

Weathering the Storm City of Windsor Sewer Master Plan



UPCOMING EVENT: Come to a Windsor Sewer Master Plan Public Information Centre (PIC) in late September. The project team will be there to share project updates, answer questions and guide you through the panels. This is your chance to be involved, provide your feedback on the flooding solutions and learn more about protecting your property.

Background

Over the past few years, thousands of Windsor residents were impacted by flooding both in and around their homes. In early fall 2017, the Mayor released an [8-Point Plan](#) aimed to assist the Windsor community to address flooding issues. A key element of the plan is completing the City's Sewer Master Plan. The Master Plan will confirm the areas that are vulnerable to basement and surface flooding, identify causes of flooding, generate and evaluate short and long-term alternative solutions, and develop a long-range implementation strategy to manage flooding in the City.

Project Update

To date we have completed the following:

- Finalized factors and criteria for evaluation of the long-term alternative solutions.
- Met with various agencies such as the Ministry of Environment, Conservation and Parks (MECP) and Essex Region Conservation Authority (ERCA), to review the City's strategy to reduce basement and surface flooding and obtain feedback on fundamental solution strategies being considered.
- Developed level of service criteria to meet the City's objectives of reducing basement and surface flooding.
- Incorporated provisions for the development of future Secondary Plan Areas identified in the City's Official Plan.
- Developed long term alternative solutions for the sanitary systems in the South Windsor and East Windsor separated sewer areas.
- Determined the benefit of completing the City's established plans to separate sewers within the Central Downtown areas.
- Identified locations where roadway flooding does not meet the level of service and developed solution alternatives to address issues.
- Determined how impact of climate change should be considered in the development of solutions. This included identifying areas that are more vulnerable and have a higher risk of flooding.

Contact info@WeatheringTheStorm.ca or visit www.WeatheringTheStorm.ca for more information.

What We've Heard from You

The Windsor Sewer Master Plan team has been out at events to provide the public with project updates and collect feedback:

- Pop-up events were held in Spring 2019 to discuss the Sewer Master Plan:
 - Windsor Home and Garden Show (April 12-14, 2019)
 - City of Windsor's Earth Day (April 28, 2019)
 - Little River Pollution Control Plant Open House (June 1, 2019)
- Approximately 350 visitors learned and provided feedback
- The project website was promoted as a resource for more information: www.weatheringthestorm.com

Long Term Solutions

Long term solutions are being developed to address basement and surface flooding throughout the City of Windsor.

There are three considerations that are fundamental to the implementation of solutions being developed:

1. Solutions rely on a **partnering approach** and require a combination of private (homeowner) and public (municipal) improvement measures in order to work.
2. Solutions will **not eliminate risk** of basement or surface flooding. Implementing measures to **protect** your property is key.
3. The extent of improvements needed to reduce the risk and impacts of flooding will **be costly and take many years** to implement.



Below is a summary of the types of solutions that are being proposed as part of the solution alternatives.

1. Proposed Public Improvements

a) Control of rainwater getting into the sanitary sewer system

Rain Catchers on Sanitary Manholes

Reduce the amount of rainwater entering sanitary manholes.



Repairs to Existing Sewers and Manholes

Reduce the amount of rainwater entering pipes and manholes through cracks and damaged pipes.



b) Sewer system improvements

Stormwater Management Ponds

Stormwater management ponds will hold rainwater and slowly drain over time. Ponds improve water quality and can be used as a community feature.



Underground Storage Systems

Underground storage facilities in parks and other areas. These types of systems are completely underground and don't impact park use.



Oversize Sewer Pipes

Replace existing sewers with larger sewers that will hold more rainwater in the storm system and sanitary system. These will help lower the water level in the sewers.



Low Impact Development Measures

Low impact development measures such as exfiltration trenches are being proposed. Exfiltration trenches are underground sewer systems that have perforated pipes that allow infiltration of runoff into the ground. Excess flows that cannot be infiltrated are collected in the sewer and discharged through the sewer system.



c) Increase Downstream Capacity

Treatment Plant Improvements

Increasing the amount of sewage that can be treated so the sanitary sewer system can drain faster. Greater capacity at the treatment plants lower the risk of sewer overflows to the river.



Stormwater Pump Station Improvements

Provide added storm sewer outlet capacity allowing the system to drain faster.



2. Proposed Private Side Measures

Indoor Measures

In older homes, disconnection of foundation drains and installation of a sump pump provides significant relief to the sanitary sewer system.



Outdoor Measures

Disconnection of roof downspouts reduces the amount of rainwater getting into the storm sewer which offsets the needs to implement other public infrastructure.



What's Next

The study is following the Municipal Class EA (Schedule B) requirements.

- Develop a prioritization and implementation strategy for the recommended long-term solutions.
- Document and report on the Sewer Master Plan process.
- Consider how climate change impacts will be incorporated into this study. This includes identification of areas having higher vulnerability and impacts associated with flooding.
- Evaluate long-term solution alternatives and determine the preferred solutions.
- September PICs to present preferred solutions and get feedback from the public.
- Incorporate public feedback into evaluation and confirm recommended solutions.
- Complete functional design and cost estimates for recommended solutions.

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