

Stormwater Climate Action Fund - Phase 2

CITY OF BARRIE – CITY COUNCIL PRESENTATION

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Purpose and Overview

- Review of Phase 1 Work Completed
- Present Phase 2 Work Plan



Why call it the Stormwater Climate Action Fund?

Climate change will increase rainfall intensities which can lead to costly flooding, increased erosion and negative impacts on natural watercourses. The City of Barrie is building community resilience to the risks of climate change and this program is part of those efforts.

Work Done to Date

Council approved Phase 1
Stormwater Funding Study (2019)

- Estimated funding needs
- Recommended funding model
- Proposed implementation strategy targeting Go Live 2023

Council approved Asset
Management Plan (2020)

- Confirmed funding gap



Phase 2 Scope of Work

(2021 – 2023)

- Actively solicit feedback from staff, Council and the community on the recommended funding option
- Confirm desired stormwater funding model details
- Support the development of billing and bylaw
- Support the development of a credit program
- Provide support and consultation post-launch



The ***Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure*** requires all Asset Management Plans *must include information about the levels of service that the municipality proposes to provide, the activities required to meet those levels of service, and a strategy to fund activities.*

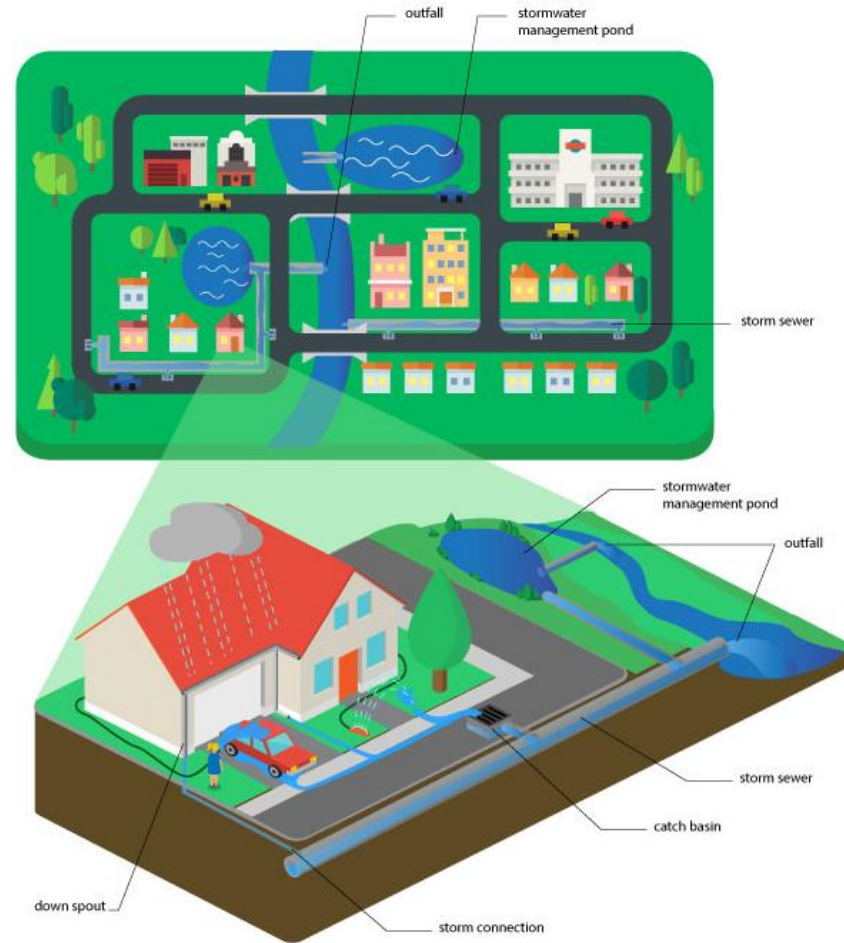
What is Stormwater?

Stormwater refers to rainwater, melted snow or water that runs off our roofs, driveways and roads rather than soaking into the ground.

It either flows into rivers and waterways or is channeled into storm sewers.

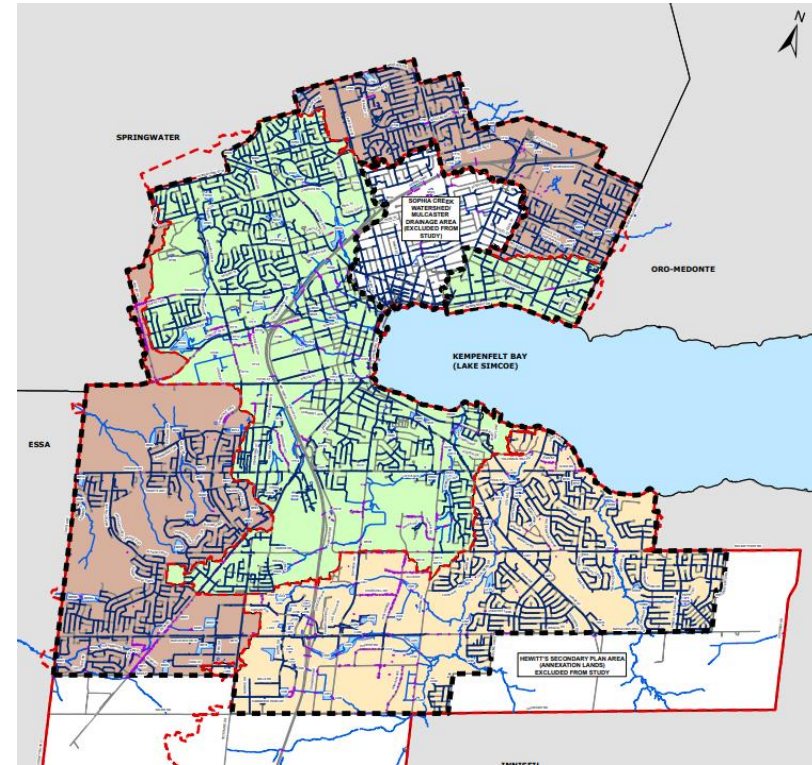
Impervious Area

A hard area that does not absorb water. Water runs off the impervious surface, collects pollutants, and flows into our local rivers and other waterways.



