

Stormwater Financing Study

Public Information Meeting No. 2

Tuesday November 20, 2012

6:30 – 8:30 pm

Presentation will begin at 7:00 pm

Iceland Arena (North Lounge)
705 Matheson Boulevard East

Please complete the sign-in sheet, review display materials and fill out a comment sheet.
The project team is available to answer your questions and address any concerns.

Stormwater Financing Study

Study Background & Project Organization

Program Goals

Council recognized that sustainable funding is needed to satisfy the City’s current and future stormwater management program needs and authorized in Summer of 2011 that a Stormwater Financing Study be initiated. The City contracted AECOM in February 2012 to undertake the study with the main objective of determining the most equitable and fair approach to satisfying these current and long term requirements.

Project Organization

Undertaken by: Staff Working Team under the direction of a Steering Committee including senior City management

Advised by: Stormwater Financing Stakeholder Group (representatives from stakeholders including ratepayer groups, the business and development communities, tax-exempt properties and others such as conservation authorities) as well as the general public

The recommended implementation plan will be presented to Council on December 5, 2012 .

The project schedule is shown below.

Task / Description	2012											
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1. Existing Stormwater Management Program												
2. Future Stormwater Management Program												
3. Funding Options												
4. Stakeholder Meetings and Draft Report												
5. Final Report												

Highlights of Study Tasks

The consulting team has been tasked to identify, review and evaluate alternative funding mechanisms to support the City's stormwater management program and to recommend the preferred funding approach. To achieve this goal, the following steps are being undertaken :

- Compile and quantify the cost of the City's existing stormwater management program including operations and maintenance, asset management, planning and monitoring activities and capital plans
- Develop and evaluate various stormwater management program options based on varying levels of service and recommend a program that will meet the desired levels of service, targets for compliance with regulations and other future pressures
- Review available stormwater financing options
- Recommend the preferred option that offers a fair and equitable method for allocating the costs of the stormwater management program
- Develop a strategy to implement the recommendations

In addition to the above, an integral part of this study is the formation of a Stormwater Financing Stakeholder Group (SFSG). Members from this group include: representatives from stakeholders such as ratepayer groups, business and development communities, tax-exempt properties and others such as conservation authorities. They have been asked to represent the views of their organizations or sector and provide advice and input on issues such as overall community goals and priorities of the City's stormwater management program and feedback on setting an affordable/sustainable level of service and expenditures to meet these needs.

Another important component of the public consultation program is tonight's Public Information Meeting. The City wishes to engage its citizens, business owners and other members of the community with the goal of providing an inclusive, traceable and useful opportunity for dialogue between City staff and stakeholders. Your insight and input is both a valuable and necessary step towards this goal and we encourage you to provide written comments to be communicated to City officials.

Background information and presentation material from the first Public Information Meeting (held in June) can be found at www.mississauga.ca/stormwaterstudy.

Stormwater Management

Stormwater management is a service that keeps a low profile, but ***without adequate funding can lead to serious problems that will only get worse unless steps are taken now.***

Stormwater runoff is generated when precipitation from rain and snowmelt flows over land and does not percolate into the ground. Hard surfaces such as rooftops and parking areas increase runoff and pollutants into waterbodies compared to natural conditions. Controlling the amount of runoff and quality of water entering the creeks, rivers and Lake Ontario, our source of drinking water, is a main focus of the City's stormwater management program.

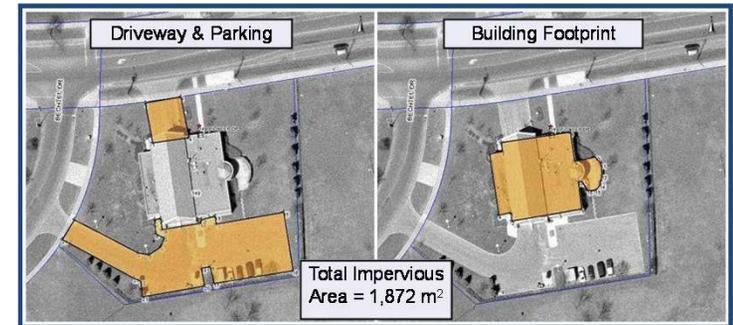
The City is responsible for managing all aspects of stormwater. However, the City's ability to effectively and adequately perform its duties are limited by available funding.

