



**CITY OF HAMILTON**  
**PUBLIC WORKS DEPARTMENT**  
**Hamilton Water Division**

<b>TO:</b>	Chair and Members Public Works Committee
<b>COMMITTEE DATE:</b>	November 4, 2024
<b>SUBJECT/REPORT NO:</b>	Sewage Spills from City Infrastructure – Annual Report (PW24072) (City Wide)
<b>WARD(S) AFFECTED:</b>	City Wide
<b>PREPARED BY:</b>	Charlene McKay (905) 546-2424 Ext. 2671 Dave Alberton (905) 546-2424 Ext. 1090
<b>SUBMITTED BY:</b>	Shane McCauley Director, Water and Wastewater Operations Public Works Department
<b>SIGNATURE:</b>	

**RECOMMENDATIONS**

- (a) That the updated Hamilton Water Sewage Spills Communications Guideline attached to PW24072 as Appendix “A” be approved.
- (b) That the General Manager, Public Works be authorized to approve minor updates to the Hamilton Water Sewage Spills Communications Guideline as required.

**EXECUTIVE SUMMARY**

Recommendation (e) of Public Works Committee report PW22088(a) Burlington Street Sewage Spill Update directed the General Manager, Public Works to provide an annual update report to the Public Works Committee regarding sewage spills from the City of Hamilton sewer infrastructure. Table 1 of this report provides the year-over-year total number of sewage spills from sewer infrastructure, the estimated volume and approximate costs for remediation and repair.

The Sewer Inspection Program webpage ([www.hamilton.ca/home-neighbourhood/house-home/water-pollution-prevention/sewer-inspection-program](http://www.hamilton.ca/home-neighbourhood/house-home/water-pollution-prevention/sewer-inspection-program)), provides details on sewage spills from city sewer infrastructure. Information includes the location, date, cause, corrective action, remediation status, estimated volume (where possible), estimated duration and approximate repair cost.

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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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Table 1 - Annual Summary of Dry Weather Sewage Spills from City Sewer Infrastructure

Year	Total Estimated Litres of Sewage Spill	Total Number of Spills	Total Estimated Cost to Remediate Spill
2022	337,000,000	1	\$29,830
2023	60,000,000*	6	\$49,758
2024	470,480*	4	\$5,197

\*Where estimates were possible

In 2022, the one spill was the Burlington Street and Wentworth sewer cross connection referred to in Public Works Committee report PW22088 – Burlington Street Sewage Spill Update.

In 2023, two of the spills were the Rutherford Avenue and Kinrade Avenue spills referred to in Public Works Committee report PW22088(a) Burlington Street Sewage Spill Update. Regarding the other four spills, two were caused by sewer blockages upstream of a combined sewer regulator. One was a leak in the regulator trough, and one was due to maintenance activities.

In 2024, three of the spills were related to sewer blockages downstream of combined sewer regulators, and the other was a leak in the regulator trough.

**Alternatives for Consideration – N/A**

**FINANCIAL – STAFFING – LEGAL IMPLICATIONS**

Financial: N/A

Staffing: N/A

Legal: N/A

**HISTORICAL BACKGROUND**

In November 2022, Hamilton Water staff identified a sewer cross-connection at Burlington Street and Wentworth Street, which was reported to the Ministry of the Environment, Conservation and Parks as a spill. The details of that spill are explained in Public Works Committee report PW22088 Burlington Street Sewage Spill Update.

In January 2023, the City of Hamilton was issued an eight-part Provincial Order (the Order) due to the Burlington Street and Wentworth Street spill, and the Rutherford Avenue spill. The details of that order and the City’s response are detailed in Public

Works Committee reports PW22088(a) and PW22088(b) Burlington Street Sewage Spill Update.

In addition to providing an update on the Order, Public Works Committee report PW22088(b) Burlington Street Sewage Spill Update recommended the approval of 12 additional full-time staff to resource a new sewer sampling program, an enhanced sewer inspection program and to mitigate other risks to the City’s wastewater program. The following information provides an update on the Sewer Sampling Program and the Enhanced Sewer Inspection Program.

#### In-Pipe Dry Weather Sampling Program

The In-Pipe Dry Weather Sampling Program is designed to survey, sample, and trace storm sewer outfalls within the City’s combined sewer system area, primarily identifying unauthorized in-pipe discharges and improving stormwater quality. The survey includes identifying the location and characteristics of all outfalls, sampling those with dry weather flow, and determining if there is any evidence of contamination. If contamination is detected, investigations are initiated with the goal of identifying and eliminating the source. A preliminary approach for identifying unmapped city-owned outfalls and updating maps has also been created.

To support the In-Pipe Dry Weather Sampling Program, Hamilton Water has hired one Supervisor, two Field Technologists, one Environmental Quality and Compliance Technologist, and one Laboratory Technician.

