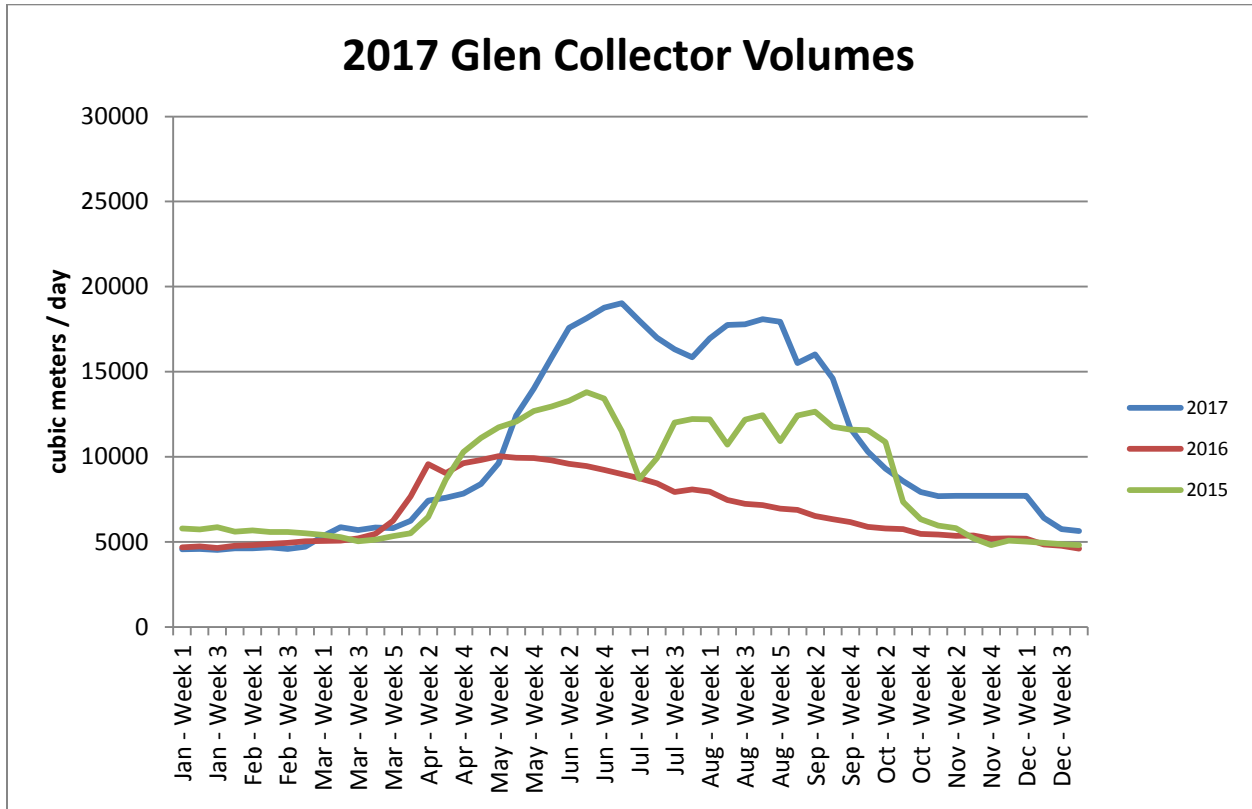
Seasonally, between April 15 and November 15, the City has a Permit-to-Take-Water that allows water to be pumped from the Eramosa River to a pond and trench-based Recharge System. In the Recharge System, the river water is filtered in-situ through the ground and approximately 50 percent of the flow is captured in the Arkell Springs Collector System. In 2016, the Recharge System was out of service to accommodate infrastructure improvements including an extension of the trench system in an effort to capture more water in the Collectors. The Recharge System was returned to service in May 2017. In 2017, Arkell Well 7 contributed 403,872 m³ of raw water (from May through August) to the Recharge System as part of a Collector System capacity test. Approximately half of this volume would have been captured in the Collector system.

The productivity of the Collectors can be used as one of many predictive tools. If the production volume from the Collectors is low, then it can be assumed that other water supplies would be needed to make up the difference. This may alter how regular maintenance is performed as well as the urgency with which repairs are made to supplies that unexpectedly go off-line as they may be needed to supplement overall production for the City when the Collector System is unable to produce a sufficient supply.

The Collectors have produced 3,798,506 cubic metres (3.8 billion litres) of water in 2017. This represents 34.8 percent more water as compared to the same time period in 2016 and 7.4 percent more water than in 2015.

For a visual representation, please refer to Figure 4, which depicts the Arkell Spring Grounds Collector flow rate in cubic metres per day (m³/day) that is averaged each week.

Figure 4: 2017 Arkell Spring Grounds Collector System Volumes



Please note: Arkell Well 7 contributed 403,872 m³ to the Recharge System (from May through August 2017) with approximately half (202,000 m³) captured in the Collector flow post filtration; The Collector flow was not augmented by the addition of recharge water from the Eramosa river in 2016.

System Maintenance and Updates

The tables that follow summarize Water Services’ maintenance work – for Distribution (Table 3) and for Water Supply (Table 4).

Table 3: Distribution Maintenance Activity

Job Type	2015 Q1&2	2015 Q3&4	2015 Total	2016 Q1&2	2016 Q3&4	2016 Total	2017 Q1&2	2017 Q3&4	2017 Total
Acoustic Leak – Dry	0	1	1	0	4	4	0	1	1
Blow Off Install	0	0	0	0	0	0	0	0	0
Dig to find leak	1	0	1	1	1	2	0	0	0
Hi/Low Jumper Install	0	0	0	0	0	0	0	0	0
Hydrant Install (WW)	0	0	0	0	0	0	0	0	0
Hydrant Remove	0	0	0	1	0	1	0	0	0
Hydrant Repair	2	7	9	1	29	30	1	34	35

Job Type	2015 Q1&2	2015 Q3&4	2015 Total	2016 Q1&2	2016 Q3&4	2016 Total	2017 Q1&2	2017 Q3&4	2017 Total
Hydrant Repair Hit	0	0	0	0	1	1	2	0	2
Hydrant Replace (WW)	0	1	1	2	6	8	0	2	2
Hydrant Replace Hit	0	0	0	0	0	0	0	2	2
Main Break	57	14	71	26	27	53	23	24	47
Other (e.g. exploratory excavations, miscellaneous repairs, etc.)	2	2	4	1	2	3	1	1	2
Re-route Watermain	0	0	0	0	0	0	0	0	0
Sample Station Install	0	0	0	0	1	1	0	17	17
Sample Station Replace	0	0	0	0	4	4	0	10	10
Service Cut Off	0	5	5	1	4	5	2	1	3
Service Lowered	0	0	0	0	0	0	0	0	0
Service New Install	0	0	0	0	0	0	0	0	0
Service Repair	54	45	99	58	86	144	48	43	91
Service Replace Lead (City-side)	1	1	2	0	0	0	1	1	2
Service Replace Non-Lead	9	16	25	8	8	16	2	3	5
Trench Repair	-	-	-	1	0	1	0	0	0
Valve Install (WW)	0	6	6	0	0	0	0	1	1
Valve Remove	0	0	0	0	0	0	0	0	0
Valve Repair	1	4	5	3	5	8	2	5	7
Valve Replace (WW)	9	5	14	1	7	8	7	15	22
Meters New	141	412	553	336	277	613	233	254	487
Meters Exchanged	202	423	625	286	246	532	458	254	712
Hydrants new/replaced by Engineering	-	-	52	-	-	39	-	-	26
Total City Hydrants	-	-	2,745	-	-	2,763	-	-	2,783
Valves new/replaced by Engineering	-	-	122	-	-	57	-	-	93
Total City Main Valves	-	-	4,135	-	-	4,184	-	-	4263
Watermains new/replaced by Eng. (km)	-	-	9.13	-	-	3.93	-	-	4.68
Total Watermains Excluding Aqueduct (km)	-	-	548.5	-	-	550.8	-	-	555.4
Watermains Cleaned (km)	-	-	107.1	-	-	231.4	-	-	150.65
Watermains Re-lined (m)	-	-	0	-	-	0	-	-	171

The next table includes Water Supply-related maintenance activities and expenditures (may include programs that have a series of projects).

Table 4: Water Supply Maintenance Activity

Maintenance Activity	Location
Booster 2 & 3 Discharge Train Replacements	F.M. Woods
Booster Pump Motor Replacement	Arkell Recharge River Pump
Fencing and Security Upgrades	Various Sites
Flow Meter and Chamber Installation	Glen Diversion Chamber
Flow Meter Replacements	Arkell Well 7 Burke Well Clythe Booster Membro Well Queensdale Well Water St. Well
Mixer Installation	Water St. Well
Electrical and Instrumentation Upgrades	Various Sites
Facility Repairs and Maintenance	Various Sites
Process and Monitoring Equipment Upgrades	Various Sites
Physical Inventory of Process and Monitoring Assets	All Sites
Pressure Transmitter Installations	Calico Well Carter Well 1 Clair Tower Clythe Well Downey Well Helmar Well Paisley Well Park Well 2 Robertson Booster University Well Water St. Well
Process Piping Upgrades	Calico Well Helmar Well F.M. Woods
Refurbishment of Speedvale Elevated Tank	Speedvale
Standby Power Generator – new	Downey Well Arkell Well 15
Transformer Installation	F.M. Woods Administration Trailer
Well Rehabilitation, Liner, Installation and Pump Replacement	Water St. Well

SCADA System Improvements

The Supervisory Control and Data Acquisitions (SCADA) system is the computerized control system that looks after the monitoring and automatic control of the pumps, valves, water towers and online instrumentation at the 21 water facilities located throughout the City and 6 water facilities located in the Arkell Springs well field. The SCADA system also performs the vital role of monitoring/logging process data to ensure regulatory compliance and providing tools to the Operations team that enables them to run the City's water system in a consistent manner.

In early 2017, the SCADA system was upgraded to include fully redundant backup network links to all sites. The SCADA system had an uptime of approximately 99.95 percent in 2017. Since the installation of the fully redundant backup network, the SCADA uptime has increased by ten times in 2017, as compared to the 2016 value of 99.5 percent. This improvement has significantly improved the reliability of the SCADA system for both operational and compliance requirements.

The following table provides a summary of improvements to SCADA and Security:

Table 5: SCADA/Security Maintenance and Improvement Activities

SCADA / Security Maintenance & Improvement Activities	Well Site(s)
Process flow diagrams and piping & instrumentation diagrams (P&ID's) update	Various Sites
SCADA hardware and software inventory update	Various Sites
SCADA network architecture and configuration documentation update	Various Sites
SCADA network connectivity monitoring server updates	Various Sites
SCADA network redundancy (with secondary back-up connections)	Various Sites
SCADA software code update (multi-year program)	Various Sites
SCADA software code revision control software	Various Sites
Security systems upgrades	Various Sites
SCADA Input / Output Lists and standardized connection diagram updates	Various Sites
Additional SCADA data-logging redundancy (with secondary data-loggers)	Various Sites
Additional Operator interface terminal displays and SCADA view nodes	Various Sites
Installation of secondary motorized gate for vehicles	F.M. Woods
Enhancements of security patrols	F.M. Woods

Water Distribution Locates

In 2014, The City of Guelph registered its utility infrastructure with ON1Call, as mandated by the Ontario Underground Infrastructure Notification System Act, 2012.

Since registering, the City experienced a significant increase in locate request volumes. This increase in volume ensures that Water Services is notified of and attends all locate requests for every excavation in proximity to water infrastructure. This prevents damage to City infrastructure and protects the City's water quality and quantity.

In order to provide efficient locate services across the corporation, the City has transitioned all infrastructure locates into one corporate group which is housed at Water Services. This includes water, sanitary and storm sewers, traffic signals, and fibre optics. In 2017, one additional full time utility locator was hired, and the peak season is supplemented with temporary utility locators. Utility locators now locate all infrastructure in one site visit rather than each department individually. Table 6 includes all water locate requests received and responded to in 2017 with a year to year comparison below.

Table 6: Water Distribution Locates Requested and Responded to in 2017

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
294	243	628	1,037	1,070	1,029	957	1,112	819	711	538	184

Historical locate requests received	
Year	Total
2017	8,622
2016	7,979 ⁵
2015	9,255
2014	8,943
2013	7,884

Form 1s and Form 2s

These forms are required to document significant changes to the drinking water system. Engineering Services staff complete “Form 1 – Record of Watermains Authorized as a Future Alteration” and retain copies in applicable project files and Water Services staff complete “Form 2- Record of Minor Modification or Replacements to the Drinking Water System” that are retained by the Water Services Compliance Coordinator.

Table 7 provides a summary of Form 1’s and Form 2’s completed over the course of 2017.

Table 7: Summary of 2017 Form 1s and Form 2s

Form Type	Total Number of Completed Forms
Form 1 – Record of Watermains Authorized as a Future Alteration	5
Form 2 – Record of Minor Modification or Replacements to the Drinking Water System	49

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 2017.

Water Quality Review – Guelph Drinking Water System

Under the Safe Drinking Water Act, 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

⁵ Volume reduction in 2016 is attributed to an increase in larger more complex excavation projects submitted as 1 single ticket rather than broken into multiple tickets via streets or street segments as in the past.

diligence and is expected to identify any changes within the treated water, as well as, in raw source waters.

A note about all tables included in this section:

1. All regulated chemicals detected in the City of Guelph's treated water sources that are above the lab's MDL (minimum detection limit) are underlined indicating a hyperlink to an Excel Workbook in Guelph's electronic document management system (EDMS). The workbook contains a definition of the parameter and an Excel worksheet for each treated source where the parameter has been detected with values for all sample results from January 1, 2007 to December 31, 2017. This database is used to closely track the instances of the identified chemical parameters and therefore provide time for planning / budgeting if treatment or an alternative supply is eventually required due to the presence of a given parameter. The database is updated annually.
2. Tabulated data is from the best available information at the time of table creation.
3. If sampling for a particular schedule's parameters (e.g. Schedule 23 and 24) did not occur within the calendar year of the report, then the most recent values are included in the report for reference.
4. All acronyms and initialisms included in tables are described in Appendix "I" – Glossary.

The following section summarizes daily Distribution free chlorine residual test results required by O. Reg. 170/03 Schedule 7-2 where secondary disinfection is provided for the period of January 1 to December 31, 2017. The Verney Tower sample point is used to represent the water quality provided by the Zone One distribution system pressure; the Speedvale Tower sample point represents the water quality in Zone Two and the chlorine analyzer at Clair Booster Station monitors the water quality in Zone 3 for the purposes of the regulation. Please note that the City of Guelph takes additional operational daily Distribution samples and tests for free chlorine residual in order to better monitor the free residual in the Distribution System and respond accordingly. There was no instance of an adverse result in 2017 associated with these sampling sites, as presented in Table 8.

Table 8: O. Reg. 170/03 Schedule 7-2, City of Guelph - Distribution Manual Free Chlorine Residual Summary (2017)

Parameter	ODWQS Criteria	Total Analyses	Total Samples above Detection Limit	Total Outside ODWQS Criteria	Range	Units
Free Chlorine Residual – Zone One	0.05 – 4.0	365	365	0	0.52 – 1.08	mg/L
Free Chlorine Residual – Zone Two	0.05 – 4.0	365	365	0	0.22 – 1.13	mg/L
Free Chlorine Residual – Zone Three	0.05 – 4.0	SCADA	n/a	0	0.34 – 1.50	mg/L

Table 9 summarizes raw bacteriological sampling and test results required by O. Reg. 170/03 Schedule 10-4 including investigative re-sampling for the period of January 1 to December 31, 2017. There were a total of 1,097 raw samples taken and 3,291 raw analyses conducted.

Table 9: O. Reg. 170/03 Schedule 10-4, City of Guelph - Raw Bacteriological Sampling Summary (2017)

Parameter	ODWQS Criteria	Total Analyses	Total Outside ODWQS Criteria	Range	Units
Raw - E. coli	n/a	1097	n/a	0 - 1	cfu/100 mL
Raw - Total Coliform	n/a	1097	n/a	0 - 14	cfu/100 mL
Raw - Background	n/a	1097	n/a	0 - 760	cfu/100 mL

Table 10 summarizes treated bacteriological sampling and test results required by O. Reg. 170/03 Schedule 10-3 and 6-3 including investigative re-sampling for 2017.

- Number of POE⁶ samples taken: 607
- Number of POE analyses: 3,035
- Number of Distribution samples taken: 1,621
- Number of Distribution analyses: 7,728

Table 10: O. Reg. 170/03 Schedule 10-2, 10-3 and 6-3, City of Guelph - Treated Bacteriological Sampling Summary

Parameter	ODWQS Criteria	Total Analyses	Total Outside ODWQS Criteria	Range	Units
POE - E. coli	0	607	0	0	cfu /100 mL
POE - Total Coliform	0	607	0	0	cfu /100 mL
POE - HPC	n/a	607	n/a	0 - 25	cfu /mL
POE - Background	n/a	607	n/a	0 - 680	cfu /100 mL
POE - Free Chlorine Residual	0.05 to 4.0	603 ⁷	0	0.60 - 1.85	mg/L
Distribution - E. coli	0	1,621	0	0	cfu /100 mL
Distribution - Total Coliform	0	1,621	3 ⁸	0 - 25	cfu /100 mL
Distribution - HPC	n/a	766	n/a	0 - 150	cfu /mL
Distribution - Background	n/a	1,621	n/a	0 - 720	cfu /100 mL
Distribution - Free Chlorine Residual	0.05 to 4.0	2,099	0	0.29 - 1.31	mg/L

Table 11 summarizes raw source turbidity sampling and test results required by O. Reg. 170/03 Schedule 7-3 for the period of January 1 to December 31, 2017. Schedule 7-3 requires a "Monthly" sampling

⁶ Point of Entry; the point at or near which treated water enters the distribution system.

⁷ Total number of samples used specifically to satisfy the requirements of O.Reg. 170/03 Schedule 10-3 and 6-3 (Treated Source samples taken for Operational purposes are not included).

⁸ Reported as AWQI #132381; #133265; 134654 and described in Table 1 of this document.

schedule, the City of Guelph samples all raw sources and tests for turbidity on a weekly basis to better monitor this aspect of raw water quality.

Table 11: O. Reg. 170/03 Schedule 7-3, City of Guelph - Raw Source Turbidity Sampling Summary (2017)

Parameter	ODWQS Criteria	Total Analyses	Total Samples above Detection Limit	Total Outside ODWQS Criteria	Range	Units
Raw Source Turbidity	n/a	1007	1007	n/a	0.03– 0.37	ntu

Table 12 summarizes raw source Ultraviolet Transmittance sampling and test results required by the city's Municipal Drinking Water Licence (MDWL), where UV for primary disinfection is used and for the period of January 1 to December 31, 2017. The MDWL requires a test to be conducted and recorded on a "weekly" sampling schedule.

Table 12: O. Reg. 170/03 Schedule 7-3, City of Guelph - Raw Ultraviolet Transmittance Sampling Summary (2017)

Parameter	MDWL Criteria	Total Analyses	Total Samples above Detection Limit	Total Outside MDWL Criteria	Range	Units
Raw UVT F.M. Woods Station	93.5%	SCADA	n/a	0	93.4 - 99.8	% uvt
Raw UVT Emma Well	90.0%	51	51	0	91.0 – 97.2	% uvt
Raw UVT Membro Well	90.0%	48	48	0	90.1 – 100.0	% uvt
Raw UVT Water St. Well	87.0%	26	26	0	90.8 – 100.0	% uvt

Microparticulate and Laser Particle Counting Sampling

As a part of the Guelph Drinking Water System's Municipal Drinking Water Licence, Guelph Water Services is required, twice annually, to assess the Arkell Collector System which is groundwater under the influence of surface water with effective in situ filtration (GUDI-WEF). The purpose of the assessment is to ensure that the source continues to meet the GUDI-WEF source water characteristics as outlined by the MOECC. Sampling was performed on this water source in the spring and fall of 2017. The source continues to meet the GUDI-WEF source water characteristics.

Treated Water Quality Statistics – O. Reg. 170/03 Schedule 6-5 - "Continuous Monitoring" Results Summary

Water Services utilises over twenty regulatory and operational continuous monitoring devices to measure water quality. Each regulatory device has controls associated with it such that in the event that the device detects that a measured value is outside the acceptable parameters for that location, the device causes an alarm to be sent to an Operator for immediate response (24 hours per day, seven days per week) and either automatically shuts down the station or activates a second alarm for immediate Operator response. Both the minimum allowable levels (if applicable) and the target values for Water Services regulatory continuous monitoring devices are listed in Table 13. The target values represent a safety margin to

ensure that regulatory requirements are satisfied at all times. Please note that, continuous monitoring values all fell within acceptable regulatory standards in 2017.

Table 13: O. Reg. 170/03 Schedule 6-5, "Continuous Monitoring" Results Summary (2017)

Parameter	ODWQS or Regulatory Minimum	Target Range	Units
Point of Entry Free Chlorine Residual	0.05 mg/L	Greater than 0.4	mg/L
UV Dose F.M. Woods Station	24 mJ/cm ²	Greater than 40	mJ/cm ²
UV Dose Emma and Water St. Wells	40 mJ/cm ²	Greater than 45	mJ/cm ²
UV Dose Membro Well	20 mJ/cm ²	Greater than 40	mJ/cm ²

Treated Water Quality Statistics – O. Reg. 170/03 Schedule 13-6 and 13-7, "Three Month" Sampling Results Summary

In 2017, all operational Treated Sources were sampled and analyzed for Schedule 13-6, 13-16.1 and 13-7 parameters as per O. Reg. 170/03.

Regulation 170/03, Schedule 13-6 requires a minimum of one distribution sample taken from the Distribution System where THM's (trihalomethanes) are most likely to develop (locations with high retention times). Water Services uses Speedvale Tower, Clair Tower, Verney Tower and Paisley Reservoir for this purpose in the Guelph Drinking Water System. The Maximum Allowable Concentration (MAC) for THM's is 0.1 mg/L. However, for this parameter, the MAC uses a running annual average of quarterly samples.

The results of the running annual average value for THMs for all related Distribution System samples in each quarter of 2017 (Jan. 01 to Dec. 31) is below the half of the maximum allowable concentration (½ MAC): Q1 = 0.0350 mg/L; Q2 = 0.0357 mg/L; Q3 = 0.0347 mg/L and Q4 = 0.0347 mg/L.

Regulation 170/03, Schedule 13-6.1 requires a minimum of one distribution sample taken from the Distribution System where HAAs (haloacetic acids) are most likely to develop. Water Services uses Speedvale Tower, Clair Tower, Verney Tower and Paisley Reservoir for this purpose in the Guelph Drinking Water System. The Maximum Allowable Concentration (MAC) for HAAs is 0.08 mg/L. However, for this parameter, the MAC uses a running annual average of quarterly samples.

The results of the running annual average value for HAAs for all related Distribution System samples in each quarter of 2017 (Jan. 01 to Dec. 31) is below the half of the maximum allowable concentration (½ MAC): Q1 = 0.0057 mg/L; Q2 = 0.0053 mg/L; Q3 = 0.0062 mg/L and Q4 = 0.0060 mg/L.

All operational Treated Sources were sampled and analyzed for Nitrates and Nitrites as per Regulation 170/03, Schedule 13-7. There was no instance of an adverse result in 2017. Raw sampling results are also presented in Table 14.

**Table 14: O. Reg. 170/03 Schedule 13-6 and 13-7, City of Guelph -
"Three Month" Sampling Results Summary (2017)**

Parameter	ODWQS MAC	½ MAC	Total Samples	Samples Above MDL	Total Above ODWQS Criteria	Min (mg/L)	Max (mg/L)	Average ⁹ (mg/L)
Trihalomethanes	0.100 ¹⁰	n/a	17	17	0	0.0212	0.0613	0.0339
Haloacetic Acids	0.08 ¹⁰	n/a	16	4	0	< 0.05	.032	0.032
Nitrate + Nitrite (as nitrogen)	10	5	54	40	0	< 0.10	3.03	1.00
Nitrate + Nitrite (as nitrogen) – Woods' Raw Sources (Operational Sampling)	n/a	n/a	41	40	n/a	<0.10	6.78	2.14
Nitrate + Nitrite (as nitrogen) – University Raw Source (MDWL Sampling)	10	5	5	5	0	0.22	0.76	0.49
Nitrate + Nitrite (as nitrogen) – Paisley Raw Source (MDWL Sampling)	10	5	5	5	0	1.83	2.14	2.03

Treated Water Quality Statistics – Operational VOC Scan Results Summary

Please note that Schedule 13-6, 13-6.1 and Schedule 24 parameters are also part of the "Operational VOC Sampling Regime" and therefore the values in the "Operational VOC Scan Results Summary" in Appendix "D" include a repetition of the relevant data from the Schedule 13-6, 13-6.1 and Schedule 24 tables. The "Operational VOC Scan Results Summary" lists the total number of samples analyzed for these parameters in 2017 (January 1 to December 31, 2017). Table 15 (below), highlights specific VOC parameters due to their presence / significance within the water supply. There was no instance of an adverse result in 2017.

Table 15: City of Guelph Operational VOC Scan Selected Results Summary (2017)

Parameter	ODWQS MAC	½ MAC	Total Samples	Samples Above MDL	Total Above ODWQS Criteria	Min (mg/L)	Max (mg/L)	Average (mg/L)
Trichloroethylene	0.005	0.0025	176	66	0	< 0.0001	0.00194	0.00081
Trihalomethanes (TTHMs)	0.100 ⁸	n/a	178	68	0	< 0.0002	0.0613	0.0115

⁹ This is the average of values above the lab detection limit.

¹⁰ This standard is expressed as a running annual average.

Treated Water Quality Statistics – O. Reg. 170/03 Schedule 23 Results Summary

In 2016, all operational “Treated Sources” were sampled and analyzed for Schedule 23 parameters as per O. Reg. 170/03. All of the City of Guelph’s treated ground water sources are on a three year sampling schedule. F.M. Woods’ Station is the exception and is sampled on the annual surface water schedule due to the fact that five of the nine sources that supply F.M. Woods are GUDI-WEF sources (the Carter Well field, Arkell 1, Arkell 15 and the Arkell Glen Collectors).

The results of the Schedule 23 inorganic parameter analysis in 2016 were all under the half of the maximum allowable concentration ($\frac{1}{2}$ MAC) and the majority were under the laboratory’s MDL (minimum detection level). Please refer to the section titled “O. Reg. 170/03 Schedule 23 Results Summary” included in Appendix “D” for more information.

The next scheduled “Three Year” Schedule 23 sampling event takes place in the third quarter of 2019.

The results of the Annual Schedule 23 inorganic parameter analysis in 2017 for F.M. Woods’ Station and Dean Well (not operational in 2016) were all under the $\frac{1}{2}$ MAC and the majority were under the laboratory’s MDL (minimum detection level) as presented in Table 16.

Table 16: O. Reg. 170/03 Schedule 23, 13-2a, City of Guelph - Annual Schedule 23 Sampling Results Summary (2017)

Parameter	ODWQS MAC	$\frac{1}{2}$ MAC	Total Samples	Samples Above MDL	Total Above ODWQS Criteria	Min (mg/L)	Max (mg/L)	Average (mg/L)
<u>Antimony</u>	0.014	0.007	3	0	0	< 0.0005	< 0.0005	n/a
<u>Arsenic</u>	0.025	0.0125	3	0	0	< 0.001	< 0.001	n/a
<u>Barium</u>	1.0	0.5	3	2	0	0.054	0.097	0.078
<u>Boron</u>	5.0	2.5	3	2	0	< 0.01	0.035	0.031
<u>Cadmium</u>	0.005	0.0025	3	1	0	< 0.00010	0.00011	0.00011
Chromium	0.05	0.025	3	0	0	< 0.005	< 0.005	n/a
Mercury	0.001	0.0005	2	0	0	< 0.0001	< 0.0001	n/a
Selenium	0.01	0.005	3	0	0	< 0.002	< 0.002	n/a
<u>Uranium</u>	0.02	0.01	3	3	0	0.00054	0.0019	0.00138

Treated Water Quality Statistics – O. Reg. 170/03 Schedule 24 Results Summary

In 2016, all operational “Treated Sources” were sampled and analyzed for Schedule 24 parameters as per O. Reg. 170/03. All of the City of Guelph’s treated ground water sources are on a three year sampling schedule. F.M. Woods’ Station is the exception and is sampled on the annual surface water schedule due to the fact that five of the nine sources that supply F.M. Woods’ are GUDI-WEF sources (the Carter Well field, Arkell 1, Arkell 14 and the Glen Collectors).

The results of the Schedule 24 organic parameter analysis in 2016 were all under half of the maximum allowable concentration ($\frac{1}{2}$ MAC) and the majority were under the laboratory’s MDL (minimum detection

level). Please refer to the section entitled "O. Reg. 170/03 Schedule 24 Results Summary" included in Appendix "D" for more information.

It should be noted that, before 2012, values for TCE (trichloroethylene) at Membro and Emma occasionally crested the ½ MAC value of 0.0025 mg/L and as a result Water Services moved to an "Increased Frequency Sampling Plan" as required by Regulation 170/03 - 13-5 which requires that sampling for this parameter be sampled every "three months" until two consecutive sample results are below the ½ MAC value. As a precautionary measure, Water Services samples both raw and treated water sources on a monthly schedule at Membro and Emma wells. All other sources, both raw and treated, are sampled annually (minimally) for VOC's (Volatile Organic Carbons) through a "Guelph VOC Scan" in order to better track parameters such as TCE via more data. Currently, TCE is above the MDL but below the ½ MAC at Membro, Water Street and Park treated water samples.

The next scheduled "Three Year" Schedule 24 sampling event takes place in 2019.

The results of the Annual Schedule 24 organic parameter analysis in 2017 for F.M. Woods Station and Dean Well (not operational in 2016) were all under the half of the maximum allowable concentration (½ MAC) and the laboratory's MDL (minimum detection level), as presented in Table 17.

Table 17: O. Reg. 170/03 Schedule 24, 13-4a, City of Guelph - Annual Schedule 24 Sampling Results Summary (2017)

Parameter	ODWQS MAC	½ MAC	Total Samples	Samples Above MDL	Total Above ODWQS Criteria	Min (mg/L)	Max (mg/L)	Average (mg/L)
Alachlor	0.005	0.0025	2	0	0	< 0.0005	< 0.0005	n/a
Atrazine + N-dealkylated metabolites	0.005	0.0025	2	0	0	< 0.001	< 0.001	n/a
Azinphos-methyl	0.02	0.01	2	0	0	< 0.002	< 0.002	n/a
Benzene	0.005	0.0025	11	0	0	< 0.0001	< 0.0001	n/a
Benzo(a)pyrene	0.00001	0.000005	2	0	0	< 0.000009	< 0.000009	n/a
Bromoxynil	0.005	0.0025	2	0	0	< 0.0005	< 0.0005	n/a
Carbaryl	0.09	0.045	2	0	0	< 0.005	< 0.005	n/a
Carbofuran	0.09	0.045	2	0	0	< 0.005	< 0.005	n/a
Carbon Tetrachloride	0.005	0.0025	11	0	0	< 0.0001	< 0.0001	n/a
Chlorpyrifos	0.09	0.045	2	0	0	< 0.0001	< 0.0001	n/a
Diazinon	0.02	0.01	2	0	0	< 0.001	< 0.001	n/a
Dicamba	0.12	0.06	2	0	0	< 0.001	< 0.001	n/a
1,2-Dichlorobenzene	0.2	0.1	11	0	0	< 0.0002	< 0.0002	n/a
1,4-Dichlorobenzene	0.005	0.0025	11	0	0	< 0.0002	< 0.0002	n/a
1,2-Dichloroethane	0.005	0.0025	11	0	0	< 0.0002	< 0.0002	n/a
1,1-Dichloroethylene (vinylidene chloride)	0.014	0.007	11	0	0	< 0.0001	< 0.0001	n/a
Dichloromethane	0.05	0.025	11	0	0	< 0.0005	< 0.0005	n/a

Parameter	ODWQS MAC	½ MAC	Total Samples	Samples Above MDL	Total Above ODWQS Criteria	Min (mg/L)	Max (mg/L)	Average (mg/L)
2,4-Dichlorophenol	0.9	0.45	2	0	0	< 0.00025	< 0.00025	n/a
2,4-Dichlorophenoxy acetic acid (2,4-D)	0.1	0.05	2	0	0	< 0.0001	< 0.0001	n/a
Diclofop-methyl	0.009	0.0045	2	0	0	< 0.0009	< 0.0009	n/a
Dimethoate	0.02	0.01	2	0	0	< 0.0025	< 0.0025	n/a
Diquat	0.07	0.0035	2	0	0	< 0.007	< 0.007	n/a
Diuron	0.15	0.075	2	0	0	< 0.01	< 0.01	n/a
Glyphosate	0.28	0.14	2	0	0	< 0.01	< 0.01	n/a
Malathion	0.19	0.095	2	0	0	< 0.005	< 0.005	n/a
2-Methyl-4-chlorophenoxyacetic acid	0.1	0.05	2	0	0	< 0.00012	< 0.00012	n/a
Metolachlor	0.05	0.025	2	0	0	< 0.0005	< 0.0005	n/a
Metribuzin	0.08	0.04	2	0	0	< 0.005	< 0.005	n/a
Chlorobenzene	0.08	0.04	11	0	0	< 0.0001	< 0.0001	n/a
Paraquat	0.01	0.005	2	0	0	< 0.001	< 0.001	n/a
Pentachlorophenol (PCP)	0.06	0.03	2	0	0	< 0.0005	< 0.0005	n/a
Phorate	0.002	0.001	2	0	0	< 0.0005	< 0.0005	n/a
Picloram	0.19	0.095	2	0	0	< 0.005	< 0.005	n/a
Polychlorinated Biphenyls (PCB)	0.003	0.0015	2	0	0	< 0.00005	< 0.00005	n/a
Prometryn	0.001	0.0005	2	0	0	< 0.00025	< 0.00025	n/a
Simazine	0.01	0.005	2	0	0	< 0.001	< 0.001	n/a
Terbufos	0.001	0.0005	2	0	0	< 0.0005	< 0.0005	n/a
Tetrachloroethylene (PCE)	0.03	0.015	11	0	0	< 0.0001	< 0.0001	n/a
2,3,4,6-Tetrachlorophenol	0.1	0.05	2	0	0	< 0.0005	< 0.0005	n/a
Triallate	0.23	0.115	2	0	0	< 0.001	< 0.001	n/a
Trichloroethylene	0.005	0.0025	11	0	0	< 0.0001	< 0.0001	n/a
2,4,6-Trichlorophenol	0.005	0.0025	2	0	0	< 0.0005	< 0.0005	n/a
Trifluralin	0.045	0.0225	2	0	0	< 0.001	< 0.001	n/a
Vinyl Chloride	0.002	0.001	11	0	0	< 0.0002	< 0.0002	n/a

Treated Water Quality Statistics – O. Reg. 170/03 Schedule 13-8 and 13-9, “Five Year” Sampling Results Summary

In 2014, all operational “Treated Sources” were sampled and analyzed for the Schedule 13-9 Fluoride parameter as per O. Reg. 170/03. In 2014, Fluoride (naturally present and not added as part of the treatment process) was detected at all treated sources; the analytical results were all under the maximum allowable concentration (MAC). The values in Table 18 reflect the 2014, Schedule 13-9 sampling regime. Sodium, however, is sampled on a more frequent basis (annually) than the Schedule 13-8 requirement. Due to the fact that at every treated source, sodium levels are above the lower reportable limit of 20 mg/L.

The increased frequency of sampling provides more data in order to better establish sodium value trends. Sodium results for 2014 can be referenced in Table 18. This data is provided to Wellington-Dufferin-Guelph Public Health, as required.

Table 18: O. Reg. 170/03 Schedule 13-8 and 13-9, City of Guelph - “Five Year” Sampling Results Summary

Parameter	ODWQS MAC	½ MAC	Total Samples	Samples Above MDL	Total Above ODWQS Criteria	Min (mg/L)	Max (mg/L)	Average (mg/L)
Sodium	20 and 200 ¹¹	n/a	27	27	27	24	150	73.6
Fluoride	1.5 and 2.4 ¹²	n/a	20	20	0	0.13	0.77	0.292

Treated Water Quality Statistics – General Chemistry Results Summary

Water Services has initiated an “Annual General Chemistry” sampling event through RCap (Rapid Chemical Analysis Package). This body of data can be used to answer customer inquiries, as well as, inquiries from Water Services staff and consultants in terms of treatment upgrades.

Please note that Schedule 23 parameters are also part of the “Annual General Chemistry Sampling Regime” and therefore the values in the “General Chemistry Results Summary” section in Appendix “D” include a repetition of the relevant data from the Schedule 23 Table. The “General Chemistry Results Summary” lists the total number of samples analyzed for these parameters in 2017.

In 2017, all operational “Treated Sources” were sampled and analyzed for general chemistry parameters. Please refer to the “General Chemistry Results Summary” in Appendix “D” for the full list of parameters.

Table 19 highlights specific parameters due to their presence / significance within the water supply.

¹¹ The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.

¹² Where supplies contain naturally occurring fluoride at levels higher than 1.5 mg/L but less than 2.4 mg/L, the Ministry of Health and Long Term Care recommends an approach through local boards of health to raise public and professional awareness to control excessive exposure to fluoride from other sources.

Table 19: City of Guelph General Chemistry Selected Results Summary (2017)

Parameter	ODWQS MAC	ODWQS AO	ODWQS OG	Total Samples	Samples Above MDL	Total Above Criteria	Min (mg/L)	Max (mg/L)	Average (mg/L)
Ammonia-N	n/a	n/a	n/a	13	2	n/a	< 0.05	0.18	0.14
<u>Chloride</u>	n/a	250	n/a	13	13	0	37	280	150
<u>Hardness (Calculated as CaCO₃)</u>	n/a	n/a	80-100	13	13	13	320	550	441
<u>Iron</u>	n/a	0.3	n/a	14	3	1	< 0.1	0.49	0.31
Lead	0.01	n/a	n/a	14	2	0	<0.0005	0.0013	0.00099
<u>Manganese</u>	n/a	0.05	n/a	14	11	1	<0.002	0.065	0.0143
<u>Sodium</u>	n/a	20 and 200	n/a	14	14	14	20	160	84

i) Treated Water Quality – 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 2017. For regulatory sampling schedules that do not occur in 2017 related to the Gazer Mooney System, the most recent historical data is listed.

Water Quality Review - Gazer Mooney Subdivision Distribution System

Under the Safe Drinking Water Act, 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 the raw source waters.

A note about all tables included in this section:

1. All regulated chemical parameters where values above the lab's MDL (minimum detection limit) have been detected in the City of Guelph's treated water sources are underlined indicating a hyperlink to an Excel Workbook in Guelph's EDMS. The workbook contains a definition of the parameter, an Excel worksheet for each treated source where the parameter has been detected with values for all sample results from January 1, 2007 to December 31, 2017. This database is used to closely track the instances of the identified chemical parameters and therefore provide time for planning / budgeting if treatment or an alternative supply is eventually required due to the presence of a given parameter. The database is updated quarterly.
2. Tabulated values are from best available information at the time of table creation. While the values above satisfy the regulatory minimum regulatory requirements, Water Services performs many additional operational tests not listed in this report.
3. All acronyms and initialisms included in tables are described in Appendix "I" – Glossary.

Table 20 summarizes daily Distribution free chlorine residual test results required by O. Reg. 170/03 Schedule 7-2 for the period of January 1 to December 31, 2017. There was no instance of an adverse result in 2017.

Table 20: O. Reg. 170/03 Schedule 7-2, Gazer Mooney - Distribution Manual Free Chlorine Residual Summary (2017)

Parameter	ODWQS Range	Total Samples	Total Samples Outside of ODWQS Criteria	Min (mg/L)	Max (mg/L)	Average (mg/L)	Units
Free Chlorine Residual	0.05 – 4.0	365	0	0.27	1.24	0.88	mg/L

Table 21 summarizes bacteriological sampling and test results required by O. Reg. 170/03 Schedule 10 for the period of January 1 to December 31, 2017. There was no instance of an exceedance for a Regulatory microbiological parameter in 2017. There were 52 Distribution samples taken and 573 Distribution analyses completed in 2017.

Table 21: O. Reg. 170/03 Schedule 10-2, Gazer Mooney Treated Bacteriological Sampling Summary (2017)

Parameter	ODWQS Criteria	Total Analyses	Total Outside ODWQS Criteria	Range	Units
Distribution - E. coli	0	52	0	0	cfu/100 mL
Distribution - Total Coliform	0	52	0	0	cfu/100 mL
Distribution – HPC	n/a	51	n/a	0 - 2	cfu/mL
Distribution – Background	n/a	52	n/a	0 - 4	cfu/100 mL
Distribution– Free Chlorine Residual	0.05 – 4.0	365	0	0.27 – 1.24	mg/L

Treated Water Quality Statistics – O. Reg. 170/03 Schedule 13-6, “Three Month” Sampling Results Summary

In 2017, Gazer Mooney Subdivision Distribution System was sampled and analyzed for Schedule 13-6 and 13-6.1 parameters as per O. Reg. 170/03. Regulation 170/03, Schedule 13-6 requires a minimum of one distribution sample taken from the Distribution System where THMs (trihalomethanes) are most likely to develop (points with high retention times). The MAC for THMs is 0.1 mg/L. However, for this parameter the MAC uses a running annual average of quarterly samples. These results are presented in Table 22.

The results of the running annual average value for THMs in the Gazer Mooney Subdivision Distribution System samples in 2017 is below the half maximum allowable concentration ($\frac{1}{2}$ MAC): Q1 = 0.0251 mg/L; Q2 = 0.0287 mg/L; Q3 = 0.0285 mg/L and Q4 = 0.0174 mg/L.

Regulation 170/03, Schedule 13-6.1 requires a minimum of one distribution sample taken from the Distribution System where HAAs (haloacetic acids) are most likely to develop. The MAC for HAAs is 0.08 mg/L. However, for this parameter the MAC uses a running annual average of quarterly samples.

The results of the running annual average value for HAAs in the Gazer Mooney Subdivision Distribution System samples in 2017 is below the half maximum allowable concentration ($\frac{1}{2}$ MAC): Q1 = 0.0014 mg/L; Q2 = 0.0014 mg/L; Q3 = 0.0014 mg/L and Q4 = not detected.

Table 22: O. Reg. 170/03 Schedule 13-6, Gazer Mooney - "Three Month" Sampling Results Summary (2017)

Parameter	ODWQS MAC mg/L	1/2 MAC mg/L	Total Samples	Samples Above MDL	# Above ODWQS Criteria	Min (mg/L)	Max (mg/L)	Average (mg/L)
Trihalomethanes	0.100 ¹³	n/a	4	4	0	0.0143	0.0533	0.0202
Haloacetic Acids	0.08 ¹³	n/a	4	0	0	<0.005	<0.005	n/a

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, Water Services samples for parameters as listed in Table 23 in order to gather additional data and answer common inquiries from the public.

Table 23: Gazer Mooney General Chemistry Results Summary (2017)

Parameter	ODWQS MAC mg/L	ODWQS AO	1/2 MAC mg/L	Total Samples	Samples Above MDL	Total Above ODWQS Criteria	Min (mg/L)	Max (mg/L)	Average (mg/L)
Sodium	20 and 200 ¹⁴	n/a	n/a	1	1	1	21	21	21
Chloride	n/a	250	n/a	1	1	0	41	41	41

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

This includes summaries and updates related to the implementation of the:

- 2016 Water Efficiency Strategy;
- Source Water Protection Plan; and
- Lead Reduction Plan.

Water Conservation and Efficiency

The City of Guelph strives to be a leader in water conservation and efficiency. As one of Canada's largest communities reliant on a finite groundwater source for our drinking water needs, our ability to reclaim precious water and wastewater serving capacity through conservation and efficiency initiatives offers numerous benefits to our community and local ecosystem. Water Services continues to promote the ongoing sustainability of our finite water resources through active water conservation and efficiency programming to meet the water reduction targets as outlined in the 2014 Water Supply Master Plan.

¹³ This standard is expressed as a running annual average.

¹⁴ The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.

Appendix "H" includes a highlight of the progress made for the period of January 1 to December 31, 2017 in the implementation of the 2016 Water Efficiency Strategy.

Source Water Protection Plan

The Grand River Source Protection Plan was approved by the Minister of the Environment and Climate Change on November 26, 2015 with an effective date of July 1, 2016. Council has appointed risk management staff, including a Risk Management Official (RMO) and a Risk Management Inspector (RMI) to protect Guelph's Drinking Water, as per the Clean Drinking Water Act, 2016.

Source Water Protection staff will continue to carry out on-site inspections of businesses that were originally flagged as significant drinking water threats in the Grand River Approved Assessment Report (2012). A desktop review was conducted in 2010 to provide an initial inventory of potential significant drinking water threats and was conservative in the approach taken to enumerate the threats. Staff will be carrying out on-site inspections on a priority basis with properties closest to the City's municipal wells being addressed first to confirm the details from the initial inventory. It is expected that the total number of significant drinking water threats will be reduced as a result of the field confirmations that will take place in 2018 and beyond.

The Risk Management Official will continue to negotiate Risk Management Plans that are required under the Clean Water Act. This will be prioritized during the development application and building permit stages for new development, and as identified during the ongoing on-site field confirmation program noted above.

Source Water Protection Program staff are working with the Source Protection Authority and the County of Wellington to advance the development of water quantity policies using priority rankings, risk management measures, stakeholder consultations and public communications with the goal of submitting draft policies to the MOECC at the end of 2018. The policies, once approved by the Minister will form the final part of the Source Protection Plan.

Source Water Protection Program staff, in conjunction with Water Services and Communication staff, will also undertake the development of the various education and outreach programs that are required under the Grand River Source Protection Plan in 2018. The objective of this part of the program is to raise awareness of the importance of protecting our drinking water sources and to educate the public on drinking water threats and ways they can contribute to protecting our water resources.

For more information on Guelph's Source Water Protection Program visit: guelph.ca/sourcewater.

Arkell Springs Forest Stewardship Project

Another source water protection initiative is carried out through the Arkell Springs Forest Stewardship Project. The Arkell Spring Grounds cover an area of 804 acres. The area is comprised of old and new forested areas. The objective of the Arkell Springs Forest Stewardship Project has been to protect the drinking water aquifer by managing past tree plantings, monitor general forest health and enhance fallow areas with new plantings.

Delicate forest stands require continued maintenance and observation to ensure the prevention of any unnecessary and undesired losses. The many benefits of the project include: the creation of a diverse and

functioning forest cover; maintenance and re-generation of older forested areas on the property; protection and recharge of underground aquifers which supply our City’s water; prevention of undesirable surface water runoff and flooding into local waterways; and regulation of the flow of water. This multiple barrier approach results in the highest possible quality of water to supply Guelph’s drinking water system. Forest systems also extend the longevity of the existing snow pack by stabilizing the temperature of the ground and limiting the evaporative impact of the sun. This ensures that surface water source recharges the underlying aquifer rather than contributing to damaging runoff and flooding.

At the beginning of December 2016, a commercial thinning harvest was started on the Arkell site. Commercial thinning is a silviculture treatment that 'thins' out an overstocked plantation stand by removing trees that are large enough to be sold for products such as poles or fence posts. It is carried out to improve the health and growth rate of the remaining crop trees. Commercial thinning is an intermediate harvest where the merchantable wood removed should cover part or all of the cost of harvesting. The thinning of a red pine plantation was completed in January 2017. About 10,000 red pine trees (1,150 cords of wood) were removed.

To further enhance the site’s fallow farm fields, a tree planting program has been ongoing since 2007. On a volunteer basis, the Community Environmental Leadership Program (CELP) has planted 24,500 trees on 18 acres, and Bartram Woodlands (on-site contractor) has planted 35,790 trees on another 16 acres. This number includes 9,550 trees that were planted into the rows removed from the recent commercial harvest.

Lead Reduction Plan

The City of Guelph’s Lead Reduction Plan (LRP) was developed in lieu of a Corrosion Control Plan (as outlined in Ontario Regulation 170/03 Schedule 15.1) and was formally approved by the Ministry of the Environment and Climate Change (MOECC) on March 21, 2012. The LRP focuses on physical lead service line replacement through verification sampling, financial incentives and public outreach.

As per the City of Guelph MDWL 017-101, Schedule D issued April 21, 2017, the City is required to submit all lead sampling data every 6 months and an annual Evaluation Report to assess the effectiveness of the Lead Reduction Plan. The following table presents summary results for lead sampling in the Guelph Drinking Water System as per Schedule D for the period of January 1 to December 31, 2017.

Table 24: Lead Reduction Plan Lead Sampling – Guelph Drinking Water System 2017¹⁵

Number of Locations	Location Type	Number of Samples	Lead Range (mg/L)
56	Plumbing that Serves Private Property	92	0.0000 – 0.11
17	Distribution System	41	0.0000 - 0.088

In the Gazer Mooney Subdivision Distribution System, all samples were below the Ontario Drinking Water Standard for lead of 0.01 mg/L, as presented in the following table.

¹⁵ Includes all samples as required by the MDWL or Lead Reduction Plan.

Table 25: Lead Reduction Plan – Gazer Mooney Subdivision Distribution System 2017

Number of Locations	Location Type	Number of Samples	Lead Range (mg/L)	pH Range	Alkalinity Range (mg/L)
2	Distribution	3	0.0000 – 0.0021	7.8 – 8.11	260 - 270

Lead Sampling

Lead sampling is conducted to identify the presence of lead service lines (LSL) and to monitor lead levels following a LSL replacement. For the period of January 1 to December 31, 2017, 41 private plumbing locations were sampled for the purposes of verifying the presence of a LSL. Of these locations, 9 locations were above 5 micrograms per litre ($\mu\text{g/L}$) indicating presence of a lead service line and 6 also exceeded the ODWQS of 10 $\mu\text{g/L}$. Lead samples are collected before and after a LSL replacement has been undertaken. There were 15 locations resampled in order to monitor lead levels post-replacement. Based on sample results to date, regulatory compliance is expected at individual sites that have undergone a full LSL replacement or where there is no lead remaining in the service line.

Lead Service Line Replacements

There were 24 LSL replacements undertaken in the City between January 1 to December 31, 2017. These replacements include the following situations: i) Full LSL Replacement where both the City- and private-side of the LSL is replaced, ii) Partial LSL Replacement where only the City-side of the service is replaced and connected back to lead or a non-lead material on the private-side, and iii) Private LSL Replacement where the private-side of the service is replaced and the City-side is known to be copper. The next table presents a summary of all LSL replacements in the Guelph Drinking Water system for 2017 up to December 31.

Table 26: Lead Service Line Replacements 2017

Type of Replacement	#
Full (City and Private sides replaced): Lead Free	1
Partial (City side replaced and connected to copper or iron on Private side): Lead Free	1
Partial (City side replaced and connected to lead or unknown material on Private side): Lead Remaining	5
Private LSL Replacement (Funded under Grant Program¹⁶ or by private contractor): Lead Free	17
TOTAL	24

Privately Owned Lead Service Line Replacements

Since 2010, the City initiated financial incentive programs to encourage replacement of privately-owned LSL by reducing the financial burden to property owners. The grants cover 70 to 100 percent of the LSL

¹⁶ The LSL Replacement Grant Program provides eligible property owners funding to off-set the cost of replacing an LSL on private property.

replacement cost for homeowners. From 2010 to Dec. 31, 2017, 213 privately owned lead service lines were replaced through the grant program, as presented in Table 27.

Table 27: Private Lead Service Line Replacement Grant Programs (2010 – Dec. 31, 2017)

Grant Program	2010	2011	2012	2013	2014	2015	2016	2017
Yearly Total	60	62	31	20	9	12	7	13
Cumulative Total	60	122	153	173	182	194	200	213

Targeted outreach regarding the Grant Programs is directed at all properties with known or suspected privately-owned LSLs. The main barriers to privately owned LSL replacement for homeowners include financial costs, disruption to property, rental properties and people who are unconcerned about the health risks of lead in drinking water. Direct communications continued to be tailored to address these barriers.

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

Appendix "E" Legal & Other Requirements includes a summary of legislative and regulatory updates from January 1 to December 31, 2017.

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

Carter Monitoring Program – Operational Testing

The Permit to Take Water for Carter Well requires that the Carter Wells be operated at increased levels in conjunction with monitoring in the Torrence Creek Subwatershed. The purpose of the monitoring is to quantify impacts within this subwatershed.

Municipal Drinking Water Licence Renewal

The current Municipal Drinking Water Licence expires in 2019. Table 28, below includes Licence documents' dates of issue and expiry.

Table 28: Municipal Drinking Water Licensing Documents

Document (hyperlinked)	Issue Date (yyyy-mm-dd)	Expiry (yyyy-mm-dd)
<u>Municipal Drinking Water Licence (#017-101)</u>	2017-04-21	2019-08-17
<u>Drinking Water Works Permit (#017-201)</u>	2017-04-21	2019-08-17
<u>Drinking Water Works Permit (#017-201) - Schedule C</u>	2016-03-24	2019-08-17
<u>Municipal Long Range Financial Plan (#017-301)</u>	2014-02-25	2019-08-17
<u>DWOMS Certificate of Registration - Guelph Drinking Water System (017-OA1)</u>	2016-08-04	2019-07-27
<u>Operational Plan Re-endorsement Guelph Drinking Water System (resolution)</u>	2015-10-26	2019-10-31

Document (hyperlinked)	Issue Date (yyyy-mm-dd)	Expiry (yyyy-mm-dd)
<u>Agreement Regarding Water Services for the Gazer-Mooney Subdivision</u>	2009-06-01	2019-05-31
<u>Municipal Drinking Water Licence (#104-103)</u>	2016-01-28	2021-01-26
<u>Drinking Water Works Permit (#017-203)</u>	2016-01-28	2021-01-26
<u>Operational Plan Re-endorsement Gazer Mooney Sub. Dist. System (resolution)</u>	2015-07-14	2019-10-31
<u>DWQMS Certificate of Registration - Gazer Mooney (104-OA2)</u>	2016-08-04	2019-07-27

Sentry Monitoring Wells

In order to help predict future TCE concentrations in our source water and allow for planning for the possible need for further treatment, sentry wells have been constructed in the vicinity of Emma and Membro Wells. TCE source sampling analysis indicates that TCE concentrations are stable or decreasing.

Permits to Take Water (PTTW) Renewals

The [Water St. Wellfield \(Water, Dean, University, Membro\) PTTW](#) (exp. 2016 -10-31) is still in the active renewal process and rests with the MOECC. For the time period between the expiry date of a PTTW and the receipt of a renewal, the requirements of the last PTTW remain in force.

Two PTTWs are scheduled for renewal in 2018:

1. [Calico PTTW](#) (exp. 2018-04-30)
2. [Eramosa River PTTW](#) (exp. 2018-11-30)

Staff Certification

The following tables (Table 29, Table 30 and Table 31) describes all staff (Operators, Management, and other Technical staff) with various classes of provincial Drinking Water Operator Certificates and years' experience, as of December 31, 2017.

Table 29: Water Services Staff with Drinking Water Operator Certificates

Certificate Class	Number of Certified Employees		
	2015	2016	2017
Operator-In-Training	4	2	3
Class I	1	2	0
Class II	3	3	3
Class III	12	12	8
Class IV	10	12	19
Total Certified Employees	30	31	33

Table 30: Competency & Years’ Experience of Certified Management Staff

Role	Minimum Competency Required ¹⁷	Competency Achieved	Years’ Experience
Manager of Operations / ORO -Overall Responsible Operator	Class IV Certificate	Class IV Certificate	30+
Supervisor of Distribution / Construction	Class I Certificate or higher	Class IV Certificate	21+
Supervisor of Distribution / Metering	Class I Certificate or higher	Class IV Certificate	17+
Supervisor of Water Supply Operations	Class I Certificate or higher	Class IV Certificate	14+
Supervisor of Water Supply Maintenance	Class 1 Certificate or higher	Class IV Certificate	9+

Table 31: Years’ Experience of Certified Staff

Role	<5 years	5-9 years	10-14 years	15-19 years	20-24 years	25+ years
Distribution Operators	2	6	3	2	0	2
Supply Operators	1	0	4	2	0	1
Technical Services Staff	1	2	1	0	1	0

Changes Affecting the Quality Management System (QMS)

Results of the Management Review, the identified deficiencies, decisions and action items:

A Management Review meeting was held on February 1, 2017 and January 30, 2018. The following is a summary of results of the management review. Appendix “F” includes the action items from the meeting; items 1-15 are from the February 1, 2017 Management Review meeting and items 16-28 are from the January 30, 2018 Management Review Meeting. The summary includes identified deficiencies, decisions and action items below:

Deficiencies:

- There were not any identified non-compliance issues in 2017.
- 5 AWQI’s occurred in 2017 (two related to lead, three related to TC).
- 2 minor non-conformities from the last external audit re: Sampling, Testing and Monitoring and Continual Improvement.

¹⁷ Minimum competency includes the certification requirements listed here, plus the completion of ongoing training requirements of O. Reg. 128/04.

Decisions:

- Refer to section d) regarding decisions made in the Risk Assessment process on October 12, 2017.
- Install a sample station in Zone 3, as soon as reasonably possible.
- For the 2017 Annual and Summary Report:
 - Include more defined Pressure Zone boundaries in Figure 1.
 - Include emergency preparations that were done at F.M. Woods prior to work on the Paisley-Clythe Feedermain.
 - Include the sampling stations that were installed by contractors through the DMA Program in Table 4.
 - Create a table that identifies the UVT values at the stations that provide UV treatment.
 - Add information regarding the Paisley-Clythe Feedermain project to the Infrastructure Review section.
- For the 2018 Annual and Summary Report:
 - Include the total number of lead replacements, including those done through capital reconstruction projects in the 2018 Annual & Summary Report.

Ontario's updated Drinking Water Quality Management Standard (DWQMS)

Guelph Water Services has implemented the updated DWQMS (Version 2.0 - February 2017) in its quality management system. Most significant edits to the DWQMS are:

- Throughout: added "once every Calendar Year" where applicable in place of "once every year" or "once every 12 months".
- QMS 07: includes consideration of potential hazardous events and associated hazards identified by the ministry. These hazardous events are identified in the document titled "Potential Hazardous Events for Municipal Residential Drinking Water Systems."
- QMS 12: suppliers of essential supplies and services identified by Guelph Water Services are considered in the procedure for communications. This document will further describe this statement.
- QMS 14: Outcomes of the risk assessment documented under QMS 08 will be considered in the procedure for reviewing the adequacy of the infrastructure necessary to operate and maintain the drinking water system.
- QMS 15: Long-term forecast of major infrastructure maintenance, rehabilitation and renewal activities is already included as part of QMS 14 (but will elaborate the procedure to include this statement).
- QMS 21: includes consideration of BMP's (when available from the MOECC) in continual improvement; a documented process for identification & management of continual improvement reports (that are continual improvement items, corrective actions or preventive actions, where applicable).

I) Consumer Feedback

The table below represents the number of all customer calls received, but do not necessarily reflect the number of individual issues (as more than one call could relate to a single issue):

Table 32: Customer Calls Received

Type	# Calls 2015	# Calls 2016	# Calls 2017
Discoloured Water	160	185	106
Distribution	72	77	54
Flushing	27	33	13
Frozen	695	5	3
Hydrant - Accident Report	2	3	5
Hydrant - Investigation	38	39	35
Hydrant Out-of-Service	65	108	137
Leak	52	88	83
Meter	36	11	8
Other	127	53	33
Pressure	95	104	92
Private Issue	18	23	5
Service Box Repairs	254	205	194
Swabbing	47	59	16
Trench Investigation	9	6	4
Valve	27	46	19
Water Quality / Appearance	47	55	39
Watermain	67	5	6
Watermain Break Investigation	54	90	96
Well Interference Inquiries	2	4	3

m) The Resources Needed to Maintain the DWS and QMS

Water Services currently has one full-time Quality Assurance Coordinator, who is also the Quality Management System Representative; a Compliance Coordinator; access to five Water Services Technicians; and a Customer Service Clerk for reporting and documentation requirements of the QMS.

Operational challenges in the drinking water system continue to drive the need for additional resources, such as:

- A changing staff profile, with experienced staff that have retired or are due to retire in the next few years;
- Aging city infrastructure requiring increased capital budget considerations;
- Potential source water supply shortfall (e.g. current supplies not meeting future demand, drought, contamination, demands of future growth);

- Distribution system issues (e.g. frozen city-side infrastructure, larger infrastructure failures or hits; Locates Program, Metering Program); and
- Private property issues.

n) The Results of Infrastructure Review

The identification of water infrastructure requirements are achieved by reviewing the needs of existing and new infrastructure through the completion of asset management plans both at Water Services and corporately.

Distribution Infrastructure Needs

Distribution infrastructure needs are outlined in the corporate asset management plan, which is developed using industry best management practices and completed by the Engineering & Capital Infrastructure Services (Engineering Services) Asset Management department. This linear plan is reviewed by Water Services who then assists in developing a priority sequence for project completion. In 2017, Water Services also completed a review of the distribution system with respect to fire flows to aid in this discussion.

During the annual budget preparation process, Engineering Services and Water Services review infrastructure conditions, inventory age, CAPS (capital asset prioritisation system), and system criticality. From this evaluation, Engineering and Water Services finalize the list of priority projects that also considers the priorities of wastewater and road reconstruction projects so that these projects can share the costs of excavation and rehabilitation. New linear infrastructure reviews are primarily driven by Engineering Services.

Annual summaries of road reconstruction, sewer and watermain projects are identified on an infrastructure map that is released early spring each year.

Supply & Facilities Infrastructure Needs

On July 28, 2014 Guelph City Council unanimously approved the Water Supply Master Plan update, defining preferred water supply servicing alternatives in meeting the needs of existing customers and future community growth.

In concert with the Water Supply Master Plan Update, the City's Engineering Services completed an update to the linear water distribution network model as part of the 2014 Development Charges Background Study to define water distribution improvements needed for growth servicing.

As part of the above mentioned studies, a number of system upgrades have been identified including, additional water supply sources, new pumping stations, storage facilities and new water distribution mains. To help integrate these complex works, the City completed the Pressure Zone 1 and 2 studies in 2015 and 2017, respectively. These studies support the implementation of capital projects as outlined in the Water and Wastewater Capital Budget deliberations.

In 2017, Water Services completed the Water Facility and Property Asset Management Plan. This Plan identifies and prioritizes capital projects and land acquisitions required to maintain and renew its existing

facility assets and associated operations over a 25 year planning horizon in accordance with asset management industry best management practices as well as current codes, guidelines and standards. A 10 year capital forecast for Facility and Plant Upgrades was presented to and endorsed by Council as part of the 2018 Capital Budget deliberations to address a backlog in infrastructure investment required to sustain operation of the City's critical water supply facilities and processes. This 10 year capital plan seeks to invest \$48.8 million in water supply asset renewal and maintenance between 2017 and 2026, an increase of just over \$26 million over prior planned investment over this period in comparison to planned Water Services Facility Upgrades defined through the 2016 Capital budget.

As a result of the above noted studies, key capital projects have been initiated/ completed in 2017. The following provides the project name with a brief description of these key projects.

Burke Well Station Upgrades: Manganese concentrations in water from the Burke Well appear to be gradually increasing and are slightly above the MOECC's Aesthetic Objective for manganese (0.05 mg/L). Upgrades to the Burke Well Station to improve the aesthetic quality (iron and manganese) of water from the Burke Well have been planned for a number of years. The upgrades will include construction of a building to house a pressure filtration system. In 2016 the Building Permit for the project was received and the capital budget approved. Construction of the upgrades began in 2017 and the new treatment facility is expected to be in operation by the fall of 2018. The upgrades are expected to result in the Burke Well Station being classified as a Water Treatment Subsystem.

Clythe Well Treatment Upgrades – Environmental Assessment: The Environmental Assessment (EA) was completed for the Clythe Well station in 2017, to be filed in early 2018.

F.M. Woods Station Pump Discharge Replacement: Woods pump 2 and 3 discharge replacement was completed in the summer of 2016 to ensure the efficient operation of the pumping station.

Speedvale Tower Upgrades and Recoating: The Speedvale elevated tank recoating and upgrades were initiated in the spring of 2017 and completed in the fall of 2017. These key upgrades included ensuring the asset life of the elevated tank is sustained as well as provided key operational upgrades.

York Trunk Sewer and Paisley-Clythe Watermain: In 2017, Water Services provided assistance during the last stages of the York Trunk Sewer & Paisley-Clythe Watermain - Phase 2A Construction project. This contract included installation of new watermains, valve chambers and instrumentation at the Woods Pumping station requiring direct tie-ins to the City's existing water distribution system. An emergency backup water system was implemented as a contingency measure during critical pieces of this work. The Phase 1 and 2A portions of the Paisley-Clythe watermain were disinfected, commissioned and put into service in fall 2017.

Backflow Prevention Program

Preservation of drinking water quality within Guelph's infrastructure is supported by the City of Guelph's Building Services and Guelph's Backflow Prevention Regulations ("By-law", Number (2016) - 20028). As per the By-law, "Backflow" means the flowing back of or reversal of the normal direction of flow of water. The By-law requires that no connections are made to the City's water supply without the installation of a backflow prevention device to isolate premises, sources, and zones to prevent cross-connections in every building or structure where a City water supply or other potable water supply exists.

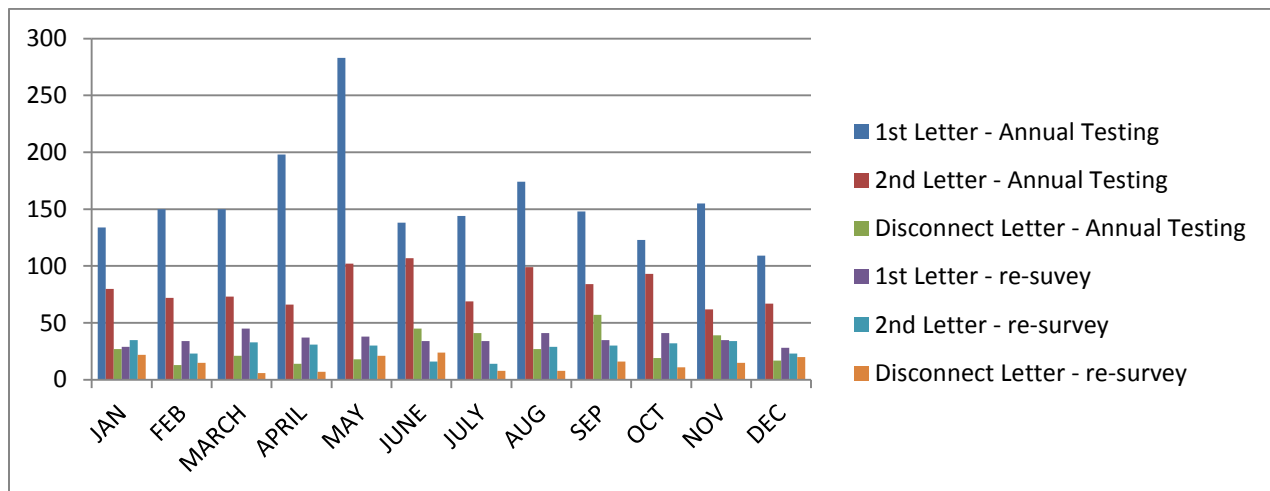
On a regular basis, Building Services provides the following “Backflow Report” included in the table below that tracks the number of letters sent out regarding annual testing and re-surveying requirements of the By-law.

As presented in Table 33 and Figure 5, the City of Guelph has a total of 2,818 properties (2,688 active and 130 inactive properties) that have a total of 6,495 backflow prevention devices installed. Of the total, 1,926 buildings have premise isolation and 990 buildings are without premise isolation (e.g. residential irrigation systems, plaza facility – plaza owner has premise isolation). New properties from January 1 to December 31, 2017: 14 with premise and 31 without premise isolation.

Table 33: 2017 Backflow Report - Number of Letters Sent out for Annual Testing and Re-survey

Letter Type	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Annual Testing – 1 st Letter	134	150	150	198	283	138	144	174	148	123	155	109	1906
Annual Testing – 2 nd Letter	80	72	73	66	102	107	69	99	84	93	62	67	974
Annual Testing – Disconnect Letter	27	13	21	14	18	45	41	27	57	19	39	17	338
Re-survey – 1 st Letter	29	34	45	37	38	34	34	41	35	41	35	28	431
Re-survey – 2 nd Letter	35	23	33	31	30	16	14	29	30	32	34	23	330
Re-survey – Disconnect Letter	22	15	6	7	21	24	8	8	16	11	15	20	173
Water Service Disconnected	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of new devices installed													206

Figure 5: Annual Backflow Prevention Device Re-Survey and Testing Letters from Building Services to Customers in 2017



o) Operational Plan Currency, Content and Updates

On an ongoing basis, the Operational Plan is updated by the Quality Assurance Coordinator with the help of additional Water Services Staff. Updates to the Operational Plan were communicated to management at an update meeting on September 13, 2017. Notable updates include:

- Redesign of the Water Quality Policy Poster with Corporate Communications and posting it in prominent locations, such as at City Hall and around Water Services.
- QMS 06 Drinking Water System: updated to include information regarding UV treatment at Membro Well and to include the newly added Zone 3 pressure system.
- QMS 08 Risk Assessment Outcomes: updated after the risk assessment was completed.
- QMS 09 Organizational Chart: updated when changes are made to staff assignments.
- QMS 21 Continual Improvement: updated to define a more robust Continual Improvement Procedure for Water Services.

