



Hamilton
Public Works

City of Hamilton Stormwater Management

As part of an ongoing initiative to reduce flooding impacts and protect our natural environment, the Public Works Department is conducting several studies and planning initiatives.



Greenhill Ave area (pictured above). A storm drainage study is currently ongoing.

Planning Processes...Planning for the future

Water and Wastewater Master Plan: Addressing Wet Weather Treatment

Hamilton is presently completing a comprehensive Water and Wastewater Master Plan, which includes upgrades to the Woodward Wastewater Treatment Facility as well as overall combined sewer overflow management. This year, Phases 3 and 4 of the Plan are expected to be completed hereby identifying the preferred alternative for upgrading the Wastewater Treatment Plant as well as the preferred method for controlling combined sewer overflows to ensure the City meets development needs and cleans up Hamilton Harbour.

The Water and Wastewater Master Plan addresses many of Hamilton's needs, including Wet Weather Treatment:

Hamilton has approximately 600 kilometres of combined sewer system. Wet weather conditions can place significant stress on the wastewater conveyance and treatment facilities. On occasion, wastewater must bypass the plant to protect against flooding private homes and

businesses. This material is diverted to the combined sewer overflow outfalls. Through the Water and Wastewater Master Plan, Hamilton is better able to address the need to alleviate these occurrences.

