

Welcome

Class Environmental Assessment *for* The Old Dundas Road Sewage Pumping Station (HC005) Wet Weather Relief

Public Information Centre No.2

Please complete the sign-in sheet and review the display materials.

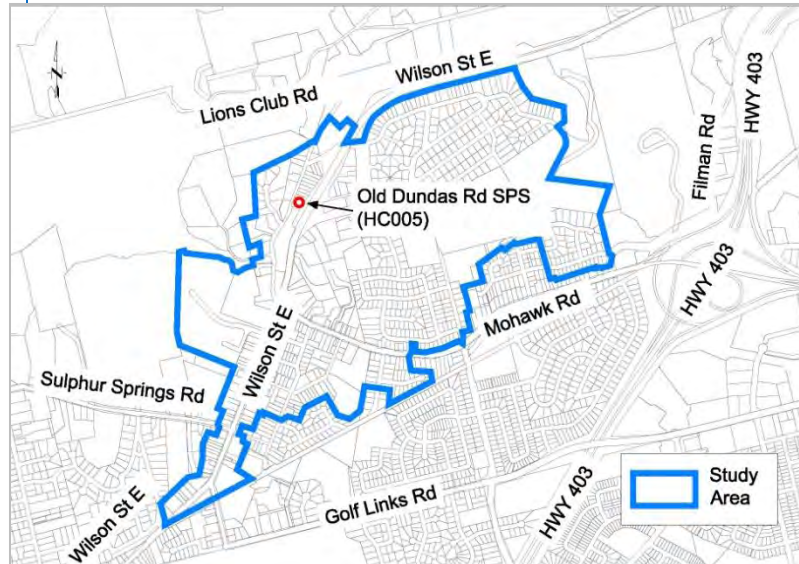
Your Input is valued! Please fill out a comment sheet.

The Project Team are on hand to answer your questions and address any concerns.

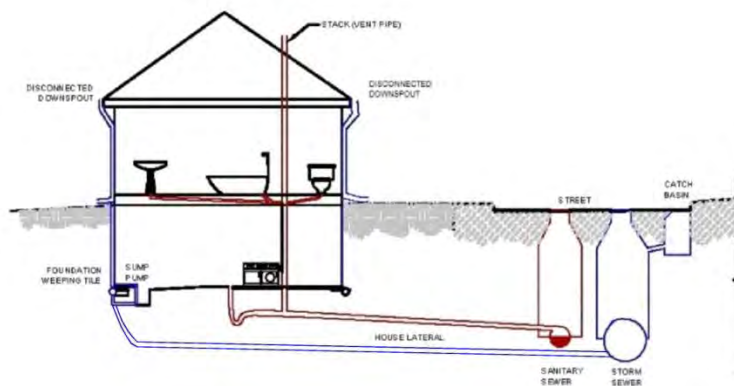


The Study Area

- The study area is bounded by Mohawk Road to the south, Wilson Street East to the west and north, and Filman Road to the east. The area represents the drainage/catchment area tributary to the Old Dundas Road Sewage Pumping Station (HC005). All homes and businesses in this area drain sewage to the station.
- The area is made up primarily of residential properties mixed with commercial properties.