See section k) "Expected Future Changes That Could Affect the DWS or the QMS" for additional Operational Plan updates.

p) Staff Suggestions

Staff suggestions are discussed during staff and operational meetings and taken into account during annual budget processes. Appendix "G" Summary of Staff Suggestions includes a listing of various improvement items that were presented by staff from January 1 to December 31, 2017.

q) New or Other Business

This section provides an update on new or other items of business beyond the scope of this report. There are no updates in 2017.

r) Next Meeting Dates

The Management Review Meeting scheduled to review the updated 2017 Annual & Summary Water Services Report was held on January 30, 2018. Review of the Internal Audit findings will take place in June 2018, review of the Risk Assessment outcomes in September 2018 and review of the External Audit findings in November 2018. Monthly QMS updates are scheduled with the management team and the Quality Assurance Coordinator.

Appendix "A" – Summary of Critical Control Points and Critical Control Limits

Critical Control Point (CCP)	Hazard Description	Critical Control Limit (CCL)	Monitoring Process & / or Procedures	Response Procedures
<p>Multi-Barrier Primary Disinfection</p> <p><i>To remove or inactivate pathogens potentially present in the source water.</i></p>	<p>Low Chlorine Dosage</p> <ul style="list-style-type: none"> Chlorination system failure (e.g. pump, line, fitting, power, PLC, flow meter) Failure of analyzers (POE or process) to alarm Poor chemical quality <p>Inadequate UV Dosage</p> <ul style="list-style-type: none"> UV Treatment system failure (e.g. UV and Turbidity analyzers, high flow, reactor, PLC, power, flow meters) 	<p><u>Free Chlorine</u></p> <ul style="list-style-type: none"> 0.05-4.0 mg/L (PDDW¹⁸, SDWA, O. Reg. 170/03) 0.2 mg/L (PDDW recommended optimal) <p><u>UV dose</u></p> <ul style="list-style-type: none"> at FM Wood: 24 mJ/cm² (Drinking Water Works Permit, DWWP) at Emma and Water Street wells: 40 mJ/cm² (DWWP) at Membro well: 20 mJ/cm² (DWWP) 	<ul style="list-style-type: none"> Certified and competent operators Daily operational sampling, testing and monitoring of control limits, as applicable Redundancy of system components (including equipment) & monitoring (operators, instruments), stand-by power Monitoring and alarming of control limits Calibration, maintenance and preventive maintenance - equipment Robust communication systems Receiving process for chemicals – Certificates of Analysis required for essential chemicals 	<ul style="list-style-type: none"> Supply Standard Operating Procedures Water Services Emergency Plan procedures
<p>Secondary Disinfection</p> <p><i>To ensure the maintenance of a disinfectant residual throughout the distribution system</i></p>	<p>Deterioration of chlorine residual, from:</p> <ul style="list-style-type: none"> Reduced water flows Occurrence of dead ends Increased water temperature (causing low chlorine residual) 	<p><u>Free Chlorine</u></p> <ul style="list-style-type: none"> 0.05-4.0 mg/L (PDDW, SDWA, O. Reg. 170/03) 0.2 mg/L (PDDW recommended optimal) <p><u>pH</u></p> <ul style="list-style-type: none"> 6.5-8.5 (operational criteria) <p><u>Turbidity</u></p> <ul style="list-style-type: none"> 5 NTU (operational criteria) 	<ul style="list-style-type: none"> Certified and competent operators Sampling, testing and monitoring of control limits, as applicable Main flushing programs Installation of blow-offs in dead ends Regular samples taken and analyzed for chlorine residual and temperature 	<ul style="list-style-type: none"> Distribution Standard Operating Procedures Response to customer calls Repair and system rehabilitation Use of appropriately certified and competent contractors and suppliers
<p>Backflow Prevention</p> <p><i>To prevent cross-contamination that can result from the flowing back of or reversal of the normal direction of flow of water.</i></p>	<p>System contamination from negative or reduced pressure</p> <ul style="list-style-type: none"> Lack of backflow prevention device Main breaks or blow-outs Large services Temporary connections Firefighting drawdown Depressurization from residential usage Pipe failure (deterioration) 	<p><u>System pressure</u></p> <ul style="list-style-type: none"> 275-550 kPa (industry standard for operating pressure) <p><u>Consumer complaints</u></p> <ul style="list-style-type: none"> Related to system pressure or water characteristics (odour, colour, taste other). 	<ul style="list-style-type: none"> Backflow Prevention program Where possible, implementation of backflow prevention devices and small mains Proactive Watermain and substandard service replacement program 	<ul style="list-style-type: none"> Distribution Standard Operating Procedures Response to customer calls Water Services Emergency Plan procedures

¹⁸ PDDW – Procedure for Disinfection of Drinking Water in Ontario as adopted by reference by O. Reg. 170/03 under the Safe Drinking Water Act.

Appendix "B" – Internal and External Audit Plans

Guelph Water Services Process or Program	2016 Audit Plan		2017 Audit Plan		2018 Audit Plan	
	Internal	External	Internal	External	Internal	External
Source Water – Source Water Protection (Engineering)				X		
Source Water – Tap Water Promotion, Education & Outreach			X		X	X
Source Water – Water Conservation (incl. Leak Detection and Water Loss Management)		X			X	X
Supply – Source & Treated Water Sampling, Testing, Monitoring		X	X	X	X	X
Supply – Operational Control: Disinfection, Minimum Storage, SCADA / Security, DMA's		X	X	X	X	X
Supply – Instrumentation Calibration / Verification		X	X	X	X	X
Supply – Supply Maintenance		X	X	X	X	X
Supply – Infrastructure (facility and tower) Inspections Program		X	X		X	X
Distribution – Watermain Maintenance and Service Connections Improvement		X	X	X	X	X
Distribution – Appurtenance Maintenance (valves, hydrants, meters)		X	X	X	X	X
Distribution – Backflow Prevention (Building Services)	X			X	X	
Distribution – Watermain Flushing & Swabbing		X	X	X	X	X
Distribution – Infrastructure Locates		X	X	X		
Distribution – Temporary Connections	X	X			X	X
Major Works & New Infrastructure – Engineering / Water: Review of Infrastructure (Specifications and Design)	X			X		
Major Works & New Infrastructure – Engineering: Infrastructure Reconstruction and Replacement	X	X			X	X
Major Works & New Infrastructure – Engineering: New Construction (new subdivisions, major facility upgrades)		X	X			X
Engineering Tech Services: Field Verification of Specifications			X	X		
Management – Owner (Council & CAO) Standard of Care	X	X		X		X
Management – Customer Service (Administration, Distribution, Supply)	X	X		X	X	X
Management – Risk & Emergency Management (incl. Water Advisory, EPO Response)	X	X		X	X	X
Management – Human Resources (incl. Operator Certification) & Supplier Management	X	X		X	X	X
Management – Communications	X	X		X	X	X
Management – Continual Improvement	X	X		X	X	X

Appendix "C" – Total Water Pumped and Instantaneous Flows

Note on Capacity:

Capacity is calculated by comparing the average pumped or flow value against the MDWL allowable volume or PTTW flow. Capacity is representative of the conditions of pumping for that year which may be influenced by other testing programs, maintenance or special operational conditions. Additionally, the actual capacity of the source may not be achievable with current infrastructure. Optimization efforts are included as a component of the Water Supply Master Plan with the intent to match the actual capacity of the water source with the appropriate infrastructure.

City of Guelph Water Services – Pumpage to System – January 1 – December 31, 2017

Facility		Burke Discharge	Calico Discharge	Dean Discharge	Downey Discharge	Emma Street Discharge	Helmar Discharge	Membro Discharge	Paisley Net Discharge	Park Discharge	Queensdale Discharge	University Net Discharge	Water Street Discharge	F.M. Woods Discharge	Total System Discharge
Units		m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³
Month	Regulatory Limit	6,546	5,237	2,300	5,237	3,100	3,273	6,050	13,738	10,300	5,273	5,108	3,400	65,000	n/a
January	Maximum	3,829	939	0	4,691	2,502	1,088	3,137	929	5,940	1,168	1,928	2,063	27,635	49,417
	Average	3,492	875	0	4,654	2,232	869	3,035	915	2,459	1,158	1,236	613	23,493	45,030
	Total	108,261	27,140	0	144,271	69,179	26,935	94,075	28,351	76,221	35,898	38,317	18,992	728,290	1,395,930
February	Maximum	5,396	943	1,489	4,665	2,492	840	3,117	928	6,451	1,192	1,810	1,961	26,968	51,808
	Average	3,643	906	91	4,414	2,364	787	3,038	922	2,755	1,141	1,608	555	23,879	46,103
	Total	101,997	25,374	2,535	123,585	66,187	22,022	85,066	25,824	77,135	31,956	45,035	15,542	668,624	1,290,882
March	Maximum	3,813	873	1,510	4,693	2,516	992	3,116	927	5,226	1,209	1,826	1,977	29,672	54,188
	Average	3,247	752	1,485	4,502	2,457	969	3,037	875	2,129	1,081	1,649	408	24,040	46,632
	Total	100,668	23,297	46,040	139,576	76,158	30,032	94,162	27,116	66,013	33,525	51,107	12,634	745,253	1,445,582
April	Maximum	3,824	881	1,516	4,761	2,513	942	3,136	873	7,255	1,173	2,139	2,126	26,412	53,683
	Average	2,978	798	1,175	4,692	2,246	928	3,032	796	3,704	1,067	1,423	659	22,209	45,707
	Total	89,329	23,932	35,250	140,761	67,394	27,843	90,950	23,890	111,134	32,002	42,688	19,760	666,267	1,371,201
May	Maximum	3,750	906	1,513	4,664	2,530	970	3,190	866	7,506	1,185	1,889	2,128	28,716	50,271
	Average	2,891	862	535	4,513	2,491	937	2,966	857	2,285	944	964	993	23,812	45,049
	Total	89,621	26,718	16,579	139,889	77,227	29,037	91,953	26,579	70,833	29,272	29,872	30,773	738,164	1,396,517
June	Maximum	4,772	834	0	4,564	2,534	1,015	3,196	885	5,325	1,122	1,866	1,924	39,112	53,964
	Average	3,489	788	0	4,467	928	926	2,399	867	1,669	881	474	807	30,303	47,998
	Total	104,662	23,645	0	134,013	27,842	27,786	71,979	26,018	50,063	26,417	14,208	24,219	909,099	1,439,952
July	Maximum	5,154	830	0	4,666	2,529	995	3,094	884	4,007	1,037	1,850	0	36,422	51,743
	Average	3,915	784	0	4,595	2,142	988	2,431	879	1,640	1,027	198	0	28,175	46,771
	Total	121,365	24,296	0	142,446	66,387	30,614	75,358	27,236	50,826	31,827	6,143	0	873,412	1,449,910
August	Maximum	5,109	792	0	4,632	2,529	1,020	3,063	878	7,197	1,023	1,869	0	27,476	52,283
	Average	4,934	722	0	4,430	2,490	965	1,690	870	1,869	1,016	967	0	27,553	47,430
	Total	152,960	22,377	0	137,316	77,204	29,915	52,401	26,958	57,951	31,509	29,982	0	851,752	1,470,326
September	Maximum	5,068	812	1,507	4,674	2,524	1,022	3,006	867	8,761	1,021	1,843	0	31,742	54,421
	Average	4,678	774	876	4,545	2,400	537	2,886	848	2,958	360	1,059	0	27,855	49,776
	Total	140,351	23,216	26,289	136,356	71,985	16,117	86,583	25,439	88,725	10,805	31,778	0	835,646	1,493,291
October	Maximum	4,888	859	1,510	4,312	2,540	1,001	2,964	867	5,433	0	1,911	0	30,666	50,666
	Average	4,504	820	1,265	4,276	2,467	969	2,656	859	2,063	0	739	0	25,634	46,253
	Total	139,624	25,422	39,220	132,553	76,477	30,046	82,349	26,618	63,958	0	22,901	0	794,661	1,433,831

Facility		Burke Discharge	Calico Discharge	Dean Discharge	Downey Discharge	Emma Street Discharge	Helmar Discharge	Membro Discharge	Paisley Net Discharge	Park Discharge	Queensdale Discharge	University Net Discharge	Water Street Discharge	F.M. Woods Discharge	Total System Discharge
Units		m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³
Month	Regulatory Limit	6,546	5,237	2,300	5,237	3,100	3,273	6,050	13,738	10,300	5,273	5,108	3,400	65,000	n/a
November	Maximum	4,923	863	1,551	4,427	2,619	958	2,906	886	7,584	0	2,005	0	26,226	50,484
	Average	4,441	829	1,455	4,240	2,289	665	2,553	799	4,630	0	814	0	23,316	46,031
	Total	133,226	24,881	43,660	127,211	68,676	19,949	76,599	23,957	138,907	0	24,405	0	699,472	1,380,943
December	Maximum	4,744	901	1,503	4,422	2,504	876	3,653	860	5,831	0	2,086	0	28,540	47,037
	Average	4,051	809	1,488	4,194	2,366	680	1,178	817	2,217	0	944	0	24,905	43,648
	Total	125,574	25,065	46,118	130,002	73,359	21,071	36,512	25,336	68,717	0	29,270	0	772,057	1,353,081
2017 Year	Maximum	5,154	1,503	4,422	4,692	2,619	3,653	3,094	1,052	8,761	2,086	2,005	28,540	47,037	54,421
	Average	4,326	843	926	4,526	2,437	888	2,690	873	4,423	788	1,348	1,015	27,990	49,437
	Total	1,407,638	295,362	255,691	1,627,979	818,076	311,367	937,987	313,321	920,485	263,213	365,707	121,921	9,282,698	16,921,444
	Average Capacity	59%	15%	30%	85%	72%	26%	42%	n/a	24%	14%	n/a	10%	39%	n/a

City of Guelph Water Services – Permit to Take Water Pumpages – January 1 – December 31, 2017

Facility	Admiral Well	Arkell Well #1	Arkell Well #6	Arkell Well #7	Arkell Well #8	Arkell Well #14	Arkell Well #15	Arkell Wellfield (#6,7,8,14,15) Total	Arkell - Recharge Pump	Arkell Glen Collector System	Burke Well	Calico Well	Carter Wells #1 and #2	Clythe Well	Dean Well	Downey Well	Edinburgh Well	Emma Street Well	Helmar Well	Membro Well	Paisley Well	Park Wells #1 and #2	Queensdale Well	Sacco Well	Smallfield Well	University of Guelph Well	Water Street Well	
Units	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³		
Month	Regulatory Limit	N/O¹⁹	3,273	9,600	9,600	9,600	9,600	28,800	9,092	25,000	6,546	5,237	6,547	N/O	2,300	5,273	N/O	3,100	3,273	6,050	3,200	10,300	5,237	N/O	N/O	3,300	3,400	
January	Maximum	N/O	153	6,829	7,008	5,692	7,546	5,731	23,086	0	4,910	3,773	947	0	N/O	0	4,779	N/O	2,502	1,084	3,098	929	5,876	1,218	N/O	N/O	2,113	2,063
	Average	N/O	20	4,783	4,335	972	6,936	1,876	18,900	0	4,578	3,448	874	0	N/O	0	4,741	N/O	2,232	850	2,985	915	2,430	1,150	N/O	N/O	702	613
	Total	N/O	609	148,249	134,376	30,122	215,003	58,145	585,905	0	141,920	106,893	27,090	0	N/O	0	146,972	N/O	69,179	26,538	92,526	28,351	75,337	35,653	N/O	N/O	21,756	18,992
February	Maximum	N/O	165	7,347	6,880	6,912	7,458	7,159	22,363	0	5,284	5,338	944	0	N/O	1,470	4,753	N/O	2,492	836	3,076	928	6,415	1,241	N/O	N/O	1,852	1,961
	Average	N/O	14	4,218	4,818	1,369	5,270	3,535	19,211	0	4,704	3,588	907	0	N/O	96	4,497	N/O	2,364	769	2,993	922	2,730	1,137	N/O	N/O	1,400	555
	Total	N/O	390	118,098	134,918	38,331	147,558	98,990	537,894	0	131,700	100,456	25,388	0	N/O	2,698	125,909	N/O	66,187	21,538	83,813	25,824	76,434	31,842	N/O	N/O	39,199	15,542
March	Maximum	N/O	694	7,418	6,921	5,896	7,426	7,395	23,866	0	6,252	3,731	890	5,111	N/O	1,510	4,779	N/O	2,516	986	3,076	927	5,049	1,235	N/O	N/O	2,116	1,977
	Average	N/O	53	5,201	3,605	732	4,950	3,710	18,198	0	5,778	3,192	763	562	N/O	1,448	4,587	N/O	2,457	949	2,993	875	2,102	1,090	N/O	N/O	1,484	408
	Total	N/O	1,636	161,238	111,746	22,682	153,460	115,022	564,148	0	179,122	98,952	23,646	17,408	N/O	44,879	142,192	N/O	76,158	29,427	92,784	27,116	65,162	33,775	N/O	N/O	46,017	12,634
April	Maximum	N/O	140	7,340	6,829	6,156	7,529	4,015	22,573	650	8,101	3,735	887	5,105	N/O	1,490	4,855	N/O	2,513	941	3,094	873	7,326	1,178	N/O	N/O	2,139	2,126
	Average	N/O	11	4,937	2,493	1,646	7,272	666	17,014	22	7,238	2,937	790	3,093	N/O	1,146	4,781	N/O	2,246	909	2,988	796	3,662	1,074	N/O	N/O	1,423	658
	Total	N/O	332	148,101	74,797	49,378	218,153	19,988	510,417	650	217,136	88,119	23,699	92,795	N/O	34,366	143,442	N/O	67,394	27,259	89,629	23,890	109,852	32,230	N/O	N/O	42,688	19,752
May	Maximum	N/O	297	6,984	4,810	992	7,579	3,859	23,172	8,662	16,074	3,728	920	4,567	N/O	1,516	4,756	N/O	2,530	964	3,146	866	7,404	1,196	N/O	N/O	1,889	2,128
	Average	N/O	44	2,780	2,488	169	6,500	1,080	13,018	5,948	11,745	2,856	861	3,717	N/O	523	4,600	N/O	2,491	917	2,923	857	2,246	938	N/O	N/O	964	993
	Total	N/O	1,354	86,190	77,132	5,235	201,505	33,494	403,556	184,383	364,110	88,545	26,694	115,240	N/O	16,220	142,608	N/O	77,227	28,426	90,627	26,579	69,620	29,071	N/O	N/O	29,872	30,773
June	Maximum	N/O	331	7,406	6,793	2,300	7,325	4,425	23,160	8,467	19,328	4,654	832	3,049	N/O	0	4,653	N/O	2,534	998	3,151	885	5,153	1,120	N/O	N/O	1,866	1,924
	Average	N/O	26	4,930	6,197	375	4,958	1,706	18,166	8,145	18,168	3,438	786	2,956	N/O	0	4,556	N/O	928	908	2,187	867	1,638	864	N/O	N/O	474	807
	Total	N/O	780	147,885	185,916	11,237	148,740	51,187	544,966	244,343	545,033	103,139	23,584	88,668	N/O	0	136,682	N/O	27,842	27,228	65,067	26,018	49,144	25,928	N/O	N/O	14,208	24,219
July	Maximum	N/O	332	7,472	7,348	6,292	7,354	5,253	22,862	8,106	19,334	5,100	833	4,984	N/O	0	4,761	N/O	2,529	991	3,035	884	4,102	1,063	N/O	N/O	1,850	0
	Average	N/O	17	5,580	2,145	738	3,140	1,281	12,884	7,899	16,842	3,880	783	3,278	N/O	0	4,688	N/O	2,142	968	2,390	879	1,633	982	N/O	N/O	198	0
	Total	N/O	513	172,981	66,493	22,866	97,351	39,716	399,407	244,875	522,100	120,279	24,287	101,629	N/O	0	145,328	N/O	66,387	29,999	74,099	27,236	50,619	30,429	N/O	N/O	6,143	0
August	Maximum	N/O	293	7,367	6,682	6,757	7,222	6,877	28,619	7,770	18,894	5089	810	4,972	N/O	0	4,727	N/O	2,529	1,001	3,107	878	7,122	982	N/O	N/O	1,869	0
	Average	N/O	21	3,225	6,152	820	5,518	1,491	17,207	7647	17,831	4,858	718	4,955	N/O	0	4,520	N/O	2,490	945	1,666	870	1,844	860	N/O	N/O	967	0
	Total	N/O	648	99,967	190,725	25,429	171,060	46,230	533,411	237,061	552,763	150,597	22,272	153,598	N/O	0	140,112	N/O	77,204	29,291	51,633	26,958	57,155	26,647	N/O	N/O	29,982	0

¹⁹ N/O – not operational

Facility		Admiral Well	Arkell Well #1	Arkell Well #6	Arkell Well #7	Arkell Well #8	Arkell Well #14	Arkell Well #15	Arkell Wellfield (#6,7,8,14,15) Total	Arkell - Recharge Pump	Arkell Glen Collector System	Burke Well	Calico Well	Carter Wells #1 and #2	Clythe Well	Dean Well	Downey Well	Edinburgh Well	Emma Street Well	Helmar Well	Membro Well	Paisley Well	Park Wells #1 and #2	Queensdale Well	Sacco Well	Smallfield Well	University of Guelph Well	Water Street Well
Units		m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	m ³	
Month	Regulatory Limit	N/O¹⁹	3,273	9,600	9,600	9,600	9,600	9,600	28,800	9,092	25,000	6,546	5,237	6,547	N/O	2,300	5,273	N/O	3,100	3,273	6,050	3,200	10,300	5,237	N/O	N/O	3,300	3,400
September	Maximum	N/O	332	5,060	7,310	6,917	7,401	1,693	19,158	7,609	17,331	5,021	817	4,922	N/O	1,517	4,777	N/O	2,524	1,001	2,966	867	8,614	833	N/O	N/O	1,843	0
	Average	N/O	29	730	4,740	2,038	5,153	495	13,156	5,488	14,631	4646	772	4,887	N/O	865	4,639	N/O	2,400	529	2,845	848	2,909	282	N/O	N/O	1,509	0
	Total	N/O	875	21,914	142,189	61,134	154,591	14,861	394,689	164,653	438,915	139,373	23,146	146,612	N/O	25,953	139,166	N/O	71,985	15,858	85,335	25,439	87,282	8,458	N/O	N/O	31,778	0
October	Maximum	N/O	243	1,201	7,174	6,894	7,170	5,411	20,563	4,183	10,555	4,869	873	6,411	N/O	1,497	4,402	N/O	2,540	980	2,940	867	5,357	0	N/O	N/O	1,911	0
	Average	N/O	26	53	3,945	5,500	6,406	909	16,812	228	8,889	4,489	824	6,088	N/O	1,233	4,366	N/O	2,467	947	2,619	859	2,032	0	N/O	N/O	739	0
	Total	N/O	808	1,638	122,291	170,501	198,581	28,164	521,176	7,079	275,546	139,167	25,548	188,738	N/O	38,237	135,345	N/O	76,477	29,343	81,182	26,618	62,992	0	N/O	N/O	22,901	0
November	Maximum	N/O	406	6,951	7,242	6,631	7,146	6,269	26,053	0	7,911	4,904	862	6,547	N/O	1,537	4,522	N/O	2,619	950	2,866	886	7,405	0	N/O	N/O	2,005	0
	Average	N/O	43	5,700	6,460	3,578	5,774	1,154	22,666	0	7,704	4,415	825	1,348	N/O	1,435	4,333	N/O	2,289	650	2,516	799	4,575	0	N/O	N/O	814	0
	Total	N/O	1,293	171,013	193,785	107,349	173,223	34,605	679,975	0	231,122	132,452	24,753	40,443	N/O	43,058	129,980	N/O	68,676	19,498	75,491	23,957	137,241	0	N/O	N/O	24,405	0
December	Maximum	N/O	204	6,961	6,971	6,720	6,997	5,273	24,364	0	7,700	4,702	890	0	N/O	1,512	4,519	N/O	2,504	873	3,598	860	5,737	0	N/O	N/O	2,086	0
	Average	N/O	14	5,221	5,573	3,304	6,474	585	21,157	0	6,421	3,976	802	0	N/O	1,472	4,295	N/O	2,366	668	1,161	817	2,172	0	N/O	N/O	944	0
	Total	N/O	407	161,861	172,760	102,432	200,693	18,135	655,881	0	123,258	123,258	24,877	0	N/O	45,636	133,159	N/O	73,359	20,714	35,992	25,336	67,318	0	N/O	N/O	29,270	0
2016 Year	Maximum	N/O	406	7,472	7,348	6,917	7,401	6,877	28,619	8,467	19,334	5,100	907	6,547	N/O	1,537	4,781	N/O	2,619	1,001	3,598	922	8,614	1,150	N/O	N/O	2,086	1,924
	Average	N/O	135	5,113	5,638	3,500	6,247	2,982	19,759	3,227	10,925	4,167	842	3,191	N/O	916	4,610	N/O	2,303	869	2,573	872	4,073	755	N/O	N/O	1,275	922
	Total	N/O	9,646	1,439,146	1,607,130	646,694	2,079,918	558,537	6,331,425	1,083,044	3,722,725	1,391,230	294,985	945,132	N/O	251,047	1,660,895	N/O	818,076	304,939	918,717	313,321	908,157	254,033	N/O	N/O	338,219	121,913
	Average Pumped	N/O	1%	41%	46%	18%	59%	16%	60%	29%	41%	58%	15%	40%	N/O	30%	87%	N/O	72%	26%	42%	27%	24%	13%	N/O	N/O	28%	10%

City of Guelph Water Services – Instantaneous Flows Summary (PTTW) – January 1 – December 31, 2017

Facility		Admiral Well	Arkell Well #1	Arkell Well #6	Arkell Well #7	Arkell Well #8	Arkell Well #14	Arkell Well #15	Arkell Wellfield (#6,7,8,14,15)	Arkell -Recharge System	Arkell Glen Collector System	Burke Well	Calico Well	Carter Wells	Clythe Well	Dean Well	Downey Well	Edinburgh Well	Emma Street Well	Helmar Well	Membro Well	Paisley Well	Park Wells	Queensdale Well	Sacco Well	Smallfield Well	University of Guelph Well	Water Street Well
Units		L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s	L/s
Month	Regulatory Limit	n/a	37.9	111.0	111.0	111.0	111.0	111.0	n/a	157.8	290.0	83.7	60.6	90.9	n/a	39.9	90.9	n/a	40.9	37.9	105.0	42.0	127.2	60.6	n/a	n/a	57.3	59.0
January	Maximum	N/O	12.6	85.9	85.5	81.4	89.6	87.2	429.6	0.0	56.8	65.6	13.2	0.0	N/O	0.0	58.3	N/O	29.7	15.7	44.6	11.3	123.9	16.1	N/O	N/O	25.8	33.4
	Average	N/O	0.2	55.3	50.3	11.2	80.3	21.7	218.8	0.0	53.0	40.0	10.1	0.0	N/O	0.0	55.6	N/O	25.9	9.9	34.6	10.6	28.2	13.4	N/O	N/O	8.1	7.1
February	Maximum	N/O	12.6	82.5	82.5	82.4	90.2	87.6	425.3	0.0	61.2	65.6	12.6	0.0	N/O	20.8	64.9	N/O	30.3	12.4	42.3	11.5	124.0	14.9	N/O	N/O	26.1	40.5
	Average	N/O	0.2	55.9	55.9	15.9	61.0	40.9	229.5	0.0	54.4	41.6	10.5	0.0	N/O	1.1	48.9	N/O	27.4	9.0	34.6	10.7	31.5	13.2	N/O	N/O	16.2	6.4
March	Maximum	N/O	12.5	91.3	81.9	81.5	90.4	88.1	433.3	0.0	72.4	66.7	14.5	61.0	N/O	21.2	59.4	N/O	29.9	12.6	42.9	11.6	124.6	14.9	N/O	N/O	25.2	32.1
	Average	N/O	0.6	59.8	41.9	8.5	57.4	43.0	210.6	0.0	66.9	37.0	8.7	6.5	N/O	16.9	54.0	N/O	28.4	11.1	34.7	10.1	24.4	12.6	N/O	N/O	17.2	4.7
April	Maximum	N/O	12.6	86.6	82.7	87.8	89.6	89.3	436.0	106.3	93.8	71.1	13.1	59.3	N/O	22.1	59.1	N/O	30.3	13.7	41.8	11.0	122.2	15.5	N/O	N/O	26.8	35.9
	Average	N/O	0.1	56.9	28.8	18.0	84.2	7.8	196.7	0.2	83.8	34.0	9.2	35.8	N/O	13.4	56.2	N/O	26.0	10.7	34.6	9.2	42.4	12.4	N/O	N/O	16.5	7.6
May	Maximum	N/O	13.2	87.2	85.3	81.8	89.7	90.3	434.4	106.3	186.0	96.7	12.8	34.8	N/O	21.4	59.2	N/O	29.8	14.3	42.4	10.9	123.8	15.2	N/O	N/O	22.9	33.8
	Average	N/O	0.5	28.8	32.2	1.9	75.2	12.5	150.7	71.4	135.9	33.1	9.9	34.6	N/O	6.1	54.0	N/O	28.7	10.7	33.8	0.2	26.0	10.9	N/O	N/O	11.2	11.5
June	Maximum	N/O	28.0	87.3	85.1	80.9	87.8	88.5	429.7	98.8	223.7	64.8	13.5	64.1	N/O	0.0	55.8	N/O	30.8	14.8	44.1	10.3	124.4	15.1	N/O	N/O	22.6	40.4
	Average	N/O	0.3	56.8	71.7	4.3	57.4	19.8	209.9	94.4	210.3	40.0	9.1	34.2	N/O	0.0	53.5	N/O	10.8	10.6	25.3	10.0	19.0	9.4	N/O	N/O	5.5	8.7
July	Maximum	N/O	27.9	88.5	86.8	82.1	88.0	89.3	434.6	94.5	223.8	64.7	13.4	63.9	N/O	0.0	60.1	N/O	31.8	14.7	46.2	10.4	109.3	15.9	N/O	N/O	22.3	0.0
	Average	N/O	0.2	64.7	24.9	8.6	36.4	14.8	149.3	91.4	194.9	45.1	9.2	38.0	N/O	0.0	55.1	N/O	24.6	11.3	27.7	10.2	18.9	11.3	N/O	N/O	2.3	0.0
August	Maximum	N/O	12.6	86.4	82.6	81.1	86.3	86.0	422.4	89.9	218.7	67.5	13.3	57.8	N/O	0.0	61.7	N/O	29.7	14.7	39.9	11.1	109.0	16.3	N/O	N/O	22.5	0.0
	Average	N/O	0.2	38.4	71.0	9.5	65.2	17.2	201.3	88.5	206.4	56.4	8.3	57.3	N/O	0.0	53.2	N/O	28.6	11.1	19.3	10.1	21.3	9.9	N/O	N/O	11.2	0.0
September	Maximum	N/O	12.5	87.9	87.5	81.9	88.1	88.4	433.8	88.9	201.0	65.2	13.4	57.1	N/O	21.4	56.7	N/O	30.8	20.8	40.5	10.9	110.6	18.3	N/O	N/O	24.0	0.0
	Average	N/O	0.3	8.5	54.4	23.3	59.5	5.7	151.5	63.5	169.0	53.2	8.9	56.3	N/O	9.9	54.4	N/O	27.6	6.2	32.8	9.8	33.7	3.3	N/O	N/O	12.2	0.0
October	Maximum	N/O	12.4	84.8	85.8	82.5	85.6	87.2	426.0	88.6	122.0	64.0	13.2	76.1	N/O	35.0	57.0	N/O	30.5	14.8	40.4	10.9	111.5	0.0	N/O	N/O	24.3	0.0
	Average	N/O	0.3	0.6	45.8	63.9	74.1	10.5	194.9	2.6	103.0	51.5	9.5	70.5	N/O	14.4	51.4	N/O	28.5	11.1	30.3	9.9	23.5	0.0	N/O	N/O	8.5	0.0
November	Maximum	N/O	12.3	84.2	86.2	80.7	84.2	86.0	421.4	0.0	92.0	75.0	16.3	74.6	N/O	20.3	54.4	N/O	29.8	15.4	42.5	10.5	111.3	0.0	N/O	N/O	24.2	0.0
	Average	N/O	0.2	65.7	74.5	41.5	66.5	13.3	261.4	0.0	89.0	50.6	9.5	15.5	N/O	16.5	51.0	N/O	26.5	7.6	29.0	9.2	52.9	0.0	N/O	N/O	9.4	0.0
December	Maximum	N/O	12.1	120.0	81.0	81.0	84.0	90.0	492.0	0.0	89.1	62.4	13.2	0.0	N/O	20.9	59.3	N/O	29.8	13.6	49.2	10.8	111.3	0.0	N/O	N/O	25.8	0.0
	Average	N/O	0.2	74.9	38.2	38.2	74.9	6.8	233.0	0.0	74.3	46.2	9.3	0.0	N/O	16.9	50.6	N/O	27.9	7.8	13.4	9.5	25.2	0.0	N/O	N/O	10.9	0.0

Appendix "D" – Treated Water Quality Statistics

O. Reg. 170/03 Schedule 23, 13-2b – "Three Year" Results Summary

(Jan. 1 – Dec. 31, 2016)

Parameter	ODWQS MAC mg/L	½ MAC mg/L	Total Samples	Samples Above MDL	# Above ODWQS Criteria	Min (mg/L)	Max (mg/L)	Average (mg/L)
Antimony	0.014	0.007	26	10	0	< 0.0005	0.0013	0.00085
Arsenic	0.025	0.0125	26	6	0	< 0.001	0.0033	0.0022
Barium	1.0	0.5	26	26	0	0.035	0.096	0.066
Boron	5.0	2.5	26	26	0	0.013	0.048	0.030
Cadmium	0.005	0.0025	26	6	0	< 0.0001	0.00016	0.00013
Chromium	0.05	0.025	26	0	0	< 0.005	< 0.005	n/a
Mercury	0.001	0.0005	13	0	0	< 0.0001	< 0.0001	n/a
Selenium	0.01	0.005	26	0	0	< 0.002	< 0.002	n/a
Uranium	0.02	0.01	26	24	0	< 0.0001	0.0024	0.00124

O. Reg. 170/03 Schedule 24, 13-4b – "Three Year" Results Summary

(Jan. 1 – Dec. 31, 2016)

Parameter	ODWQS MAC mg/L	½ MAC mg/L	Total Samples	Samples Above MDL	# Above ODWQS Criteria	Min (mg/L)	Max (mg/L)	Average (mg/L)
Alachlor	0.005	0.0025	13	0	0	< 0.0005	< 0.0005	n/a
Atrazine + N-dealkylated metabolites	0.005	0.0025	13	0	0	< 0.001	< 0.001	n/a
Azinphos-methyl	0.02	0.01	13	0	0	< 0.002	< 0.002	n/a
Benzene	0.005	0.0025	71	0	0	< 0.0001	< 0.0001	n/a
Benzo(a)pyrene	0.00001	0.000005	13	0	0	< 0.000009	< 0.000009	n/a
Bromoxynil	0.005	0.0025	13	0	0	< 0.0005	< 0.0005	n/a
Carbaryl	0.09	0.045	13	0	0	< 0.005	< 0.005	n/a
Carbofuran	0.09	0.045	13	0	0	< 0.005	< 0.005	n/a
Carbon Tetrachloride	0.005	0.0025	71	0	0	< 0.0001	< 0.0001	n/a
Chlorobenzene	0.08	0.04	71	0	0	< 0.0001	< 0.0001	n/a
Chlorpyrifos	0.09	0.045	13	0	0	< 0.001	< 0.001	n/a
Diazinon	0.02	0.01	13	0	0	< 0.001	< 0.001	n/a
Dicamba	0.12	0.06	13	0	0	< 0.001	< 0.001	n/a
1,2-Dichlorobenzene	0.2	0.1	71	0	0	< 0.0002	< 0.0002	n/a
1,4-Dichlorobenzene	0.005	0.0025	71	0	0	< 0.0002	< 0.0002	n/a
1,2-Dichloroethane	0.005	0.0025	71	0	0	< 0.0002	< 0.0002	n/a
1,1-Dichloroethylene (vinylidene chloride)	0.014	0.007	71	0	0	< 0.0001	< 0.0001	n/a

Parameter	ODWQS MAC mg/L	½ MAC mg/L	Total Sample s	Samples Above MDL	# Above ODWQS Criteria	Min (mg/L)	Max (mg/L)	Average (mg/L)
Dichloromethane	0.05	0.025	71	0	0	< 0.0005	< 0.0005	n/a
2,4-Dichlorophenol	0.9	0.45	13	0	0	< 0.0005	< 0.0005	n/a
2,4-Dichlorophenoxy acetic acid (2,4-D)	0.1	0.05	13	0	0	< 0.001	< 0.001	n/a
Diclofop-methyl	0.009	0.0045	13	0	0	< 0.0009	< 0.0009	n/a
Dimethoate	0.02	0.01	13	0	0	< 0.003	< 0.003	n/a
Diquat	0.07	0.0035	14	0	0	< 0.007	< 0.007	n/a
Diuron	0.15	0.075	13	0	0	< 0.01	< 0.01	n/a
Glyphosate	0.28	0.14	13	0	0	< 0.002	< 0.002	n/a
Malathion	0.19	0.095	13	0	0	< 0.005	< 0.005	n/a
MCPA	0.05	0.025	13	0	0	< 0.00012	< 0.00012	n/a
Metolachlor	0.05	0.025	13	0	0	< 0.0005	< 0.0005	n/a
Metribuzin	0.08	0.04	13	0	0	< 0.005	< 0.005	n/a
Paraquat	0.01	0.005	14	0	0	< 0.001	< 0.001	n/a
Pentachlorophenol	0.06	0.03	13	0	0	< 0.0005	< 0.0005	n/a
Phorate	0.002	0.001	13	0	0	< 0.0005	< 0.0005	n/a
Picloram	0.19	0.095	13	0	0	< 0.005	< 0.005	n/a
Polychlorinated Biphenyls (PCB)	0.003	0.0015	13	0	0	< 0.00005	< 0.00005	n/a
Prometryne	0.001	0.0005	13	0	0	< 0.0003	< 0.0003	n/a
Simazine	0.01	0.005	13	0	0	< 0.001	< 0.001	n/a
Terbufos	0.001	0.0005	13	0	0	< 0.0005	< 0.0005	n/a
<u>Tetrachloroethylene (perchloroethylene)</u>	0.03	0.015	71	2	0	< 0.0001	0.00011	0.00011
2,3,4,6-Tetrachlorophenol	0.1	0.05	13	0	0	< 0.0005	< 0.0005	n/a
Triallate	0.23	0.115	13	0	0	< 0.001	< 0.001	n/a
<u>Trichloroethylene</u>	0.005	0.0025	71	30	0	< 0.0001	0.00137	0.00055
2,4,6-Trichlorophenol	0.005	0.0025	13	0	0	< 0.0005	< 0.0005	n/a
Trifluralin	0.045	0.0225	13	0	0	< 0.001	< 0.001	n/a
Vinyl Chloride	0.002	0.001	71	0	0	< 0.0002	< 0.0002	n/a

Operational VOC Scan Results Summary

(Jan. 1 – Dec. 31, 2017)

Parameter	ODWQS MAC mg/L	½ MAC mg/L	Total Samples	Samples Above MDL	# Above ODWQS Criteria	Min (mg/L)	Max (mg/L)	Average (mg/L)
1,1-Dichloroethane	n/a	n/a	171	0	n/a	< 0.0001	< 0.0001	n/a
1,1-Dichloroethylene	0.014	0.007	176	0	0	< 0.0001	< 0.0001	n/a
1,1,1-Trichloroethane	n/a	n/a	171	0	n/a	< 0.0001	< 0.0001	n/a
1,1,2-Trichloroethane	n/a	n/a	171	0	n/a	< 0.0002	< 0.0002	n/a
1,1,2,2-Tetrachloroethane	n/a	n/a	171	0	n/a	< 0.0001	< 0.0001	n/a
Ethylene Dibromide	n/a	n/a	171	0	n/a	< 0.0002	< 0.0002	n/a
1,2-Dichlorobenzene	0.2	0.1	176	0	0	< 0.0002	< 0.0002	n/a
Cis-1,2-Dichloroethylene	n/a	n/a	171	72	n/a	< 0.0001	0.00394	0.00178
Trans-1,2-Dichloroethylene	n/a	n/a	171	2	n/a	< 0.0001	0.00018	0.00016
1,2-Dichloropropane	n/a	n/a	171	0	n/a	< 0.0001	< 0.0001	n/a
1,3-Dichlorobenzene	n/a	n/a	171	0	n/a	< 0.0002	< 0.0002	n/a
1,4-Dichlorobenzene	0.005	0.0025	176	0	0	< 0.0002	< 0.0002	n/a
Acetone	n/a	n/a	171	0	n/a	< 0.01	< 0.01	n/a
Benzene	0.005	0.0025	176	0	0	< 0.0001	< 0.0001	n/a
Bromodichloromethane	0.1	0.05	178	52	0	< 0.0001	0.0188	0.0049
Bromoform	0.1	0.05	178	50	0	< 0.0002	0.00412	0.00145
Carbon Tetrachloride	0.005	0.0025	176	0	0	< 0.0001	< 0.0001	n/a
Chloroethane	n/a	n/a	171	0	n/a	< 0.0002	< 0.0002	n/a
Chloroform	0.1	0.05	178	85	0	< 0.0001	0.0341	0.00266
Dibromochloromethane	0.1	0.05	178	54	0	< 0.0002	0.0119	0.00469
Dichloromethane	0.05	0.025	176	0	0	< 0.0005	< 0.0005	n/a
Ethylbenzene	0.0024	n/a	175	1	0	< 0.0001	< 0.00049	0.00049
Methyl Ethyl Ketone	n/a	n/a	171	0	n/a	< 0.0005	< 0.0005	n/a
Styrene	n/a	n/a	171	0	n/a	< 0.0002	< 0.0002	n/a
<u>Tetrachloroethylene (perchloroethylene)</u>	0.03	0.015	176	6	0	< 0.0001	0.00014	0.00011
Tolulene	0.024	n/a	176	0	0	< 0.0002	< 0.0002	n/a
<u>Trichloroethylene</u>	0.005	0.0025	176	66	0	< 0.0001	0.00194	0.00081
Trichlorofluoromethane	n/a	n/a	171	0	0	< 0.0002	< 0.0002	n/a
Vinyl Chloride	n/a	n/a	176	0	0	< 0.0002	< 0.0002	n/a
o-Xylene	n/a	n/a	175	1	0	< 0.0001	0.00135	0.00135
m- + p- Xylene	n/a	n/a	175	1	0	< 0.0001	0.00314	0.00314
Total Xylene	0.3	n/a	175	1	0	< 0.0001	0.00448	0.00448
<u>Trihalomethanes</u>	0.100	n/a	178	68	0	< 0.0002	0.0613	0.0115

General Chemistry Results Summary

(Jan. 1 – Dec. 31, 2017)

Parameter	ODWQS MAC	ODWQS AO	ODWQS OG	Total Samples	Samples Above MDL	# Above Criteri a	Min (mg/L)	Max (mg/L)	Average (mg/L)
Aluminum	n/a	n/a	0.1	14	0	0	< 0.005	< 0.005	n/a
Alkalinity (as CaCO ₃)	n/a	n/a	30-500	13	13	0	250	340	291
Ammonia-N	n/a	n/a	n/a	13	2	n/a	< 0.05	0.18	0.14
Anion Sum	n/a	n/a	n/a	13	13	n/a	7.02 ²⁰	17.5 ²⁰	12.35 ²⁰
<u>Antimony</u>	0.014	n/a	n/a	14	3	0	< 0.0005	0.00091	0.0007
<u>Arsenic</u>	0.025	n/a	n/a	14	2	0	< 0.001	0.0025	0.0018
<u>Barium</u>	1.0	n/a	n/a	14	14	0	0.030	0.097	0.068
Beryllium	n/a	n/a	n/a	14	0	n/a	<0.0005	<0.0005	n/a
<u>Boron</u>	5.0	n/a	n/a	14	13	0	< 0.01	0.066	0.034
<u>Cadmium</u>	0.005	n/a	n/a	14	3	0	< 0.0001	0.00026	0.00017
Calcium	n/a	n/a	n/a	14	14	n/a	87	160	118.5
Cation Sum	n/a	n/a	n/a	13	13	n/a	7.35 ²⁰	17.6 ²⁰	12.4 ²⁰
<u>Chloride</u>	n/a	250	n/a	13	13	0	37	280	150
Chromium	0.05	n/a	n/a	14	0	0	< 0.005	< 0.005	n/a
Cobalt	n/a	n/a	n/a	14	5	n/a	< 0.0005	0.0035	0.0024
Copper	n/a	1	n/a	14	8	0	< 0.001	0.0071	0.0025
Dissolved Organic Carbon (DOC)	n/a	5	n/a	14	14	0	0.56	2.9	1.32
<u>1,4 Dioxane</u>	n/a	n/a	n/a	5	0	n/a	<0.0001	<0.0001	n/a
<u>Hardness (Calculated as CaCO₃)</u>	n/a	n/a	80-100	13	13	13	320	550	441
Ion Balance (% difference)	n/a	n/a	n/a	13	13	n/a	0.05 ²¹	2.28 ²¹	0.8454 ²¹
<u>Iron</u>	n/a	0.3	n/a	14	3	1	< 0.1	0.49	0.31
Langalier's Index at 4°C	n/a	n/a	n/a	13	13	n/a	0.471 ²²	0.882 ²²	0.698 ²²
Langalier's Index at 20°C	n/a	n/a	n/a	13	13	n/a	0.718 ²²	1.13 ²²	0.945 ²²
Lead	0.01	n/a	n/a	14	2	0	<0.0005	0.0013	0.00099
Magnesium	n/a	n/a	n/a	14	14	n/a	26	43	36
<u>Manganese</u>	n/a	0.05	n/a	14	11	1	<0.002	0.065	0.0143
Molybdenum	n/a	n/a	n/a	14	12	n/a	<0.0005	0.0051	0.00225
Nickel	n/a	n/a	n/a	14	13	n/a	<0.001	0.014	0.0056
o-Phosphate	n/a	n/a	n/a	13	0	n/a	<0.01	<0.01	n/a

²⁰ Units in mEq/L²¹ Units in %²² Units in Langalier's Index

Parameter	ODWQS MAC	ODWQS AO	ODWQS OG	Total Samples	Samples Above MDL	# Above Criteri a	Min (mg/L)	Max (mg/L)	Average (mg/L)
pH	n/a	n/a	6.5-8.5	13	13	0	7.77	8.13	7.92
Phosphorus	n/a	n/a	n/a	14	0	n/a	<0.1	<0.1	n/a
Potassium	n/a	n/a	n/a	14	14	n/a	1.4	3.3	2.143
Saturation pH at 4°C	n/a	n/a	n/a	13	13	n/a	7.13	7.34	7.22
Saturation pH at 20°C	n/a	n/a	n/a	13	13	n/a	6.88	7.09	6.97
Selenium	0.01	n/a	n/a	14	0	0	<0.002	< 0.002	n/a
Silicon	n/a	n/a	n/a	14	14	n/a	3.7	8.8	5.2
Silver	n/a	n/a	n/a	14	0	n/a	<0.0001	<0.0001	n/a
<u>Sodium</u>	n/a	20 and 200	n/a	14	14	14	20	160	84
Strontium	n/a	n/a	n/a	14	14	n/a	0.15	5.3	2.573
Sulphate	n/a	550	n/a	13	13	0	38	250	106
Thallium	n/a	n/a	n/a	14	7	n/a	< 0.00005	0.0002	0.000084
Titanium	n/a	n/a	n/a	14	0	n/a	<0.005	<0.005	n/a
Total Dissolved Solids	n/a	n/a	n/a	13	13	n/a	380	1000	686
<u>Uranium</u>	0.02	n/a	n/a	14	13	0	<0.0001	0.0044	0.00143
Vanadium	n/a	n/a	n/a	14	0	n/a	<0.0005	<0.0005	n/a
Zinc	n/a	5	n/a	14	13	0	<0.005	0.31	0.0849

Appendix "E" – Legal and Other Requirements Update

Date - 2017	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
Jan. 14	OMWA newswire	<p><u>Drinking Water Committee Reports on Lead in Drinking Water</u> The Government of Canada's Federal-Provincial-Territorial Committee on Drinking Water has released a report for public consultation on lead in drinking water for the purposes of updating the drinking water guideline. The report has recommended that the maximum acceptable concentration (MAC) be changed from 0.01 mg/L of weekly intake, as per the World Health Organization standard, to the MAC of 0.005mg/L.</p>	No action required.
Jan. 18	Canadian Environmental Law Association Blog	<p><u>Source Water Protection 2.0: Strengthening Ontario's Drinking Water Safety Net</u> The <u>Auditor General of Ontario</u> notes that: "An estimated 1.6 million people in Ontario rely on private wells for their drinking water supply. For them, protecting source water is the only line of defence. In 2013, over a third of the water samples from private wells tested positive for bacteria, including E. coli." Accordingly, the Auditor General recommended in 2014 that "to strengthen source water protection, the Ministry of the Environment and Climate Change should consider the feasibility of requiring source protection plans to identify and address threats to sources of water that supply private wells and intakes." However, in her 2016 report, the Auditor General found that the provincial government has made "little or no progress" on this important recommendation.</p>	Risk Management Official forwarded to Water Technical staff for review
Jan. 19	MOECC e-mail	<p><u>Ontario Taking Next Step to Protect Water Resources</u> As part of Ontario's plan to protect water resources, the province is proposing a new fee for water bottling companies that take groundwater. Currently, water bottlers are charged \$3.71 for every million litres of groundwater they take. Ontario is proposing water bottlers pay an additional \$500 fee, which would bring the cost up to \$503.71 for every million litres of groundwater taken. People across Ontario are encouraged to provide their input on the proposed new fee for water bottlers through the <u>Environmental Registry</u>, available until March 20, 2017</p>	GM Environmental Services followed up with an Alert to council re: Water Bottling Charge. City technical comments are planned before the deadline.
Jan. 23	OMWA newswire	<p><u>Town of Ingersoll fined \$80K for violating water law</u> The town of Ingersoll has been slapped with an \$80,000 fine after pleading guilty to violating the Ontario Water Resources Act. The town failed to comply with the terms contained in a ministry issued permit. In the spring of 2014, sediment was discharged into a storm sewer that flows into Whiting Creek, and town officials failed to notify the ministry.</p>	No action required. Quality Assurance Coordinator shared story with top management and Technical staff.
Feb. 8	Ontario News	<p><u>Toronto Business fined \$120,000 for Ontario Water Resources Act Violations in Eastern Region</u> Aecon Construction and Materials Ltd. pleaded guilty to two offences and was fined \$120,000 for discharging a material into water that may impair the quality of the water and failing to report the</p>	No action required.

Date - 2017	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update								
		discharge, contrary to the Ontario Water Resources Act (OWRA). The company was also issued a Court Order requiring that a fish habitat embayment is constructed within the Rideau River watershed.									
Feb. 17	MOECC Email	The <u>2016/17 Winter Operator Certification Bulletin</u> has just been launched.	Email forwarded to the Training Coordinator.								
Feb. 27	OMWA newswire	<u>Pilot Programs Announced As Guelph Wraps First Round of Civic Accelerator</u> Alert Labs' "Flowie" water sensor kit will be included on a trial basis in the City's Water Efficiency Rebate program.	No action required.								
Mar. 6	OMWA newswire	<u>Guelph firms to be inspected for water threats</u> City hall is getting ready to do on-site inspections of businesses that have been flagged as significant threats to Guelph's drinking water supply. A list of such potential threats in Guelph was initially compiled in 2010 during a "desktop review," says a city staff report.	No action required.								
Mar. 28	Guelph City News	<u>Council endorses Guelph's first asset management plan</u> Council unanimously endorsed the City's <u>Corporate Asset Management Plan</u> and <u>Asset Management Policy</u> at last night's <u>Council meeting</u> . The City's first asset management plan outlines the processes and practices the City is undertaking to ensure its assets and services offer maximum value to the Guelph community.	No action required.								
Mar. 31	Guelph City News	<p><u>Federal infrastructure funding projects</u> The City has secured federal funding for the reconstruction of a 1.2 kilometre stretch of Metcalfe Street from Speedvale Avenue to Eramosa Road to improve municipal water supply to citizens and businesses in the north end of Guelph, alleviate historical flooding and replace aging underground infrastructure (water, wastewater and storm).</p> <table border="1"> <thead> <tr> <th>Funding source</th> <th>Amount approved</th> </tr> </thead> <tbody> <tr> <td>Clean Water Wastewater Fund</td> <td>\$1,797,890</td> </tr> <tr> <td>Province of Ontario</td> <td>\$898,945</td> </tr> <tr> <td>City</td> <td>\$898,945</td> </tr> </tbody> </table>	Funding source	Amount approved	Clean Water Wastewater Fund	\$1,797,890	Province of Ontario	\$898,945	City	\$898,945	No action required.
Funding source	Amount approved										
Clean Water Wastewater Fund	\$1,797,890										
Province of Ontario	\$898,945										
City	\$898,945										
Apr. 3	OMWA newswire	<u>Flint residents were poisoned. Now, they're being billed for it</u> Flint is invoicing people for lead-contaminated water. Says one: "We just don't want to pay to have ourselves killed." These same state departments also told Flint residents their water was fine when it was actually poison. Their trust in government is gone now, maybe forever.	No action required.								
Apr. 4	Guelph City News	<u>City's continued focus on water efficiency to be led by new Water Services division manager</u> Wayne Galliher is the successful candidate for the division manager of Water Services position. Galliher, who has worked for the City since 2007, has been acting in the role since August 2016.	No action required.								

Date - 2017	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
Apr. 10	Guelph Today	<p><u>Results of Guelph and Guelph/Eramosa Tier 3 Water Budget and Local Area Risk Assessment study released</u></p> <p>The Lake Erie Source Protection Region released the results of the Guelph and Guelph/Eramosa Tier 3 Water Budget and Local Area Risk Assessment study at the Lake Erie Region Source Protection Committee meeting on April 6th. The Tier 3 Study began in 2008, and the County and Townships' participation began in 2014 after the Grand River Conservation Authority and the City of Guelph identified to the County that the Wellhead Protection Area, with respect to quantity (WHPA-Q), would likely extend past the City of Guelph boundaries.</p>	Email sent by Manager of Technical Services to Technical Staff. No action required.
Apr. 21	EBR	<p><u>Bottled Water Technical Guidance Document</u></p> <p>The guidance document is intended to provide guidance for renewal applications of existing permits that authorize the taking of groundwater for the purpose of producing bottled water from the same location, for the same purpose, and for the same or lesser amount as currently permitted, all in accordance with the requirements imposed by O. Reg. 463/16 (Taking Groundwater to Produce Bottled Water), made under the <i>Ontario Water Resources Act</i>. A decision has been made to proceed with the policy proposal; the guidance document has been updated to reflect the considerations of comments received during public consultation.</p>	No action required.
Apr. 21	OMWA newswire	<p><u>Wellington expresses concern over drinking water study that urges expanded protection of wellheads</u></p> <p>Wellington County officials are expressing concern about possible impacts of a major technical study into protecting Guelph's drinking water supply. The townships of Puslinch and Guelph/Eramosa and the Town of Erin "all have considerable area and employment land contained within" the wellhead protection area that has been identified to ensure Guelph has an adequate quantity of water into the future, says a county news release.</p>	No action required.
Apr. 21	OMWA newswire	<p><u>Erin council votes to accept Nestlé Waters' voluntary levy</u></p> <p>ERIN - Council here has voted 4-1 in favour of accepting an annual contribution from Nestlé Waters Canada, despite strong opposition from many at the meeting. Nestlé Waters proposed in February an annual voluntary levy of \$0.50 per 1,000 litres, with a minimum payment of \$25,000 per year.</p>	No action required.
Apr. 21	OMWA newswire	<p><u>North Battleford tainted water victims get settlement in class action</u></p> <p>People who were children and got sick from a parasite in a Saskatchewan city's drinking water 16 years ago are getting compensation. A law firm says Saskatchewan Court of Queen's Bench has approved a \$3.3-million settlement for anyone who was younger than 18 during the tainted water scandal in North Battleford.</p>	No action required.
Apr. 27	MOECC email	<p><u>Revisions to Ontario's Drinking Water Quality Management Standard</u></p> <p>The Minister of the Environment and Climate Change has approved</p>	Sent to Compliance Coordinator, QA Coordinator and Manager

Date - 2017	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
		the revisions to Ontario's Drinking Water Quality Management Standard (DWQMS). The revisions are based largely on feedback received from stakeholders and extensive stakeholder consultation was undertaken to both identify and validate the changes. A policy decision notice with the final <i>Drinking Water Quality Management Standard</i> and supplementary document, <i>Potential Hazardous Events for Municipal Residential Drinking Water Systems</i> , was posted to the Environmental Registry as registry number 012-5530 on Thursday April 6th 2017 .	of Technical Services. Discussed with Top Management at Meeting on May 24. The 2016 Risk Assessment included the impacts of Climate Change.
May 10	Guelph City News	<u>City wins two Ontario Water Works Association awards</u> The Ontario Water Works Association (OWWA) has recognized Guelph's leadership in water conservation with a 2017 Award of Excellence in Water Efficiency for its updated water efficiency strategy in the Public Sector & Utilities Award category. The City was also recognized for its water-based youth education programming with the H2Awesome event that won in the category of Public Education & Awareness.	No action required.
May 15	OMWA newswire	<u>In Flint, Overdue Bills for Unsafe Water Could Lead to Foreclosures</u> Following a water crisis that saw sky-high levels of lead contamination in Flint, Mich., many homes in the city still do not have access to safe tap water. The city has mailed 8,002 letters to residents in an effort to collect about \$5.8 million in unpaid bills for water and sewer services. If homeowners do not pay by May 19, property liens are transferred to tax bills, which begins a process that can end with residents losing their homes unless they pay their outstanding bills before March 2018.	No action required.
May 19	MOECC Email	<u>A NEW Notice of Adverse Tests Results and Issues Resolution Form</u> (Schedule 16), formally the Notice of Adverse Test Results and Other Problems and Notice of Issue Resolution at Drinking Water Systems, is available to help make adverse drinking water quality incident reporting easier and faster. The form can be completed and submitted electronically.	Emailed by GM - Environmental Services to Water Services' Top Management, Compliance Coordinator and QA Coordinator. Compliance Coordinator created a revised SOP to include the new form and sent it to management.
May 24	OMWA newswire	<u>Markham water bandits steal liquid gold from fire hydrants in broad daylight</u> Nearly \$30,000 in water was stolen from the City of Markham in 2016 by thieves in trucks who simply drive up to one of Markham's nearly 8,600 fire hydrants, often in the middle of the day, hook up their hoses and fill up their trucks, then drive away. City employees descended on the crescent where they applied locking mechanisms to multiple hydrants to deter the thieves from repeating their brazen deeds. The city said the tamper-proof devices attached to fire hydrants are only used in high-risk areas because "they can slow	No action required.

Date - 2017	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
		down a fire response" in the event of an emergency. A company caught stealing water in King Township last year was fined \$1,000 in Newmarket Court for the offence but fines can range up to \$50,000 for offenders.	
May 25	EBR	<u>Proposed Municipal Asset Management Regulation</u> The purpose of the proposed regulation is to implement best practices throughout the municipal sector and provide a degree of consistency to support collaboration between municipalities, and among municipalities and the province. The regulation would balance valuable consistency with appropriate flexibility, and would include phased implementation. The regulation would provide certainty around future provincial asset management planning requirements, and would be supported by the collection of selected data to capture the key aspects of municipal asset management: resilience and sustainability. 60 Day comment period, until July 24/17.	QA Coordinator sent link to Supervisor of Maintenance and Water Supply Maintenance Technician.
May 29	Guelph City News	<u>Outside Water Use is Level 0 – Blue.</u> Blue indicates there are no serious storage, rainfall or stream flow issues. In Level 0 Blue, outside water use restrictions are enforced with a focus on education.	No further action required.
June 2	Ontario News	<u>Cheese Manufacturer fined \$13,000 for Ontario Water Resource Act Violations</u> Barrie - Silani Sweet Cheese Limited pleaded guilty to one offence and was fined \$13,000 for failing to ensure that every Operator holds a license applicable to that type of wastewater treatment facility, contrary to the Ontario Water Resources Act (OWRA).	No action required.
June 6	Guelph City News	<u>Notice of collection: water and wastewater billing focus group recruitment survey</u> The City of Guelph is conducting a residential telephone call survey to gather information about residents' attitudes toward and awareness of current water and wastewater billing policies. Metroline Research Group Inc. is contacting 100 households in the City of Guelph. Results of the survey will be used by City staff to recruit focus group participants to provide opinions and feedback on possible water and wastewater billing policy changes.	No action required.
June 8	Ontario News	<u>Province Charging New Water Bottling Fee to Better Protect Water for Future Generations</u> As part of the province's plan to strengthen groundwater protection for future generations, Ontario will be charging water bottling companies an additional \$500 fee to take groundwater. Beginning Aug. 1, 2017, water bottlers will pay \$503.71 for every million litres of groundwater taken. The new fee will help recover costs associated with managing groundwater taken by water bottlers, including supporting scientific research on the environmental impacts as well as enhanced data analysis on groundwater taken for water bottling.	QA Coordinator forwarded email to Top Management. No further action required.
June 13	MOECC Email	<u>New guidance for changes to O. Reg 243/07 effective July 1, 2017</u> The changes will require child care centres and schools to sample for lead all fixtures used to provide drinking water and/or prepare food or	QA Coordinator forwarded email to Top Management and Compliance Coordinator.

Date - 2017	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
		drink for children under 18.	No further action required.
June 16	Ontario News	<u>Excavation Company fined \$50,000 for Ontario Water Resources Act (OWRA) Violations</u> J-AAR Excavating pleaded guilty to one charge and was fined \$50,000 for discharging sediment into a municipal storm sewer, which proceeded to enter Whiting Creek and impaired the waters, contrary to the Ontario Water Resources Act (OWRA).	No action required.
June 21	OMWA newswire	<u>Michigan Officials Charged With Manslaughter For Role In Flint Crisis</u> Michigan Attorney General Bill Schuette announced last week that he has charged five public officials with involuntary manslaughter related to their alleged failure to act in the Flint water crisis. The charge is punishable by up to 15 years in prison.	QA Coordinator forwarded to Top Management.
June 22	Ontario News	<u>The Kinsmen Club fined \$2,000 for Safe Drinking Water Act Violations</u> The Kinsmen Club of Stratford Incorporated pleaded guilty to one offence and was fined \$2,000 for failing to ensure that no drinking water was supplied after a shutdown period of seven or more consecutive days until samples were taken and tested, contrary to the Safe Drinking Water Act (SDWA).	No action required.
June 22	Ontario News	<u>Golf Course fined \$6,000 for Water Resources Act Violations</u> Caradoc Sands Golf Course Ltd. pleaded guilty to one offence and was fined \$6,000 for taking greater than 50,000 litres of water per day without a Permit to Take Water (PTTW), contrary to the Ontario Water Resources Act. The company operates a golf course located on Saxton Road in Strathroy.	No action required.
June 23	Guelph City News	<u>City's rainwater harvesting bus wash wins national award</u> The City of Guelph has won a <u>Water's Next Award</u> for its innovative rainwater harvesting bus wash system in the category of Projects and Technology. Since 2014, the City has saved more than 1 million litres of drinking water in the process of washing its buses—enough to fill four Olympic-sized swimming pools. In 2016, the City saved 548,000 litres of water by using rain water for bus washing, for a water cost savings of almost \$2,000, on top of the savings achieved from the water-efficient spray nozzles (3,150,000 litres; 1.25 Olympic-sized swimming pools of water), and savings from the reduction in pumping and treatment of the drinking water supply.	No action required.
June 24	Ontario Gazette	<u>ONTARIO REGULATION 176/17 made under the ONTARIO WATER RESOURCES ACT</u> O. Reg. 176/17: CHARGES FOR TAKING GROUND WATER TO PRODUCE BOTTLED WATER The purpose of this Regulation is to recover the costs the Government of Ontario incurs to, (a) regulate water bottling facilities under the Act; (b) study the impact water bottling facilities have on the ground water resources in watersheds from which a water bottling facility	No action required.

Date - 2017	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
		takes water; and (c) review the regulatory framework that governs ground water takings related to water bottling facilities.	
July 5	OMWA newswire	<u>Door-to-Door Water Treatment Sales Venture Leads to Conviction</u> An Ontario Government news release last week reports a Guelph man pleaded guilty and was convicted of one count under the Consumer Protection Act for misleading consumers in relation to door-to-door sales of water treatment equipment in Kingston. Danny Shamon was ordered to pay a fine of \$4,000, placed on probation for two years and ordered to pay a \$1,000 victim fine surcharge. He was also required to pay approximately \$11,000 in restitution to three consumers, including some seniors.	No action required.
July 10	OMWA Newswire	<u>Flint Sued For Failure To Approve Water Source</u> Flint is coming under legal fire from the state of Michigan for delaying a decision on its drinking water source. "The Michigan Department of Environmental Quality [DEQ] sued the City of Flint over the city council's foot-dragging in approving Detroit's Great Lakes Water Authority (GLWA) as its long-term drinking water source," the Detroit Free Press reported.	No action required.
July 14	MOECC Email	<u>Federal Discussion Paper Released on Review of Environmental Regulatory Processes</u> The Government is considering a new approach to Environmental Assessments, among other changes.	QA Coordinator forwarded email and link to the report to Top Management.
July 14	OMWA Newswire	<u>Their water poisoned, fed up residents demand answers about toxic fire foam</u> More than eight months after fire destroyed a flea market near Smiths Falls, Ont., the wells of a dozen nearby residents were poisoned with dangerous toxins, and questions still swirl about the regulation of firefighting foam commonly used to smother flames. The medical officer of health advised that residents "not consume their well water and not to use their well water in ways that it may be aerosolised and inhaled".	No action required.
July 14	MOECC email	In support of Ontario's commitment to <u>Open Government</u> and belief in transparency, the Ministry of the Environment and Climate Change (MOECC) is expanding data sets available on the <u>Drinking Water Quality and Enforcement</u> page of the <u>Open Data Catalogue</u> to include more detailed drinking water data. Since 2015, drinking water inspection summary data has been posted to the Catalogue. For the first time, raw data including names of regulated drinking water systems (under O. Reg. 170/03), will be posted. Expanded data sets will be available for: <ul style="list-style-type: none"> · Adverse water quality incidents; · Test result data (includes lead and pesticides); · Inspections; · Laboratory inspections; · Orders; 	QA Coordinator forwarded email to Management, Technicians and Compliance Coordinator.

Date - 2017	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
		<ul style="list-style-type: none"> · Laboratory orders; and, · Microcystin. 	
July 26	OWMA Newswire	<p><u>Lead levels in Little Italy home's tap water test nearly 5 times the acceptable limit</u> Lead service lines were used in homes built before the mid-1950s.</p>	QA Coordinator sent news story to Supply Technician.
Aug. 1	Guelph Mercury	<p><u>Construction site theft leads to water overflow on Guelph street</u> Water was flowing on to Ontario Street, near Neeve Street, last week after a curb stop valve was stolen from the exposed pipe. The project manager for the construction there says theft is a common problem for construction sites in Guelph.</p>	No action required.
Aug. 2	Guelph City News	<p><u>Guelph among select municipalities to oversee and apply greater rigour to development in vulnerable source water areas</u> The City of Guelph has improved its review process for sanitary sewer infrastructure projects to better protect our community's vulnerable source water. The revised process allows the City of Guelph to complete the review process for the Ministry of the Environment and Climate Change's (MOECC) environmental compliance approval (ECA) applications internally.</p>	No action required.
Aug. 25	Guelph City News	<p><u>Speedvale Tower</u> The Speedvale water tower is back in service. It has been out of service since February for an inspection, painting and other maintenance.</p>	No action required.
Sept. 18	Guelph City News	<p><u>Fire Hydrant Testing</u> The City is testing over 2,700 fire hydrants starting Monday, October 2, 2017. Fire hydrant testing will start in the north end of Guelph and progress towards the south end. All testing should be complete by the end of October.</p>	No action required.
Oct. 5	Guelph City News	<p><u>Schedule 'B' Class Environmental Assessment for Clythe Well treatment upgrades</u> The City of Guelph is initiating a Municipal Class Environmental Assessment (EA) for proposed treatment upgrades to bring the Clythe well back into service. The City's Water Supply Master Plan (2014) identifies the need for additional water sources to support future demand. A study conducted in 2011 concluded that water from the Clythe well can be successfully treated with existing technologies.</p>	Information presented to staff at full staff-meeting. No further action required.
Oct. 6	MOECC email	<p><u>Chief Drinking Water Inspector Annual Report</u> The 2016-2017 annual drinking water report for Ontario highlights efforts to keep our drinking water clean and among the best protected in the world. Ontario uses a multi-barrier approach of strong legislation, stringent health-based standards, regular and reliable testing, highly trained operators, regular inspections and a source water protection program to protect the province's drinking water.</p>	Division Manager forwarded email to all of Water Services.
Oct. 9	Guelph City News	<p><u>Watermain Cleaning</u> The City will begin fall water main cleaning in selected areas of</p>	No action required.

