

## Quarterly Report: Improving Monitoring and Public Reporting of Sewage Overflows and Bypasses Program

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<b>Quarterly report number and date:</b>	#2 (Sept 23, 2022)
<b>Municipality:</b>	City of Hamilton
<b>Contact person and title:</b>	Mike Christie, Senior Project Manager
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### **Notes:**

- Funding must be used to increase municipal implementation of near real-time public reporting of sewage bypass and overflow events.
- Eligible expenses include:
  - Engineering and design work
  - Purchasing of equipment/software (e.g., monitoring devices)
  - Installation costs (e.g., monitoring equipment)
  - Electrical/internet connections
  - Associated capital costs (e.g., access point)
  - Capital upgrading costs (e.g., improved monitoring devices/infrastructure)
  - Signage associated with public reporting of sewage overflows and bypasses (e.g., to support social media – QR code)
  - Other capital expenses related to the development and implementation of monitoring/modelling and public reporting of sewage overflows and bypasses
- Expenses listed above are only considered eligible if they are capital in nature or able to be capitalized based on standard accounting principles. However, engineering, design, or other consultant costs cannot be the significant/sole expenditure. Funding must be used for equipment and construction. Engineering, design, or other consultant costs shall be incidental to that. Municipal staff time and staff costs are not an eligible expense under the Program.
- Eligible expenses do not include any costs (including taxes) for which the Municipality has received, will receive, or is eligible to receive, a rebate, credit, or refund.
- Quarterly report dates are: #1 June 30, 2022; #2 September 30, 2022; #3 December 31, 2022; #4 March 31, 2023; #5 June 30, 2023; #6 September 30, 2023; #7 December 31, 2023; #8 March 31, 2024

**Quarterly Report # 1 (June 30,2022) By Municipality: City of Hamilton**  
**Improving Monitoring and Public Reporting of Sewage Overflows and Bypasses Program**

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**Background and Context**

*Please provide relevant context and background (e.g., current status of monitoring and public reporting of sewage overflow and bypass events in your municipality).*

In 2020, the City of Hamilton implemented a real-time monitoring and public reporting of wastewater overflows and bypasses website: [Monitoring Wastewater Overflows and Bypasses | City of Hamilton, Ontario, Canada.](#)

- This live map is updated every 15 minutes providing current information for each outfall location. The map will indicate whether there is a current overflow and if an overflow has occurred within the last 48 hours.
- The website also hosts two public facing logs:
  - Historical Wastewater Treatment Plant Bypass Log – Includes date/time, duration, location, type of bypass and volume.
  - Historical Combined Sewer Overflow Log - Includes date/time, duration, location of outfall, type of bypass and volume **if there is flow metering present at the location.**
- The website also has an educational component, explaining why wastewater bypasses and combined sewer overflow events occur, including a video which explains the differences between separated and combined sewer systems, how they work and what happens with the combined sewer system during extreme wet weather: [Combined Sewer Overflows in Hamilton](#)

The City of Hamilton currently has 16 combined sewer overflow outfalls and the Dundas Wastewater Treatment Plant tertiary bypass that are unmonitored (no flow metering). These locations have been studied and recommendations have been received through a technical memorandum from AECOM “CSO Outfall Monitoring Feasibility Study” (March 2021) that focuses on the objective of implementing a permanent flow monitoring plan to quantify, using real-time data through the City’s SCADA system, the amount of combined wastewater discharging directly into the environment at the unmonitored outfalls.

The City of Hamilton also received recommendations through the technical memorandum from Hatch “CSO Facilities Assessment” which discusses the findings of the CSO facility inspections and the recommendations to improve the monitoring, performance and reliability of each facility to minimize the potential for bypasses and overflows.

**Use of funding**

*Please provide brief description of how funding will be used (e.g., number of monitors purchased, locations monitored/modelled, cost of monitoring or modelling per location).*

General improvements include the following:

- Replacement and addition of new monitors (flow, level, direction, etc.) at critical overflow locations (AECOM Report)
- Addition of flow measurement/detection (velocity-area flow meter and/or level sensors) at 16 new locations.
- Addition of new cameras at critical overflow locations.
- Repairs and modifications required to improve monitoring, performance, reliability including safety enhancements.
- Repairs and modifications required to return each outstation to regular functionality and provide enhanced control and visibility at potential environmental discharge locations.
- Review and assess all signage (or provide new if required) at locations with potential of discharges (overflows or bypasses) of sanitary or combined sewage into the environment. Possible addition of QR codes to signs that direct users to the relevant pages on the City’s website.
- Evaluate and provide recommended improvements to the current monitoring, data collection, reporting and information that is available to the public regarding sanitary overflows/bypasses.

Please see Appendix A – Breakdown of Construction & Engineering Costs for a detailed breakdown of eligible expenses.

**Projected Benefits**

**Quarterly Report # 1 (June 30,2022) By Municipality: City of Hamilton**  
**Improving Monitoring and Public Reporting of Sewage Overflows and Bypasses Program**

*Please describe how the funding will improve near real-time public reporting of sewage overflow and bypass events. Note: Implementation of near real-time public reporting is required for each municipality receiving funding.*

The proposed project will support the overall objective of the funding program: To increase municipal implementation of near real-time public reporting of sewage bypass and overflow events.

- The project will improve our current monitoring/modeling and real-time reporting of these events by the replacement and addition of new monitors that will detect and/or measure flow, level and direction at 16 new locations.
- The addition of cameras at critical overflow points to provide greater visibility of current operational function of the facility.
- Implementation of signage and signage improvements to existing signage at locations with potential discharges (overflows or bypasses), including the addition of QR codes to the signs.
- Replacement of existing monitoring instrumentation to improve reliability and accuracy.
- Enhancements to the current monitoring, data collection, reporting mechanism and information that is available to the public regarding overflows and bypasses through our current website: [Monitoring Wastewater Overflows and Bypasses | City of Hamilton, Ontario, Canada.](https://www.hamilton.ca/water-wastewater/monitoring-wastewater-overflows-and-bypasses)

**Expenses**

<b>Eligible Expense</b>	<b>Description</b>	<b>Amount</b>
Consultant/Design Costs	Engineering Costs with added 30% contingency	\$360,000
Capital Costs	Construction Costs with added 30% contingency	\$1,440,000
	<b>Total:</b>	<b>\$1,800,000</b>

**Reimbursements**

<b>Funding allocation:</b>	\$885,936.00
<b>Reimbursements requested to date:</b>	\$0
<b>Reimbursement requested for this report:</b>	\$0
<b>Remaining funding:</b>	\$885,936.00

**Eligible Expense:** The eligible expense as set out in the funding agreement and on page one of this report. Provide additional detail if needed.

**Description:** A short sentence or paragraph that provides some details of the expense.

**Funding allocation:** Amount of funding that has been allocated to your municipality by the program.

**Reimbursements requested to date:** The total amount of reimbursements that have been requested prior to this quarterly report.

**Reimbursements requested for this report:** The amount of reimbursement requested for this report

**Remaining funding:** The amount of the funding allocation remaining after reimbursement of all requested reimbursements.