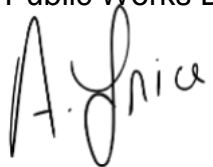




Hamilton

INFORMATION REPORT

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	July 8, 2020
SUBJECT/REPORT NO:	Sewer Use By-law Program 2019 Annual Update (PW20042) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Susan Girt (905) 546-2424 Ext. 3250 Debbie Saunders (905) 546-2424 Ext.5953
SUBMITTED BY:	Andrew Grice Director, Hamilton Water Public Works Department
SIGNATURE:	

COUNCIL DIRECTION

Not Applicable

INFORMATION

This report serves to provide an update to Committee on the progress and successes of the Sewer Use By-law Program for 2019.

Public Works Committee at its meeting of April 7, 2014, approved the new Sewer Use By-law (PW13061a), which was then subsequently enacted by Council and came into force on May 1, 2014. At the time, Hamilton Water made a commitment to provide an information report, outlining the status of the Sewer Discharge Permit Program, as well as other general Sewer Use By-law Program highlights, to the Public Works Committee on an annual basis.

The City of Hamilton's Sewer Use By-law (SUB) regulates discharges to the City of Hamilton's (City) storm, sanitary, and combined sewers from industrial, commercial and institutional (IC&I) facilities, and residential units. It also regulates the conveyance and disposal of hauled sewage. It establishes limits for common pollutants and prohibited

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

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substances, and details requirements that users need to meet to discharge to the City's sewer infrastructure.

The current SUB No. 14-090 is an administrative re-write from the original 1988 SUB. In 2009, the Canadian Council for Ministers of Environment (CCME) produced a new model Sewer Use By-law (CCME Model By-law) to assist municipalities with addressing sources of contaminants in wastewater and the inclusion of provisions considered "industry standards". In response, the current SUB was written by Hamilton Water and Legal Services staff to promote clarity and ease of use as well as fair and consistent administration and enforcement. The environmental impacts would be significant without regulating dischargers through enforcement of the SUB. Examples include:

- Clogged or damaged sewers and pipes;
- Risk of impairment of the sewage treatment processes;
- High nutrients contributing to eutrophication of water bodies through algal blooms;
- Heavy metals and emerging contaminants that are toxic and can bioaccumulate in the food chain; and,
- Biosolids would not meet strict provincial guidelines for land application.

The mandate of the Environmental Monitoring and Enforcement (EME) Unit in the Hamilton Water Division of Public Works is to protect the City's sewer infrastructure, wastewater treatment facilities and the natural environment by the effective administration and enforcement of SUB No. 14-090. This is achieved via the following activities and programs, an update for many of them are highlighted in this report:

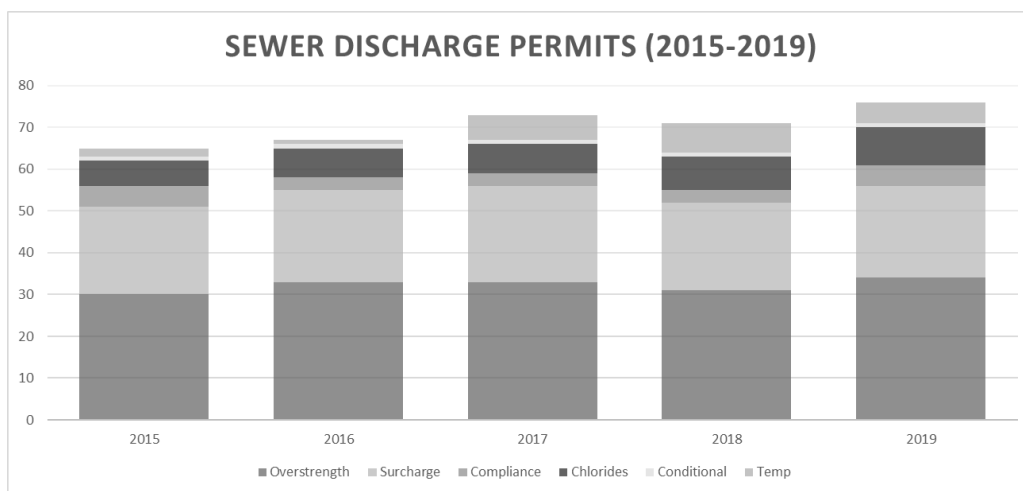
- Sewer Discharge Permitting Program;
- 24/7 Spills Response Program;
- Wastewater Abatement Program (WWAP);
- IC&I Inspection and Risk Assessments;
- Enforcement Action;
- Sampling and Monitoring;
- Hauled Sewage Monitoring Program;
- Sewer Use By-law Updates; and,
- Community Outreach.