Impervious Area

Impervious area includes surfaces that prevent stormwater from infiltrating into the ground such as roads, parking areas, driveways, sidewalks, building rooftops, and similar structures. These areas generate more runoff, transport it more quickly, and accumulate more pollutants than from an equivalent natural area.

Imperviousness is the percentage of impervious cover within a given area of land, and is often measured through aerial photo interpretation. The impervious areas for a single property are highlighted in yellow in the figure on the right: the building rooftop area or "footprint" (right panel), and all other types of impervious areas (left panel). The sum total is 1,872 m² of impervious area on a 3,900 m² lot, or 48 percent imperviousness.

The amount of impervious area on a property directly correlates to the stormwater runoff and pollutant loading that is contributed to the City's stormwater management system. Although rainfall is largely unpredictable, the amount of impervious area can be controlled by landowners.



Current Stormwater Program and Expenditures

Currently, the City’s stormwater program is primarily funded through the following sources:

- **Property Taxes:** This method is not equitable, since the contribution each property owner makes to the stormwater program is not related to the property’s use of the system (the contribution is based on property value, not on the amount of stormwater runoff generated)
- **Development Charges (DC):** Development-related capital projects are funded separately through DCs that are assessed depending on the nature of each project. These DCs are limited in that they can only be used for capital projects related to new development

The table below shows the annual cost of the City’s current stormwater program (tax-funded portion for 2012).

Activity	Cost (\$)	Description
Operation & Maintenance		
Engineering & Works	5,260,000	Day to day operating costs of Stormwater Management Program
Planning, Monitoring and Support	1,010,000	Support staff required for the planning of future stormwater infrastructure needs
Community Services (estimated)	350,000	Departmental project costs associated with stormwater-related programs
<i>Subtotal</i>	6,620,000	
Capital Improvement Projects		
Erosion Control	4,470,000	Watercourse erosion protection and rehabilitation
Flood Relief	1,260,000	Culvert capacity improvements and flood protection berms
Storm Sewer	350,000	Rehabilitation and replacement of existing storm sewers
Studies	1,000,000	Stormwater-related studies
Stormwater Management Facilities	280,000	Pond dredging/rehabilitation, quantity control facilities and low impact development practices
Channelization	470,000	Watercourse conveyance improvements
Community Services (estimated)	200,000	Departmental project costs associated with stormwater-related programs
<i>Subtotal</i>	8,030,000	
Total	14,650,000	

Note : The 2012 capital budget also includes \$2 million for infrastructure associated with growth. These projects have been funded with development charges revenue.

Stormwater Financing Study

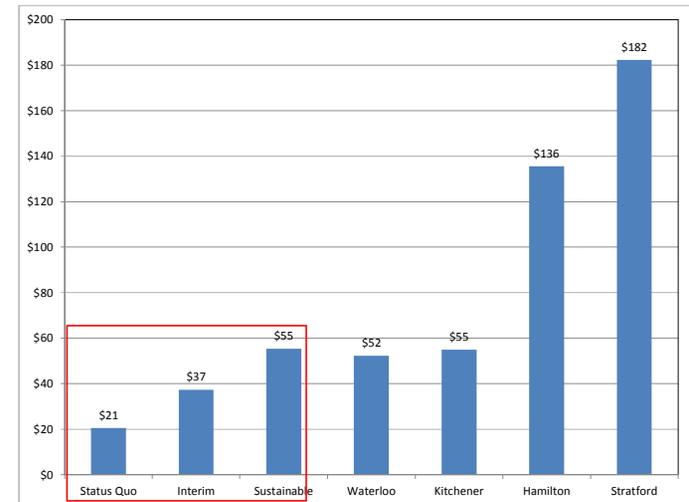
Future Stormwater Program and Expenditures

The City’s current funding program does not provide sufficient funds to achieve the City’s desired service levels for stormwater management. Please see the materials from the first Public Information Meeting for more details on the challenges faced by the City of Mississauga.

