

Hamilton's Wastewater System

The City of Hamilton has one of the largest and most complex sewer systems on the Great Lakes. Hamilton has approximately 2100 kilometres of sewers. Of that, approximately 900 kilometres are in the combined sewer system; this means one sewer pipe collects both municipal wastewater and storm water. During heavy rainstorms, the increase in combined wastewater flows occasionally exceeds the capacity of the municipal sewer system and wastewater treatment plant. To protect against basement flooding and WWTP upsets, wastewater can escape the collection system at various CSO locations and possibly bypass the WWTP going directly to Windermere Basin.

The Woodward Avenue Wastewater Treatment Plant (WWTP) treats wastewater for approximately 380,000 residents of Hamilton with a current average daily flow of 340 million litres per day. The design peak flow capacity of the WWTP is 614 million litres per day. During wet weather periods, due to the combined sewer system, flows can reach as high as 1 billion litres per day.

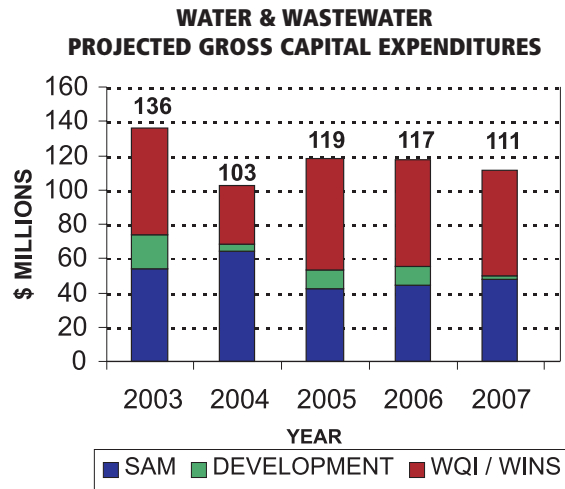
Hamilton is proactive in its wet weather treatment efforts. The City is presently implementing upgrades to the WWTP that will address the treatment of flows in accordance with Ministry of Environment Procedure F-5-5 and initial RAP targets. As well, the City has continued to implement Combined Sewer Overflow (CSO) control methods.



Capital Investments in Hamilton's Wastewater System

2000 – 2003 Completed Capital Upgrades to the Woodward Ave. Wastewater Treatment Plant \$22 Million

2003 Completed Greenhill Combined Sewer Overflow Tank \$20 Million



SAM – Sustainable Asset Management Development
WQI – Water Quality Initiatives

2004 – 2007 Capital Budget to the Wastewater Treatment Plant and Outstations . . \$153.5 Million

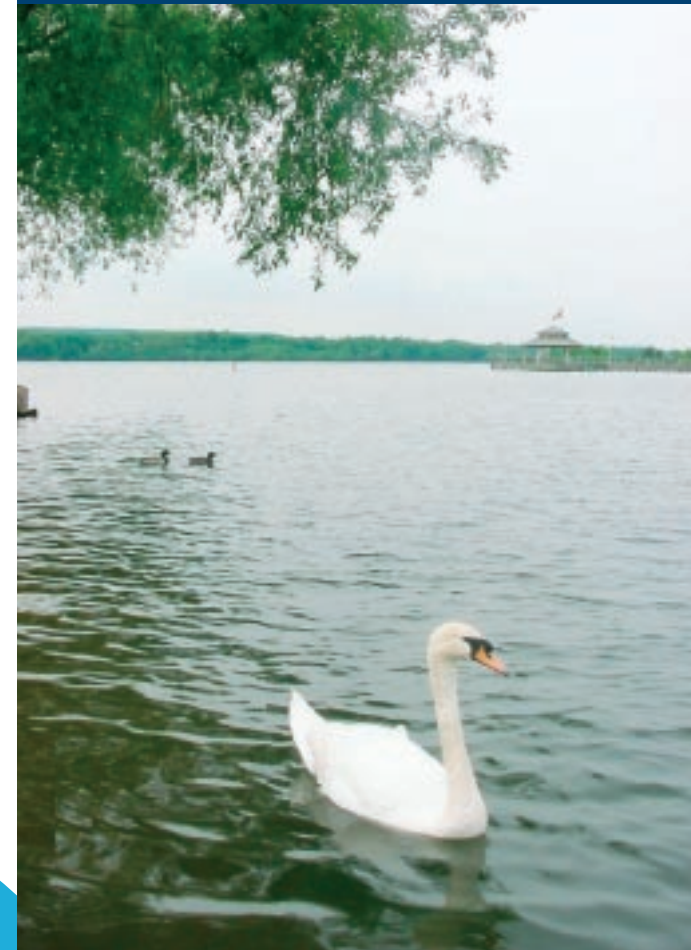
2004 – 2007 Major CSO Tanks \$73 Million

For more information about other programs and services offered by the Water and Wastewater Division, please call 905-546-CITY (2489), on-line at www.hamilton.ca/water or visit your local Municipal Service Centre for one of our brochures.

