



INFORMATION REPORT

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	July 12, 2018
SUBJECT/REPORT NO:	Sewer Use By-law Program Annual Update (PW18059) (City Wide)
WARD(S) AFFECTED:	City Wide
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SIGNATURE:	

Council Direction:

Not applicable

Information:

Public Works Committee at its meeting of April 7, 2014, approved the Proposed 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.

As the Sewer Use By-law (“By-law”) has reached the 4th year in enactment, staff have completed the first Sewer Discharge Permit (“Permit”) renewal cycle. The new method of administering the By-law requires Permits to be reviewed and re-issued every 3 years. ICI facilities that were originally given their first permits in 2014 have now been reissued a new permit that will be valid for the next 3 years. The efficiencies of the new system are significant since staff are able to process Permits in a much shorter time period with increased consistency, accountability and with the ability to now recover administrative fees for processing. In 2017 the Sewer Discharge Permit Program generated approximately \$7.1M in revenue. In February 2017 EME issued their first Part 1 ticket under the By-law; recently approved by the Attorney General in 2016,

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providing staff with this enforcement tool. This report serves to provide an update to Committee on the progress and successes of the Sewer Use By-law Program for 2017.

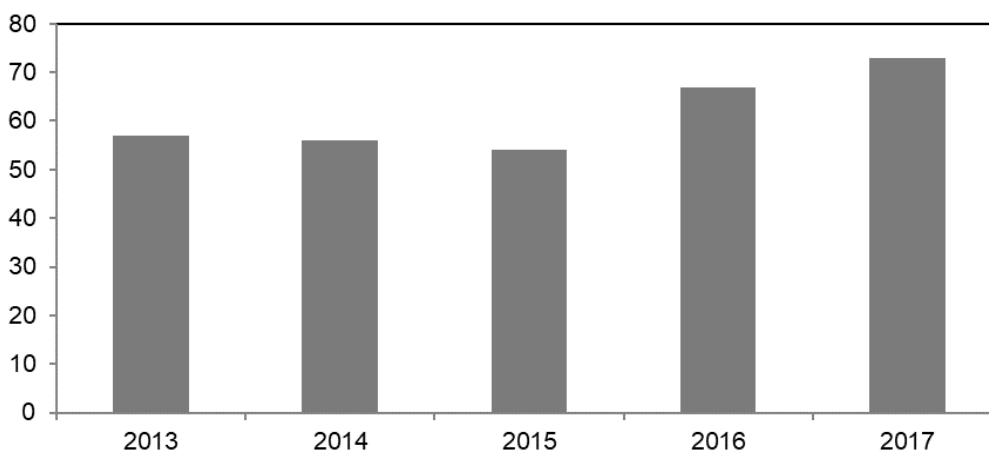
The Environmental Monitoring and Enforcement's (EME) mandate/mission is to protect the City's sewer infrastructure, wastewater treatment facilities and the natural environment by the effective administration and enforcement of the Sewer Use By-law.

Sewer discharge permits: One of the major changes to the Sewer Use By-law was the conversion from Sewer Discharge Agreements to Sewer Discharge Permits. The former Agreement format is now fully redundant and all known non-compliant dischargers have a Permit. 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 Sewer Use By-law but can be treated effectively at the Woodward Wastewater Treatment Plant 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 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. With the exception of Compliance Permits, each permit is typically issued for a 3-year cycle. Prior to the expiry date, if a permit is still required, the discharger must re-apply.

In 2017, EME managed 73 Permits vs 66 Permits the previous year. EME staff did an excellent job converting all former Agreements into Permits over the past 3 years. The cycle will continue as Permits expire every 3 years and dischargers will be required to apply for a new one.

Active SDP/Agreement files (2013 - 2017)



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Overstrength Permit

If a discharger cannot meet the requirements of the Sewer Use By-law for treatable parameters (BOD, TSS, phosphorus, TKN and Oil & Grease (animal/vegetable) 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.

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.

Compliance Permit

Provides a discharger with certain controlled exemptions to the By-law for a limited time period, 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 2017 there were 3 active Compliance Permits: 2 have since expired and 1 new one was added.

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.