The area is serviced by a separated sewer system



Separated Sewer

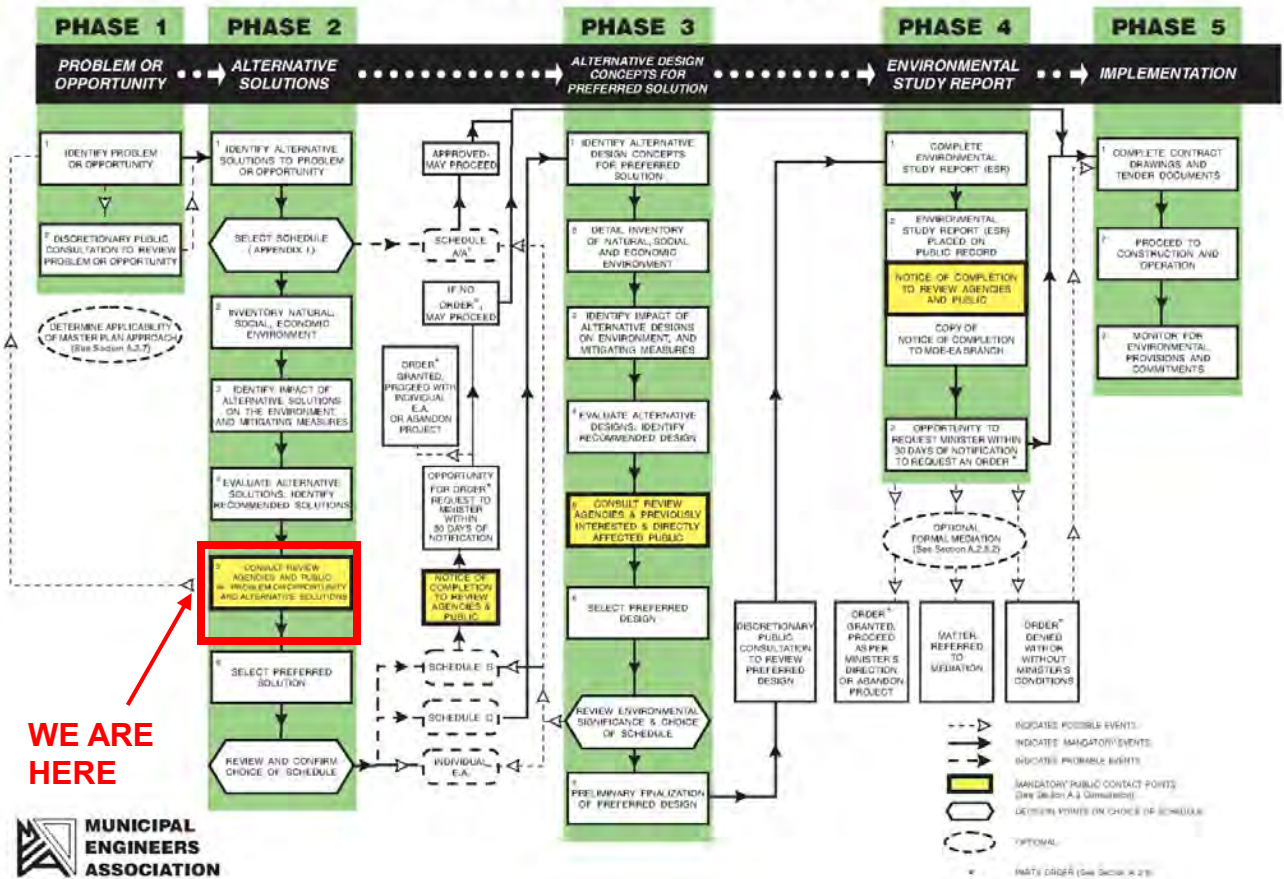




Overview of the Class Environmental Assessment Process

EXHIBIT A.2 MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA





Municipal Class Environmental Assessment (EA) Process

- A Class EA Study is prepared to consider potential environmental, economic, social and technical impacts of alternatives to solve an identified problem.
- EA Studies will result in the recommendation of an alternative which provides the best overall solution for the community.
- Master Plans are long range plans that tie together the various needs of an overall system. It is typically comprised of a set of separate projects that are to be individually implemented over time.
- Input from community residents and agencies is a key component of EA Studies.
- Information gathered during this Study will be shared with residents and agencies in a report which will be available for review by all parties.
- This Study considers the alternatives to relieve the wet weather flows at the pumping station.
- This is a Master Plan (Approach #2) Class EA Study. At a minimum, this Master Plan will address Phases 1 and 2 of the EA Process for any Schedule B projects that are identified and outline additional work that will be required to implement Schedule C projects.