- Drinking Water Report
- Lead Pipe Service Replacement Program
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- Low-Flow Aerators
- Maintenance of Sewer Laterals
- Sewer Lateral Tree Root Policy
- No-Fat Sewers
- High Household Water Consumption

We can answer your questions, assist you with a concern, or help you find the right person!
905-546-CITY (2489)
www.hamilton.ca/water

HAMILTON HARBOUR WINS Wastewater, Investment, Needs And Strategies



Hamilton

Public Works Department
Water and Wastewater Division



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Hamilton Harbour WINS

Mission Statement

Wastewater Investment Needs and Strategies (WINS) is dedicated to long-range planning and implementation of sustainable wastewater infrastructure upgrades.

WINS addresses future growth, water quality and wet weather treatment to protect and enrich environmental and public health.

The Wastewater Investments Needs and Strategies (WINS) program is intended to assess the technical, social, and financial needs of the City's wastewater systems over a 30-year period.

Due to aging infrastructure, anticipated growth, and most importantly water quality targets established by the Hamilton Harbour Remedial Action Plan (RAP), and by Ministry of Environment Procedure F-5-5 for the control of wet weather discharges, a system was required to develop the strategies needed to effectively meet specific objectives related to Hamilton's wastewater system.

It has been estimated that capital expenditures of between \$400 to \$600 million are required to implement the WINS program, depending on the water quality targets adopted and the eventual treatment capacity required at the City's wastewater treatment plants.

Why initiate the WINS program?

The WINS program will provide cost effective, logical and efficient planning to meet the following goals:

- Ensure Hamilton's Water and Wastewater Treatment Plants (WWTP) meet water quality objectives - RAP targets
- Ensure Hamilton's WWTP meet development capacity requirements
- Effectively deal with wet weather flow issues in the collection system due to contributions from the combined sewers

How was WINS developed?

First, there was the identification of existing relevant information to produce a WINS library containing relevant study or project reports on previous work.

Second, there was the identification of internal and external stakeholders to ensure all interests were represented.

Third, guidelines were developed to identify and track projects under the WINS umbrella.

Who's involved in WINS?

Various internal and external stakeholders play a role in the WINS program. City stakeholders include Planning and Development, Finance, Capital Planning and Implementation, and Water and Wastewater. External stakeholders involve various environmental groups and provincial departments.

Implementation of WINS

WINS is a tool used to gather wastewater planning information. WINS will enable coordinated decisions to be made regarding ongoing projects or initiate projects that are required for wet weather treatment.

WINS will help ensure money is spent wisely. WINS will identify the appropriate upgrades at the appropriate time in the appropriate location. It is also anticipated that having a detailed and concise plan will assist the City in obtaining critical provincial and federal funding.

What does WINS accomplish?

Meeting Water Quality Objectives

Hamilton Harbour was identified as an "Area of Concern" under the Great Lakes Water Quality Agreement, due to a history of water quality issues. The Hamilton Harbour Remedial Action Plan (RAP) was developed as a multi-stage and multi-stakeholder effort. WINS addresses water quality issues and works to protect and enrich our natural waterways.

Meeting Development Capacity Requirements

WINS is associated with Hamilton's Vision 2020 Plan, a guiding principal on sustainable development; GRIDS, Growth Related Integrated Development Strategy, a strategic direction for City development; and the Water and Wastewater Master Plan, which identifies the capacity and location of the required wastewater infrastructure.

Wet Weather Treatment

Wet weather conditions can place significant stress on the wastewater system, on occasion wastewater has to bypass the plant and go directly to the combined sewer overflow outfalls. Through WINS, the City is better able to address these needs. Presently upgrades are taking place at Hamilton's wastewater treatment plant to ensure all wet weather flows receive primary treatment prior to entering waterways.

Photography by Mark Bainbridge



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