

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 9, 2017
FROM:	KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT	CHANGES TO THE WASTE DISCHARGE BY-LAW WM-16 AND THE WASTEWATER AND STORMWATER BY-LAW WM-28

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services & City Engineer the following actions **BY TAKEN**:

- a) The proposed by-law, attached as Appendix 'A' **BE INTRODUCED** at the Municipal Council meeting to be held on May 16, 2017 for the purpose of amending the Waste Discharge By-Law (WM-16); and,
- b) The proposed by-law attached as Appendix 'B' **BE INTRODUCED** at the Municipal Council meeting to be held on May 16, 2017 for the purpose of amending the Wastewater and Stormwater By-law (WM-28).

PREVIOUS REPORTS PERTINENT TO THIS MATTER

None

2015-19 STRATEGIC PLAN

The following report supports the Strategic Plan through a focus on:

Building a Sustainable City by Working together to protect all aspects of our natural environment including woodlands, wetlands, river and watercourses, and air quality as our city grows; and

Growing our economy by serving industrial land to bring more jobs to London.

BACKGROUND

Purpose

This report seeks the approval of Municipal Council to;

- update the Waste Discharge Bylaw, WM-16, to allow the City to control discharges to the sanitary sewers which may cause harm to the environment even after treatment in a wastewater treatment plant;
- expand the definition of leachate in the Waste Discharge Bylaw, WM-16 to include portable toilet waste so that the charge for receiving this waste will reflect its higher treatment costs; and,
- update the Water and Wastewater By-law WM-28 to allow industries that purchase in excess of 50,000 cubic metres per month of water to be billed for wastewater usage charge based on their metered wastewater monthly volumes.

Context

Many contaminants discharged to a sanitary sewer can harm the environment without causing harm to the sewage treatment plant or processes; Section 3.6 of the bylaw does not presently allow the City to control the discharge of these contaminants into a sanitary sewer.

Hauled liquid waste is received at the City's Dingman facility and is charged at one of two rates based on its handling and treatment costs. Portable toilet waste is currently charged at \$13.36 per 1,000 L but its treatment cost is better reflected at the rate of \$24.60 per 1,000 litres for leachate.

In most cases, industrial water users are charged a sanitary rate based on the volume of water purchased. Industries discharging less than 85% of the water purchased can install a separate sanitary flow meter and be billed on the actual sanitary flows entering the City's wastewater system. The 85% threshold could present a significant financial cost for some larger water users.

Discussion

Effluent Discharge Harmful to the Environment

The current Waste Discharge By-law has a general clause protecting the public sewage works but it does not include discharges that can pass through the wastewater treatment plants and impact the receiving stream. Examples are discharges causing foam, sheen, discolouration and acute or chronic toxicity of the wastewater treatment plant effluent.

The Canadian Council of Ministers of the Environment (CCME) model sewer use By-law and the Ontario Model Sewer Use By-law include clauses prohibiting discharges that impact any requirement of the wastewater treatment plant operation or cause an adverse effect on the receiving stream.

Federal Wastewater Systems Effluent Regulations (WSER) require wastewater treatment plant effluents to be monitored and not be acutely toxic. The Chemicals Management Plan (CMP) is a Government of Canada initiative aimed at reducing the risks posed by chemicals to Canadians and their environment. It identifies 4,300 different chemicals that could be of concern. The City needs to have general conditions in the Waste Discharge By-law to deal with the discharge of these chemicals to the sanitary system.

This proposed revision will help to ensure the City has the ability to control substances discharged into the sewer systems.

Section 3.6 of By-law WM-16 should be amended as follows:

3.6 Matter harmful to sewage works

No person shall discharge or deposit or cause or permit to be discharged or deposited, in to or in sanitary sewers, wastes which may be or may become or cause:

- (a) harm to the public sewage works; or
- (b) an impairment of the quality of the water in any watercourse; or
- (c) a failure of any discharge from the sewer works to comply with the requirements of an environmental compliance approval or with federal or provincial legislation.