In addition to widening the infrastructure gap, if the City continues its current funding program then additional tax funding will be necessary just to maintain status quo. A large portion of the City’s stormwater capital projects is funded from reserves (i.e., taxes accumulated in previous years), such that the current year tax funding only provides \$8.7M of the total \$14.7M annual program. Funding from reserves will not be available in the future and taxes will need to be increased in order to generate the revenue needed to support the full stormwater program.

The table below summarizes the future stormwater program scenarios and the corresponding annual expenditures. The Status Quo scenario represents the City’s current partially funded program and the Sustainable scenario represents full funding of priority capital projects, operations and maintenance, as well as a reinvestment fund to address the City’s aging storm pipe system. The City has identified an Interim scenario in consideration of affordability issues, representing reduced funding for future storm pipe reinvestment. The chart below compares these service level scenarios (on a per capita basis) to other municipalities in Ontario that have recently conducted similar stormwater financing studies.

Status Quo	Interim	Sustainable
<ul style="list-style-type: none"> Based on 2012 Capital and Operating Budget – maintains current service level Unfunded Capital Program needs identified in 10-year Capital Plan would remain unfunded Unfunded Operations and Maintenance pressures would remain unfunded No money would be put aside for future storm infrastructure renewal needs (storm pipe system) 	<ul style="list-style-type: none"> All currently identified Capital, Operations and Maintenance and pipe renewal needs would be funded Introduces a “Pipe Renewal” reserve fund, starting with an initial annual collection rate of \$2.4 million (0.15% of the \$1.6 billion (2012) storm pipe system replacement cost) 	<ul style="list-style-type: none"> All currently identified Capital, Operations and Maintenance and pipe renewal needs would be funded Introduces a “Pipe Renewal” reserve fund with an annual collection rate of \$16 million (1% of the \$1.6 billion (2012) storm pipe system replacement cost)
Annual Cost = \$14,650,000	Annual Cost = \$26,610,000	Annual Cost = \$39,490,000



Stormwater Financing Study

Comparison of Funding Options

In addition to the City’s current funding mechanisms (tax funding and development charges), a stormwater rate was evaluated as an alternative. A stormwater rate is a type of user fee that would be administered in a similar fashion as Region of Peel’s current water and wastewater rate. With a stormwater rate, landowners are charged in relation to the amount of impervious area on their property. Allocating charges in this manner quantifies the relative contribution of stormwater runoff from each property to the City’s stormwater management system, since runoff is a function of the land use practices and surface treatment decisions of property owners. A stormwater rate generates funding that is more fair and equitable than property taxes, which is based on the assessed property value. There are hundreds of such stormwater rates across North America. Both Kitchener and Waterloo implemented a stormwater rate in 2011 and a number of Ontario municipalities are currently investigating this as an alternative funding mechanism.

The stormwater funding options were evaluated against the following criteria (see table below):

- Applicability of funding method citywide
- Eligibility to support capital improvement projects
- Eligibility to support operations & maintenance activities
- Eligibility to offset costs for engineering, support, and overall administration of the stormwater program
- Fair & Equitable Allocation - charges the property owner according to individual contribution to the stormwater program expenditures
- Dedicated and sustainable funding source dedicated solely to stormwater program expenditures
- Effort to Administrate
- Environmental Benefits including opportunities for incentives to reduce stormwater and pollutant loads using source control measures

Funding Method	City Wide Applicability	Used for Capital Costs	Used for O&M Costs	Used for Eng'rg/ Support Costs	Fair & Equitable Allocation	Dedicated Funding Source	Effort To Administrate	Environmental Benefits
Property Tax	Yes	Yes	Yes	Yes	No	No	Low	Low
Development Charges	No	New Capital	No	Partly	Partly	Yes	Medium	Medium
Stormwater Rate	Yes	Yes	Yes	Yes	Yes	Yes	High	High