Date - 2017	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
		Guelph on Monday, October 23. The City expects to complete the cleaning by the end of November.	
Oct. 10	Guelph City News	<u>Telephone Survey</u> The City of Guelph is conducting a residential telephone call survey to gather residents' opinions on water use practices and communications for water programs. The survey is being conducted October 12 through November 10, 2017.	No action required.
Oct. 12	MOECC	New Organizational chart issued by the MOECC.	Copy of the new chart was sent to Managers, Compliance Coordinator, QMS Rep, Project Managers and Technicians who work with the MOECC.
Oct. 13	Guelph Today	<u>Five area schools found to have higher than acceptable levels of lead in the water</u> More than 640 Ontario schools and daycares found lead levels in drinking water that failed to meet the provincial standard over the past two years.	No action required.
Oct. 16	Ontario News	<u>Laboratory fined \$15,000 for Failing to Report Adverse Drinking Water Results</u> SGS Canada Inc. was convicted of one offence under the Safe Drinking Water Act (SDWA), was fined \$15,000 plus a victim fine surcharge of \$3,750 and was given 120 days to pay the fine.	No action required.
Oct. 23	Ontario News	<u>Unlicensed Well Driller fined \$2,000 for Drilling Wells without a Licence</u> Allan Charlebois was convicted of two offences under the Ontario Water Resources Act (OWRA), was fined \$2,000 plus a victim fine surcharge of \$250 and paid the fine on the date of conviction.	No action required.
Oct. 31	Ontario News	<u>Drinking Water System Owner fined \$2,000 For Submitting False Information to the Ministry</u> Carl Douglas Dressel was convicted of one offence under the Safe Drinking Water Act (SDWA), was fined \$2,000 plus a victim fine surcharge (VFS) of \$500 and was given 30 days to pay the fine.	No action required.
Nov. 2	Guelph City News	<u>Council Approves 2018 Non-Tax Supported Operating Budget and 2018 Capital Budget</u> In this budget, Council approved an increase to the stormwater, water and wastewater service rates and fees that increases the average annual residential bill by \$23.40 over 2017 rates.	No action required.
Nov. 8	OWMA Newswire	<u>Welland, Ont. Incentivizes Purchase of Real-Time Water Sensors</u> The City of Welland, Ontario is assisting consumers with water conservation and leak detection by offering a \$100 incentive for the purchase of Alert Labs real-time water sensors.	Forwarded article to Supervisor of Water Efficiency and Manager of Technical Services.
Nov. 22	MOECC	<u>Minister of the Environment and Climate Change Annual Report on Drinking Water 2017</u>	Emailed Report to Top Management and

Date - 2017	Source of Posting / Reference	Title of Legal & Other Requirement Highlights of posting	Action and Status Update
			Compliance Coordinator.
Dec. 8	Ontario News	<p><u>Water Testing Laboratory and Owners fined \$246,500 plus VFS for Safe Drinking Water Act Violations</u> Central Ontario Analytical Laboratory Inc. (COAL), 2293560 Ontario Inc., Lesley and Teresa Johnston were charged and convicted under the Safe Drinking Water Act (SDWA). The convictions relate to offering or providing a drinking water testing service without authority or not in accordance with a drinking water testing licence.</p>	No action required.
Dec. 14	MOECC Email	<p><u>Reminder that amendments to drinking water regulations will come into force on January 1, 2018.</u></p>	Forwarded email to Compliance Coordinator, Top Management and Water Supply Technician.
Dec. 14	Contained in an Email from DCAO Office	<p><u>MOECC Policy Decision Notice: Consideration of Climate Change in Environmental Assessment in Ontario</u></p>	Copy of the email was sent to Top Management, the Compliance Coordinator, QA Coordinator and the Hydrogeologist.
Dec. 19	Guelph City News	<p><u>City's 2018 rates and fees released</u> As part of the 2018 budget, City Council approved a series of <u>rate and fee</u> increases to ensure that the City is able to continue delivering programs and services that meet the community's expectations.</p>	No action required.
Dec. 22	MOECC Email	<p><u>Proposed Amendments to a regulation under the Clean Water Act and establish a new regulation under the Safe Drinking Water Act have been posted on the Environmental Registry</u></p>	Forwarded email to Source Water Protection staff, Division Manager, Manager of Technical Services and Compliance Coordinator.

Appendix "F" Management Review Action Items

ITEM #	STATUS	DESCRIPTION
1	CIR #398	Check-in EDMS SOP's for A&S Report preparation and MOECC Inspection preparation.
2	CIR #400 Plan for 2018/2019	Water Services should update Water By-law to better address water use at hydrants; water theft and prevention of cross connections at hydrants.
3	CIR #402 Closed 2017-05-25	Consider moving Paisley and University raw water sampling to 5-year sampling (with F.M. Woods, Burkes, Downey, Queensdale, Helmar and Calico) since 1,4 Dioxane has never been detected at these wells (Paisley & University)
4	CIR #403	Consider reducing the frequency of sampling to once per year of treated sources only for sites not located in industrial / commercial areas and where VOC's have never been detected (prior to seeking Council approval of the VOC Management Plan).
5	CIR #409 Closed 2017-05-25	Follow-up with an analysis of past years' Glen Collector flows (compare wet seasons vs. "normal" seasons and collector flows – any correlations?)
6	CIR #412 Closed 2017-05-25	Note any changes that affect data results (e.g. improving the accuracy of sample results by choosing a more representative sample location – which may change the trend of data results).
7	CIR #415 Closed 2017-05-25	Schedule annual Water Quality Monitoring Schedule (WQMS) meeting with Water Supply Supervisors.
8	CIR #422 Closed 2017-02-14	Schedule annual meeting with Building Services regarding the Backflow Prevention Program.
9	CIR #503 Closed 2017-01-31	For 2016 A&S Report, add the following to the report: <ul style="list-style-type: none"> - % compliance to Locates section - valve turning - hydrant repair - swabbing / flushing - service box repairs
10	CIR #504 Closed 2017-01-30	For 2016 A&S Report, add SCADA section of the report, including % uptime, categories of SCADA maintenance, etc.
11	CIR #505	For 2016 A&S Report, explain water pumpages section of the report.
12	CIR #506 Closed 2017-01-31	In A&S Report, verify source of service repair stats
13	CIR #554 Closed 2017-02-01	Consider separating microbiological and chemical sampling contracts (e.g. use IDEXX at ALS, which is simpler and less potential for error). Also consider potential to carry-out this (IDEXX) methodology internally.
14	CIR #556	Form 1's and Form 2's should more immediately be completed and submitted to the Compliance Coordinator.
15	CIR #595	Consider discontinuing the report card version of the Annual and Summary Report to reduce redundancy.

ITEM #	STATUS	DESCRIPTION
16	CIR #734 Closed 2018-02-01	For the A&S Report: The notice about EDMS being internal in the introductory section is all that is required. Remove this statement from other places in the document.
17	CIR #735 Closed 2018-01-30	For the A&S Report: Figure 1 – update to better show Zone Boundaries.
18	CIR #736 Closed 2018-02-01	For the A&S Report: Emergency Response Testing: Need to add a section re: emergency preparations that were done before the Paisley-Clythe Feedermain work at Woods Station.
19	CIR #737 Closed 2018-01-30	For the A&S Report: Table 4: include number of sample stations installed through DMA Program.
20	CIR #738	For the A&S Report: Table 4: Should Locate information be included in this table, instead of its own section? Review the necessity of including the Locate section next year because Locates is a Corporate Initiative, not just Water Services.
21	CIR #739 Closed 2018-01-31	For the A&S Report: Need more information on SCADA uptime improvements.
22	CIR #732 Closed 2018-01-31	For the A&S Report: Add Zone 3 chlorine residuals to Table 9.
23	CIR #741	Arrange for the installation of a sample station in Zone 3.
24	CIR #742 Closed 2018-01-31	For the A&S Report: Add UVT values to Table 13, or create a new table.
25	CIR #743 Closed 2018-01-31	For the A&S Report: Clarification on the Water St. Wellfield PTTW application is needed.
26	CIR #744	For the A&S Report: Need to capture the total number of Lead Replacements (done by City staff and Contractors) in the 2018 report.
27	CIR #745 Closed 2018-02-01	For the A&S Report: Update Management Review Section, as per today's meeting.
28	CIR #746 Closed 2018-02-01	For the A&S Report: Infrastructure Review: Add information on the York Trunk Project to the A&S Report.

Appendix "G" Summary of Staff Suggestions

CIR #	Suggestion Title	Description of Staff Suggestion
576	EOC Preparation – Electronic Records	Future EOC preparation - work with ITS to establish improved electronic records management tool for use from minute 1 for future EOC activations.
577	Removal of Duplication	SOPs/work instructions should be removed from T:\ drive once filed to EDMS for better document control. Can be ambiguous (when filed on the T:\) as to which version is most recent.
578, 603	Document Control System Training	Consider refresher EDMS training and document and records control training for staff.
579	Internal Audit Process Improvement	Consider either a full group audit (in order to gain information from each Admin area) OR consider a focused rotational audit of each functional area of admin customer service (e.g. full internal audit of meter process - starting at the beginning in Admin and following the process in Meter area then finishing back at Admin - for example).
580	Printed Emergency Contact Lists	Consider having a printed copy of emergency contact list in case of network issues experienced recently. Also consider consolidated emergency contact list for all divisions.
581	Document Control	With Backflow Prevention (in Building Services) - SOP's / work instructions / documents should be created for: - the Backflow process in AMANDA - how to deal with a situation where a backflow device failed or a backflow event occurred. Who would be informed, what information would be required, how best to respond to the situation. - documenting a process either through email or Amanda where a water shutoff/turn on would trigger a response from Backflow to ensure that when the water is turned on a cross connection is not created.
582	Emergency Test Members and Training	Backflow Prevention staff have not received emergency response training. They should be included in the next training exercise (especially if it's related to a chemical contamination related to a backflow event).
583	New Program Data Management	As a plethora of data is available through district metered areas - investing in 2017 to better tracking and understanding of data (e.g. SCADA Watch).
584	New Program Resources	Future operational staff resources required for operations & maintenance (O&M) phase of leak detection program.
585	New Program Document Control	Leak Detection Program O&M documentation to be developed: o standard operating procedures, o annual inspection / verification program description and templates, o work orders / instructions (for scheduling inspections and equipment calibrations / verifications)
586	Internal Audit Plan Improvement	Add Engineering's Technical Services (related to surveys and inspections) to future internal / external audits – to review how specifications are verified in the field
587-588	Contractor / Consultant Review Improvements	With Engineering (Construction): The Contractor Review Form used to conduct a monthly contractor review currently has a maximum 3/5 score given to any contractor, which is often perceived as unacceptable by contractors (when they sign-off). Engineering is considering improvements to this form to better represent quality of work and improved ratings (with removal of unachievable 4-5 scores). Establishment of a Consultant Review Form - need to consider that consulting teams would be evaluated rather than the consulting firm.
589, 657	Min/Max Inventory Workaround	Consider a way to manage min/max parts system in interim (as related to instrument calibration / verification) while WAM being sorted out.
590-591	Annual Records Filing	For records that are created on an annual basis (Annual and Summary Report, Internal Audit Report) they should have their own document location in EDMS based on the year. 2015 internal audit report to be filed in EDMS.
592	Back-up Training Certificates	Scanned certificates and database should be placed in a shared location on T:\ drive for back-up access. [Should test visibility of linked certificates when other Technical Services staff have access.]

CIR #	Suggestion Title	Description of Staff Suggestion
593	Training Data Reporting	Consider reporting cost / loss stats to individual employees.
594	Training Provider Improvements	Consider developing internal trainers and topics to satisfy some of the annual 50 hours required for operators.
595-596	Compliance Reporting Improvements	How are we ensuring we don't miss the PTTW reporting requirement in the future? (the one non-compliance issue in 2016). Also presence of VOC's at low levels in source water and a description of what we are doing to manage this water quality risk.
597	Annual Report Formats	Consider discontinuing the report card version of the A&S Report to reduce redundancy. To be evaluated at next management Review.
598	Sampling and Testing	Add to the Temporary Lines work instruction procedures on how to sample/test/read results, etc.
600	Quality Management System	Determine how frequently SOPs should be reviewed and determine the process for SOP approval by top management.
605	Emergency Tests	Consider including Engineering staff in the Emergency Test Exercises, as applicable.
616-617	Hydrant Program	Ensure adequate resources are allocated to the hydrant inspection program. Create a better date field on the maps for the hydrant inspections.
618, 653, 698	In-field Technology	Would be beneficial to have more in-field technology to use with the hydrant inspection collector app. Look at moving towards electronic job sheet forms. Consider using electronic logbooks.
607-615	District Metered Areas	Consider adding DMAs to the next risk assessment. Investigate if there are training opportunities for DMAs. Create a DMA SOP/Operations Manual for staff. Clarify the roles and responsibilities associated with the DMA program.
629, 630, 642, 645	Standard Operating Procedures	Complete the SOPs for the meter shop and enter them into EDMS. Create a leak response SOP for staff, including what needs to be documented. Complete the valve exercising program SOP. Review and update the existing locate SOPs; including a procedure for locate investigations.
634	Valve Program	Develop a plan that schedules valve turning based on a pre-determined priority order. Consider creating a work instruction or reaction plan for critical valves in advance of exercising.
635	Work Completion Documentation	Consider colour coding the valves turned by the year they were exercised in the GIS database.
647	Flushing Program	Look at implementing a weekly (or as needed) flushing program for known dead ends in the City.
655	Communications	Look at creating a communications plan or media blitz to educate people on the unauthorized use of hydrants and ask members of the public to report it when they see it.
675-677	Tap Water Promotion	Look at replacing the Blue W branding with Bring! Fill! Drink! Create tap water promotion signage for use at events where the Water Wagon is not available to attend. Revisit the event qualifications for attendees for future Water Wagon events.
681, 682	Water Sampling and Monitoring	Consider a formal procedure to confirm sample results after a well or storage facility has been taken out of service. Consider standardizing all monitoring equipment.
730	Audits	Consider adding administration staff to the flushing and swabbing audit, as they deal with a lot of the communications for the program.
731, 732	Quality Management System	Add Form 2 and Schedule C to the Reference Document List in QMS 06 – Drinking Water System. Consider adding DMA information and maps as well. Also, add the chart for the number of hydrants, valves, etc. that is currently in the A&S Report.

Appendix “H” – Water Conservation & Efficiency Program – 2017 Annual Progress Report (updated annually)

Background:

The City of Guelph strives to be a leader in water conservation and efficiency. As one of Canada’s largest communities reliant on a finite groundwater supply for our drinking water needs, our ability to reclaim precious water and wastewater serving capacity through conservation initiatives offers numerous benefits to our community and local ecosystem.

Between 2006 and 2016, 9,520 cubic meters per day (m³/d) of average day water/wastewater capacity has been reclaimed as a result of the successful uptake of the City’s 2009 Water Conservation and Efficiency Strategy, allowing the City to delay the need for over \$41 million in additional water and wastewater infrastructure with an investment of approximately \$11.3 million in water conservation programming. Further, the reduction in water use across the city has resulted in a cumulative daily operational savings of over \$625,000 per year in electricity and treatment chemical costs, creating a significant financial benefit to our rate payers. As a result of such efforts, the City’s water and wastewater rates remain close to the median of Council approved Ontario comparator municipalities responsible for the provision of water and wastewater services.

In July 2014, Guelph City Council endorsed the update to the Water Supply Master Plan. Through this update, servicing capacity reclaimed through water conservation and efficiency continued to be a top priority in achieving a sustainable and cost effective community water supply, with a new reduction target of 9,147 cubic meters (m³) in average daily production set through this plan to guide the City’s Water Conservation Programming for the planning period of 2015 to 2038.

In April 2015, an update to the 2009 Water Conservation and Efficiency Strategy commenced. After multiple opportunities for public engagement, including the utilization of the long-standing Water Conservation and Efficiency Public Advisory Committee, feedback on the proposed measures to help to achieve the water reduction goal, as outlined in the 2014 Water Supply Master Plan, was used to inform the program and service improvements. Thus, the Council-approved 2016 Water Efficiency Strategy update defines the programs, policies and resources that will help Guelph meet its reduction targets while ensuring the City continues to offer effective programs that provide value for the community.

In 2017, the City of Guelph was pleased to be the recipients of three industry leader awards. The Ontario Water Works Association presented the City an award for an outstanding leader in water efficiency in both the Public Sector and Utilities category for the 2016 Water Efficiency Strategy and the Public Education and Awareness category for the annual H2Awesome youth program. Further, at the annual Water’s Next Awards associated with the Canadian Water Summit in June, the City of Guelph was honoured in the category of Projects and Technology—Stormwater for the innovative rainwater harvesting bus-wash system at Guelph Transit.

The following sections provide an update of the water conservation and efficiency program activities and successes as they relate to the 2016 Water Efficiency Strategy from January 1 to December 31, 2017. For more information on the City’s Water Conservation Program and individual program resources please visit: guelph.ca/ourstoconserve.

Water Reduction Target Progress:

The 2016 water savings target of 6,659 m³/d outlined in the 2009 Water Conservation and Efficiency Strategy have been surpassed through the implementation of the City's innovative water conservation programs. From 2010 to 2016 an estimated total water savings of 8,155 m³/d is attributed to community participation in the City's water conservation and leak detection programs.

The 2016 Water Efficiency Strategy includes a 10 year water savings goal of 6,265 m³/d by 2026. This exceeds the 2027 target set by the 2014 Water Supply Master Plan. With the recent completion of the strategy late in 2016, 2017 was spent phasing out some previous programs, developing new programs and optimizing current programs. As such, the total water savings achieved for 2017 that can be attributed to community participation in water conservation and efficiency programming is 34,281 m³, or 96 m³/d.

As outlined in the 2016 Water Efficiency Strategy, enhanced and new programming will be rolling out in Q1 2018 for:

- the previously unexplored multi-residential sector;
- a more robust incentive program for the industrial, commercial and institutional sector;
- an enhanced outreach and education platform; and
- commencing data collection through District Metered Area leak detection program.

Water Conservation and Efficiency Public Advisory Committee:

The Water Conservation and Efficiency Public Advisory Committee (WCEPAC) of Council was formed in 2009 and was re-established in 2016 through Council approval following the Water Efficiency Strategy. This committee provides a forum for community input and guidance throughout the City's implementation of the Water Efficiency Strategy. The WCEPAC met four times in 2017. The WCEPAC continues to provide valued insights on opportunities for continued optimization of current and developing water conservation programming and policy, as well as, the enhancement of Guelph's education, engagement and outreach resources. In alignment with Council reporting requirements outlined in the committee's Terms of Reference, the following Annual Report details activities of this Water Conservation and Efficiency Public Advisory Committee within 2017. In 2017 WCEPAC contributions included the following:

- Feedback on various water efficiency programs that have been discontinued, updated or developed as directed through the 2016 WESU, including Water Smart Business, Multi-residential Audit Program, and the Residential Sub-meter Rebate Program.
- Comment on various innovative research, study and pilots including the Alternative Water Softening Technology Market Research Study, Billing Exemption Study Results, and the Civic Accelerator Water Use Challenge.
- Consultation during the development of the updated Public Education and Communication Strategy Update.
- Engagement in learning opportunities to support member's role on the committee, including tours of City owned rainwater harvesting systems.

A full list of the WCEPAC members, meeting minutes and agendas can be found at <http://guelph.ca/city-hall/council-and-committees/advisory-committees/water-conservation-and-efficiency-public-advisory-committee/>.

The WCEPAC possesses no annual budget. Funding for the City's Water Conservation and Efficiency Program is provided within the approved 2017 Non-Tax Supported Water and Wastewater Services Capital and Operating Budgets as well as Development Charges.

In 2018, the WCEPAC will continue to be engaged to solicit input throughout detailed design and implementation of the 2016 Water Efficiency Strategy recommendations and associated public and stakeholder engagement campaigns, including but not limited to the finalization of the Public Education and Communications Strategy, outreach and engagement strategies for City of Guelph's conservation programming and tap water promotion, redesign of the Blue Built Home program, business case development for wastewater reuse pilot project, the rate review, and kick-off of the energy-water nexus study.

Leak Detection Program:

The City's leak detection program started in the spring of 2011 and aims to reduce the amount of water lost between the time of production and end delivery to customers. Since the onset of this program to year-end 2016, the total volume of water saved equates to 1,177,710 m³ (*please note: this is not a cumulative value*).

The 2017 Leak Detection Program was launched in July. This program included sounding and correlation of all 345 kilometers of metallic watermains and 193 kilometres of PVC watermains within City's distribution system, encompassing a total of 538 kilometres of linear infrastructure. In total, 5 watermain and service leaks were identified through this survey. The average daily volume of servicing capacity reclaimed through the location and remediation of these leaks equate to approximately 25 m³/d, with a total volume of 9,620 m³ in 2017.

The 2017 Leak Detection Program also included the continued detailed design of district metered areas (DMA). In recognition of benefits offered through this proactive water loss management approach, Water Services will be working to implement 29 DMAs over the period of 2016 to 2018 with funding provided through government funding, local development charges and local user rates. The objective of the DMA program is to reclaim and sustain 1,500 m³/d in water servicing capacity. To date, 26 DMAs have been installed with an additional 3 scheduled for the future. The outstanding installations are suspended due to challenges with existing infrastructure. Although water savings were noted in the Water Efficiency Strategy, the DMA program was not implemented in 2017.

The overall Water Loss Management savings goal of 192 m³/d for 2017 was not achieved, largely due to the delay in execution of the DMA program. The program is scheduled for 2018; thusly 25 m³/d associated with the sounding and correlation work are the only savings to be attributed to this program at this time.

Residential Water Conservation Rebate Programs:

During 2017, a total number of 951 rebate applications were processed via the City's residential rebate programs. Through the Water Efficiency Strategy, Council approved changes in direction and planning of the Royal Flush Toilet and Smart Wash Washing Machine rebate programs. These changes were due primarily to changes in the marketplace, updates to the building code and improvements in technology.

Royal Flush Toilet Rebate Program:

In line with changes to rebate structure noted in the Water Efficiency Strategy, the Royal Flush Toilet Rebate was adjusted in early 2017 moving from a \$75 rebate to a \$50 rebate, effective the first of the year. It was further broadened to the replacement of 6L toilets instead of only 13L toilets. A total of 876 toilet rebates claimed in 2017, achieved an in-year water savings of 34 m³/d. This surpasses the Strategy's 2017 goal of 30 m³/d.

Smart Wash Washing Machine Rebate Program:

In line with changes to rebate structure noted in the Water Efficiency Strategy, the Smart Wash Washing Machine Rebate was discontinued effective the first of the year. However, those washers purchased in 2016 were eligible to be claimed until March 31, 2017. As such, an additional 75 rebates were claimed in 2017, achieving an in-year water savings of 6 m³/d.

Further to routine promotion of the City's water conservation retrofit programs, Water Services also continued to implement customized engagement within local business sectors in 2017 to increase awareness of program resources and potential water use efficiencies specific to the sector. This included a multi-residential marketing campaign for building owners comparing individual building unit water consumption to multi-residential sector averages, as well as, anticipated utility savings and return on investment for buildings pursuing mass retrofit of inefficient toilets.

Water Use Home Visit and Audit Program:

Identified as a unique opportunity for engaging with Guelph residents in the 2016 Water Efficiency Strategy, a water use home visit and audit program was identified as a means to verify water using plumbing, fixtures and behaviour, which may help modify an occupant's water use. For the last several years, the eMERGE home-tune up has been offered to Guelph residents. This program is an innovative collaboration between the City of Guelph, Guelph Hydro Electric Systems Inc., Union Gas, Transition Guelph and other local partners. This service offers a free 1 hour home audit by trained advisors, a complimentary retrofit of common home water use fixtures (such as water efficient showerheads and faucet aerators), with the option to purchase a flapper and have it installed on-site if leaks are found. The service also includes the development of a household-specific action plan, providing information to residents on how to further reduce home resource use and directing homeowners to further resources and tools to assist with the implementation of recommended improvements.

In verifying the household water consumption data, the City has concluded that on average, the home owner who receives the visit will reduce their water consumption by up to 10 percent depending on the retrofit measures taken. To date, eMERGE home visits have engaged 1242 households with a home audit. The eMERGE Home Visit service continued engaging 302 households in 2017, achieving an estimated in-year savings of 7 m³/d. This value is down from the 13 m³/d goal outlined in the Strategy. However, this year's home visit program focused a great deal on multi-residential units, which often offer lower savings expected from single family homes. There will be a renewed effort for this program to focus on the single-family home in 2018.

Blue Built Home Water Efficiency Standards and Rebate Program:

The Blue Built Home (BBH) Water Efficiency Standards and Rebate Program is a voluntary construction standard designed to outperform the plumbing and water-using fixture requirements of the Ontario Building Code (OBC). The original intent of this certification program for new homes was to increase the installation of more water efficient technologies and contribute to reduced water use in single-family detached homes. Residents with Certified Blue Built Homes could save water and reduce water and wastewater utility bills by 15 to 62 percent. From launch in 2010 until year-end 2017, a total of 50 local new homes have been BBH certified (44 Bronze, 4 Silver and 2 Gold).

The Water Efficiency Strategy Update identified the BBH program as a program that would continue to be enhanced and implemented over the next 10 years due to the potential water savings it could generate. The Strategy details a plan to transition this program from a three-tier (bronze, silver and gold certification) to a single-tier program. BBH certification and associated rebates are to be made available to both existing and new homes and the multi-residential community. The BBH program update was initiated in 2017 and will continue into 2018. The revised program is anticipated to launch May 1, 2018.

In absence of the anticipated program update, 3 homes were built and certified in 2017 with a total water savings of 0.25 m³/d. This is lower than the anticipated goal of 3 m³/d. However, this program has yet to be revised as per the Strategy to include that of retrofit single family homes and multi-residential buildings.

Water use monitoring at the four Net Zero Homes, constructed by Reid's Heritage Homes', continued throughout 2017. Net Zero Homes aim to have each home produce as much energy as it consumes on an annual basis using technologies available to the average builder. To date, 3 reports on household water consumption have been submitted to Reid's Heritage Homes. Data is not considered statistically significant, but three of the four Homes exhibit water savings when compared to modelling of a home built to Ontario Building Code standards. The annual water savings in these BBH ranges from -0.5 and 106 m³ when compared to a home of equal size built to the Ontario Building Code standard.

For more information on the Blue Built Home program visit: bluebuilthome.ca.

Multi-Residential Water Audit Program:

Multi-residential buildings, both new and existing, pose the potential of significant water savings up to 10 percent and the top 5 percent of high density multi-residential accounts are using 23 percent of the water demand. The Water Efficiency Strategy endorsed the development of a Multi-Residential Water Audit Program as a measure to assist in reducing Guelph's daily water production. The overall program savings goal of 14 m³/d for 2017 was not achieved, due to late approval of the Water Efficiency Strategy and the year spent in program design and development.

The Audit program, set to launch in Q1 2018, offers participants a no-cost water audit completed by a third party consultant, outlining the building's daily water demand pattern to determine an estimation of potential water savings related to installing efficient plumbing fixtures and defining the presence of leaks in the building. Through the audit, a proportionate number of units per multi-residential building (with 7 units or greater) will be assessed to identify water saving opportunities. The audit also includes the completion of flow monitoring and a 24-48 hour data logging of the building's main municipal water meter and on specific water using processes, such as pools and irrigation systems.

After the multi-residential audit, property owners/condo boards can move forward down several paths including a full retrofit of fixtures under the Blue Built Home Rebate program, Residential Sub-metering of their building or, if capital infrastructure needs to be replaced or upgraded, incentives through the Water Smart Business program.

The 2017 development of the Multi-Residential Audit Program included development of a stream-lined application process and rebate tracking system, development of program terms and conditions, request for tender (RFT) process, contractor selection, and creating a marketing plan with communication materials including program website and other promotion collateral.

Residential Sub-Metering Program:

Sub-metering creates awareness of water use for property owners (i.e. homeowners, landlords, property managers) and when effectively communicated everyone is equally aware of what they pay. Sub-meters, and in some cases their associated smart phone applications, can provide specific and measurable conservation challenges and goals for property owners and tenants. These services offer significant opportunities for motivating behaviour change since a knowledge gap often exists in regards to how much water residents actually use.

It is because of this that Water Services staff, supported through the Civic Accelerator program, explored a pilot rebate with the AlertLab technology "Flowie", a strap-on sub-meter for a household's water billing meter. Through a smart phone application, a homeowner can receive time of use information on their water using behaviour. Twenty-nine Guelph households purchased a Flowie and received a rebate. The overall program savings goal of 1 cubic meter per day for 2017 cannot be confirmed, as the pilot has yet to determine whether program participation equates to the anticipated savings. Further, the year has been spent in program design and development.

With the moderate success of the sub-meter pilot rebate, and as a further recommendation in the Strategy, staff spent 2017 in design and development of a more robust Residential Sub-metering Rebate Program. Through this program, the City of Guelph will rebate up to half of the cost of the meter to a maximum of \$125 per permanent sub-meter installed and \$100 for an add-on sub-meter with smart technology (e.g. a strap-on sub-meter). The rebate will be provided directly to the property owner/manager or to a third-party agent of the property owner/manager.

The 2017 development of the Residential Sub-Metering Rebate Program included:

- development of a stream-lined application process and rebate tracking system;
- development of the program terms and conditions;
- creation of a marketing plan; and
- the creation of communication materials, including full design of the program website and other promotion collateral.

For more information on the City's water conservation rebate programs please visit: guelph.ca/rebates.

Water Smart Business Program (formerly the Industrial, Commercial and Institutional Capacity Buyback Program):

Since 2007, the City has successfully reclaimed an annual average daily savings of 1,590 m³/d in water/wastewater servicing capacity through participation in the Industrial, Commercial and Institutional Capacity Buyback Program – a program to assist local businesses reduce their ongoing operational utility costs and decrease their demand on municipal supply.

Through the 2016 Water Efficiency Strategy Update, several changes were identified to enhance the program and increase uptake. The Strategy recommended an increased incentive for capital projects permanently offsetting reliance on municipal supply, effectively buying back water servicing capacity. Further, through consultation, it was identified that streamlining the process to offer financial assistance and incentives to local industrial, commercial and institutional clients to complete water efficiency process audits and capital retrofits that reduce water demand, required more dedicated staff resources to support this water-using sector of the community.

During the 2017 budget approval, an expansion was approved to hire a new Water Smart Business Program Coordinator to administer the program recognizing the benefits associated with an enhanced program.

Throughout the course of 2017, staff was hired, trained, and consulted with internal and external stakeholders in an effort to redesign the former ICI capacity buyback program to best meet the needs of Guelph's water-using business community. Staff redesigned and developed administrative and legal processes, communication marketing strategies and collateral, and began network building to facilitate the soft launch of the Water Smart Business on January 1, 2018. A firm launch event is scheduled to occur in the spring of 2018. As such, the overall program savings goal of 150 m³/d for 2017 was not achieved, due to the year spent in program design and development.

Three kick-off meetings with prospective clients, including walk-throughs of their facilities occurred late in 2017. These preliminary meetings inform the 2017 program redevelopment and offer a high probability of early program success in 2018.

This work is intended to support the program's ambitious 2018 goal of conserving 150 m³/d and completing 15 water efficiency process audits and/or reviews in partnership with industrial, commercial and institutional clients in Guelph.

Municipal Facility Water Efficiency Upgrades:

The City aims to lead by example by increasing water efficiency and environmental/cost savings in our own operations and we made significant progress in 2017. Staff provided expertise and input during the initial design meetings for the new construction of the South End Recreation Centre, in order that the building and operations support optimal water efficiency.

In support of the recommendation through the 2016 Water Efficiency Strategy, the need for a new corporate policy was identified in relation to water use within City-owned facilities. Staff initiated and completed internal consultations with multiple departments including Facilities Management, Engineering and Capital Infrastructure Services in order to draft a new policy and education program for best municipal building practices for both new asset construction and asset renewal/upgrades. Once finalized in 2018,

this process policy will ensure the City is using the best municipal practices in regard to water efficiency across its corporate assets.

For measurable water savings in 2017, staff were responsible in identifying a deficient water softener at Water Services that was using 25 m³/d. Replacement of the softener saved an annual 21.75 m³/d, making the program only 250 litres per day short of the 2017 water savings goal of 22 m³/d. Annual achievements for this program can be variable due to capital investments and asset replacement schedules. Staff are connecting with internal stakeholders across the organization to support water efficient practices and infrastructure upgrades.

In June 2017, the City of Guelph won the national Water's Next Award for the innovative rainwater harvesting bus-wash system. The award, won in the category of Projects and Technology—Stormwater, celebrated the high-profile Rainwater Harvesting project in partnership with Guelph Transit. Further, data monitoring and project coordination to maintain optimal functionality of the Rainwater Harvesting system continued through 2017. The total volume of water savings yielded by this project in 2017 equates to 300 m³ of municipal water — another success story to share with prospective clients in 2018 as we expand the Water Smart Business Program and build towards even greater water efficiency and conservation. The Transit bus wash rainwater harvesting system has further prompted other City departments to investigate the installation of similar auxiliary water systems to help offset municipal water use and other fit-for-use applications.

Public Education and Communications Strategy Update:

The Water Efficiency Strategy recognized public education as a municipal best practice for water efficiency programming. The development of this complimentary Strategy to determine the best platform(s) in which to engage the various sectors of the community commenced in August 2017. As an industry leader in municipal water efficiency, it is important Guelph evaluate the best tactics and messaging to resonate with a community aware of the conservation message. In 2017, two pieces were completed: a literature review of best practices of municipal tap water and conservation programming in both grey and academic literature; and quantitative/qualitative research through market research using telephone survey and focus groups. With this information, a final strategy is to be provided that will identify current and proposed program constraints, opportunities, recommend communication goals and messages, define audiences and suggest target groups, identify outreach and communication strategies, tactics and tools to meet the recommended communication goals and water efficiency targets. The Strategy is anticipated to be complete in early 2018.

Youth and Public Education:

The City's curriculum based, Grade 2, Grade 8, and High School in-class water conservation programming continues to be a popular resource for local educators in both the Upper Grand District School Board and the Wellington Catholic District School Board. In 2017, Water Conservation Staff provided 60 interactive school presentations to 1,442 students. Since the inception of this in-class, curriculum-linked program educational initiative six years ago, the City has provided a total of 315 school presentations to over 11,942 students.

In partnership with the Grand River Conservation Authority's Guelph Lake Nature Centre, a total of 696 local Grade 8 and high school students and their chaperones participated in guided educational tours of the City's Water Services facility in 2017.

Civic Museum Exhibit and Education Program - A Ripple Effect:

2016 and 2017 brought a new partnership with Water Services and the Guelph Civic Museum. Staff assisted in funding and resourcing the 'Water Above and Water Below- Guelph's Groundwater System' exhibit at the Civic Museum as part of an agreement with the City of London's Civic museum called: A Ripple Effect. This local water-focused exhibit, with content generated with assistance from Water Services and Wastewater Services, was open to the public and a special educational program was developed specifically tailored to local grade 2 students from both school boards. With content directly related to the curriculum, students were able to explore the history of water through many hands-on events, gallery exploration, and interactive activities. City staff led the learning while students were able to explore the story of Guelph's water from the ground up. The exhibit was available from January 27 to September 10, 2017 with a total of 500 Grade 2 students in attendance between February and June.

H2Awesome:

On October 25, 2017, approximately 350 Grade 8 students from the Upper Grand District School Board and the Wellington Catholic District School Board participated in the fourth annual, award-winning H2Awesome event. This day-long learning event held at Lakeside Church is an opportunity to celebrate water, encourage conservation of this precious resource, and provide focus to the importance of water in our daily lives. The event featured 3 key note guest speakers from our First Nations communities. These speakers included Doug Pawis, Debora Stanger, and Jan Sherman. Both Doug Pawis and Debora Stanger are Ojibwa elders that focus their teachings on traditional medicines and healing circles. Jan Sherman is an Anishinaabe Metis woman that shares her traditional teachings about water through music and song. Key to the event was a variety of 16 different curriculum-linked workshops on various themes, including arts, science, and technology, enabling students to pick their own specific learning venue and challenged them to complete a year-long project. A small group of students who participated are expected to present the culminating efforts of their project to Council in spring of 2018.

The successful event was made possible through collaborative partnership of the Wellington Water Watchers, the Upper Grand District School Board, and the Wellington Catholic District School Board.

Planet Protectors:

In 2016, Water Services partnered with the Office of Climate Change, Transportation and Infrastructure Departments to offer a curriculum focused, interactive and activity based online program called Planet Protectors. This program helps students understand the importance of water conservation by helping them make personal commitments and sharing them with their family members, such as shortening shower time. During the 2016/17 school-year, this program has reached over 1600 elementary students in both the Upper Grand District School Board and the Wellington Catholic District School Board and was offered in 76 Grade 3, 4, 5 and 6 classrooms. The Planet Protector program has further expanded the water awareness and education component of the program and Water Conservation staff's input helped improve the program in 2017. This included new ways to measure success and additional ways to encourage more water conservation efforts both in the classroom and at home with students and their families.

Canada Water Week:

The City of Guelph celebrated Canada Water Week with the fifth annual H2O Go Festival, a community celebration of water. Collaborating with community partners, H2O Go welcomed the contributions of local businesses, community organizations, experts, performers and families. This year's event, offered in partnership with the eMERGE Guelph's Ecomarket, attracted over 4,000 participants of all ages to Old Quebec Street Mall for water-themed presentations, live performances, interactive exhibits, games about water, and artistic children's activities.

Waterloo Wellington Children's Groundwater Festival:

This long-standing festival was held from May 26 to June 1 and celebrated its 22nd year in 2017. Water Services is proud to be an ongoing partner, sponsor, contributor and organizer of the Festival. The Festival annually educates 5,000 Grades 2 through 5 City of Guelph, Wellington County, and Region of Waterloo students. Since 1996, over 90,000 students have participated in the Festival which features fun and interactive activities designed to inform students of the importance of water protection and conservation in their daily lives. In partnership with Guelph's school boards, staff have worked to increase local awareness and participation in this Festival with upwards of 900 students participating from Guelph on an annual basis.

Guelph Water Wagon:

In support of the City's Public Promotion Action Plan for City Drinking Water Consumption, the Guelph Water Wagon has been providing tap water to attendees of large, outdoor community events during the summer months for five years. The Water Wagon provides access to tap water where water fountains or taps are not readily available. Continually growing in demand year-after-year, the Water Wagon attended 32 events in 2017 and provided 19,312 litres of water to event attendees. The Water Wagon continues to provide staff an excellent opportunity to engage with the public. Staff engage with Guelph residents about:

- the importance of water for the City of Guelph;
- the need for water conservation;
- address any questions and concerns regarding municipal tap water;
- promote tap water consumption over other beverages; and
- staff promote the awareness of, and solicit public involvement in Water Services based public processes, programs and studies.

Peak Season Water Demand Management:

Reduction of peak season water demands continues to be a primary objective of the City's water conservation programming. The ability to reduce variations in seasonal water use limits the impact on our finite groundwater supply during times of environmental stress and creates operational efficiencies by reducing capital and operational investment to service our community for only a few days a year. Since 2002, the City's Outside Water Use Program has helped to manage peak season water use via regulatory controls with complementary programs, such as Healthy Landscapes, working to proactively manage potential peak demands by assisting residents and local businesses in establishing low outdoor water use environments. The following activities were completed as part of this program in 2017.

- The Outdoor Water Use Program (OWUP) was in Level 0 Blue all season due to the cooler, wetter summer conditions. This required minimal additional staff report beyond that of the weekly condition reporting, liaising with internal and external partners in monitoring water use, water production patterns and working with the Grand River Conservation Authority. Advertisements were kept minimally, but still maintained to encourage customers to maintain their efficient water using behaviour, including through that of the Healthy Landscapes Program.
- In working to proactively manage peak season demand, the Healthy Landscapes Program offered various public resources throughout 2017. The annual Healthy Landscapes Workshop/Seminar Series featured numerous free talks on time-of-year appropriate outdoor water conservation topics including water efficient landscape design, plant selection, and proactive maintenance best practices to manage the impact of drought and common turf pests. It is estimated over 350 Guelph residents took part in this Landscape and Seminar series.
- The successful annual rain barrel truckload sale in May of 2017 was held at Exhibition Arena and yielded the sale of over 380 rain barrels sold. Rain barrels offer homeowners the benefit of capturing free volumes of water for outside use but also assist in managing stormwater impacts on private property. The sale of rain barrels are a net zero service to the City as the barrels are sold at the bulk rate attained through a rain barrel tender process.
- The Healthy Landscapes Program continues to be a popular resource with 406 free 1-hour visits completed by trained staff in 2017. This service offers a complementary site-based consultation aiming to educate residents on garden design and maintenance practices to significantly curb outdoor water demand at their home.

Peak season water demand research:

Staff continue to pursue collaborative research opportunities where resources can be leveraged to garner greater products. Included in 2017 research in is the City's participation in:

- Alliance for Water Efficiency's Outdoor Water Savings Research Initiative, which seeks to explore the reasons and rationale and water demand impact of landscape changes and the components necessary to achieve reliable and persistent water savings long-term. This project is to be completed in 2018.
- Groundcover research project, which sought to explore more drought tolerant species to enhance lawn aesthetic performance for the duration of two-years by inter-seeding clover species and trefoil into residential turf. The project site was compromised for second growing season and the project could not be completed. However, after one year, the percentage of bird's foot trefoil and clover was very minimal and indicated that the inter-seeding of those species was not successful at the rates and date of seeding (September 27, 2016) in this study.
- University of Waterloo Outdoor Water Use Bylaw Study, which is assessing how well outdoor water applications reflect water application out of habit; or based on soil moisture needs and the effectiveness on water use bylaws across Canada. The study is being undertaken by a PhD student at the University of Waterloo as part of her research. This ongoing study is expected to be completed in the summer of 2018.

Water efficiency studies completed in other Ontario communities have shown a net result of 74 litres per day per household during peak season as a result of similar water efficiency-based landscape consultant

services. For more information on the Healthy Landscapes Program please visit: guelph.ca/healthylandscapes.

Watr - water conservation mobile app:

In alignment with the open government objectives of the City's 2012 Strategic Plan, Water Services has completed a pilot on a mobile-based app to increase customer accessibility to information about household water use. The app, developed by a local technology start-up company, uses customer water account information to provide users with suggestions for conserving water and reducing bills, and view customized information based on known attributes of their household. This application can be downloaded from either the Apple or Google app stores.

Water Conservation and Rebound Effects Study:

Commenced in August 2017, staff directed the research into the effects of water conservation on infrastructure that supply water and return wastewater. This study is investigating (a) the effects of water conservation and plumbing and municipal water/wastewater infrastructure, and (b) the possibility for a rebound in water use should conservation technologies degrade in performance or land uses (such as intensification) change over time. The analysis will assist the program in informing the knowledge gap that does exist in residential customer water billing data for a variety of residential applications (i.e. multi-residential unit demand), outdoor and general demands related to change in behaviour or practice (including automatic irrigation systems), and impact on water demands associated with change in undeveloped or developing land use. This study will inform current programming and is considered to influence redesign in water demand analysis. This study will be completed in Q1 of 2018.

Water Softener Alternatives Testing and Market Research:

With high levels of naturally occurring hardness in the City's groundwater source, the use of residential ion exchange water softener technologies is quite common amongst Guelph households. It is estimated that approximately 77 per cent of local households, as part of a 2009 residential call survey, use a water softener. The Region of Waterloo and the City of Guelph financed ground-breaking research in 2015 to assess the performance of an alternative to ion exchange water softening technology (salt based) that treats hard water without the need for salt and recharge water. This technology referred to as salt and water free technology through the use of: media induced crystallization (nucleation assisted crystallization (NAC) and template assisted crystallization (TAC)); or electromagnetic water treatment (MWT); or chemical conditioning with complexing or chelating agents. Salt and water free technology employs a combination of processes to effectively prevent scale buildup in household water heaters and appliances. However, these technologies do not allow for the same lathering effect as salt based water softeners provide.

It was recommended through the 2016 Water Efficiency Strategy Update to continue to collaborate with the Region of Waterloo on the various project deliverables to determine if salt and water free water softening technologies are viable in Guelph to support a reduction in water use and improve wastewater quality overall. In June 2017, the City of Guelph again partnered with the Region of Waterloo to continue the research, trialling the NAC/TAC technology in real life scenarios. The aim of this study is to assess the field performance and user benefits associated with salt and water free residential water softener treatment technology.

Through this study, social research in both communities was completed (phone surveys, focus groups) to generate a technology test group, a participant list of 18 homes, to install a single technology in their home for testing for user experience.

As of December 2017, all participating homes have the technology installed. Use of the systems will continue for a complete calendar year. Monitoring through online conversations boards, focus groups, and actual energy/water use of the homes will occur over the course of 2018. The final report is scheduled to be delivered February 2019.

The depersonalized results of this Water Conditioner Study will be posted to the joint website, watersoftenerfacts.ca.

Appendix "I" – Glossary

Included below is an index of terms used throughout this report.

Term	Description
<	Less than (used in reference: less than lower detection limit shown)
µg/L	Micrograms per litre = 1 part per billion
½ MAC	half of the maximum allowable concentration
Above Detection Limit	Means the result can be detected using the current level of technology.
AMP	Adaptive Management Plan
AO	Aesthetic Objective
AODA	Accessibility for Ontarians with Disabilities Act
A&S	Annual and Summary
AWQI	Adverse Water Quality Incident
Background	Indicator bacteria group used to monitor general water quality (non -regulatory)
BBH	Blue Built Home program
CAO	Chief Administrative Officer
CAPS	Capital Asset Prioritization System
cfu	colony forming unit
CCL	Critical Control Limit
CCP	Critical Control Point
CELP	Community Environmental Leadership Program
Cubic metres	Cubic metres = 1,000 litres water
Distribution Samples	Samples taken within the distribution system, post primary disinfection
DMA	District Metered Area
DWQMS	Drinking Water Quality Management Standard
DWS	Drinking Water System
DWWP	Drinking Water Works Permit
EC	E. coli (Escherichia coli)
E. coli	Escherichia coli, indicator bacteria used to determine the presence of fecal contamination
EDMS	Electronic Document Management System
EHV	Efficient Home Visit
Eng.	Engineering Services
EOCG	Emergency Operations Control Group
EPA	Environmental Protection Act
Form 1	Form 1 – Record of Watermains Authorized as a Future Alteration
Form 2	Form 2 – Record of Minor Modification or Replacements to the Drinking Water System

Term	Description
GUDI-WEF	Groundwater Under the Direct Influence of surface water – With Effective Filtration
HPC	Heterotrophic Plate Count, indicator bacteria group used to monitor general water quality (non-regulatory)
ICI	Industrial, Commercial, Institutional
In-situ filtration	Refers to the filtration achieved as river water migrates through the ground and into the Glen Collector System
km	Kilometre
LESP	Lake Erie Source Protection
LRP	Lead Reduction Plan
LSL	Lead Service Lines
L/s	Litres per second
m	Metres
m ³	Cubic metres = 1,000 litres water
m ³ /day	Cubic metres per day = 1,000 litres per day
MAC	Maximum Allowable Concentration
MCC	Motor Control Centre
MDL	Minimum Detection Limit
MDWL	Municipal Drinking Water Licence
mg/L	Milligrams per litre = 1 part per million
MOECC	Ontario Ministry of the Environment and Climate Change
n/a	Not Applicable
NDOG	Non-Detect Overgrown
NSF 60	NSF/ANSI Standard 60: Drinking Water Treatment Chemicals -- Health Effects
NSF 61	NSF/ANSI Standard 61: Drinking Water System Components -- Health Effects
ntu	nephelometric turbidity unit
O. Reg. 170/03	Ontario Regulation 170/03 Drinking Water Systems
OA	Operating Authority
ODWQS	O. Reg. 169/03 Ontario Drinking Water Quality Standards
ODWSP	Ontario Drinking Water Stewardship Program
OG	Operational Guideline
OIC	Operator-in-Charge
OP	Operational Plan
ORO	Overall Responsible Operator
OTP	Operational Testing Plan
OWRA	Ontario Water Resources Act
OWUP	Outside Water Use Program
OWWCO	Ontario Water Wastewater Certification Office
Pb	Lead

Term	Description
PDDW	Procedure for Disinfection of Drinking Water in Ontario
PLC	Programmable Logic Controller
POE	Point of Entry, the point at or near which treated water enters the distribution system
ppm	Parts per million (mg/L)
ppb	Parts per billion (µg/L)
PTTW	Permit to Take Water
Q1	Quarter One (aka first quarter), Q2 (second quarter), etc.
QMS	Quality Management System
Raw	Refers to samples that have not yet received disinfection
RCap	Rapid Chemical Analysis Package
RCMP	Reliability-Centered Maintenance Program
SAC	Spills Action Centre
SAN	Storage Area Network
SCADA	Supervisory Control and Data Acquisition
SDS	Subdivision Distribution System (as in Gazer Mooney SDS)
SDWA	Safe Drinking Water Act, 2002
TC	Total Coliform, indicator bacteria group used to determine presence of contamination
TCE	Trichloroethylene
THM	Trihalomethane
TOMRMS	The Ontario Municipal Records Management System
Total Coliform	Indicator bacteria group used to determine presence of contamination
Treated	Refers to samples that have received disinfection
UGDSB	Upper Grand District School Board
UV	Ultraviolet
VOC	volatile organic compound
WCDSB	Wellington Catholic District School Board
WCES	Water Conservation and Efficiency Strategy
WCWC	Walkerton Clean Water Centre
WDGPH	Wellington-Dufferin-Guelph Public Health
WSMP	Water Supply Master Plan

Staff Report



To **Committee of the Whole**

Service Area Infrastructure, Development and Enterprise Services

Date Monday, March 5, 2018

Subject **Municipal Class Environmental Assessment Reform**

Report Number IDE-2018-28

Recommendation

1. That the Mayor be directed to send a letter to the Minister of the Environment and Climate Change (MOECC) requesting that:
 - a. the response process for Part II Orders or 'Bump-Up requests' be expedited, as part of the s.61 review to improve MCEA process times and reduce study costs;
 - b. changes to better integrate and harmonize the MCEA process with processes defined under the Planning Act be supported;
 - c. the scope of MCEA reports and studies be amended to reduce duplication with existing public processes and decisions made under municipal Official Plans and provincial legislation.

Executive Summary

Purpose of Report

To provide background on time and financial challenges resulting from the current Municipal Class Environmental Assessment (MCEA) process and recommendations for Council to encourage the Minister of Environment and Climate Change to expedite reform of the MCEA.

Key Findings

A coalition of the Municipal Engineers Association (MEA) and the Residential and Civil Construction Alliance of Ontario have successfully applied to have a review of the Municipal Class Environmental Assessment process conducted under Part IV (Section 61) of the Environmental Bill of Rights Act, 1993 (EBR Act).

Impact studies and public meetings required by the MCEA process often take two years or more to complete before construction can commence.

Analysis by the Residential and Civil Construction Alliance of Ontario (RCCAO) has demonstrated that the time to complete an EA rose from 19 months to 26.7 months and costs went from an average of \$113,300 to \$386,500.

Local projects that do not have the necessary approvals could lose out on the next intake of Build Canada funding.

The MCEA requirements to evaluate alternatives are often not well aligned with prior or municipal land use planning decisions.

The Auditor General of Ontario has tabled recommendations for modernizing the MCEA process.

In spite of written commitments made by the Ministry of the Environment between 2013-2015, no action has been taken.

Financial Implications

Similar to other Ontario municipalities, the City of Guelph has seen the cost of MCEA process increase significantly over time. Modernization and reform of the current process would be expected to decrease both the time delays and costs to complete the MCEA.

Report

The Municipal Class Environmental Assessment (MCEA) process was developed by the Municipal Engineer's Association (MEA) to provide municipalities with a risk-based approach to comply with the Environmental Assessment Act for both capital projects and infrastructure maintenance activities. Over time, the MCEA process has become more complex, delaying projects and significantly increasing costs. In fact, a 2014 study by the Residential and Civil Construction Association of Ontario (RCCAO) showed that it was typically taking almost 27 months to complete the process for Schedule B and C projects, with study and consultant costs averaging \$386,500 (not including municipal staff time).

A coalition of MCEA stakeholders, such as MEA, RCCAO, the Ontario Good Roads Association (OGRA) and many others, agree that EA reform is needed and have been pressing the Ministry of the Environment and Climate Change (MOECC) to make changes.

Last February, a joint application for review was submitted through the Environmental Commissioner of Ontario and forwarded to the MOECC. The Ministry responded positively to the application in mid-April 2017 and committed to completing a comprehensive review by December 2018.

Although MOECC accepted the arguments made both in the joint application and by the AG, little progress was made in 2017. With the provincial election scheduled for June 2018, there are limited opportunities for the Ontario government to implement legislative and policy changes. Realizing that this window is closing, MEA and RCCAO organized a workshop on November 29, 2017 where 40 municipal practitioners, including a representative from the City of Guelph, shared their

frustrations with the Class EA process. During the discussion, the top priority for EA reform was identified as improving the Part II Order Request (PIIOR) process.

MOECC has now put a team in place and is committed to beginning consultation in early 2018. This team will turn its attention to longer-term improvements that will require more discussion. However, recognizing time is limited; MEA also wants to implement short-term EA improvements that can be implemented now.

Without speedy reform, Ontario municipalities risk losing out on funding for projects that are subject to the MCEA process. This simply is neither proper infrastructure planning nor good asset management.

Consequently, the OGRA Board of Directors is encouraging all municipalities in Ontario to adopt the following resolution that calls on the Minister of the Environment and Climate Change to accelerate the Application for Review of the MCEA process.

Whereas a coalition of the Municipal Engineers Association (MEA) and the Residential and Civil Construction Alliance of Ontario have successfully applied to have a review of the Municipal Class Environmental Assessment process conducted under Part IV (Section 61) of the Environmental Bill of Rights Act, 1993 (EBR Act);

And whereas impact studies and public meetings required by the MCEA process often take two years or more to complete before construction can commence;

And whereas the MCEA requirements to evaluate alternatives are often not well aligned with prior or municipal land use planning decisions;

And whereas analysis by the Residential and Civil Construction Alliance of Ontario (RCCAO) has demonstrated that the time to complete an EA rose from 19 months to 26.7 months and costs went from an average of \$113,300 to \$386,500;

And whereas the Auditor General of Ontario has tabled recommendations for modernizing the MCEA process;

And whereas in spite of written commitments made by the Ministry of the Environment between 2013-2015, no action has been taken;

And whereas local projects that do not have the necessary approvals could lose out on the next intake of Build Canada funding;

Therefore be it resolved that the City of Guelph requests that the Minister of the Environment and Climate Change take immediate steps to expedite the response process for Part II Orders or Bump-Up requests, as part of the s.61 review to improve MCEA process times and reduce study costs;

And further that the Minister of the Environment and Climate Change support changes to better integrate and harmonize the MCEA process with processes defined under the Planning Act;

And further that the Minister of the Environment and Climate Change amend the scope of MCEA reports and studies to reduce duplication with existing public processes and decisions made under municipal Official Plans and provincial legislation

Given the time delays and increased costs that the City of Guelph has experienced in recent years due to deficiencies in the current MCEA process, staff recommend that Council adopt the resolutions as provided.

Financial Implications

Similar to other Ontario municipalities, the City of Guelph has seen the cost of MCEA process increase significantly over time. Modernization and reform of the current process would be expected to decrease both the time delays and costs to complete the MCEA.

Consultations

Following Council approval of the recommendations, a letter to the Minister of Environment and Climate Change containing the resolutions will be drafted by staff and send under the Mayor's signature.

Corporate Administrative Plan

Overarching Goals

Service Excellence
Financial Stability

Service Area Operational Work Plans

Our Services - Municipal services that make lives better
Our People - Building a great community together
Our Resources - A solid foundation for a growing city

Attachments

None

Departmental Approval

Report Author

Kealy Dedman



Approved By

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Staff Report



To **Committee of the Whole**

Service Area Infrastructure, Development and Enterprise Services

Date Monday, March 5, 2018

Subject **Sign By-law Variances – [392 Silvercreek Parkway North](#)**

Report Number IDE- 2018-26

Recommendation

1. That the request for a variance from Table 1, Row 1 of Sign By-law Number (1996)-15245, as amended, to permit a total sign face area of 27.86m² on the west building face of 392 Silvercreek Parkway North, be approved.
2. That the request for a variance from Table 1, Row 6 of Sign By-law Number (1996)-15245, as amended, to permit a building sign with an area of 9.75m² to be located on the first storey of a building face fronting an adjacent property at a distance of 3.5m from the property line of 392 Silvercreek Parkway North, be approved.

Executive Summary

Purpose of Report

To advise Council of a Sign By-law variance request at [392 Silvercreek Parkway North](#).

Key Findings

The subject property is located in an Industrial (B.4) Zone. Table 1, Row 1 of Sign By-law Number (1996)-15245, as amended, restricts the maximum size of sign faces permitted to 20% of the building face to a maximum of 22m² in an Industrial Zone. In addition, the Sign By-law requires that building signs facing an adjacent property be located at least 7.0m from an adjacent property.

Mito Graphics Inc. has submitted a Sign By-law variance application on behalf of Triess Properties Limited to:

- Permit a total sign face area of 27.86m² to occupy 7% of the west building face of 392 Silvercreek Parkway North; and
- Permit an illuminated building sign to front an adjacent property at a distance of 3.5m from the property line.

The requested variances from the Sign By-law are recommended for approval for the following reasons:

- The requested sign face area of 27.86m² is reasonable given the size of the west building face (sign area will cover 7% of the permitted 20% of the west building face);
- The request to permit an illuminated sign on the south building face at a distance of 3.5m from the property line is reasonable given that the adjacent property is zoned industrial and the sign will be adjacent to an asphalt parking area;
- The locations of the signs will not detract from the appearance of the building;
- A Highway Corridor Management Sign Permit has already been issued by the Ministry of Transportation; and
- The proposed signs should not have a negative impact on the streetscape or surrounding area and is not in close proximity to residential uses.

Financial Implications

Not applicable

Report

The subject property is located in an Industrial (B.4) Zone. Table 1, Row 1 of Sign By-law Number (1996)-15245, as amended, restricts the maximum size of sign faces permitted to 20% of the building face to a maximum of 22m² in an Industrial Zone. In addition, the Sign By-law requires that building signs facing an adjacent property be located at least 7.0m from an adjacent property.

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- Permit a total sign face area of 27.86m² to occupy 7% of the west building face of 392 Silvercreek Parkway North; and
- Permit an illuminated building sign to front an adjacent property at a distance of 3.5m from the property line.

(see "Attachment 2 – Sign Variance Drawings")

The requested variances are as follows:

	By-Law Requirements	Variance Request
Permitted sign face area	20% of a building face, to a maximum of 22m ² in an industrial zone	7% of the building face with an area of 27.86m ² in an industrial zone
Setback of a sign facing an adjacent property	7m from an adjacent property	3.5m from the adjacent property

The requested variances from the Sign By-law are recommended for approval for the following reasons:

- The requested sign face area of 27.86m² is reasonable given the size of the west building face (sign area will cover 7% of the permitted 20% of the west building face);
- The request to permit an illuminated sign on the south building face at a distance of 3.5m from the property line is reasonable given that the adjacent property is zoned industrial and the sign will be adjacent to an asphalt parking area;
- The locations of the signs will not detract from the appearance of the building;

- A Highway Corridor Management Sign Permit has already been issued by the Ministry of Transportation; and
- The proposed signs should not have a negative impact on the streetscape or surrounding area and is not in close proximity to residential uses.

Financial Implications

Not applicable

Consultations

Not applicable

Corporate Administrative Plan

Overarching Goals

Service Excellence

Service Area Operational Work Plans

Our Services - Municipal services that make lives better

Attachments

ATT-1 Location Map
ATT-2 Sign Variance Drawings

Departmental Approval


Not applicable

Report Author

Bill Bond
Zoning Inspector III/Senior By-law Administrator

Approved By:

Patrick Sheehy
Program Manager – Zoning

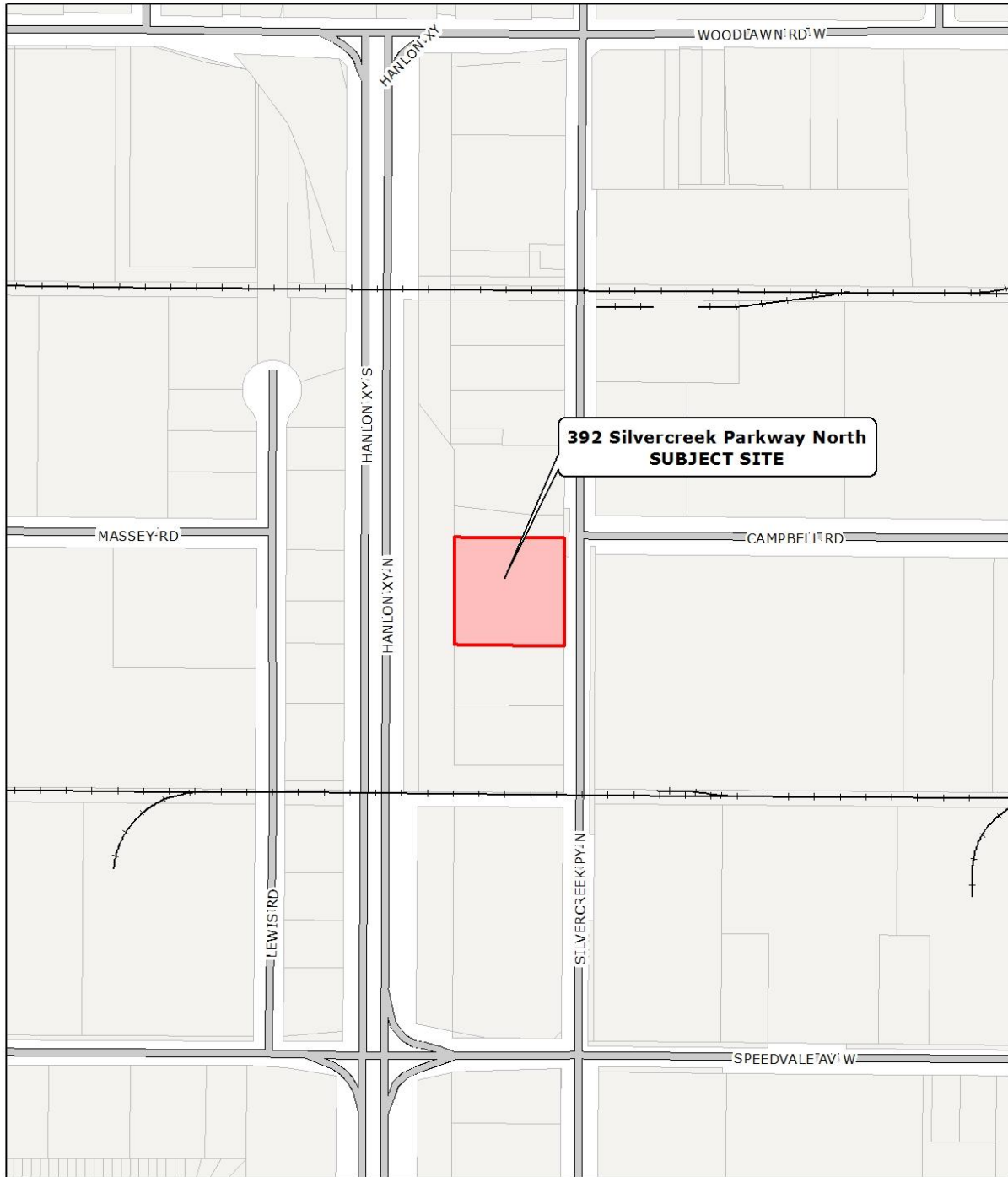


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 for

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ATT-1 - Location Map



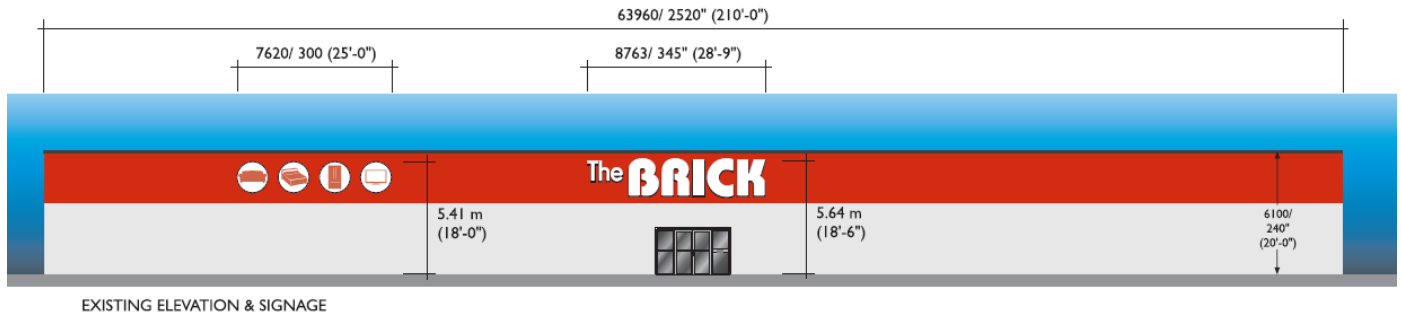
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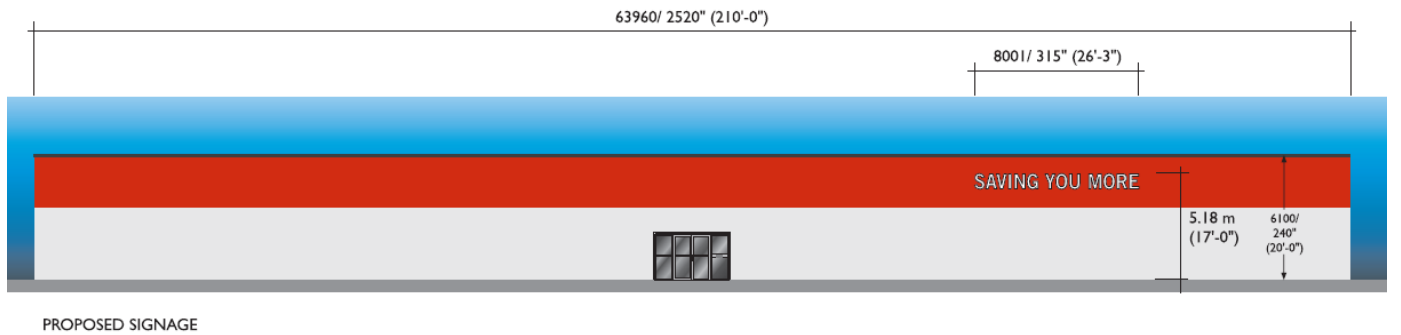
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Planning, Urban Design and Building Services • Development Planning
January 15, 2019

ATT-2 - Sign Variance Drawings (Provided by the applicant)

Existing West Elevation

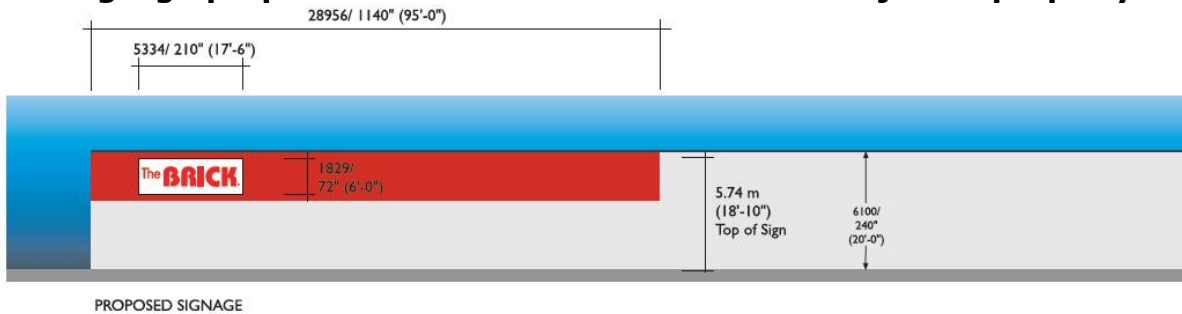


Proposed additional signage "SAVING YOU MORE" to be added to existing west building face, making the total sign area 27.86m² (7% of the total building face)



South Elevation

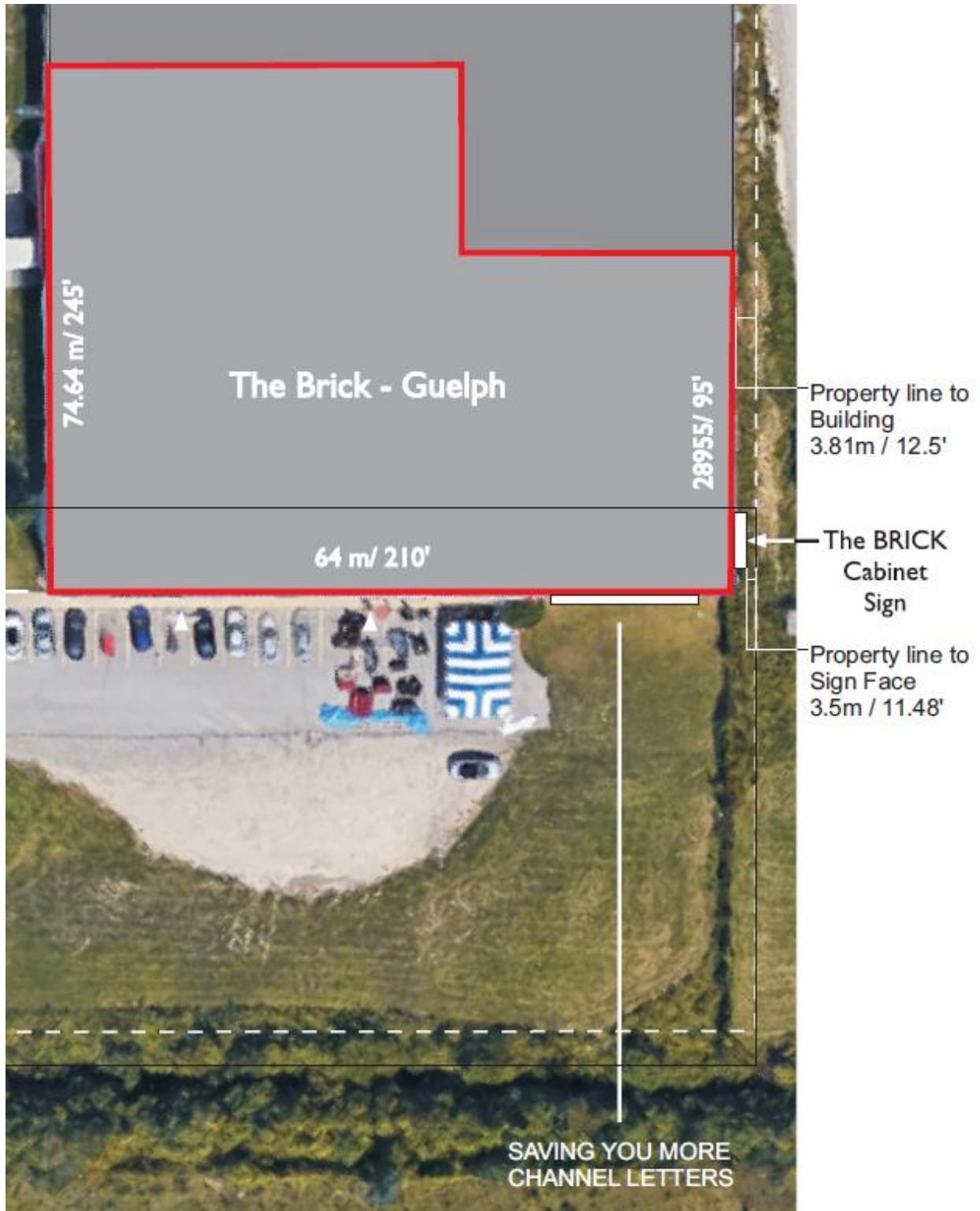
Building sign proposed to be located 3.5m from the adjacent property



EXISTING SOUTH ELEVATION

**ATT-2 - Sign Variance Drawings
(Provided by the applicant)**

Proposed sign locations



Staff Report



To **Committee of the Whole**

Service Area Infrastructure, Development and Enterprise Services

Date Monday, March 5, 2018

Subject **Sign By-law Variances – [848 Gordon Street](#)**

Report Number IDE-2018-27

Recommendation

1. That the request for variances from Table 2, Row 5 of Sign By-law Number (1996)-15245, as amended, to permit a non-illuminated freestanding sign with a height of 3.15m above the adjacent roadway and sign face area of 3.84m² on the property of 848 Gordon Street, be approved.

