

Enhanced Inspection and Monitoring Hamilton Water and Wastewater

June 14, 2021

Public Works Department Hamilton Water Division

PW21019 Item 8.1

ANDREW GRICE



AGENDA

Enhanced Inspections

Surface Water Quality Program

Hamilton



ECHO Program

Multidisciplinary Team

- Operations
- Maintenance

Responsibilities

- Inspections
- Preventative maintenance
- Compliance and SOP's
- Process Control Narratives review







ECHO Program 2020 RESULTS

First ECHO Team Inspection was Main/King CSO Tank - August 18, 2020

Staff spent 4 days on-site

Completed inspections at 28 different facilities in 2020 including all of the CSO facilities







ECHO Program ISSUES DISCOVERED/ MITIGATED

Status update on Deficiencies

Refer to Appendix "B" of the report







ECHO Program NEXT STEPS

Fill remaining vacancies in operational team

Finalize inspections at all facilities by end of 2021

Create roadmap / priority matrix for future inspections



Hamilton



Surface Water Quality Program DISCHARGE IMPACTS

Primary sources of wastewater & stormwater discharges include:

- Combined Sewer Overflows (CSOs)
- WWTP effluent and bypasses
- Sewage Pumping Station (SPS) emergency overflows and/or by-passes
- Sanitary Sewer Cross-connections
- Separated stormwater system discharges



Surface Water Quality Program

Preparation

Hiring WQT	Phase 1 (1-2 yrs)			Ň
Hiring WQT Background information review Stakeholder Engagement Sample Point Inventory Gap Analysis Sample name standardization EME Chedoke Creek sample conversion LIMS data standardization Mapping WQT Training Field equipment	Sampling parameter standardization Proposed modification existing internal WQ programs New internal WQ monitoring locations Proposed modification external WQ programs	Phase 2 (2-5 yrs) Additional enhancements to sample inventory Technology – real time monitoring Data sharing / Webpage Funding / Grants	Phase 3 (5-10 yrs) Decision making / Capital investing Benthic monitoring Strategic sewer use by- law enforcement	
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Surface Water Quality Program **STAKEHOLDER ENGAGEMENT**

WQ Technologist has been in contact with several internal and external stakeholders

WQ Technologist sits on 4 of HHRAP's teams for continuity of programs

In the final stages of finalizing Memorandums of Understanding (MOU) for Data Sharing







Surface Water Quality Program

CITY ASSETS

- 54 Outfalls associated with Wastewater System
- 755 Outfalls Associated with Stormwater System
- 61 Sampling locations with ongoing/regular sampling programs (inclusive of WWTPs & CSOs) WWTP effluent and bypasses

AREAS WITH LIMITED VISIBILITY

Hamilton Harbour, Cootes Paradise, Chedoke Creek, Red Hill Creek, Grindstone Marsh

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Surface Water Quality Program EXISTING SAMPLING LOCATIONS

- EXTERNAL CA SITE
- EXTERNAL RBG SITE
- EXTERNAL ECCC
- CITY CSO TANK EFFLUENT SITE
- CITY SURFACE WATER MONITORING SITE
- CITY WWTP DISCHARGE
- WWTP EXPANSION PROGRAM





Surface Water Quality Program WEBSITE & DATA SHARING



Surface Water Quality Program

ome > Home, Property and Development > Water & Sewer > Surface Water Quality Program

The City of Hamilton has implemented a Monthly Surface Water Quality Program that samples select waterways throughout the City for a wide range of water quality parameters.

Surface Water Monitoring Map

Live map is updated monthly providing current information for each water sample location.





Phase I – Integrate existing Chedoke Creek Surface Water Quality Program

Phase II – Integrate new City of Hamilton
Surface Water Quality Program,
Monitoring locations and revised
parameter monitoring list



Phase III – Integrate external stakeholder sampling locations and monitoring data

BI Dashboard development

Phase IV – On demand data trending and analysis.

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QUESTIONS?