




INFORMATION REPORT

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	September 8, 2023
SUBJECT/REPORT NO:	Procedural Changes Resulting from Chedoke Creek and Burlington Street Combined Sewage Discharge Incidents (PW23056) (City Wide) (Outstanding Business List Item)
WARD(S) AFFECTED:	City Wide
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SUBMITTED BY:	Nick Winters Director, Hamilton Water Public Works Department
SIGNATURE:	

COUNCIL DIRECTION

At the November 28, 2022 meeting of the Public Works Committee, staff were directed to report back to the Public Works Committee respecting changes to the Standard Operating Procedures as a result of the lessons learned from the Chedoke Creek and Burlington Street combined sewage discharge incidents.

INFORMATION

Since the discovery of the Chedoke Creek combined sewage spill in July of 2018, and the subsequent discovery of the Burlington Street combined sewage discharge incident in November of 2022, the Public Works Department and Hamilton Water Division have implemented a number of new operational programs and procedural changes to assist in the prevention of future incidents from occurring. However, should further incidents occur, measures are now in place that allow early detection and mitigation. In addition, new protocols ensure appropriate and timely communication to City Council, the community, and the City's partners. Additional programs have also been implemented to enhance the stewardship of the City's watersheds and natural environment.

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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Below is a list and brief description of new or revised programs or procedures that have been developed as result of the Chedoke Creek and Burlington Street combined sewage discharge incidents.

New Programs or Processes

Watershed Action Plan

The purpose of the Watershed Action Plan is to reduce the pollution of waterways due to rural and urban runoff, reduce the impact of City infrastructure and operations, increase the retention and infiltration of stormwater into the ground and increase the connectivity of naturalized areas and green infrastructure. The plan also minimizes system capacity risk due to growth, development, and climate change and maximizes the adaptability of investments to manage future uncertainties.

Report PW19008(u) provided the City's General Issues Committee with a thorough update on the Watershed Action Plan at its meeting of June 28, 2023.

Surface Water Quality Program

The Surface Water Quality Program builds a baseline understanding of surface water conditions over time and provides processes to respond to and investigate any water quality anomalies that may be due to infrastructure malfunctions or standard operating conditions. The program developed open communication and transparency with various partners. The City has also launched the website [Surface Water Quality Program](#) that enables the City to share the surface water quality data with the public. Report PW23040 provided the Public Works Committee with an update on the progress and successes of the program for 2022.

Wastewater Quality Management Program

The Wastewater Quality Management System has established new processes or improved existing processes to effectively collect and treat wastewater in a manner that protects the environment and meets legal and regulatory requirements. The program supports the City's commitment to a high-quality wastewater system. The Wastewater Quality Management System received endorsement from Council on December 16, 2020 (Report PW20076). Report PW23030 and the Wastewater Quality Management System Annual Report informed the Owner (Mayor and Council) and City's Public Works Committee of the performance and major milestones achieved in 2022.

Enhanced City of Hamilton Inspections Program

The Enhanced City of Hamilton Outstation Inspection Team was developed in 2020 and consists of one (1) Maintenance Operator, one (1) Millwright, one (1) Electrician, and one (1) Instrumentation Technician. Four (4) of the full-time equivalent staff approved by Council were used to staff the Enhanced City of Hamilton Outstation Inspection Team, who are tasked with completing thorough inspections and preventative maintenance at the City's water and wastewater treatment plants, pumping stations, reservoirs, water towers, well systems and combined sewer overflow tanks. The team is also responsible for looking at a facility or process area as a whole to verify its operational functionality instead of focusing on preventative maintenance of individual components. This includes reviewing the process control narratives, Supervisory Control and Data Acquisition set points, Environmental Compliance Approval requirements, asset information, and the facility/process standard operating procedures. Report PW21019 provided Council with an update on the status of the Enhanced City of Hamilton Outstation Inspection Team's accomplishments.

Council and Public Transparency

The details surrounding the Chedoke Creek combined sewage spill have been widely reported within the community and to City Council and all associated reports and materials can be found on the City's website [Chedoke Creek Spill & Remediation Activities](#). The details surrounding the Burlington Street combined sewage discharge incident have been similarly reported and associated reports and materials can be found on the City's website [Burlington Street Sewage Spill & Response](#). In addition, all materials related to Ministry Orders can be found on the City's website [Ministry Orders](#).

Another example of enhanced public transparency regarding sewage discharges is the public facing website [Monitoring Wastewater Overflows and Bypasses](#). Developed in 2020, this website includes a live map of overflows and bypasses, the Wastewater Treatment Bypass Log and the Combined Sewer Overflow Log. Report PW19091(a) provided the City's Public Works Committee with an update on processes related to reporting wastewater treatment plant bypasses and combined sewer overflows, processes related to the new website and notification of signage at combined sewer overflows.

The City has also developed a public facing website [Sewer Inspection Program](#) which informs the community about cross-connections and provides links to the City's [Sewer Systems](#) and [Wastewater Quality Management System](#) websites. The Sewer Inspection Program website also includes a live map to sewage spills from Hamilton Water infrastructure. The [Sewer Inspection Program](#) website was reported to Council

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through Communication Update HW.23.03 - Spills from Hamilton Water Infrastructure Webpage.

New and Updated Procedures - Chedoke Creek Combined Sewage Spill

In response to the Chedoke Creek combined sewage spill, in 2019, Hatch Consulting completed a comprehensive review and update of combined sewer overflow operations and maintenance plans. The report entitled “City of Hamilton CSO Facilities O&M Plan - MECP Order Item 6” (Hatch, January 31, 2019) provided a summary of the Operations and Maintenance Plan for the City’s combined sewer overflow facilities. The Operations and Maintenance Plan report included updated standard operating procedures for the combined sewer overflow facilities which are reviewed every three years or sooner if required. The Operations and Maintenance Plan report also included an updated process control narrative for the Main/King combined sewer overflow tank. Process control narratives for the remaining facilities were not changed and therefore not included in the Operations and Maintenance Plan however they are maintained as key operational documents for the facilities.

Appendix “A” to Report PW23056 summarizes the standard operating procedures that were updated or created in response to the Chedoke Creek combined sewage spill.

New and Updated Procedures - Burlington Street Combined Sewage Discharge Incident

In addition to the programs and procedures above, Hamilton Water has also developed additional procedures or improved existing procedures to identify, respond to and communicate spills and unauthorized discharges of untreated combined sewage from the City’s sewer system.

Appendix “B” to Report PW23056 summarizes the standard operating procedures that were updated or created in response to the Burlington Street combined sewage discharge incident.

All the procedures summarized in Appendix B to Report PW23056, along with the City’s Surface Water Quality Program Framework were submitted to the Ministry of Environment, Conservation and Parks on Thursday June 29th, 2023, in response to Items No. 7 and 8 of the Provincial Officer’s Order Number 1-142403769 issued to the City on January 18, 2023.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report PW23056 – Procedures to Address the Chedoke Creek Combined Sewage Spill

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Appendix “B” to Report PW23056 – Procedures to Address the Burlington Street
Combined Sewage Discharge Incident