Executive Summary

Purpose of Report

To advise Council of a Sign By-law variance request at [848 Gordon Street](#).

Key Findings

The subject property is located in a commercial Office Residential (OR-32) Zone. Table 2, Row 5 of Sign By-law Number (1996)-15245, as amended, restricts freestanding signs to a height of 1.8m above an adjacent roadway and to a sign area of 3.0m² in a commercial Office Residential Zone.

1313052 Ontario Inc. has submitted a Sign By-law variance application to permit a non-illuminated freestanding sign with a height of 3.15m above the adjacent roadway and sign face area of 3.84m² on the property of 848 Gordon Street.

The requested variances from the Sign By-law are recommended for approval for the following reasons:

- The sign will assist the public by identifying the tenants of the property;
- The request is reasonable given the size of the property;
- There will be no other outdoor signage, therefore the property will conform to the maximum overall sign area permitted on the property of 4.5m²; and
- The proposed sign should not have a negative impact on the streetscape or surrounding area.

Financial Implications

Not applicable

Report

The subject property is located in a commercial Office Residential (OR-32) Zone. Table 2, Row 5 of Sign By-law Number (1996)-15245, as amended, restricts freestanding signs to a height of 1.8m above an adjacent roadway and to a sign area of 3.0m² in a commercial Office Residential Zone.

1313052 Ontario Inc. has submitted a Sign By-law variance application to permit a non-illuminated freestanding sign with a height of 3.15m above the adjacent roadway and sign face area of 3.84m² on the property of 848 Gordon Street. (See "Attachment 2 – Sign Variance Drawings").

The requested variances are as follows:

	By-law Requirements	Request
Maximum height permitted above an adjacent roadway	1.8m	3.15m
Maximum sign face area per face	3.0m ²	3.84m ²

The requested variances from the Sign By-law are recommended for approval for the following reasons:

- The sign will assist the public by identifying the tenants of the property;
- The request is reasonable given the size of the property;
- There will be no other outdoor signage, therefore the property will conform to the maximum overall sign area permitted on the property of 4.5m²; and
- The proposed sign should not have a negative impact on the streetscape or surrounding area.

Financial Implications

Not applicable

Consultations

Not applicable

Corporate Administrative Plan

Overarching Goals

Service Excellence

Service Area Operational Work Plans

Our Services - Municipal services that make lives better

Attachments

ATT-1 Location Map
ATT-2 Sign Variance Drawings

Departmental Approval

Not applicable

Report Author

Bill Bond
Zoning Inspector III/Senior By-law Administrator

Approved By:

Patrick Sheehy
Program Manager – Zoning



Approved By

Todd Salter
General Manager
Planning, Urban Design, and
Building Services
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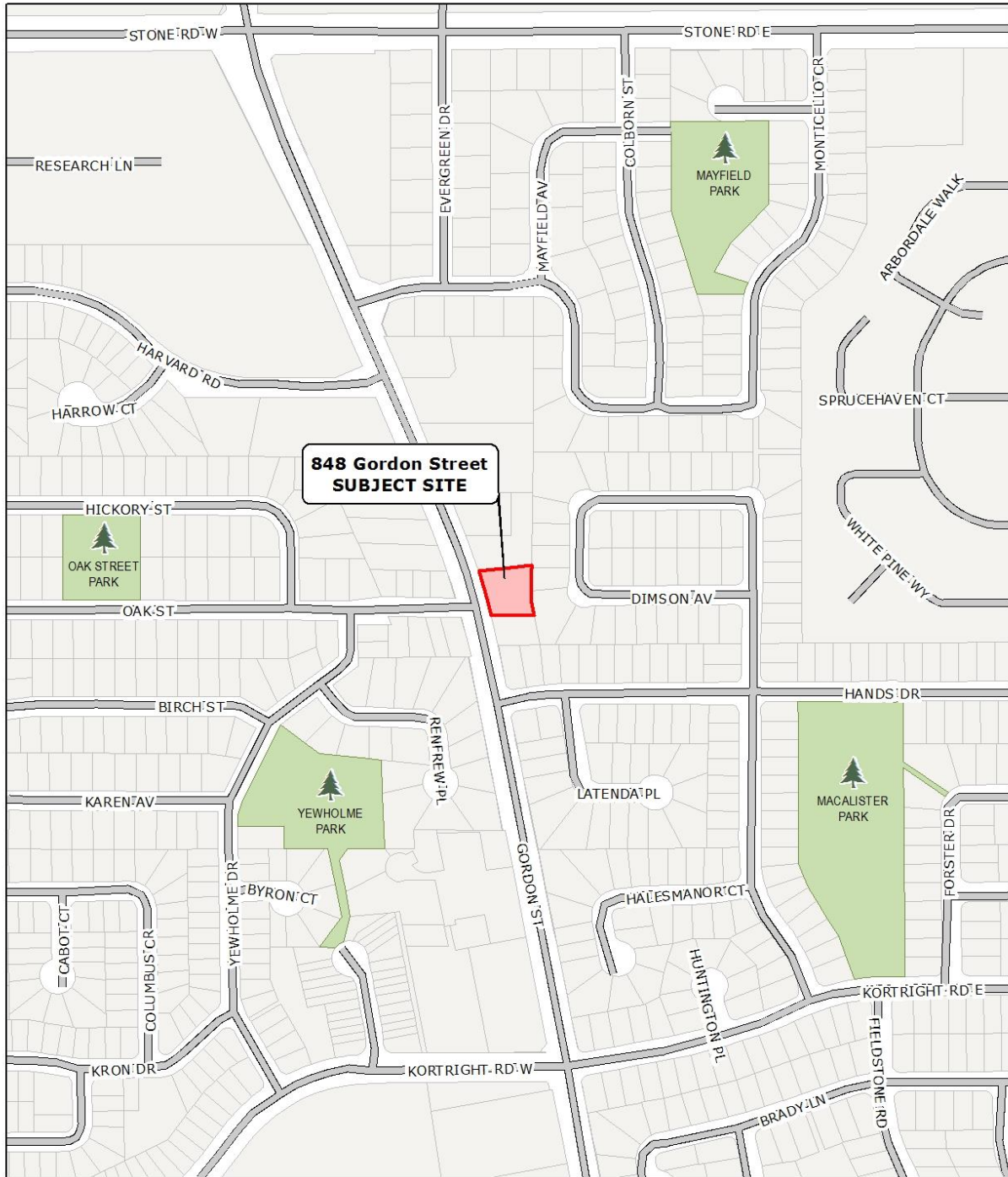


for

Recommended By

Scott Stewart, C.E.T.
Deputy CAO
Infrastructure, Development and Enterprise
519-822-1260, ext. 3445
scott.stewart@guelph.ca

ATT-1 - Location Map



0 25 50 100 150 200 m

848 Gordon Street

Produced by the City of Guelph
Planning, Urban Design and Building Services - Development Planning
January 15, 2019

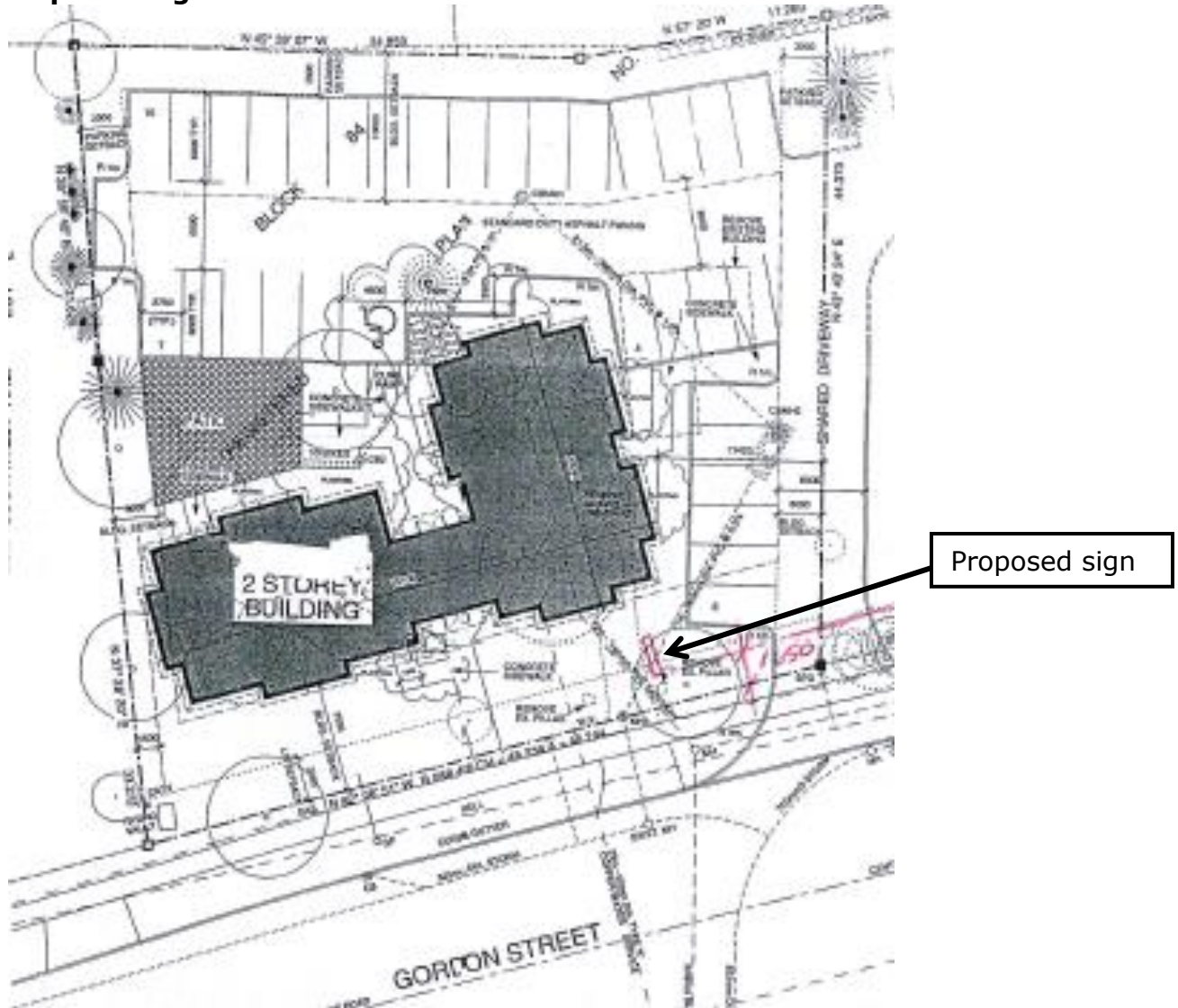
**ATT-2 - Sign Variance Drawings
(Provided by the Applicant)**

Proposed non-illuminated freestanding sign with a height of 3.15m above the adjacent roadway and sign face area of 3.84m²



**ATT-2 - Sign Variance Drawings
(Provided by the Applicant)**

Proposed sign location



A photograph of the steeple of St. Andrew's Presbyterian Church, featuring a tall, pointed roof with a weather vane on top, set against a clear blue sky. The steeple is made of light-colored stone or brick with dark wood shingles on the roof.

St. Andrew's Presbyterian Church

Presentation to

**City of Guelph's
Committee of the Whole**

March 5, 2018

Introduction

- **St. Andrew's appreciates the opportunity provided to speak to the Committee of the Whole on our quest for additional affordable housing in the downtown core;**
- **In attendance are members of our land lease task force:**
 - **John Groenewegen, chair**
 - **Rev. John Borthwick**
 - **Virginia Gillham**
 - **Anne Holman**
 - **Rick McDonald**

Why We Are Here

- **Provide context for our request to the City;**
- **Our request is twofold:**
 1. **That the City provide a funding grant to cover the cost of a Heritage Impact Assessment of our properties located at 62, 68 and 74/76 Yarmouth Street; and**
 2. **That the Chief Building Official extend our demolition permit application for a reasonable period of time following completion of a Heritage Impact Assessment funded by the City.**

An Overhead View of Yarmouth Street Properties



These are the
3 properties
under
consideration

Our Yarmouth Street Properties

- **62, 68 and 74/76 Yarmouth Street currently provide affordable housing for 13 individuals;**
- **St. Andrew's is trying to understand whether we can develop these properties to provide affordable housing for 30 + individuals;**
- **Any decision on the potential for development requires a Heritage Impact Assessment (HIA);**
- **Heritage Guelph was presented with some background research on these properties by Heritage Planning staff;**
- **St. Andrew's does not have the funds for a HIA;**
- **St. Andrew's will not proceed with any further investigation of potential for more affordable housing without outside funding for a HIA, or a determination by City officials.**

In Summary

➤ **Our request is twofold:**

- 1. That the City provide a funding grant to cover the cost of a Heritage Impact Assessment of our properties located at 62, 68 and 74/76 Yarmouth Street; and**
- 2. That the Chief Building Official extend our demolition permit application for a reasonable period of time following completion of a Heritage Impact Assessment funded by the City.**

➤ **Thank-you for the opportunity to appear before you.**

Parking Technology Selection and Implementation Metrics Study



March 5, 2018



AGENDA

Parking technology selection and implementation metrics study



Our imperative

How we began



Master plan

How this work fits



Project initiation

Formation of working group



Economic health

Snapshot of downtown



Parking policy

Performance based parking management



Stakeholder survey

Understanding parking durations



Requirements

Understanding uses



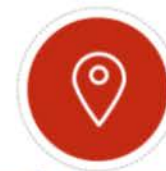
Launch

Elements of a successful implementation



Technologies

Selecting suitable devices



Path forward

What's next

Our imperative

How we began

Deep community engagement

At the meeting of November 18, 2015, Council approved the 'Downtown Parking Master Plan (2016 to 2035)'.



“That staff be directed to work with the Downtown Advisory Committee to develop metrics which will be used to measure and determine the effect and implementation of enhanced On-Street Parking Management and Customer Service Strategy within the downtown, while also allowing for flexibility as to the timelines for implementation so as to minimize impact.”

On December 7, 2016, “That staff report back on the timing of implementation once performance metrics have been put in place and measured.”

Downtown parking master plan

How this initiative contributes to delivering the master plan

A focused effort to resolve the concerns with on-street paid parking was essential to move the master plan from ideation into execution. A successful implementation relies on selecting the appropriate technology to deliver excellent customer service, provide real-time data for decision making and allow the City to pivot based on changing needs.

On-street Technologies

Deliver on-street technologies to enforcement while minimizing impact on economic health of downtown

Periphery Parking

Address approach to periphery parking



Project initiation

Formation of a working group

A working group was formed with members from the Downtown Advisory Committee, Guelph Labs and City staff, focused on delivering the objectives outlined by Council.

Communication

Community Engagement City staff created facilitation plans to structure and guide the discussions



Research

Expert input and materials were reviewed from Guelph Labs, leading industry experts & CIMA+ consultants to inform discussions



Collaboration

Twenty two community stakeholders and seven City staff participated in twenty two meetings since May, 2016



Potential Solutions

The working group strove to achieve consensus on how to move forward, how to approach implementation and next steps

Assessing economic health

A snapshot of downtown

The working group was tasked with developing a sustainable, data-driven model to assess the economic health of downtown.



Developing a model

Literature review

The working group began by reviewing industry, materials brought forward by Guelph Labs, examples of models from other cities and expertise from the University of Guelph.

Expert brainstorming

The participants identified all the potential measures of economic health and produced more than one hundred possible indicators.

Surveying

A survey ranked the criteria by importance, ease of collection, reliability and efficiency in order to prioritize which measure to collect and report on

Prototyping

The next phase of the work is to produce a mock economic health assessment report in order to validate



How policy impacts economic health

Performance based parking management

We need a parking management process in which decisions to influence demand and use of parking to meet overall goals are supported by policies and data.



Policies need to be developed to address:

1. Occupancy: measured as the percentage of parking supply available
2. Pricing: used as a primary tool to manage demand
3. Time limits: maximum time that can be purchased at one time
4. Enforcement: effective enforcement to support a successful implementation
5. Allocation of revenue: pricing is for managing demand, not gathering revenue

A successful implementation of these policies will generate a change in public perception of parking by:

1. Influencing choice (where & how)
2. Sharing of parking resources
3. Use of alternate modes of transportation
4. Convenience
5. Utilization & prioritization

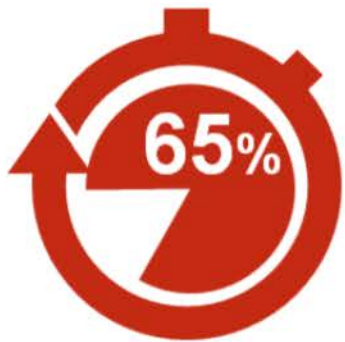
Technology will need to be in place to support the data collection informing the economic indicators



Downtown stakeholder survey

Understanding parking durations

A survey was sent to twenty five stakeholders from the Downtown Guelph Businesses Association, the Downtown Advisory Committee as well as community groups and not-for-profit organizations. We received 18 surveys, representing a 72% response rate.



Parking Duration

More than 65% of respondents indicated that TWO HOURS was an appropriate duration for parking on street



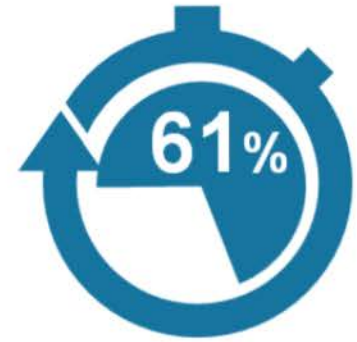
Grace Period

Equally, 28% of respondents indicated that the grace period should be 15 MINUTES or 20 MINUTES



Grace Period

It is recommended that staff look to other municipalities for best practices when deciding between the two times



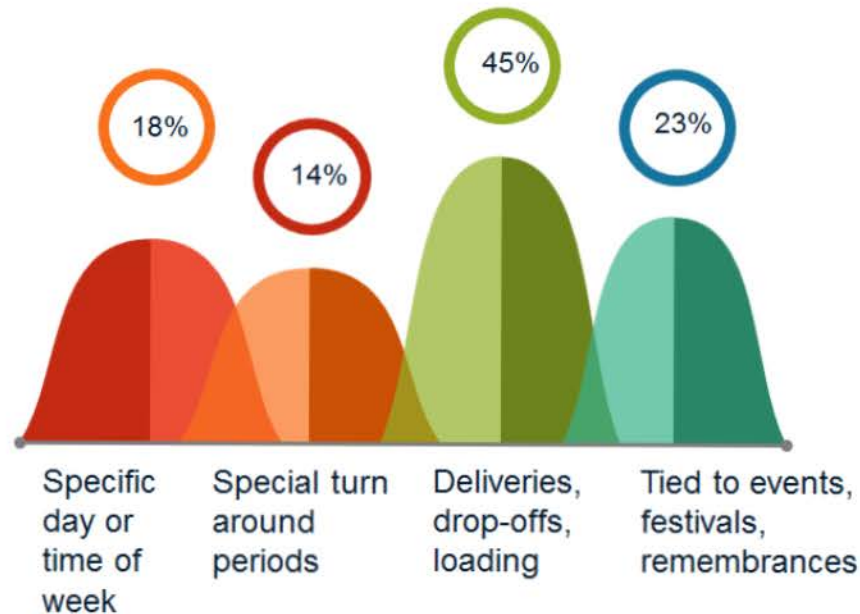
Timing of Grace Period

When asked, 61% of respondents indicated that the grace period should occur AFTER payment

Special parking requirements

Understanding uses

Stakeholders were asked to consider all their direct and ancillary parking needs as they run their businesses or operate their community agencies in order to uncover, prior to policy creation, their specific requirements. When the results were collated, trends of uses became apparent.



Next steps

A number of next steps were identified including:

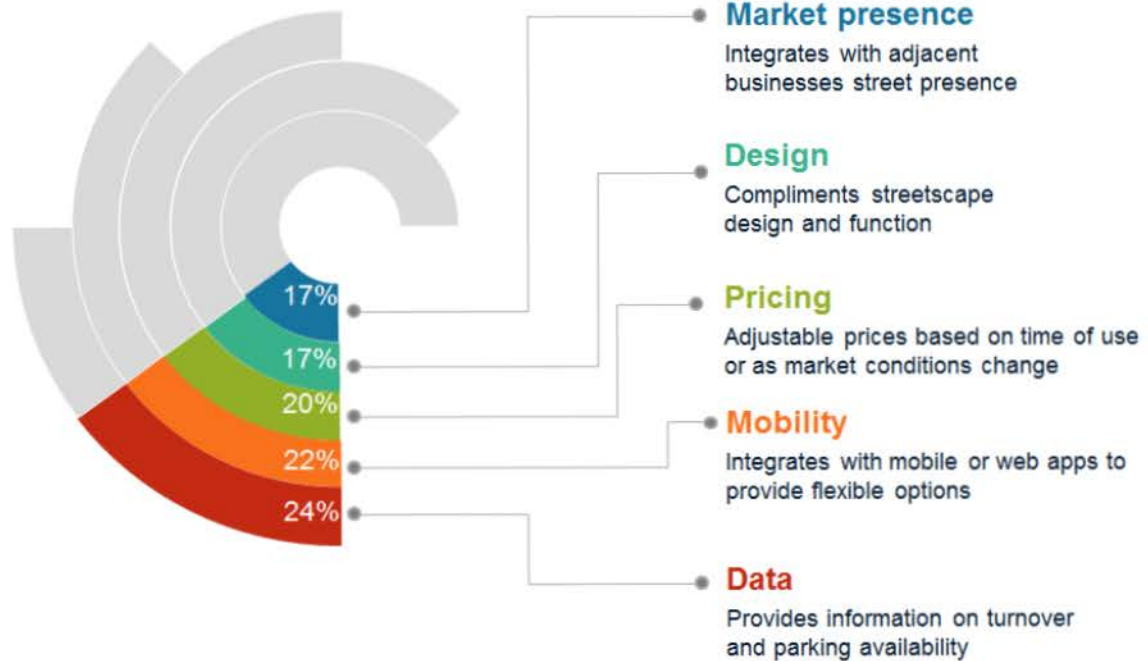
1. Contacting respondents to better understand specific needs
2. Creating policies which account for these needs
3. Socialize proposed policies with stakeholders for feedback
4. Continuous dialogue post-launch to ensure needs are met



Parking technologies

Desired characteristics

Participants were queried on which capabilities they would like to see the new equipment provide. The responses demonstrate an interest in exploiting the wide variety of capabilities new technology can provide to support data collection, support businesses and to improve and understand turnover.





Launch

Elements of a successful implementation

Stakeholders were asked to consider which elements would contribute to a successful launch of the new technologies downtown.



Launch strategy

100%













Overwhelmingly, the message from the survey was one of inclusion. Downtown stakeholders want to be involved, have input and the ability to shape how the new technologies are implemented.

Key themes emerging from the responses cover the imperative for frequent, transparent and continuous communication with the stakeholders and public, clear signage and opportunities to become familiar with the devices, a phased approach with an introductory period and opportunities to celebrate.

Technology options

Selecting a suitable device

The working group participated in a series of discussions with the consultants from CIMA+ as a means to understand how technology is changing, which offerings were in the market and the advantages and disadvantages of each device. A requirement matrix was developed to assist in evaluating the various options.

	 <p>Single Space User pays meter adjacent to vehicle</p>		 <p>Mobility User inputs location and pays on mobile</p>		 <p>Pay & Display User pays and place POP in dash</p>
 <p>Pay by Plate User inputs plate number and pays</p>		 <p>Pay by Space User inputs space number and pays</p>		 <p>Licence Reader User parks and reader verifies plate and bills</p>	

Path forward



Operationalize metrics

1. Create mock up economic health report for review
2. Implement system requirements to support data collection for input into performance based parking model
3. Develop mechanism for analysis, review, economic benchmarking & decision making for needed changes

Policy creation

1. Develop policies to support implementation
2. Create assessment criteria for technology selection
3. Address special needs to support businesses
4. Resolve how free elements will be integrated into parking model





Community engagement

1. Establish a smaller working group to coordinate feedback, gather recommendations and uncover needs
2. Socialize proposed policies and approaches for community feedback

Feedback

1. Pivot policies to address issues and feedback from community engagement
2. Review with stakeholders and gain consensus, where possible, on approach and uses





Roll out plan

1. Create technology selection process, shortlist and provide demonstrations to the public
2. Develop phased implementation plan addressing elements raised in stakeholder survey
3. Begin community education, communication and preparatory efforts

Launch

1. Move towards an autumn 2019 phased launch of the technologies and policies
2. Initiate continuous monitoring of performance of system to pivot and adjust as needed



Staff Report

To **Committee of the Whole**

Service Area Infrastructure, Development and Enterprise Services

Date Monday, March 5, 2018

Subject **Parking Technology Selection and Implementation Metrics Study**

Report Number IDE-2018-36

Recommendations

1. That the Parking Technology Selection and Implementation Metrics Study dated January 2018, prepared by CIMA+ Canada Limited, be approved;
2. That staff operationalize a set of performance based parking metrics to provide reliable data with which to measure the performance of the parking operation, based upon the metrics identified in Table 1 : Proposed Parking Metrics of this report;
3. That staff establish a mechanism to review at established intervals the performance metrics of the parking system and work in partnership with the Downtown Advisory Committee when recommending any changes to parking policy and pricing;
4. That staff work with the Downtown Advisory Committee to create an implementation plan which addresses the key elements raised by stakeholders in the Stakeholder Survey;
5. That the implementation of the new on-street paid parking technology be scheduled for Fall 2019, following the opening of the Wilson Street Parkade.

Executive Summary

Purpose of Report

The report describes the findings and recommendations of the recently completed Parking Technology Selection and Implementation Metrics Study and provides a framework for operational parking metrics, parking technology selection and an implementation plan to support a successful rollout of the on-street paid parking technologies.

Key Findings

Parking Technology Selection and Implementation Metrics Study was initiated with the goal to develop indicators for metrics that would be used to assess the impact of paid on-street parking on the downtown economy and to identify technology to support collection of the data.

Through this process, it became clear that parking itself is not an indicator of the economic health of downtown but that parking metrics could and should inform economic health indicators. Parking has an important, if indirect, influence on the economic health of downtown and a detailed, data driven view of the performance of the parking system could provide insight into changes in the key indicators of the health of the downtown economy.

As part of this study, two major surveys were conducted. The first was to assess other municipalities and gather important information on parking policies. The second survey was conducted to assess needs as they relate to parking policy among key stakeholders in the downtown, including businesses, community groups and not-for-profits.

Feedback, in the form of discussions, research papers and community surveys, was instrumental in articulating the needs of the downtown stakeholders and will be influential in shaping the direction parking policy will take.

The set of performance management metrics as established through this study will be important to assess the impact of parking policies and will need to be supported by reliable, attainable and accessible data.

The development and use of parking metrics to drive parking policies and to measure the influence of those policies on the economic health of downtown is unique to the City of Guelph and is an innovative approach for a city of this size.

The selection of the appropriate technology solution to support on-street paid parking will also be critical in delivering a successful launch, in facilitating data collection efforts for metrics creation and for positioning the parking system for future growth.

Continued collaboration with the working group and with the Downtown Advisory Committee will ensure the City builds an effective and successful approach to implementing on street paid parking downtown.

The implementation of new on-street technologies should be scheduled in Fall 2019, following the opening of the Wilson Street Parkade, to minimize any impact on users of the parking system.

Financial Implications

The potential revenue generated from on-street parking is a significant financial factor in the Council approved DPMP. The recommendations of this study will support the update to the DPMP, which will be presented to Council in May 2018.

The funding for the implementation of the on-street paid parking technologies will be identified through the 2019 budget process. Projected revenue timing and costs will be presented to Council as part of the Downtown Parking Master Plan Update, for approval in May 2018.

Report

BACKGROUND

At the meeting of November 18, 2015, Guelph City Council approved the 'Downtown Parking Master Plan (2016 to 2035)'. The implementation of On-Street Paid Parking in the downtown was approved subject to the following direction to staff:

"That staff be directed to work with the Downtown Advisory Committee to develop metrics which will be used to measure and determine the effect and implementation of enhanced On-Street Parking Management and Customer Service Strategy within the downtown, while also allowing for flexibility as to the timelines for implementation so as to minimize impact."

The November 18, 2015, Guelph City Council meeting and Downtown Parking Master Plan can be viewed at: http://guelph.ca/wp-content/uploads/council_minutes_111815downtown_parking_master_plan.pdf

Subsequently, at its meeting of December 7, 2016 Council provided the following direction to staff regarding the consideration to re-introduce on-street paid parking in the downtown:

"That \$700,000 for downtown parking metres be removed from the 2017 Capital Budget."

"That staff report back on the timing of implementation once performance metrics have been put in place and measured."

Parking Technology Selection and Implementation Metrics Study was initiated with the goal to develop indicators for metrics that would be used to assess the impact of paid on-street parking on the downtown economy.

An Information Report providing an overview of the study approach and progress, entitled Parking Master Plan – On-Street Parking Metrics Study Update, was provided to Council in October 2017. <https://guelph.ca/2017/10/information-items-week-ending-october-20-2017/>

STUDY

CIMA+ Canada Inc. was awarded the contract to undertake the Parking Technology Selection and Implementation Metrics Study. The assignment had the following deliverables identified:

1. Project Start-up

2. 'Local Economy Metrics' Development
3. Technology Review and Selection
4. Operational Policies and Procedures Development
5. Roll-out Strategy Development
6. Summary Report & Presentation

The Parking Technology Selection and Implementation Metrics Study is contained within Attachment 1.

Deliverable Results

Local Economy Metrics Development

A working group involving city staff and members of the Downtown Advisory Group had been established prior to the beginning of this study to create a model of economic indicators which could be used to measure the health of downtown Guelph. After a significant literature review and the addition of resources from Guelph Labs and the University of Guelph, an initial set of economic indicators were generated.

A clear distinction was drawn between an indicator and a metric. An indicator is a quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect changes connection to an intervention, or to help assess the performance of a development actor. In the case of downtown, such indicators could include retail performance, safety and security, accessibility or stability among others. A metric, however, is the degree to which a particular subject possesses the quality that is being measured. Metrics help to put a variable in relation to one or more other dimensions. Related metrics could include percentage of open opportunities that become closed sales, or percentage of customer visits resulting in a sale.

The working group identified a list of key indicators they felt would best represent a holistic view of the health of the downtown economy. Through this process, it became clear that parking itself is not an indicator of the economic health of downtown but that parking metrics could and should inform economic health indicators. Parking has an important, though indirect, influence on the economic health of downtown such that a detailed, data driven view of the performance of the parking system could provide insight into changes in the key indicators of the health of the downtown economy.

In addition to the development of downtown economic health indicators, the working group focused on the identification of parking metrics to measure and determine the effect of the implementation of enhanced on-street parking management. It was determined that an appropriate approach to developing key parking metrics was twofold: first, survey other municipalities to gain insight into how they are using metrics to drive their parking policies and how those policies impact economic health, and secondly, to identify and integrate best practices in the industry as a benchmark.

A survey was sent to eighteen municipalities probing for information on rates, time durations, enforcement and metrics collected and used. While important information on rates, durations and enforcement was collected, it became apparent that, of those who responded, no other municipality is currently using metrics to

drive their parking policies nor are they using metrics to measure the impact of parking policies on the economic health of their downtown. The City's intention to collect data to feed a metrics system which can be used to inform data-driven decision making on how to adjust and modify its parking policies is innovative in a municipality of this size. The methodologies and experience gained through this on-going exercise will make the City of Guelph a leader in this area and unique among similar sized municipalities.

The results of the review indicated that the use of local economy metrics to set pricing for parking is not a common practice in the municipalities. However, the results did show that a performance based parking system is a well-established parking management approach that can be used to support economic development policies and strategies.

Performance based parking management can be defined as a parking management process in which decisions to influence demand and use of parking to meet overall goals are heavily supported by public policies and data collected in a general basis. The first part of performance based parking management is governed by a set of parking policies or guidelines developed to ensure that the right amount of parking is available, at the right location and at the right price. Typically, guidelines are developed to address:

1. Occupancy – measured as the percentage of available parking supply during the work week.
2. Pricing – used as the primary tool to manage demand for public parking.
3. Time Limits – identified as the maximum time that can be purchased at one time.
4. Enforcement – effective enforcement is required for a successful implementation.
5. Allocation of Parking Revenue – pricing is first and foremost for managing demand rather than gathering revenue.

A successful implementation of these policies/guidelines has proven to generate a change in public perception of parking by influencing choice (where and how), sharing of parking resources, price (use alternate modes of transportation), convenience, optimization, utilization and prioritization. A successful

implementation allows users to make decisions about where, when, how long, mode of transportation and need.

The working group determined that the establishment of reliable, repeatable, and consistent measurements of the performance of the parking systems was required and agreed on which metrics would be useful to track to assess the health and performance of the parking system. The working group proposed the following parking metrics to be collected, analyzed and reported on publicly, when and where appropriate.

Table 1: Proposed Parking Metrics

Performance metric	Target	Data source	Rationale
Aggregate turnover	Every 2.5 hours	Integrated software system	Ability to measure overall turnover of parking to support consumer traffic to downtown commercial entities
Aggregate occupancy	85%	Integrated software system	Ability to measure overall occupancy to determine usage and future needs
Turnover by street	Every 2.5 hours	Integrated software system	Ability to measure turnover of parking as a street specific view
Occupancy by street	85%	Integrated software system	Ability to measure occupancy of parking as a street specific view
Turnover in courtesy zones	Every 0.5 hours	Integrated software system	Ability to measure short term visitor turnover
Occupancy in courtesy zones	85%	Integrated software system	Ability to measure usage of short term visitor spots
% pay with debit	50%	Internal financial systems	Ability to measure payments by debit impacting cash flow
% pay with credit	10%	Internal financial systems	Ability to measure payments by credit cards impacting cash flow
% pay with mobile app	15%	Internal financial systems	Ability to measure adoption of mobile payments
Average duration of stay	2 hours	Data exported from software to Excel	Ability to measure true durations
Overall number of infractions	TBD	Integrated software system	Ability to measure compliance in parking system
Infraction by type	TBD	Integrated software system	Ability to measure infractions by type to adjust or pivot policies
Infraction by street	TBD	Integrated software system	Ability to determine any street specific issues
Sustained occupancy in excess of defined occupancy target	15%	Integrated software system	Ability to see true occupancy of system

In addition, direct feedback from the affected stakeholders in downtown Guelph was identified by the working group an important lens through which to understand the needs of business and community groups.

A survey was created jointly by City staff and members of the Downtown Advisory Committee for distribution to downtown businesses, agencies, cultural and religious institutions, community groups and not for profit organizations and other stakeholders. In total, the survey was sent to 25 individuals representing downtown interests. Of those invited, 18 participants responded partially or fully to the survey, representing a response rate of 72%. The profile of the respondents is captured in the table below.

Table 2: Demographics of Survey Respondents

Respondent	Business Type	No. of Employees	Square Footage	No. of Units
1	Government	10	2000	1
2	Government	30	800	several
3	Health and fitness	4	n/a	2
4	Retail / shopping	12	3500	2
5	Real estate	50	12,000	4
6	Non-profit organization	n/a	n/a	
7	Food and dining	50	2000	4
8	Retail / shopping	9	40006	6
9	Real estate	4	300	7
10	General service	4	600	n/a
11	Retail / shopping	350	105,000	51
12	Financial	8	2000	3
13	Non-profit organization	4	1500	10
14	Non-profit organization	3	Unsure	2
15	Financial	n/a	n/a	n/a
16	Non-profit organization	10	10,000	2
17	Non-profit organization	6 paid 50 volunteers	occupy street frontage on Quebec, Baker and Chapel Lane	1
18	Non-profit organization	4	1000	1

The results of the survey provided additional clarity on what is deemed important to the downtown businesses, community group and not for profit organizations. A similar survey will be conducted with the public during the first quarter of 2019 to capture additional needs and feedback.

Survey Results

Maximum Allowed Parking Time

A two hour maximum parking time was identified by 65% of respondents as appropriate.

Grace Period after Expiration of Paid Parking Time

Participants identified fifteen to twenty minutes as the appropriate grace time. Overall, 56% of respondents identified these times as appropriate.

Discussions took place involving City staff and members of the Downtown Advisory Committee, regarding whether it was more appropriate to offer the grace period in advance of paid time in order to support a “free” short term, short stay option in downtown. In order to gain additional insight, the survey included a question asking respondents whether they felt the grace period should precede or follow the paid parking component. The downtown businesses, community groups and not for profit organizations who responded preferred the grace period to follow the paid parking component by 61%.

Special Requirements

City staff wanted to uncover community or business needs that would inform any policies developed for the implementation of paid parking so the survey also queried participants on any special requirements that should be considered. Short, recurring periods of parking was identified as the most important accommodation identified to support drop offs, loading and deliveries. Participants also identified parking needs tied to special events and festivals, during specific times of day or week. These results will be explored further and accommodated in the development of a paid on street parking policy.

Looking to the future installation of new parking technology, the survey queried participants on which capabilities they would like to see the new equipment to provide. The participants’ responses demonstrate an interest in exploiting the wide variety of capabilities new technology can provide to support data collection, support businesses and to improve and understand turnover of parkers in the downtown area. Participants identified the following key capabilities of any new technology: adjustable prices based on time of use, compliments streetscape, integrates well with adjacent businesses and organizations’ street presence, integrates with mobile or web apps and provides detailed data on turnover and occupancy. These responses will be important considerations in the selection of any new technology.

Finally, in order to ensure a successful roll out of the new parking technology, participants were asked to identify components of a smooth execution. A variety of elements were identified to ensure a successful launch but among the top needs identified are an effective marketing and communications effort, excellent signage and a mechanism for continuous two way communication between the City and the public and the City and the downtown stakeholders.

Parking staff will continue to collaborate with the working group to refine the metrics to measure the impact of the parking system on the economic health of downtown. The metrics and the identified stakeholder needs will directly inform which technology is ultimately selected for implementation. The technology will gather the data to generate the metrics while at the same time, the data needs of anticipated metrics will influence the choice of technology selected.

Finally, continued involvement with the working group and with the Downtown Advisory Committee will ensure the City builds an effective and successful approach to implementing on street paid parking downtown.

Parking Technology Scan

The working group explored various technology options to enable, support and provide critical data to a performance based parking management system. It was agreed that the technology selected for implementation on street will need to provide continuous, reliable and objective data on occupancy and turnover. This will allow City staff to manage the parking system in an effective and sustainable manner while taking into consideration any impacts on the approved DPMP and the potential influence on some of the indicators applied to assess the economic health of the downtown.

There are many different technologies currently available that are part of smart parking solutions. These technologies range from payment methods to in-ground sensors that can be used as an aid in parking enforcement. CIMA+ Canada reviewed the current offerings in the market with the working group and outlined how they function, the advantages and disadvantages of each offering and the associated costs. The consultant also reviewed how enforcement is performed with each parking offering and the types of data the system provides.

The variety of parking technologies reviewed was extensive and wide-ranging, accounting for the familiar and traditional technology offerings to the latest, most innovative means of supporting on street paid parking. The technologies reviewed by the working group are outlined in the Table 3.

Table 3: Parking Technology Offerings

Parking Technology	Function	Payment
Single space smart meter	Traditional system that allows user to park in a designated spot for a specified time	Payment with coins or credit cards
Pay and Display	Driver makes payment and display ticket on dashboard	Payment with coins, credit, debit and smart phone apps.
Pay by Phone	Driver makes payment through mobile application for specific spot	Payment with credit, debit and third party mobile wallets
Pay by Space	Driver makes payment through meter for specific spot	Payment with credit, cash or combined with pay by phone
Pay by Plate	Driver makes payment through meter using licence plate rather than spot	Payment with coins or credit
Recent Innovations	Functions	Payment
In-ground Sensors	Magnetic sensors on individual parking spaces which gather information on payment and compliance	Not applicable
Pay by Sky	Technology allows driver to park in a designated area with a small in-vehicle transponder and walk away	Payment is done automatically from previously set up profile and payment information

Licence Plate Readers	Technology allows driver to park in any area with licence plate reader in viewing range, capturing start and leave time	Payment is done automatically from previously set up profile and payment information
-----------------------	---	--

A technology selection criteria matrix was developed to inform decision making. Considering the strategic goal to support the economic health of downtown and the need to provide reliable and accessible data for effective decision making, the team identified criteria related to the following operational areas.

1. Permitting
2. Payment methods
3. Payment options
4. Account creation
5. Enforcement
6. Central management
7. Future enhancements

Further, recognizing that parking covers operational and maintenance services within regular municipal activities, the allocation of responsibilities was an important consideration as the functions of installation, maintenance, payment collection and data collection is currently performed by staff in different service areas. The selection of the technology will consider their processes and needs to ensure that the implementation supports effective procedures for ongoing operation. CIMA+ Canada also identified that the physical and technological limitations of the different offerings be considered in the selection process.

This work has resulted in a useable, informative and comparable process to evaluate any technology for use on street. A hybrid approach to the technology encompassing both single space and multi-space meters has been recommended through the study. While this approach is considered the most beneficial and cost effective, there is flexibility such that each parking location could be considered and determine whether it is more appropriate to assign single space meters or group the spaces under a multi-space meter system.

The evaluation matrix, requirements, usefulness of the data provided by the technology and study recommendations will inform the decision making process at the time that the City tenders the purchase of the technology to support on-street paid parking.

As part of the technology selection process, the City will provide an opportunity for suppliers to demonstrate their product to the public. Community feedback regarding preferences will be used by staff in making a final selection.

Operational Policies and Procedures Development

From a policy development perspective, a survey was sent to other municipalities to solicit feedback on their approaches, current operations, challenges and successes in implementing on street paid parking. Twenty eight municipalities were sent the survey with eleven municipalities completing the questionnaire, corresponding to a 39% response rate. The survey provided findings on hourly rates currently in force, durations and grace periods, exemptions, permits and enforcements.

Best practices from other jurisdictions, as well as case studies regarding other cities' innovation in parking and their progress in achieving their strategic goals, were also reviewed. While more detailed work remains to develop parking policies for downtown, the survey of comparable municipalities and other jurisdictions will provide a broader view on best practices, challenges and opportunities.

Rollout Strategy Development

The working group agreed to a set of fundamental guiding principles to inform the on-street paid parking implementation plan, as described below.

1. Any implementation of on street paid parking should occur following the construction and opening of the Wilson Street Parkade. It was agreed that, to implement on street paid parking in advance of the opening, would be too onerous on users. With restricted access to parking alternatives and higher demand for available spots, it was agreed to schedule the implementation of paid parking on street during the third and fourth quarters of 2019 following the completion of the parkade.
2. The implementation of on street paid parking should include supporting communication and education plans, previews of the technology, a compliment of administrative, operational and maintenance plans and a market launch plan.
3. The implementation should be done in phases so that the rollout is staggered across streets or areas so City staff can resolve any issues prior to a full implementation.
4. Once the paid parking on street technologies have been implemented and are live, there should be a grace period of warnings provided by Bylaw and additional roll out education provided while the public become accustomed to paid parking downtown.
5. The Downtown Guelph Business Association and the Downtown Advisory Committee should continue to be involved in the development of the rollout strategy to provide guidance and input to ensure a successful implementation.

Financial Implications

The potential revenue generated from on-street parking is a significant financial factor in the Council approved DPMP. The recommendations of this study will support the update to the DPMP, which is will be presented to Council in May 2018.

The funding for the implementation of the on-street paid parking technologies will be identified through the 2019 budget process. Projected revenue from on-street paid parking will also be identified as part of the 2019 budget process.

Consultations

Select members of the Downtown Advisory Committee received a draft version of the CIMA+ Canada report in advance for feedback and comment.

Members of the Downtown Advisory Committee will continue to be engaged in the development of the implementation plan for the on-street paid parking technologies.

Corporate Administrative Plan

Overarching Goals

Service Excellence
Innovation
Financial Stability

Service Area Operational Work Plans

Our Resources - A solid foundation for a growing city
Our Services - Municipal services that make lives better
Our People - Building a great community together

Attachments

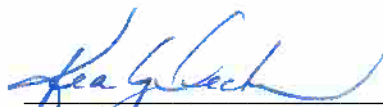
ATT-1 Parking Technology Selection and Implementation Metrics Study

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City of Guelph

Parking Technology Selection & Implementation Metrics

Final Report

17-091

January 2018



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Definitions

3 rd -party Integration	In the context of this report, it refers to another system interfacing with the identified system for the purposes of sharing data and expanding the capabilities
License Plate Readers (LPR)	Type of camera hardware which utilizes video analytics and image processing to determine the sequence of characters on a license plate of a vehicle for identification purposes
Near Field Communications (NFC)	Low-speed communications protocol allowing for contactless transfer of data (e.g. payments). Payment methods currently using a form of NFC include Paypass, PayWave, Android Pay, and Apple Pay

1. Executive Summary

At its meeting of Wednesday, November 18, 2015, Guelph City Council approved a Parking Master Plan (PMP) which addresses the future parking needs for the City's downtown for the period 2016 to 2035. As part of the commitments considered for the implementation of the PMP, Council directed staff to identify and develop metrics to monitor potential economic impacts of policy changes related to pricing and on-street management.

To support staff with this endeavor, a thorough review of parking technologies and parking management practices was conducted following a Performance Based Parking Management approach with two main objectives:

- Determination of parking related data that can be used to support the future development of a performance based parking system; and
- Identification of a set of parking technologies able to provide this type of information in a cost-effective manner and responding to the particular needs of the City of Guelph.

During the early stages of this assignment, work conducted by the University of Guelph Research Group (GuelphLab) for the identification of economic development measures was discussed with City Staff and members of the Downtown Advisory Committee.

Even though at the time of completion of this study, the applicability of the nine indicators and their respective set of factors identified by GuelphLab was still under discussion, the link between these indicators and the data collected by parking technologies and the day-by-day parking operations was investigated as part of a jurisdictional scan and best practice review.

The jurisdictional scan and best practices review encompassed two sources of information:

- The results of an online survey focused on economic development, parking technology, and parking policies targeted to the 28 comparable municipalities as approved by City Council; and
- A Canadian and international review of best practices related to parking policies, management and technology.

The results of the review indicated that although the use of local economy metrics to set pricing for parking is not a common practice in the municipalities that responded the online survey, it also showed that a performance based parking system is a well established parking management approach that can be used to support economic development policies and strategies.

Due to the fact that a performance based parking system is a data-driven management methodology, the assessment and analysis of parking technology presented in this document considered the following factors for the review of on-street parking technology:

- Type and format of the information collected for each type of parking technology;
- Capabilities of each type of parking technology, included enforcement, administration, and user information; and
- Cost (installation and operational)

To support a preliminary evaluation of the parking technology identified as part of this study, a comprehensive review of the collected information was conducted in conjunction with City staff as part of this assignment. The result of this review process was a technology selection criteria that considers not only the capabilities of each type of parking technology but also their physical and technological limitations and expected levels of responsibility.

Based on the findings of this study we can provide the following preliminary recommendations regarding parking technology and implementation metrics:

1. Implementation of all Single Space(Smart) Parking Meters
2. Implement of all Multi Space Parking Meters
3. Proceed with a hybrid approach that includes both Single Space and Multi Space Meters

While each of the technologies have various capabilities a hybrid approach may be the most beneficial and cost effective. The hybrid approach could consider each location for on-street parking – specifically where one multi-space meter could capture parking from 5 or more adjacent spaces. This would spread the higher capital cost over several spaces as compared to the lower cost for the single space units.

With respect of implementation metrics, Guelph Labs and others will continue to work on establishing and identifying a specific set of performance metrics suitable for the City of Guelph.

The analysis conducted as part of this assignment suggests that the information collected by single space and multi space meters can support the implementation of a performance based parking management and the determination of related performance measures such as average occupancy and hourly occupancy.

It is expected that the collection and analysis of this type of information will support the measurement of the economic vitality and viability of the City of Guelph's Downtown.

2. Introduction to Performance Measurement in Economic Development

From a policy perspective, economic development can be defined as efforts that seek to improve the prosperity of a community by creating and/or retaining jobs and supporting or growing incomes and the tax base. In the context of economic development, prosperity is defined as the well-being of a community’s residents and businesses that accrues from the availability of jobs and investment that provide economic livelihood, educational opportunities, and a safe and healthy environment.

To pursue these objectives economic development encompasses three main areas:

- Public policies intended to meet broad economic objectives such as price stability, high employment, expanded tax base, and sustainable growth;
- Programs to provide infrastructure and services such as highways, parks, affordable housing, crime prevention, and educational programs and projects; and
- Policies and programs explicitly directed at job creation and retention.

The level of success of these types of programs or projects can be quantified using a set of performance measures. From this perspective, performance measurement is a systematic approach used to assess the efficiency and effectiveness of programs or projects, to monitor whether they are ‘on track’ in achieving the desired goals, and to clearly demonstrate the value of the economic development efforts.*¹

The different elements of this systematic approach are summarized in **Table 1**.

Table 1: Performance Measurement in Economic Development

Inputs	Activities	Outputs	Outcomes
<p>Resources such as money, staff time and other items used to produce outputs and outcomes.</p> <p>Inputs indicate the amount of a particular resource that is actually used to produce a desired result.</p>	<p>Actions a program takes to achieve a particular result.</p>	<p>Amounts of products created and services delivered in a reported period.</p>	<p>Changes in knowledge, skills, attitudes, values, behavior, or condition that indicates progress toward achieving the program’s mission and objectives.</p>

¹ Performance Measurement Toolkit for Local Economic Development in British Columbia

2.1. City of Guelph – Quantifying Downtown Health

As described in the February 2017 Report titled “Quantifying Downtown Health” prepared by the University of Guelph Research Group (GuelphLab), the economic vitality and viability of downtown cores can be modelled based on a set of performance factors and indicators tailored to consider the particular characteristics of this type of urban areas.

One of the examples presented in the aforementioned document for quantifying these two qualitative concepts is the **Government’s Planning Policy Guidance Note 6** also known as PPG6.

Table 2 summarizes the set of Indicators considered by the PPG6 as part of its Town Centre Health Check.

Table 2: PPG6 Indicators

Diversity of Uses	Retailer Representation
Vacant Properties	Commercial Performance
Pedestrian Flows	Accessibility
Customer Views and Behaviours	Safety and Security
Environmental Quality	

With respect of Guelph’s Downtown, GuelphLab conducted an update of the information provided on the February 2017 report, and after consultation and discussion with City Staff and members of the Downtown Advisory Committee, a set of nine indicators and their respective set of factors were proposed as most suitable for the conditions of Downtown Guelph. (See **Table 3**)

Table 3: Proposed Factors and Indicators (GuelphLab – 2017)

Factor	Indicator
Overall retail sales Total sales volume Number of employees in downtown core Profit and loss statements Sales per square foot	Retail Performance
Public transit access Parking availability Information availability through wayfinding signage Availability of necessities (e.g. grocery stores, drug stores) Easy-to-follow flow and urban planning	Accessibility

Factor	Indicator
Cleanliness General condition of buildings Identifiable landmarks Historic character Streetscape and façade improvement programs	Aesthetics and Planning
Customer satisfaction Reputation Social media presence Media coverage Online presence (e.g. website dedicated to downtown events)	Branding and Imaging
Volume of dining restaurants (not fast food) Volume and range of service offerings Presence and quality of cross-shopping opportunities Evening economy Diversity in retail offerings	Commercial Representation
Feeling of security Perception of safety outside shopping hours Crime rates	Safety and Security
Cooperation and activity of city government Local political situation Community leadership Flexibility of retailers to consumer trends Business longevity/turnover	Stability
Pedestrian footfall Population density Universities in area Tourism Population growth over time	Traffic
Rent per square foot Commercial vacancy rate Mixed-use buildings Property values New residential development	Real Estate

Although not all the Indicators and Factors proposed by GuelphLab can be directly linked to parking related activities, data collected by parking technologies and the day-by-day parking operations can be used as a source of information to support a performance measurement process as schematically presented in **Table 4**.

Table 4: Performance Measurement Process

Parking Activities	Parking Outputs	Indicator and Factors
Public policies and data collection	Goals and objectives	Economic Development

2.2. Performance Based Parking Management

Performance Based Parking Management can be defined as a parking management process in which decisions to influence demand and use of parking to meet overall goals are heavily supported on public policies and data collected in a general basis.

The type of goals considered for this type of parking management process depends of the parking environment, but in general, they can include the following:

- To efficiently utilize the City’s parking supply;
- To improve parking user quality, convenience, service and information; and
- To ensure that the limited supply of public parking is allocated in an equitable way.

It is generally assumed that the potential benefits of this type of parking management process includes the following:

- Convenient access to local business;
- Reduction of traffic congestion and consequent greenhouse gas emissions;
- Improvement of economic vitality; and
- A positive parking experience

2.2.1. Parking Activities

The first part of the performance based parking management process is governed by a set of parking policies or guidelines developed to ensure that the right amount of parking is available, at the right location and at the right price.

The following is a list of the policies or guidelines commonly used for this type of parking management:

Occupancy

Measured as the percentage of available parking supply during the working week, occupancy is based on the results of parking utilization studies and political decisions regarding the availability of parking.

Pricing

Under a performance based parking approach, pricing is the primary tool for managing the demand for public parking.

Time Limits

Identified as the maximum time that can be purchased at one time. This policy or guideline is directly related to parking turnover and the desired level of parking availability.

Enforcement

An effective enforcement of parking regulations and restrictions is required for the successful implementation of this type of parking management

Allocation of Parking Revenue

Under this approach, Pricing of parking is first and foremost about managing demand for parking, rather than gathering revenue.

2.2.2. Parking Outputs

Under this type of parking management process, it is expected that the implementation of the aforementioned policies and/or guidelines in the day-by-day management of on-street parking will generate a change in the public perception of parking in the following way:

Choice

Influence people's travel choices, providing consumers with options around where to park and how long to park.

Pricing

Influence the costs for those people who choose to use less parking, through substitution (i.e. changing transport mode) or conservation (reducing travel).

Sharing

Allows for parking resources to accommodate variations in peak demand associated with different land uses.

User Convenience

Provides consumers with information regarding location, prices, availability, regulations and penalties associated with the use of parking facilities.

Peak Demand Management

Optimization of parking spaces during peak time or special events.

Prioritization

Establish a hierarchy of parking users based on their specific needs

- Short term parking (e.g. buying something from a convenience store)
- Long term parking (e.g. going out for dinner)

Utilization

Encourage frequent turnover and good availability of parking

2.3. Parking Management and Economic Development

As presented in **Table 5**, a performance based parking management process can support the performance measurement of economic development at three different levels:

Level One – Inputs

Depending of the type of parking technology, the day-by-day use of parking locations and user behaviour can be collected and used to support the decision making process.

Level Two – Activities

The effect of policies and guidelines governing on-street parking facilities can be quantified based on information collected by the parking technology. If modifications are required in order to reach the preferred goals, these will be data-driven and easily supported.

Level Three – Outputs

Preferred parking usage and user behaviour can be enforced or stimulated to support the parking related economic development goals.

Table 5: Performance Measurement in Economic Development and Parking

Inputs	Activities	Outputs	Outcomes
Data Collection	Occupancy	Choice	Retail Performance
	Pricing	Pricing	Accessibility
	Time Limits	Sharing	Aesthetics and Planning
	Enforcement	User Convenience	Branding and Imaging
	Allocation of Parking Revenue	Peak Demand Management	Commercial Representation
		Enforcement	Safety and Security
		Prioritization	Stability
		Utilization	Traffic
			Real Estate

This innovative approach to parking management has been implemented by a diversity of municipal authorities to contribute to the wellbeing of downtown areas and promote economic development opportunities. Implementation of these parking programs is generally based on the following set of activities:

Definition of parking analysis zones

The diversity of land uses and services provided by a typical downtown area generates changes in the supply and demand for parking that will varies depending of the purpose of the trip. Visit to a dentist or another type of medical appointment

during the day may require less than an hour of parking, while going to a restaurant or another night event will require 3 or 4 hours of parking.

Data collection

New parking technologies allows municipalities to track changes to on-street utilization in a regular basis and do the necessary changes to parking policies such as pricing and time limits to better manage their on-street parking resources.

Parking management

Activities conducted as part of parking management can be integrated to municipal goals an objectives such as improving access to local business, reducing traffic congestion and the consequence reduction on emissions and greenhouse gases.

An example of this type of parking management process is the Performance-Based Parking Pricing Program implemented by the City of Seattle in 2010. Under this program the day-by-day parking operations of 30 paid parking areas are monitored and managed using information collected by paid stations as well as mobile systems (PayByPhone).

The Seattle Department of Transportation (SDOT) analyzes and uses the collected data for two specific purposes:

Pricing

Occupancy data in all paid parking areas in the City of Seattle is used by SDOT to support the decision making process regarding rates and hours of operation in line with performance metrics that aligns with the City transportation, environmental and economic policy objectives.

Time of Day Rates

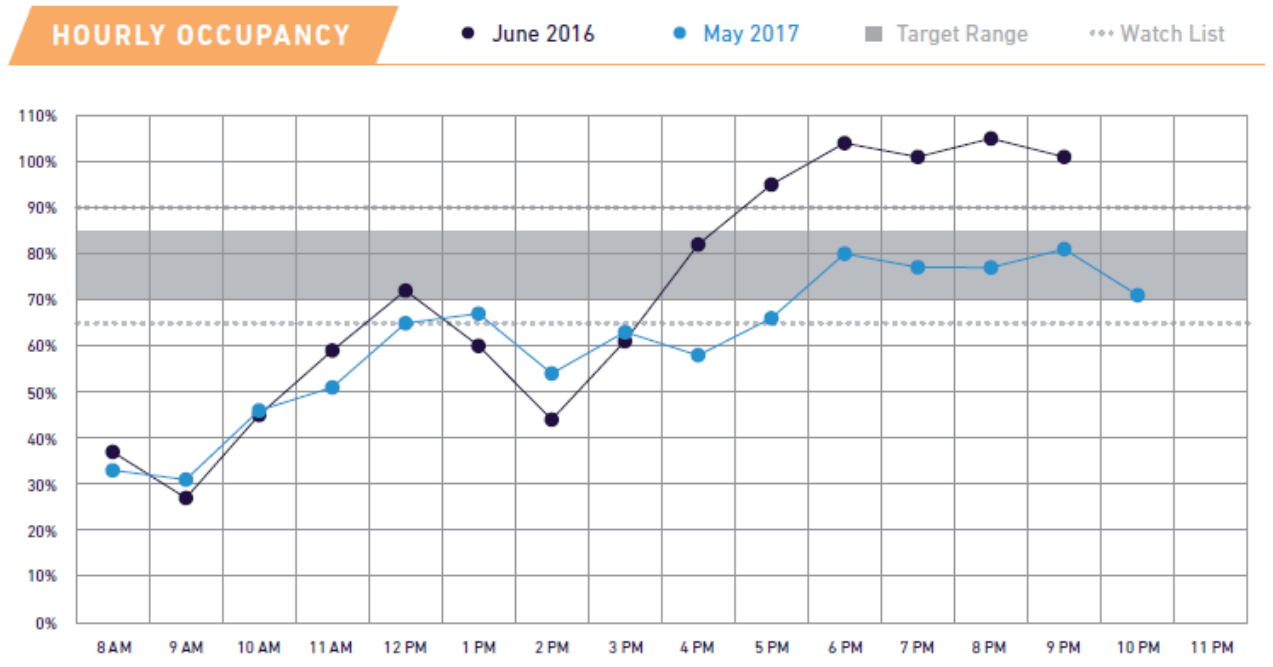
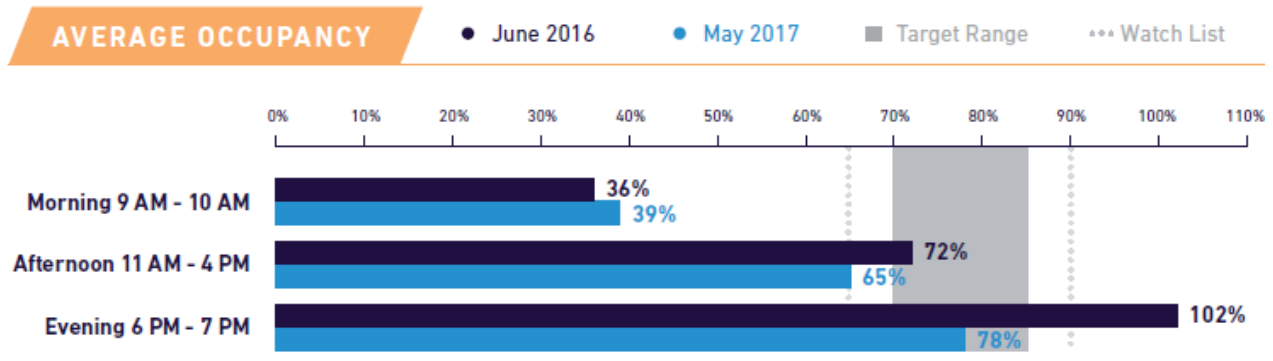
Following the City's municipal code, SDOT manage parking by time of day to accomplish the City's objective of one to two parking spaces available per city block throughout the day.

Collected information is compiled and used to determine the effectiveness of the parking system from the perspective of two main performance measures: average occupancy and hourly occupancy. Graphical results of this process are presented in **Figure 1.**²

This type of results are integrated as part of the decision making process to support changes on parking policies such as rate per hour or time limits to better support the goals and objectives identified as part of the economic development strategy.

² City of Seattle, Department of Transportation "On-Street Paid Parking Occupancy", September 2017

Uptown Core



NEW PARKING REGULATIONS

- Rate Per Hour**
 - 8 AM - 11 AM \$1.00
 - 11 AM - 5 PM \$1.50
 - 5 PM - 8 PM \$1.50
- Paid Hours**
 - 8 AM - 8 PM
- Time Limit**
 - 2 hrs
 - 3 hrs after 5 PM

2017 ACTION

- Morning**: Decrease Rate (Downward arrow icon)
- Afternoon**: Low Watch (Eye icon)
- Evening**: No Change (Horizontal line icon)

Figure 1: SDOT Annual Report 2017 (Example of Data-Driven Outputs)

3. Operational Policies and Procedures Development

3.1. Jurisdictional Scan – Online Survey, Ontario Municipalities

3.1.1. Economic Development and Parking Technology

An electronic survey questionnaire was developed and invitations were sent to 28 municipalities³ to collect information about current parking policies and/or best practices. Eleven municipalities completed the questionnaire, corresponding to a 39% response rate. Of the 11 municipalities completing the survey, only 5 indicated their municipality has a Downtown On-Street Paid Parking Program, and one opted not to provide their municipality information. The municipalities that completed the survey were the following:

- City of Hamilton
- City of St. Catharines
- City of Thunder Bay
- City of Kingston
- City of Windsor
- City of Vaughan
- City of Greater Sudbury
- Town of Milton
- Town of Oakville
- Town of Ajax

3.1.2. Policy Rates, Times, Exemptions, Permits, and Enforcement

An electronic survey questionnaire was developed and invitations were sent to 28 municipalities to collect information about current parking policies and/or best practices. Nine municipalities completed the questionnaire, corresponding to a 32% response rate. Of the 9 municipalities completing the survey, only 6 indicated their municipality has a Downtown On-Street Paid Parking Program, and one opted not to leave their municipality information. The municipalities that completed the survey were:

- City of Hamilton
- City of St. Catharines
- City of Thunder Bay
- City of Kingston
- City of Windsor
- City of Vaughan
- City of Greater Sudbury

³ As per approved City Council list of comparable municipalities

- Town of Milton
- Town of Oakville

Table 6 provides a summary of the main findings. Additional details of the results of the survey are presented as part of **Appendix A**

Table 6: Jurisdictional Scan – Main Findings

Does your Jurisdiction have paid, on-street parking in a downtown area?



Has your local business community or business association developed or reviewed a method for collecting metrics to inform parking policies?



Do you use any local economy metrics to set pricing for parking?



Do you or any other department / staff collect statistics on local economic health that connects parking policy to vitality?



Do you have any on-going relationship with your local business association to discuss parking issues?



Have you undergone a major introduction or change to parking technology or policy in your community?



■ Yes ■ No

Do you use formal pricing analysis when establishing parking rates?



■ Yes ■ No

Does your Jurisdiction have paid, on-street parking in a downtown area?



■ Yes ■ No

Is the regular on-street parking rate in your jurisdiction's downtown area between \$1.50 to \$1.75 per hour?



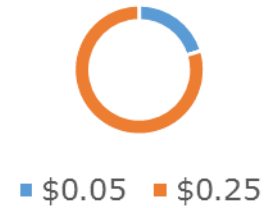
■ Yes ■ No

Do these rates change based on time, location or real-time occupancy?



■ Yes ■ No

What is the minimum payment required for on-street parking in you jurisdiction's downtown area?⁴



Is the minimum payment for on street parking cost or time based?



Is there a different rate offered whether the user chooses cash or credit?



Do you apply different parking periods for specific locations



Are there special occasions when paid parking is not in effect in your jurisdiction? (For example, during the month of December, during specific events, etc.)



⁴ No Response (17%)

3.1.3. Downtown On-Street Parking Management Survey

A key component of this on-street policy work was the collection of feedback from valued stakeholders in the downtown area on how they use the on-street spaces.

To this purpose, a survey was developed, executed and analyzed by City Staff in parallel to the completion of the assignment.