To date, 102 outfalls have been identified. Initial chemical constituents to be analyzed under the program and their limits have been selected, and sampling and/or inspections commenced in June 2024. Table 2 below summarizes the program’s progress findings as of September 1, 2024. Of the 102 Identified outfalls 60 have been sampled or inspected, with 42 remaining.

Table 2 Summary of In-Pipe Sampling Program Progress – 102 Identified Outfalls

33	No Dry Weather Flow
13	Samples Collected - Confirmed No Contamination
4	Samples Collected - Possible Contamination
10	Sampling in Progress
42	Yet to be inspected

Through the In-Pipe Dry Weather Sampling Program, Hamilton Water has identified the following in 2024:

- A potential underground watermain leak that has been referred for further investigation by Hamilton Water staff responsible for water distribution system leak detection.
- An outfall showing signs of contamination that has been referred for further investigation by Hamilton Water staff responsible for the Sewer Lateral Cross Connection Program.
- Three outfalls requiring further investigation by Hamilton Water’s Environmental Monitoring and Enforcement team.

Weather permitting, the In-Pipe Dry Weather Sampling Program will continue sampling and inspections year-round to detect and eliminate unauthorized discharges and contamination in the City’s outfalls and waterways, supporting the City’s commitment to enhanced environmental outcomes and a safe, clean, and sustainable future.

#### Enhanced Sewer Inspection Program

The Enhanced Sewer Inspection Program, formerly referred to as the System-wide Unauthorized Discharges Removal and Inspection Program, builds upon the successful Proactive Sewer Inspection Pilot program initiated in January 2023. The revised inspection methodology, endorsed by the City’s Office of the Auditor General and the Ministry of Environment, Conservation and Parks, employs historical drawings and background information review to accurately verify existing field conditions within the City’s sewer maintenance chambers where potential cross-connections may occur. The program includes physically inspecting approximately 3,000 maintenance chambers within the combined sewer network.

The cyber security incident that the City experienced in February of this year has affected Hamilton Water’s ability to access digital records, limiting inspections under this program to physical inspections in 2024, with an accompanying review of data within the City’s Geographical Information System.

To support the Enhanced Sewer Inspection Program, Hamilton Water has hired two Wastewater Collection Operators and one Operations Technologist. Hamilton Water is working to hire a Superintendent to support this program as well.

As of September 1, 2024, 90 modified inspections have been completed under this program, with no cross-connected sewers identified.

## Communications Procedure

Council approved the Hamilton Water Sewage Spills Communications Guideline (Guideline), which was attached as Appendix “F” to Public Works Committee report PW22088(a) Burlington Street Sewage Spill Update. The purpose of this Guideline was to ensure transparency regarding sewage spills from the City’s sewer infrastructure and serve as a complement to the City’s protocol for communicating combined sewer overflows and wastewater treatment plant bypasses. The Guideline provides for different communication channels based on the significance of any discovered sewage spills. This guideline has been actively used since Council approved it at the meeting of February 22, 2023. Between February 22, 2023, and September 1, 2024, seven spills have been identified and reported using the guideline.

## **POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS**

None

## **RELEVANT CONSULTATION**

The Corporate Communications and Strategic Initiatives Division was consulted during the development of report PW24072, and the updates to the Hamilton Water Sewage Spills Communications Guideline were supported.

## **ANALYSIS AND RATIONALE FOR RECOMMENDATION**

Hamilton Water staff are recommending that the Hamilton Water Sewage Spills Communication Guideline (Guideline) be revised. Between February 22, 2023, and September 1, 2024, seven spills have been identified and reported using the guideline. Based on lessons learned since the implementation of the Guideline, Hamilton Water is recommending, in addition to some minor changes, such as who initiates the communication, the following changes to the guideline:

The addition of a “Minor Spills Scenario” where an estimated spill volume is less than 50,000 litres. In this scenario, the Ministry of the Environment, Conservation and Parks is notified through the Spills Action Centre, the Director of Hamilton Water, Director of Water and Wastewater Operations and the Manager of Compliance and Regulations are notified. The details of the spill are reported on the City’s website and subscribers to the City’s e-Newsletter would also receive notification via that communication. This change is meant to recognize that minor spills related to aging infrastructure and regular maintenance issues, occurring at locations that regularly overflow combined sewage during wet weather, are unfortunately not unexpected, and are identified and mitigated in a timely manner through Hamilton Water’s robust maintenance and inspection

programs. The change maintains the City’s objectives for transparency, accountability, and public reporting.

The number of properties has been removed from the various spill scenarios, recognizing that the volume of the spill is the greatest driver in determining severity.

**ALTERNATIVES FOR CONSIDERATION**

N/A

**APPENDICES AND SCHEDULES ATTACHED**

Appendix “A” to Report PW24072 – Hamilton Water Sewage Spills Communication Guideline