This entire master planning process will be undertaken in consultation with stakeholders, including the public, through various Public Information Sessions and public review processes.

Stormwater Master Plan

Hamilton recently finalized the Stormwater Master Plan (SWMP) to ensure that the City not only meets the current and future needs of the community and environment, but is coordinated with the Transportation and Water & Wastewater Master Plans through the Growth Related Infrastructure Development Strategy (GRIDS) program.

The intent of the Stormwater Master Plan is to prepare a framework which balances the requirements of proposed and existing development with infrastructure needs,

economic, social and environmental constraints and opportunities. A guiding principle of the Plan is to "Treat rainwater as a resource to be protected and managed, rather than a waste product to be quickly removed from where it falls."

The goals of the Plan are:

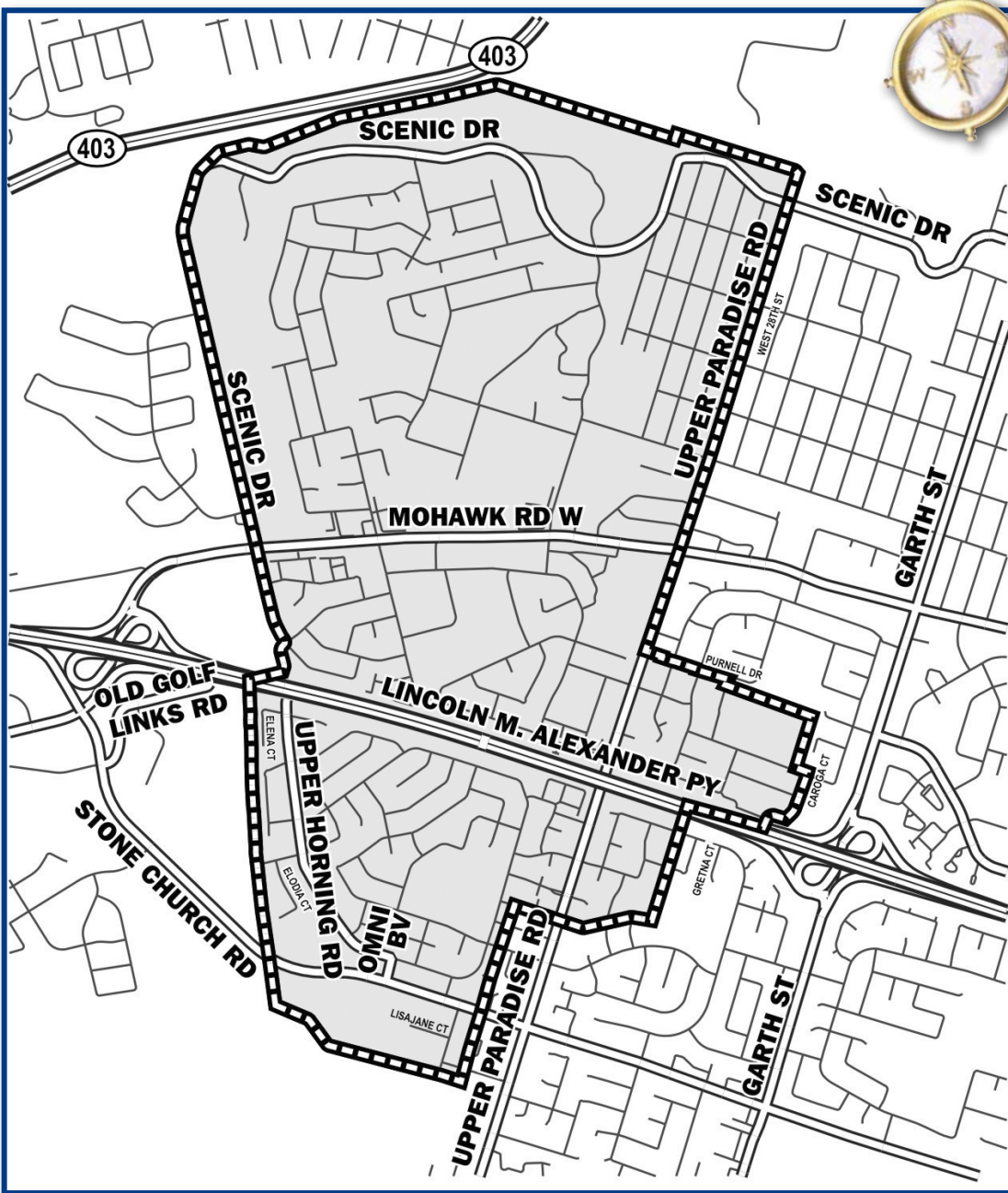
- To develop management guidelines for the maintenance and replacement of the City's existing separated storm sewer systems and for design of proposed systems;
- To develop and implement appropriate strategies to protect, enhance and restore the natural resources of the watersheds located within the City under present conditions and as land use changes occur in the future;