The survey presented in **Appendix B** was provided to downtown businesses, including retailers, restaurants and personal services, community service providers, including health, faith and cultural groups, landlords and residents.

3.2. Best Practices – Other Jurisdictions

3.2.1. International Jurisdictions

Following a request of the Downtown Advisory Committee, the jurisdictional scan was expanded to consider other Canadian and international jurisdictions. To respond to this request, a review of publicly available information was conducted to consider among others the following parameters:

- Time limits (Parking duration)
- Payment type
- Cost (Parking rates)
- Payment verification
- Parking availability (Technology based)
- New developments

A summary of the results for international jurisdictions is presented as part of **Table 7**.

Table 7: Jurisdictional Scan, International Jurisdictions

Parking Durations	Location	Description
Variable Throughout the Day	Seattle Traverse City Michigan	Seattle: "After 5" program extends normal 2-hour maximum by one hour from 5 to 8 pm. Traverse City Michigan: Multiple meter types: 3-hour for customers visiting downtown area for shopping or leisure, and 4 to 10 hour meters for downtown employees.
Location Based (i.e neighbourhood vs. downtown)	Seattle	Seattle: Adjusts time limits, based on availability & balanced occupancy for each City Block.
Overnight Parking	Denver	Denver: Paid overnight parking included as innovative strategic parking plan.
Payment Type	Location	Description
Debit/Credit	New York Los Angeles San Francisco Traverse City Michigan	Los Angeles: Debit/Credit only. San Francisco: Debit/Credit enabled parking meters.
Token/Permit	New York Boston Tampa Traverse City Michigan	Boston: Utilize an online parking permit renewable program. Tampa: Universal parking access card for local employees and vendors. Traverse City Michigan: Parking permits purchased and managed online.
By Cell Phone/App	Washington Miami Houston Tampa Chicago London England	Washington: Pay by Cell selected over other forms of payment such as pay by license plate. Miami: Was one of the early parking-management organizations to implement pay-by-phone technology. Houston: Pay-by-phone program. Tampa: Mobile parking payment app available.

Cost	Location	Description
Variable Rate per Location	New York Seattle Portland San Francisco	<p>New York: ParkSmart graduated-rates during commercial business hours & evenings for Commercial Development.</p> <p>Seattle: 12,500 spaces served through adjustable parking rates to ensure a balance for each City Block. "Best Value" program with lower rates for parking outside congested core areas (longer duration, lower rates).</p> <p>Portland: Varied metering rates discourage parking in neighbourhood areas.</p> <p>San Francisco: Demand responsive parking fares increase or decreases parking fee based on local parking demand.</p>
Variable Rate per Time of Day	San Francisco New York Seattle Miami	<p>San Francisco: SFpark Rate change recommendations through data collection.</p> <p>New York: ParkSmart variable peak hour pricing.</p> <p>Seattle: 12,500 spaces served through adjustable parking rates during peak parking conditions.</p> <p>Miami: Offer special-discount programs for residents and downtown visitors for daytime and evening park and shop and quick-visit parking.</p>
Demand Based	Los Angeles	<p>Los Angeles: ParkTM program using demand-based pricing based on availability.</p>
Payment Verification	Location	Description
License Plate	Miami Denver Pittsburg Tampa	<p>Miami: Led Florida in piloting pay-by-plate technology.</p> <p>Denver: License plate recognition systems in use.</p> <p>Pittsburg: Pay-on-foot machines for both on- and off-street parking.</p> <p>Tampa: Permit Management System uses license plates as credentials.</p>

Parking Availability through Technology	Location	Description
Parking Space Guidance	San Francisco Seattle Los Angeles London England Berlin Germany Amsterdam Netherlands	<p>San Francisco: SFpark real-time information on availability.</p> <p>Seattle: e-Park electronic parking guidance system using dynamic message signs and web info to direct to available off-street parking.</p> <p>Los Angeles: Wireless sensors direct customers to available spaces.</p> <p>London England: Sensors detect available parking along street. Available parking information is released to the public through a mobile device app.</p> <p>Berlin Germany: Radar based parking technology. Radar system informs drivers via mobile application where to look for available parking</p> <p>Amsterdam Netherlands: Mobile application provides real time location & availability of parking.</p>
Enforcement Assistance Technology	Boston San Francisco Berlin Germany	<p>Boston: Utilizes call center to create an email notification of the record relaying the information to parking enforcement officials.</p> <p>San Francisco: Uses in-ground parking sensors that detect when vehicles enter and exit a parking space.</p> <p>Berlin Germany: Radar based network can alert parking enforcement when meters run out or a driver has failed to pay a fee.</p>
New Developments	Description	
New York	Dynamic parking occupancy forecasting, developing regional management service, smart collection & maintenance routing, pay-by-cell program, license plate recognition.	
Pittsburg	Future options to be implemented include license plate recognition and pay-by-phone technology.	
Paris, France	Multiple mobile apps planned for payment of on-street parking throughout the City.	

Los Angeles	Utilizes solar powered wireless parking meter technology.
Washington	Conducted a marketing/public outreach program informing the public regarding changes to parking payment through cell phone/app service.
Amsterdam Netherlands	Smart Parking areas where customers can park their cars for 8 days at a time, with reservations up to three days.
Paris, France	Eliminated 95% of free parking spaces in favour of paid parking spaces with new technology.
Traverse City, Michigan	Traverse City conducted its own parking ratio analysis of their CBD. Determined 363 Sq. Ft. of commercial space per parking space.

3.2.2. Canadian Jurisdictions

A more thorough review of parking management systems and policies compatible with the City of Guelph intentions was conducted for other jurisdictions in Ontario and Canada. A summary of the results of the jurisdictional scan is presented as follow:

Halifax Regional Municipality, Nova Scotia – Parking Roadmap

The Community Council Report presented to Regional Council on 2015 describes the Parking Roadmap as a “phased, multi-year plan that identifies the necessary process, governance and technology related projects required to address parking in the Regional Centre”⁵. The report indicates that the Parking Roadmap was developed through an extensive consultation and collaboration process involving the following internal and external stakeholders:

- Business Improvement Districts (BIDs);
- Waterfront Development Corporation;
- Academic Institutions, and
- Other Government Agencies.

The development process included a comprehensive review of current parking strategies and best practices related to Governance, Parking Technology, and Supply-Demand Management. As approved by Regional Council in 2015, the Parking Roadmap states that:

- Parking will be considered as a municipal service operation;
- The corresponding supply-demand management policy framework will be developed based on active parking management strategies; and
- Parking technology options should support the aforementioned policy framework.

⁵ January 12, 2105 Staff Report, <http://www.halifax.ca/council/agendasc/cagenda.php> as revised on October 2017.

Although the Parking Roadmap follows a multi-year approach it should be noted that Halifax Regional Municipality issued a Request for Proposal last year for the provision of a service to enable mobile payment of parking so that users may pay for a specific period of parking time via:

- Dialing a telephone number and using Interactive Voice Response (IVR)
- Visiting a website compatible with at a minimum Internet Explorer, Firefox, Safari and Chrome desktop browsers, and
- Through the use of a smart phone application written for, at a minimum, the latest release of iOS, Android, Blackberry, Windows Mobile 7 and HTML-5 device agnostics web app compatible with at a minimum Safari and Chrome mobile browsers.⁶

City of Lethbridge, Alberta – On Street Parking Management Study

The City of Lethbridge conducted a comprehensive on-street parking management study in 2015⁷ that includes a review of best practices regarding parking technology, operations and maintenance, parking enforcements, parking rates and time limits.

The intent of the study was to support the determination of a new parking meter system more suitable to the current and future City's needs. Findings and recommendations provided by the study are summarizing below:

- Implementation of a hybrid parking meter system based on the use of pay-by-plate multi-space meters and single-space smart meters;
- Replace the current on foot-patrol enforcement with mobile license plate recognition;
- Implementation of a demand-based pricing with graduate hourly rates;
- Implementation of a pay-by-cell phone as a payment option.

Findings and recommendations of the study were presented for public discussion during public engagement sessions with internal and external stakeholders prior to submit to Council for decision and approval.

On September 2017, City Council approved the implementation of a hybrid parking system consisting of 170 play-by-plate multi-space machines and 60 single space smart meters with an estimated cost of 2 million dollars that will replace the existing parking meters and establish consistent parking controls.

City of Victoria, British Columbia – Privacy Impact Assessment

Prior of the implementation of a new service that allow users to pay for parking using their mobile devices, the City of Victoria conducted a Privacy Impact Assessment to determine the potential effects (positive and negative) of this type of parking technology.

⁶ Halifax Regional Municipality, Request for Proposals # 17-034, Mobile Parking Payment Service, April 2017

⁷ City of Lethbridge, Alberta, On Street Parking Management Study, prepared by Walker Parking Consultants, February 2015

To conduct this assessment, the following requirements for such type of technology were considered:

- An online account with the City;
- Payment using a 4 digit on-street parking space from this account using a cell phone, tablet or computer;
- Variable parking timing;
- Online receipts
- Delivery of parking expiration reminders

A summary of the findings of the privacy impact assessment is presented in **Table 8**.

Table 8: Privacy Impact Assessment – Mobile Pay Parking⁸

Elements of Information or Data	Data Collected	Data Generated by the System	Risk	Likelihood	Impact
Registration personal Information	10 digits mobile phone information, first and last name and email address		Retention of personal information	low	low
Parking payment personal information	Vehicle license plate number, pin number and email address		Client financial information	low	high
Parking personal information		Parking history including: civic address, date and parking duration	Staff Access to personal information	low	low

⁸ City of Victoria, British Columbia, Privacy Impact Assessment, Mobile Pay Parking, 2014

Elements of Information or Data	Data Collected	Data Generated by the System	Risk	Likelihood	Impact
Credit card	Name, type and card number, expiry date, postal code		Client financial information	low	high
Local information		Device location	Third party access to personal information	low	medium
Device information	Mobile device ID		Personal information on mobile devices	NA	NA

4. Parking Technology Review and Selection

There are many different technologies currently in place that are part of smart parking solutions. These technologies range from payment methods to in-ground sensors that can be used as an aid for parking enforcement.

The purpose of this section of the report is to provide a summary of findings of current on-street parking technologies, list of jurisdictions that have it currently in effect, advantages and disadvantages, and cost estimate. This section details a number of On-Street parking technologies that are currently being used by a number of similar jurisdictions. For the purposes of this study, traditional parking meters have been excluded from this review

4.1. Assessment and Analysis of Parking Technology

4.1.1. Single Space Smart parking meter

This updated version of the traditional system allows the user to park the vehicle in a designated space for a limited amount of time. Payment can be done by coins or credit cards.

Possible Payment Types

- Coins
- Credit Card/Debit
- Near Field Communications (NFC) (e.g. Android Pay, Apple Pay)
- Integration possible with PayByPhone

Key Vendors

- MacKay Meters, IPS Group

Jurisdictions using this technology

- City of North Bay

Advantages

- Increases convenience for parkers
- Well understood by the public
- Easy to enforce
- If the mechanism goes down, only 1 space is affected
- Most familiar solution

Disadvantages

- Increased cost for maintenance and repair
- Requires manual coin collection
- Increases the amount of street furniture / unsightly



Figure 2: Single space parking meter

- Depending on parking meter procured, battery consumption may not be considered environmentally friendly

Cost

- \$750 - \$1000
- Installation typically ranges from \$150-\$200

Enforcement

- Requires vehicle-by-vehicle enforcement

Information system provides

- Coin count, including invalid coin count
- Separate time-stamped transaction (coin/card)
- Maintenance log including real-time status of meters / battery / coin box status, and faults

System Components

- Installed on the curb / sidewalk adjacent to the parking meter on a 2" galvanized steel pole
- Operates on a variety of battery options that can last between 12 – 48 months depending on the model and battery pack selected. Some models have solar powered features
- Can integrate to Data Management systems through cellular connections

4.1.2. Pay and Display

This system requires the driver to make a payment at the machine, which will provide a paper ticket. This ticket is to be displayed on the dashboard of the parked vehicle. Payment must be done as soon as the vehicle is parked.

Possible Payment Types

- Cash
- Credit Card/Debit
- Near Field Communications (NFC) (e.g. Android Pay, Apple Pay)

Key Vendors

- MacKay Meters, Precise Parklink, CALE

Jurisdictions using this technology

- City of Brampton
- City of Barrie
- City of Greater Sudbury
- City of Mississauga
- City of Hamilton

Advantages

- Increases convenience for parkers
- Easy to enforce
- Receipt issued with every transaction

Disadvantages

- Increased cost for maintenance and repair
- Requires user to walk to machine and return to vehicle
- Requires manual vehicle-by-vehicle enforcement
- Consumable costs (paper)

Cost

- Price starts at \$6300 and is based on chosen features
- Installation costs starts at \$75.00/ unit + tax

Enforcement

- Enforcement is typically performed by manually viewing the ticket on each dashboard for validity.
- Enforcement will issue a parking charge notice to drivers that did not pay or those who stay passed their allotted time.



Figure 3: Pay and Display Station

Information system provides

- Reports for grand totals and subtotals for coins, bills, and card transaction per type. Reports can be exported as PDF or CSV files
- Transaction and occupancy reports using a web browser

System Components

- Base-mounted integrated pedestal encompassing
 - Power supply, batteries, solar panel unit (option)
 - Communications equipment
 - User interface display
 - Payment processor with cash box
 - Printer
 - Solar Panel (optional) payment interface, power supply, batteries, and communications equipment
 - Environmental controls (AC, heater, fan)
- On-board memory would support software and transaction log in addition to communicating to a central system

- Communications available through hard-wired Ethernet connectivity or cellular modem backhaul
- Some models support line of sight wireless communications to a primary kiosk, which would provide the central backhaul requiring only one hard-wired or cellular modem connection between a set of kiosks.
- Solar-powered options available. Some models require hard-wired power to support heater unit for winter operations.

4.1.3. Pay-By-Phone

This technology allows drivers to make the parking payment by using a mobile application on their smart phone instead of using a physical payment method such as cash or credit/debit at the parking kiosk.

Drivers would be required to initially create an account, which links their vehicle(s) and payment details to the account. To start a parking session the driver must first arrive at the designated parking area and identify the location parking code (usually displayed on a street sign). This will associate the specified vehicle in the account to the specific parking area. Finally, the duration of parking would be specified to complete the parking transaction. Pay-By-Phone does not require a physical receipt to be displayed as proof-of purchase as this is stored at a central database.

Pay-By-Phone can be adopted as a standalone system or an enhancement to an existing physical parking kiosk or metering system.

Possible Payment Types

- Credit Card/Debit
- Third-party mobile wallets (e.g. PayPal)

Key Vendors

- Honk Mobile, PayByPhone

Jurisdictions using this technology

- City of Burlington
- City of Waterloo
- City of Ottawa
- Town of Oakville
- City of London



Figure 4: Pay-by-phone signage

Advantages

- Ability to extend parking session remotely by using mobile application or phone
- Ability to monitor and/or be alerted of parking status through mobile application notifications
- Increases compliance
- Versatile by offering various payment options
- Unused time is not transferrable to next parker

Disadvantages

- Requires a smart phone and some level of technical understanding to download app, create account, etc.
- Pre-registration is usually needed to make payment
- Some people are still reluctant to provide payment information to the internet
- Requires manual vehicle-by-vehicle enforcement
- Can result in data entry mistakes by the user leading to parking violations

Cost

- Cost for mobile application service. Based on number of parking spaces and transactions performed by users. Typically, \$0.25 - \$0.30 per transaction would go to the mobile application provider

Enforcement

- Enforcement utilize handheld devices to cross-reference parking ticket validity to the associated license plates in the parking area.

Information system provides

- License plate
- Transaction time, start time, end time
- Zone ID (where the user parked)
- Dollar amount
- Invoice number
- Volume summary by credit card type
- Data from customer profile such as email address, mobile phone number, all transaction within the city, payment types (without credit card information)

System Components

- Branded mobile application hosted by service provider
- Data support and integration with central parking management system
- Mobile application to support enforcement

4.1.4. Pay-By-Space⁹

This system allows the driver to make a parking payment at a designated payment station by using the number of the parking space being used. Accepted payments are usually by credit card, cash or it can also be combined with the pay-by-phone system.

Key Vendors

⁹ Pay-by-space is mostly used for parking lots and not for on-street parking areas due to the numbering needed on each space.

- MacKay Meters, Ventek

Jurisdictions using this technology

- Fredericton, NB
- Dallas, Texas
- Cambridge, Massachusetts

Advantages

- No ticket issued
- Convenient for drivers
- Previously tested for on-street parking

Disadvantages

- Educate and inform users how to use the system (note parking space number before paying)
- Dependent on meters operating adequately
- All spaces must be numbered

Cost

- Similar to pay-and-display, cost is by meter and based on chosen features
- Prices start at \$6300 per unit
- Additional cost for marking designated spaces

Enforcement

- Enforced by simply checking meters for expired spaces

Information system provides

- Reports for grand totals and subtotals for coins, bills, and card transaction per type. Reports can be exported as PDF or CSV files
- Transaction and occupancy reports using a web browser

System Components

- Similar to Pay and Display machine
- Development of a parking space number database
- Mobile application option to support enforcement



Figure 5: Pay-By-Space system combined with pay-by-phone

4.1.5. Pay-By-Plate

Similar to pay-by-space, this technology allows the driver to make the parking payment at a designated payment station by using the car plate instead of the space number. Accepted payments are usually by credit card or cash.

Key Vendors

- Precise Parklink, MacKay Meters, CALE

Jurisdictions using this technology

- City of Burlington
- Town of Oakville

Advantages

- Convenient for drivers
- Reduction in costs since there is no ticket issued
- Unused time is not transferrable to next parker

Disadvantages

- Potential error for license plate input
- Longer time spent at payment station
- More complex enforcement

Cost

- Similar to pay-and-display, cost is meter and based on chosen features
- Prices start at \$6300 per unit
- Installation cost varies by location, starting at \$75.00 per unit

Enforcement

- Enforced by simply checking for expired license plates.

Information system provides

- Reports for grand totals and subtotals for coins, bills, and card transaction per type. Reports can be exported as PDF or CSV files
- License plates, turnover by time, date and meter
- Transaction and occupancy reports using a web browser

System Components

- Similar to Pay and Display machine
- Mobile application option to support enforcement



Figure 6: Pay-by-plate meter

by

4.2. Focused Scan on Recent Developments

4.2.1. In-ground based sensors

This technology places magnetic sensors on individual parking spaces which gather information regarding payment and compliance monitoring. This information can then be transmitted to a controller used to monitor system operation. These sensors are usually battery powered (5-10 years lifetime).

There are various types of in-ground sensors and based on the type of communication used, there can be issues regarding the range capability. This type of technology is usually combined with pay-by-phone for payments. The status of sensors can be utilized on a mobile application to provide real-time parking availability to drivers reducing vehicle emissions and congestion caused by vehicles looking for parking spots. For off-street applications, variable message signage technology is often used to advise quantity of unoccupied spaces or to direct users to unoccupied spaces.

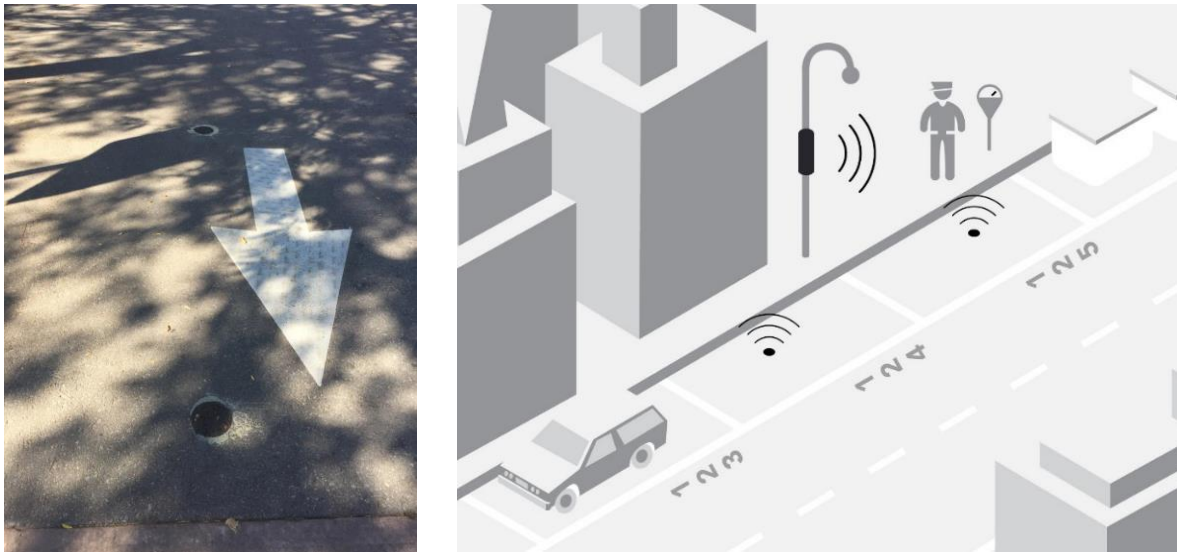


Figure 7: In-ground wireless sensors to record traffic flow (left).
Sample concept of an in-round sensor based system (right)

Key Vendors

- Siemens, Sensys Networks, Urbiotica

Jurisdictions using this technology

- Vancouver (pilot program at UBC- dated 2015), City of Burlington

Advantages

- Alerts are sent to enforcement office when an overstay is detected
- Increases revenues by allowing unspent transactions to be reset

- High accuracy provided to drivers regarding parking availability reducing congestion and vehicle emissions

Disadvantages

- Intrusive technology
- Battery powered
- Range limitation due to the capability of data communication between the sensors and controller

Cost

- Cost estimates range from \$400 to \$550 per parking space which includes sensor, networking equipment, and parking management software
- Costs may vary based on the local geography and extent of network infrastructure required
- Variable message signs to support a parking guidance system start from \$10,000

Enforcement

- Enforcement utilize handheld devices to cross-reference parking ticket validity to the associated license plates in the parking area.

Information system provides

- Registers occupancy
- Real-time data for parking behavior and compliance
- Access to historical information, including time of day occupancy, duration of stay.
- Similar information to pay-by-phone technology



Figure 8: Variable message sign feature of a parking guidance system

System Components

- Wireless in-ground sensors for each space – these can be placed in the pavement or on the curb to avoid issues with re-paving
- Supporting communications infrastructure (e.g. repeaters, access points) to backhaul to a central parking management system or cloud-based service provider. These systems require permanent power and are typically mounted on streetlights.
- Branded mobile application for payments and option of real-time parking availability
- Mobile application to support enforcement

4.2.2. Pay-By-Sky

This technology allows the driver to simply park in any pay-by-sky designated area and walk away. By using a small in-vehicle transponder, the parking payment is automatically done and there is no need for the driver to use a physical credit card or cash. Payment is made from a previously set up profile by the user, which contains the desired payment information.

The parking transaction begins when the engine's vehicle is off. Likewise, the parking transaction will be stopped when the ignition is turned on and the vehicle starts to move out of the parking space.

Key Vendors

- PayBySky

Jurisdictions using this technology

- City of Calgary

Advantages

- Convenient for drivers
- Unused time is not transferrable to next parker
- Increases compliance

Disadvantages

- No complimentary parking time
- No buffer time before leaving the parking space
- Profile required to make payments
- Requires drivers to install a device in their vehicle to enable GPS based parking requiring further education
- May be difficult to enroll all citizens / visitors

Cost

- No cost to the operator
- The in-vehicle transponder costs \$240 + \$15/month service charge – in the future this cost may decrease with the system embedded in the vehicle during manufacturing

Enforcement

- Enforcement utilize handheld devices to cross-reference parking ticket validity to the associated vehicle transponder in the parking area

Information system provides

- Origin-destination information
- Aggregated data based on postal codes
- Speed information
- Parking duration
- Time spent finding a parking space

System Components

- Vehicle transponder issued by the parking operator
- Local wireless communications infrastructure to detect transponder presence
- Service provider for account management
- Mobile application to support enforcement

4.2.3. License Plate Readers

This technology allows the driver to simply park in any on-street or off-street parking with a license plate reader within viewing range. Vehicle park start and end time are recorded and automatically charge the driver based on a registered profile or license plate typed on a kiosk. This allows vehicles to arrive and leave parking with minimal delay.

Key Vendors

- Q-Free

Jurisdictions using this technology

- GO Transit
- City of Ottawa
- Calgary Parking Authority

Advantages

- Convenient for drivers
- Unused time is not transferrable to next parker
- Increases compliance as drivers are video recorded

Disadvantages

- No buffer time before leaving the parking space
- Requires all license plates to be registered through pre-registered account or local kiosk

Cost

- Deployment of license plate readers along with central parking management system
- Specialized license plate readers can range up to \$15,000 to \$30,000 for installation plus associated communications
- Cloud-based service provider may take a fixed or percentage fee of each transaction
- Central parking management system may start at \$50,000 including design and deployment



Figure 9: License Plate Reader-based parking management

Enforcement

- Enforcement utilize handheld devices to cross-reference parking ticket validity to the associated license plate in the parking area

Information system provides

- License plate repository with account and transaction information
- Aggregated data based on postal codes
- Parking duration
- License plate information for infractions, unregistered vehicles








System Components

- Strategically-placed license plate readers and will require power and communications (cellular or Wi-Fi)
- Central database of registered license plates and account details
- Customer online portal to create account (mobile application and/or website)
- Mobile application to support enforcement

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4.3. Summary by Technology Type

4.3.1. Provided Information








	On-Street Parking Technologies					Recent Developments	
Information Collected	Single Space Meter	Pay & Display	Pay-By-Phone	Pay-By-Space	Pay-By-Plate	In-Ground Based Sensors	Pay-By-Sky
							
Transaction report	✓	✓	✓	✓	✓	✓	✓
Occupancy report		✓	✓	✓	✓	✓	
Parking time (start, end, and duration time)	✓	✓	✓	✓	✓	✓	✓
Origin-destination information			✓*				✓
Driver behaviour patterns			✓				✓
Driver information (i.e. email address, payment types)			✓		✓**		✓
License plates			✓***		✓	✓**	✓***
Real-time data	Select Applications	Select Applications	✓	Select Applications	✓	✓	✓

✓* Ability may be restricted due to privacy issues (access to GPS data) ✓** Applicable if combined with Pay-by-phone ✓*** Accuracy may be reduced due to possibility of using on different vehicles.








4.3.2. Capabilities

Capabilities	On-Street Parking Technologies					Recent Developments	
	Single Space Meter 	Pay & Display 	Pay-By-Phone 	Pay-By-Space 	Pay-By-Plate 	In-Ground Based Sensors 	Pay-By-Sky 
Mobile app/device to support Enforcement	Select Applications	Select Applications	✓	Select Applications	✓	✓	✓
Enforcement ticket management		✓	✓	✓	✓	3 rd party Integration	
Customer web portal/ mobile application			✓			✓	✓
Revenue management	✓	✓	✓	✓	✓	3 rd party Integration	✓
LPR integration					Select Applications	3 rd party Integration	
Counting, reporting and auditing	Select Applications	✓	✓	✓	✓	✓	✓
Real-time availability, parking guidance system			Select Applications			✓	
Parking spot reservation						✓	
Gateless/"Park and walk away"			✓			Select Applications	✓
Ability to add-on time remotely			✓	Select Applications	Select Applications	3 rd party Integration	

4.3.3. Cost

	On-Street Parking Technologies					Recent Developments	
Cost Summary	Single Space Meter 	Pay & Display 	Pay-By-Phone 	Pay-By-Space 	Pay-By-Plate 	In-Ground Based Sensors 	Pay-By-Sky 
Installed Costs Per Unit	\$900 to \$1200 per meter	\$6,500+ per unit	\$0.25 to \$0.30 per transaction	\$6,500+ per unit	\$6,500+ per unit	\$400 to \$550 per parking space	\$240 Per transponder
Operational Costs Considerations	System Management	System Management	Service Hosting	System Management	System Management	System Management	Service Hosting
	Coin Collection	Coin Collection		Coin Collection	Coin Collection		
	Paper Costs	Paper Costs		Payment Processor	Payment Processor		
	Payment Processor	Payment Processor					

4.3.4. Economic Development Metrics

	On-Street Parking Technologies					Recent Developments	
Parking Outputs	Single Space Meter 	Pay & Display 	Pay-By-Phone 	Pay-By-Space 	Pay-By-Plate 	In-Ground Based Sensors 	Pay-By-Sky 
Choice	✓	✓	✓	✓	✓	✓	✓
Pricing	✓	✓	✓	✓	✓	✓	✓
Sharing			✓				✓
User Convenience			✓			✓	✓
Peak Demand Management	✓	✓	✓	✓	✓	✓	✓
Prioritization		✓	✓	✓	✓	✓	
Utilization		✓	✓	✓	✓	✓	

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4.4. Technology Selection Criteria

Performance Specifications were selected based on a review of the features the City would like to have as part of the technology selection criteria. The criteria included:

Permitting	<p>How should vehicles be permitted at local pay stations? By parking spot number or lot number (ticketless) By license plate (ticketless) By physical ticket on dashboard</p>
Payment Methods	<p>What payment methods should be supported? Locally at pay station Pay by mobile application and/or text</p>
Payment Options	<p>What payment types should be supported? Cash or cashless Credit card (Visa, Mastercard, and/or American Express) Chip Technology Contactless (Interac Flash, PayPass, payWave, Apple Pay, Android Pay)</p>
Account Creation	<p>Incentives to create a parking account and pay by mobile phone? Provide third-party login support? Facebook, Google</p>
Enforcement	<p>What are the expectations and features to support enforcement? Local, manual dashboard , license plate, or parking space number verification with handheld device Automated alerts based on vehicle detection by pavement sensors or video analytics Integrate parking tickets with new or existing parking ticket payment system?</p>
Central Management	<p>What features should the parking management support? Ticket Management Permit Management Mobile Enforcement Customer web portal, mobile application Parking Guidance System Revenue Management License Plate Reader integration Counting, reporting and auditing</p>
Enhancements	<p>Real-time parking spot or lot availabilities? Guidance system using variable message signs Live online mapping Should users be able to reserve spots in advance? Gateless system (with pay station option) for parking lots?</p>

The aforementioned set of criteria was presented for discussion to City Staff divided in two different levels:

Responsibility

Since parking technology as well as related operational and maintenance services can be owned and conducted as part of regular municipal activities or included under a provision of services agreement, the following criteria was consider as part of the evaluation process:

- Installation;
- Maintenance;
- Payment collection; and
- Data collection.

































Physical and Technological Limitations

A qualitative estimation of potential limitations of each type of parking technology was conducted based on the following elements:

- Need for connection to external sources of power;
- User access to WiFi or data services;
- Consideration for snow removal;
- Physical space and access to the equipment that considers all users;
- Need for regular maintenance (on-site);
- Risk of theft;
- Perceived lack of convenience (i.e. need to returning to the car); and
- Increased opportunity for user error.

Results of the qualitative evaluation are summarized in the following tables.

Table 9: On-Street Parking Technologies - Responsibility

On-Street Parking Technologies					
Responsibility	Single Space Meter 	Pay & Display 	Pay-By-Phone 	Pay-By-Space 	Pay-By-Plate 
Installation	 	 		 	 
Maintenance		 		 	 
Payment Collection					
Data Collection					

 City of Guelph	 Provider	 Contract with Provider
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Table 10: On Street Parking Technologies – Physical and Technological Limitations





































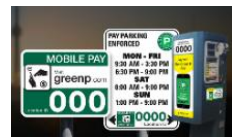


On-Street Parking Technologies						
Limitations		Single Space Meter 	Pay & Display 	Pay-By-Phone 	Pay-By-Space 	Pay-By-Plate 
Power						
WiFi / Data						
Environmental Effects						
Accessibility						
Maintenance						
Theft						
Convenience						
User Error						

Table 11: On-Street Parking Technologies – Matrix Ranking Descriptive

On-Street Parking Technologies					
Ranking Categories	Single Space Meter 	Pay & Display 	Pay-By-Phone 	Pay-By-Space 	Pay-By-Plate 
Permitting	Parking spot (low) License plate (high)	Car dashboard (low)	License Plate (high)	Parking spot (low)	License Plate (high)
Accessibility	Meter next to vehicle (high)	Multiple trips from device to car required (low)	No restrictions (high)	Required to remember parking space (medium)	Required to remember license plate (medium)
Payment Location	Pay at station (high)	Pay at station (high)	Pay through device (low)	Pay at station (high)	Pay at station (high)
Payment Options	Cash (low) Credit Card (high)	Cash (low) Credit Card (high)	Credit Card (high)	Cash (low) Credit Card (high)	Cash (low) Credit Card (high)
Enforcement	Manual by foot (high)	Manual by foot (high)	Automatic Handheld device (high)	Manual by foot (high) Automatic Handheld device (high)	Automatic Handheld device (high)

Table 12: On-Street Parking Technologies – Matrix Ranking Quantitative

On-Street Parking Technologies					
Ranking Categories	Single Space Meter 	Pay & Display 	Pay-By-Phone 	Pay-By-Space 	Pay-By-Plate 
Permitting	3	1	5	1	5
Accessibility	5	1	5	3	3
Payment Location	5	5	1	5	5
Payment Options	3	3	4	3	3
Enforcement	5	5	5	5	5
Total Score	21	15	20	17	21
Overall Percentage	84%	60%	80%	68%	84%

4.4.1. Preliminary Recommendation

The following options can be considered based on the above information:

4. Implementation of all Single Space(Smart) Parking Meters
5. Implement of all Multi Space Parking Meters
6. Proceed with a hybrid approach that includes both Single Space and Multi Space Meters

While each of the technologies have various capabilities as noted above, a hybrid approach may be the most beneficial and cost effective.

The hybrid approach could consider each location for on-street parking – specifically where one multi-space meter could capture parking from 5 or more adjacent spaces. This would spread the higher capital cost over several spaces as compared to the lower cost for the single space units.

At this time, we do not recommend considering the Pay-By-Sky Option given its limited use to date and significant costs that would need to be paid by the users

4.5. AODA Compliance Matrix

For the purposes of this task, parking meters, especially multi-space electronic parking meters will fall under the classification of a self-service kiosk under the AODA. Discussions were had with several vendors related to AODA compliance and the primary concern for AODA compliance was to ensure an accessible height for users.

The following table details the applicable requirements for the Accessibility for Ontarians with Disabilities Act (AODA) with respect to the parking technologies and self-serve parking meters (“kiosks” as referred to by the AODA).

Although AODA does not stipulate exactly which technologies need to be implemented for self-serve kiosks, it does provide features to consider. The following are features listed on the Ministry of Ontario’s website (<https://www.ontario.ca/page/how-make-self-service-kiosks-accessible>). These features apply not only to parking meters but other kiosks such as self-checkouts and other kiosks.

- Colour contrast on the display screen
- Extra time for people to complete tasks
- Audio instructions
- Voice-activated equipment
- Height and stability of the kiosk
- Headset jacks with volume control
- Specialized keypads or keyboards (e.g. tactile keyboard)

The features listed above were further assessed against an industry scan, review of AODA-compliant products and services, and expected limitations of the users. The table below lists the features deemed mandatory for AODA-compliance based on the application.

Due to the nature of driving, it is expected that visually impaired individuals would have a support person available to drive and complete the transaction. As such, features to support visually impaired individuals are not practical and were deemed as non-mandatory.

Consideration should also be made for people with mobility aids such as walkers or wheelchairs to ensure there is adequate space and clearance for them to access the parking meters.

Table 13: Accessibility Considerations

Element	Parking Management System	Parking Meters	Parking Kiosks
Height Maximum 48 inches to top of controls (e.g. keypad)		✓	✓
Keypad Operable Requires no more than 5 pounds of force to provide input		✓	✓
Public Portals Any public ticketing portals, web pages, guides, etc. shall be capable of supporting and or being modified to support WCAG 2.0 guidelines	✓		

4.6. Performance Specifications

This section of the document includes performance specifications to use as a basis to support a future procurement of parking technology. These performance specifications are high-level and not specific to any vendor or product.

The performance specifications include

- Parking management systems – the underlying software service to manage operations and transactions of roadside equipment
- Smart parking meters – encompassing single-space and multi-space parking meters
- Pay-by-plate parking kiosks – kiosks which provide allocate permits based on the parked vehicle’s license plate

Other Considerations

Prior to a formal procurement, the following features/processes will need to be confirmed based on the City's objectives, capabilities, and local infrastructure:

- Existing/planned infrastructure to support wired and/or wireless power and communications
- Cash vs. cashless strategy for parking meters
- Enforcement and ticketing integration to existing payment processes
- Future augmentation with mobile application payment methods

4.6.1. Parking Management System

Central Management

1. The parking management system shall support single-space parking meters, multi-space parking meters, and pay-by-plate parking kiosks.
2. The parking management system shall provide the ability to monitor parking meters/kiosks statuses in an interactive list and map-based interface.
3. The parking management system shall consolidate transactions.
4. The parking management system shall support various reporting capabilities.
5. The parking management system shall provide support for enforcement and ticketing module to streamline enforcement activities.

Enforcement and Ticketing System

6. The parking management system shall support real-time enforcement capabilities through a handheld device.
7. The parking management system shall manage a real-time database of tickets and support integration with an online ticket payment system.
8. The parking management system shall support the ability for City staff to manually modify ticket status (e.g. mark as paid).

4.6.2. Parking Meters

Features

1. The parking meters shall be capable of supporting applications specific to the City. These applications which may include
 - a. Single-space parking
 - b. Multi-space parking
2. The parking meters shall be capable of automatically updating time.
3. The parking meters shall be capable of accepting credit cards using contactless and card-insert methods.
4. The parking meter shall be capable of registering transaction details.
5. The parking meter shall have a digital screen to provide instructions, time, and status information.
6. The parking meter height, screen, instructions, and keypad (if applicable) shall be AODA-compliant.
7. The parking meter shall fail to an out-of-order status message.
8. The parking meter shall support a free parking status message.

Communications

9. The parking meter shall be capable of transmitting and receiving transaction and payment processing through wireless methods.
10. The parking kiosk shall be capable of connecting to adjacent kiosks (parent/child configuration) or access points via Wi-Fi and/or cellular (3G+) connections.

Power

11. The parking kiosk shall be hard-wired and have battery back up to support operation in the event of power loss. It can not include solar power as a sole source of power.

Structure

12. The parking meter support and enclosure shall be durable, corrosion-resistant, water-proof and capable of operating in year-round temperatures.

4.6.3. Pay-By-Plate Kiosk

Features

1. The parking kiosks shall be capable of automatically updating time.
2. The parking kiosks shall be capable of accepting credit cards using contactless and card-insert methods.
3. The parking kiosk shall be capable of registering transaction details.
4. The parking kiosk shall have a digital screen to provide instructions, time, and status information.
5. The parking kiosk shall support pay-by-plate permit options
6. The parking kiosk height, screen, instructions, and keypad shall be AODA-compliant.

Communications

7. The parking kiosk shall be capable of transmitting and receiving transaction and payment processing through wireless methods.
8. The parking kiosk shall be capable of connecting to adjacent kiosks (parent/child configuration) or access points via Wi-Fi and/or cellular (3G+) connections.

Power

9. The parking kiosk shall be hard-wired and have battery back up to support operation in the event of power loss. It can not include solar power as a sole source of power.

Structure

10. The parking kiosk support and enclosure shall be durable, corrosion-resistant, waterproof and capable of operating in year-round temperatures.

5. Vendors Contacted

The following vendors were contacted during the course of this study to confirm technical details, discuss product offerings, and request pricing information.

1. Stinson-Owl-Lite
James Delamere
905-669-2360
james@stinson.ca
2. Orange Traffic
Alan MacKenzie
1-800-363-5193 ext109
Alan.mackenzie@orangetraffic.com
3. Mackay Meters
Brian Clark
1-800-265-5741 ext424
Brian.clark@mackaymeters.com
4. StreetSmart Rental
Mike Granger
1-800-653-6800
mgranger@streetsmartrental.com
5. HONK Mobile
Eddie Baqaj
416-705-8086
eddie@honkmobile.com
6. Pay-By-Sky
Geoff Pulford
519-661-9785
gpulford@paybysky.com
7. Sensys Networks
Floyd Williams
510-384-5940
Fw3@sensysnetworks.com
8. Electromega
Ivano Teti
450-635-1020 ext 239
Iteti@electromega.com
9. PreciseParkLink
Dani Ierullo
dierullo@precisebi.com

APPENDIX A

Table 14: Economic Development and Parking Technology – Survey Results Summary

Does your Jurisdiction have paid, on-street parking in a downtown area?	Survey Results
Yes	45%
No	55%
The 6 respondents answering “No” ended the survey. The remaining 5 respondents continued the survey.	
Has your local business community or business association developed or reviewed a method for collecting metrics to inform parking policies?	Survey Results
Yes	0%
No	100%
If yes, please explain: N/A	
Do you use any local economy metrics to set pricing for parking?	Survey Results
Yes	20%
No	80%
If yes, please explain: The municipality compares prices to the nearest private lot operators. Most parking in their Downtown area is privatized. The municipality does indirectly.	
Do you or any other department / staff collect statistics on local economic health that connects parking policy to vitality?	Survey Results
Yes	20%
No	80%
If yes, please explain: Planning Department.	
Do you have any on-going relationship with your local business association to discuss parking issues?	Survey Results
Yes	100%

No	0%
<p>If yes, please explain:</p> <p>There are BIA associations which the municipality consults with when making changes to parking pricing, hours of operations, and new paid parking in their vicinity.</p> <p>A representative from local business association sits on our Parking Advisory Committee.</p> <p>Members of BIAs are invited to attend monthly Parking Authority board meetings.</p> <p>Parking policies are discussed at BIA meetings as required.</p>	
Have you undergone a major introduction or change to parking technology or policy in your community?	Survey Results
Yes	40%
No	60%
<p>If yes, please explain:</p> <p>The municipality is currently working on an enforcement system upgrade for pay-by-phone technology targeted for 2018.</p> <p>The municipality is adding mobile pay-by-phone for parking payments at On-Street meters.</p>	
<p>Please describe your process for launching a new parking facility or technology to the community.</p>	
<p>If yes, please explain:</p> <p>A press release would be issued.</p> <p>A communication plan would be developed in cooperation with City Council in order to promote the change well in advance through social media, websites, email, direct mail, etc.</p> <p>A marketing and education program is to be developed with the provider and then implemented.</p>	
Do you use formal pricing analysis when establishing parking rates?	Survey Results
Yes	20%
No	80%

If yes, please explain:

The municipality compares pricing to private operators and uses the Municipal Benchmarking Data to help develop rates.

Rates are established considering elasticity of demand, occupancy rates, maintenance, and operating costs.

Table 15: Policy Rates, Times, Exemptions, Permits and Enforcement – Survey Results Summary

Does your Jurisdiction have paid, on-street parking in a downtown area?	Survey Results
Yes	67%
No	33%
The 3 respondents answering “No” ended the survey. The remaining 5 respondents continued the survey.	
What is the regular on-street parking rate in your jurisdiction’s downtown area?	Survey Results
\$1.50 - \$1.75 per hour	67%
Other (Please Specify)	33%
If other, please explain Ranges from \$1.00 - \$2.00 \$1.30	
Do these rates change based on time, location or real-time occupancy?	Survey Results
Yes (Please provide details)	17%
No	83%
Highest rates charged in the center of Downtown with rates declining as you move out of the highest volume areas	
What is the minimum payment required for on-street parking in you jurisdiction’s downtown area?	Survey Results
\$0.05	17%
\$0.25	67%
No response	17%
Is the minimum payment for on street parking?	Survey Results
Cost Based	67%
Time Based	33%

Is there a different rate offered whether the user chooses cash or credit?	Survey Results
Yes	0%
No	100%
What is the maximum daily rate for on-street parking in your jurisdiction?	Survey Results
\$13.00	17%
\$10.00	17%
\$2.00	17%
\$2.50 for 2 hour time limit	17%
4.5 hour time limit	17%
2 or 3 hour maximum time limit	17%
Does your jurisdiction offer a courtesy or grace period?	Survey Results
Yes up to 20 minutes	17%
Yes up to 15 minutes	33%
Yes (other please specify)	33%
No	17%
If other, please specify 10 minutes after meter expires 5 minutes after meter expires	
What are the typical days and times when on-street paid parking is in effect in your jurisdiction?	Survey Results
Monday to Friday, 09:00 to 17:00	17%
Monday to Friday, 09:00 to 18:00	50%
Monday to Saturday, 09:00 to 18:00	33%
Is this period different for specific locations?	Survey Results
Yes (Please specify)	17%
No	83%

If yes, please specify	
We have some areas where parking must be paid until 9:00 PM and some areas where parking is free on a Saturday.	
Are there special occasions when paid parking is not in effect in your jurisdiction? (For example, during the month of December, during specific events, etc.)	Survey Results
Yes (Please specify)	67%
No	33%
If yes, please specify	
We have free parking in BIA areas at Christmas. Dates differ slightly by BIA but generally 1 month of free on-street parking is offered. Lots still require payment.	
1/2 of December, weekends and evenings.	
Typically the week of, or before, Christmas there is no fee required for parking on-street.	
BIA's can reimburse the City and offer free parking for patrons for special events like sidewalk sales etc. These typically last 1 to 3 days.	
What is the maximum paid parking time allowed on street in your municipality's downtown area? (i.e. after which the parking space must be vacated)	Survey Results
2 hours	50%
3 hours	33%
There is no maximum time	17%
Does your jurisdiction offer special permits or exemptions for paid on-street parking in the downtown area?	Survey Results
Yes (Please specify)	17%
No	83%
If yes, please specify	
We offer free on-street parking to those with a valid Ontario Veteran's plate for a maximum of 3 hours as well as to those with Ontario Disability permits for a maximum of 3 hours.	
How many enforcement staff does your jurisdiction use to enforce paid parking downtown?	Survey Results
1	33%

2 - 4	33%
5 +	33%
How many parking spaces does each enforcement person typically cover?	Survey Results
50+	67%
Other (please specify)	33%
If yes, please specify	
<p>Unsure of the ratio but there is 2400 meters across the City with approximately ½ of parking in the downtown area.</p> <p>Two (2) enforcement officers patrol all of the lots and meters, 1200+ spaces.</p>	
Are parking enforcement officers exclusive to paid on-street parking or do they enforce other by-laws as well?	Survey Results
They enforce paid on-street parking and other parking offences	100%
Is enforcement conducted following a regular schedule of routes and/or times, or is it conducted randomly (i.e. less predictably to help reduce violations and increase turnover)?	Survey Results
Regular Schedule	67%
Random	33%
Does your municipality have a time tolerance before issuing a paid parking ticket?	Survey Results
10 Minutes	17%
15 Minutes	17%
Same as the courtesy/grace period	17%
None	33%
Other (Please specify)	17%
If yes, please specify	
<p>Only if the person parking is present in the 10 minutes following their paid parking period.</p>	

APPENDIX B

Downtown On-Street Parking Management Stakeholder Survey

Background

Guelph City Council approved the Downtown Parking Master Plan in November 2015. For more information, please see <https://guelph.ca/plans-and-strategies/parking-master-plan/>

The Plan is a comprehensive review of providing parking services downtown, including managing on-street, off-street and adjacent neighbourhood inventories, enforcement, governance and customer service improvements and present and future planning projections, all linked to better maintaining existing supply and building additional capacity.

The direction adopted for on-street parking management was to move away from the current '2 Hour Free' policy towards an operation that generates better turnover. It has a secondary objective to create an additional revenue stream to invest to expand the overall parking capacity downtown.

Council directed that City Staff work with the Downtown Advisory Committee to develop the program details, including:

- developing user needs profiles to inform detailed program and technology decisions
- a review of potential technologies that would best support the identified needs
- implementation timing
- developing a roll-out strategy and communications plan
- developing economic metrics to monitor the impact and success of implementation

Purpose of this Survey

A key component of this on-street policy work is collecting feedback from valued stakeholders in the downtown area on how they use the on-street spaces.

The survey is going out to downtown businesses, including retailers, restaurants and personal services, community service providers, including health, faith and cultural groups, landlords and residents.

We invite you to answer a few questions about on-street parking policies and the technology that will be used. When answering the survey, please assume that all questions refer to **on-street parking management in downtown Guelph** (versus parking lots), unless otherwise stated.

Completing this survey should take about 10–15 minutes of your time. We will be happy to share a summary of the survey results with you upon request.

Should you have any questions or comments about this project or the survey, please contact our project manager:

- Jamie Zettle Jamie.Zettle@guelph.ca

Thank you for your participation.

Survey Questions

Getting to know you

Please indicate if you are a

1. Business
2. Retailer
3. Personal service
4. Community service
5. Resident
6. Landlord
7. Religious institution
8. Cultural centre
9. Other

If you are business, please indicate

1. # of employees
2. # square feet
3. # of units in your building

If you are a resident, please indicate

1. Postal code
2. Age range: 18-25, 26-39, 40-54, 55-65, 65+

Answer these from your needs perspective.

1. What is the appropriate maximum allowed time for using an on-street parking space downtown?

0.5 hour
1 hour
1.5 hour
2 hour
2.5 hour
3 hour
4 hour

2. If you were to provide a grace period, what is the appropriate maximum time?

0 minutes (none)
5 minutes
10 minutes
15 minutes
20 minutes

3. What is your preference for when the grace period would function?

Before payment is required?

After payment has expired?

4. Do you have any special parking needs which need to be accommodated for your business/organization? Please choose all that apply, and provide more detail in the comment box.

Specific day or time of the week – please comment in the box below

Tied to events, festivals or annual remembrances

Large transport parking such as buses, vans, etc.

Specific short, recurring periods of parking such as deliveries, drop-offs, loading

Special turn around parking for which paid parking is inappropriate

Other

5. Which of the following attributes are required when choosing technology for paid on-street parking? Please choose all that apply.

Provides information on turnover and parking availability

Integrates with mobile and/or web-based apps to allow the user to select, pay and top-up spot usage

Provides ability to adjust prices based on time of use (e.g. time of day) or as market conditions change

Supports streetscape design and function

Integrates with adjacent businesses and organizations' marketing and street presence

Other

6. The technology used for payment may offer the following services or opportunities. Please indicate which of the following would be of interest to your group/business. Please choose all that apply.

Able to display paid ads or messages from you

Able to offer pre-payment or promotional pricing to your clients

Can be disabled for temporary periods during special events or holidays

Able to produce parking occupancy reports for spots in front of your location

Able to produce parking turnover reports for spots in front of your location

Able to advertise on machines near your location (e.g. wraps)

Other

7. The City of Guelph will develop a fee structure for paid on-street parking. Consider each scenario below and provide an hourly parking in whole dollar amounts that, in your opinion, would match each scenario. Please note that zero ("0") is not a valid amount.

At what amount would you consider **the price per hour** to be:

___ Too cheap: "At this price, why did you bother charging me at all."

___ A deal: "I would pay this price and consider that I received fair value, maybe even got a deal."

___ Costly: "I would still pay this price because I want to park but may consider the price high for what I am receiving."

___ Too expensive: "I would choose not to pay to park on the street at this price and make alternative parking choices or choose not to stop."

8. In your opinion, which factors are the most important to ensure the successful implementation of paid on-street parking in the downtown. Please choose all that apply.

A pilot phase (testing)

Phased rollout (e.g. street by street)

An introductory period where warnings, rather than tickets, are provided to unpaid users

Signage to payment points

A marketing and communications plan to inform the public

A launch or kickoff event with technology demonstrations

Regular opportunities for two-way communication/feedback with stakeholders following implementation

Other

9. Please include any other suggestions or recommendations you have for the successful implementation of on-street paid parking.

Commercial Policy Review: Recommended Vision and Principles



Purpose of the Vision and Principles

- **Instrumental to the development and evaluation of Commercial Policy Framework Alternatives**
- **Inform the update of commercial policies and objectives in the City's Official Plan**

Development of Vision and Principles

- **City's Official Plan provides a current context**
- **Informed by Stage 1 Commercial Analysis and Background Report – trends and issues**
- **Informed by public feedback on shopping and service experiences within commercial designations.**

Vision and Principles Outcomes

- **Reflective of City's commercial needs**
- **Flexible to address market realities**
- **Provides for a full range of stores and services in appropriate locations**
- **Represents a commercial policy refresh within existing growth vision that allows continued evolution of commercial development**

Vision

Commercial businesses are critical components of complete communities that are evolving from single use, low-rise buildings surrounded by large expanses of surface parking to an integral element of more compact, mixed-use areas that are appropriately distributed throughout the City.

They contribute to the creation of vibrant mixed use nodes and corridors and the economic vitality of the Downtown.

The City's commercial areas are comfortable, people-orientated places that demonstrate a high standard of urban design, contribute to the distinctive character of the City, and support sustainability principles that encourage transit, walking and cycling.

They meet the needs of our residents and the market by providing a full range of stores and services in appropriate locations and assist in maintaining a strong and competitive economy.

Principles

Diverse and Distinct

Convenient and Accessible

Flexible and Adaptable

Compact and Sustainable

Vibrant and Integrated

Economically Strong and Competitive

Next Steps

- **Development of Commercial Policy Framework Alternatives** **March/April 2018**
- **Community Engagement on the Commercial Policy Framework Alternatives** **April 2018**
- **Draft Policy Framework Alternatives to Council** **May 2018**
- **Release and Council approval of a Preferred Commercial Policy Framework** **Q2/Q3 2018**

To **Committee of the Whole**

Service Area Infrastructure, Development and Enterprise Services

Date Monday, March 5, 2018

Subject **Commercial Policy Review: Vision and Principles**

Report Number IDE-2018-18

Recommendation

1. That the Commercial Policy Review vision and principles be approved as outlined in report IDE-2018-18.

Executive Summary

Purpose of Report

To provide Council the recommended vision and principles for the Commercial Policy Review project for approval.

Key Findings

The Commercial Policy Review is progressing well with the completion of the Stage 1 Commercial Market Analysis and Background Report and community engagement completed on shopping and service experiences and preferences as part of Stage 2. The Stage 2 work will result in the selection of a preferred commercial policy framework for Council approval and recommendations for the City's Official Plan policy and Zoning By-law regulations to implement the preferred framework.

Obtaining Council's approval of the recommended commercial vision and principles is instrumental to the development and evaluation of policy framework alternatives and aligns with the approved terms of reference. In addition the recommended vision and principles will inform the update of commercial policies and objectives in the City's Official Plan.

The recommended vision and principles are in keeping with the direction provided by the City's Official Plan, and were informed by the Stage 1 work and community engagement feedback on shopping and service experiences and preferences. They are reflective of our community's commercial needs and flexible to address market realities by providing a full range of stores and services in appropriate locations. They support a commercial policy refresh within our existing Official Plan growth vision and allow for the continued evolution of commercial development.

The recommended vision and principles focus on the following:

1. Diverse and Distinct

2. Convenient and Accessible
3. Flexible and Adaptable
4. Compact and Sustainable
5. Vibrant and Integrated
6. Economically Strong and Competitive

Financial Implications

The Commercial Policy Review is funded through approved capital funding.

Report

Background

The City is undertaking a review of the commercial policies in the Official Plan to provide an updated commercial policy framework for the City that will meet the projected growth needs for 2031 and provide the basis to meet the needs for 2041. The last commercial policy review was completed in 2006. Since the last review the City's Official Plan has been updated, including vision, overall growth structure of the City, strategic goals, objectives and policies that provide an updated context for the City's commercial lands. This review will ensure the policies reflect changes in the commercial market that have occurred since 2006 including an update of the commercial policies and objectives of the City's Official Plan.

The Commercial Policy Review is following a three stage process as outlined in the Council approved Terms of Reference ([IDE Report 16-84 Commercial Policy Review: Terms of Reference](#)):

- Stage 1 – Commercial Market Analysis and Background Report
- Stage 2 – Commercial Policy Framework Alternatives, Recommended Commercial Policy Framework, Policies and Regulations
- Stage 3 – Official Plan and Zoning By-law Amendments

The Stage 1 work was completed with the public release of the [Commercial Analysis and Background Report](#) in November 2017 and Council's receipt of the document in January 2018. Council also received a staff memo responding to questions on the Stage 1 report from Councillor Gibson, Chair of IDE Committee of the Whole.

Under the approved terms of reference, the Stage 2 work will provide updated planning objectives, a contemporary commercial structure, and land use designations, including updated policies and sufficient amounts of appropriately designated lands, to direct future commercial development within the City. The work will be in keeping with the direction provided by the Official Plan and the City's Urban Design Action Plan. The City's Official Plan through OPA 48 provides strong urban design policies and this commercial policy review will recognize these directions. Stage 2 addresses a number of the objectives included in the terms of reference including:

- iii. Potential commercial/mixed use designation categories and locations for those designations;
- v. Update the commercial policy structure in light of significant changes in the retail market nationally, provincially and locally, e.g. ecommerce;
- vi. Recognize and clarify the role, function and amount of commercial space within the Urban Growth Centre (Downtown), Community Mixed-use Nodes

- (e.g. Silvercreek, Starwood/Watson Parkway), Intensification Corridors (e.g. York Road) and Service Commercial designations in the context of updated commercial policies;
- vii. Consider feasibility of two storey commercial space in Urban Growth Centre (Downtown), Community Mixed-use Nodes and Intensification Corridors;
 - viii. Consider connectivity of the proposed commercial policy framework with existing developed or planned commercial development areas of the City;
 - ix. Recommendations for updates to the Official Plan in light of the issues, policy interpretations and findings from development applications including Official Plan Amendments, Zoning By-law Amendments and minor variances related to the Official Plan's existing commercial policies, designations and regulations;
 - x. Recognize patterns of land use, land use designations and density, and associated population and employment densities contained within OPA 48;
 - xi. Recognize the City's urban design directions included in OPA 48 and the Urban Design Action Plan; and
 - xii. Recognize transportation approaches including transit, pedestrian and bicycle connections contained within OPA 48.

Development of a recommended vision and principles relied on the context of the City's Official Plan, commercial background and market analysis information from the Stage 1 report and Stage 2 community engagement work on participants' shopping and service experiences and preferences.

The City's Official Plan provides a current context for the recommended commercial vision and principles. The Stage 1 Commercial Analysis and Background Report supplied important commercial background information to inform the vision and principles. The actual development of the recommended vision and principles began in Stage 2 with public consultation events to discuss participants' shopping and service experiences and preferences within the Downtown, Community Mixed-use Centres, Mixed-use Corridors, Neighbourhood Commercial Centre and Service Commercial designations in the City.

City of Guelph Official Plan Vision, Strategic Goals, Objectives and Policies

The City's Official Plan was updated in three stages with the most recent being [OPA 48](#) which was adopted by Council in June 2012, approved by the Minister in December 2013 and finally approved by the Ontario Municipal Board in October 2017 with some minor exceptions for items that remain under appeal on a site specific basis.

The City's Official Plan update did not amend the commercial policy structure developed as part of the 2006 Commercial Policy Review. However amendments were made to the vision, overall growth structure of the City and strategic goals, objectives and policies that provide the basis for an update of the commercial policies and objectives. The following Official Plan highlights provide the basis for the recommended Commercial Policy Review vision and principles:

- Ensure an appropriate range and mix of employment opportunities, local services, community infrastructure, housing including affordable housing and

other land uses are provided to meet current and projected needs to the year 2031 (Strategic Goal 1b));

- Planning for a complete community focused on the achievement of a well-designed, compact, vibrant city that provides convenient access to a elements including local services (Policy 3.1.1);
- Growth management structure of Community Mixed Use Nodes, Intensification Corridors and Urban Growth Centre (Downtown Guelph) are planned to achieve a higher density of mixed-uses including commercial uses. Intensification Corridors are planned for a range of uses, including commercial, depending on the appropriateness of the use for the location (Policies 3.8, 3.10, 3.11);
- Guelph will manage population growth within its current boundaries in a sustainable manner to the year 2031 (Vision);
- Development will respect Guelph's existing character and retain qualities that set the City apart from its neighbours (Vision); and
- Strong urban design policies (Chapter 8).

The existing commercial framework promotes intensification and the revitalization of existing commercial areas with no over designation of space and strong measures to ensure that new space does not compromise the opportunity for existing designated lands to develop. The commercial structure is more flexible than the traditional regional and community hierarchy and includes a node concept which provides both local and community uses. The existing framework:

- Disperses commercial activity throughout the City;
- Promotes mixed-use development but does not make it mandatory;
- Accommodates a variety of commercial formats;
- Places size caps on Community Mixed-use Centres with a limit of four large stand-alone stores per centre;
- Defines the range of uses in the Service Commercial designation; and
- Contains commercial and mixed-use designations and areas including Downtown, Community Mixed-use Centres, Mixed-use Corridors, neighbourhood Commercial Centres and Service Commercial.

The Commercial and Mixed-use designations in section 9.4 are intended to provide a range of uses to meet the needs of daily living with the dispersal of commercial uses throughout the City while discouraging the creation of strip development. Commercial centres are intended to be transit-supportive. Community Mixed-use Centres and Mixed-use Corridors are intended to develop over time into distinct areas with centralized public spaces that provide a range of uses. The Official Plan includes the following objectives in section 9.4:

- a) To ensure that an adequate supply of commercial land is provided throughout the City at appropriate locations to meet the needs of residents and businesses.
- b) To promote a distinct identity and character for commercial and mixed-use development through high standards of urban design.
- c) To promote the continued economic vitality, intensification and revitalization of existing designated commercial and mixed-use areas.

- d) To create mixed-use areas that are pedestrian oriented and transit-supportive.

The current objectives for Commercial and Mixed-use designations remain current under the recommended vision and principles. The recommended principles support the inclusion of additional objectives to strengthen the recognition of market needs by recognizing proximity to a suitable population base and exposure to sufficient levels of pass-by traffic. The principles also support flexible and adaptable commercial formats and a wide range of uses to recognize changing market demands and support the evolution of commercial development.

Stage 1 Commercial Analysis and Background Report

The Stage 1 Report showed that the City's existing retail space is comprehensive and has a strong customer draw from beyond with City's boundaries. The commercial analysis also showed that the City has sufficient land available to meet the demand for commercial development on a macro level to 2031. However there will be unmet demand for commercial space by 2041 (36,000 square metres/387,850 square feet). Trends included an increase in e-commerce from 1.4 percent of all retail trade in Canada in 2011 to 2 percent in 2015.

The Stage 1 report included interviews with key stakeholders to solicit their views on commercial development trends and policies. The key stakeholders included commercial landowners, developers and representatives of the Downtown Business Improvement Area. Their comments, including the following highlights, helped inform the recommended Commercial Policy Review vision and principles:

- Concerns with suitability of designated Watson/Starwood location for retail or mixed-use development;
- Lack of sites suitable for mid-sized or larger commercial developments;
- Impact of e-commerce including less demand for retail space overall, decline in mid-price fashion and change in formats, in particular big box development and move to reflect smaller individual stores;
- Opportunities for retail not directly impacted by e-commerce including restaurants, fitness, health and wellness. Opportunities also exist for grocery, home improvement and furniture;
- Flexibility in development requirements is needed and the right mix of land supply; and
- Mixed-use developments are challenging and will not be successful everywhere. Opportunities for mixed-use development exist in the Downtown.

Stage 2 - Development of a Vision and Principles

Stage 2 consists of the development of a commercial vision and principles; the development and assessment of policy framework alternatives including community engagement on the alternatives; selection of a preferred commercial policy framework for Council approval; and recommendations for the City's Official Plan policy and Zoning By-law regulations to implement the preferred framework.

The vision and principles will guide the development and evaluation of commercial policy framework alternatives. The evaluation of alternatives will result in the recommendation of a preferred commercial policy framework. The recommended vision and principles will also inform the updated commercial policies and objectives in the City's Official Plan.

Stage 2 was initiated in November 2017 with public consultation events to assist in the development of a vision and principles for commercial development to 2031. An afternoon and evening public workshop were held on November 29, 2017 followed by an online survey that opened on November 30, 2017 and closed on December 14, 2017. The workshops included a presentation to provide highlights from the Stage 1 report and workshop stations to discuss participants' shopping and service experiences and preferences. The public workshops and on-line survey asked participants the same questions about the Downtown, Community Mixed-use Centres, Mixed-use Corridors, Neighbourhood Commercial Centres and Service Commercial designations in the City. There were 17 participants at the workshops and 39 people responded to the on-line survey.

A summary of the public workshops and on-line survey is provided below:

- Concerns with the lack of certain types of commercial in areas, quality of active transportation options and bland architecture outside of the Downtown;
- Improvement requests for retail variety, independent businesses, improved pedestrian access and public transit, public realm and increased density outside of the Downtown;
- Pedestrian improvements include pedestrian friendly/street oriented design, more/improved sidewalks, integrated public transit and more benches;
- Offices, residential, fitness and wellness were identified as appropriate second floor uses in commercial designations;
- Most respondents travelled to commercial areas by car except for the Downtown where walking and bicycling were more prominent; and
- The vision for commercial areas in 2031 involved a variety and mix of uses, increased density, more green space, parking improvements, sustainable pedestrian friendly development and a distinctive character. A cleaner/safer Downtown and service commercial areas were also noted.

Recommended Vision and Principles

The following recommended Commercial Policy Review vision and principles were informed by the City's Official Plan, the Stage 1 Commercial Market Analysis and Background Report and the November/December 2017 public feedback from Stage 2.

Vision

Commercial businesses are critical components of complete communities that are evolving from single use, low-rise buildings surrounded by large expanses of surface parking to an integral element of more compact, mixed-use areas that are appropriately distributed throughout the City. They contribute to the creation of vibrant mixed use nodes and corridors and the economic vitality of the Downtown.

The City's commercial areas are comfortable, people-oriented places that demonstrate a high standard of urban design, contribute to the distinctive character of the City, and support sustainability principles that encourage transit, walking and cycling. They meet the needs of our residents and the market by providing a full range of stores and services in appropriate locations and assist in maintaining a strong and competitive economy.

Principles

- 1. Diverse and Distinct** - Encourage a diverse range and mix of commercial goods and services that meet the needs of residents, workers and businesses through the provision of a wide variety of options that enhance Guelph's distinct identity.
- 2. Convenient and Accessible** – Identify commercial development opportunities throughout the City to ensure appropriate distribution and easy access to daily and weekly shopping. Ensure that commercial developments are pedestrian oriented and have proximity to a suitable population base, accessible locations and exposure to sufficient levels of pass-by traffic.
- 3. Flexible and Adaptable** – Recognize changing retail market demands and support the evolution of commercial development by facilitating adaptable commercial formats that meet the City's long term objectives and market needs. Offer increased flexibility through the provision of a wide range of uses and formats for commercial development that supports the City's overall growth structure of nodes and corridors and the Downtown.
- 4. Compact and Sustainable** - Foster compact commercial development that contributes to efficient development patterns, avoids strip development and represents the sustainable use of infrastructure. Support a range of uses and densities that increase the modal share of transit and facilitate walking and cycling, while recognizing the continued need for vehicular access. Include green spaces and sustainable development standards, where feasible. Support the intensification and revitalization of commercial space within the Downtown, nodes and corridors to enhance their mixed use character.
- 5. Vibrant and Integrated** - Commercial development will enhance the public realm through engaging and attractive storefronts, landscaping and site development to support pedestrian activity, facilitate a strong and distinct sense of place for commercial areas and promote main street opportunities, where appropriate. Commercial areas will be linked to surrounding neighbourhoods and integrated internally. Mixed-use buildings or sites should be co-located with community facilities and infrastructure where possible, to serve as important community gathering places. Recognize that this integration may evolve slowly over time and ensure that the retail and service function of the commercial and mixed use areas are maintained.

- 6. Economically Strong and Competitive** – Promote the economic vitality of new and existing commercial and mixed use areas, including the Downtown, and enhance the City’s economy by supporting investment and providing jobs.

The recommended vision and principles will inform the development and evaluation of commercial policy framework alternatives as well as the remainder of the review including the update of the commercial policies and objectives in the City’s Official Plan. The evaluation of framework alternatives will result in the recommendation of a preferred commercial policy framework for Council approval in Q2/Q3 2018.

Next Steps

The following Stage 2 work will be initiated following Council endorsement of the recommended vision and principles for the Commercial Policy Review:

- Development of Commercial Policy Framework Alternatives (Q1/Q2 2018);
- Community engagement on the Commercial Policy Framework Alternatives (Q2 2018);
- Release of Draft Policy Framework Alternatives to Council (Q2 2018); and
- Release and Council approval of a Preferred Commercial Policy Framework (Q2/Q3 2018).

Financial Implications

The Commercial Policy Review is funded through approved capital funding.

Consultations

Interviews were held with key stakeholders to determine their views on commercial development trends and policies in the city. A public workshop and on-line survey were conducted during November/December 2017 to solicit feedback on the public’s experience in Guelph’s commercial and mixed-use areas to assist in the development of a refreshed commercial vision and principles for the City.

This report will be posted on the City’s website and notice of the upcoming community engagement on the Commercial Policy Framework Alternatives will be posted on the City’s website, advertised in the Guelph Tribune and a courtesy notice will be send to stakeholders who have requested to be kept apprised of the project.