Portable Toilet Waste

As shown below there are two different charges for the disposal of liquid wastes at the Dingman pumping station. The leachate charge is 1.84 times higher than the hauled liquid waste rate due to the higher contaminant concentrations and the increased treatment costs.

Table 2 – WM-28 Wastewater and Stormwater By-law Part 4.3

Type of Waste	January 1, 2017 Rate (\$ per 1,000 litres)	January 1, 2018 Rate (\$ per 1,000 litres)	January 1, 2019 Rate (\$ per 1,000 litres)
Hauled Liquid Waste, excluding Leachate	\$13.36	\$13.76	\$14.17
Leachate	\$24.60	\$25.34	\$26.10

Hauled liquid wastes currently includes portable toilet wastes. Analysis of the quality of Portable toilet wastes done recently indicate that portable toilet wastes are significantly more concentrated than septic wastes and a higher rate should be imposed. The ratios of concentration between Portable toilet wastes to septic wastes are in Appendix “C”.

The following revision is proposed to increase the rate charged for receiving portable toilet waste to reflect its treatment cost.

Section 1.1 of By-law WM-16 be amended by deleting the definition of “Leachate” and replacing it with the new definition, as follows:

Leachate – defined

“Leachate” means contaminated water that is created in landfills, resulting from rain, melting snow or liquid within municipal garbage that filters through the landfill waste picking up and carrying with it dissolved materials and/or means portable toilet wastes.

Wastewater Measurement

Large industrial water users have the option of installing sanitary flow meters for billing purposes if their sanitary discharge is less than 85% of their water use; this allows the sanitary fee charged to better reflect the actual load on the system. Extending this option to water users purchasing more than 50,000 m³ per month, irrespective of their water/wastewater percentage, will help ensure these industries are not over charged for wastewater treatment; the cost difference can be significant for high water users.

Acknowledgements

This report was prepared with the help of Tony Van Rossum, P.Eng. Environmental Services Engineer of the Wastewater Treatment Operations Division and David Munteer, Solicitor II, City Solicitors Office.

PREPARED BY:	REVIEWED AND CONCURRED BY:
GEORDIE GAULD, DIVISION MANAGER WASTEWATER TREATMENT OPERATIONS	JOHN LUCAS, P. ENG. DIRECTOR, WATER AND WASTEWATER
RECOMMENDED BY:	
KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER	

Attach:

Appendix "A" – By-law to Amend the Waste Discharge By-law (WM-16)

Appendix "B" – By-law to Amend the Wastewater and Stormwater By-law (WM-28)

Appendix "C" -- 2016 Hauled Liquid Waste Data

Appendix “A”

By-law to Amend the Waste Discharge By-law (WM-16)

Bill No.
2017

By-law No. WM-16-

A By-law to amend By-law WM-16 entitled, “A by-law to provide for the regulation of the discharge of wastes into the public sewage works and of hauled liquid waste”

WHEREAS subsection 5(3) of the *Municipal Act, 2001* S.O. 2001, c.25, as amended, provides that a municipal power shall be exercised by by-law;

AND WHEREAS under section 10 of the *Municipal Act, 2001*, a municipality may pass by-laws respecting the economic, social and environmental well-being of the municipality;

AND WHEREAS section 8(1) of the *Municipal Act, 2001* provides that the powers of a municipality shall be interpreted broadly so as to confer broad authority on municipalities to enable them to govern their affairs as they consider appropriate and to enhance their ability to respond to municipal issues;

AND WHEREAS section 8(2) of the *Municipal Act, 2001* provides that in the event of ambiguity in whether or not a municipality has the authority to pass a by-law, the ambiguity shall be resolved so as to include, rather than exclude, municipal powers that existed on December 31, 2002;

AND WHEREAS Municipal Council passed By-law WM-16, entitled “A by-law for the regulation of wastewater and stormwater drainage systems in the City of London” on December 20, 2004;

AND WHEREAS it is deemed expedient to amend By-law WM-16;

NOW THEREFORE the Municipal Council of The Corporation of the City of London enacts as follows:

1. Section 1.1 of By-law WM-16 is amended by deleting the definition of “Leachate” and replacing it with the new definition of “Leachate”, as follows:

Leachate – defined

“Leachate” means contaminated water that is created in landfills, resulting from rain, melting snow or liquid within municipal garbage that filters through the landfill waste picking up and carrying with it dissolved materials and/or means portable toilet wastes.