Sewer Discharge Permitting Program

Staff administer various permit types by approving applications and processing quarterly invoices. Typically, permits are issued to IC&I facilities whose discharges do not meet the requirements of the SUB but can be treated effectively at one of the City's

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wastewater treatment plants and will not adversely affect the condition of the sewer system. Permits are a regulatory tool that allow the City to apply conditions and controls to IC&I facility discharges to the sewer and recover costs associated with conveyance and treatment. There are currently six (6) different types of Permits that can be issued by an Officer, which are explained in detail below. Each discharger must apply to the City with specific details about the discharge which is assessed by EME and Plant Operations staff and only issued once all requirements are met. Except for Compliance Permits, each permit is typically issued for a three (3) year cycle. Prior to the expiry date, if a permit is still required, the discharger must re-apply. In 2019, EME managed 76 Permits vs 71 Permits the previous year.



Overstrength Permit

If a discharger cannot meet the requirements of the Sewer Use By-law for treatable parameters (BOD, TSS, phosphorus, TKN and Oil and Grease (an/veg)) they can opt to pay the City to treat their waste if they don't have real estate or expertise to install their own treatment system. In 2019 there were 34 Overstrength Permits, vs. 31 in 2018.

Surcharge Permit

If water is discharged to the sewer but has not been purchased from our potable water system, a Surcharge Permit is required to recover the cost of conveying and treating that water. In 2019 there were 22 Surcharge Permits, vs. 21 in 2018.

Compliance Permit

Provides a discharger with certain controlled exemptions to the By-law for a limited time, to plan and implement treatment works that will bring their discharge into compliance.

Once the permit expires, the discharger is continually monitored until it is verified that compliance was attained. In 2019 there were six (6) active Compliance Permits, compared to 3 in 2018.

Chlorides Permit

If a discharger cannot meet the requirements of the Sewer Use By-law for Chlorides; a Chlorides Permit lays out the necessary conditions based on a sewer impact study that the discharger is required to conduct. Also, the study will determine the life span of the sewer and the discharger may be required to pay the City to replace the sewer if it does not last its expected lifespan. In 2019, there were nine (9) Chlorides Permits, vs. eight (8) in 2018.

Conditional Permit

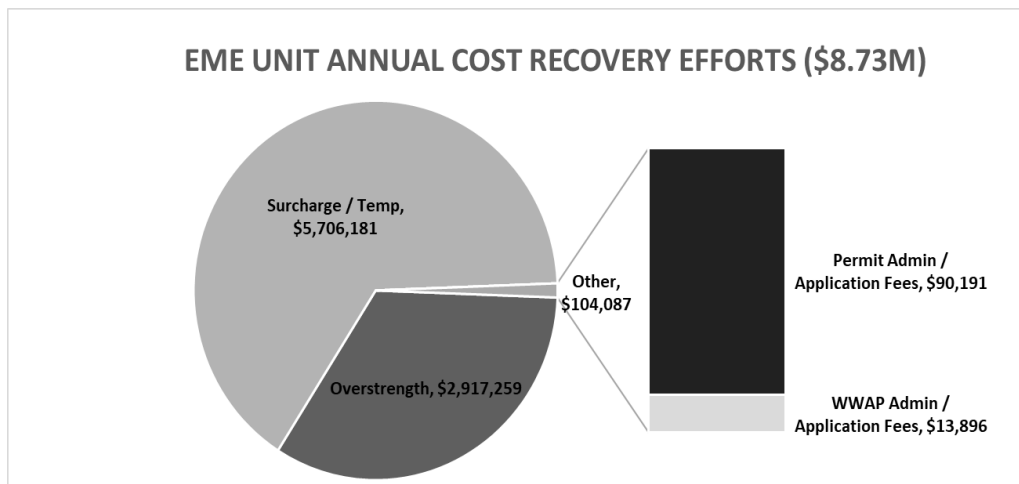
Controls and applies conditions to discharges from landfill leachate collection systems, or where a higher-level government authority is required. In 2019, there was one (1) Conditional Permit which is the same as 2018.