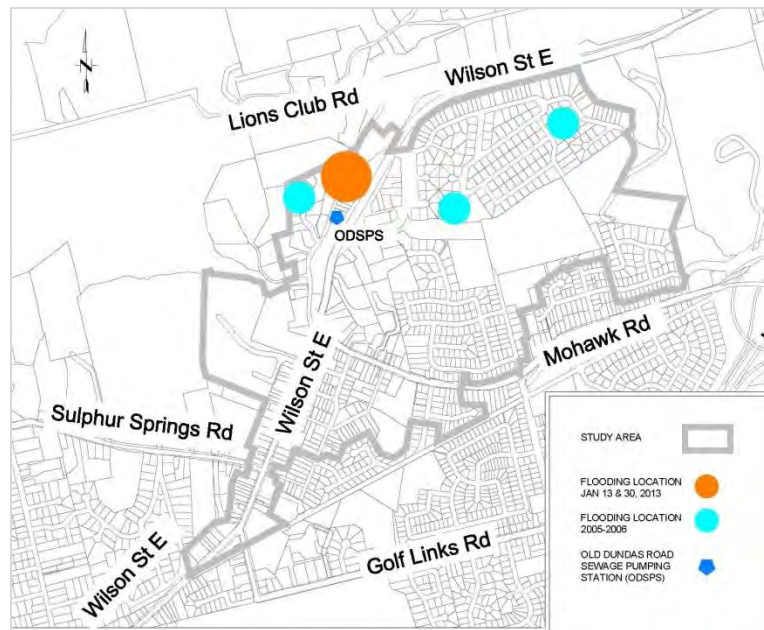
Problem Statement

Basement flooding occurs within the Old Dundas Road Sewage Pumping Station (HC005) catchment area during some wet weather events. The purpose of this study is to identify the causes of basement flooding and propose remedial measures to mitigate future basement flooding.

The accompanying figure illustrates the general location of homes which have flooded during events since 2005.

There are several potential causes of the flooding that has occurred.

This study addresses basement flooding that occurs as a direct result of overloading of the sanitary sewer system during some wet weather events by rainfall, snowmelt and groundwater which can enter the system as inflow and infiltration.



During dry weather and moderate wet weather events, the sewer system and pumping station provide the required capacity.

Purpose of this Class EA

Study Purpose:

The purpose of this study is to identify the cause(s) of basement flooding in the Old Dundas Road Sewage Pumping Station (HC005) catchment area and propose measures and/or infrastructure to mitigate future basement flooding.

Objectives of Tonight's Meeting:

- Describe the study area
- Define any problems or opportunities
- Present the Alternative Solutions
- Present a list of screening criteria which are to be used to evaluate the alternatives
- Present the Preliminary Recommended Solution
- Solicit feedback from the public

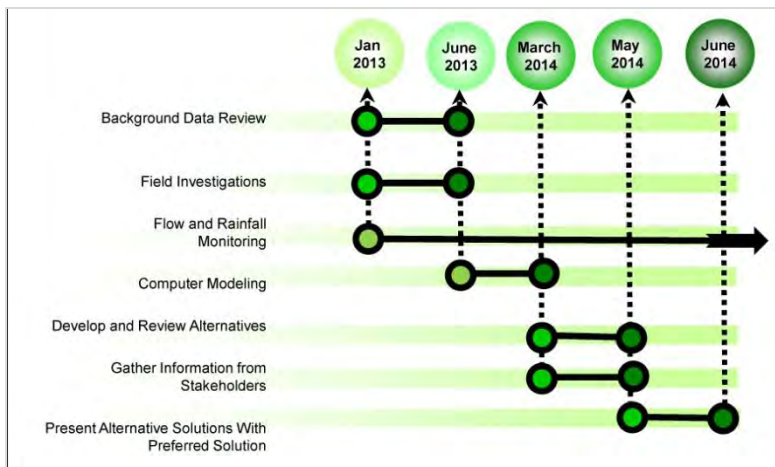
Investigating Basement Flooding: The Steps Involved



Many steps are involved in the study before solutions can be developed. The steps include:

- Collecting and reviewing background data on land use, population, soil conditions, sanitary and storm drainage systems, flooding history, previous reports and operation/maintenance records;
- Undertaking a comprehensive field investigation program to define the condition of the sanitary sewer system as well as identifying potential sources of inflow/infiltration from stormwater or groundwater sources;
- Monitoring sewer system flow and rainfall;
- Developing computer models to analyze the causes of flooding and to predict flows under various weather conditions;
- Developing and evaluating alternatives to address the issue of flooding;
- Gathering input from the community and review agencies; and
- Presenting alternative solutions together with the Preliminary Recommended Solution (June 2014).