2. Section 3.6 of By-law WM-16 is amended by deleting it and replacing it with the new section as follows:

3.6 Matter harmful to sewage works

No person shall discharge or deposit or cause or permit to be discharged or deposited, in to or in sanitary sewers, wastes which may be or may become or cause:

- (a) harm to the public sewage works; or
- (b) an impairment of the quality of the water in any watercourse; or
- (c) a failure of any discharge from the sewer works to comply with the requirements of an environmental compliance approval or with federal or provincial legislation.

3. This by-law shall come into force and effect on July 1, 2017.

PASSED in Open Council on XXXXXX, 2017.

Mayor
Matt Brown

Catharine Saunders
City Clerk

First Reading –
Second Reading –
Third Reading –

Appendix “B”

By-law to Amend the Wastewater and Stormwater By-law (WM-28)

Bill No.
2017

By-law No. WM-28-

A by-law to amend By-law WM-28 being a by-law for regulation of wastewater and stormwater drainage systems in the City of London.”

WHEREAS subsection 5(3) of the *Municipal Act, 2001* S.O. 2001, c.25, as amended, provides that a municipal power shall be exercised by by-law;

AND WHEREAS under section 10(2) of the *Municipal Act, 2001*, a municipality may pass by-laws respecting the economic, social and environmental well-being of the municipality;

AND WHEREAS section 8(1) of the *Municipal Act, 2001* provides that the powers of a municipality shall be interpreted broadly so as to confer broad authority on municipalities to enable them to govern their affairs as they consider appropriate and to enhance their ability to respond to municipal issues;

AND WHEREAS section 8(2) of the *Municipal Act, 2001* provides that in the event of ambiguity in whether or not a municipality has the authority to pass a by-law, the ambiguity shall be resolved so as to include, rather than exclude, municipal powers that existed on December 31, 2002;

AND WHEREAS Municipal Council passed By-law WM-28, entitled “A by-law for regulation of wastewater and stormwater drainage systems in the City of London” on April 16, 2013;

AND WHEREAS it is deemed expedient to amend By-law WM-28;

NOW THEREFORE the Municipal Council of The Corporation of the City of London enacts as follows:

1. Section 4.1 of By-law WM-28 is amended by deleting it and replacing it with the new section as follows:

4.1 Quantity of Wastewater to be monitored

This Part shall only apply where the quantity of Wastewater from the Land exceeds the supply of Water measured by the Meter; or, for industrial classified Lands where the quantity of Wastewater is less than 85% of the volume of municipal Water supplied; or, for industries with greater than 50,000 cubic meter per month supply. In such cases, the Customer shall monitor the volume of Wastewater discharged to the Sanitary Sewer and shall submit a proposal to the Engineer to undertake flow monitoring.

3. This by-law shall come into force and effect on July 1, 2017.

PASSED in Open Council on XXXXXX, 2017.

Mayor
Matt Brown

Catharine Saunders
City Clerk

First Reading –
Second Reading –
Third Reading –

Appendix "C"

Hauled Liquid Waste Data

TABLE 1 - Comparison between Septic waste and Portable Toilets from 2015 to March 2017

PLACE	pH	Conductivity	SS	B O D	COD	NH3	TKN	TP
		uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Septic waste	6.9	2,461	7,100	3,508	10,369	99	318	68
Portable Toilets	7.9	81,737	13,222	6,585	19,256	2,317	3,793	334
Ratio of Portable toilets Quality to Septic waste quality	1.2	33.2	1.9	1.9	1.9	23.3	11.9	4.9