Corporate Administrative Plan

Overarching Goals

Service Excellence
Financial Stability

Service Area Operational Work Plans

Our Services - Municipal services that make lives better

Our People- Building a great community together

Our Resources - A solid foundation for a growing city

Attachments

Departmental Approval

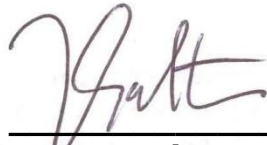
None

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Staff Report



To **Committee of the Whole**

Service Area Infrastructure, Development and Enterprise Services

Date Monday, March 5, 2018

Subject **City Initiated Official Plan Amendment for Affordable Housing**

Report Number IDE-2018-03

Recommendation

That staff be directed to initiate an amendment to the Official Plan to reflect the Council approved Affordable Housing Strategy.

Executive Summary

Purpose of Report

To seek Council direction to initiate an Official Plan Amendment regarding the Affordable Housing Strategy.

Key Findings

Since City Council adopted [OPA 48](#), the City's Affordable Housing Strategy has been approved.

In July 2017, City Council approved the City's [Affordable Housing Strategy](#) in full which resulted in a revised affordable housing target. The City's Official Plan policies, as approved in OPA 48, predate the revised target.

The Amendment will ensure that the City's Official Plan is consistent with the Council approved strategy and will provide clarity to the development community, housing providers and the general public on the City's affordable housing target.

Financial Implications

There are no financial implications as a direct result of the proposed planning matters.

Report

Background

The City's Official Plan was approved in three stages with the most recent being [OPA 48](#) which was adopted by Council in June 2012, approved by the Minister in

December 2013 and finally approved by the Ontario Municipal Board in October 2017 with some minor exceptions for items that remain under appeal on a site specific basis. OPA 48 contains policies for affordable housing. Since Council's adoption of OPA 48, Council has approved the City's [Affordable Housing Strategy](#).

Amendments to the Official Plan are Recommended to Reflect Council's Approved Affordable Housing Strategy

Section 7.2 Affordable Housing of the City's Official Plan introduced through OPA 48 sets out policies for affordable housing based on the background work completed for the Official Plan review through the City's December 2009 Affordable Housing Discussion paper. The OPA 48 policies also committed the City to undertake a housing strategy. The housing strategy was commenced in 2014 to address municipal requirements under the Provincial Growth Plan and Provincial Policy Statement regarding planning for a range of housing types and densities by establishing and implementing minimum targets for the provision of affordable rental and ownership housing.

Council approved the City's Affordable Housing Strategy on May 8, 2017. The approved strategy resulted in the annual city-wide 30% affordable housing target being confirmed for all new residential development. Council also approved a revised affordable housing target breakdown of 25% affordable ownership units and 5% affordable rental units. The 5% affordable rental target consists of a 1% affordable primary rental and a 4% affordable secondary rental target which includes accessory apartments. The approval of the Affordable Housing Strategy results in the need to update the City's Official Plan policies.

The proposed OPA would amend Section 7.2 to update the affordable housing targets, including removing the separate policy encouraging the creation of approximately 90 accessory apartment units. The policies would also be updated to refer to the target where the City may require the submission of an Affordable Housing Report as part of a development application. Chapter 12: Glossary is also proposed to be amended to add a definition for "primary rental" in accordance with the Affordable Housing Strategy.

It is timely to amend the City's Official Plan now so that the policies are consistent with the Council approved Affordable Housing Strategy and to provide clarity to the development community, housing providers and the general public on the City's affordable housing target.

Next Steps

Following Council's approval to initiate the OPA, City staff will prepare a draft Official Plan Amendment and hold a statutory public meeting for the proposed amendment. A public meeting would be scheduled for Q2 2018 with the final amendment scheduled for Council approval in 2018.

Financial Implications

There are no financial implications as a direct result of the proposed planning matters.

Consultations

This report will be posted on the City's website and the notice of the statutory public meeting will be advertised in the Guelph Tribune.

Corporate Administrative Plan

Overarching Goals

Service Excellence
Financial Stability

Service Area Operational Work Plans

Our Services - Municipal services that make lives better
Our People- Building a great community together
Our Resources - A solid foundation for a growing city

Attachments

Departmental Approval

None.

Report Author

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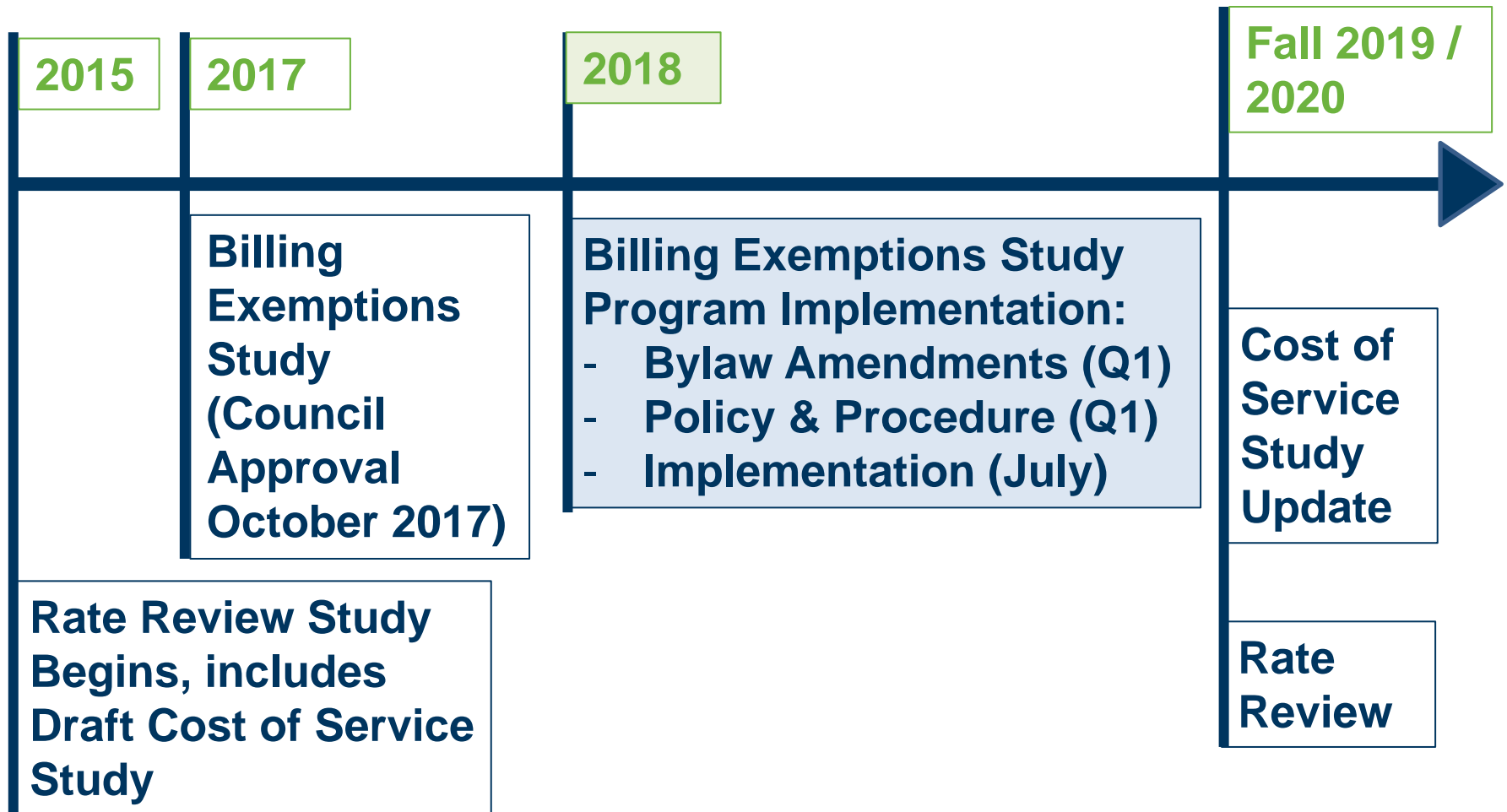
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Sewer Abatement and Leak Forgiveness Program Credit Policies

March 5, 2018
**Infrastructure, Development and Enterprise
Committee of the Whole Meeting**

Water and Wastewater Rate Review



The Process: Billing Exemption Study

- Reviewed programs from the 16 Council approved comparator municipalities.
- Strategies reviewed included: equalized billing plans, early payment discounts, temporary payment plans, lifeline rates, low/ no fixed monthly fee, social assistance programs, sewer abatement and water leak forgiveness programs.
- Residential and ICI Customer Community Engagement Completed
 - 500 telephone surveys (statistically significant) and four focus groups completed.
 - Completion of eight interviews representing 30 IC&I customers (not statistically significant)- focus was on high water users and representation for all sectors.
- Based on this study, two programs were presented: Sewer Use Abatement and Water Leak Forgiveness Program

Sewer Abatement Credit Program

- Currently, the City has no provision for adjustments to the wastewater bill for water volumes that are consumed by product development, evaporated as a result of IC&I processes and/or other end use action(s) and not discharged to the sanitary sewer.
- 9 of the 16 municipalities were found to provide a formal sewer abatement policy/ procedure that is offered to the IC&I sectors only.
- This type of program was strongly supported by all IC&I customers interviewed.
- Analysis of residential customers were somewhat supportive of this type of program for ICI customers (49 percent).

Sewer Abatement Program

- Staff recommend that a sewer abatement program be instituted for City of Guelph for IC&I customers in alignment with the following industry best practices as reviewed in the Billing Exemptions Study. This includes:
 - Submission of a certified engineering report confirming requirements of the program are met.
 - Installation of a permanent AWWA Standard C701 or C702 flow meter of the City's selection.
 - Credit applied for water received from the City's water supply system that is not discharged to the City's wastewater treatment system.
 - Credit will be applied in a single payment to the account holder.
 - Credit will only apply after the calendar year has ended starting in 2018 (i.e., not retroactive).

Sewer Abatement Program- Proposed Credit Calculation

- Deduct the wastewater volume based on the end use metering to determine the value applicable for the credit.
- Take 75 percent of that difference and determine the amount paid by the account holder to ensure water conservation promotion.
- Deduct 25 percent of the above to produce the remainder of the credit to account for INI costs.
- Volume amounts used must consider what is not applicable including: water used for irrigation, outdoor maintenance, cleaning, and stormwater management.

Credit calculation does not include:

- Changes to Overstrength agreements and associated costs
- Wastewater volumes from leaks and process malfunctions
- Water volumes for irrigation or other outdoor water uses

Further details are provided in Attachment 1 of the Staff Report

Financial Impact

- Implementation of the sewer abatement policy change recommendations will see a reduction of up to approximately \$720,000 in Wastewater Services revenues commencing in 2019.
- The first credits will be provided after March 1, 2019 for the 2018 approved period (July 1 to December 31, 2018).
- The impact to the 2018 budget would be approximately up to \$360,000 in lost revenue based on a July 1, 2018 implementation. At this time, the sewer abatement program has not been included in the 2018 Budget.
- Due to the timing of this program being brought forward for approval and implementation, any deficit resulting from lost revenue related to this program would be offset by a transfer from the Wastewater Contingency Reserve in 2018.
- Further budget adjustments will be made as part of the 2019 budget.

Water Leak Billing Forgiveness Program

- Billing forgiveness applied to residential customers for water leaks that occur on a customer's property which result in an unexpected high consumption water bill.
- Funds currently received from leaks are not forecasted as incoming base revenues as part of the Water and Wastewater User Rate Forecasting process.
- Staff recommend the water leak billing forgiveness program is instituted for residential customers, not-for profits and institution customers. These customers must:
 - Have complied with the City's policies and procedures
 - Pay all costs associated with fixing the leak
 - Pay the portion of the feeds owing not eliminated by the credit
 - Have not tampered with the water meter or internal shut off

Water Leak Forgiveness Proposed Credit Calculation

- Excludes any water loss from extraneous factors such as theft, vandalism.
- Calculate the typical, average water consumption for the period of the excess water consumption, from the previous 12 water meter readings for the Property, or, if such historical records are not available, from estimates based on what meter readings are available and comparisons with similar Properties;
- Deduct that typical, average water consumption for the period of the excess water consumption, from the actual water consumption for the period;
- Calculate the fees and charges for that quantity of excess water consumption and sewage discharge using the ordinary applicable fees and charges; and
- Finalize those calculated fees and charges, to a maximum of \$5,000.00, as the amount of the Credit.

Further details are provided in Attachment 2 of the Staff Report

Financial Impact

- The revenue the City receives from water leaks is currently unbudgeted.
- The City will see a reduction of approximately \$60,000/ year in surplus revenue once implemented based on a review of the 2017 billing.

Water and Wastewater Charges Bylaw Amendment

By-law Number (2017)-20224 be amended by adding the following section to Schedule “A” of the By-law:

“11. Credits

City Council may, from time to time, approve corporate policies providing for Credits towards the payment of fees and charges under this By-law. City staff shall carry out the procedures necessary to implement such policies. By way of example, City Council may approve corporate polices relating to a Sewer Abatement Credit and a Leak Forgiveness Credit.”

Further details are provided in Attachment 1 and 2 of the Staff Report with respect to the Credit Process.

Recommendations for Council Approval:

1. That the March 5, 2018 report of the Deputy CAO of Infrastructure, Development and Enterprise entitled “Sewer Abatement Credit and Leak Forgiveness Program Policy” be approved.
2. That the staff recommended Sewer Abatement Credit Program Policy be approved for implementation on July 1, 2018 as outlined in Attachment 1 to this report.
3. That the staff recommended Leak Forgiveness Program Policy be approved for implementation on April 1, 2018 as outlined in Attachment 2 of this report.
4. That Council approve amendments to the Water and Wastewater Rates and Charges Bylaw (2018-20224) as outlined in Attachment 3 to this report.

Thank you!

Questions?

Further information can be found at:

<http://guelph.ca/living/environment/water/water-rates/water-wastewater-rate-review/>

Staff Report



To **Committee of the Whole**

Service Area Infrastructure, Development and Enterprise Services

Date Monday, March 5, 2018

Subject **Sewer Abatement and Leak Forgiveness Credits Policies**

Report Number IDE-2018-31

Recommendation

1. That the March 5, 2018 report of the Deputy CAO of Infrastructure, Development and Enterprise entitled "Sewer Abatement Credit and Leak Forgiveness Credits Policies" be approved.
2. That the staff recommended Sewer Abatement Credit Policy be approved for implementation on July 1, 2018 as outlined in Attachment 1 to this report.
3. That the staff recommended Leak Forgiveness Credit Policy be approved for implementation on April 1, 2018 as outlined in Attachment 2 to this report.
4. That Council approve amendment to the Water and Wastewater Fees and Charges By-law Number (2017-20224) as outlined in Attachment 3 to this report.

Executive Summary

Purpose of Report

The purpose of this report is to provide the staff recommended Sewer Abatement and Leak Forgiveness Credits Policies for City Council approval. If approved, these programs would take effective July 1, 2018 and April 1, 2018, respectively.

Key Findings

The staff recommended Sewer Abatement and Leak Forgiveness Credits Policies are provided in Attachment 1 and 2, respectively. These policies were developed based on feedback collected from community and internal stakeholder engagement through the completion of the Water and Wastewater Billing Exemptions Study (Council Report IDE 17-114) in October 2017.

The proposed Sewer Abatement Credit provides financial assistance to industrial, commercial and institutional (ICI) customers whose processes do not discharge any, or only a portion of, intake water as wastewater to the sanitary sewer system

as a result of water evaporation or direct consumptive use in a process or product. The credit is calculated based on the percentage of water not returned to the sanitary sewer system, as defined within this policy, and paid to eligible applicants as a one-time credit per calendar year.

The proposed Leak Forgiveness Credit provides financial assistance to single family residential, institutional and non-profit customers who receive a high water/wastewater utility bill as a result of a water leak/ plumbing failure within the property where the leak has been repaired. This financial credit would be available on a one-time basis every ten years provided program eligibility criteria are met.

Financial Implications

Sewer Abatement Credit Program

Based on the Water and Wastewater Billing Exemptions Study findings it is anticipated that the implementation of the sewer abatement credit would see an ongoing reduction of up to approximately \$720,000 in Wastewater Services revenues commencing in 2019. The impact to the 2018 budget would be approximately \$360,000 in lost revenue based on a July 1, 2018 implementation. At this time, the sewer abatement program has not been included in the 2018 Budget. Due to the timing of this program being brought forward for approval and implementation, any deficit resulting from lost revenue related to this program would be offset by a transfer from the Wastewater Contingency Reserve in 2018. Any further budget adjustments would be made as part of the 2019 budget.

Leak Forgiveness Credit Program

The revenue the City receives from water leaks is currently unbudgeted. Therefore, no budget adjustment is required to be made to the 2018 budget for the implementation of a water leak forgiveness credit. The City would see a reduction of approximately \$60,000 in surplus revenue once the program is implemented based on the findings of the Water and Wastewater Billing Exemptions Study.

Report

In late 2015 Water and Wastewater Services initiated the multi-phase City of Guelph Water and Wastewater Rate Review. This process aimed to ensure equity and fairness amongst the City's various customer sectors through the allocation of costs for water and wastewater services received to ensure long-term financial sustainability of both the water and wastewater utilities.

Significant time is currently spent by Water and Wastewater customer service and management staff, and in some cases senior management staff and Council, in addressing customer contest of "grey areas" of current billing policies, most notably, high water bill forgiveness, cost relief for water volumes consumed/evaporated by customer end uses and terms for approval/billing of water only and wastewater only customer accounts.

To address these common billing policy exemptions requested by customers, the Water and Wastewater Billing Exemptions Study was completed in 2017. The Study conducted a formal evaluation of billing exemptions and associated impacts to future revenue requirements and City operational and administration costs to support such policy outcomes. Additional information can be found here: <http://guelph.ca/living/environment/water/water-rates/water-wastewater-rate-review/>

From this study, City staff presented two potential programs to Council in October 2017. City Council approved a recommendation that staff prepare the detailed terms and conditions, as well as, amendments to the Water and Wastewater Fees and Charges By-law Number (2017-20224).

The following sections of this report summarize the staff recommended Sewer Abatement and Leak Forgiveness Credit Programs for Council's consideration and approval. For additional context, detailed program policies and procedures including how these programs will be administered, and a supporting edit to the Water and Wastewater Fees and Charges By-law to facilitate these programs are provided in Attachments 1, 2 and 3 to this report.

Sewer Abatement Credit Program

The Sewer Abatement Credit Program provides financial assistance to City of Guelph industrial, commercial and institutional (ICI) customers whose processes do not discharge any or only a portion of their intake water as wastewater to the sanitary sewer system as a result of water evaporation or direct consumptive use in a process or product. The proposed policy and procedure is provided in Attachment 1. Highlighted below are the eligibility requirements and proposed credit calculation.

To be eligible for the program, the ICI customer must be:

- Located within the geographic limits of the City;
- Serviced by the City's Water Supply System and the City's Wastewater Treatment System;
- Divert a minimum of 25 percent of water purchased from the City away from the City's Wastewater Treatment System;
- Qualifies as industrial, commercial or institutional (IC&I) as defined by the Municipal Property Assessment Corporation; and
- Submits program application forms and supporting certified Engineering Report.

The City has proposed to calculate the Credit based on the amount of water received by the customer from the City's Water Supply System that is not discharged to the City's wastewater treatment system. The City shall consider only year over year increases in this diversion rate and the credit will be applied in a single payment against the customer's account with respect to the previous calendar years' worth of consumption.

For the calendar year of 2018, the maximum period for which staff may calculate the Credit is from July 1, 2018 to December 31, 2018.

The calculation of a Credit in respect of a particular calendar year is proposed as follows:

- Start with the volume of water discharged to the City's Wastewater Treatment System during the applicable calendar year;
- Deduct that volume of water not discharged to the City's Wastewater Treatment System for the applicable calendar year to produce the difference;
- Take 75 percent of that difference and determine the amount paid by the Account Holder during the applicable calendar year for that 75 percent; and
- Deduct 25 percent of the foregoing amount, and the remainder is the amount of the Credit.

The City shall apply any Credit by means of a single payment against the customer's water and wastewater account in respect of the previous calendar year. This policy is not applicable to:

- a. Wastewater volumes resulting from unknown leaks, process malfunctions or other issues.
- b. Wastewater loss on the non-customer side of the water meter.
- c. Wastewater volumes diverted due to outdoor water uses such as, but not limited to, irrigation, pool/basin filling, outdoor cleaning/maintenance and/or neglect of property.
- d. Wastewater loading from residential and multi-unit residential properties.
- e. Water infiltrated due to enhanced stormwater management practices.
- f. Wastewater loading volume changes caused by a third party from whom the customer is able to recover their costs.
- g. Wastewater volumes diverted from the sanitary sewer which originating from a non-municipal water source.
- h. Wastewater overstrength agreements and associated costs.
- i. Retroactive credit claims for diverted wastewater volumes before July 1, 2018.

Wastewater customers wishing to apply must meet the criteria outlined in this policy to be eligible, as outlined in Attachment 1.

Leak Forgiveness Credit Program

The Leak Forgiveness Program (LFP) provides financial assistance to residential customers who receive a high water/wastewater utility bill as a result of a water leak/ plumbing failure within the property. An Account Holder may apply for a

Credit if the Leak has caused consumption of at least two times the average monthly consumption for the property. The proposed policy and procedure is provided in Attachment 2. Highlighted below are the eligibility requirements and proposed credit calculation.

To be eligible for the program, the property must:

- Be located within the geographic limits of the City and be serviced by the City's water supply system;
- Qualifies as a residential property served by the applicable water meter;
- Possess a properly functioning and accessible internal shut off valve;
- Not possess an unmetered water line or open by-pass line within the last 5 years; and
- Show no evidence of tampering with the City's water meter.

To participate in the Credit program, the Account Holder must, at its own sole cost:

- Carry out all actions required by City staff for compliance with the Credit Policy and Procedure;
- Pay all costs for repairing the Leak, such as parts and labour; and
- Pay the portion of all fees and charges owing but not eliminated by the Credit.

The proposed credit calculation shall exclude any water loss that appears to result from any extraneous factor(s) (e.g., theft). The credit calculation is proposed to be completed as follows:

- Calculation of the typical, average water consumption for the period of the excess water consumption, from the previous 12 water meter readings for the Property, or, if such historical records are not available, from estimates based on what meter readings are available and comparisons with similar Properties;
- Deduct that typical, average water consumption for the period of the excess water consumption, from the actual water consumption for the period;
- Calculate the fees and charges for that quantity of excess water consumption and sewage discharge using the ordinary applicable fees and charges; and
- Finalize those calculated fees and charges, to a maximum of \$5,000.00, as the amount of the Credit.

This policy does not cover:

- a. Water loss from theft or vandalism.
- b. Water lost in conveyance and advance of the customer's water meter.
- c. Outside water use such as, but not limited to, pools, hot tubs, hoses, irrigation systems and skating rinks.
- d. Bulk metered multi- unit residential properties.
- e. Industrial and Commercial properties.
- f. Water loss caused by a third party from whom the customer is able to recover their costs.

- g. Water loss occurring while the premise in question is unoccupied, vacant, or as a result of private property neglect.

Water and wastewater customers wishing to apply must meet the criteria outlined in this policy to be eligible as outlined in Attachment 2.

Financial Implications

Sewer Abatement Credit Program

Based on the Water and Wastewater Billing Exemptions Study findings it is anticipated that the implementation of the sewer abatement program would see an ongoing reduction of up to approximately \$720,000 in Wastewater Services revenues commencing in 2019. The impact to the 2018 budget would be approximately \$360,000 in lost revenue based on a July 1, 2018 implementation. At this time, the sewer abatement program has not been included in the 2018 Budget. Due to the timing of this program being brought forward for approval and implementation, any deficit resulting from lost revenue related to this program would be offset by a transfer from the Wastewater Contingency Reserve in 2018. Any further budget adjustments would be made as part of the 2019 budget.

Leak Forgiveness Credit Program

The revenue the City receives from water leaks is currently unbudgeted. Therefore, no budget adjustment is required to be made to the 2018 budget for the implementation of a water leak forgiveness program. The City would see a reduction of approximately \$60,000 in surplus revenue once the program is implemented based on the findings of the Water and Wastewater Billing Exemptions Study.

Support For Business

The staff recommended Sewer Abatement Credit Policy supports the City's economic development programs, the retention of business and the attraction of new business investment to the city through the provision of financial assistance to industrial, commercial and institutional (ICI) customers, as outlined in this report.

Consultations

Community Engagement conducted in support of Water and Wastewater Billing Exemptions Study is summarized in Council Report IDE 17-114. Further information and outcome reporting of these engagement initiatives are provided on the City's website (<http://guelph.ca/living/environment/water/water-rates/water-wastewater-ratereview/>) for public reference.

Internal consultations were completed with Corporate Communications, Community Engagement, Wastewater Services, Water Services, Legal Services and Risk Services, Economic Development and Financial Services in the development of the policies.

Corporate Administrative Plan

Overarching Goals

Service Excellence
Innovation
Financial Stability

Service Area Operational Work Plans

Our People- Building a great community together
Our Services - Municipal services that make lives better

Attachments

ATT-1 Sewer Abatement Credit Policy
ATT-2 Leak Forgiveness Credit Policy
ATT-3 Amendment to Water and Wastewater Fees and Charges By-law
Number (2017-20224)

Departmental Approval

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Attachment 1

POLICY	Sewer Abatement Credit Policy
CATEGORY	Corporate
AUTHORITY	IDE- Environmental Services- Water
RELATED POLICIES	None
APPROVED BY	Guelph City Council (pending)
EFFECTIVE DATE	July 1, 2018
REVISION DATE	July 1, 2021

POLICY STATEMENT

The City shall provide financial assistance to qualifying industrial, commercial and institutional customers who reduce the amount of wastewater discharged to the City's Wastewater Treatment System. The City shall provide this financial assistance by way of a Sewer Abatement Credit against wastewater fees and charges ordinarily imposed under the City's Fees and Charges By-law.

PURPOSE

The Credit is intended to acknowledge exceptions in wastewater billing for industrial, commercial and institutional customers who permit evaporation of water, or direct consumptive use of it in a process or product, rather than discharging it as waste.

The City shall calculate the Credit based on the amount of water received by the customer from the City's Water Supply System that is not discharged to the City's Wastewater Treatment System.

The City shall consider only year over year increases in this diversion rate.

The City shall apply any Credit by means of a single payment against the customer's water and wastewater account in respect of the previous calendar year.

DEFINITIONS

In this Procedure the following terms have the corresponding definitions:

"Account Holder" means an Account Holder as defined in the Customer Accounts By-law;

"Credit" means the Sewer Abatement Credit under this Policy and Procedure;

“Customer Accounts By-law” means the City’s Water and Wastewater Customer Accounts By-law Number (2016)-20074, as amended or replaced;

“Engineering Report” means a technical report signed and sealed by a Professional Engineer, licensed in the Province of Ontario, in good standing with the Professional Engineers of Ontario, and holding a P. Eng. Qualification, retained as an independent third party by an Account Holder to prepare an engineering report as required under this Policy and Procedure;

“Fees and Charges By-law” means the City’s Water and Wastewater Fees and Charges By-law Number (2017)-20224, as amended or replaced;

“Property” means a property as described in this Policy and Procedure;

“Wastewater Treatment System” means the Wastewater Treatment System as defined in the Customer Accounts By-law; and

“Water Supply System” means the Water Supply System as defined in the Customer Accounts By-law.

PROCEDURE

City Wastewater Services staff shall administer the Credit Policy in accordance with the following Procedure.

Staff shall:

- Maintain a customer service desk open Monday through Friday between 8:00 a.m. and 4:00 p.m.;
- Receive customer service requests, including inquiries about the Credit, and, when necessary, prioritize them on a “first come, first served” basis;
- Respond in timely fashion to inquiries from customers about the Credit;
- Make available forms for applying for the Credit;
- Receive applications for the Credit, with applicable supporting documentation;
- Review applications for the Credit, keeping track of time spent, for purposes of determining the application review fee or charge;
- If an application for the Credit is incomplete, request missing documentation, and payment of the review fee or charge incurred to that time;
- When an application for the Credit is complete, visit the Property to determine the accuracy of the information and documentation received;
- Evaluate the complete application documentation, and, within 60 business days after receipt of the complete documentation, decide whether to approve or deny the Credit;
- If a Credit is approved, calculate the amount of the Credit, and notify the Account Holder of the approval, the amount of the Credit, and the amount of the application review fee or charge owed; and

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- If a Credit is denied, notify the Account Holder of the denial, the reason for the denial, and the amount of the application review fee or charge owed.

In determining a Credit, staff shall exclude any reduction in wastewater discharge volume that results from any extraneous factor, including, but not limited to:

- A leak or process malfunction;
- Diversion of water (that otherwise would have gone to wastewater) to outdoor water use, such as, but not limited to, irrigation, pool, basin or hot tub filling, hose, outdoor cleaning or maintenance, or skating rink;
- Neglect of the Property;
- Elimination of wastewater produced by residential uses;
- Elimination of stormwater from wastewater due to enhanced stormwater management practices;
- Action by a third party from whom the Account Holder is able to recover the Account Holder's loss;
- Diversion of wastewater to another property;
- Reduction of water received from a source other than the City's Water Supply System; or
- Compliance with an overstrength surcharge agreement.

Staff shall calculate a Credit on strictly a calendar year basis as follows:

- Only for calendar years after calendar year 2017;
- Only after the applicable calendar year has ended;
- Only before the subsequent calendar year has ended (retroactive Credits are not permitted); and
- Only for the applicable calendar year.

For the calendar year of 2018, the maximum period for which staff may calculate the Credit is from July 1, 2018 to December 31, 2018.

Staff shall carry out the calculation of a Credit in respect of a particular calendar year as follows:

- Start with the volume of water discharged to the City's Wastewater Treatment System during the applicable calendar year;
- Deduct that volume of water not discharged to the City's Wastewater Treatment System for the applicable calendar year to produce the difference;
- Take 75 percent of that difference and determine the amount paid by the Account Holder during the applicable calendar year for that 75%; and
- Deduct 25 percent of the foregoing amount, and the remainder is the amount of the Credit.

Staff shall deny a Credit to any Account Holder who has:

- Been convicted of any offence under the Customer Accounts By-law;
- Engaged in or taken advantage of fraudulent or misleading behaviour relating to the Credit program, such as tampering with a meter or supplying

misinformation; staff may also proceed with any other applicable remedies, such as those available under the Customer Accounts By-law;

- If requested by City staff, failed to provide adequate documentation of the Account Holder's status as industrial, commercial or institutional;
- Failed to permit Wastewater Services staff access to the Property, to determine the full applicable situation;
- Not maintained all the Account Holder's customer accounts with the City in respect of water and wastewater in good standing;
- Has diverted at less than 25 percent of the water purchased from the City away from the City's Wastewater Treatment System.

PARTICULARS OF THE CREDIT PROGRAM

Following are particulars of the program for implementing the Credit Policy.

1. Eligibility

An Account Holder may apply for a Credit in respect of the Account Holder's Property if the Property:

- Is located within the geographic limits of the City;
- Is serviced by the City's Water Supply System and the City's Wastewater Treatment System; and
- Qualifies as industrial, commercial or institutional as defined by the Municipal Property Assessment Corporation (MPAC).
- Diversion of a minimum of 25 percent of the water purchased from the City away from the City's Wastewater Treatment System.

2. Application Requirements

To apply for the Credit, the Account Holder must submit:

- A completed application form;
- A written and signed commitment to meet all applicable requirements of the Credit program;
- The Account Holder's contact information;
- The Property address;
- The Account Holder's account number;
- The serial number of each applicable water meter in respect of the Property; and
- An Engineering Report.

To apply for the Credit in respect of a specific calendar year, the Account Holder must submit the complete application by March 1 of the following calendar year. To participate in the application process, the Account Holder must, at its own sole cost:

- Ensure that the Property's private water services, wastewater services and plumbing:

-
- Satisfy all applicable Ontario Building Code and City standards, and
 - Remain properly maintained, especially so as to prevent water leaks and other critical failures;
 - Permit City staff to have safe and timely access to the Property for purposes of administering the Credit Policy and Procedure, including inspecting the site and confirming the contents of the Engineering Report;
 - Carry out all actions required by City staff for compliance with the Credit Policy and Procedure;
 - Purchase and install:
 - A permanent AWWA Standard C701 or C702 flow meter of the City's selection, and at a location determined by the City, so as to continually measure the volume of water being discharged to the City's Wastewater Treatment System, or
 - If installation of such a permanent flow meter is not possible, conduct flow metering of specific water use processes, as agreed (with the City) to best represent consumptive uses of wastewater diverted from the City's Wastewater Treatment System;
 - Pay the City's application review fee of \$125.00 per hour, or such other replacement amount as determined by City Council from time to time;
 - Carry out all actions required by City staff for compliance with the Credit Policy and Procedure;
 - Pay all costs necessary to support enrollment in the Credit program, including, but not limited to, obtaining the Engineering Report; and
 - Pay the portion of all fees and charges not eliminated by the Credit.

3. Engineering Report

The Engineering Report must:

- Identify the total volumetric amount of water (in cubic metres) purchased from the City, for January 1 to December 31 of the applicable calendar year, as determined from the Billing Agent's invoice;
- Identify the total volumetric amount of water (in cubic metres) redirected from the City's Wastewater Treatment System for January 1 to December 31 of the applicable calendar year;
- Describe the industrial, commercial or institutional processes that are responsible for water consumption on the property, and the sources (City and non-City) of water supplying those processes;
- Identify current process metering;
- Include electronic production records;
- Clearly indicate each water source and effluent discharge process;
- Clearly reference industry-accepted equations and formulae for all calculations;

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- For all equations, refer to the production records for water that is captured in production; and
 - Provide the specifications and annual calibration records for the water flow meters and data loggers used to capture process information.

Attachment 2

POLICY	Leak Forgiveness Credit Policy
CATEGORY	Corporate
AUTHORITY	IDE- Environmental Services- Water
RELATED POLICIES	None
APPROVED BY	Guelph City Council (pending)
EFFECTIVE DATE	July 1, 2018
REVISION DATE	July 1, 2021

POLICY STATEMENT

The City shall provide financial assistance to qualifying residential customers in respect of unusually high water and/or wastewater fees or charges, resulting from Leaks. The City shall provide this financial assistance by way of a Leak Forgiveness Credit against the water and wastewater fees and charges ordinarily imposed under the City's Fees and Charges By-law.

PURPOSE

The Credit is intended to provide partial reimbursement to innocent customers who suffer significant, unexpected, unintended increased fees and charges due to Leaks, and to encourage prompt repair of such Leaks.

The City shall calculate the Credit based on the extra water and wastewater fees and charges over the average, expected, water and wastewater fees and charges incurred prior to the Leak. The City shall apply any Credit by means of a payment against the customer's water and wastewater account.

DEFINITIONS

In this Procedure the following terms have the corresponding definitions:

"Account Holder" means an Account Holder as defined in the Customer Accounts By-law;

"Credit" means the Leak Forgiveness Credit under this Policy and Procedure;

"Customer Accounts By-law" means the City's Water and Wastewater Customer Accounts By-law Number (2016)-20074, as amended or replaced;

"Fees and Charges By-law" means the City's Water and Wastewater Fees and Charges By-law Number (2017)-20224, as amended or replaced;

“Leak” means an unintentional water loss caused by a broken or otherwise malfunctioning plumbing pipe or fixture;

“Property” means a property as described in this Policy and Procedure; and

“Water Supply System” means the Water Supply System as defined in the Customer Accounts By-law.

PROCEDURE

City Water Services staff shall administer the Credit Policy in accordance with the following Procedure.

Staff shall:

- Make available forms for applying for the Credit;
- Receive applications for the Credit, with applicable supporting documentation;
- Review applications for the Credit, including by investigating water consumption amounts;
- If an application for the Credit is incomplete, request missing documentation;
- When an application for the Credit is complete, if necessary, visit the Property to determine the accuracy of the information and documentation received;
- If necessary, after the Account Holder has indicated that the Leak has been repaired, visit the Property to verify whether the Leak has indeed been satisfactorily repaired;
- Evaluate the complete application documentation, and, within 60 business days after receipt of the complete documentation, decide whether to approve or deny the Credit;
- If a Credit is approved, calculate the amount of the Credit, and notify the Account Holder of the approval, and the amount of the Credit; and
- If a Credit is denied, notify the Account Holder of the denial, and the reason for the denial.

In determining a Credit, staff shall exclude any water loss that appears to result from any extraneous factor, including, but not limited to:

- Theft;
- Vandalism;
- Leaks on the City’s side of the Account Holder’s water meter;
- Outdoor water use, such as, but not limited to, irrigation, pool, basin or hot tub filling, hose, outdoor cleaning or maintenance, or skating rink;
- Action by a third party, from whom the Account Holder is able to recover the Account Holder’s loss;
- Neglect of the Property; or
- An occurrence in a Property where:
 - Although the Property is ordinarily occupied, the occupants were absent for at least 72 hours, or

-
- The Property is unoccupied because the most recent occupants have moved out with no intention of returning, or it is a newly constructed Property, and the initial occupants have not yet moved in.

Staff shall carry out the calculation of a Credit as follows:

- Calculate the typical, average water consumption for the period of the excess water consumption, from the previous 12 water meter readings for the Property, or, if such historical records are not available, from estimates based on what meter readings are available and comparisons with similar Properties;
- Deduct that typical, average water consumption for the period of the excess water consumption, from the actual water consumption for the period;
- Calculate the fees and charges for that quantity of excess water consumption and sewage discharge using the ordinary applicable fees and charges; and
- Finalize those calculated fees and charges, to a maximum of \$5,000.00, as the amount of the Credit.

Staff shall deny a Credit to any Account Holder who has:

- Been convicted of any offence under the Customer Accounts By-law;
- Previously received a Credit in respect of the same Property for a leak during the shorter period of:
 - The period from July 1, 2018 to the date of the application, or
 - The period of 10 years before the date of the application;
- During the one year period prior to the abnormal water use, failed to respond to a request by City staff for access to the Property's water meter;
- Engaged in or taken advantage of fraudulent or misleading behaviour relating to the Credit program, such as tampering with a meter or supplying misinformation; staff may also proceed with any other applicable remedies, such as those available under the Customer Accounts By-law;
- Failed to notify the City of the Leak within 5 business days after being advised (such as by an unusually high water bill) of the abnormal water use;
- If requested by City staff, failed to provide satisfactory documentation of the Account Holder's status as residential, institutional or not-for-profit;
- Failed to make reasonable efforts to locate and repair the Leak within 10 calendar days after being advised (such as by an unusually high water bill) of the abnormal water use;
- Failed to repair the Leak and provide proof of the repair, including photographs and invoices and receipts from a licensed plumber or manufacturer;
- Failed to repair the Leak using, means consistent with Ontario Build Code and water efficient technology, where applicable; or

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- Failed to permit Water Services staff access to the Property, to ensure that the Leak has been repaired, within two weeks after a request for such access.

PARTICULARS OF THE CREDIT PROGRAM

Following are particulars of the program for implementing the Credit Policy.

1. Eligibility

An Account Holder may apply for a Credit in respect of the Account Holder's Property if the Property:

- Is located within the geographic limits of the City;
- Is serviced by the City's Water Supply System;
- Qualifies as a residential customer;
- Is the only Property served by the applicable water meter;
- Has a properly functioning and accessible internal shut off valve;
- Has not had an unmetered water line or open by-pass line within the last 5 years;
- Shows no evidence of tampering with the water meter; and
- Possess a water bill identifying at least two times the average monthly consumption for the Property as caused by a leak.

2. Application Requirements

To apply for the Credit, the Account Holder must submit:

- A completed application form;
- The Account Holder's contact information;
- The Property address;
- The Account Holder's account number; and
- The serial number of each applicable water meter in respect of the Property.

To participate in the Credit program, the Account Holder must, at its own sole cost:

- Carry out all actions required by City staff for compliance with the Credit Policy and Procedure;
- Pay all costs for repairing the Leak, such as parts and labour; and
- Pay the portion of all fees and charges owing but not eliminated by the Credit.

Attachment 3

THE CORPORATION OF THE CITY OF GUELPH

By-law Number (2018) -

A By-law to amend By-law Number (2017)-20224, in respect of credits toward water and wastewater fees and charges.

WHEREAS the City of Guelph adopted By-law Number (2017)-20224, being a By-law to impose water and wastewater fees and charges;

AND WHEREAS the City of Guelph wishes to provide for corporate policies that establish credits against the water and wastewater fees and charges;

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE CITY OF GUELPH ENACTS AS FOLLOWS:

1. By-law Number (2017)-20224 be and hereby is amended by adding the following section to Schedule "A" of the By-law:

"11. Credits

City Council may, from time to time, approve corporate policies providing for Credits towards the payment of fees and charges under this By-law. City staff shall carry out the procedures necessary to implement such policies. By way of example, City Council may approve corporate policies relating to a Sewer Abatement Credit and a Leak Forgiveness Credit."

2. This by-law shall come into force and take effect upon passage.

PASSED this day of , 2018.

CAM GUTHRIE – MAYOR

STEPHEN O'BRIEN–CITY CLERK

Staff Report



To **Committee of the Whole**

Service Area Corporate Services

Date Monday, March 5, 2018

Subject **Code of Conduct for Members of Council and Local Boards - Update**

Report Number CS-2018-33

Recommendation

That the revised Code of Conduct for Members of Council and Local Boards, included as ATT-1 to the report titled Code of Conduct for Members of Council and Local Boards – Update and dated March 5, 2018, be approved.

Executive Summary

Purpose of Report

To seek Council approval for an updated Code of Conduct for Council and Local Boards (the Code).

Key Findings

A comprehensive review of the Code has not been completed since it was first approved by City Council on February 25, 2013. The proposed revisions to the Code reflect legislative changes, changes to other City of Guelph policies, and municipal best practices.

The formatting and numbering of the Code has been revised so that it is compliant with the Accessibility for Ontarians with Disabilities Act and easier to reference than the previous version.

Significant changes include the following:

- The section titled Work of a Political or Personal Nature has been removed and replaced with Section 6, titled Use of Corporate Resources, to ensure consistency with the Corporate Use of Resources During an Election Policy.
- Complaints may now be submitted directly to the Integrity Commissioner where they were previously submitted to the Integrity Commissioner through the City Clerk.

- Language which was taken directly from the Municipal Act is now summarized in plain language.
- Administrative changes were made which streamline the process for submitting Code complaints and clarify reporting requirements for the Integrity Commissioner.

Financial Implications

None.

Report

In 2006 the Municipal Act was amended to authorize municipalities to establish codes of conduct for members of City Council and Local Boards. The City of Guelph Code was adopted by City Council on February 25, 2013. Bill 68, the Modernizing Ontario's Municipal Legislation Act, further amended the Municipal Act in 2017 to require that every municipality establish a code of conduct. While the City of Guelph currently meets the requirements of the Municipal Act in relation to codes of conduct there are several areas of the Code which require updating to ensure continued compliance and applicability.

This report outlines several changes to the Code which are recommended based on recent changes to the Municipal Act, the Municipal Conflict of Interest Act, and the Municipal Elections Act, as well as municipal best practices and feedback from the City of Guelph's Integrity Commissioner. These changes ensure the Code is accessible, easily understood and referenced, and consistent with other City of Guelph policies, provincial legislation, and municipal best practices.

Summary of Changes to the Code

- Sections are now numbered for easier reference and formatted in accordance with the Accessibility for Ontarians with Disabilities Act.
- Definition of confidential material in ATT-1, section 3 (c) amended to include the debate on a matter in a closed meeting in addition to the substance of that matter and information relating to that matter.
- ATT-1, section 4 (g) (i) amended to replace 'in keeping with a members representative role' with 'serves a legitimate business purpose' to clarify the type of events for which Councillors are exempt from the provisions of the Code relating to gifts and benefits.
- ATT-1, section 6 replaced to ensure consistency with the Use of Corporate Resources During an Election Policy. This new section establishes rules regarding the use of corporate resources which apply regardless of elections. Specifically, this section prohibits members of Council or Local Boards from using any corporate resources for personal purposes or profit.

- ATT-1, appendix 1, section 2 replaced with a plain language version of section 223.3 (1) of the Municipal Act, instead of a verbatim copy of that section, to improve readability and accessibility.
- ATT-1, appendix 1, section 3 amended to remove a list of applicable complaint procedures which the Integrity Commissioner must defer to before conducting their own investigation. In short, this change gives the Integrity Commissioner the ability to determine what complaint procedures are applicable in relation to a particular complaint and reduces the need to amend the Code as specific complaint procedures are added, changed, or removed.
- Administrative changes were made which streamline the process for submitting Code complaints and clarify reporting requirements for the Integrity Commissioner such that reports are not required for frivolous complaints or where an investigation did not uncover any wrong doing.

Financial Implications

None.

Consultations

Robert Swayze, Integrity Commissioner

Corporate Administrative Plan

Overarching Goals

Service Excellence

Service Area Operational Work Plans

Our Services - Municipal services that make lives better

Attachments

ATT-1 Code of Conduct for Members of Council and Local Boards

Departmental Approval

N/A

Report Author

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CORPORATE POLICY AND PROCEDURE



POLICY	Code of Conduct for Members of Council and Local Boards
CATEGORY	Corporate
AUTHORITY	City Clerk's Office
RELATED POLICIES	Use of Corporate resources During an Election
APPROVED BY	City Council
EFFECTIVE DATE	February 25, 2013
REVISION DATE	March 26, 2018

1. Policy Statement

A written Code of Conduct for Council and Local Boards (the Code) helps to ensure that the members of Guelph City Council (Council), Advisory Committees, and Local Boards of the City of Guelph (the City) share a common basis for acceptable conduct. This Code is designed to provide a set of rules on ethical conduct and a supplement to the legislative parameters within which the members must operate. These standards serve to enhance public confidence that Guelph's elected and appointed representatives operate from a base of integrity, justice and courtesy.

The key principles that underline the Code are as follows:

- All members shall serve and be seen to serve their constituents in a conscientious and diligent manner.
- All members should be committed to performing their functions with integrity.
- All members shall be committed to avoiding the improper use of the influence of their office.
- All members shall be committed to avoiding and declaring conflicts of interest, both real and apparent.
- All members shall perform their duties while in office in a manner that promotes public confidence and will bear close public scrutiny.
- All members shall seek to serve the public interest by upholding both the letter and the spirit of the laws and policies established by the Federal Parliament, Ontario Legislature, and Council.

2. Purpose

Members hold positions of privilege. Therefore, they must discharge their duties in a manner that recognizes a fundamental commitment to the wellbeing of the community and regard for the integrity of the Corporation.

The purpose of the Code is to:

- protect the public interest;
- encourage high ethical standards among members of Council and local boards;
- provide a universal understanding of the fundamental rights, privileges, and obligations of members of Council and local boards; and
- provide a means for members of Council and local boards to obtain information on contemplated conduct in circumstances where they are uncertain as to the ethical appropriateness of that conduct.

3. Definitions

“members” means the Mayor, members of Council, and members of all local boards as defined in Section 223.1 of the Municipal Act.

“confidential information” means the following:

- a. Any information in the possession of, or received in confidence by the City, that the City is prohibited from disclosing, or has decided to refuse to disclose, under the Municipal freedom of Information and Protection of Privacy Act, or any other law.
- b. Information of a corporate, commercial, scientific or technical nature received in confidence from third parties, including, but not limited to:
 - i) personal information;
 - ii) information that is subject to solicitor-client privilege;
 - iii) information that concerns any confidential matters pertaining to personnel labour relations, litigation, property acquisition, the security of the property of the municipality or a local board; and
 - iv) any other information lawfully determined by the Council or the local board to be confidential, or required to remain or be kept confidential by legislation or order.
- c. A matter, the substance of a matter, the debate on the matter, and information pertaining to a matter, that has been debated or discussed at a meeting closed to the public, unless the matter is subsequently discussed in open or is authorized to be released by Council, the local board or otherwise by law.
- d. Reports of consultants, draft documents and internal communications, which, if disclosed may prejudice the reputation of the City, its officers and employees, or its effective operation.
- e. Information, the publication of which may infringe on the rights of any person (e.g., source of a complaint where the identity of a complainant is given in confidence).

“Integrity Commissioner” means the person appointed by Council in accordance with Section 223.3 of the Municipal Act, 2001 and who is responsible for performing in an independent manner the functions assigned by the City with respect to the application of the Code for members of Council and Local Boards.

4. Gifts and Benefits

No member shall accept a fee, advance, gift or personal benefit that is connected directly or indirectly with the performance of their duties of office, unless permitted by the exceptions listed below. For these purposes, a fee, advance, gift, or personal benefit provided with the member's knowledge to a member's spouse, child or parent, or to a member's staff that is connected directly or indirectly to the performance of the member's duties, is deemed to be a gift to that member.

The following are recognized as exceptions:

- a) compensation authorized by by-law;
- b) such gifts or benefits that normally accompany the responsibilities of office and are received as an incident of protocol or social obligation;
- c) a political contribution otherwise reported by law;
- d) services provided without compensation by persons volunteering their time;
- e) a suitable memento of a function honouring the member;
- f) food, lodging, transportation and entertainment provided by provincial, regional or local governments, or political subdivisions of them, by the federal government or a foreign country;
- g) food and beverages consumed at banquets, receptions or similar events, if:
 - i) attendance serves a legitimate business purpose;
 - ii) the person extending the invitation or a representative of the organization is in attendance; and
 - iii) the value is reasonable and attendance at events sponsored by the same entity is infrequent.
- h) communication to the offices of a member, including subscriptions to newspapers and periodicals.

In the case of categories (b), (e), (f), (g) and (h), if the value of the gift or benefit exceeds \$300, or if the total value received from any one source during the course of a calendar year exceeds \$300, the member shall within 30 days of receipt of the gift or reaching the annual limit, file a disclosure statement with the City Clerk.

The disclosure statement must indicate:

- a) the nature of the gift or benefit;
- b) its source and date of receipt;
- c) the circumstances under which it was given or received;
- d) its estimated value;
- e) what the recipient intends to do with the gift; and
- f) whether any gift will at any point be left with the City.

Any disclosure statements will be a matter of public record.

CORPORATE POLICY AND PROCEDURE



Except in the case of category (f), a member may not accept a gift or benefit worth in excess of \$500 or gifts or benefits from one source during a calendar year worth in excess of \$500. No member shall seek or obtain by reason of their office any personal privilege or advantage with respect to City services not otherwise available to the general public and not consequent to their official duties.

5. Confidentiality

No member shall disclose, release, or publish, by any means to any person or to the public, any confidential information acquired by virtue of their office, except when required or authorized by Council or by by-law to do so. No member shall use confidential information for their own personal or private gain or benefit or for the personal or private gain or benefit of any other person or body.

6. Use of Corporate Resources

No member shall, for personal purposes or profit, make use of any City facilities, services or property other than for purposes connected with the discharge of City duties or associated community activities, unless such use is permitted by one of the following exceptions:

- Reasonable and incidental personal use of equipment such as computers, cell phones, smart phones, telephones, tablets, printers, scanners, copiers, e-mail, file storage, voicemail, or any other equipment or technology owned by the City of Guelph, where the City incurs no additional costs relating to such use, and the use is of limited duration and frequency; and
- Use of City property and facilities where such use is universally known to be available to other residents upon request and on equal terms.

No member shall obtain financial gain from the use of City developed intellectual property, computer programs, technological innovations or other patentable items, while an elected official or thereafter. All such property remains the exclusive property of the City of Guelph.

No member shall use information gained in the execution of their duties that is not available to the general public for any purposes other than their official duties.

The Municipal Elections Act, the Election Finance Act and the Canada Elections Act establish regulations relating the use of City resources during elections. Members should review the City of Guelph Use of Corporate Resources During an Election policy for specific rules and regulations that apply during municipal, provincial and federal elections.

7. Conduct Respecting Current and Prospective Employment

No member shall allow the prospect of their future employment by a person or entity to adversely affect the performance of their duties to the City.

8. Business Relations

No member shall act as a paid agent before Council, its committees, or an agency, board or commission of the City. A member shall not refer a third party to a person, partnership, or corporation in exchange for payment or other personal benefit.

9. Conduct

As a representative of the City, every member has the duty and responsibility to treat members of the public, one another, and staff appropriately and without abuse, bullying, or intimidation, and to ensure that the municipal work environment is free from discrimination and harassment. A member shall not use indecent, abusive, or insulting words or expressions toward any other member, a member of staff, or a member of the public. A member shall not speak in a manner that is discriminatory to any individual based on that person's race, ancestry, place of origin, creed, gender, sexual orientation, age, colour, marital status or disability.

10. Influence on Staff

Individual members of Council do not have the authority of the whole of Council. Only Council as a whole has the authority to set policy or direct staff, including, but not limited to:

- budget approvals;
- governance processes; and
- staff work plans.

Members shall be respectful of the fact that staff work for the City as a corporate body and are charged with making recommendations that reflect their professional expertise, without undue influence from any individual member or group of members. Accordingly, no member shall maliciously or falsely injure the professional or ethical reputation of staff and all members shall show respect for the professional capacities of staff.

Council directs the business of the City and passes by-laws, or resolutions as appropriate, for decisions adopted by Council. Council has delegated responsibility to the Chief Administrative Officer (CAO) for the administration of the affairs of the City in accordance with decisions adopted by Council. This means that under the direction of the CAO, staff have the responsibility and the authority to provide consultation, advice, and direction to Council and to implement Council approved policy.

Accordingly, staff establish administrative policies, systems, structures and internal controls necessary to implement the goals and objectives of Council. Council should expect a high quality of advice from staff based on political neutrality and objectivity irrespective of party politics, the loyalties of persons in power or their personal opinions. No member shall compel any staff member to engage in activities that are contrary to the directions of Council or the policies of the City.

No member shall compel staff to engage in partisan political activities or be subjected to threats or discrimination for refusing to engage in such activities. No member shall use, or attempt to use, their authority or influence for the purpose of intimidating, threatening, coercing, commanding or influencing any staff member with the intent of interfering with that person's duties, including the duty to disclose improper activity.

11. Improper Use of Influence

No member shall use the influence of their office for any purpose other than for the exercise of their official duties.

Examples of prohibited conduct are the use of one's status as a member to improperly influence the decision of another person to the private advantage of oneself, or one's immediate relatives, staff members, friends, associates, businesses or otherwise. This includes attempts to secure preferential treatment beyond activities in which members normally engage on behalf of their constituents as part of their official duties. Also prohibited is the holding out of the prospect or promise of future advantage through a member's influence within Council in return for present actions or inaction.

For the purposes of this provision:

"private advantage" does not include a matter:

- a) that is of general application;
- b) that affects a member, their immediate relatives, staff members, friends, associates, businesses, or otherwise as one of a broad class of persons; or
- c) that concerns the remuneration or benefits of a member.

Members should not advocate on behalf of any person at a hearing of an adjudicative board (as listed on the City's website) and should not contact any member of such a board regarding any application before it.

12. Complaints Alleging Violation of this Code of Conduct

When a member of Council or local board, an employee of the City or a member of the public has reasonable grounds to believe that a member has breached the Code, a complaint may be submitted to the Integrity Commissioner who will process it in accordance with the Complaint Protocol attached as Appendix 1.

The Integrity Commissioner will advise the City Clerk, with as much notice as possible, before preparing a report to Council so that the City Clerk may schedule items on a Council agenda accordingly and provide related meeting information to the Integrity Commissioner accordingly.

Appendix 1

Code of Conduct Complaint Protocol

1. Application

This process applies to members of Council and its local boards as defined in Section 223.1 of the Municipal Act.

2. Integrity Commissioner

The City of Guelph Integrity Commissioner shall be responsible for the provision of the following services, as identified in the Municipal Act:

1. Application of the Code, as well as any other ethical rules, procedures and policies, for members.

3. Procedure for Making a Complaint

1. All complaints or requests for inquiries of alleged breaches of the Code shall be submitted to the Integrity Commissioner in the form provided in Appendix 2.
2. All complaints or requests for inquiries must clearly include:
 - i) the member to whom the complaint relates;
 - ii) the nature of the alleged contravention;
 - iii) the specific provision(s) of the Code allegedly contravened;
 - iv) names of any witnesses to the alleged contravention; and
 - v) written material in support of the alleged contravention.
3. Upon receipt of a complaint or request for enquiry, the Integrity Commissioner shall first determine if it is within their jurisdiction and whether there is a procedure under other legislation or City policy to deal with the complaint. If it is determined that other procedures apply, the Integrity Commissioner shall refer the complainant to the appropriate person or agency to follow that process.

Where it has been determined that a complaint should be dealt with under another process, it will no longer be considered or dealt with by the Integrity Commissioner and the time limits described in the other processes will apply accordingly.

4. Upon receipt of a complaint or request to conduct an enquiry within their jurisdiction, and if the Integrity Commissioner deems the complaint or request to have merit, the Integrity Commissioner may deliver a preliminary report to an open meeting of Council which may include the following:

- i) The opinion of the Integrity Commissioner as to whether the enquiry is appropriate and whether it can be conducted within the law applicable to such an enquiry;
- ii) An indication as to whether it is the Integrity Commissioner's intention to conduct the enquiry under the Public Inquiries Act;
- iii) A preliminary indication of the members of staff and/or consultants needed to assist the Integrity Commissioner;
- iv) An estimated cost of the enquiry;
- v) The estimated time required to complete the enquiry and prepare a final report; and
- vi) Where appropriate, the Integrity Commissioner may recommend that the alleged infraction be reported to the police and that the enquiry be suspended until the police investigation is completed.

If the Integrity Commissioner is of the opinion that a complaint or request to conduct an enquiry is frivolous, vexatious, not made in good faith or that there are insufficient grounds for an enquiry, the Integrity Commissioner shall not prepare a preliminary report to Council and shall not conduct an enquiry.

4. Procedure for Obtaining Advice

1. A request for information from the Integrity Commissioner by a member or the public must be made in writing.
2. All advice provided by the Integrity Commissioner to a member, shall be confirmed in writing. No Solicitor/Client relationship will exist in the giving of such advice.
3. Where the Integrity Commissioner learns of a violation through the request for advice from a member, they are required to report such a violation to Council.
4. The Integrity Commissioner may decline to give advice if they determine it will put them in conflict with their duty to Council as a whole.

5. Confidentiality

1. The Integrity Commissioner shall carry out all enquiries in a manner which will ensure that the individual to whom the complaint relates is treated fairly and all complaints shall be treated as confidential to the extent possible and in accordance with the Municipal Act.
2. All records of investigations shall be kept confidential and access limited according to the discretion of the Integrity Commissioner.

6. Intake Procedures

The Integrity Commissioner may attempt to settle any complaint. Except where otherwise required by the Public Inquiries Act, the Integrity Commissioner shall provide a copy of the complaint and supporting material to the member with a request for a written response to the allegation within ten days. Unless the complainant requests that their identity be kept confidential, the copy of the complaint sent to the respondent shall include the name of the complainant.

A copy of such response may be provided by the Integrity Commissioner to the complainant with a request for a written response within ten days.

7. Investigations

The Integrity Commissioner shall take all necessary steps within their jurisdiction to promptly investigate the complaint. This may include entering any City office or building, consulting with relevant City staff and accessing any information or records described in Section 223.4 (3) and (4) of the Municipal Act. The Integrity Commissioner may retain independent professional services if required.

1. The Integrity Commissioner shall make every effort to complete an investigation within 30 days and no later than 180 days after receiving the application.
2. If the Integrity Commissioner requires more than 30 days to complete an investigation, the Integrity Commissioner may advise the complainant and prepare an interim report to Council which includes an estimated extended time period and end date for completion as well as the reasons for the extension.
3. A complaint involving an alleged contravention that has already been thoroughly investigated will not be re-investigated unless new evidence is presented.

8. Reporting the Results of an Investigation

1. All reports from the Integrity Commissioner shall be made to an open meeting of Council. Where the enquiry relates to a local board, the report shall be submitted to both Council and the local board.
2. If the Integrity Commissioner determines that there has been no contravention of the Code, or that a contravention occurred even though the member took all reasonable measures to prevent it, or that a contravention occurred that was trivial or committed through inadvertence or an error of judgement made in good faith, the Integrity Commissioner shall dismiss the complaint and may report to Council on the matter.

3. If a preliminary report was previously issued by the Integrity Commissioner then a final report shall be submitted to an open meeting of Council and a local board as applicable.
4. The Integrity Commissioner shall give a copy of the final report to the complainant and the member whose conduct is concerned on the same day as the agenda containing the report becomes public.

9. Actions by Council

1. In reviewing the final report, Council will determine whether it will impose any of the following penalties on a member if the Integrity Commissioner reports that it is their opinion that the member has contravened the Code:
 - i) Issue a motion of reprimand;
 - ii) Suspension of the remuneration paid to the member with respect to their services as a member for a period of up to 90 days; and
 - iii) Remove the member from committee or local board appointments.
2. Council may also make the following requests:
 - i) Request the member involved to return any gift or benefit received in contravention of the Code;
 - ii) Request that the member involved repay the value of the benefit; and
 - iii) Request an apology from the member involved.
3. All reports to Council by the Integrity Commissioner on the investigation of complaints are public documents.
4. The Integrity Commissioner shall be responsible for ensuring the above procedures are followed with respect to requests for enquiries and for conducting investigations. Council shall be responsible for determining penalties where a finding is made by the Integrity Commissioner that the Code has been contravened.

10. Protection from Retaliation

Any employee who files a complaint of a contravention of the Code will not be subjected to any form of penalty or reprisal provided the complaint is made:

- in good faith; and
- in the reasonable belief of the complainant that a contravention of the Code has occurred.

11. Limitation Period

The Integrity Commissioner shall not proceed with an enquiry regarding a complaint more than 60 days after the date when the event or series of events which are the subject matter of the complaint were discovered by the complainant.

The onus of proof as to the date of discovery lies with the complainant.

Where the Integrity Commissioner decides not to proceed with the investigation of a complaint received more than 60 days after the date when the event(s) occurred, the Integrity Commissioner may prepare and file a report to Council setting out that decision.

12. Complaints in Municipal Election Years

Pursuant to the Municipal Act, no application for an inquiry by the Integrity Commissioner of an alleged contravention of the Code shall be made between Nomination Day and the end of Voting Day in a regular election. Furthermore, any investigation not completed prior to Nomination Day in a regular election shall be terminated by the Integrity Commissioner on that day.

The Integrity Commissioner shall not re-commence an enquiry terminated as the result of an election unless, within six weeks of Voting Day in a regular election, the person who made the original request submits a written request to the Integrity Commissioner asking that the inquiry be re-commenced.

CORPORATE POLICY AND PROCEDURE



Appendix 2

Code of Conduct for Council and Local Boards Complaint Form

Complaint forms can be submitted directly to:

Robert J. Swayze
Barrister & Solicitor
20736 Mississauga Road
Caledon, ON. L7K 1M7

T: 519 942 0070
F: 519 942 1233
E: robert.swayze@sympatico.ca

I, _____ [please print full name],

believe that the following member of Guelph City Council or a local board,
_____ [specify name of member],
has contravened section(s) _____ [specify section(s) of the Code of
Conduct] of the City of Guelph Code of Conduct for Council and Local Boards.

The details are as follows:

[If you require more space, please attach to this complaint. If you wish to include
attachments to support this complaint, please identify them and attach them to this
complaint.]

Staff Report

To **Committee of the Whole**

Service Area Corporate Services

Date Monday, March 5, 2018

Subject **Procedural By-law Update**

Report Number CS-2018-36

Recommendation

That the proposed Procedural By-law, included as ATT-1 to the report titled Procedural By-law Update, dated March 5, 2018, be approved and that By-law (2016)-20087 be repealed.

Executive Summary

Purpose of Report

To update the Procedural By-law based on direction given at the December 18, 2017 Council meeting regarding notices of motion and to make administrative changes resulting from a review conducted in advance of the new term of Council.

Key Findings

The Procedural By-law requires an update to reflect Council's direction regarding the process by which members bring forward new items for inclusion on an agenda or notices of motion.

This is the first time the Procedural By-law has been reviewed or amended since the adoption of the Committee of the Whole governance system.

As a result, and to ensure the Procedural By-law continues to effectively guide the order and business of Council and Committee, staff undertook a broader review and are recommending several administrative changes. These changes include simplification of language, correction of errors, inclusion of new definitions and other minor changes.

Financial Implications

None.

Report

At its meeting on December 18, 2017 Council passed the following resolution:

That, when introducing subject matter not on the agenda, members of Council first approach the Service Area Chair and Deputy CAO for approval to place the matter on the next relevant Committee of the Whole agenda, prior to initiating the notice of motion process, and that the Procedural By-law be amended accordingly and as outlined in ATT-1 Potential Amendment to Procedural By-law to Report No. CS-2017-73 titled 'Notices of Motion Review' dated December 4, 2017.

As a result of this resolution an update to the Procedural By-law is required. By-law (2016)-20087 (the Procedural By-law) was adopted in July, 2016. This is the first time the Procedural By-law has been amended since the adoption of the Committee of the Whole governance system.

In order to ensure the Procedural By-law continues to effectively guide the order and business of Council and Committee, a broader review was undertaken and several administrative changes are being recommended. The proposed changes clarify and refine the existing rules to ensure they align with current practices. None of the changes, with the exception of the above noted resolution, alter the intention of existing sections or establish new rules that are not already in practice.

A copy of the proposed Procedural By-law with all changes noted in red is attached as ATT-1.

Summary of Proposed changes to the Procedural By-law:

- Minor administrative and grammatical changes throughout.
- All sections amended to remove the word 'addendum' and replace it with 'consolidated agenda'.
- Definition of 'meeting' amended to ensure consistency with the Municipal Act and the recent formal definition of 'meeting' that has been added to the Municipal Act.
- Definition of 'notice of motion' added.
- Definition of 'regular meeting' added.
- Definition of 'special meeting' added.
- S. 3.5 (a) iii amended to prevent audience members from making audible noises which affect Council or Committee deliberations.
- S. 3.5 (a) iv added to prevent audience members from bringing placards or signs into the Council Chambers.

- S. 4.1 (a) amended so that a paper notice of Council and Committee meetings posted at City Hall is no longer required.
- S. 4.11 (h) amended so that recoded votes are now required to move into a closed meeting.
- S. 5.6 (b) removed so that Council may consider reports on an agenda in any order judged appropriate by the Chair.
- S. 5.8 (g) amended so that the order of i and ii are reversed.
- S. 5.11 (a) and (b) amended based on the Council resolution passed on December 18, 2017 (regarding notices of motion).
- S. 6.5 amended to reflect the removal of S. 5.6 (b).
- S. 7.5 (a) amended to clarify that the Committee of the Whole consent agenda may contain any item which does not have a presentation or delegation.
- S. 8.2.3 removed because the purpose of a Council workshop is now found within the definition of workshop.
- S. 11 amended to remove references to the Striking Committee and to clarify that appointments for Chairs and Vice-Chairs, as well as to agencies, boards and committees, are made by Council.
- Appendix 1 – Motions Table amended by removing ‘vote to extend the meeting beyond 11:59 p.m.’ as that vote is a vote to suspend the rules of procedure which is already listed in the Motions Table.

Financial Implications

None

Consultations

None

Corporate Administrative Plan

Overarching Goals

Service Excellence

Service Area Operational Work Plans

Our Services - Municipal services that make lives better

Attachments

ATT-1 Proposed Changes to the Procedural By-law

Departmental Approval

N/A

Report Author

Dylan McMahon, Council Committee Coordinator



Approved By

Stephen O'Brien
City Clerk
519-822-1260 ext. 5644
stephen.obrien@guelph.ca



Recommended By

Trevor Lee
Deputy CAO, Corporate Services
519-822-1260 ext. 2281
trevor.lee@guelph.ca

THE CORPORATION OF THE CITY OF GUELPH

By-law Number (2018)-*****

A By-law to provide rules for governing the order and procedures of the Council of the City of Guelph, and to repeal By-law Number (2016)-20087.

1. Definitions

In this By-law,

"Act" means the Municipal Act, 2001, c.25 as amended or replaced from time to time.

"Acting Mayor" means the Councillor who is appointed, in alphabetical order by last name, to serve one month each, to act in the place and stead of the Mayor as required.

"Ad Hoc Committee" means a Committee created by Council with a defined ending, to report directly to Council on a specific matter.

"Advisory Committee" means a Committee created by Council, to report to the Committee of the Whole on a specific subject.

"By-law" means an enactment, in a form approved by Council, passed for the purpose of giving effect to decisions or proceedings of Council.

"CAO" means the Chief Administrative Officer of the City.

"Chair" means the Mayor or Acting Mayor of any Meeting of Council or the Chair or Acting Chair of any Meeting of a Committee.

"City" means The Corporation of the City of Guelph ~~and includes the geographical area of the City of Guelph.~~

"Clerk" means the Clerk, or his or her designate.

"Closed Meeting" means a Meeting, or part of a Meeting of Council or a Committee, which is closed to the public as permitted by the Municipal Act.

"Committee" means Committee ~~of the Whole, an~~ Advisory Committee or other Committee, Sub-Committee or similar entity.

"Committee of the Whole" means a Committee comprised of all Members of Council that directly reports to Council.

"Committee of the Whole Consent Report" means a report from Committee of the Whole outlining items approved by the Committee and forwarded to Council for consideration.