Conditional Permit

Controls and applies conditions to discharges from landfill leachate collection systems, or where a higher level government authority is required.

Temporary Permit

Controls and applies conditions for any of the above discharges that do not exceed a period of 6 months – tank discharges, site excavations, etc. There has been an increase in the number of temporary permits issued as there are more new construction locations in the City.

2017 Financials

	Amount Forecasted	Actual Expenditures	% Spent
Operating Budget	\$1,780,060	\$1,683,107	94%

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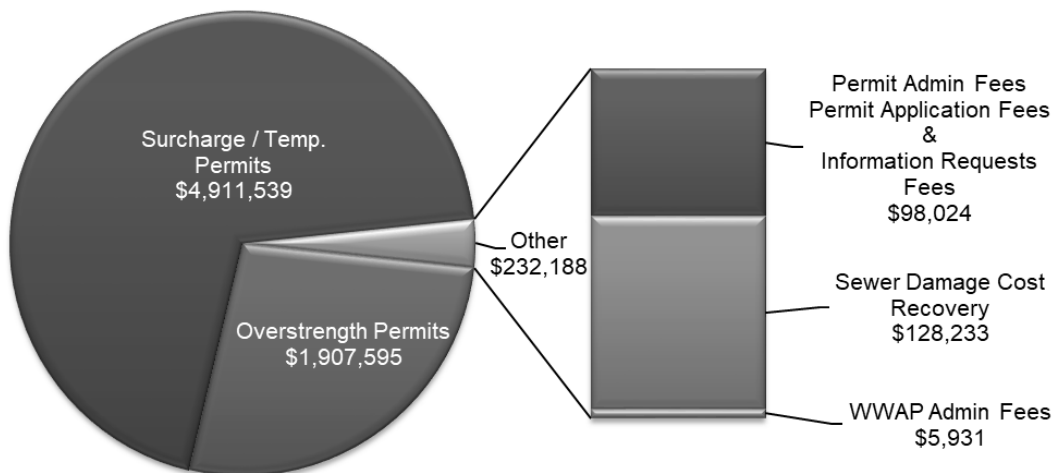
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Annual Revenue (~\$7 Million)

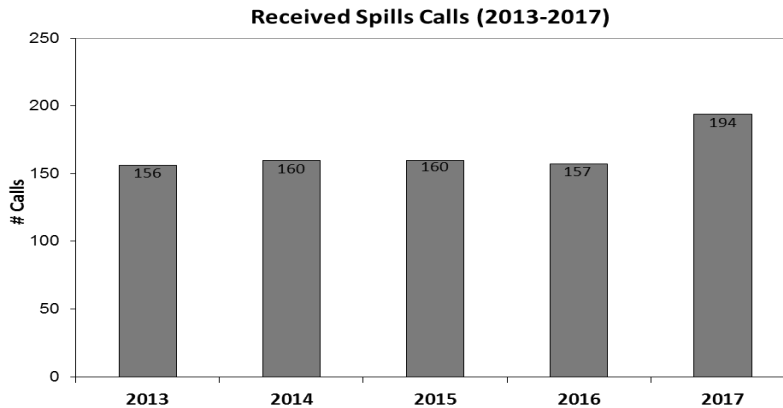
In 2017, Sewer Discharge Permits generated approximately \$7.1 million in annual revenue, which accounts for the recovery of costs associated with conveying and treating overstrength and surcharge wastewater. This includes approximately \$98,000 for permit administration, application and information request fees being invoiced. The chart below shows a breakdown of the Annual EME Unit Cost Recovery Efforts. It is also worth noting that \$128,233 in sewer damage associated with legacy wastewater effluent discharged to the City sewer has been recovered as a result on ongoing monitoring and enforcement.

