

Tracey Cook
 Deputy City Manager
 Infrastructure and Development Services

Toronto Water
 City Hall 100 Queen Street West
 24th Floor, East Tower
 Toronto, ON M5H 2N2

Tel: (416) 392-8200
 Fax: (416) 392-4540
 lou.digironimo@toronto.ca
 www.toronto.ca

2019 OPERATING BUDGET BRIEFING NOTE

Industrial Waste Surcharge Program – Feasibility of Phased In Surcharge Parameter Fee Increases

Issue:

- This briefing note is in response to a motion adopted by the Budget Committee on February 13, 2019 requesting that the General Manager, Toronto Water, address the feasibility of phased-in surcharge parameter fee increases for each of the five treatable surcharge parameters permitted under the City's Industrial Waste Surcharge Agreement Program (the "Program") in an effort to reduce the Program funding deficit. For the reasons outlined below, the phased in surcharge parameter fee increases, as contemplated by the motion, are not feasible.

Background

- Urban wastewater is characterized in terms of its physical, chemical and biological constituents that are collectively referred to as "parameters", which are managed through the City's wastewater treatment plants to protect public health and the environment.
- The concentration limits of the parameters are governed by Municipal Code Chapter 681, Sewers (the "By-law") to ensure compatibility with the design and capabilities of our wastewater treatment plants.
- Companies that exceed the wastewater sanitary concentration limits under the By-law for five specific and treatable parameters can either apply for an Industrial Waste Surcharge Agreement or minimum surcharge permit with the City ("IWSA") or install on-site treatment to comply with the By-law. Most companies prefer to enter into an IWSA, as it is generally more cost effective than on-site treatment.
- The five treatable parameters permissible under an IWSA are: Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), Total Phosphorus (TP), Phenols, and Total Kjeldahl Nitrogen (TKN is a measure of concentrated nitrogen and ammonia); all of which are treatable at Toronto's wastewater treatment plants.
- Under an IWSA, composite sampling data of a company's discharge to the City's sewer (samples that are generally collected over a 24-hour period) is used to evaluate the quality of wastewater generated by that company for the purpose of recovering a portion of the costs of treating the excess amount discharged over the By-law limit.
- In 2008, the Auditor General's Report on Protecting Water Quality and Preventing Pollution, having found that fees for excess treatment were unchanged in Toronto since 1996, recommended that: "The General Manager, Toronto Water, develop a fee policy for all

surcharge agreements that reflects the cost of sampling and testing and that all companies subject to surcharge agreements be billed on a cost recovery basis."

- In response, Toronto Water retained Stantec Engineering to determine the cost to recover surcharge parameter treatment fees and to determine if TKN should be added as a surcharge parameter.
- In June 2012, Stantec's report, Overstrength Surcharge Review for Toronto Water (the "Stantec Report"), recommended that:
 - new fees for the treatable surcharge parameters cited above, including TKN, be adopted;
 - full cost recovery be established and that the City charge a company for each surcharge parameter above the By-law limit;
 - an IWSA application fee be introduced on a cost recovery basis, to assess a company's wastewater and to prepare the necessary IWSA agreement; and
 - the City review these fees after two years and, subsequently, every five-years.
- City Council at its meeting of November 27-29, 2012 approved the majority of the staff report recommendations that were based on the Stantec Report. However, Council did not adopt the staff report recommendation to charge IWSA holders the fees for each surcharge parameter which exceeded the By-law limit but rather only to charge the fee for the highest surcharge parameter that exceeded the By-law limit. The new surcharge parameter fees came into effect on January 1, 2013.
- The summary of staff reports and City Council decisions in regards to the IWSA changes effective January 1, 2013 can be found at:
<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.PW18.1>
- In accordance with Council's 2012 direction, staff reviewed the surcharge parameter fees again in 2015 and recommended increases to each surcharge parameter fee under an IWSA. City Council on December 9 and 10, 2015 adopted the staff recommendation to increase all the surcharge parameter fees effective April 1, 2016. Those Council approved fees are listed below in Table 1 and, for IWSA billing purposes, continue to apply to only the surcharge parameter that exceeds the By-law by the highest amount.