We Are Here



Alternative Solutions

The general types of alternatives that may be implemented in order to reduce basement flooding are summarized below.

1. Do Nothing

2. Private Property Works

- Disconnect downspouts
- Improve grading adjacent to the foundation of the home
- Disconnect driveway catch basins



Driveway catch basin

3. Public Property Works (Operation & Maintenance)

Measures which could be undertaken by the City include:

- Rehabilitating leaky sanitary sewer pipes
- Sealing sanitary manholes and implementing measures to limit infiltration/inflow in manhole covers



4. Inline/Offline Storage

- Provide underground storage within the sanitary sewer system to accommodate flows which exceed the capacity of the sanitary sewers and Old Dundas Road Sewage Pumping Station



5. Old Dundas Road Sanitary Sewage Pumping Station

- Increase capacity of sanitary sewage pumping station to accommodate flows which exceed the capacity of the Old Dundas Road Sewage Pumping Station
- Provide underground storage adjacent to Old Dundas Road Sewage Pumping Station to accommodate flows which exceed sewage pumping station capacity



6. Emergency Overflow

- Provide an emergency overflow to Ancaster Creek to protect homes from basement flooding during extreme wet weather events.

Evaluation Criteria



The following criteria will be used to evaluate each alternative. It will help determine which alternatives should continue to be considered in selecting a preferred alternative or final recommendation.

Natural Environment

- Potential Impact on Terrestrial Systems (Vegetation, Trees, Wildlife)
- Potential Impact on Aquatic Systems, Aquatic Life and Vegetation
- Potential Impact on Soils, Groundwater and Surface Water
- Niagara Escarpment Commission Designations

Economic

- Capital Costs
- Operating/Maintenance Costs

Socio-Cultural

- Impact on Urban Greenspace / Recreational Use (Trees, Parks, Open Spaces)
- Disruption to Community During Construction
- Potential Impact to Archaeological and/or Natural Heritage Sites

Technical

- Effectiveness of Control Measure in Eliminating Basement Flooding
- Feasibility of Control Measure (available space, accessibility, construction requirements)
- Current Pumping Station Function
- Location / Impacts of Other Utilities
- Permits and Approvals

Evaluation of Alternatives



Evaluation Criteria	Alternative 1 -Do Nothing	Alternative 2 – Private Property Works	Alternative 3 – Public Property Works (O & M)	Alternative 4 – Inline/Offline Storage	Alternative 5 – Old Dundas Road Sanitary Sewage Pumping Station	Alternative 6 – Emergency Overflow
Natural Environment	<ul style="list-style-type: none"> No impact on terrestrial, aquatic or groundwater/ surface water environments 	<ul style="list-style-type: none"> No impact on terrestrial, aquatic or groundwater/ surface water environments 	<ul style="list-style-type: none"> No impact on terrestrial, aquatic or groundwater/ surface water environments 	<ul style="list-style-type: none"> Limited impacts associated with construction of proposed works 	<ul style="list-style-type: none"> Limited impacts associated with construction of proposed works 	<ul style="list-style-type: none"> Potential impact on terrestrial & aquatic environment which would be determined through future assessments
Economic	<ul style="list-style-type: none"> Lowest overall costs excluding costs associated with flooding of basements 	<ul style="list-style-type: none"> Lowest overall cost, associated with works to remove stormwater on private property entering the sanitary sewer system 	<ul style="list-style-type: none"> Moderate cost, associated with rehabilitation of sewers at various locations 	<ul style="list-style-type: none"> Moderate cost, associated with construction of inline storage on Old Dundas Road 	<ul style="list-style-type: none"> Highest cost, due to the requirement to upgrade pumping station and accompanying forcemain 	<ul style="list-style-type: none"> Moderate cost, associated with the construction of an overflow from the sanitary system to Ancaster Creek
Socio-Cultural	<ul style="list-style-type: none"> Significant disruption to homeowners who experience basement flooding 	<ul style="list-style-type: none"> Minimal disruption to community during construction period No impact on urban greenspace or archaeological features 	<ul style="list-style-type: none"> Minimal disruption to community during construction period No impact on urban greenspace or archaeological features 	<ul style="list-style-type: none"> Minimal disruption to community during construction period No impact on urban greenspace or archaeological features 	<ul style="list-style-type: none"> Minimal disruption to community during construction period No impact on urban greenspace or archaeological features 	<ul style="list-style-type: none"> Minimal disruption to community during construction period Impact on greenspace would be dependant upon route selected
Technical	<ul style="list-style-type: none"> This alternative would not reduce frequency or extent of existing basement flooding problems 	<ul style="list-style-type: none"> Work would reduce infiltration/inflow generated from private lands thereby reducing extent of basement flooding 	<ul style="list-style-type: none"> Work would reduce infiltration/inflow generated from public lands thereby reducing extent of basement flooding 	<ul style="list-style-type: none"> Increased storage within the sanitary sewer system would accommodate flows which exceed capacity of sewers and Old Dundas Road Sewage Pumping Station 	<ul style="list-style-type: none"> Increased capacity at pumping station would reduce occurrence of flooding Flooding may still occur as a result of inadequate sewer capacity 	<ul style="list-style-type: none"> Overflow would provide relief to flooding associated with infrequent storms (greater than 100 year) Approvals from MOE, HCA, and NEC likely required
Overall Alternative Rank						