The Stormwater Master Plan is currently undergoing a public review program.

Please visit www.hamilton.ca for more details about the Master Plans.



Two of Hamilton's stormwater management ponds on the west side of the Red Hill Valley; North of Greenhill Avenue (top), South of King Street (bottom).



Mountview Neighbourhood Storm Drainage Study

The City initiated this study following two major storm events that occurred on July 26, 2005 and August 19, 2005. The study area is roughly bounded by Scenic Drive, Stone Church Road and Upper Paradise Road.

The Study is being conducted in two parts; a Storm Drainage Study and a Stormwater Management Facility Review.

Storm Drainage Study:

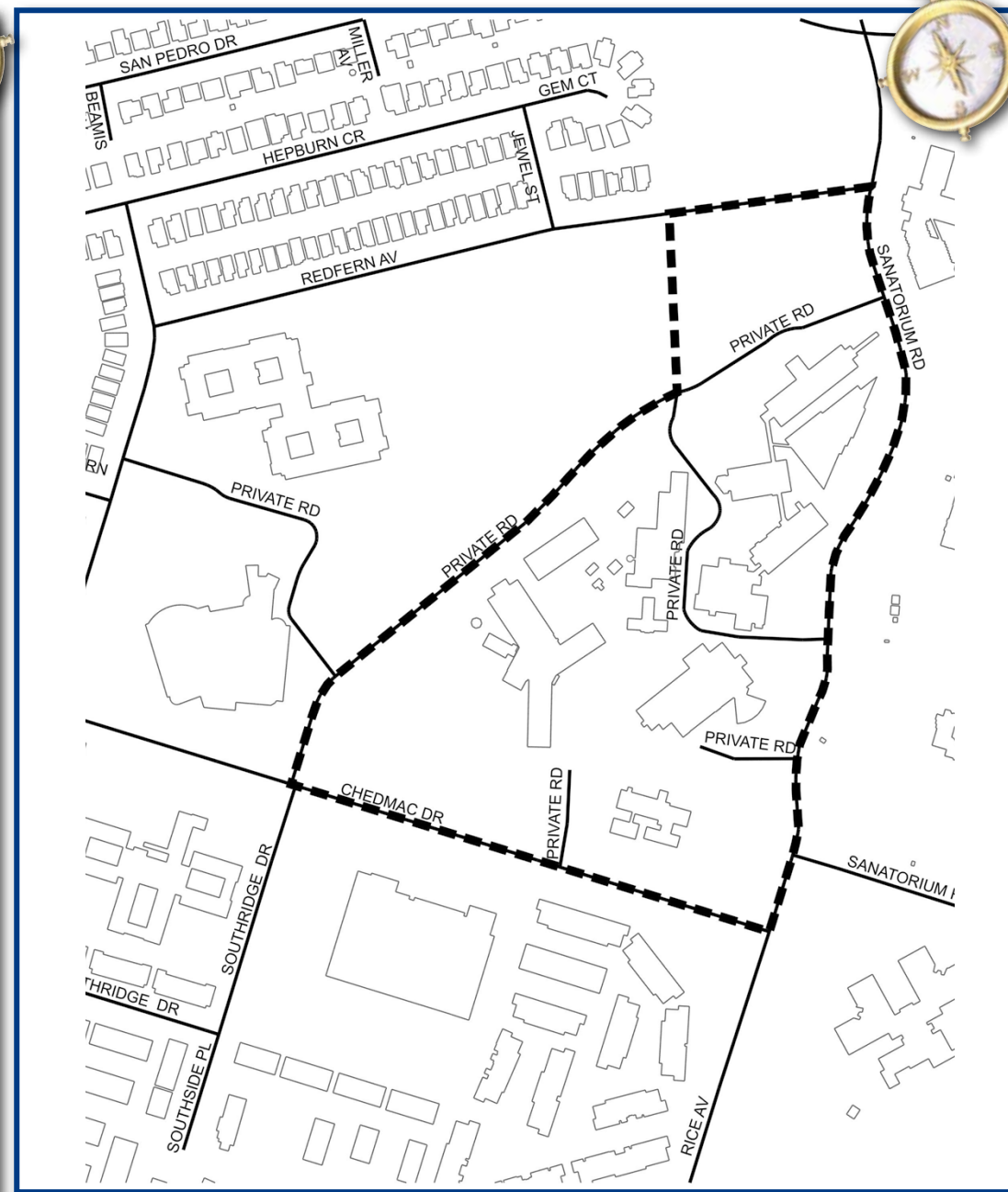
This Study reviewed the storm sewer system. Some of the Study components included:

- Analyzing the capacity of all drainage outlets in the Mountview Neighbourhood
- Identifying major and minor drainage systems
- Identifying any remedial works associated with storm drainage system capacity deficiencies
- Public Consultation period
- Documentation period in a Study Report

Stormwater Management Facility Review:

This Review examined the suitability of providing a stormwater management facility within the hydro corridor above the Escarpment in the Mountview Neighbourhood.

Three Public Information Centres were conducted in 2006 which covered both study parts. The Final Study Report is currently being developed and is expected to be available for public review by early Fall 2007.