EME Unit Annual Cost Recovery Efforts (2017) ~ \$7M

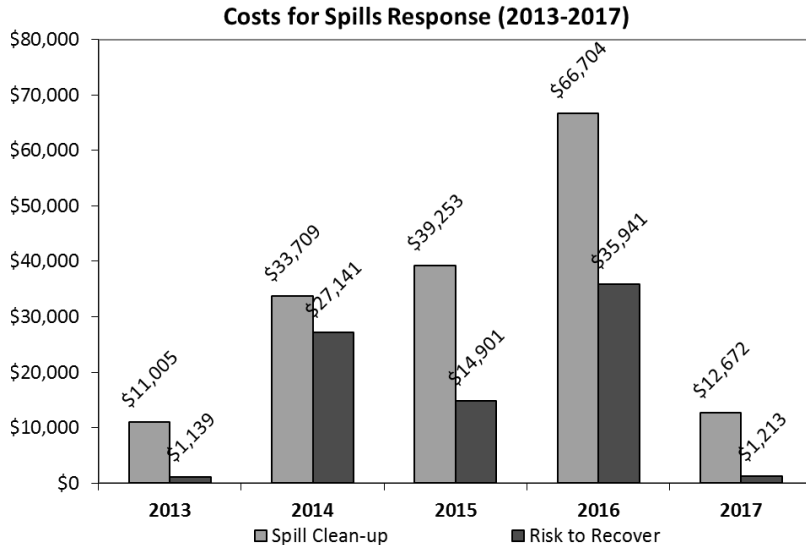


Spill Response

The number of spills calls received had remained remarkably consistent until 2017. The 22% increase could be attributed to increased awareness from internal stakeholders receiving spills training and public education. Improvements to customer service were made to the Spills Reporting Line by adding an additional recorded script so that callers reporting spills are provided with further direction. Spills were recorded in the INFOR module for all of 2017 as the use of the decade old Spills Database ended late 2016. Further program development, such as response time metrics and costing per incident is planned for 2018 implementation, to help staff track and measure the Spills Response Program more effectively.



Spills Clean-Up Costs Recovered Staff endeavours to ensure spills to the City’s sewer infrastructure and natural environment are remediated to our satisfaction. This includes having staff investigate the source of the spill and holding the responsible party accountable. In 2017, approximately 10% of the \$12,672 spent on spill clean-up was recovered through Risk Management. Cost recovery efforts are continuous and in some cases yield results. A new corporate-wide Spills Contract was written with clear, specific terms and subsequently awarded in 2017. This resulted in savings, due to a reduction in average cost of spill clean-up and disposal as noted in the chart below.

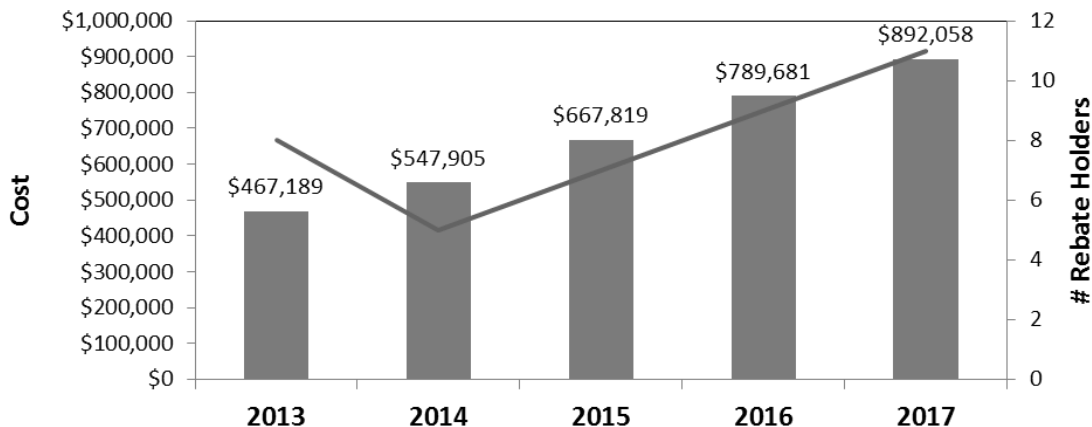


Wastewater Abatement Program (WWAP)

The Wastewater Abatement Program has now been imbedded in the Sewer Use By-law Assessment Report Document, which has increased the program’s profile. It appears to be gaining popularity and more dischargers are inquiring about it. 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.