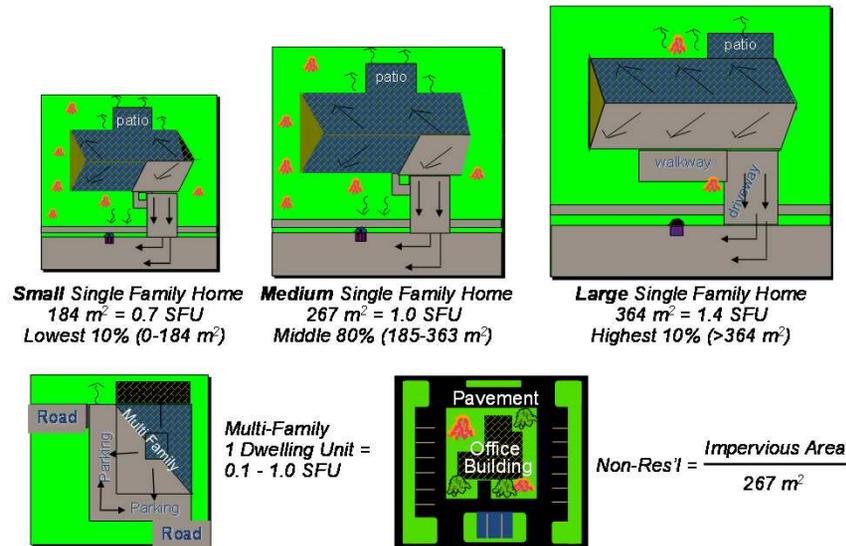
Stormwater Rate Details

The basic calculation for a stormwater rate is simply the stormwater program expense divided by the number of billing units within Mississauga. To determine the billing unit denominator, there are a number of methods to allocate a stormwater charge to property owners that have been used in stormwater rate implementations throughout North America. The Tiered Single Family Unit (SFU) was selected as the preferred option as it provides the best balance between accuracy (i.e., maximizing fairness and equity) and level of effort to administer and manage (i.e., minimizing rate administration costs). Based on a review of provincial legislation, a number of entities have been determined to be exempt from municipal fees and charges. They include, but may not be limited to, the following: The Crown (including Canada Lands Company Limited, Canada Post Corporation, and Metrolinx, among others), Colleges, and School Boards. Impervious area for fee-exempt properties was removed from the billing unit calculations

Tiered Single Family Unit (SFU)

The Tiered SFU option accounts for the wide variability in impervious area among residential properties by assigning three tiers to single-family detached homes (Small, Medium and Large) as well as assigning a number of categories for multi-family residential properties (e.g., apartments, condos, and townhouses). Each residential category features unique impervious area characteristics with statistical properties determined by taking many measurements throughout Mississauga.

For residential properties, the average impervious area of single-family detached homes is used as the base billing unit (i.e., one SFU per single-family home). The smallest 10 percent would be billed 0.7 SFU to reflect a smaller impervious footprint. The largest 10 percent would be billed 1.4 SFU to reflect a larger footprint. All other single family homes (the middle 80 percent) would be billed 1.0 SFU. Multi-family residential properties would have fractional SFU values. For non-residential properties, the number of SFU billing units is determined by dividing the impervious area by the SFU size.



Funding Impact – Property Tax Option

The table below shows the annual charges for selected properties using property tax to fund the City’s future stormwater program. The first column shows a range of property types. The first three single-family homes represent assessed value statistics (all other entries shown are actual properties):

- 10-percentile: 10 percent of homes in Mississauga have an assessed value less than or equal to \$330,000
- 50-percentile: the median assessed value of homes in Mississauga is \$430,000
- 90-percentile: 90 percent of homes in Mississauga have an assessed value less than or equal to \$610,000

The second column shows annual charges for the City’s current stormwater program (Board No. 4). The remaining columns show the “Pay-As-You-Go” option (i.e., property tax funding without reserves or debt financing) for the various future service levels (Board No. 5). The property tax and Payment-In-Lieu-Of Tax (PILT) allocation indicates the proportion of the total City tax revenue that would be used to fund the stormwater program cost.