Table 1: Current IWSA Fees (effective April 1, 2016)

Surcharge Parameter	Current IWSA Fee (\$/kg)
BOD/Phenolics	0.64
TSS	0.70
TP	2.24
TKN	1.43

- The summary of staff reports and City Council decisions in regards to the IWSA fee changes effective April 1, 2016 can be found below:
<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.EX10.23>

Key Points:

- Under the current Program, the City bills each IWSA holder an amount based on the fee for the surcharge parameter that exceeds the By-law the most; rather than for all surcharge parameters discharged in excess of the By-law limits.
- Therefore, the IWSA program is not operating at full cost recovery.
- The difference between the costs recovered through fees from all active IWSA holders under the Program and the costs incurred by the City for treatment (at full cost recovery) is approximately \$1.2 million annually, based on the most recent Q3 billing data. This loss in revenue is currently being absorbed in the water rates paid by all consumers.
- The loss in revenue between the costs recovered from all IWSA holders under the Program and the costs incurred by the City for treatment (at full cost recovery) changes with every invoicing period throughout the year. Surcharge billing is calculated on a quarterly basis and there are a number of factors in any given quarterly period which could impact the loss in revenue including:
 - The number of active IWSA holders
 - The number of parameters listed on each active IWSA
 - The volume of water discharged by each active IWSA holder to the City sewer
 - The excess concentration of each surcharge parameter discharged to the City sewer by each active IWSA holder
- Table 2 illustrates the number of IWSA holders billed for each surcharge parameter from the invoicing periods of Q1 2018 to Q3 2018. The number of IWSA holders billed for each of the surcharge parameters varies each billing period. Such variation between each billing period causes the amount in revenue loss to change unpredictably. Table 3 demonstrates the change in the amount of revenue loss per year when it is calculated using sampling data from Q1, Q2 and Q3 2018.
- Given the fluctuations in revenue loss in each billing period, it is not feasible to calculate a surcharge parameter fee increase for each of the five treatable surcharge parameters to address the Program funding deficit within the existing rate structure.
- The current surcharge rates that were calculated and established in the Stantec Report are based on an overstrength discharge fee (ODF) structure commonly used by Ontario municipalities and also detailed in the Water Environment Federation (WEF) Financing and Charges for Wastewater Systems (3rd Edition). The fees for each of the surcharge parameters listed in Table 1 were established based on a review of Toronto Water's operating costs at each of the wastewater treatment plants, capital budget estimates for each of the wastewater treatment plants, and administration fees. The fee structure recommended in 2013 based on surcharge parameter fees for each surcharge parameter was designed to ensure that the cost of treatment for each surcharge parameter discharged in excess of the By-law limits was recovered in full. The surcharge parameter fees under the Program are the true cost of treatment for each of the parameters.

- Increasing the fees for each of the surcharge parameters based on revenue loss would result in the surcharge parameter fees no longer representing the true cost of treatment. There must be a nexus between the amount of the fee and the cost to provide the treatment service. While fees do not need to correspond precisely to the cost of the treatment service, there needs to be a reasonable connection between the cost of the service provided and the amount charged.

Table 2: Number of IWSA Holders Billed for Each Surcharge Parameter from Invoicing Periods of Q4 2017 to Q3 2018

Invoicing Period (Quarter)	Total Number of IWSA Holders billed	Total Number of IWSA Holders billed for BOD	Total Number of IWSA Holders billed for Phenols	Total Number of IWSA Holders billed for TSS	Total Number of IWSA Holders billed for TKN	Total Number of IWSA Holders billed for TP
Q1 2018	304	272(89.47%)	1(0.33%)	18 (5.92%)	7 (2.30%)	6 (1.97%)
Q2 2018	189	178 (94.18%)	0 (0%)	10 (5.29%)	0 (0%)	1 (0.53%)
Q3 2018	206	191 (92.72%)	0 (0%)	11 (5.34%)	3(1.46%)	1(0.49%)

Table 3: The Estimated Annual Loss in Surcharge Revenue under the Program

Time Period**	Estimated Annual Loss in Surcharge Revenue
Q1 2018	\$1.5 million/year
Q2 2018	\$1.3 million/year
Q3 2018	\$1.2 million/year

** The time period during which sampling data was used to calculate the annual revenue loss.

Prepared by: Elena Martellacci, Engineer, Environmental Monitoring & Protection, Toronto Water, 416-392-9934 elena.martellacci@toronto.ca

Further information: Lou Di Gironimo, General Manager, Toronto Water, 416-392-8200 Lou.DiGironimo@toronto.ca

Date: February 15, 2019