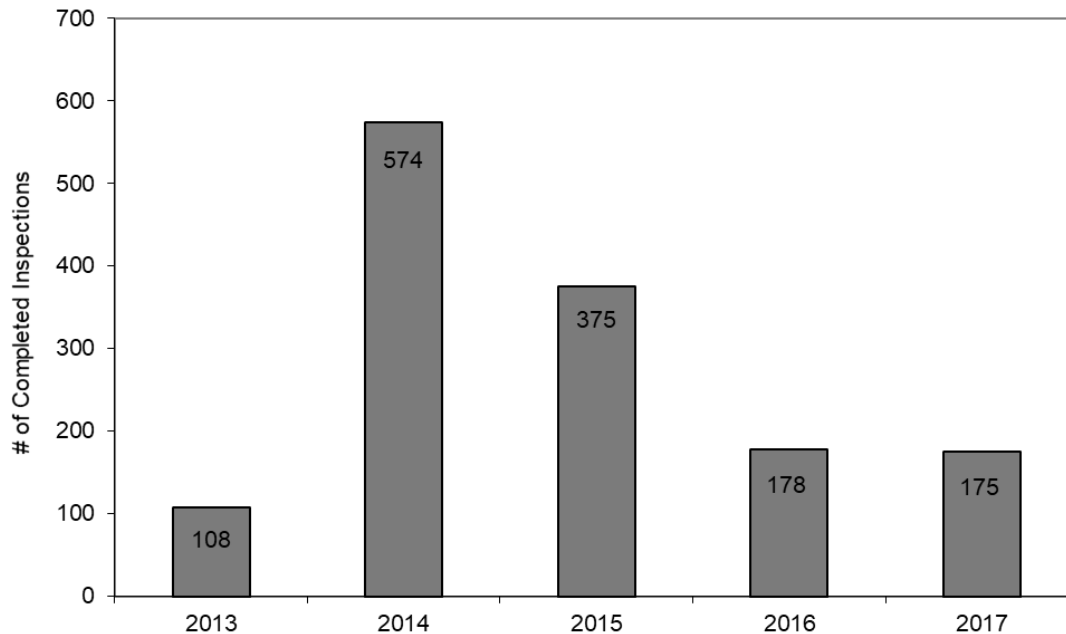
WWAP Summary (2013-2017)



General Property Assessments (GPA)

In 2017, EME did 175 Inspections which includes a combination of IC&I and Pollution Prevention (P2) locations. The inspection could be a complex industrial facility or a multiunit property with a variety of business types. The City has approximately 7900 non-residential dischargers and currently only 8% of these locations have been historically assessed and are regularly monitored by EME. Once the assessment is complete, each parcel of land is assigned a risk level, (high, medium or low) in INFOR. The GIS mapping module uses the risk level assigned in INFOR and applies a colour (red=high; yellow=medium; green=low) to the map layer, which provides a visual representation of risk to the sewer system. 2017 was the first full year that the risk layer colour coding was applied. 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.

Completed Property Inspections (2013 - 2017)



