



Report to: General Committee

Date Report Authored: October 24, 2012

SUBJECT: Water Meter By-law
PREPARED BY: Paul Li, Infrastructure Project Engineer, Ext. 2646

RECOMMENDATIONS:

- 1) THAT the report entitled “Water Meter By-law” be received;
- 2) AND THAT Council enact the proposed Water Meter By-law, as described in this report and in the form set out in Attachment ‘A’;
- 3) AND THAT Council repeal Sections 25 to 33 in the current Waterworks System By-law (By-law #1602, Attachment ‘B’) on rules and regulations for the installation, maintenance, access and reading of water meters;
- 4) AND FURTHER THAT Staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE:

The purpose of this report is to seek Council’s endorsement of the proposed Water Meter By-law, which will provide staff with an effective mechanism to address the issues related to access to water meter for reading, maintenance, investigations for meter tampering, high water use complaints and other concerns on water meter installation and maintenance; and at the same time home and business owners will have a reliable means, through which they can request testing of water meters to verify meter accuracy.

BACKGROUND:

Waterworks operates and maintains the City’s drinking water distribution system. To date, the City’s drinking water distribution network consists of about 1,000 km water mains. Water meters are part of the City’s drinking water distribution system and key components for measuring water consumptions for billing revenue. There are 75,000+ residential and ICI (Industrial, Commercial and Institutional) water meters installed and maintained by the City.

The City has Water System By-Law #1602 enacted in 1956 for the maintenance, construction and operation of the drinking water distribution system, including water meters. This By-Law has undergone several amendments up to December 2002. Since 2002, there have been no further updates or changes related to the water meter program. Staff recognized that By-law #1602 does not meet and address the current water meter installation, maintenance and replacement needs and requirements.

To address and efficiently manage the water meter program activities, Waterworks staff recommend repealing Sections 25 to 33 in the current Waterworks System By-law #1602 and replacing them with a new Water Meter By-law (Attachment ‘A’).

OPTIONS/ DISCUSSION:**City of Markham's Water Meter Program:**

The City has a water meter program for installation, maintenance, replacement and testing of water meters. The program includes the following annual operating work:

- Supply and installation of meters for new developments (1,700 in 2011);
- Perform maintenance on approximately 1,850 meters;
- Replace approximately 2,000 meters for annual change out program;
- Sample test approximately 100 residential meters; and
- Test and replace (as necessary) an average of 102 ICI meters.

Note that out of the 2,000 meters which are part of the annual change out program, there has been about 500 inaccessible water meters due to resident non-responses or refusals as water meter replacements are currently not mandatory. These meters are generally under-registering by 5 to 6% as the meters are at or over their life cycle (i.e. 20 years) and as such, translates to approximately \$20,000 to \$25,000 in lost water revenues per annum (based on 500 meters x average residential use of 303 m³/year x \$2.628/m³ water rate x 5 to 6% under-registration).

Water Meter By-law:

Highlights of the proposed Water Meter By-law are as follows (refer to Attachment 'C' for revision and addition details):

Sections have been revised and/or expanded to replace those in By-law #1602 with incorporation of the current City policy and requirements on water metering, including:

- **5.0.0 Water to be Metered** to replace Sections 27, 30 and 31 in By-law #1602,
- **5.0.1 Installation of Residential Water Meter,**
- **5.0.2 Installation of ICI Water Meter,**
- **5.0.3 Supply of Water Meter,**
- **5.0.4 Application for Water Meter**
- **5.0.5 Size of Water Meter,**
- **5.0.6 Water Meter Loss or Damage,**
- **5.0.7 Notification by Owner,**
- **5.0.8 Provision for Installation of a Water Meter, and**
- **5.0.9 Water Meter By-Pass Piping, inclusive** to replace Section 25 in By-law #1602,
- **5.0.10 Water Meter Chamber** to replace Section 28 (2) in By-law #1602,
- **5.1.1 Water Meter Access** to replace Section 28 (1) in By-law #1602,
- **5.2.2 Water Meter Accuracy** to replace Sections 26, 29, 32 and 33 in By-law #1602.