Stormwater Program Item	Existing (2012) ¹	Pay-As-You-Go Financing of Future Stormwater Management Program (2014-2023)								
		Status Quo			Interim			Sustainable		
Program Cost	\$14,650,000	\$14,650,000			\$26,610,000			\$39,490,000		
Property Tax & PILT Allocation	2.36%	3.96%			7.19%			10.67%		
Single-Family Detached Home		Charge	Δ	%	Charge	Δ	%	Charge	Δ	%
10-percentile assessed value	\$22.10	\$37.13	\$15.03	68%	\$67.44	\$45.34	205%	\$100.09	\$77.99	353%
50-percentile assessed value	\$28.58	\$48.01	\$19.43	68%	\$87.21	\$58.63	205%	\$129.42	\$100.85	353%
90-percentile assessed value	\$40.69	\$68.36	\$27.67	68%	\$124.16	\$83.47	205%	\$184.26	\$143.57	353%
Brooks Drive	\$28.37	\$47.66	\$19.29	68%	\$86.57	\$58.20	205%	\$128.47	\$100.10	353%
Robin Drive	\$42.69	\$71.72	\$29.03	68%	\$130.28	\$87.59	205%	\$193.34	\$150.65	353%
Homelands Drive	\$27.39	\$46.01	\$18.62	68%	\$83.58	\$56.19	205%	\$124.03	\$96.64	353%
Beacham Street	\$31.08	\$52.22	\$21.14	68%	\$94.85	\$63.77	205%	\$140.76	\$109.67	353%
King Richard's Place	\$40.14	\$67.44	\$27.30	68%	\$122.50	\$82.35	205%	\$181.79	\$141.65	353%
Condominium										
Sherobee Road	\$15.86	\$26.64	\$10.78	68%	\$48.39	\$32.54	205%	\$71.82	\$55.96	353%
Multi-Family (7+ Units)										
Goreway Drive (per unit)	\$10.54	\$17.71	\$7.17	68%	\$32.18	\$21.63	205%	\$47.75	\$37.21	353%
Commercial										
Mall	\$10,445	\$17,548	\$7,103	68%	\$31,875	\$21,429	205%	\$47,303	\$36,858	353%
Tax Exempt										
Church (Dundas St.)	\$0	\$0	\$0		\$0	\$0		\$0	\$0	

Notes:

1. Current program includes \$8.7M (Tax & Payment In-Lieu-Of Taxes) plus \$5.9M (Reserves & Debt).

Funding Impact – Stormwater Rate Option

The table on the left shows the annual charges for selected properties if a new stormwater rate was used to fund the City’s future stormwater program. The first column shows the number of billing units for each property. The second column lists the same properties that were shown on Board No. 8, with two additional single-family home types: the 10-percentile (Small Tier) and 90-percentile (Large Tier) entries correspond to the smallest and largest tiers (Board No. 7). The other 10-, 50-, and 90- percentile entries correspond to the Medium Tier, and thus would be assigned 1.0 SFU billing units. The remaining columns show the charges for the various future service levels (Board No. 5).

The table on the right compares annual charges for both property tax and stormwater rate options for the Interim service level, indicating the difference between existing charges both as a dollar value and as a percentage. The last two columns compare the rate to the proposed tax option.

Billing Units (SFU)	Service Level:	Status Quo (Pay-As-You-Go)	Interim	Sustainable
	Program Cost	\$15,420,000	\$27,380,000	\$40,260,000
	Base Rate (\$/SFU/mo)	\$4.39	\$7.80	\$11.47
Single-Family Detached Home				
0.7	10-percentile (Small Tier)	\$36.31	\$64.52	\$94.87
1.0	10-percentile assessed value	\$52.68	\$93.60	\$137.64
1.0	50-percentile assessed value	\$52.68	\$93.60	\$137.64
1.0	90-percentile assessed value	\$52.68	\$93.60	\$137.64
1.4	90-percentile (Large Tier)	\$71.95	\$127.84	\$187.99
1.0	Brooks Drive	\$52.68	\$93.60	\$137.64
1.0	Robin Drive	\$52.68	\$93.60	\$137.64
1.0	Homelands Drive	\$52.68	\$93.60	\$137.64
1.0	Beacham Street	\$52.68	\$93.60	\$137.64
1.0	King Richard's Place	\$52.68	\$93.60	\$137.64
Condominium				
0.2	Sherobee Road	\$12.07	\$21.45	\$31.54
Multi-Family (7+ Units)				
0.2	Goreway Drive (per unit)	\$9.63	\$17.10	\$25.15
Commercial				
519.1	Mall	\$27,346	\$48,587	\$71,448
Tax-Exempt				
14.9	Church (Dundas St.)	\$787	\$1,399	\$2,057