Most Preferred Least Preferred



Recommended Solutions

The evaluation of the alternatives illustrates that implementation of several alternatives are beneficial in protecting homes in the community from flooding due to excess flows in the sanitary sewer system during wet weather events.

The recommended solution, together with the appropriate Schedule to be followed under the Municipal Class Environmental Assessment process is summarized below:

Alternative Number	Description	Municipal Class Environmental Schedule
2	Private Property Works	Not Applicable
3	Public Property Works	Schedule A
4	Inline/Offline Storage	Schedule A+
6	Emergency Overflow	Schedule C

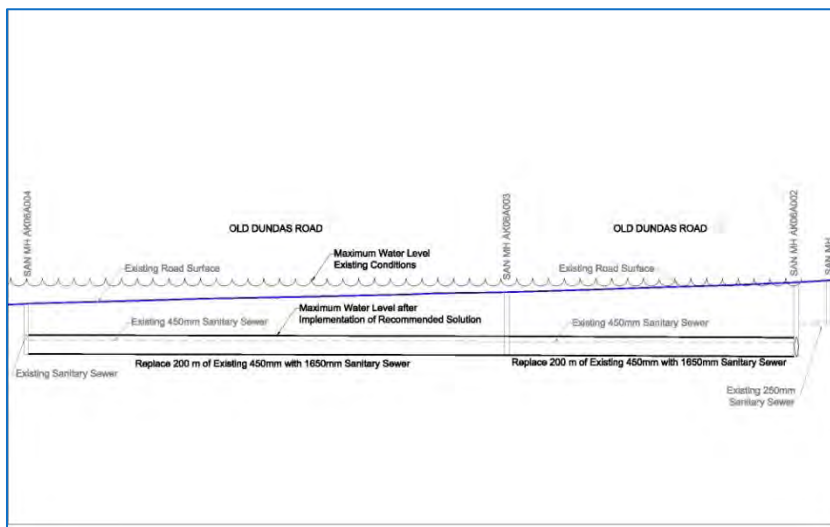
This project was carried out as a Master Plan and will fulfill Phases 1 and 2 (Schedule A, A+ and B projects). Alternatives 2, 3 and 4 would therefore be satisfied under this project. Additional work will be required prior to implementing Alternative 6.

Recommended Solution

Alternative 4

One component of the Recommended Solution involves construction of 400m³ of underground (inline) storage to accommodate excess flows which exceed capacity of the sanitary sewers and the Old Dundas Road Sewage Pumping Station.

Provided below is a figure illustrating the proposed concept.





Next Steps

Following this Public Information Centre, the Project Team will review and consider your comments related to the evaluation criteria, alternative solutions and preliminary recommendation solution.

Questions

For more information on this study, or to provide your comments, please contact:

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