Temporary Permit

Controls and applies conditions for any of the above discharges that do not exceed a period of six (6) months – tank discharges, site excavations, etc. 2019 was a challenging year with respect to construction dewatering projects. In 2019, there were four (4) Temporary Permits vs. seven (7) in 2018.

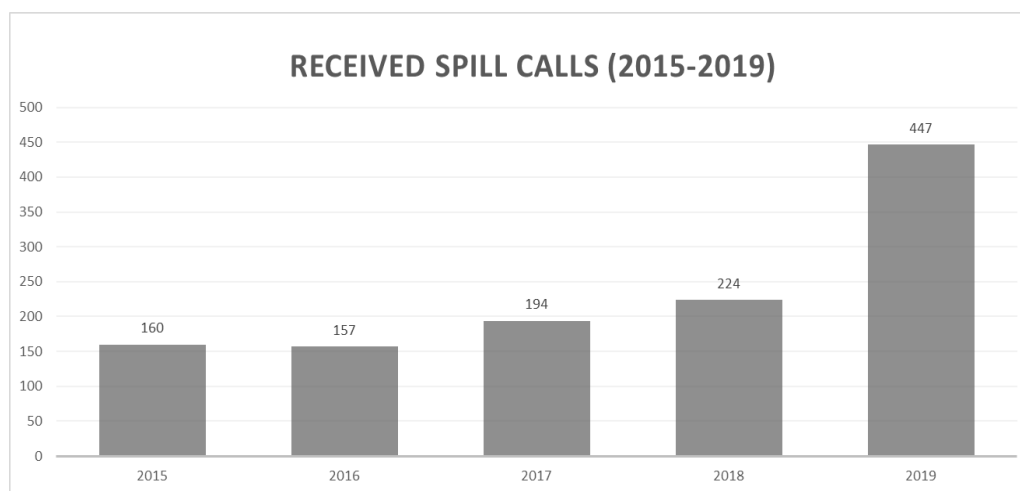
Annual Revenue

In 2019, Sewer Discharge Permits generated approximately \$8.73 million in annual revenue, which accounts for the recovery of costs associated with conveying and treating overstrength and surcharge wastewater. This includes approximately \$104,000 for permit administration, application and information request fees being invoiced. In 2019, Hatch (formerly Hatch Mott MacDonald) conducted a review of the rates applied to overstrength permits and hauled wastewaters discharged to the Woodward Avenue Wastewater Treatment Plant. Annual operation and maintenance costs were used to calculate rates for the five (5) treatable overstrength parameters. The 2020 user fees and chargers for treatment cost rates, included the information from this review. The chart below shows a breakdown of the 2019 cost recovery efforts.



24/7 Spills Response Program

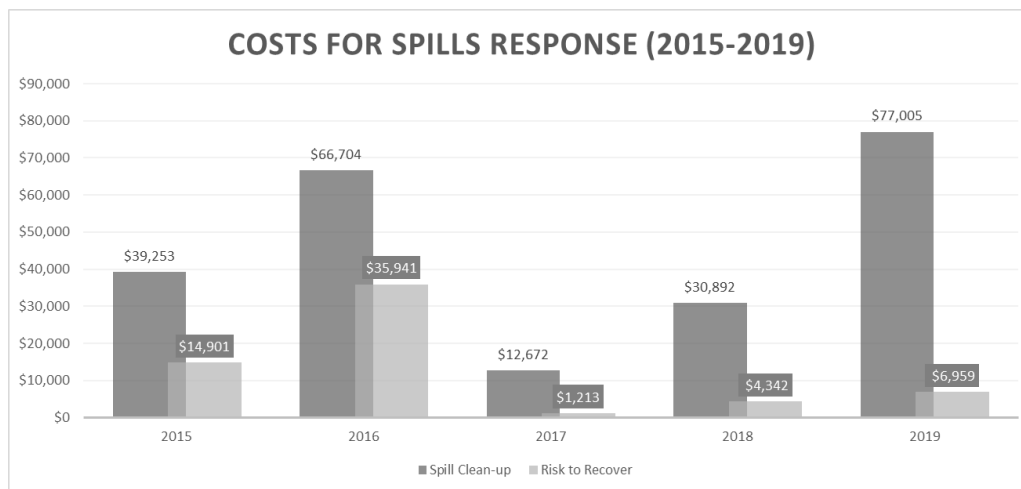
EME staff respond to spills, manage the emergency spills contract and oversee clean-up efforts. 2019 was a challenging year with a 140% increase in calls vs. the previous four (4) year average (447 vs. 184). Many of the calls received were a result of incorrect activation. Staff have worked with Customer Contact Center on scripts to ensure correct activation of City resources (Roads, Municipal Law Enforcement, Waste). Responsible parties are held accountable and EME works with the City’s Risk Management Office to recover the cost of the contractor’s service. In 2019, \$77,000 was spent on clean-up efforts and \$7,000 went to Risk Management for cost recovery.