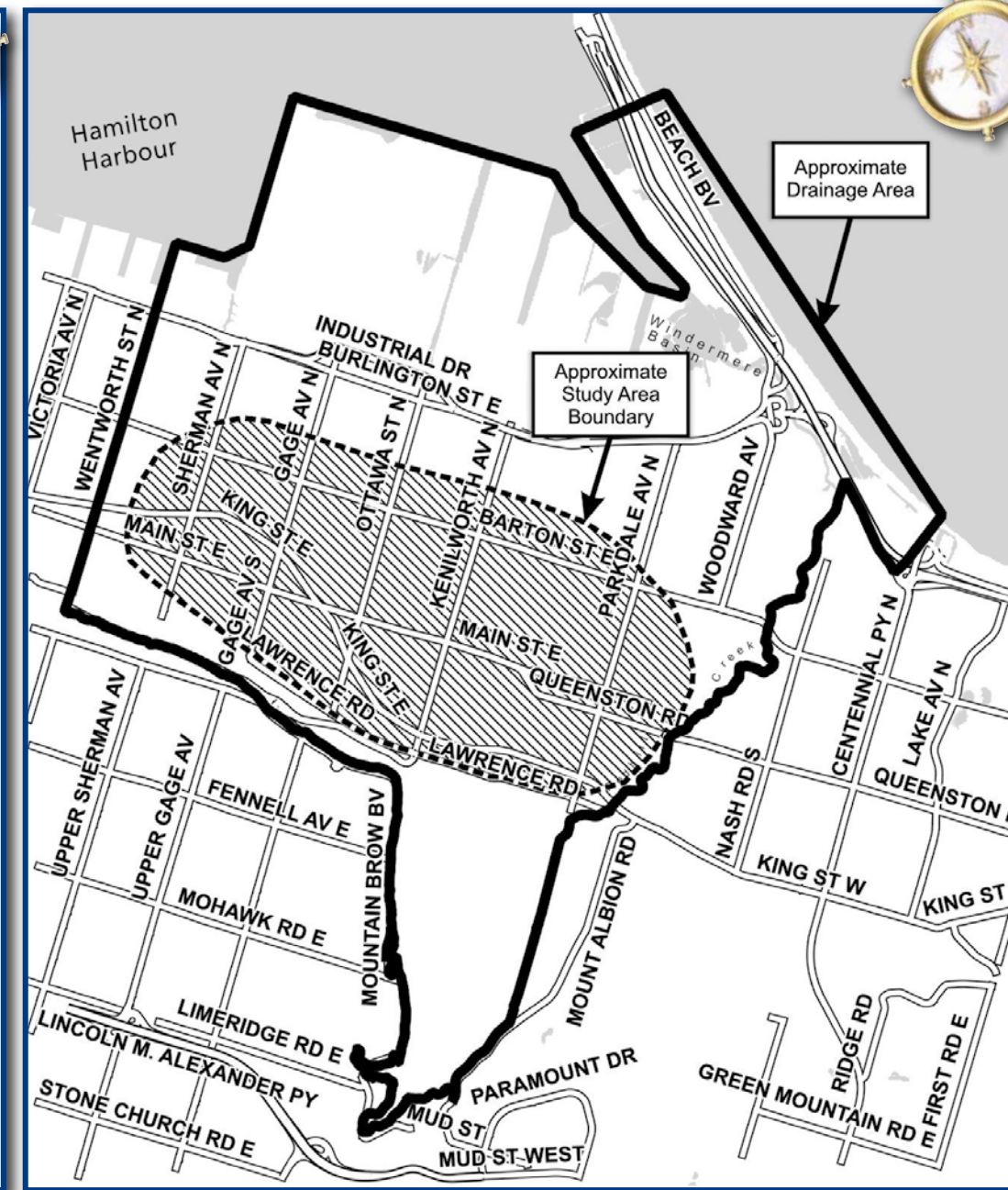


Sanatorium Road and Stormwater Municipal Class Environmental Assessment

In recent years the City has been inspecting and maintaining the north-south portion of Sanatorium Road due to the deteriorated condition of the road, sidewalks and lack of municipal storm sewers for derelict drainage. The stormwater management of the overall environmental assessment in this area will evaluate implementation options for the area around the north-south portion of Sanatorium Road (see study area map above)

The preferred stormwater design includes:

- A new enlarged inlet to the existing storm sewer on Sanatorium Road;
- New inlets and storm sewer in Holbrook Park connected to the West 33rd Street storm sewer at Elmwood Avenue;
- The construction of a low berm (earth mound) on the north boundary of Holbrook Park;
- A connection between the existing Sanatorium Road storm sewer and a new storm sewer flowing north on Sanatorium Road;
- A new storm sewer on Sanatorium Road between Rice Avenue and Redfern Avenue and
- A new stormwater storage facility ("dry" pond) south of Redfern Avenue connected to the existing Tiffany Pond.



Lower East End Storm Drainage Study

A number of areas within the Lower East End of Hamilton experienced flooding impacts during major storm events. The City has initiated this Study in order to investigate the storm drainage system and enhance stormwater management initiatives. The Study Area includes the area with the highest concentration of reported flooding problems bounded by Wentworth Street to the west, Lawrence Road to the south, Red Hill Creek to the east and extending just north of Barton Street to the north.