"Confirmatory By-law" means a By-law passed at the conclusion of ~~all~~ Council Meetings, confirming the actions of Council taken at that Meeting and any previous Meetings which did not have a Confirmatory By-law, in respect of each Resolution and other actions taken, so that every decision of Council at that Meeting shall have the same force and effect as if each and every one of them had been the subject-matter of a separately enacted By-law.

"Consent Agenda" means a listing of Consent Items being presented to Council and Committee of the Whole for its consideration.

“Consent Item” means a report that is presented for approval without debate and with no delegation or presentation.

“Council” means the City’s elected representatives, comprised of the Mayor and Councillors.

“Councillor” means a Member of Council, other than the Mayor.

“Delegate” means any person, group of persons, firm or organization, who is neither a Member of the Committee of the Whole, Council or an appointed official of the City and who is speaking to Committee or Council.

“Deputy CAO” means staff who report to the CAO and are responsible for multijurisdictional service areas.

“Electronic Device” means computers, cellphones, smartphones, personal digital assistants, smartwatches, tablets, voice recorders, cameras or any other similar device.

“Items for Discussion” means agenda material that is presented for approval which has an associated presentation or delegation(s).

“Local Board” means a Local Board of the City as defined in the Municipal Act.

“Majority” means, for the purpose of voting, unless otherwise specified, more than half of the Members of Council or Committee present at the vote and not prohibited by statute from voting.

“Mayor” means the head of Council and includes the Acting Mayor when acting in place of the Mayor.

“Meeting” means any Regular or Special Council or Committee Meeting when a Quorum is present as defined in the Municipal Act.

“Member” means, according to the circumstances, a Member of Council, including the Mayor, or a Member of the Committee including the Chair.

“Motion” means a proposal, moved by a Member and seconded by another Member, for the consideration of Council or a Committee.

“Notice of Motion” means a written notice, given by a Member, advising Council that the Motion described therein will be brought forward at a subsequent Meeting.

“Open Meeting” means a Meeting which is open to the public.

“Presentation” means information presented to Council or Committee in person by an individual or group on an issue which may typically does not require any action to be taken by Council or Committee.

“Quorum” means a Majority of the Members.

“Recording Device” means any device used for the purpose of recording whether it be analogue, digital or other means of recording, including but not limited to computers, cellphones, smartphones, tablets, voice recorders, cameras or any other similar device.

“Registered Delegate” means an individual who has submitted a request for delegation to the Clerk within the prescribed timelines to address Council or Committee in relation to a matter appearing on the agenda.

“Resolution” means a Motion that has been carried.

“Rules of Procedure” means the rules and procedures set out in this By-law.

“Regular Meeting” means a Meeting of Council or Committee held at the times and dates specified in this By-law and approved by Council or Committee as part of an annual calendar.

“Special Meeting” means a separate Meeting of Council or Committee held at a time different than a Regular Meeting as approved by Council or Committee and which is focused on one or more particular and specific items or subjects.

“Vice Chair” means a Member of Council appointed by Council who shall have all the power and duties of a Chair in their absence; and consequently the words “Vice Chair” are interchangeable with the word “Chair” in all sections of this By-law.

“Workshop” means a ~~special Meeting of the Members of Council~~ convened for the purpose of educating or training the Members, for providing the Members with information and/or advice, or to solicit input from the Members on a topic(s) of interest to the Members.

2. Purpose and Principles

2.1 Purpose

- (a) Council and Committee of the Whole shall observe the Rules of Procedure contained in this By-law in all proceedings of the Council and Committee. This By-law shall be used to guide the order and dispatch of business of the Council and Committee and wherever possible, with the necessary modifications, for all Advisory Committees and Ad Hoc Committees unless otherwise provided.
- (b) This By-law sets out processes that are open and transparent.

2.2 Principles

- (a) Each Member has the right to:
 - i. One vote, subject to the declaration of pecuniary interest;
 - ii. Information to help make decisions, unless otherwise prevented by law;
 - iii. An efficient Meeting; and,
 - iv. Be treated with respect and courtesy.
- (b) No item shall be placed on an agenda with respect to a matter which is not within the jurisdiction of Council or Committee. The Mayor and/or Chair, in consultation with the Clerk, will determine if a matter is within the jurisdiction of Council or Committee.
- (c) In the event of conflict between the provisions of this By-law and the Act, or any other legislation, the provisions of the legislation shall prevail.

2.3 Suspension of Rules

- (a) No provision of this By-law shall be suspended except by an affirmative vote of at least two-thirds of the entire Council (nine Members) for each incidence of suspension of the rules.
- (b) The suspension shall only apply to ~~the suspension of~~ the procedure(s) or rules(s) ~~for the stated purpose which are stated within the~~ Motion to suspend and only during the Meeting in which such Motion was introduced.
- (c) The following procedure(s) or rule(s) cannot be suspended:
 - i. No other business in Special Meetings.
 - ii. Majority of Members for Quorum.

3. Conduct at Meetings

3.1 Council and Committee Members

- (a) Council Members shall govern themselves according to Council's Code of Conduct.
- (b) The Mayor or Chair shall preserve order and rule on points of order and privilege.
- (c) Every Member desiring to speak shall indicate so in order to be recognized by the Mayor or Chair.
- (d) Every Member, on being recognized, shall remain seated in his or her place and address themselves to the Mayor or Chair.
- (e) A Member called to order by the Mayor or Chair shall immediately cease further comment and may appeal the call to order to the Council or Committee. The Council or Committee, if appealed to, shall decide on the case without debate and by way of a Majority vote of the Members present. If there is no appeal, the decision of the Mayor or Chair shall be final.
- (f) No Member shall, without leave of the Council or Committee:
 - i. speak to an issue for more than five (5) minutes (cumulative);
 - ii. use offensive words or speak disrespectfully of the Mayor, Members of Council, Committee, staff or the public;
 - iii. speak on any subject other than the subject under debate;
 - iv. speak in contempt of any decision of the Council or Committee;
 - v. leave his or her seat or make any noise or disturbance while a vote is being taken or until the result is declared; or,
 - vi. disobey the rules or decisions of Council or a decision of the Mayor or Chair on points of order or privilege, or upon the interpretation of the Rules of Procedure. If a Member persists in such disobedience after having been called to order by the Mayor or Chair, the Member may be ordered by Council or Committee to leave his or her seat for the Meeting. In the event that a Member refuses to vacate their seat, the Mayor or Chair may request that the Member be removed by the

Clerk and/or staff as required. In case of adequate apology being made by the Member they may, by way of Majority vote of the Members present, be permitted to take their seat.

3.2 Member Absent From Council

The office of a Member of Council becomes vacant if the Member has been absent from Meetings of the Council for three (3) successive months without being authorized to do so by a Resolution of the Council unless otherwise permitted by S. 259 (1.1) of the Act. and recorded in the minutes.

3.3 Electronic Devices

- (a) Each Member shall place any Electronic Devices on an inaudible setting during any Meeting, except for any Closed Meeting where Electronic Devices must be turned off as required by Section 4.6.6.
- (b) No Member shall use an Electronic Device as a Recording Device during any Meeting.
- (c) No Member shall use an Electronic Device to broadcast or otherwise publish or post audio, video or photographs of any Meeting.

3.4 Hearing Delegations

- (a) Except for points of order or privilege, Members of Council shall not interrupt a Delegate while he or she is addressing Council or Committee.
- (b) Members may address a Delegate only to ask questions of clarification and not to express opinions or enter into debate or discussion.
- (c) All Registered Delegates for any particular agenda item shall be heard before Council or Committee enters into discussion or debate on that item.
- (d) After all delegations have been heard, the related item shall immediately be brought forward for the consideration of Council or Committee.

3.5 Conduct of Public

- (a) Members of the public who constitute the audience in attendance at a Meeting, shall not:
 - i. address Council or Committee without permission;
 - ii. bring food or beverage, with the exception of water, into the Council Chamber or meeting room unless so authorized;
 - iii. engage in any activity or behaviour or make any audible noise that could affect the Council or Committee deliberations; or
 - iv. bring any signs or placards into the Council Chambers;
- (b) No person, except Members of Council and appointed officials of the City of Guelph, shall be permitted to come within or behind the horseshoe during a Meeting of the Council or Committee without the permission of Council or Committee.

- (c) No person shall make detrimental comments, or speak ill of, or malign the integrity of staff, the public, Mayor, Members of Council or Committee.

4. Rules and Procedures for Council and Committee Meetings

4.1 Public Notice of Meetings

- (a) The Clerk shall give public notice of all ~~Regular Open and Closed~~ Council and Committee ~~of the Whole~~ Meetings by ~~inclusion on the City's website at least 72 hours prior to the Meeting.~~
 - ~~i.~~
 - ~~ii. posting at a public place in City Hall at least 72 hours prior to the Meeting; and~~
- (b) The Clerk may, at his or her discretion, publish notice of ~~Regular Open and Closed~~ Council and Committee ~~of the Whole~~ Meetings in a local newspaper or other local media source.
- (c) Public notice shall include:
 - i. date;
 - ii. time; and
 - iii. location of Meeting.
- (d) The Clerk shall give public notice of all special open and Closed Meetings of Council and Committee by inclusion on the City's website as soon as possible after the Meeting is called and no later than 48 hours prior to the Meeting.

4.2 Location, Date and Time of Meetings

Committee of the Whole, Regular Council and Council Planning shall meet in the Council Chambers of City Hall, 1 Carden Street, unless with adequate public notice, as required in Section 4.1, the Council selects an alternate Meeting location, date, or time. - In the event the Regular Meeting date falls on a public holiday, the Council or Committee shall meet at the same hour on the next day not being a public holiday.

4.3 ~~Addendum Consolidated~~ Agenda

- (a) The Clerk shall prepare ~~a an addendum~~ Consolidated Agenda advising Council or Committee of the names of Registered Delegates and written submissions relating to matters on the agenda.
- (b) Items or matters will not be added to the agenda after distribution to Council or Committee ~~on the addendum~~ unless directed by the Mayor or Chair, CAO and/or Deputy CAO(s) and if the urgent nature of the matter requires a decision prior to the next Council or Committee Meeting.

4.4 Quorum and Commencement of Meetings

- (a) Unless there is a Quorum present within fifteen minutes after the time appointed for the Meeting of the Council or Committee, the Council or Committee shall stand adjourned until the next Meeting date.
- (b) As soon as there is a Quorum present, the Mayor or Chair shall call the Members to order. In the absence of the Mayor or Chair, the Clerk shall call the Members to order and the Council shall choose a Chair from the Members present and that person shall preside over the Meeting or until the arrival of the Mayor or Chair.

4.5 Disclosure of Pecuniary Interest

Prior to a particular matter being addressed, Members shall declare any pecuniary interests they may have, and the general nature thereof, in connection with that matter pursuant to the Municipal Conflict of Interest Act, R.S.O. 1990, c. M.50, as amended. Such Members shall then be precluded from participating in any way regarding the matter in question.

4.6 Closed Meetings

4.6.1 General Principles

- (a) Meetings shall be open to the public.
- (b) Notwithstanding Section 4.6.1(a), a Meeting or part of a Meeting may be closed to the public in accordance with Section 239 (2), (3) and (3.1) of ~~Municipal the~~ Act.
- (c) Council shall approve and maintain a Closed Meeting Protocol.

4.6.2 Date and time of Meetings

Further to Section 4.2:

- (a) When a Closed Meeting of Council is required, it shall be held no earlier than 4:30 p.m. on the day of an existing Regular Council or Council Planning Meeting.
- (b) When a Closed Meeting of Committee of the Whole is required, it shall be held no earlier than 12:30 p.m. on the day of an existing Committee of the Whole Meeting.

4.6.3 Resolution

- (a) Prior to holding a Closed Meeting, Council or Committee shall state by Resolution in an Open Meeting, that Council or Committee will be holding a Closed Meeting, the subject matter and the permitted Closed Meeting exemption under the Municipal Act.

4.6.4 Recording of Minutes

- (a) The Clerk and/or his or her designate shall attend all Closed Meetings and record the proceedings, including procedural Motions and direction given to staff, without note or comment.
- (b) The Clerk may delegate the Clerk's duties with respect to recording minutes in a Closed Meeting of Council or Committee to a staff person ~~only~~. For Closed Meetings of Committee or Council where the CAO's performance or contract is addressed, the Clerk may delegate the Clerk's duties with instructions to a third party.

4.6.5 Reporting in Open Session

- (a) The Mayor or Chair shall report out in an Open Meeting immediately following the Closed Meeting and summarize the actions taken in the Closed Meeting.
- (b) Matters discussed in a Closed Meeting ~~and directed to be brought forward for which require a decision voting in public session~~ will be brought forward to an ~~n~~ Open Meeting of Council or Committee. ~~immediately following the Closed Meeting and will be presented under Special Resolutions.~~

4.6.6 Electronic Devices

All Electronic Devices must be turned off throughout Closed Meetings of Council or Committee with the exception of 'on call/on duty' medical or emergency services personnel. ~~_(Council or employees)_~~. Such personnel shall advise the Chair, and place their Electronic Devices on the audible setting in order to be notified, and upon notification, leave the room to respond.

4.6.7 Closed Meeting Voting

- (a) In relation to a matter considered in a Closed Meeting pursuant to Section 4.6.1(b), Council or Committee may vote ~~on~~:
- i. on procedural Motions;
 - ii. ~~procedural-on~~ Motions to rise, report and introduce a proposed recommendation on an Open Meeting agenda; or
 - ii. to give direction to staff or a third party of the City.
- (b) Notwithstanding Section 4.11(g), votes held in Closed Meetings shall be by a show of hands unless a recorded vote is requested by a Member in accordance with the regulations contained in the ~~Municipal~~ Act.

4.7 Presentations

4.7.1 Public Presentations

- (a) A request from an outside organization or individual to make a presentation to Council or Committee shall only appear on an agenda upon approval of the Mayor, Chair and Deputy CAO for the appropriate Service Area.
- (b) Public presentations are for information only.
- (c) Public Presentations at a Meeting shall be limited to a maximum of 10 minutes and shall be heard at the beginning of a Council or Committee Meeting.
- (d) Presentations by outside organizations or individuals shall not be permitted for the sole purpose of generating publicity or promotion.
- (e) Outside organizations or individuals shall provide the Clerk with written material for inclusion on the agenda by the agenda production deadline.
- (f) Presentations by outside organizations or individuals shall not be added on the ~~addendum~~consolidated agenda.

4.7.2 City Presentations

- (a) Presentations by City staff at Meetings shall endeavour to be a maximum of 10 minutes.
- (b) The following types of presentations shall provide information only and shall be heard at the beginning of a Committee of the Whole, Regular Council or Council Planning Meeting:
- i. presentations by staff providing information with no accompanying report; and

- ii. presentations recognizing achievements.
- (c) Where a staff or a third party presentation accompanies an item on an agenda, the item shall be placed under Items for Discussion with the report and shall be brought forward for consideration immediately after the presentation has been made. If Delegates wish to speak on an item with a presentation involving, the item shall not be ~~brought forward for consideration~~ considered until all Delegates on the item have been heard.

4.8 Delegations

- (a) A Delegate may address Council or Committee for a period of time not exceeding five minutes. Council or Committee may extend the five minute time period by a Majority vote of the Members present. Such ~~question-a motion~~ shall be decided without debate.
- (b) For the purpose of Council and Committee Meeting agendas, Delegates have until 10:00 a.m. on the Friday of the week prior to the Meeting to notify the Clerk that they wish to Delegate or to submit written submissions on items on the agenda.
- (c) Notwithstanding Section 4.8(a), designated representatives of senior levels of government or the County of Wellington appearing before Council or Committee shall have no time limitations placed on their delegation.
- (d) A Delegate may only address Council or Committee with respect to an item on the agenda.
- (e) Delegates shall only be permitted at Council budget Meetings designated for the explicit purpose of receiving budget delegations.
- (f) No delegation shall be made to Council or Committee on matters relating to litigation or potential litigation, including those matters which are before and under the jurisdiction of any court or administrative tribunals unless such matter is referred to Council by the said administrative tribunal or court.
- (g) No Delegate shall speak on a matter that is not within the jurisdiction of the Council or Committee. The Mayor and Committee Chairs in consultation with the Clerk will determine if a matter is within the jurisdiction of the Council or Committee.
- (h) No delegations shall be made to notices of Motion on a Council or Committee agenda. Delegates will have an opportunity to speak at a subsequent Council or Committee Meeting when that item will be discussed.
- (i) No delegations shall be permitted to speak on a notice of Motion to reconsider.
- (j) No delegations shall be made at ~~Council~~ Workshops.
- (k) A Delegate may not address Council or Committee with respect to a By-law on the agenda.
- (l) Delegates shall not be permitted to appear before Council or Committee for the sole purpose of generating publicity for an event.
- (m) A Delegate shall only register themselves to speak and may not register other Delegates.

- (n) If a Delegate is unable to attend the Meeting for which they are registered they may provide their written submission to the Clerk.
- (o) Delegates wishing to speak on a matter not the agenda:
 - i. Shall provide the Clerk in writing a request outlining the subject matter of the delegation and the action being requested to be taken by Council.
 - ii. The Clerk will advise the appropriate Chair and Deputy CAO of the request.
 - iii. The Clerk will advise the requestor that the Chair and Deputy CAO has been made aware of the request.
 - iv. The requestor will be advised of the actions taken or when the item is coming forward to Council or Committee.

4.9 Written Submissions/Petitions

- (a) Individuals may submit written correspondence on matters listed on the agenda by the timelines specified in Section 4.8(b) for inclusion on the agenda and ~~addendum~~consolidated agenda.
- (b) Petitions shall include a statement or position, ~~that the signatories are supporting and~~ legible names of signatories and their signatures.
- (c) Petitions ~~and~~ shall not contain any obscene or improper matter or language.
- (d) The individual or group initiating the petition, or submitting the petition to the Clerk, must provide a key contact name, mailing address, and telephone contact information.
- (e) The signatory's names and personal information will be redacted from the information published in the agenda. Council or Committee will be advised of the number of signatories only.
- (f) Electronic petitions will not be accepted.

4.10 Motions and Order of ~~Putting Questions~~Voting

- (a) After a Motion has been moved and seconded, it shall be deemed to be in the possession of Council or Committee. Council or Committee may consent to the withdrawal of the Motion at any time before amendment or decision.
- (b) Council or Committee shall not debate any Motion until it has been moved and seconded. When a Motion has been seconded, it may upon request, be read or stated by the Mayor, Chair or Clerk at any time during the debate.
- (c) When a Councillor moves a Motion or an amendment to a Motion that is not included as part of the agenda package, that Councillor shall provide a copy of the Motion to the Mayor or Chair prior to the vote being taken.
- (d) Whenever the Mayor or Chair is of the opinion that an amending Motion is contrary to the main Motion, the Mayor or Chair shall apprise the Members thereof immediately. A Member of Council or Committee may appeal the ruling of the Mayor or Chair to Council or Committee. If there is no appeal, the decision of the Mayor or Chair shall be final. The Council or Committee, if appealed to, shall ~~decide~~

~~the question vote on the motion~~ without debate and its decision shall be final.

- (e) A Motion in respect of a matter which is not within the jurisdiction of the Council or Committee shall not be in order. The Mayor or Chair in consultation with the Clerk will determine if the matter is within the jurisdiction of Council or Committee.
- (f) When a Motion is under consideration no other Motion shall be received unless it is a Motion:
 - i. to refer the Motion to Committee, Council, staff or any other person or body. Such a Motion to refer:
 - a. is open to debate;
 - b. is amendable; and
 - c. shall preclude amendment or debate of the preceding Motion.
 - ii. to amend the Motion. Such a Motion to amend:
 - a. is open to debate;
 - b. shall not propose a direct negative to the main Motion;
 - c. shall be relevant to the main Motion;
 - d. is subject to only one further amendment, and any amendment more than one must be to the main ~~question~~ motion; and
 - e. if more than one, shall be put in the reverse order to that in which they were moved, and shall be decided or withdrawn before the main ~~question~~ motion is put to the vote.
 - iii. to defer the Motion to another time. Such a Motion to defer:
 - a. is not open to debate;
 - b. is not subject to amendment; and
 - c. applies to the main Motion and any amendments thereto under debate at the time the Motion to defer is made.
 - iv. to adjourn the Meeting notwithstanding Section 4.13(d) Such a Motion to adjourn:
 - b. is not open to debate;
 - c. is not subject to amendment; and
 - d. shall always be in order.
 - v. to call ~~the question~~ a vote on the Motion. Such a Motion to call ~~the question~~ a vote on the Motion:
 - a. cannot be amended;
 - b. cannot be proposed when there is an amendment under consideration;
 - c. when resolved in the affirmative, shall be forwarded by ~~putting the question~~ voting on the motion, without debate or amendment;
 - d. when resolved in the negative, shall be followed by resumption of debate; and
 - e. shall always be in order.
- (g) Once all Motions relating to the main Motion have been dealt with, and once the main Motion is put, there shall be no further discussion or debate and the Motion shall be immediately voted on.

- (h) A Motion ~~once put~~, may be voted against by the mover and seconder.

4.11 Voting at Open Meetings

- (a) When one or more Motions as set out in Section 4.10 have been made, the order of the vote shall be as follows:
- i. to defer the Motion;
 - ii. to refer the Motion;
 - iii. upon the amendments in the reverse order to that in which they were moved, dealing with an amendment to an amendment immediately before the amendment it proposes to amend; and
 - iv. then, upon the main Motion or upon the main Motion as amended, if any amendments have been carried.
- (b) Except as otherwise provided, every Member of Council or Committee shall have one vote.
- (c) Any ~~question Motion~~ on which there is a tie vote shall be deemed to be lost, except where otherwise provided by any act.
- (d) A failure to vote by a Member who is present at the Meeting at the time of the vote and who is qualified to vote shall be deemed to be a negative vote.
- (e) When the ~~Motion question~~ under consideration contains distinct clauses, and ~~upon the request of any~~ a Member has requested to, the vote on each distinct clause, including each clause added by way of an amendment, then a vote shall be taken separately on each clause; including each clause added by way of an amendment.
- (f) After a ~~question is finally put vote has been called~~ by the Mayor or Chair, no Member shall be recognized to speak to the ~~question Motion~~, or make any other Motion after the result of the vote has been declared.
- (g) Members shall distinguish their vote by voting either in favour or opposed using an electronic voting system. Should Council or Committee meet in a location where there is no electronic voting system or should the electronic voting system be inoperable, each Member must distinguish their vote by clearly calling out if they are in favour or opposed to the ~~question Motion~~ when their name is called.
- (h) Unless otherwise requested by a Member, no recorded vote is required for the following privileged and incidental Motions:
- i. Adjournment
 - ii. Recess
 - iii. Suspension of the Rules of Procedure
 - iv. Extend the automatic adjournment beyond 11:00 p.m.
 - v. Add an item not appearing on the agenda
 - vi. Moving ~~in and~~ out of a Closed Meeting
 - vii. Call the ~~question~~ vote
- (i) The Mayor or Chair shall vote on any ~~Motion question~~ while in possession of the Chair, however, if the Mayor or Chair wishes to propose a Motion he or she shall step down and shall not resume the Chair until the vote is taken.

4.12 Points of Order or Privilege

4.12.1 Point of Order

- (a) A Member may raise a point of order at any time, whereupon the Mayor or Chair shall:
 - i. interrupt the matter under consideration;
 - ii. ask the Member raising the point of order to state the substance of and the basis for the point of order; and
 - iii. rule on the point of order immediately without debate by Council or Committee.
- (b) A Member of Council or Committee may appeal the ruling of the Mayor or Chair to Council or Committee which will then decide on the appeal, without debate, by way of a Majority vote of the Members present. If there is no appeal, the decision of the Mayor or Chair shall be final.

4.12.2 Point of Privilege

- (a) A Member may raise a point of privilege at any time if he or she considers that their integrity, the integrity of Council or the Committee as a Whole or staff has been impugned, whereupon the Mayor or Chair shall:
 - i. interrupt the matter under consideration;
 - ii. ask the Member raising the point of privilege to state the substance of and the basis for the point of privilege; and
 - iii. rule on the point of privilege immediately without debate by Council or Committee.
- (b) A Member of Council or Committee may appeal the ruling of the Mayor or Chair to Council or Committee.
- (c) If there is no appeal, the decision of the Mayor or Chair shall be final. The Council or Committee, if appealed to, shall ~~decide the question~~ vote on the Motion without debate by way of a Majority vote of the Members present and its decision shall be final.
- (d) Where the Mayor or Chair considers that the integrity of any City employee has been impugned or questioned, the Mayor or Chair may permit staff to make a statement to Council or Committee.

4.13 Adjournment

- (a) The Council shall adjourn at 11:00 p.m. unless otherwise decided before that hour by a Majority vote of the Members present. If the Council is adjourned ~~at 11:00 p.m.,~~ before the agenda is completed, Council shall establish a time and date for consideration of the balance of the agenda.
- (b) Only one Motion to extend the automatic adjournment beyond 11:00 p.m. shall be permitted per Meeting, and the maximum allowable extension shall be to 11:59 p.m. ~~which shall be decided by a two-thirds vote of the entire Council.~~

- (c) A Motion to adjourn may be made by any Member who has been recognized by the Mayor or Chair. The Motion must be moved and seconded. A Motion to adjourn shall not be made during a vote on any other Motion.
- (d) Notwithstanding Section 4.13(a), if a Motion to extend the automatic adjournment time is required prior to the hearing of all Delegates on a matter being considered at the time such Motion to adjourn is made, Council or Committee shall not adjourn the Meeting until all listed Delegates on the matter have been heard. - Once the listed Delegates have been heard, Council or Committee shall deal with the matter being considered at the time the Motion to adjourn was made, as well as any other time sensitive issues on the agenda identified by the Clerk.

5. Regular Meetings of Council

The rules and procedures contained in Sections 3 and 4 shall apply with necessary changes.

5.1 Location, Date and Time of Meetings

Notwithstanding Section 4.2:

5.1.1 Time of Regular Meetings

Regular Council Meetings shall be held at 6:30 p.m.

5.1.2 Closed Council Meetings

When a Closed Meeting of Council is required, it shall be held no earlier than 4:30 p.m. on the day of an existing Regular Council Meeting.

5.2 Order of business

The Clerk, in consultation with the Mayor and staff, shall have discretion to prepare for the use of Members, an agenda containing the following:

- Call to Order
- Singing of O Canada
- Silent Reflection
- First Nations Acknowledgement
- Closed Meeting Summary
- Disclosure of Pecuniary Interest and General Nature Thereof
- Confirmation of Minutes
- Presentations
- Consent Agenda
- Items for Discussion
- Special Resolutions
- By-laws
- Announcements
- Notice of Motions
- Adjournment

5.3 Closed Meeting Summary

Following a Closed Meeting of Council or Committee, the Mayor or Chair shall disclose, in a general manner, how the agenda items were dealt with in the Closed Meeting.

5.4 Confirmation of Council and Committee of the Whole Minutes

- (a) The Clerk shall present the minutes, without note or comment, of any previous Open and Closed Council or Committee Meetings to Council for adoption.
- (b) When the minutes of Committee of the Whole, or any Council Meeting, have been adopted, the Mayor and Clerk shall sign them.

5.5 Committee of the Whole Consent Report

- (a) The report from Committee of the Whole to Council, ~~which for~~ which do not have presentations or delegations, shall be submitted to Council in the form of a Consent Report, and shall be dealt with by Council ~~in the manner provided for~~ as follows:
 - i. The Committee of the Whole Consent Report shall be presented by the respective Chair or, in his or her absence, by the Vice Chair who shall move the adoption of their report.
 - ii. Council Members shall identify any items contained on the Committee of the Whole Consent Report which they wish to speak to and the matter shall be extracted from the Consent Report to be dealt with separately under Items for Discussion.
 - iii. The balance of items on the Committee of the Whole Consent Report, which have not been extracted, shall be voted on in one Motion.
- (b) In the event that Council adopts a Motion to be referred back to staff, staff shall report back to a Regular Council Meeting and not back to a Committee of the Whole Meeting.
- (c) Reports from Local Boards and ~~commissions-Advisory Committees~~ submitted in writing shall be signed by the Chair or Secretary. When such reports are requesting Council action, they shall include appropriate Resolutions for consideration.

5.6 Council Consent Agenda

- (a) The Council Consent Agenda shall consist of the following items that do not have presentations or delegations:
 - i. reports from staff;
 - ii. correspondence for the direction of Council, which may include:
 - correspondence for which a policy decision or approval of Council is required;
 - correspondence accompanied by a recommendation from staff; and
 - iii. items of a timely nature.
- ~~(b) Council shall consider reports in the following order:
 - i. Committee of the Whole
 - ii. Ad Hoc Committees; and
 - iii. Boards and Commissions.~~
- (b) Council Members shall identify any items contained on the Consent Agenda which they wish to speak to and the matter shall be extracted from the Consent Agenda to be dealt with separately under Items for Discussion.

- (c) The balance of items on the Consent Agenda, which have not been extracted, shall be voted on in one Motion.

5.7 Items for Discussion

- (a) Items for Discussion shall consist of the following items that have presentations and/or delegations:
 - i. Reports from staff;
 - ii. Correspondence for the direction of Council; **and**
 - iii. Correspondence extracted from the weekly Items for Information.
- (b) In the event that Council adopts a Motion to be referred back to staff, staff shall report back to a Regular Council Meeting and not back to a Committee of the Whole Meeting.

5.8 Reconsideration of a Council Decision

- (a) Council may reconsider an entire Resolution that was decided during any term of Council. A reconsideration of a portion of a Resolution shall not be permitted. Such reconsideration can either amend the previous decision or rescind it.
 - i. No **Resolution question** shall be reconsidered more than once during the term of Council.
 - ii. A Motion to reconsider shall not be reconsidered.
- (b) A Resolution that was decided by Council cannot be reconsidered if action has been taken in implementing the Resolution resulting in legally binding commitments that are in place on the date the Motion to reconsider is considered by Council.
- (c) If Council passes a Resolution and adopts the same matter by By-law, only the Resolution may be reconsidered. If the decision resulting from the reconsideration warrants, the By-law will be amended or repealed accordingly.
- (d) A Motion to reconsider shall be introduced by way of a Notice of Motion to Council and considered as a Special Resolution at a subsequent regular Meeting of Council pursuant to Sections 5.11 and 5.12 **of this By-law**.
 - i. No delegations shall be permitted to speak on a notice of Motion to reconsider.
- (e) Only a Member of Council who voted with the Majority in respect of a previous decision or who was absent from the vote or was not a Member of Council at the time may move or second a Motion for reconsideration.
- (f) A Motion to reconsider must be carried in the affirmative by a vote of two-thirds of the entire Council.
- (g) If a Motion to reconsider is decided in the affirmative:
 - i. the reconsideration effectively returns Council to just prior to the original Council decision.
 - ii. reconsideration of the original Motion shall **then become** the next order of business unless the Motion specifies a future **definite** date.

5.9 By-laws

- (a) The Clerk shall submit to Council a summary of all By-laws proposed for adoption that includes the By-law numbers and titles.
- (b) A complete copy of every proposed By-law shall be brought to the Council Meeting and be available to any person interested in reviewing.
- (c) Unless otherwise requested, all By-laws proposed for adoption shall be passed in one single Motion.
- (d) The Clerk shall be responsible for their correctness should they be amended at a Council Meeting.
- (e) Every By-law passed by Council shall:
 - i. be signed by the Mayor, or the presiding officer;
 - ii. be signed by the Clerk or designate;
 - iii. be sealed with the City seal; and
 - iv. indicate the date of passage.
- (f) Council shall enact a By-law to confirm all actions taken by Council.

5.10 Announcements

Council Meeting announcements shall be provided to the Mayor in writing prior to the Council Meeting, and the Mayor shall read the announcements at the end of the Council Meeting.

5.11 Notices of Motion

- (a) Prior to initiating the Notice of Motion process, a Member shall first submit the proposed Motion in writing to the Deputy CAO and relevant Committee of the Whole Service Area Chair for approval to place the matter on a Committee of the Whole agenda. If approved, the Motion shall be submitted in writing to the Clerk prior to the regular agenda deadline for inclusion on a Committee Meeting agenda.
- ~~(b)~~ If the matter is not placed on a Committee of the Whole agenda by the relevant Service Area Chair and Deputy CAO, at a Regular Council, Council Planning or Committee of the Whole Meeting, a Member shall give notice that he or she intends to introduce a Motion at a subsequent Regular Meeting of Council to initiate any measure within the jurisdiction of Council.
- (c) The Notice of Motion shall be submitted in writing, on the prescribed form, to the Clerk prior to the regular agenda deadline for inclusion on any Regular Council, Council Planning or Committee Meeting agenda.
- (d) The Motion may not be submitted as part of a an addendum to an agenda consolidated agenda.
- (e) A Motion for which notice has been given, other than one to reconsider or rescind a prior decision of Council, shall be in the form of a referral to Committee of the Whole.
- (f) The Motion for which notice has been given, shall be included as a Special Resolution on an agenda of a Regular Council Meeting.

- (g) If a Motion is introduced and not brought forward in the next two (2) subsequent ~~Meetings of a~~ Regular Council Meetings, the Motion expires.
- (h) No delegations shall be permitted to speak on a Notice of Motion.

5.12 Special Resolutions Arising from Notice of Motion

- (a) Motions for which notice has been given shall be listed on the next Regular Council agenda, unless the Member introducing the Motion has specified another Regular Council Meeting date as per Section 5.11(a), under the Special Resolutions section of the agenda. ~~Special Resolutions for which previous notice has been given shall not be placed on a consolidated any addendum agenda.~~
- (b) In introducing a Special Resolution to Council, a Member shall be permitted the opportunity of providing material and information in support of the Resolution ~~for the benefit of Council.~~

5.13 Special Resolutions Arising from Closed Meeting

- (a) Where Council has passed a procedural Resolution at a Closed Meeting to report out at a Meeting, such Resolution shall be introduced under the Special Resolution or Closed Meeting Summary heading of the agenda pursuant to Section 4.6.7 (a) (ii) ~~of this By-law.~~
- (b) Council or staff may provide contextual information prior to Council's consideration of the Special Resolution.

6. Council Planning Meetings

The rules and procedures contained in Sections 3, 4 and 5 shall apply with necessary changes.

Council Planning shall consider matters where a public Meeting is required to hear applications under the Planning Act.

6.1 Public Notice of Meetings

Notwithstanding Sections 4.1, staff shall give legislated notice of items on any agenda in accordance with the applicable legislation.

6.2 Location, Date and Time of Meetings

Notwithstanding Section 4.2:

6.2.1 Time of Meetings

Council Planning Meetings shall be held at 6:30 p.m.

6.2.3 Closed Council Meetings

When a Closed Meeting of Council is required, it shall be held no earlier than 4:30 p.m. on the day of an existing Council Planning Meeting.

6.3 Order of Business

The Clerk, in consultation with the Mayor and staff, shall have discretion to prepare for the use of Members, an agenda containing the following:

- Call to Order
- Singing of O Canada
- Silent Reflection
- First Nations Acknowledgement
- Closed Meeting Summary
- Presentations
- Disclosure of Pecuniary Interest and General Nature Thereof
- Setting of the Consent Agenda
- Public Meetings Pursuant to The Planning Act
- Items for Discussion
- Special Resolutions
- By-laws
- Announcements
- Notice of Motions
- Adjournment

6.4 Delegations

- (a) Notwithstanding Section 4.8 (a) ~~of this By-law~~, the time limitation for delegations speaking at a public Meeting to hear applications under the Planning Act, shall not exceed ten minutes. Council may extend the ten minute time period by a Majority vote of the Council Members present without debate.
- (b) Council may ask questions of staff after ~~the a~~ staff presentation and prior to ~~the~~ Delegates addressing Council.
- (c) Once all Registered Delegates have spoken, the Mayor or Chair shall ask if anyone present wishes to speak. ~~Such individuals shall be permitted to speak without advance notice pursuant the Planning Act and as per Section 6.4 (a).~~

6.5 Council Planning Consent Agenda

The rules and procedures contained in Section 5.6 shall apply to the Council Planning Consent Agenda. ~~with the exception of Section 5.6 (b).~~

7. Committee of the Whole Meetings

Notwithstanding Section 4.2, ~~t~~he rules and procedures contained in Sections 3, 4 and 5 shall apply with necessary changes.

~~Notwithstanding Section 4.2,~~

7.1 Location, Date and Time of Meetings

7.1.1 Time of Meetings

Committee of the Whole Meetings shall be held at 2:00 p.m.

7.1.2 Closed Meetings

When a Closed Meeting of Committee is required, it shall be held no earlier than 12:30 p.m. on the day of an existing scheduled Committee of the Whole Meeting.

7.2 Chairing

- (a) Chairs will chair the portion of the Committee Meeting where business is forwarded from their respective Service Areas or portfolios.

- (b) Chairs will remain in their existing seats when chairing their portion of the Meeting.

7.3 Service Area Reporting

Service Areas will report to Committee on their designated month.

7.4 Order of Business

The Clerk, in consultation with the Chairs, Mayor and staff, shall have discretion to prepare for the use of Members, an agenda containing the following:

- Closed Meeting Summary
- Disclosure of Pecuniary Interest and General Nature Thereof
- Presentations
- Consent Agenda (rotating ~~basis~~-based on Service Area reporting)
- Items for Discussion (rotating ~~basis~~-based on Service Area reporting)
- Chairs and Staff Announcements
- Notice of Motions
- Adjournment

7.5 Committee of the Whole Consent Agenda

- (a) Committee of the Whole shall use a Consent Agenda which shall consist of ~~the following~~ items that do not have presentations or delegations.:
- ~~i. Reports from staff from the designated Service Areas;~~
 - ~~ii. Correspondence for the direction for which a policy decision or approval is required;~~
 - ~~iii. Correspondence accompanied by a recommendation from staff~~
- (b) A Member of Council may request that a matter appearing on the Weekly Information Items to Council be listed on the appropriate Committee of the Whole Consent Agenda for discussion or consideration.
- (c) Reports from Local Boards and Advisory Committees submitted in writing shall be signed by the Chair or Secretary. ~~Reports from boards and Committees submitted in writing shall be signed by the Chair or Secretary.~~ When such reports are requesting Council action, they shall include appropriate Resolutions-Motions for consideration.
- (d) Those matters which are time sensitive may be included on the Consent Agenda as approved by the CAO and appropriate Deputy CAO.
- (e) Council Members shall identify any items contained on the Committee of the Whole Consent Agenda which they wish to speak to and the matter shall be extracted from the Consent Agenda to be dealt with separately under Items for Discussion.
- (f) The balance of items on the Committee of the Whole Consent Agenda, which have not been extracted, shall be voted on in one Motion.

7.6 Announcements

Service Area updates may be made by the Mayor, Chair, CAO, Deputy CAO's or their designates. ~~;~~ ~~and~~ Service Area announcements provided to the Chairs prior to the Meeting shall be read by the Chair at the end of the Committee Meeting relevant Service Area portion of the Meeting.

8. Special Council Meetings

The rules and procedures contained in Sections 4 and 5 shall apply with necessary changes.

8.1 Calling of Special Council Meetings

- (a) The Mayor may at any time summon a special Meeting of Council within 48 hours. - The Mayor shall also summon a special Meeting of Council when so requested in writing by a Majority of Members of Council.
- (b) Upon receipt of a written petition of the Majority of the Members of the Council, the Clerk shall summon a special Meeting for the purpose mentioned in the petition.
- (c) Upon the calling of a special Meeting the Clerk shall give notice to all Members, not less than 48 hours prior to the time fixed for the Meeting of the:
 - time;
 - place; and
 - business to be considered.
- (d) On emergency or extraordinary occasions, the Mayor may call a special Council Meeting without the notice provided in Section 8.1(a).
- (e) Only items disclosed on the Meeting notice agenda may be considered by Council. Items will not be added to the special Meeting on an addenduma consolidated agenda.

8.2 Workshops

8.2.1 Location, Date and Time of Meeting

Council Workshops shall be held no earlier than 6 p.m.

~~8.2.3 Purpose~~

~~Workshops are MemberMemberMember to receive information only and no decisions will be made.~~

8.2.2 Delegations

Delegations will not be heard at Council Workshops.

9. Inaugural Council Meeting

- (a) The first Meeting of Council following a regular election shall be held on the first Monday in December at 6:30 p.m. in the Council Chambers of City Hall or at such alternate location as determined by the Clerk.
- (b) At the inaugural Meeting, each Member present shall make his or her declaration of office and sign Council's Code of Conduct. The Clerk may provide additional policies or procedures to Council as appropriate. ~~and~~ Council shall not proceed with any regular business at this Meeting.

10. Council Meeting as Shareholder

- (a) Council meets as the Shareholder of the following Corporations:
 - i. Guelph Municipal Holdings Incorporated ~~(GMHI)~~
 - ii. Guelph Junction Railway Company
- (b) Shareholder Meetings shall be held as special Meetings on separate dates, unless otherwise directed by the Mayor and/or CAO.

11. Committees

11.1 ~~Striking Committee~~ Appointments to Committees

- (a) Council ~~as a whole~~ shall appoint Chairs for Committee of the Whole. Council shall consider rotating the Chairs position every two years. In appointing the Chairs, consideration shall be given to workload balance, individual interests and Councillor development.
- (b) Council ~~as a whole~~ shall appoint Vice Chairs for Committee of the Whole. Council shall consider rotating the Vice Chairs every two years. In appointing a Vice Chair, consideration shall be given to workload balance, individual interests and Councillor development.
- (c) Council shall ~~meet as a Striking Committee for the purpose of making Councillor and/or citizen appointments~~ make public and Member appointments to Agencies, Boards, Committees and Commissions at Regular Council Meetings.

11.2 Committees Reporting Directly to Council

The following Committees are appointed by and report directly to Council:

- (a) Ad Hoc Standing Committee
 - i. Emergency Governance
- (b) Quasi-Judicial Committees
 - i. Business Licence Appeals Committee
- (c) Committee of Management for the Elliott
~~Elliott Board of Management~~

11.3 Committee Composition

The Mayor is ex-officio on all Committees and:

- i. may attend Meetings;
- ii. attendance does not count towards Quorum; and
- iii. may participate in Meetings.

11.3.1 Emergency Governance Committee

The Emergency Governance Committee shall be comprised of a minimum of four (4) and a maximum of six (6) Members of Council and Quorum shall be four (4) Members.

11.3.2 Elliott Board of Management

The Elliott Board of Management shall be composed of five (5) Members of Council, appointed for the term of Council.

11.3.3 Business Licence Appeals Committee

The Business Licence Appeals Committee shall be composed of five (5) Members of Council appointed for the term of Council to hear appeals under the Business Licence By-law.

11.4 Ad Hoc Committees and Advisory Committees

11.4.1 Ad Hoc Committees

- (a) Council may appoint Ad Hoc Committees, with a defined ending, to consider a specific matter and report to Council.
- (b) Only the Members of an Ad Hoc Committee shall participate in debate or ask questions at Ad Hoc Committee Meetings.

11.4.2 Advisory Committees

- (a) Advisory Committees are created by Council with no defined ending, to report through the appropriate Service Area on a specific subject matter.
- (b) No Members of Council shall be appointed to Advisory Committees.
- (c) The appointment of a ~~citizen~~ Member of the public to an ~~Ad Hoc Committee or~~ Advisory Committee may be forfeited if the ~~citizen~~ Member is absent from Meetings of the Committee for three (3) consecutive months without being authorized to do so by a Resolution of the Committee ~~entered upon its minutes~~.

12. Report Deadlines and Weekly Information Items

12.1 Report Deadlines

Reports, presentations and other agenda materials are due to the Clerk's Office on the dates and times set out in the Council and Committee Report Deadlines schedule prepared following the adoption of the Council and Committee Meeting dates.

12.2 Weekly Information Items

- (a) Weekly Information Items shall consist of the following items:
 - i. Reports from staff for information;
 - ii. Correspondence received that may be of interest to Members of Council;
 - iii. Boards & Committees minutes and information;
 - iv. Intergovernmental Consultations; and
 - v. Items available in the Clerk's Office.
- (b) Weekly Information Items will be published and distributed weekly on Fridays.
- (c) Members of Council may request an item from the Weekly Information Items be placed on the appropriate Committee of the Whole or Council agenda for discussion.

13. General Rules

13.1 Robert's Rules of Order

13.1.1 In relation to the proceedings of Council and Committees and for which Rules of Procedure have not been provided in this By-law, Roberts Rules of Order 11th Edition shall be referenced where practicable.

13.2 Other General Information

13.2.1 This By-law comes into force on March 26, 2018.

13.2.2 The short title of this By-law is the Procedural By-law.

13.2.3 Appendix 1, the "Motions Table", forms part of this By-law and shall be used as a reference.

14. Procedural By-laws for Other Boards, Committees or Commissions

Where a board, Committee or commission of the City has not adopted a procedural By-law, such board, Committee or commission shall be deemed to have adopted this Procedural By-law with necessary modifications including the requirement that all Meetings be open to the public, subject to the same exceptions applicable to Council Meetings as set out herein.

15. Repeal of Previous By-law

By-law Number (2016)-20087 is hereby repealed.

PASSED this TWENTY-SIXTH day of MARCH, 2018.

Cam Guthrie – Mayor

Stephen O'Brien – Clerk

Appendix 1 - Motions Table

Motion	Debatable	Non-Debatable	Amendable	Non-Amendable	Majority Vote	Special Majority
adjourn		X		X		
point of privilege		X		X		Chair Rules*
point of order		X		X		Chair Rules*
call a vote on the Motion <u>a vote on the question</u>		X		X	X	
Motion to amend	X		X		X	
defer		X		X		
refer	X		X			
extend Meeting beyond 11:00 p.m.	X			X	X	Majority of the Members present
extend Meeting beyond 11:59 p.m.	X			X		2/3 of entire Members of Council (9)
reconsideration	X			X		2/3 of entire Members of Council (9)
appeal the Chair's ruling		X		X		
suspend the Rules of Procedure		X		X		2/3 of entire Members of Council (9)

*A point of order/privilege is ruled on by the Mayor/Chair. Any Member may appeal the Chair's ruling which must then be decided by a Majority vote of the Members present without debate.

Smart Cities Framework and Opportunity

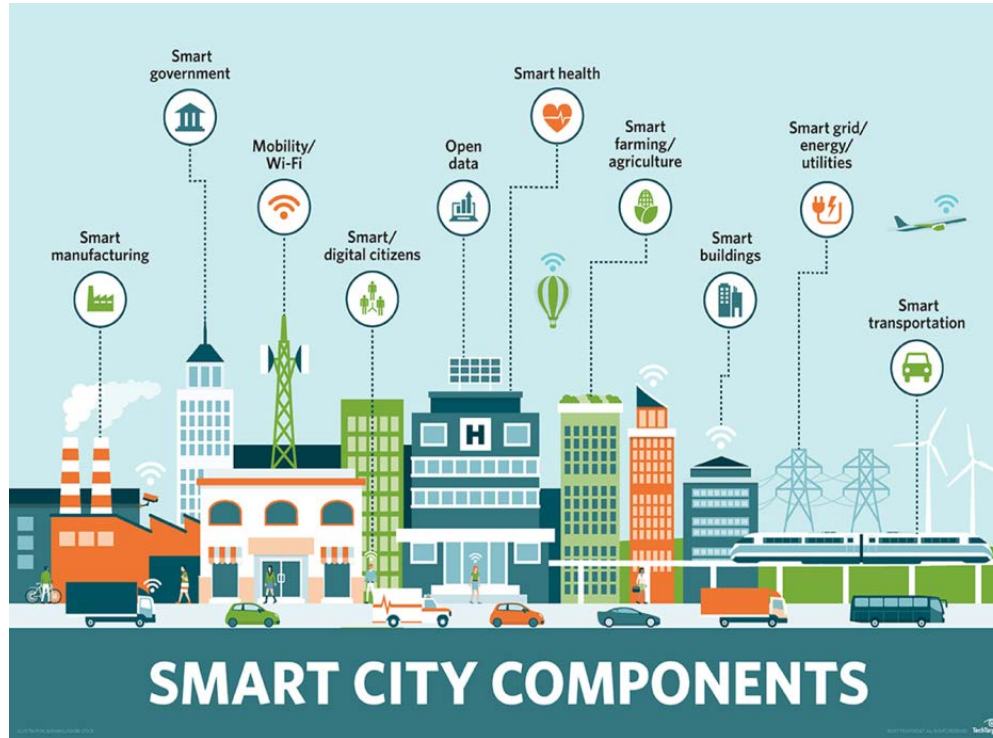
Information presented to:
Committee of the Whole: March 5, 2018



Smart Cities Platform Potential Building Blocks

A Smart City uses technology and data to solve social problems, improve lives and empower communities through creativity and ingenuity. It goes beyond boundaries to create sustainable social innovation and economic value.

- Smart Parking
- Civic Accelerator
- City wide WiFi
- Greenfield Smart Community - GID
- Smart Metres
- City Performance Reporting



- Transportation System Automation
- Street Light Management
- MyGuelph – Online Citizen Portal
- GRE&T Centre
- Community Data

FIBER

IOT MESH NETWORK



Smart Cities Challenge

- A Government of Canada competition open to communities of all sizes (municipalities, regional governments, and Indigenous communities)
- To improve lives through innovation, data and connected technology
- The City of Guelph is eligible to win one of two prizes – \$10 million (under 500,000 population)

Timelines:

- Application Submission – April 24, 2018
- Finalist announcement – Summer 2018
- Each finalist will receive \$250,000 to develop its final proposal
- Final proposal deadline – Winter 2018-19
- Winner announcement – Spring 2019



Successful Applications will...



Realize outcomes for residents

- Measure change and success with data



Empower Communities to Innovate

- Communities should take risks and think big
- Identify significant, “un-solvable” problems
- Achieve outcomes through data and connected technology



Forge new partnerships and networks

- Undertake meaningful engagement with residents and forge relationships with new and non-traditional partners



Spread benefit for all

- Smart cities approaches should not only benefit a single community; they should be scalable and replicable across Canada



Challenge Statement

- A critical part of a successful application is the Challenge Statement. A significant amount of the application evaluation weighting is allocated to the Challenge Statement
- “The Challenge Statement is a single sentence that defines the outcome or outcomes a community aims to achieve by implementing its smart cities proposal. The Challenge Statement must be measurable, ambitious, and achievable through the proposed use of data and connected technology.” (Source: Infrastructure Canada)
- **Example of a challenge statement:** “The neighbourhood in our community with the highest crime rate will become safer than the national average.”
 - **Projects:**
 - After-school programs for at-risk youth, featuring technology (digital design, coding etc.) and gamification of skills development
 - On-line platform for reporting and tracking crime incidents integrating resident input and crime data
 - Install smart lighting and detection technology integrating first responder services to address issues around safety and security
 - **Indicators of progress:**
 - Reduction in incidents reported in smart lighting areas
 - Increased attendance of after school programming
 - Crime rate reduced to below the national average

Process & Timelines

- Internal discussion of initial thinking on challenge statement
 - February & March
- Socialization of refined challenge statement with community stakeholders and partners - March
- Mobilization of private and public sector champions including public advocacy - March
- Targeted outreach with supporters and potential partners on high-level application – March/April
- Formal engagement sessions with partners to develop consensus on final application - April
- Complete the formal application for April 24, 2018



Challenge Topic – Food Sustainability & Security

Guelph is uniquely & strategically positioned to develop innovative solutions to food challenges, thus producing better economic, environmental and social outcomes.

- **Long-standing leadership role** for Guelph-Wellington: food sustainability, access, security, production, distribution
- **Guelph-Wellington** is a leader in the local food movement & environmental stewardship – with a **vibrant & engaged food community**
- **Known for our expertise & cluster of food-focused sectors:**
 - Community-based – social and health sector innovation focused on food security, availability, use and access (e.g. The SEED, Farm to Fork)
 - Municipal government – social, economic & environmental focus for the City and Wellington County (e.g. local food, tourism, Guelph Innovation District, waste diversion, planning)
 - University of Guelph – Canada’s food university, Food Institute and new food chairs, AI & big data opportunities
 - Economic sector – tech companies working in this area (e.g. Bio-tech, clean-tech, agri-tech, green energy; advanced manufacturing, food processing)
 - OMAFRA, federal agencies, agriculture associations located in Guelph

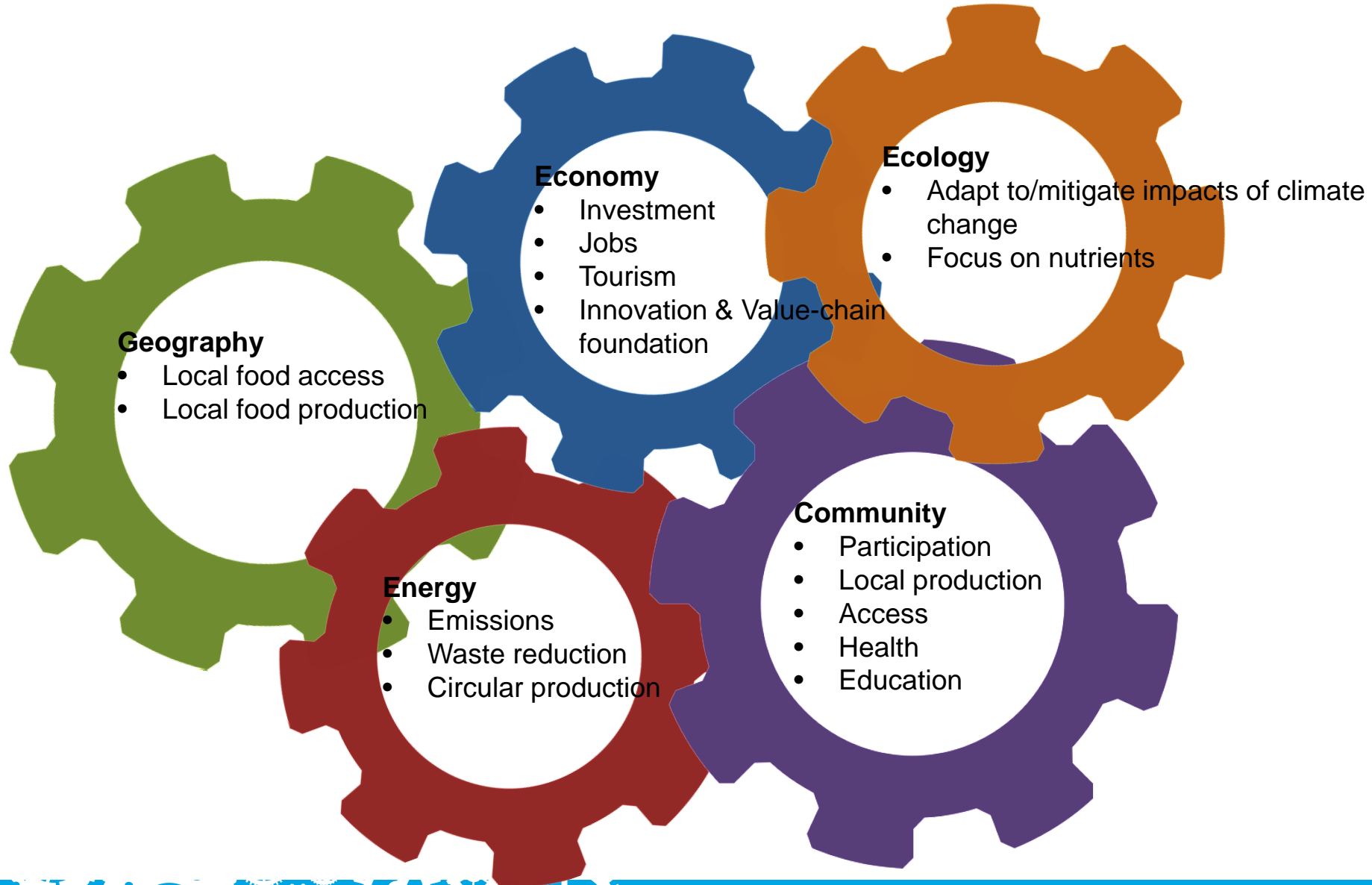


Why now?

- Urgent **social and economic challenges** are a function, in part, of food production challenges
- These challenges are **global, national and local** in nature. For example, there is an opportunity to improve the lives of local residents in Guelph-Wellington:
 - Households experiencing food insecurity (17% Guelph; 9% Wellington)
 - Food inequality across neighbourhoods
 - High cost of food (27% increase since 2009 for family of 4)
 - Children living in poverty (13% Guelph; 11.5% in Wellington)
 - Negative health impacts (obesity levels 15.1% Guelph; 23.1% Wellington)
 - Local food production – between 2001 and 2011, Wellington County lost 77 farms and 11,245 hectares of farmland.
- Significant impact of climate change on food production - need for a sustainable food system to mitigate climate change
- The components of the solutions are uncoordinated. Opportunity to leverage big data & AI; Guelph's participation in and proximity to technology and innovation hubs; and integrate our Guelph's systems thinking (whole food system)



Potential Performance Metrics



Questions?



Staff Report



To **Committee of the Whole**

Service Area Corporate Services

Date Monday, March 5, 2018

Subject **Procurement By-law Update**

Report Number CS-2018-02

Recommendation

That report CS-2018-02 Procurement By-law Update dated March 5, 2018 be approved and adopted by by-law.

Executive Summary

Purpose of Report

To present the updated Procurement By-law (the By-law) to Council.

Key Findings

Paragraph 3 of subsection 270(1) of the Municipal Act, 2001, S.O. 2001, c. 25, provides that a municipality shall adopt and maintain policies with respect to its procurement of goods and/or services. The City's current Procurement By-law was last reviewed and updated in 2014. The City's procurement practices have been the focus of three internal audits through 2017 which resulted in a number of recommendations that have been addressed through this By-law update.

The revisions to the By-law include a number of features designed to:

- Provide clarity regarding Council's governance role and staff procedural responsibilities. The By-law is broken into parts which define the policies and schedules which define the procedures;
- Provide greater clarity of definitions;
- Provide clarity regarding roles of participants in the procurement process;
- Provide standardized spending limits for staff;
- Delegate approval of bids to staff subject to prior project and budget approval by Council; and
- Incorporation of recommendations provided through the Vendor/Payment Process Internal Audit, the Purchasing Card Internal Audit and the Single Source Purchase Internal Audit.

The By-law update will make the purchasing practices of the City easier to understand by both internal and external stakeholders, especially for those new to the City who are learning this process.

The update also includes a recommendation to consolidate and increase the City's competitive purchasing threshold to \$35,000 for all goods and/or services from the previous dual threshold of \$20,000 for goods and/or services and \$35,000 for consulting fees. This increase will benefit the City by reducing administration time resources on lower-value purchasing activities. The City will mitigate the risk of this decision by making greater use of approved vendor listings for lower value purchases.

Financial Implications

There are no direct financial implications from this report but the Procurement By-law is an important aspect of the City's financial internal control structure providing guidance for procuring goods and/or services.

Report

Paragraph 3 of subsection 270(1) of the Municipal Act, 2001, S.O. 2001, c. 25, provides that a municipality shall adopt and maintain policies with respect to its procurement of goods and/or services. The City's current Procurement By-law contains these policies. This By-law has not been updated since 2014.

The City's procurement practices have been the focus of three internal audits through 2017 which resulted in a number of recommendations that have been addressed through this By-law update.

To improve the By-law, staff has assembled changes that ensure compliance with best practices, allow for agility in decision-making, and gain clarity in the roles of administration and Council in procurement matters.

The existing Procurement By-law (2014)-19771 has been re-drafted and included as ATT-1.

Some features of the updated By-law include:

1. The Purchasing Card (P-card) Policy has been removed and posted on the City's intranet (Infonet) as a standalone policy. This policy is sent annually to P-card holders and a signature is required stating they have read and understand the requirements outlined in the policy; new card holders are also required to sign the policy upon receipt of a P-card.
2. The By-law remains structured so that the Council-controlled, higher-level, rules (the "policies") are found in the main body of the By-law identified under Part I to Part V, and the procedures are found in Schedules A to G. For example, Part IV of the By-law lists the governing policies for nine steps in the procurement process (steps a. through i.), while Schedule "E" lists the staff procedures for implementing those same nine steps (a. through i.).
3. The definitions (Part I) have been further refined as well as new definitions added.
4. The Guiding Principles (Part II) have been expanded to provide an overall framework for the entire procurement process.
5. Signing authority limits by position adds guidance for management as to what limits of award approval are acceptable for a position.

6. Refining the Vendor Performance Evaluation process and procedures, with the development of new easy-to-use forms that have been posted on the Infonet.
7. Redefining the sole/single source process with a breakdown between sole sourcing and single sourcing and the strengthening of the requirements to produce such.
8. A singular competitive purchasing threshold of \$35,000 for all goods and/or services (previously there were two thresholds which were complicated and not in line with best practice).

Generally, the changes include removing ambiguities, organizing the material logically, and making the entire document clearer; therefore, easier to comply with.

Vendor Engagement

The City now utilizes an electronic bidding system where all bids are submitted online and the system tracks plan takers for each opportunity posted on the website. The use of this system has provided an easy efficient manner to respond to bidder's inquiries related to bid opportunities. If a plan taker is not going to provide a submission, by way of the system they can provide a reason as to why they will not be providing a submission. This provides insight to staff on a continual basis on the quality of the bid documents being prepared across the organization. For those plan takers that have not provided a reason for not submitting, it is common practice for procurement staff to reach out and request a response. If the feedback provided is related to restrictions either in the bidding document or the agreement, staff will review and if warranted, modify the bid documents on a prospective basis as based on the plan taker's feedback.

Further, procurement and engineering staff meet annually with the Conestoga Heavy Equipment Association, where some of the discussion is centred on the tender documents issued by the City, the contractual agreements and the vendor performance evaluation process. Suggestions for improvement are tabled and where appropriate, modifications to these documents and processes are incorporated.

The vendor community is an important stakeholder in City business and many efforts are sought to include their feedback in the procurement process on a continual basis.

Vendor Performance Management

Staff, over the past year, has spent a considerable amount of time and effort reviewing and recommending efficiencies and improvements to the construction and construction-consulting process. As an outcome of this process, new, easy-to-use forms have been created and posted for internal use, including a revised form to assess vendor performance. The vendor performance evaluation is a tool to monitor a vendor's performance on a procurement awarded by the City and

provides valuable documentation for the City in the case of poor performance and defines the actions the City can take when this occurs.

A summary spreadsheet is available for internal review by all staff that outlines each vendor for which an evaluation has been completed. Currently staff is reviewing and refining the general consulting and general goods performance evaluation criterion and are also considering ways to make this information publically available. Vendors have expressed interest in having positive performance evaluations publically available as it provides for a great reference for companies bidding on other non-City projects.

The proposed Procurement By-law includes the refined process and procedures for vendor performance as it is a critical component to ensuring the best value is being obtained.

Financial Implications

There are no direct financial implications from this report but the Procurement By-law is an important aspect of the City's financial internal control structure providing guidance for procuring goods and/or services.

Consultations

The draft By-law was forwarded to the Corporate Management Team with a request to send the draft to managers and supervisors in the various service areas who have responsibility for procurement.

All feedback was considered for adoption. The current draft has incorporated departmental feedback and changes where appropriate.

Corporate Administrative Plan

Overarching Goals

Financial Stability

Service Area Operational Work Plans

Our Resources - A solid foundation for a growing city

Attachments

ATT-1

Procurement By-law 2018

Departmental Approval

Bruce Banting, Associate Solicitor

Report Author

Bill Stewart
Manager of Procurement

Tara Baker

Trevor Lee

Approved By

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PROCUREMENT BY-LAW

By-law Number (2018) –

A By-law to provide for the procurement of goods and services by The Corporation of the City of Guelph.