Staff endeavours to ensure spills to the City’s sewer infrastructure and natural environment are remediated. This includes having staff investigate the source of the spill and holding the responsible party accountable. In 2019, approximately 9% of the \$77,005 spent on spill clean-up was recovered through Risk Management. Cost

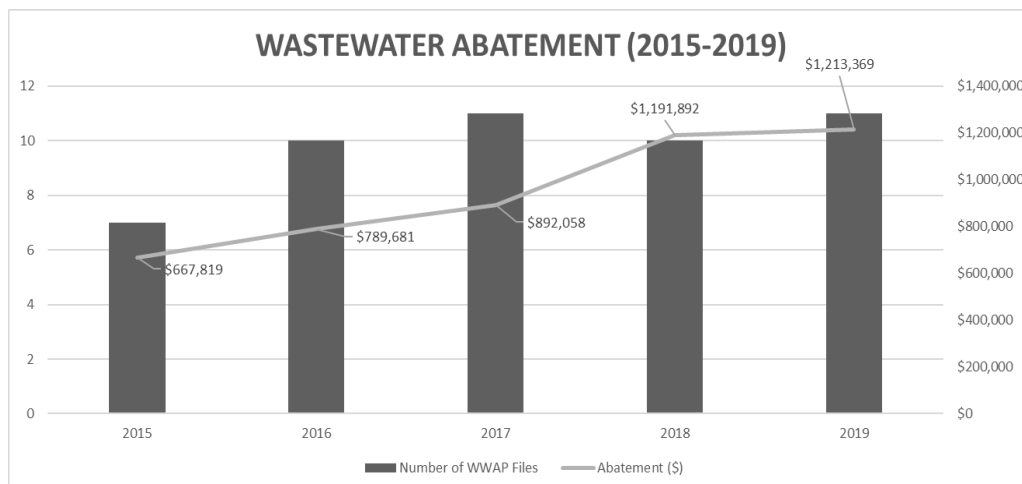
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recovery efforts are continuous and, in some cases, yield results. The corporate-wide Spills Contract is written with clear, specific terms and has been in use since 2017; it was renewed for another one (1) year term starting on May 1, 2020. The spill clean-up and recovered costs are noted in the chart below.



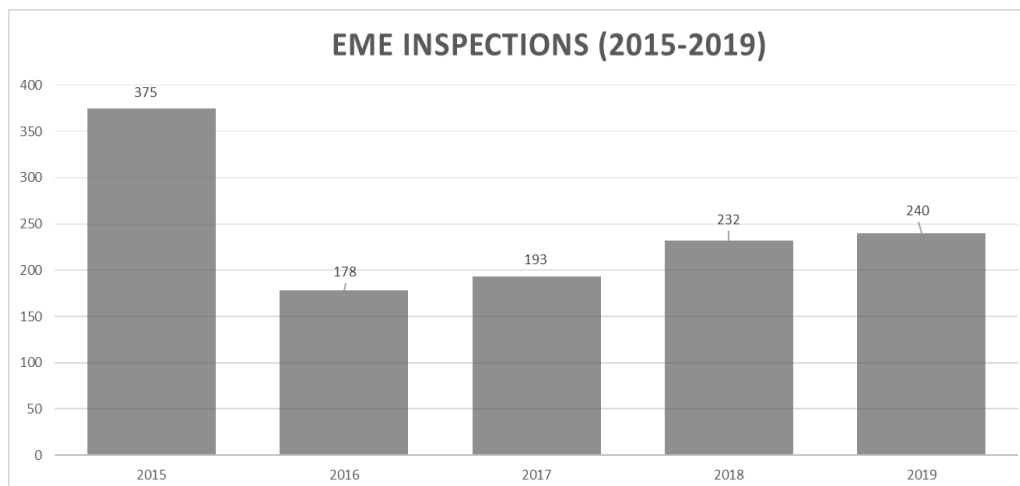
Wastewater Abatement Program (WWAP)