Notes:

1. Rate assumes 92% collection with annual administration cost of \$770,000.

Stormwater Program Item	Existing (2012) ¹	Future - Interim Service Level (2014-2023)							
		Tax (Pay-As-You-Go)			Rate (Tiered SFU, with Exemptions)				
		Charge	Δ _{Existing}	%	Charge	Δ _{Existing}	%	Δ _{Tax}	%
Single-Family Detached Home									
10-percentile (Small Tier)	\$22.10	\$67.44	\$45.34	205%	\$64.52	\$42.42	192%	-\$2.93	-4%
10-percentile assessed value	\$22.10	\$67.44	\$45.34	205%	\$93.60	\$71.50	324%	\$26.16	39%
50-percentile assessed value	\$28.58	\$87.21	\$58.63	205%	\$93.60	\$65.02	228%	\$6.39	7%
90-percentile assessed value	\$40.69	\$124.16	\$83.47	205%	\$93.60	\$52.91	130%	-\$30.56	-25%
90-percentile (Large Tier)	\$40.69	\$124.16	\$83.47	205%	\$127.84	\$87.15	214%	\$3.68	3%
Brooks Drive	\$28.37	\$86.57	\$58.20	205%	\$93.60	\$65.23	230%	\$7.03	8%
Robin Drive	\$42.69	\$130.28	\$87.59	205%	\$93.60	\$50.91	119%	-\$36.68	-28%
Homelands Drive	\$27.39	\$83.58	\$56.19	205%	\$93.60	\$66.21	242%	\$10.02	12%
Beacham Street	\$31.08	\$94.85	\$63.77	205%	\$93.60	\$62.52	201%	-\$1.25	-1%
King Richard's Place	\$40.14	\$122.50	\$82.35	205%	\$93.60	\$53.46	133%	-\$28.90	-24%
Condominium									
Sherobee Road	\$15.86	\$48.39	\$32.54	205%	\$21.45	\$5.59	35%	-\$26.95	-56%
Multi-Family (7+ Units)									
Goreway Drive (per unit)	\$10.54	\$32.18	\$21.63	205%	\$17.10	\$6.56	62%	-\$15.07	-47%
Commercial									
Mall	\$10,445	\$31,875	\$21,429	205%	\$48,587	\$38,142	365%	\$16,713	52%
Tax-Exempt									
Church (Dundas St.)	\$0	\$0	\$0	n/a	\$1,399	\$1,399	n/a	\$1,399	n/a

Notes:

1. Current program includes \$8.7M (Tax & Payment In-Lieu-Of Taxes) plus \$5.9M (Reserves & Debt).

Study Recommendations & Contact Information

Study Recommendations

The following recommendations will be presented to Council on Wednesday, December 5, 2012:

- Recommendation 1: That the Interim service level be selected for the City's stormwater management program. This represents a \$26.6M annual program that meets currently identify capital needs, unfunded Operations and Maintenance pressures and an initial Storm Pipe Renewal reserve fund.
- Recommendation 2: That a user fee in the form of a stormwater rate be implemented to support the Interim service level, based on the Tiered SFU rate structure.
- Recommendation 3: That everyone be charged a stormwater rate unless exempted through legislation
- Recommendation 4: That a credit program be implemented. Credits are to be applied to non-residential properties that provide on-site stormwater management measures. Incentives are to be provided to residential properties which may include discount coupons for rain barrels, for example.
- Recommendation 5: Proceed with the implementation phase, with billing to begin July 2013

Contact

If you have any questions, comments or concerns, please contact:

Lincoln Kan, P.Eng
Manager, Environmental Services
Transportation and Works Department
201 City Centre Drive, Suite 800, Mississauga ON L5B 2T4
Phone: 905.615.3200 ext. 4086
Email: lincoln.kan@mississauga.ca

Comments received will be compiled and summarized in the final report.