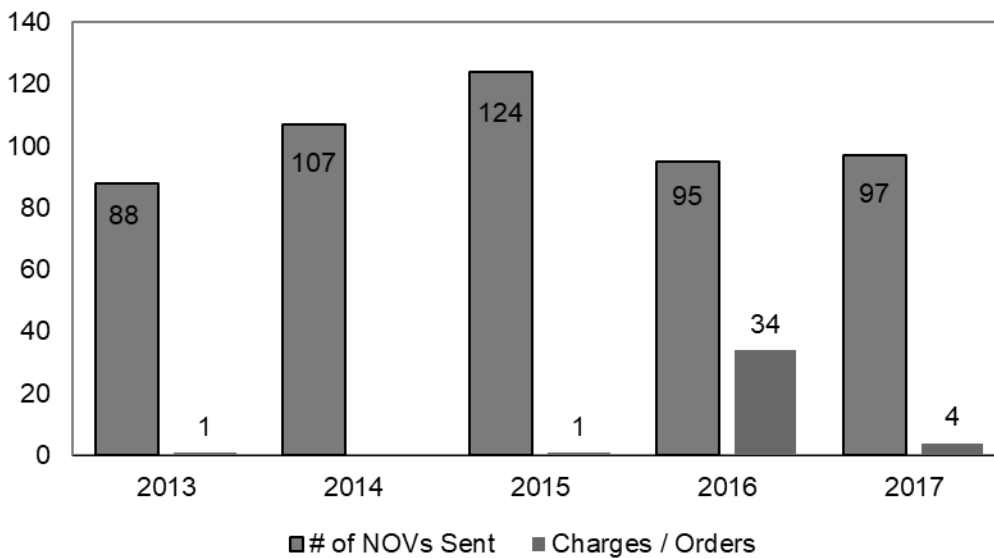
Enforcement Action

As part of the Fats, Oils & Grease (FOG) Program, EME has been visiting the restaurant and food services sector in order to ensure compliance. The Officer can assess whether or not the restaurant requires a grease control device (GCD) by completing a Risk Matrix; if needed, they are given 1.5 to 2 years to install one. Since 2014, 41 restaurants without GCD's were given notice to have one installed: to date, only 3 are still outstanding. They have been given a formal order to comply and staff will be following up with them to ensure that installation is complete by the end of 2018. Proper enforcement of this program will result in less sewer maintenance costs, fewer sewer back-ups and overflows, and fewer odour complaints.

EME was trained in-house with the assistance of Legal Services and Municipal Law Enforcement Staff on how to issue Part 1 tickets. Procedures and workflows were completed and the first ticket was issued in February 2017. The chart below shows the Enforcement Action that has been taken and includes Notice of Violations (NOV's), 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.

Enforcement Action (2013-2017)



Phase 2 Sewer Use By-Law Update

In the 4th Quarter of 2017 EME staff hired a consultant to prepare for Phase 2 of the By-law update. The changes that were made to the SUB in 2014 were administrative in nature, and did not consider the list of parameters, prohibited substances or specific limits. This high-level study will consist 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 will also address the Hamilton Harbour Remedial Action Plan: “*Urban Runoff Hamilton Harbour Report*”. This report recommended that the SUB limits be reviewed by evaluating the inclusion of a total phosphorous limit discharged to the storm sewer. The By-law amendment is scheduled to take place in 2019 with appropriate public consultation.

Mount Hope Community Odours

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. EME actively worked with the airport, community, Councillor and our Hamilton Water counterparts in Wastewater Collection and Customer Service & Community Outreach (CS&CO) to address the odour concerns. An outreach plan was executed for residents in the Mount Hope area by providing mailing and website updates. The community assisted City Staff by participating in a data gathering survey to understand if odour complaints in the area are driven by overland air emissions that may emanate from the airport property, sanitary sewer infrastructure or private plumbing deficiencies. A well-attended community

meeting was held in February 2018 to update residents and business owners. The airport provided information on their work plan to install a treatment system on site to help mitigate odours. The Ward 11 Councillor community website was updated with City and Airport presentations along with direction on odour reporting to the responsible authority.

Looking Forward to 2018

EME will undertake many improvements and initiatives in 2018; here are a few of the highlights:

Drinking Water: In 2018, EME will be taking on the responsibility of collecting drinking water sampling from the distribution system. This transition is being undertaken to improve efficiencies within the Compliance & Regulations Section. Staff training is underway and by mid-2018 EME will fully assume this role, in addition to their existing wastewater sampling services.

Sewer Damage: Officers issue Compliance Permits when dealing with companies that are not able to meet the SUB parameter limits. Allowing time to resolve a problem by issuing a Compliance Permit is not always successful and then the decision to charge a company must be made. In some cases, sewer damage is evident and can be attributed to legacy discharges. EME is working with Legal Services on these claims to recover costs from the responsible parties. Council is made aware and direction is provided as these situations arise.

Conclusion

The Environmental Monitoring & Enforcement Unit continues to be recognized as leaders in the Municipal Sewer Use Enforcement industry. With the addition of drinking water to the Monitoring program the sampling team will increase their profile within the City. 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. Storm water monitoring is another area where future demand for staffing resources is forecast.

Over the last decade, many Industries both large and small 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 unit 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 as a result of this great work.

The strategic investment that City Council made over 10 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.

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