The Wastewater Abatement Program allows IC&I facilities to apply for a rebate on the water that they purchased from the City's potable water supply but did not discharge at least 25% of the purchased water into the City's sewer system. This program appears to be gaining popularity and more dischargers are inquiring about it. The chart below summarizes the program statistics over the past five (5) years. The application process has become more simplified over the past few years, but certainly more rigorous in its approach. Staff have taken measures to ensure no discharger receives a rebate if they are not in compliance with the Sewer Use By-law or if they are in any type of monetary arrears to the City. A WWAP File was revoked in 2019 as a result of Sewer Use By-law non-compliance.



IC&I Inspection & Risk Assessments

In 2019, EME completed 240 inspections which includes a combination of IC&I and Pollution Prevention locations. The inspection could be a complex industrial facility or a multiunit property with a variety of business types. Once the assessment is complete, each parcel of land is assigned the appropriate risk level and a mapping module provides a visual representation of risk to the sewer system. Since the strategy was implemented, only a small portion of the map has been populated. The City has approximately 7900 non-residential dischargers and currently less than 10% of these locations have been historically assessed and are regularly monitored by EME. In 2019 EME partnered with City Lab and Mohawk College to assist with a long-term strategic solution, to improve on increasing the number of yearly risk assessments that are being done. The long-term goal is to assess all 7900 dischargers, assign a risk rating for each one, and ultimately ensure our treatment and conveyance costs are being recovered appropriately. The chart below shows the number of yearly inspections that have been done.

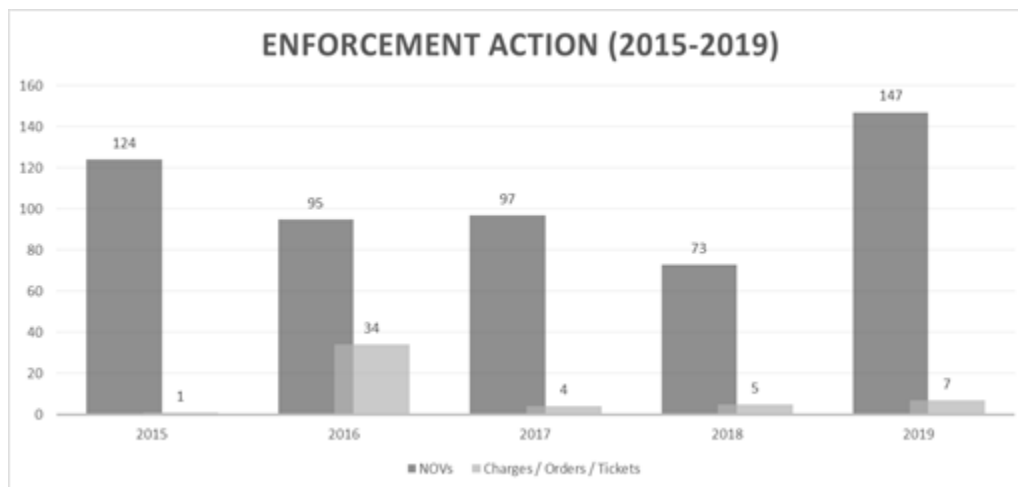


Enforcement Action

As part of the Fats, Oils and Grease (FOG) Program, EME has been visiting the restaurant and food services sector to ensure compliance. The Officer can assess whether the restaurant requires a grease control device (GCD) by completing a Risk Matrix; if needed, they are given one and a half (1.5) to two (2) years to install one. In 2019, one (1) Certificate of Offence (Part one (1)), and six (6) orders related to GCD evacuation and GCD installation were issued. Proper enforcement of this program results in less sewer maintenance costs, fewer sewer back-ups and overflows, and fewer odour complaints.