WHEREAS paragraph 3 of subsection 270(1) of the *Municipal Act, 2001*, S.O. 2001, c. 25 provides that a municipality shall adopt and maintain policies with respect to its procurement of goods and services;

AND WHEREAS The Corporation of the City of Guelph wishes to adopt this By-law as its policies with respect to its procurement of goods and services;

NOW THEREFORE THE CORPORATION OF THE CITY OF GUELPH ENACTS AS FOLLOWS:

PART I – DEFINITIONS AND INTREPRETATION

1.1 In this By-law:

“Audit Committee” means Council’s Audit Committee or any successor committee of Council with responsibilities in the auditing field;

“Award” means authorization to proceed with a purchase of Goods and/or Services;

“Award Memo” means the method to grant an Award, and includes a Council Award Memo and a Staff Award Memo;

“Bid” means an offer or submission from a Bidder in response to a Bid solicitation;

“Bid Bond” means an insurance agreement, accompanied by a monetary commitment, by which a third party (the surety) accepts liability and guarantees that the Bidder will not withdraw the Bid, the Bidder will furnish the bond as required, and, if the Contract is offered to the bonded (insured) Bidder, the Bidder will accept the Contract as bid, or else the surety will pay a specified amount;

“Bid Surety” means a monetary commitment by a Bidder in the form of a certified cheque, Irrevocable Stand-by Letter of Credit or a Bid Bond issued by a surety;

“Bidder” means one who submits a Bid;

“CAO” means the Chief Administrative Officer of the City or his/her Designate;

“City” means The Corporation of the City of Guelph;

“Civil Works” means the Construction or reconstruction of road, sewer, water, bridge or other municipal services;

“Competitive Bidding” means a method of bidding that provides for competition among Bidders, and includes the RFIQ, RFP, RFQ and RFT methods;

“Construction” means the process of utilizing labour, material and equipment to build, alter, repair, improve or demolish any structure, building or public improvement, but generally does not include routine maintenance, repair or operation of existing real property;

“Consulting Services” means services provided by architects, engineers, designers, surveyors, geoscience consultants, geo-technical consultants, planners, software consultants and any other similar professional services rendered on behalf of the City;

“Contract” means a binding agreement between two or more parties by way of

- a. A Purchase Order which incorporates the standard Purchase Order Terms and Conditions posted on the City’s website,
- b. A Purchase Order which incorporates a written agreement, or
- c. A written agreement;

“Cooperative Purchasing” means the action taken when two or more entities combine their requirements to obtain advantages of volume purchases, including administrative savings and other benefits, pursuant to one of a variety of arrangements whereby two or more entities purchase from the same Supplier using a single Bid solicitation;

“Council” means the municipal council of the City;

“Council Award Memo” means an Award Memo authorized by Council;

“Deputy CAO” means the CAO or Deputy Chief Administrative Officer of the applicable Service Area or his/her Designate;

“Designate” means the person or persons assigned the duties and responsibilities on behalf of, or in the absence or incapacity of, the person charged with the principal authority to take the relevant action or make the relevant decision;

“Development Project” means the construction, erection, or placing of water, sanitary sewer and storm sewer service connections to one or more buildings or structures on land to service a housing subdivision or plaza;

“Dispute Committee” means the group created pursuant to the Performance Evaluation Program;

“Emergency” means an actual situation or threatened impending situation that creates unexpected conditions that pose a threat to the health, safety or welfare of the public, maintenance of essential City services, the City’s physical assets or other public property, the City’s financial interests, or security of the City;

“Environmental Sustainability” means protection and enhancement of the climate, ecology and natural resources for future generations, through approaches that reduce carbon dependency, enhance energy resilience, conserve energy and resources and reduce waste and toxins;

“Environmentally Responsible Goods and/or Services” means Goods and/or Services that have a lesser or reduced impact on the environment over their lifecycle when compared with other Goods and/or Services serving the same purpose, because of characteristics including:

- a. Reducing waste,
- b. Conserving and making efficient use of resources,
- c. Being energy efficient,
- d. Being durable and reusable, as opposed to being of single use or disposable,
- e. Having long service lives,
- f. Being capable of economic repair or upgrade,
- g. Being recyclable and capable of diversion from landfill,
- h. If not recyclable, being capable of safe disposal or return to vendor at end of life cycle,
- i. Containing recycled or sustainable materials, obtained and manufactured in an environmentally sound, sustainable manner,
- j. Minimizing packaging,
- k. Employing packaging made of reusable, recycled, recyclable or compostable materials,
- l. Employing reusable shipping packaging,
- m. Minimizing or reducing environmental impacts such as greenhouse gas and air pollutant emissions,
- n. Eliminating or reducing toxins that create hazards to the health or safety of workers or the community, or
- o. Resulting in minimal or no environmental impact during normal use and maintenance;

“Fair Trade” means the organized social movement that aims to help producers in developing countries to make better trading conditions and promote sustainability, and that advocates the payment of a fair price to producers and exporters as well as higher social and environmental standards;

“Fairness Monitor” means an individual appointed in accordance with the Procurement Process Policies of this By-law;

“Goods” includes, but is not limited to, any of the following or any combination of the following: wares, merchandise, materials, equipment;

“Guiding Principles” means those principles described in Part II (Guiding Principles) of this By-law;

“High Value Procurement” means a procurement for which the estimated monetary value, including contingency allowance, is \$100,000 or more;

“Irrevocable Stand-by Letter of Credit” means a document issued by a bank or credit union as permitted by City policy, authorizing the bearer to draw upon a specified amount from that bank or credit union or its agent, including a letter or similar statement extending credit up to a given amount at certain affiliated banks for a person who has paid or guaranteed that amount to the issuing bank or credit union;

“Labour and Material Payment Bond” means an instrument, from an Ontario based surety company, executed, subsequent to Award, by the successful Bidder, that

protects the City from loss due to the Bidder's inability to pay any or all subcontractors and/or suppliers associated with the Contract as agreed, and is a risk reduction mechanism that secures the fulfillment of all Contract requirements;

"Low Value Procurement" means a procurement for which the estimated monetary value, including contingency allowance, is \$35,000 or less;

"Lowest Compliant Bid" means a Bid which:

- a. Will provide the City with the desired Goods and/or Services at the lowest Total Acquisition Cost,
- b. Is not a Non-Compliant Bid,
- c. Meets all the mandatory requirements of the Bid solicitation, and
- d. Was submitted by a Bidder who:
 - i. Has the skills, ability and willingness to complete the Contract,
 - ii. Is a Responsible Bidder,
 - iii. Is a Responsive Bidder, and
 - iv. Has acceptable past performance, reputation and ethics;

"Manager of Procurement" means the individual primarily responsible for the procurement function of the City, or his/her Designate;

"Medium Value Procurement" means a procurement for which the estimated monetary value, including contingency allowance, is more than \$35,000, but less than \$100,000;

"Non-compliant Bid" means a Bid which fails to comply substantially with the Bid solicitation, and "Non-compliance" has a corresponding meaning;

"Opposing Party" means a Bidder who has an outstanding, unresolved claim or legal proceeding against the City, or a Bidder against whom the City has an outstanding, unresolved claim or legal proceeding;

"Performance Bond" means a written guarantee from a third party guarantor (usually a bank or an insurance company) submitted to the City by a Bidder upon Award and which ensures payment of a sum of money in case the Bidder fails in the full performance of the Contract;

"Performance Evaluation Program" means a program that assists the City to improve the performance of Suppliers receiving Awards in significant public Bid solicitations through evaluating the performance of Suppliers;

"Pilot Project" means an activity planned as a test or trial;

"Project Manager", in respect of a Bid solicitation, means the member of the applicable Service Area Staff who is primarily responsible for the Service Area's participation in that Bid solicitation;

"Purchase Order" means a standard form document, usually incorporating standard Purchase Order Terms and Conditions, used by the City to formalize a purchasing transaction with a Supplier of Goods and/or Services;

"Purchase Requisition" means an electronically transmitted request on an approved internal City standard form which is sent to the Manager of Procurement to purchase Goods and/or Services;

“Purchasing Card” means a payment method whereby authorized employees of the City are empowered, in accordance with the written Purchasing Card Policy agreement and procedure, to purchase directly from Suppliers using credit cards issued by a bank or major credit card provider, and supplied by the City;

“Responsible Bidder” means a Bidder who is fully capable, technically and financially, of supplying Goods and/or Services sought;

“Responsive Bidder” means a Bidder who correctly and completely responds to all of the requirements provided in a Bid solicitation;

“RFEOI” (Request for Expressions of Interest) means a non-bidding solicitation made to the marketplace, which will be used to determine the interest of the marketplace in providing Goods and/or Services which the City is contemplating procuring;

“RFI” (Request for Information) means a non-bidding solicitation made to the marketplace or to selected potential Suppliers for input (such as Goods and/or Services details, publicly available commodity costs, comments, feedback or reactions) with respect to a possible future procurement process and/or budget planning, and which is a market research tool that may identify Goods and/or Services available to meet City requirements;

“RFIQ” (Request for Informal Quotations) means a Bid solicitation, made to selected potential Bidders, for informal quotations for supplying Goods and/or Services, based on defined requirements (including Specifications) where a clear solution exists;

“RFP” (Request for Proposals) means a Bid solicitation, made to the marketplace or to selected potential Bidders for proposals for supplying Goods and/or Services, generally based on providing a solution to objectives stated in terms of reference;

“RFPQ” (Request for Pre-Qualification) means a pre-bidding solicitation made to the marketplace or to selected potential Bidders for detailed submissions of the experience, financial strength, education, background and personnel of potential Suppliers of specific Goods and/or Services;

“RFQ” (Request for Quotations) means a Bid solicitation made to selected potential Bidders for quotations for supplying Goods and/or Services, based on defined requirements (including Specifications) where a clear solution exists;

“RFT” (Request for Tenders) means a Bid solicitation made to the marketplace or to selected potential Bidders, for tenders for supplying Goods and/or Services, based on defined requirements (including Specifications) where a clear solution exists;

“Service Area” means any applicable administrative unit of the City;

“Service Area Evaluation Committee” means the group of Service Area Staff, from all applicable Service Areas, chosen to make the initial selection and recommendation of successful Bids in a specified procurement process;

“Service Area GM” means the CAO, Deputy CAO or General Manager of the applicable Service Area or his/her Designate;

“Service Area Staff”, in respect of a particular Service Area, includes the CAO, Deputy CAO, General Manager, Manager, Supervisor or other officer or employee in that Service Area that have the appropriate signing authority;

“Services” includes, but is not limited to, any of the following or any combination of the following: janitorial or cleaning services, Consulting Services, legal surveys, training, rental, installation, inspection, repair, maintenance, Construction, reconstruction, Civil Works, building, altering, repairing, improving and demolishing;

“Single Sourcing” means, although Goods and/or Services are available from more than one potential Supplier, the City selects a single Supplier because of one or more of the reasons set out in Schedule “A” (Reasons for Single Sourcing);

“Sole Sourcing” means the City selects a sole Supplier because it is the only known source of supply of the required Goods and/or Services because of one or more of the reasons set out in Schedule “B” (Reasons for Sole Sourcing);

“Specifications” means plans, designs, terms of reference and other criteria which describe Goods and/or Services;

“Staff Award Memo” means an Award Memo authorized by City staff;

“Supplier” means any individual, partnership or corporation providing Goods and/or Services to the City;

“Tied Bids” means two or more compliant Bids that are equal in all material respects;

“Total Acquisition Cost” means the total aggregate cost of a single purchase transaction or Purchase Order amount and includes, but is not limited to, the extended amount of the unit value, any ongoing relevant service charges, fees, life cycle costs, calibration and accuracy of readings etc. applicable to the purchase, all applicable taxes, freight, duty, licensing and other related costs, less any applicable rebates or discounts; and

“Treasurer” means the General Manager Finance, Treasurer of the City or his/her Designate.

- 1.2 Other terms not defined in this By-law, are as defined in the National Institute of Government Purchasing Inc. (NIGP) Public Procurement Dictionary of Terms.
- 1.3 Any reference in this By-law to legislation, policies or rules is to such legislation, policies or rules as amended, extended, re-enacted or replaced from time to time.

PART II – GUIDING PRINCIPLES

Introduction

- 2.1 Except as provided otherwise in this By-law, the following Guiding Principles shall govern the City’s procurement of Goods and Services:
 - a. Fairness;

- b. Transparency;
 - c. Accountability;
 - d. Best overall value
 - e. Competitive Bidding;
 - f. Conflict of interest;
 - g. Environmental Sustainability;
 - h. Accessibility for persons with disabilities;
 - i. Ethics;
 - j. Fair Trade; and
 - k. Compliance with Codes of Conduct.
- 2.2 In order to maintain the integrity of the procurement process, and to protect the interests of the City, of persons participating in the procurement process and of the public, the City shall, except as provided otherwise in this By-law, apply these Guiding Principles in:
- a. Conducting procurements pursuant to this By-law;
 - b. Making decisions pursuant to this By-law; and
 - c. Interpreting this By-law.

Specific Guiding Principles

2.3 The particulars of the Guiding Principles are as follows:

Principle a. Fairness

- 2.3.a.1. The City shall generally utilize standard documents (instructions to Bidders, terms and conditions, bidding forms, etc.) to ensure consistency of content and format, but these documents are subject to change as required in particular circumstances.
- 2.3.a.2. The City shall clearly specify all details regarding closing dates, times and locations of particular procurements.
- 2.3.a.3. The City shall apply the requirements of Bid acceptance consistently.
- 2.3.a.4. The City shall treat all Bidders and all Bids equally, objectively and without bias or favouritism at all times, except as provided otherwise in this By-law.
- 2.3.a.5. The City shall not give preference to Suppliers who provide unsolicited products, samples or demonstrations of Goods and/or Services.
- 2.3.a.6. If the City answers Bidder questions about a procurement, raised during the procurement, it shall provide, to the extent possible, such answers to all Bidders and potential Bidders in that procurement.
- 2.3.a.7. The City may appoint a Fairness Monitor to confirm that a procurement is conducted in a way that is procedurally fair and to communicate to external observers, including prospective and actual Bidders, that fairness, objectivity, impartiality, clarity, openness and transparency are of concern to the City and have been maintained throughout the entire procurement.

Principle b. Transparency

- 2.3.b.1. The City shall communicate its needs to Bidders clearly.
- 2.3.b.2. The City shall specify the method of evaluating Bids and the evaluation criteria at the outset of each procurement.
- 2.3.b.3. The City shall include definitions and interpretations of the terminology used in Competitive Bidding documents.
- 2.3.b.4. In Bid solicitation documents, the City shall set out clearly the method and format for submitting Bids.

- 2.3.b.5. When appropriate and practicable, the City shall advertise its methods for exploring the marketplace on an acceptable Internet website.

Principle c. Accountability

- 2.3.c.1. The City shall ensure that all Bids in each procurement are kept secure prior to the closing date, during the evaluation period and following Award.
- 2.3.c.2. The City shall maintain confidentiality (in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c. M.56) of all Bids and proprietary information submitted in confidence.
- 2.3.c.3. The City shall ensure that its Service Area Evaluation Committees are representative, allowing for various perceptions and opinions.
- 2.3.c.4. The City shall ensure that all Bids, final rating results and related supporting documentation are retained in accordance with the City's Retention By-law.
- 2.3.c.5. The City shall review its procurement procedures on a regular basis to ensure that they are clear, logical, current, and in accordance with accepted industry standards.
- 2.3.c.6. The City shall ensure that the City's procurement procedures, facilities, resources and staff are employed for the procurement of Goods and/or Services for only the City, and not for any officer, employee or member of Council of the City.

Principle d. Best Overall Value

- 2.3.d.1. The City shall seek the best overall value for the City and for the taxpayers, which value will ordinarily be obtained through the use of Competitive Bidding methods, but in some circumstances, may only be obtained through the use of other means or processes.
- 2.3.d.2. The City shall protect its financial interests in implementing this By-law.
- 2.3.d.3. To ensure best overall value for the City in public procurements, the City shall, despite the other provisions of this By-law, employ a Performance Evaluation Program whereby the performance of Suppliers is evaluated, in order to avoid entering future Contracts with Suppliers whose performance was previously unsatisfactory.
- 2.3.d.4. The City may use Purchasing Cards as a payment method to reduce the number of acquisitions of Goods and/or Services of low monetary values that would otherwise require the full Purchase Order procedures and would be subject to this By-law.

Principle e. Competitive Bidding

- 2.3.e.1. The City shall ordinarily use the Competitive Bidding methods, but shall not ordinarily use the Competitive Bidding methods for the items included in Schedule "C" (Items Exempt from Competitive Bidding) to this By-law.
- 2.3.e.2. The City shall, whenever possible, develop Specifications that are not restrictive and allow for open competition from the marketplace.
- 2.3.e.3. When appropriate and practicable, the City shall advertise its Competitive Bidding opportunities on an acceptable Internet website.
- 2.3.e.4. The City shall not grant a preference to local Suppliers contrary to the *Discriminatory Business Practices Act*, R.S.O. 1990, c. D.12.
- 2.3.e.5. The City shall, where applicable, comply with relevant International, National and Inter-Provincial Trade treaties and agreements.

2.3.e.6. The City shall not ordinarily consider unsolicited proposals. However, if a legitimate need exists for the Goods and/or Services offered, then the City may commence a procurement process in accordance with this By-law.

Principle f. No Conflict of Interest

2.3.f.1. The City shall include conflict of interest guidelines in all Competitive Bidding documents to minimize the risk of Bidders trying to influence officers, employees or members of Council of the City during the bid evaluation process.

2.3.f.2. Unless prior Council approval has been provided, the City shall not purchase any Goods and/or Services from any member of Council or employee of the City, or any associate or family member of any member of Council or employee of the City.

Principle g. Environmental Sustainability

2.3.g.1. The City shall show community leadership by having due regard to Environmental Sustainability and by considering lifecycle costs of Goods and/or Services in its procurement processes.

2.3.g.2. Whenever possible and economically feasible, the City shall ensure that Specifications provide for consideration of environmental characteristics.

2.3.g.3. The City shall endeavour to increase the use by the City of Environmentally Responsible Goods and/or Services.

Principle h. Accessibility for Persons with Disabilities

2.3.h.1. The City shall promote and have regard to the requirements of the *Ontarians with Disabilities Act, 2001*, S.O. 2001, c. 32 and the *Accessibility for Ontarians with Disabilities Act, 2005*, S.O. 2005, c. 11 in applying this By-law.

Principle i. Ethics

2.3.i.1. The City shall insist upon adherence by all Bidders and Suppliers to a strict morally correct standard.

2.3.i.2. The City shall require that all Bidders and Suppliers become knowledgeable of, and adhere to, any ethics policies adopted by the City.

2.3.i.3. The Manager of Procurement shall comply with the "Statement of Ethics" of the Ontario Public Buyers Association attached to this By-law as Schedule "D" (Statement of Ethics).

2.3.i.4. No officer or employee of the City shall divide the quantity of the Goods and/or Services being purchased, with the sole intent of avoiding the requirements, including the monetary limits, of this By-law.

Principle j. Fair Trade

2.3.j.1. The City shall show community leadership by supporting Fair Trade purchasing principles and considering Fair Trade in its procurement processes.

2.3.j.2. Where possible, the City shall consider the procurement and use of Fair Trade certified Goods and/or Services.

Principle k. Compliance with Codes of Conduct

- 2.3.k.1. In respect of the procurement of Goods and/or Services, all members of Council shall comply with the Code of Conduct for Council.
- 2.3.k.2. In respect of the procurement of Goods and/or Services, all employees of the City shall comply with the Code of Conduct for employees.

PART III – AUTHORITY

3.1 The CAO has the following authority:

- 3.1.1 The CAO is authorized to exercise the powers and shall carry out the duties provided in this By-law for the CAO.
- 3.1.2 The CAO may approve actions and sign documents under this By-law, up to the dollar limits of Council-approved budgets.
- 3.1.3 The CAO shall appoint one or more Designates.
- 3.1.4 The CAO may impose additional restrictions on procurement when necessary and in the best interest of the City.

3.2 The Deputy CAO has the following authority:

- 3.2.1. Each Deputy CAO is authorized to exercise the powers and shall carry out the duties provided in this By-law for the Deputy CAO.
- 3.2.2 Each Deputy CAO may approve actions and sign documents under this By-law, up to the dollar limits of Council-approved budgets.
- 3.2.3 Each Deputy CAO shall appoint one or more Designates.
- 3.2.4 Each Deputy CAO shall appoint Service Area Staff to exercise the powers and carry out the duties provided in this by-law for Service Area Staff.
- 3.2.5 Each Deputy CAO shall appoint, or provide for the appointment of, Designates for Service Area Staff.
- 3.2.6 Each Deputy CAO shall ensure that Service Area Staff exercise the powers and carry out the duties provided in this By-law for Service Area Staff.

3.3 The Manager of Procurement has the following authority:

- 3.3.1 The Manager of Procurement is authorized to exercise the powers and shall carry out the duties provided in this By-law for the Manager of Procurement.
- 3.3.2 The Manager of Procurement shall appoint one or more Designates.
- 3.3.3 The Manager of Procurement may amend the Schedules to this By-law from time to time, without Council approval.
- 3.3.4 The Manager of Procurement shall:
 - a. Develop, implement and maintain procedures for the procurement of Goods and/or Services for the City;
 - b. Provide advice and assistance to Council, the CAO, Treasurer, Deputy CAOs and Service Area Staff regarding the procurement of Goods and/or Services;
 - c. When appropriate and feasible, standardize and coordinate the procurement of Goods and/or Services for multiple Service Areas; and
 - d. Act as the City's representative in Cooperative Purchasing groups and Cooperative Purchasing initiatives.

3.4 Service Area Staff have the following authority:

- 3.4.1 Service Area Staff are authorized to exercise the powers and shall carry out the duties provided in this By-law for Service Area Staff.
- 3.4.2 Unless varied by the CAO or Deputy CAO, the following levels of staff (regardless of job titles) may approve actions and sign documents as provided in ~~under~~ this By-law, up to the following corresponding dollar limits:
 - a. Supervisor Level: \$25,000;
 - b. Manager Level: \$50,000; and
 - c. General Manager Level: \$100,000.
- 3.4.3 The foregoing limits apply to the following actions and documents:
 - a. Bid solicitations;
 - b. Single Sourcing;
 - c. Sole Sourcing;
 - d. Purchase Requisitions; and
 - e. Purchase Orders.
- 3.4.4 The CAO and Deputy CAO may vary the foregoing limits higher or lower based on factors including:
 - a. The need for efficiencies in processing approvals;
 - b. The type of approvals;
 - c. The magnitude of approvals; and
 - d. The functionality of the particular Service Area.

PART IV – PROCUREMENT PROCESS POLICIES

Introduction

- 4.1. This By-law does not apply to Low Value Procurements. Service Area Staff shall conduct Low Value Procurements outside the provisions of this By-law.
- 4.2. Unless otherwise indicated, where a value or price is referred to in this By-law, such value or price will be interpreted as being in Canadian dollars and as excluding all applicable taxes.
- 4.3. The City's process of procuring Goods and/or Services may involve the following steps:
 - a. Assessing needs for Goods and/or Services;
 - b. Exploring the marketplace;
 - c. Monitoring fairness;
 - d. Soliciting Bids;
 - e. Receiving and Opening Bids;
 - f. Taking special actions;
 - g. Recommending successful Bids;
 - h. Approving successful Bids; and
 - i. Managing Contracts.
- 4.4. If the CAO determines that:
 - a. An Emergency exists;
 - b. Addressing the Emergency requires the procurement of certain Goods and/or Services; and
 - c. The immediacy of the requirement for the Goods and/or Services precludes the Manager of Procurement from proceeding with a usual procurement process;

then the CAO may conduct, or authorize the conducting of, the procurement of those Goods and/or Services with or without the involvement of the Manager of Procurement, and without employing the processes provided in this By-law, but employing the most expedient and economical means possible. If the monetary value of the expenditure thus undertaken is more than \$500,000, the CAO shall, as soon as reasonably possible, provide to Council a written report of the particulars of the Emergency and the procurement.

- 4.5. This Part contains higher-level policies governing the various steps in the procurement process. Detailed procedures applicable to the steps in the procurement process are set out in Schedule "E" (Procurement Process Procedures), Schedule "F" (Performance Evaluation of Suppliers – Obligations of City Staff), and Schedule "G" (Performance Evaluation of Suppliers – Outline for Potential Bidders) to this By-law. The particulars of the higher-level policies are as follows:

Step a. – Assessing Needs for Goods and/or Services

- 4.5.a.1. Each Deputy CAO shall adopt, implement and maintain for his/her Service Area a system of materials management and inventory control for Goods and/or Services required for the Service Area.
- 4.5.a.2. Each Deputy CAO shall ensure that adequate levels of inventory for the Service Area are maintained in a cost effective manner.
- 4.5.a.3. The Manager of Procurement shall keep informed of current developments in pricing, market conditions and new products related to Goods and/or Services required by the City.
- 4.5.a.4. Service Area Staff shall keep informed of current developments in pricing, market conditions and new products related to Goods and/or Services required by their respective Service Areas.
- 4.5.a.5. Service Area Staff shall prepare, in writing, any necessary Specifications for the Goods and/or Services required for the Service Area, and shall provide such Specifications to the Manager of Procurement for review and approval prior to adoption by the Service Area Staff.
- 4.5.a.6. Service Area Staff may retain outside professional consultant assistance in the preparation of Specifications that will be required of all Bidders in a particular procurement, but, in such case, Service Area Staff shall:
- a. So advise the Manager of Procurement; and
 - b. In advance of any expenditure of time, money or effort by the consultant, agree with the consultant on the fee to be paid for developing such Specifications, and that such Specifications shall be the property of the City.
- 4.5.a.7. If Service Area Staff request a potential Supplier of Goods and/or Services to expend time, money or effort in developing Specifications for those Goods and/or Services, which Specifications will be required of all Bidders in a particular procurement, or otherwise to help define or create a requirement, then such potential Supplier will be considered a consultant and will be disqualified from Competitive Bidding for those Goods and/or Services.
- 4.5.a.8. If new Specifications are developed for a particular procurement either internally or by an external consultant, and these Specifications will apply to all Bids in that procurement, then such Specifications are the property of the

City, and the City may use them in any processes for exploring the marketplace or soliciting Bids.

Step b. – Exploring the Marketplace

- 4.5.b.1. The City may employ the following methods for market research prior to commencing a method for procuring bids:
 - a. RFI;
 - b. RFEOI;
 - c. RFPQ; and
 - d. Other appropriate methods of market research.
- 4.5.b.2. The City may employ the foregoing methods for market research to assist in activities including developing Specifications or scopes of Goods and/or Services and selecting qualified potential Bidders.
- 4.5.b.3. An RFI, RFEOI or RFPQ will not create any contractual obligation between the City and any interested potential respondent.
- 4.5.b.4. The City may make the submission of a response to an RFEOI or RFPQ a specific pre-condition to any particular procurement process.

Step c. – Monitoring Fairness

- 4.5.c.1. The Deputy CAO shall determine whether a Fairness Monitor is required for a particular procurement. In reaching such determination, the Deputy CAO shall consult the CAO, the Manager of Procurement and the City's Solicitor.
- 4.5.c.2. If the City will be appointing a Fairness Monitor for a procurement, it shall conduct an RFP for the Fairness Monitor services. It shall advertise the RFP on the City's website and elsewhere as appropriate. The Fairness Monitor must be an independent, outside, third party individual.
- 4.5.c.3. The City shall appoint a Fairness Monitor by means of a Contract which outlines the terms of the appointment.

Step d. – Soliciting Bids

- 4.5.d.1. The Manager of Procurement, with the assistance of Service Area Staff, shall establish standard performance evaluation criteria and a standard performance evaluation form for each type of Goods and/or Services in respect of which performance may be evaluated, and may revise those criteria and forms from time to time.
- 4.5.d.2. Performance evaluation will form part of a particular procurement if the Goods and/or Services comprise:
 - a. Construction with a monetary value of more than \$100,000;
 - b. Consulting Services with a monetary value of more than \$100,000;
 - c. Consulting Services with a monetary value of up to \$100,000, but where the underlying Construction has a monetary value of more than \$100,000; or
 - d. A commodity with a monetary value of more than \$100,000, whether as a single line purchase or a grouped purchase.
- 4.5.d.3. The Manager of Procurement, in consultation with the Service Area Staff, may determine that performance will be evaluated for any procurement not described in the foregoing section.
- 4.5.d.4. Service Area Staff shall select the RFP method for use when the requirement for Goods and/or Services is based on providing a solution to objectives stated within applicable terms of reference.

- 4.5.d.5. Service Area Staff shall select the RFT method for use when the City intends to accept the Lowest Compliant Bid without negotiation.
- 4.5.d.6. For a Medium Value Procurement or High Value Procurement the City may use:
- a. Competitive Bidding;
 - b. Single Sourcing, if the procurement meets the definition; or
 - c. Sole Sourcing, if the procurement meets the definition.
- 4.5.d.7. In a Competitive Bidding procurement:
- a. The Manager of Procurement shall, in consultation with Service Area Staff, select the specific method of Competitive Bidding;
 - b. For a Medium Value Procurement, the methods available are the RFIQ, RFP, RFQ and RFT;
 - c. For a High Value Procurement, the methods available are the RFP and RFT; and
 - d. The City shall solicit Bids by means of an electronic or paper procurement document.
- 4.5.d.8. When the RFP method is employed, the Bid solicitation document will:
- a. Contain clear terms of reference, clear evaluation criteria and clear weightings for the criteria; and
 - b. Provide that the weighting for price will not be less than 10% of the total weighting of all criteria.
- 4.5.d.9. A Bid solicitation for Construction or Civil Works that is a High Value Procurement will require, in forms satisfactory to the City:
- a. A Bid Surety of at least 5% of the value;
 - b. A Performance Bond of at least 50% of the value; and
 - c. A Labour and Material Payment Bond of at least 50% of the value.
- 4.5.d.10. For Bid solicitations for Construction, the City may include in its terms and conditions standard precedent Specifications such as:
- a. The Ontario Provincial Standards Specifications for Civil Works, General Conditions of Contract;
 - b. CCDC Canadian Construction Documents Committee for Construction Contracts conditions;
 - c. The City's Supplementary General Conditions of Contract; or
 - d. The City's Linear Infrastructure Standards Standard Contract Specifications for Civil Works,
- all subject to necessary amendments for the particular circumstances.
- 4.5.d.11. When soliciting Bids in situations where the potential Bidders might include or involve Suppliers whose previous performance was unsatisfactory, the Bid solicitation documents will require each Bidder to disclose:
- a. Whether the Bidder's performance has ever been determined by the City to be unsatisfactory, and if so, the particulars;
 - b. Any change of the Bidder's name;
 - c. All the Bidder's proposed subcontractors;
 - d. If the Bidder is a corporation, all its directors and officers and, if the corporation is privately held, all its principal shareholders;
 - e. If the Bidder is a partnership, all its partners;
 - f. If the Bidder is a proprietorship, its proprietor;
 - g. All the Bidder's senior managers; and
 - h. All the Bidder's managers who might be involved with the supply of these Goods and/or Services to the City.
- 4.5.d.12. For every Competitive Bidding procurement that is a Medium Value Procurement or High Value Procurement, the Bid solicitation document will provide that all information will be public.

- 4.5.d.13. When the RFIQ method is employed, the Bid solicitation document may be provided to only those potential Bidders from whom Service Area Staff wish to solicit Bids.
- 4.5.d.14. When the City conducts an RFI process preliminary to an RFP or RFT process, it shall, when practical, advertise the RFI on the City's bids and tenders website.
- 4.5.d.15. Unless potential Bidders have been selected through an RFPQ process, the City shall advertise all RFPs and RFTs on the City's bids and tenders website so that the Competitive Bidding opportunities are accessible to all potentially interested Bidders.
- 4.5.d.16. Every Bid solicitation document will specify how all questions or comments about the Bid solicitation must be directed and in what format the questions are to be directed. The Bid solicitation document will also specify that no questions or comments from potential Bidders may be directed to members of Council.
- 4.5.d.17. In respect of Cooperative Purchasing, the City may:
- a. Join and participate in Cooperative Purchasing groups, including Cooperative Purchasing arrangements with other municipalities, agencies, boards and commissions;
 - b. Participate in Cooperative Purchasing Bid calls conducted by other members of the Cooperative Purchasing group; and
 - c. If allowed in the Bid solicitation document, tailgate or piggy back.
- 4.5.d.18. When the City participates in a Cooperative Purchasing Bid call conducted by another member of a Cooperative Purchasing group, the purchasing requirements, policies and procedures of that other member will prevail over this By-law to the extent of any conflict.

Step e. – Receiving and opening Bids

- 4.5.e.1. The City shall ordinarily receive Bids electronically, in its electronic bidding system.

Step f. – Taking Special Actions

- 4.5.f.1. The Manager of Procurement and Service Area Staff may jointly negotiate with one or more Bidders for a bargain better for the City if:
- a. Low Tied Bids have been received from Bidders that are Responsible Bidders and Responsive Bidders;
 - b. Only one Bid has been received;
 - c. All Bids received fail to meet the Specifications, and it would be impractical to re-issue the procurement process;
 - d. The lowest Bid from a Bidder that is a Responsible Bidder and a Responsive Bidder substantially exceeds the budgeted amount for the Goods and/or Services, or is excessive in total cost as compared to the usual cost for such Goods and/or Services; or
 - e. The subject matter of the negotiation is:
 - i. Improved revenue returns for advertising;
 - ii. Rebates, based on annual purchase value, from the Bidder or Bidders;
 - iii. Improved discounts for early payment of invoices by the City;
 - iv. The substitution of alternative Goods and/or Services offering equal or higher performance at lower costs;
 - v. A gain by way of barter, such as the reduction or elimination of charges for City services;

- vi. Better warranties for the City; or
- vii. The provision of extras at no charge to the City.

- 4.5.f.2. The Manager of Procurement may, with the approval of Service Area Staff, cancel a Competitive Bidding procurement, in whole or in part, if, in the opinion of the Manager of Procurement:
- a. The Competitive Bidding procurement document contains errors or omissions which would result in an unfair process if an Award was granted;
 - b. The Goods and/or Services are no longer needed;
 - c. Circumstances have changed and the procurement, in its current form, would be inappropriate;
 - d. The Competitive Bidding procurement has been compromised; or
 - e. All acceptable Bids received exceed either the budget for the acquisition or the fair market value of the Goods and/or Services.

Step g. –Recommending Successful Bids

- 4.5.g.1. The following table shows, for each type of Competitive Bidding procurement, who may recommend a successful Bid:

<u>Monetary Value of the Procurement</u>	<u>Procurement Process Used</u>	<u>Who Recommends the Successful Bid</u>
Medium Value Procurement	RFP	Service Area Evaluation Committee
	RFQ	Manager of Procurement
	RFT	Manager of Procurement
High Value Procurement	RFP	Service Area Evaluation Committee
	RFT	Manager of Procurement

- 4.5.g.2. In respect of each Competitive Bidding process other than an RFP procurement, the Lowest Compliant Bid will be recommended as the successful Bid in that process.
- 4.5.g.3. Unless the CAO, in consultation with the City’s Solicitor, has decided to the contrary, the City shall reject any Bid submitted by a Bidder who:
- a. Is an Opposing Party;
 - b. Proposes an Opposing Party as a subcontractor; or
 - c. Is not at arm’s length from an Opposing Party.
- 4.5.g.4. The City shall reject any Bid submitted by a Service Area in competition with external Bidders for the provision of Goods and/or Services.
- 4.5.g.5. Unless Council has decided to the contrary, the City shall reject any Bid submitted by:
- a. An officer, employee or member of Council of the City;

- b. A business of which an officer, employee or member of Council of the City is a director or officer; or
 - c. A person who is not at arm’s length from an officer, employee or member of Council of the City.
- 4.5.g.6. The City shall reject any Bid from a Bidder who expended time, money or effort on developing Specifications or otherwise to help define or create a requirement in the procurement.
- 4.5.g.7. If a Supplier’s performance in a prior procurement has been found to be unsatisfactory pursuant to the City’s Performance Evaluation Program, then the City shall, for a period of four years after such finding, reject any Bid from a Bidder who:
- a. Is that Supplier;
 - b. Proposes that Supplier as a subcontractor; or
 - c. Is not at arm’s length from that Supplier.
- 4.5.g.8. If the final performance evaluation of a Supplier under an existing Contract has not been completed when that Supplier’s Bid is being considered under a new procurement, then the City may consider such interim performance evaluations of that Supplier as are available under that existing Contract.
- 4.5.g.9. For the purposes of the foregoing sections, the Manager of Procurement may determine that a Bidder is not at arm’s length from an Opposing Party or a Supplier who previously performed unsatisfactorily if, in his/her opinion, there is a substantial connection between any of the directors, officers, shareholders, partners, proprietors, senior managers or relevant managers of the Bidder and any of the directors, officers, shareholders, partners, proprietors, senior managers or relevant managers of the said Opposing Party or Supplier. Upon making such a determination, the Manager of Procurement shall so notify the Bidder and shall advise the Bidder in writing that it may, within five days after receipt of such notification, request an appeal to the Dispute Committee, which shall decide whether the Bidder is at arm’s length from the said Opposing Party or Supplier.
- 4.5.g.10. The City shall reject Bids that are Non-compliant Bids.

Step h. – Approving Successful Bids

4.5.h.1. Before a Contract in respect of a recommended Competitive Bid can be offered, the Bid must be approved by all the applicable individuals or groups specified in the following table:

<u>Monetary Value of the Procurement</u>	<u>If the Procurement has an approved Council Budget</u>	<u>If the Procurement is a Development Project</u>	<u>If the Procurement does not have an approved Council Budget</u>
Medium Value Procurement	Service Area Staff, plus either the Service Area Manager, GM, the Deputy CAO, or the CAO	Service Area Staff, plus either the Service Area GM, the Deputy CAO, or the CAO	Either the, Deputy CAO, or CAO, plus Council

High Value Procurement	Treasurer, plus either the GM Service Area GM, Deputy CAO, or CAO	Either the Service Area GM, Deputy CAO, or CAO plus the Treasurer	Either the Deputy CAO, or CAO plus the Treasurer and Council
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4.5.h.2. Before a Contract in respect of a recommended Single Sourcing Bid or Sole Sourcing Bid can be offered, the Bid must be approved by the Treasurer and either the Service Area GM or the Deputy CAO or CAO.

4.5.h.3. Before a Contract in respect of a Pilot Project, where, if the Pilot Project proves successful, the City will be paying for the Goods and/or Services, can be offered, the bid must be approved by Council.

4.5.h.4. The CAO may approve a Bid on behalf of Council in the following situation:

- a. The Bid requires Council approval during a period when Council is in recess, Council meetings are suspended or Council is otherwise unable to act;
- b. No challenges have been made to the Bid solicitation process; and
- c. The recommended Bid is the lowest compliant Bid from a Bidder that is a Responsible Bidder and a Responsive Bidder, or is the Bid from the Bidder who is the highest-evaluated Responsible Bidder and Responsive Bidder.

As soon as reasonably possible after such an approval, the CAO shall provide to Council a written report of the particulars of the Bid approval.

Step i. – Managing Contracts

4.5.i.1. The Mayor and City Clerk are authorized to sign and seal all Contracts and other documents relating to Awards granted pursuant to this By-law. Despite this general authority, specific City staff may sign Contracts and other documents as authorized by this By-law.

4.5.i.2. The Manager of Procurement shall purchase Goods and/or Services pursuant to Contracts entered into pursuant to this By-law.

4.5.i.3. Service Area Staff may purchase Goods and/or Services in accordance with the Purchasing Card procedures.

4.5.i.4. The City may proactively manage the performance of a Supplier, during the Supplier’s provision of Goods and/or Services, by evaluating the Supplier’s performance and, if the Supplier’s performance is unsatisfactory, may:

- a. Request the Supplier to correct its unsatisfactory performance;
- b. Extend the Supplier’s contract for up to two years, in order to give the Supplier time to correct deficiencies in performance;
- c. Terminate the Supplier’s Contract; and/or
- d. Take other action, in the City’s best interest.

4.5.i.5. Typically, the City shall not pay for Goods and/or Services prior to receiving them, such as by way of deposit or advance payment. However, the Manager of Procurement may authorize exceptions to this.

PART V – GENERAL

5.1 The Schedules to this By-law form part of this By-law.

- 5.2 By-law Number (2014) – 19771 is hereby repealed.
- 5.3
- 5.4
- 5.5 This By-law will be referred to as the "Procurement By-law".

Passed this day of , 2018.

Cam Guthrie – Mayor

Stephen O’Brien – City Clerk

Schedule "A"

REASONS FOR SINGLE SOURCING

(Referred to in the definition of "Single Sourcing")

1. An attempt to acquire the Goods and/or Services by use of the Competitive Bidding process has already been made in good faith, but has failed to identify a willing, capable and compliant Supplier;
2. It would not be in the public interest to use the Competitive Bidding process because of the confidential nature of the procurement;
3. The selected Supplier is another public body, and it would be advantageous to the City to acquire the Goods and/or Services from another public body;
4. The procurement relates to Goods and those Goods are purchased on a commodity market;
5. The Goods and/or Services include Construction, renovations, repairs or maintenance in respect of a building leased by the City from a landlord, and those Goods and/or Services may only be provided by the landlord in accordance with the lease;
6. The Goods and/or Services can be purchased under circumstances which are exceptionally advantageous to the City, such as in the case of a bankruptcy or receivership;
7. An outside party is funding, or substantially funding, the acquisition, and has selected the Supplier, and the provisions relating to the acquisition are acceptable to the City;
8. The Goods and/or Services must be compatible with, or must maintain and support, a City standard, and:
 - a. No reasonable alternatives, substitutes or accommodations exist, and/or
 - b. The Goods and/or Services must not violate warranties and/or guarantees;
9. The procurement relates to Services, and the Services are sought from instructors, coaches, or trainers for recreation programs and the Services are not readily suitable for Competitive Bidding;
10. An existing agreement for the purchase of Goods and/or Services has expired or is about to expire, and the City would benefit from extending that agreement, rather than commencing a new competitive bidding process, because:
 - a. The City requires time to begin and proceed with a comprehensive and accurate Competitive Bidding process,
 - b. The City requires time to fulfill all its obligations, such as making final payments, under the existing agreement for the Goods and/or Services, or
 - c. The market conditions, such as timing and Specifications, are in flux;
11. Funding and project completion timelines imposed by senior government programs would not allow sufficient time for a Competitive Bidding process; and/or
12. The Goods and/or Services available from the selected Supplier would be compatible with existing Goods and/or Services or City facilities, and such compatibility is a paramount consideration.

Schedule "B"

REASONS FOR SOLE SOURCING

(Referred to in the definition of "Sole Sourcing")

1. A statutory monopoly;
2. A market-based monopoly;
3. Exclusive rights, such as patent, copyright or licence;
4. A supply of the Goods and/or Services despite scarcity of supply in the marketplace; and/or
5. The required Goods and/or Services comprise a grouping which is only available, as a complete grouping, from the sole Supplier, and no alternative or substitute grouping exists.

Schedule "C"

ITEMS EXEMPT FROM COMPETITIVE BIDDING

(Referred to in the Guiding Principle re Competitive Bidding)

The following items are excluded from the requirements of this By-law for Competitive Bidding, although all other applicable provisions of this By-law will apply:

1. Training and education Goods and/or Services:
 - a. Conferences, conventions, courses and seminars,
 - b. Books, magazines, periodicals and subscriptions, and
 - c. Trade, professional or corporate memberships, licenses and registrations;
2. Utilities Goods and/or Services:
 - a. Water and sewer,
 - b. Electricity,
 - c. Natural gas, and
 - d. Telephone;
3. Professional Goods and/or Services:
 - a. Medical, laboratory and pharmacy,
 - b. Legal and witness,
 - c. Audit, and
 - d. Insurance;
4. Real estate Goods and/or Services:
 - a. All interests in land,
 - b. All licences and other rights relating to land, and
 - c. All leasehold improvements associated with leases;
5. Goods and/or Services from governments and governmental agencies:
 - a. Licences (e.g. vehicles),
 - b. Permits, permissions, approvals, and
 - c. Postage;
6. Goods and/or Services requiring special payments:
 - a. Refundable employee expense payments (e.g. advances, meal allowances, travel, entertainment, misc.),
 - b. General employer expense payments (e.g. reimbursed employee expenses, payroll remittances, medical expenses, payment for employment),
 - c. Grant payments,
 - d. Goods and/or Services obtained pursuant to Community Benefit Agreements with non-profit parties,
 - e. Honorarium payments,
 - f. Damage claim payments,
 - g. Petty cash replenishment payments,
 - h. Tax payments,
 - i. Refund payments (e.g. reimbursement of tax/fee/charge overpayments), and
 - j. Goods and/or Services payments for Performing Artist
7. Advertising of City news in a local print newspaper;
8. Waste and recyclable materials procured for the purpose of selling; and
9. Goods and/or Services specifically excluded by Council, the CAO or the Manager of Procurement.

Schedule "D"

STATEMENT OF ETHICS

(Referred to in the Guiding Principle re Ethics)

The Ontario Public Buyers Association's Code of Ethics is based upon the following tenets and members of OPBA attempt to consistently practice their profession and deal with their day-to-day responsibilities according to these principles. Members are encouraged to display this statement in their Service Areas as well as in other locations in their agencies.

1. OPEN AND HONEST DEALINGS WITH EVERYONE WHO IS INVOLVED IN THE PURCHASING PROCESS – This includes all businesses with which this agency contracts or from which it purchases goods and services, as well as all members of our staff and of the public who utilize the services of the purchasing Service Area.

2. FAIR AND IMPARTIAL AWARD RECOMMENDATIONS FOR ALL CONTRACTS AND TENDERS – This means that we do not extend preferential treatment to any vendor, including local companies. Not only is it against the law, it is not good business practice, since it limits fair and open competition for all vendors and is therefore a detriment to obtaining the best possible value for each tax dollar.

3. AN IRREPROACHABLE STANDARD OF PERSONAL INTEGRITY ON THE PART OF ALL THOSE DESIGNATED AS PURCHASING AGENTS FOR THIS AGENCY – Absolutely no gifts or favors are accepted by the purchasing agents of this agency in return for business or the consideration of business. Also, the purchasing agents of this agency do not publicly endorse one company in order to give that company an advantage over others.

4. COOPERATION WITH OTHER PUBLIC AGENCIES IN ORDER TO OBTAIN THE BEST POSSIBLE VALUE FOR EVERY TAX DOLLAR – This agency is a member of a cooperative purchasing group. Made up of several public agencies, this group pools its expertise and resources in order to practice good value analysis and to purchase goods and services in volume and save tax dollars.

5. CONTINUOUS DEVELOPMENT OF PURCHASING SKILLS AND KNOWLEDGE – All members of the purchasing Service Area of this agency take advantage of the many opportunities provided by the Ontario Public Buyers Association to further their knowledge of good public purchasing principles and to maintain excellent skills.

Schedule "E"

PROCUREMENT PROCESS PROCEDURES

(Referred to in the introduction to the Procurement Process Policies)

The particulars of the procedures are as follows:

Step a. – Assessing Needs for Goods and/or Services

- E.a.1 The Manager of Procurement and Service Area Staff shall establish documents, necessary for the procurement process, that are, to the extent possible, standardized as to form and content.
- E.a.2. The Manager of Procurement and Service Area Staff shall ensure that, whenever possible and economically feasible, Specifications provide for consideration of Environmentally Responsible Goods and/or Services.

Step b. – Exploring the Marketplace

- E.b.1. The City may employ the RFPQ process to determine Bidders qualified to bid on Goods and/or Services if:
 - a. The Goods and/or Services are "high risk" pursuant to regulations under the *Occupational Health and Safety Act*, R.S.O. 1990, c. O.1;
 - b. The value and complexity of the Goods and/or Services are such that Contract administration costs (for work inspection, follow up, delay, extra fee negotiations, etc.) would result in substantial additional costs and/or losses to the City if the Goods and/or Services provided were unsatisfactory;
 - c. The Goods and/or Services must meet fundamental, mandatory, recognized standards of the federal government, the provincial government or the City;
 - d. Provision of the Goods and/or Services requires stipulated performance and experience levels;
 - e. Provision of the Goods and/or Services requires elements of confidentiality and/or security; or
 - f. The Manager of Procurement determines that pre-qualification is appropriate.
- E.b.2. When the RFPQ process is employed:
 - a. The Manager of Procurement shall provide Service Area Staff with valuation guidelines;
 - b. The pre-qualification document provided to potential respondents will outline the criteria and weighting to be considered in the pre-qualification, and the scope of the Goods and/or Services for the envisioned ensuing procurement process;
 - c. If fewer than two respondents survive the pre-qualification process, the City may cancel and re-issue the RFPQ; and
 - d. Selection of a respondent as pre-qualified will not create any contractual obligation between the City and that pre-qualified respondent.

Step c. – Monitoring Fairness

- E.c.1. In determining whether a Fairness Monitor is required for a particular procurement, the Deputy CAO and the consulted staff shall consider the following characteristics of the procurement:
 - a. Whether the procurement will have a high value;
 - b. Whether the procurement may be complex;

- c. Whether the procurement is in respect of a high risk project;
- d. Whether an innovative form of procurement is being proposed;
- e. Whether the Goods and/or Services comprise new technologies, such as waste management or information systems;
- f. Whether the Goods and/or Services have previously been supplied by a long-term incumbent;
- g. Whether the Goods and/or Services involve development or new use or operation of a significant public site, facility or property;
- h. Whether the procurement represents an anticipated high profile and controversial project;
- i. Whether there may be pressure to select the winning Bid based on low price regardless of evaluations of other factors; and
- j. Whether a public-private partnership, which may be complex or controversial, may be involved.

E.c.2. The Fairness Monitor, if appointed in respect of a specific procurement, shall, in respect of that procurement:

- a. Carry out the duties specified in his/her engagement letter;
- b. Monitor whether:
 - i. The advertised procurement procedure is followed;
 - ii. All Bidders are treated equally during the procurement; and
 - iii. All procedural problems, including conflicts of interest, are identified and, if possible, cured in a manner that does not prejudice any Bidders;
- c. Focus on the fairness of the process described in the Bid solicitation document, rather than on the fairness of the result (such as whether the City obtained the "right" Goods and/or Services);
- d. During his/her engagement, work with relevant City staff;
- e. Be ultimately accountable to Council through the Audit Committee;
- f. Prior to each key decision or action in the procurement, meet with the individual or group who will be making such key decision or taking such key action, with a view to:
 - i. Receiving information updates;
 - ii. Reviewing documents relating to the procurement;
 - iii. Asking any questions that he/she deems necessary to test the logic, fairness and merit behind such key decision or action;
 - iv. Providing advice and perspective on requests from prospective and actual Bidders; and
 - v. Reporting on whether he/she is satisfied that the actions and decisions are fair, reasonable and consistent with the procurement process described in the Bid solicitation and whether those actions and decisions have been reasonably implemented and materially complied with;
- g. In any case of a difference of opinion between himself/herself and relevant City staff regarding any aspect of his/her mandate as described in the engagement letter or this By-law, liaise with the Chair of the Audit Committee to try to resolve the matter;
- h. At the completion of his/her engagement, unless specifically provided to the contrary in the engagement letter, provide the City, through the Chair of the Audit Committee, with a full, written, public report summarizing his/her activities, findings and opinions on the fairness of the procurement; and
- i. If requested by the City, respond to public and media inquiries in relation to his/her report.

Step d. – Soliciting Bids

- E.d.1. Each Bid solicitation document will provide that:
- a. The City will ordinarily accept only Bids submitted by electronic means, and only from Bidders who have created vendor accounts on the City's electronic bidding system; and
 - b. The City reserves the right, in case of problems with its electronic bidding system, to change, at any time, to a paper-based bidding system.
- E.d.2. If the City will be evaluating performance in a particular procurement, then the Bid solicitation documents for that procurement will clearly state that performance will be evaluated in accordance with the City's Performance Evaluation Program.
- E.d.3. If a procurement will include evaluation of whether the Goods and/or Services are Environmentally Responsible Goods and/or Services, then Service Area Staff shall ensure that the Bid solicitation document clearly brings such inclusion to the attention of potential Bidders.
- E.d.4. For a procurement employing the RFIQ method:
- a. Service Area Staff shall prepare the Bid solicitation document;
 - b. The Bid solicitation document will include at least a price schedule;
 - c. The Bid solicitation document will specify whether the City will accept emailed, faxed or written Bids in sealed envelopes, or any combination of such forms of Bids;
 - d. Service Area Staff may advertise the Bid solicitation in media selected by Service Area Staff;
 - e. Service Area Staff shall select at least three specific potential Bidders to receive the Bid solicitation document; and
 - f. Service Area Staff shall distribute the Bid solicitation document.
- E.d.5. For a procurement employing the RFQ method:
- a. The Manager of Procurement shall prepare the Bid solicitation document and Service Area Staff shall provide the technical particulars;
 - b. The Goods and/or Services will be adequately and generically defined, including by means of clear Specifications, in the Bid solicitation document, so as to permit direct comparison of Bids;
 - c. If potential Bidders have already been selected through an RFPQ process, then no advertising is required and Bid solicitations may be provided to only such pre-qualified potential Bidders;
 - d. If potential Bidders have not been selected through an RFPQ process, then Service Area Staff may advertise the Bid solicitation in media selected by Service Area Staff;
 - e. If potential Bidders have not been selected through an RFPQ process, and the Bid solicitation has not been advertised, then the Manager of Procurement, in consultation with Service Area Staff, shall select at least three specific potential Bidders to receive the Bid solicitation;
 - f. The Manager of Procurement shall send the Bid solicitation document to any selected potential Bidders; and
 - g. Bidding will be by means of written Bids submitted on the Quotation documents provided.
- E.d.6. For a procurement employing the RFP method:
- a. The Manager of Procurement shall prepare the Bid solicitation document with technical assistance from Service Area Staff;

- b. The Goods and/or Services will be adequately and generically defined, including by means of clear Specifications, in the Bid solicitation document, so as to permit direct comparison of Bids;
- c. The Bid solicitation document will provide that selection of the successful Bid will be by means of the ranking of the proposed solution on the stated criteria;
- d. The criteria upon which selection will be based may include, but are not limited to:
 - i. Qualifications of Bidder;
 - ii. Experience of Bidder;
 - iii. References for Bidder;
 - iv. Health and safety practices of Bidder; and
 - v. Price;
- e. If potential Bidders have already been selected through an RFPQ process, then no advertising is required and Bid solicitations may be provided to only such pre-qualified potential Bidders; and
- f. Bidding will be by means of electronic submission through the City's website.

E.d.7. For a procurement employing the RFT method:

- a. The Manager of Procurement shall prepare the Bid solicitation document with technical assistance from Service Area Staff;
- b. The Goods and/or Services will be adequately and generically defined, including by means of clear Specifications and/or criteria, in the Bid solicitation document, so as to permit direct comparison of Bids;
- c. If potential Bidders have already been selected through an RFPQ process, then no advertising is required and Bid solicitations may be provided to only such pre-qualified potential Bidders; and
- d. Bidding will be by means of electronic submission through the City's website.

Step e. – Receiving and opening Bids

- E.e.1. The City receives Bids in Competitive Bidding procurements directly into the City's electronic bidding system and leaves them sealed until the closing date and time indicated in the electronic bidding system.
- E.e.2. The opening of bids will consist of publishing on the City's bids and tenders website the names of the Bidders that have provided a submission and the price that was submitted, with the exception of the RFP process in which case only the names of the bidders that have supplied a proposal to the RFP call will be published. These unofficial results will be posted online no later than 24hours after the closing date and time published on the bids and tenders website.
- E.e.3. The Manager of Procurement confirms the mandatory procurement requirements are met and forwards those submissions that have met the mandatory procurement requirements to the Service Area Staff for review.

Step f. – Taking Special Actions

- E.f.1. If a negotiation will be employed, then the Manager of Procurement and Service Area Staff shall agree on the negotiation strategy to be employed, even if only one of them directly negotiates with the Bidder or Bidders.

Step g. –Recommending Successful Bids

- E.g.1. Before initial recommendation of a successful Bid, Service Area Staff shall:
- a. Identify the account from which the purchase funds will eventually be taken;
 - b. Ensure that there are (or will be) sufficient funds available in the identified account; and
 - c. If applicable, identify the budget provision for the purchase.
- E.g.2. If the Specifications in a Bid solicitation provide that the Goods and/or Services will be evaluated on the extent to which they are Environmentally Responsible Goods and Services, then Service Area Staff shall ensure that the analysis of Bids actually includes an analysis of such extent.
- E.g.3. In respect of each RFP, RFQ and RFT procurement:
- a. The Manager of Procurement shall review and analyze each Bid and determine whether it complies with all the mandatory requirements of the procurement and shall notify Service Area Staff of his/her determination;
 - b. In reviewing and analyzing each Bid, the Manager of Procurement shall determine what action should be taken in the case of any Bid irregularity;
 - c. For any Bid irregularity listed in the table of Bid Irregularities below, the action indicated therein will be taken; and
 - d. For any minor irregularity not listed in the table of Bid Irregularities below, the Manager of Procurement shall consult with Service Area Staff and decide whether the Bid should be accepted or the Bidder should be requested to rectify the minor irregularity.

Bid Irregularities

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>ACTION FOR PAPER BIDDING</u>	<u>ACTION FOR ELECTRONIC BIDDING</u>
1.	Bid receipt: a. Bid late by any amount of time	Automatic rejection	Automatic rejection. Electronic bidding system will not accept late Bid submissions
	b. Bid envelope unsealed	Automatic rejection	N/A
	c. Proper response envelope or label not used	Acceptable if envelope received on time nonetheless	N/A
	d. Multiple Bids from same Bidder, not identified as alternative or optional Bids and not subsequently the subject of withdrawal notices	Bid bearing the most recent date/time stamp considered the intended submission, and older Bids considered withdrawn and to be returned to Bidder	N/A
2.	Contents of envelope: a. No Bid submission document b. No Bid Surety (if required)	Automatic rejection	N/A
	c. Bid submission	Rejection unless	N/A

	document other than that provided in Bid solicitation document	specified otherwise in the Bid solicitation document	
3.	<p>Bid Bond:</p> <ul style="list-style-type: none"> a. Corporate seal or signature missing b. Bonding company not licensed to carry on bonding business in Ontario c. Bid Bond not in effect for duration required in Bid solicitation documents d. Monetary amount lower than required 	Automatic rejection	Automatic rejection
4.	<p>Irrevocable Stand-by Letter of Credit:</p> <ul style="list-style-type: none"> a. Signature of bank/credit union missing b. Bank/credit union not authorized by City policy c. Monetary amount lower than required 	Automatic rejection	Automatic rejection
5.	<p>Certified cheque:</p> <ul style="list-style-type: none"> a. Cheque not certified b. Monetary amount lower than required 	Automatic rejection	N/A
6.	<p>Agreement to bond:</p> <ul style="list-style-type: none"> a. Corporate seal or signature missing b. Bonding company not licensed to carry on bonding business in Ontario c. Agreement to bond not in effect for required duration d. Monetary amount lower than required 	Automatic rejection	Automatic rejection
7.	<p>Bid submission document:</p> <ul style="list-style-type: none"> a. Pricing page(s) missing 	Automatic rejection	N/A
	<ul style="list-style-type: none"> b. Bid not signed 	Automatic rejection	Automatic rejection. Electronic bidding system will not accept Bids unless the Bidder has checked a box confirming authority to submit the Bid on behalf of the Bidder
	<ul style="list-style-type: none"> c. Bid completed in pencil or any other erasable/modifiable 	Automatic rejection	N/A

	medium		
	d. Bid not legible	Automatic rejection	N/A
	e. Where a corporate Bidder, no proof of authority to bind the corporation	Automatic rejection	Automatic rejection. Electronic bidding system will not accept Bids unless the Bidder has checked a box confirming authority to submit the Bid on behalf of the Bidder
	f. City unable to verify Digital Bond(s)	N/A	Automatic rejection
	g. Part Bid (not all items bid)	Acceptable unless Bid submission document requires complete Bid	Acceptable unless Bid submission document requires complete Bid
	h. Un-initialed strikeouts, erasures, whiteouts or overwrites to price(s) or schedule of prices.	Automatic rejection	N/A
	i. Un-initialed strikeouts, erasures, whiteouts or overwrites to minor portion of Bid submission document (e.g. Bidder's address)	Bidder to have 3 business days to correct and initial; City reserves right to waive initialing and accept Bid	N/A
	j. Alternate item bid in whole or in part	Rejection unless Bid solicitation document permits alternate Bid	N/A
	k. Minor mathematical error (e.g. inconsistency with unit prices)	Bidder to have 3 business days to correct and initial (e.g. showing unit price to govern)	N/A
	l. Bid submission document form not entirely completed	Rejection unless Manager of Procurement determines that the missing information is minor and would not adversely affect an award decision	N/A
	m. Any addendum not acknowledged	Automatic rejection	Automatic rejection. Electronic bidding system will not accept Bids unless the Bidder has checked a box confirming all addenda
	n. Bidder did not attend mandatory site meeting	Automatic rejection	Automatic rejection

E.g.4. In respect of each RFP procurement:

- a. Service Area Staff shall select a Service Area Evaluation Committee; and
- b. The Service Area Evaluation Committee shall review and analyze the Bids and select and recommend the highest ranking Bid that best meets the evaluation criteria and comes from a Responsible and Responsive Bidder.

Step h. – Approving Successful Bids

E.h.1. When Council approval of a successful Bid is not required in a Medium Value Procurement, the applicable City staff shall apply the following procedure:

- a. Service Area Staff shall prepare a Purchase Requisition for the Goods and Services;
- b. If the RFIQ method was employed in the procurement, then Service Area Staff shall also scan and attach to the Purchase Requisition an electronic copy of all applicable quotations;
- c. Purchasing staff will forward the submission summary document to Service Area Staff who shall sign and return it, with the appropriate approval, for approval by the Manager of Procurement;
- d. Once the final approved submission summary document is received by the Manager of Procurement, he or she shall ensure that the successful Bidder is notified, requesting the required contractual documents, and the Service Area Staff shall initiate preparation of the Contract;
- e. Service Area Staff shall prepare and submit the Purchase Requisition, with any required documentation if applicable, to a member of the Service Area Staff with the appropriate approval authority, for approval;
- f. Upon such approval, Service Area staff shall submit the Purchase Requisition, with any required documentation if applicable, to the Manager of Procurement;
- g. If the Purchase Requisition, all required applicable documentation, and proper signing authority are satisfactory, the Manager of Procurement shall approve the Purchase Requisition and issue a Purchase Order;
- h. The Manager of Procurement may not approve the Purchase Requisition until all required documentation, if applicable, and proper signing authority is provided.

E.h.2. When Council approval of a successful Bid is not required in a High Value Procurement, the applicable City staff shall apply the following procedure:

- a. Service Area Staff shall prepare a Staff Award Memo for the Goods and/or Services;
- b. The Service Area Staff shall attach an approved funding summary to the Staff Award Memo;
- c. The Service Area Staff shall obtain approval and signature of the Service Area GM for the Staff Award Memo package;
- d. Service Area Staff shall forward the signed Staff Award Memo to the Manager of Procurement;
- e. The Manager of Procurement shall obtain the approval and signature of the Treasurer;
- f. The Manager of Procurement shall return the signed Staff Award Memo to the Service Area Staff for the approval and signature of the Deputy CAO, unless the Service Area GM who had previously signed the Staff Award Memo was the Deputy CAO's Designate;

- g. The Deputy CAO or the Manager of Procurement (whoever was the last approver) shall return the completed Staff Award Memo to the Service Area Staff;
 - h. The Service Area Staff shall distribute the Staff Award Memo to all staff listed on the Staff Award Memo;
 - i. Once the final approved Staff Award Memo is received by the Manager of Procurement, he or she shall ensure that the successful Bidder is notified, requesting the required contractual documents, and the Service Area Staff shall initiate preparation of the Contract;
 - j. Service Area Staff shall prepare a Purchase Requisition for the Goods and/or Services, indicating the procurement document number; and
 - k. Service Area Staff shall submit the Purchase Requisition, and shall attach to the Purchase Requisition an electronic copy of any required documentation (such as the Staff Award Memo and Contract), to the Manager of Procurement for the issuance of a Purchase Order.
- E.h.3. When Council approval of a successful Bid is required, the following procedure shall apply:
- a. Service Area Staff shall prepare a Council Award Memo and submit it to the Deputy CAO for Council approval of the acquisition of the Goods and/or Services; and
 - b. Once the final approved Council Award Memo is received by the Manager of Procurement, he or she shall ensure that the successful Bidder is notified, requesting the required contractual documents, and the Service Area Staff shall initiate preparation of the Contract;
 - c. Upon obtaining Council approval, Service Area Staff shall prepare a Purchase Requisition and shall attach to the Purchase Requisition an electronic copy of the executed Council Award Memo and the Council resolution; Service Area Staff shall then submit this package to the Manager of Procurement for issuance of a Purchase Order.
- E.h.4. When a change order is required in Competitive Bidding procurement, increasing the current dollar amount of the corresponding Contract, the City shall carry out the following procedure:
- a. For a High Value Procurement, any change to the Contract value that isn't included in the contingency funds, if applicable as noted in the initial Award Memo, would require a reissue of the Award Memo to reflect the change, provided that the increase is 10% or greater of the Contract value;
 - b. For a Medium Value Procurement, once the Contract value exceeds \$100,000 an Award Memo must be generated; and
 - c. For a Low Value Procurement, once the Contract value exceeds \$20,000 a Single Source or Sole Source Memo must be generated.
- E.h.5. When a change order is required in a Single Sourcing procurement or a Sole Sourcing procurement, increasing the current dollar amount of a Contract, the City shall reissue the Single Source Memo or Sole Source Memo (as applicable) reflecting the change.

Step i. – Managing Contracts

- E.i.1. The Manager of Procurement shall determine for which Bid solicitations the Contract shall comprise:
- a. A Purchase Order;
 - b. A Purchase Order incorporating a written agreement; or
 - c. A written agreement.
- E.i.2. If the City will be evaluating performance in a particular procurement, then:

- a. Throughout the provision and use of the Goods and/or Services, Service Area Staff shall identify, record in writing, and report to the Supplier in writing, every aspect of substandard performance;
 - b. Service Area Staff shall complete performance evaluation forms and provide copies, in writing to the Supplier:
 - i. During the provision of the Goods and/or Services, at the frequency established in advance,
 - ii. During the provision of the Goods and/or Services, on occasions beyond the established frequency if a problem arises,
 - iii. At the end of the period during which the Goods and/or Services are provided, and
 - iv. After completion of the provision of the Goods and/or Services, if a problem arises;
 - c. If possible, the City shall give the Supplier a reasonable opportunity to cure any unsatisfactory performance by conducting an interim performance evaluation of the Supplier;
 - d. After substantial completion of the provision and use of the Goods and/or Services and any opportunity for curing unsatisfactory performance, Service Area Staff shall make a final performance evaluation as to whether the Supplier's performance was satisfactory or unsatisfactory in this particular procurement, complete the performance evaluation form and provide a copy to the Supplier; and
 - e. The Supplier may request an appeal of its final evaluation within ten days after receiving it.
- E.i.3. If a Supplier requests an appeal of its final evaluation, the appeal shall be heard by the Dispute Committee and the Dispute Committee shall decide whether the Supplier's performance was satisfactory or unsatisfactory.
- E.i.4. When an appeal is made to the Dispute Committee, the Dispute Committee shall:
- a. Comprise, at a minimum, the Manager of Procurement, the Project Manager, the manager of the Project Manager and any additional team members selected by the Dispute Committee as required;
 - b. Have a quorum of three of the members;
 - c. Appoint in writing a time and place for the hearing of the appeal;
 - d. Hear from both the Supplier and the City;
 - e. Rely on information relating to the particular procurement, as well as information relating to such other procurements as it considers relevant; and
 - f. Render a written decision, with reasons, copied to both the Supplier and the City, which decision will be final.

Schedule "F"

PERFORMANCE EVALUATION OF SUPPLIERS – OBLIGATIONS OF CITY STAFF*

(Referred to in the introduction to the Procurement Process Policies)

General Preparation

1. If called on by the Manager of Procurement, help him/her establish standard performance evaluation criteria and a standard performance evaluation form for evaluating the performance of Suppliers who provide applicable types of Goods and/or Services.

Preparation for a Specific Procurement

2. If called on by the Manager of Procurement, help him/her decide whether Supplier performance will be evaluated for a specific procurement, even though that specific procurement falls in a class of procurements that don't ordinarily require performance evaluations.
3. If the City will be evaluating Supplier performance in a specific procurement, be sure that the Bid solicitation documents for that procurement posted on the City's Bids and Tenders website include:
 - a. A clear statement that performance of the successful Supplier will be evaluated in accordance with the City's Performance Evaluation Program;
 - b. The performance evaluation criteria that will be used; and
 - c. The performance evaluation form that will be used.

Evaluating Performance during a Specific Contract

4. In a Contract where the Supplier's performance is being evaluated, be careful, throughout the provision and use of the Goods and/or Services, to:
 - a. Identify every aspect of substandard performance;
 - b. Record it in writing;
 - c. Report it to the Supplier in writing; and
 - d. Complete a performance evaluation form and provide a copy to the Supplier at the frequency established in advance, but also each time a problem arises.

If the Supplier's Performance is unsatisfactory

5. If the Supplier's performance is unsatisfactory:
 - a. Request the Supplier to correct its unsatisfactory performance;
 - b. Give the Supplier a reasonable opportunity to cure the unsatisfactory performance;
 - c. If appropriate, extend the Supplier's contract for up to two years, in order to give the Supplier time to correct the deficiencies in performance;
 - d. If appropriate, terminate the Supplier's Contract; and/or
 - e. If appropriate, take other action, in the City's best interest.

Evaluating the Supplier's Performance after a Contract is complete

6. After substantial completion of the provision and use of the Goods and/or Services under a Contract:
 - a. Make a final performance evaluation as to whether the Supplier's performance was satisfactory or unsatisfactory in this particular Contract;

- b. Complete the final performance evaluation form; and
- c. Provide a copy to the Supplier.

*For actual wordings please consult the full By-law.

Schedule "G"

PERFORMANCE EVALUATION OF SUPPLIERS – OUTLINE FOR POTENTIAL BIDDERS*

(Referred to in the introduction to the Procurement Process Policies)

Purpose of Program

1. The City carries out a Performance Evaluation Program that assists it to improve the performance of Suppliers awarded Contracts. The Program involves evaluating the performance of successful Bidders carrying out Contracts. This helps the City to avoid entering future Contracts with Suppliers whose performance has previously been unsatisfactory.

Advance Notice that Performance Evaluation will be part of a Procurement

2. If the City will be evaluating performance in a particular procurement, then:
 - a. The Bid solicitation documents for that procurement will clearly state that performance will be evaluated in accordance with the City's Performance Evaluation Program;
 - b. The City will post the evaluation criteria and the evaluation form on the City's Bids and Tenders website; and
 - c. The City will require the following extra information from each Bidder:
 - i. Whether the Bidder's performance has ever been determined by the City to be unsatisfactory, and if so, the particulars,
 - ii. Any change of the Bidder's name,
 - iii. All the Bidder's proposed subcontractors,
 - iv. If the Bidder is a corporation, all its directors and officers and, if the corporation is privately held, all its principal shareholders,
 - v. If the Bidder is a partnership, all its partners,
 - vi. If the Bidder is a proprietorship, its proprietor,
 - vii. All the Bidder's senior managers, and
 - viii. All the Bidder's managers who might be involved with the supply of these Goods and/or Services to the City.

How Performance is evaluated

3. If the City is evaluating performance in a Contract, then:
 - a. Throughout the provision and use of the Goods and/or Services, City Staff will identify, record, and report to the Supplier, in writing, every aspect of substandard performance;
 - b. City Staff will fill out performance evaluation forms and provide copies to the Supplier at the following times:
 - i. During the provision of the Goods and/or Services, at the frequency established in advance,
 - ii. During the provision of the Goods and/or Services, on occasions beyond the established frequency if a problem arises,
 - iii. At the end of the period during which the Goods and/or Services are provided, and
 - iv. After completion of the provision of the Goods and/or Services, if a problem arises;

- c. If possible, the City will give the Supplier a reasonable opportunity to cure any unsatisfactory performance by conducting interim performance evaluations of the Supplier;
- d. After substantial completion of the Contract and any opportunity for curing unsatisfactory performance, City Staff will make a final performance evaluation as to whether the Supplier's performance was satisfactory or unsatisfactory in this particular Contract, will fill out the final performance evaluation form and will provide a copy to the Supplier; and
- e. The Supplier may request an appeal of its final evaluation within ten days after receiving it.

Penalties for unsatisfactory Performance during a Contract

- 4. If a Supplier's performance is unsatisfactory during a Contract, the City may:
 - a. Request the Supplier to correct its unsatisfactory performance;
 - b. Extend the Supplier's contract for up to two years, in order to give the Supplier time to correct deficiencies in its performance;
 - c. Terminate the Supplier's Contract; and/or
 - d. Take other action, in the City's best interest.

Penalties for unsatisfactory performance after a Contract has ended

- 5. If a Supplier's performance in a prior Contract has been found to be unsatisfactory under the City's Performance Evaluation Program, then the City will, for a period of four years after that finding, reject any Bid from a Bidder who:
 - a. Is that Supplier;
 - b. Proposes that Supplier as a subcontractor; or
 - c. Is not at arm's length from that Supplier.
- 6. If the City is considering a Bid from a Bidder whose final performance evaluation under a previous Contract has not yet been completed, the City may consider any interim performance evaluations of that Bidder that are available under that previous Contract.
- 7. A Bidder is not at arm's length from a Supplier who previously performed unsatisfactorily if there is a substantial connection between any of the directors, officers, shareholders, partners, proprietors, senior managers or relevant managers of the Bidder and any of the directors, officers, shareholders, partners, proprietors, senior managers or relevant managers of the previous Supplier. If the City determines that a Bidder is not at arm's length from a previous unsatisfactory Supplier, the City will advise the Bidder in writing that it may, within five days after receipt of that notification, request an appeal to the Dispute Committee. The Dispute Committee will decide whether the Bidder is at arm's length from the previous Supplier or not.

Appeal

- 8. If a Supplier requests an appeal of its final evaluation, the appeal will be heard by the City's Dispute Committee and the Dispute Committee will decide whether the Supplier's performance was satisfactory or unsatisfactory.
The Dispute Committee will:
 - a. Have a quorum of three members;
 - b. Appoint in writing a time and place for the hearing of the appeal;

- c. Hear from both the Supplier and the City;
- d. Rely on information relating to the particular Contract, as well as information relating to such other Contracts as it considers relevant; and
- e. Render a written decision, with reasons, copied to both the Supplier and the City, which decision will be final.

*For actual wordings please consult the full By-law.