Sections are added in the proposed Water Meter By-law to address specific issues related to the current water meter program, which are lacking in the Waterworks System By-law (By-law #1602), including:

- **5.1.0 Water Meter Inspection and Sealing**
- **5.1.2 Water Meter Interference Prohibited**
- **5.2.0 Maintenance of Water Meter Appurtenances and Piping**
- **5.2.1 Maintenance of Water Meter Chamber**

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- **5.2.3 Relocation of Water Meter**
 - **5.2.4 Water Meter Leaks**
 - **5.2.5 Water Meter Replacement**
 - **5.3 Sprinkler Meter**
 - **5.4 Building Demolition**
 - **6. Take Water from Fire Hydrant**
 - **8. Penalty Provisions**

Waterworks staff have reviewed Water Meter by-laws of other municipalities in the Greater Toronto Area and found the proposed Markham Water Meter By-law is generally in line with those other by-laws.

FINANCIAL CONSIDERATIONS:

Any fees and administrative costs associated with this By-law are either indicated in the City's Fee By-law or in this By-law. With the Water Meter By-law in place, the City will have the authority to recover any fees/fines by adding it to the tax roll and collecting them in the same manner as taxes. The revenues generated by all these fees/fines and administrative costs will be credited to the Waterworks Operating Budget for water meter program. The revenues will be monitored through 2013 and the Waterworks Operating Budget will be amended in 2014 based on 2013 actuals.

Any person who is guilty of an offence under the proposed Water Meter By-law, upon conviction, is liable to a maximum fine as established pursuant to the *Building Code Act*, which are as follows:

- a) Upon a first conviction, to a fine of not less than \$100.00 and not more than \$50,000.00
- b) Upon a second or subsequent conviction for the same offence to a fine of not less than \$400.00 and not more than \$100,000.00

Generally, the amount of a fine is recommended by the City (Clerk's and Legal Services Departments) to the prosecutor of the fine. The penalty sought depends on several factors, including severity of violation, prior convictions and whether there is compliance.

With the implementation of the Water Meter By-law, the City will be able to replace previously inaccessible meters due to non-responses and entry refusals. These older meters are generally under-registering and as such replacement of these meters will reduce water sales loss in the approximate annual amount of \$20,000 to \$25,000 (less than 0.1% of annual budgeted water sales).

HUMAN RESOURCES CONSIDERATIONS:

To enforce this By-law, there will be certain level of staff time realignment either from By-law Enforcement and Licensing Department and/or Waterworks.

ALIGNMENT WITH STRATEGIC PRIORITIES:

Infrastructure Management – To install, replace and strategically manage the City's water meter asset to meet the demands and expectation of the growing community.

Fiscal Stewardship - To ensure accurate recording of volume of water being consumed by the end users and provide equitable basis for cost recovery from the consumers.

BUSINESS UNITS CONSULTED AND AFFECTED:

The following departments and business units were consulted during the preparation of the Water Meter By-law and this report:

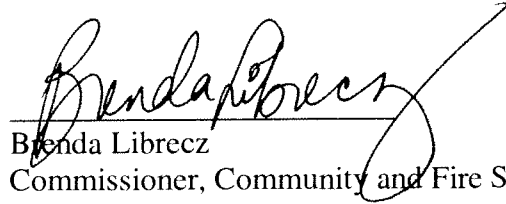
- Building Standards
- Engineering
- Clerk's
- By-Law Enforcement and Licensing
- Legal Services
- Financial Services

RECOMMENDED

BY:



Peter Loukes, P. Eng.
Director, Environmental Services



Brenda Librecz
Commissioner, Community and Fire Services

ATTACHMENTS:

Attachment 'A' – Water Meter By-law (2012-)

Attachment 'B' – Waterworks System By-law #1602

Attachment 'C' – Summary of Proposed Updates and Additions to the Water Meter Provisions in By-law #1602