The chart below shows the enforcement action that has been taken over the past five (5) years, which includes Notice of Violations (NOV's), Part one (1) tickets, charges and orders issued by EME.

It is EME's philosophy to work with dischargers on achieving compliance, leaving enforcement action as a last resort.



Sewer Use By-law Updates

Public Works Committee at its meeting of April 1, 2019, approved the Proposed Amendments Report (PW19029), which was then subsequently approved by Council on April 10, 2019. The purpose of the report was to inform Committee of staff's intent to hold Public Information Centres regarding the outcome of the 2018 consultant's review. This high-level study consisted of a comprehensive and scientific review of the parameters and limits to ensure they are appropriate and effective for the upgrades to the Woodward Wastewater Treatment Plant. The study also supports the Hamilton Harbour Remedial Action Plan: "Urban Runoff Hamilton Harbour Report" recommendation that the SUB include a limit for total phosphorous discharged to the storm sewer. City Staff held two (2) Public Information Centres (PICs) in October 2019 to seek input from stakeholders. Both PICs were well attended and the feedback that was received on the proposed changes was supportive.

Currently, the SUB permits discharges to combined sewers, which means EME cannot enforce dewatering activities with discharges to combined sewers. Monitoring and enforcement of these discharges is important because they make their way to the Woodward Avenue Wastewater Treatment Plant and can impact combined sewer and treatment plant capacity. Staff are working with a consultant (Jacobs) for the development of a construction dewatering program and associated modifications to the existing Sewer Use By-law. Recommendations will be presented to Council in 2021 related to proposed parameter amendments to SUB 14-090 and a construction dewatering component.

Community Outreach

The odour that emanates from the decomposition of products used for the de-icing operations at the John C. Munro Hamilton International Airport has been a source of many residential complaints in the area. In 2019 the number of odour complaints has decreased significantly from the 2015- 2017 reports. We can attribute this to the steps implemented in 2018 following the community meeting held with Airport representatives, councillors and our Hamilton Water counterparts from Wastewater Collection and Customer Service and Community Outreach to address odour concerns.

Understanding odours types and potential sources, residents call the reporting lines for the Ministry of the Environment, Airport or City Spills line depending on what they are smelling. The enhanced communication plan directs the issue to the appropriate group to investigate. The Ward 11 Councillor community website is updated with City and Airport information along with direction on odour reporting to the responsible authority.

Surface Water Monitoring Program

In November 2019, the MECP issued a Provincial Order against the City under the Environmental Protection Act. A surface water monitoring program is required to support any ongoing environmental impact in Cootes Paradise and Chedoke Creek that were affected by the sewage spill. City Council approved the addition of a new position: Water Quality Technologist that is based in EME. A key deliverable will be to liaise between City and outside agencies to collaborate information and to foster ongoing communication. The person will be responsible for the planning and coordinating of a sampling program and collecting representative samples in City receiving water bodies. Data will be trended, with appropriate plans of action set up as issues arise. In addition to ongoing communication, the Water Quality Technologist will assist in the preparation of an Annual Environmental Impact Report for the various watercourses in Hamilton. They will also be available on an ongoing basis to receive and answer inquiries of a technical nature from elected officials, public, staff, consultants and government agencies. Dedicating a person to having oversight on receiving water bodies will be beneficial to our environmental monitoring program.

Conclusion

The Environmental Monitoring and Enforcement Unit continues to be recognized as leaders in the Municipal Sewer Use Enforcement industry. Staffing resources have been optimized to ensure existing wastewater sampling service levels are met to support the Permit Program and provide sampling support to the Division and others when required. Construction dewatering is another area where future demand for staffing resources is forecasted.

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Over the last decade, many IC&I facilities in the City have made significant capital investments, upwards of \$50M in total, to achieve compliance with the Sewer Use By-law. The excellent work of the EME team and effective administration of the Sewer Use By-law has contributed significantly to the successful operation of the wastewater treatment plants. The quality of effluent leaving the plants, as well as that of our biosolids has been stable and much better because of this great work.

The strategic investment that City Council made almost 15 years ago by adding resources to this business unit, and support of ongoing changes to the Sewer Use By-law has been instrumental in their success. The community trusts and values the program to protect the operations of the wastewater plants and ultimately the natural environment.

APPENDICES AND SCHEDULES ATTACHED

N/A