The study will examine the problem areas with respect to the capacity of the combined sewer system as well as the overland flow route system. The main purpose of the study is to understand the causes of the flooding issues and to explore and recommend potential remedial measures including opportunities for stormwater management facilities in the study area.

A key component of the project is effective consultation with area residents and businesses, particularly in areas that have experienced drainage problems. Public Information Centres were held in early 2007 and will continue throughout the course of the Study to provide updates and present preliminary findings. Upon completion of the study, a study report will be prepared to document the findings and recommendations. The community will be notified through the local media.



Fast Facts Stormwater Management Ponds

Stormwater management ponds may provide a number of functions, including:

- Flood control
- Erosion control
- Water quality control

There are over 130 stormwater management ponds located within the City of Hamilton. "Dry" ponds provide flood control, while "Wet" ponds provide stormwater quality control.

When it rains, stormwater runoff is created (i.e. from streets and driveways) and diverted to stormwater management ponds.

Benefits

- Water quality is improved. Suspended solids (floating sand and debris) are removed from the stormwater in the pond as they settle due to gravity and the cleaner stormwater is ultimately discharged to a natural watercourse (creeks, rivers)
- Downstream stormwater storage capacity can provide additional stormwater storage capacity
- A variety of habitats can be created around the pond
- The pond could provide educational opportunities for wetlands and wildlife study
- Potential for recreational opportunities

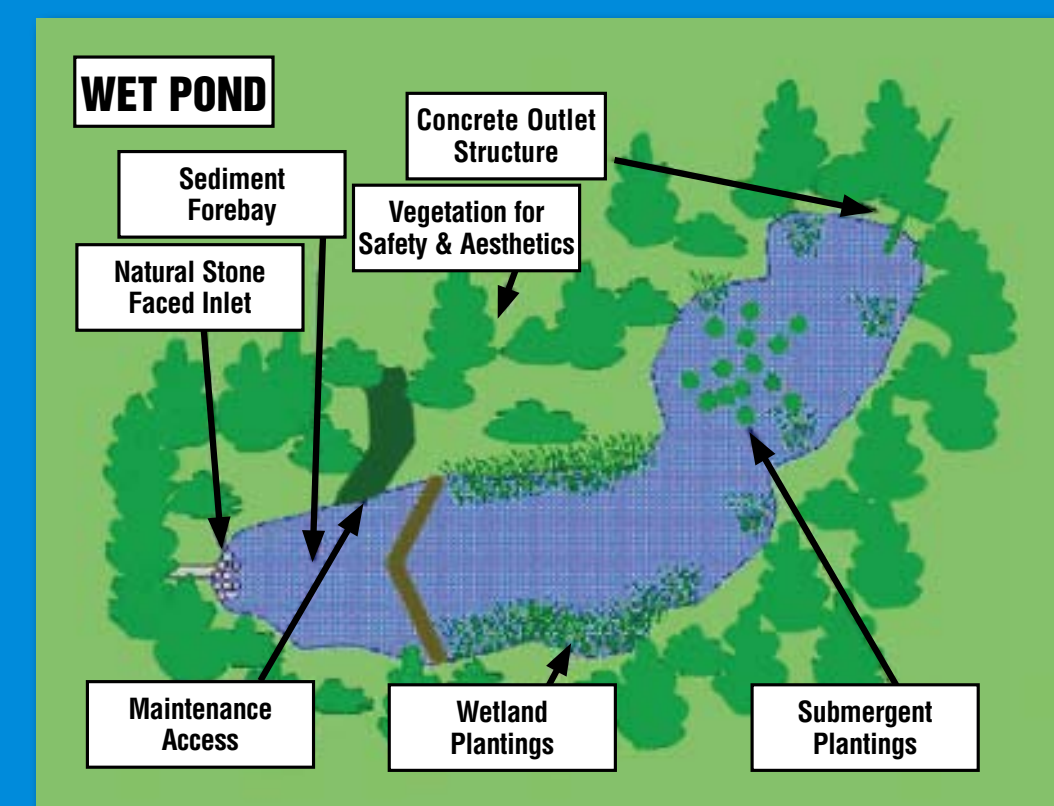


Illustration of a "wet pond"