

<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON JULY 17, 2017</b>
<b>FROM:</b>	<b>KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR OF ENVIRONMENTAL AND ENGINEERING SERVICES &amp; CITY ENGINEER</b>
<b>SUBJECT:</b>	<b>DOWNSIZING WATER METERS</b>

**RECOMMENDATION**

That, on the recommendation of the Managing Director, Environmental and Engineering Services & City Engineer, this report **BE RECEIVED** for information.

**PREVIOUS REPORTS PERTINENT TO THIS MATTER**

None

**2015-2019 STRATEGIC PLAN**

The 2015-2019 Strategic Plan identifies this objective under Building a Sustainable City: 1B – Manage and improve our water, wastewater and stormwater infrastructure and services.

**BACKGROUND**

**Purpose**

This report responds to the Municipal Council resolution on April 18, 2017:

*That the the Civic Administration BE REQUESTED to review and report back with respect to a potential program to downsize water meters at no cost to the owner where the property owner has been paying for an oversized water meter since 2013.*

**Context**

A building's water meter size directly impacts the amount a customer pays for both the water and wastewater portion of their monthly bill. A building's water meter is sized by either an engineer or a plumber working directly for the building's owner at the time the meter is installed. Water meters are usually installed when the building is initially constructed or following a building renovation.

**DISCUSSION**

**Meter Size and the Water/Wastewater Rate Structure**

Meter size is the basis for the water and wastewater fixed charges. The meter size represents the water capacity available to a building and the wastewater generated by the users of the building. The water meter size therefore is an indication of the capacity

of the City's overall system available to a building. The meter size is therefore used as the basis for the fixed portion of both the water and wastewater rates.

### **Professional Meter Sizing**

Meters are sized for the peak water needs of the water customer. For example, the meter for a restaurant would be sized based on the restaurant's water needs during their busiest time of its business day. The size of the meter installed in business or industrial operations is determined by either an engineer or a plumber at the time the meter is installed. This plumber or engineer would be hired and work directly for the business owner. Several factors considered in the meter sizing include:

- Buildings height,
- Number of units,
- Fire suppression system pressure and flow needs,
- Building equipment needs, and
- Area system pressure.

In most instances water meters are sized and installed when the building is initially constructed or following a renovation.

It should be highlighted that building water meters are not sized by the City. The City does not have the information that is available to the Owner's plumber or engineer to predict the building's peak water demand needs. In addition, the City could be liable for any advice provided to private building owners related to their building related systems. As such, the City does not provide direction to building owners on the appropriate size of their water meter.

### **Meter Re-sizing**

If an Owner is considering a change in meter size, City staff would recommend they seek professional advice to ensure Building Code requirements are met for the internal building services. Downsizing when it is not appropriate not only reduces a building's water pressure but could also impact the business's operations and fire suppression systems.

### **Owner Initiated Requests**

The City receives approximately five enquires per year related to oversized water meters. In the case where an Owner has requested that a meter can be downsized the City first determines whether the meter is at the end of its useful life. In the instances where the meter is at the end of its useful life, meters are replaced by the City free of charge with the current size or downsized based on the request of the Owner. In the case where the meter is not at the end of its useful life the Owner is required to replace the meter at their own expense. As per Water By-law W-8, the cost to replace a meter is \$300. Most Owners are satisfied with replacing the water meter at their own cost as the return on investment period is relatively short (several months).

### **Financial implications**

If 10% of the properties with meters above the minimum size requested reductions, the cost would be in the magnitude of \$200k in capital cost and a loss of annual revenue of \$400k.

## CONCLUSIONS

London's Water and Sewer systems operate on a balance of expenditures with revenues. The size of the water meter represents the portion of the overall capacity of the City's water and wastewater system used by each customer. Water meters are professionally sized by an engineer or plumber hired by a building's owner at the time the building is constructed or following a renovation.

Replacing a meter costs staff time and money. Replacing a meter prior to the end of its useful life is inefficient. The cost of replacing water meters that have not reached the end of their useful life would be borne by all water customers. It should be considered whether it's fair or appropriate to subsidize the installation of water meters of a small group of rate payers at the cost of all ratepayers.

<b>PREPARED BY:</b>	<b>REVIEWED BY:</b>
<b>SCOTT MATHERS, P.ENG., MPA DIVISION MANAGER WATER ENGINEERING</b>	<b>SCOTT MATHERS, P.ENG., MPA DIRECTOR WATER AND WASTEWATER</b>
<b>RECOMMENDED BY:</b>	
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July 10, 2017