Stormwater Issues in Barrie

- **Flooding** due to **insufficient capacity**, causing private and public property **damage**
- **Deteriorating** infrastructure
- **Climate change** (exacerbate existing issues and create new ones)
- Insufficient overflow routes
- **Development**: increase **imperviousness** and decrease **water quality**
- **Inaccessible** infrastructure



Asset Inventory and Funding Needs

- Stormwater assets' value: \$1B
- Estimated annual funding shortfall: \$11.7M (AMP)
- Comply with Ontario Regulation 588/17



Conclusions from Barrie's Recently Completed Stormwater Asset Management Plan



Funding Gap

Historically we have been underspending on stormwater and, even with future increases, we are not keeping up with identified needs.



Risk

When there is not enough funding to meet needs, the City takes on additional risks. Asset management helps understand this risk so it can be managed.



Future

A stormwater user rate has been approved in principle and advancing in 2021. Future AM Plans will consider proposed level of service and refine investment needs.

Common Billing Unit Methodologies

- Flat Rate
 - Flat fee
 - Tiered based on zoning
- Variable Rate
 - Varies by lot size, development intensity, etc.
 - Equivalent Residential Unit (ERU)
 - Detached Residential Unit (DRU)
 - Tiered based on single-unit residential property characteristics
 - Tiered based on service level, geography, etc.
 - Individual fee for all properties based on annual measurements



** Note DRU was referred to as SFU in the Feasibility study

Stormwater User Fees in Ontario

- Currently 16 municipalities in Ontario have some variation of a stormwater user fee.
- Average monthly charge (for typical detached home) \$9.34, ranging from (\$3.00 - \$17.13)

No.	Community	Monthly Res. Fee	Year Created	Population (2016 Census)
1	London	\$17.13	1996	383,800
2	Aurora	\$7.09	1998	55,400
3	St. Thomas	\$11.36	2000	38,900
4	Kitchener	\$16.39	2011	233,200
5	Waterloo	\$13.64	2011	105,000
6	Richmond Hill	\$6.16	2013	195,000
7	Markham	\$4.25	2015	329,000
8	Mississauga	\$9.20	2016	721,600
9	Ottawa	\$12.90	2017	934,200
10	Vaughan	\$4.46	2017	306,200
11	Newmarket	\$6.64	2017	84,200
12	Orillia	\$3.00	2017	31,200
13	Middlesex Centre	\$15.37	2017	17,300
14	Guelph	\$6.40	2018	131,800
15	Whitchurch-Stouffville	\$8.00	2019	45,800
16	Brampton	\$7.42	2020	593,600
	Average	\$9.34	2013	262,888

Recommended Funding Model

- Stormwater rate structure = Detached Residential Unit (DRU)
- Residential properties pay based on average impervious area
 - Single family > duplex > condo/apartment > etc.
 - Statistical sampling of different residential types
- Non-residential properties pay based on actual impervious area
 - Measured using aerial photography
 - Charged in proportion to the average single-family home

Charge Basis: Impervious Area

- Charge based on impervious area measurements:
 - Rooftops
 - Driveways
 - Parking areas
 - Patios, sheds, and sidewalks
- Proven in courts to be **fair & equitable** basis for fee
 - Based on property's contribution of runoff volume and pollutant loading
 - Not assessed value, frontage, zoning type, lot size, number of water meters, number of parking spaces, etc.



Detached Residential Unit (DRU) Example

Detached Home
= 1.0 DRU

Semi-Detached
DRU factor = 0.6/home



Duplex
DRU factor = 0.5/unit



3-, 4-, and 5-Plex
DRU factor = 0.3/unit



7+ Unit Apartments
DRU factor = 0.4/unit



Condominium
DRU factor = 0.2/unit



Townhouse
DRU factor = 0.5/unit



6-Plex
DRU factor = 0.4/unit



Credit or Incentive Options

- As part of the scope of this project the team will be looking at options for developing a credit program, the details will follow later this year.
- Municipalities with stormwater user fees have many different credit / incentive programs to reward property owners that have invested in on-site stormwater facilities / practices and to ensure that they are maintained.



Rain Barrel / Cistern



Roof Disconnection



Rain Garden



Infiltration Trench



Vegetative Swale



Green Roof



Bioretention Cell



Permeable Pavement

Credit Program

- Provides financial incentives with base charge reduction for landowners who implement facilities/practices in lieu of municipal stormwater services
- Property owners who reduce stormwater runoff or who improve the quality of stormwater runoff that discharges from their property into the municipal stormwater system and/or surrounding waterbodies may qualify for a credit
- Credits can be cumulative for measures that provide flooding and erosion protection, water quality treatment, and other environmental enhancements or non-structural best practices
- Very popular with Ontario municipalities that have undertaken funding studies, and continue to be requested by stakeholders and the public

Next Steps and Public Engagement

- Web page, FAQ (Mar. 2021)
- Refining parcel classifications and impervious area measurements (Mar. – Nov. 2021)
- Focused one-on-one sessions with key stakeholders (Jul. – Oct. 2021)
- Three Public Information Meetings with surveys (TBD)
- Stormwater Advisory Committee (2021) and Stormwater Advisory Sub-Committee (2022)
- Final presentation and approval of program details towards implementation (late 2021)



Thank you! Questions?

