



# Corporate Report

Clerk's Files

Originator's Files

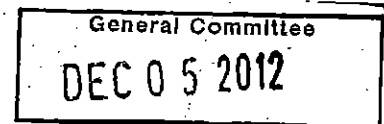
MG.23.REP

**DATE:** November 23, 2012

**TO:** Chair and Members of General Committee  
Meeting Date: December 5, 2012

**FROM:** Martin Powell, P. Eng.  
Commissioner of Transportation and Works

**SUBJECT:** Stormwater Financing Study (Phase 1) – Funding Recommendations



- RECOMMENDATION:**
1. That the City's stormwater program move from a property tax supported program to a stormwater rate funded program, using a tiered single family unit rate structure, as described in the report dated November 23, 2012 from the Commissioner of Transportation and Works titled *Stormwater Financing Study (Phase 1) – Funding Recommendations*.
  2. That staff report back to General Committee with a detailed implementation plan addressing the establishment and administration of a credit system, cost to implement and maintain the stormwater rate based program, billing mechanism and related policy and business process considerations.

**REPORT HIGHLIGHTS:**

- The current stormwater program does not meet all of the City's needs and a program which can address much of the identified pressures is necessary
- Staff identified that a stormwater rate based on a user pay model would best fund the City's stormwater program
- A credit and incentive program will be developed
- Properties that are exempt by statute from municipal fees and charges are identified

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**BACKGROUND:**

The City's stormwater management system comprises infrastructure assets valued at \$1.6 billion in current replacement value, including storm sewers, catchbasins, inlets and outlets, bridges and culverts, watercourses and ponds. The management of these assets includes the design and construction of capital infrastructure such as stormwater management ponds, stream rehabilitation and flood mitigation works, operations, maintenance and rehabilitation of existing infrastructure, environmental compliance, emergency response and clean-up, street sweeping and the enforcement of by-laws, among other activities. By controlling the quality and quantity of stormwater reaching our streams and rivers, stormwater management systems protect the health and safety of the public and the natural environment.

Despite investments in the City's stormwater infrastructure, stormwater related issues such as flooding, water quality and stream erosion continue to exist. As this infrastructure continues to age it will incur additional operation, maintenance and capital improvement costs over time to sustain sufficient levels of service. Further, regulatory requirements and design standards continue to evolve and become more rigorous in addressing environmental impacts of stormwater. In addition, adaptation to the inherent uncertainties and variabilities with extreme weather events (e.g. climate change) are expected to add pressures in the future that will have to compete for limited public funds.

*Toronto's Future Weather & Climate Drive Study* released by the Toronto Environment Office in October of this year projects that by 2049, the maximum amount of rainfall expected in any single day and in any single hour will more than double. This expectation of future extreme rainfall events indicates a critical need on the part of the City to ensure that its stormwater infrastructure is developed and maintained over time.

In order to support current and future stormwater management programs, alternative funding options beyond property taxes and development charges need to be explored.

On September 14, 2011, Council approved a report dated August 16, 2011 from the Commissioner of Transportation and Works titled *Stormwater Financing Study (Phase 1)* to commence a study to determine the appropriate funding approach in support of its stormwater management program.

In February of 2012, a consulting team led by AECOM was retained by the City to undertake a Stormwater Financing Study. This team was 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 were undertaken by the project team:

- 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 the most fair and equitable method for allocating the costs of the stormwater management program

The Stormwater Financing Study (Phase 1) is near completion. This report provides a summary of the work and consultation undertaken to arrive at the funding approach recommendations for Council consideration.

**COMMENTS:**

A significant level of effort has been undertaken in determining the preferred funding approach for the City's stormwater management program. The following identifies and highlights the major tasks undertaken to achieve this goal.

Consultation

An integral component of this study has been consultation with the public and private sectors. Input received through this process has contributed to the direction and development of the many facets of this study. The following summarizes the public engagement process undertaken as part of this study.

*Stormwater Financing Stakeholder Group*

Approximately 35 invitations were sent out by Mayor McCallion at the beginning of this study to solicit membership on a Stormwater

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Financing Stakeholder Group (SFSG). Invitees included representatives from residential ratepayer groups, the business and development communities, tax-exempt properties and others such as conservation authorities. They were asked to represent the views of their organizations or sector and provide input on issues such as priorities of the City's stormwater management program and setting an appropriate level of service and expenditure to meet these needs.

Over the course of the study, six planned SFSG meetings were held with an average of 15 well engaged representatives attending each meeting.

#### *Public Information Meetings*

Two public information meetings were held on June 27, 2012 and November 20, 2012, with poster board displays and presentations given at both meetings. Written comments received have been included as Appendix 1.

#### *Other Engagements*

Individual meetings were held with numerous organizations and stakeholder group members, including the Mississauga Board of Trade, Orlando Corporation, a joint meeting with representatives from the Building Owners and Managers Association Toronto (BOMA), the International Council of Shopping Centers (ICSC), the Commercial Real Estate Development Association Greater Toronto (NAIOP) and the Real Property Association of Canada (REALpac) and individual residential ratepayer representatives.

Written comments and submissions were also received from interested parties, including Orlando Corporation, the Greater Toronto Airport Authority (GTAA), an Environmental Advisory Committee member, the Credit River Anglers Association and a joint submission from BOMA Toronto, ICSC, NAIOP and REALpac (industrial and commercial sector). These are included in Appendix 1.

#### Service Levels

As noted earlier, stormwater related pressures continue to exist despite investments in the City's stormwater infrastructure. These pressures include the following and are summarized in detail in Appendix 2:

- Minimize storm related flood risks
- Enhance water quality treatment initiatives
- Enhance by-law enforcement
- Enhance monitoring and maintenance activities
- Climate change adaptation
- Regulatory requirements
- Infrastructure life-cycle renewal costs

It should be noted that some of these pressures are relatively new to the City and other municipalities such as the uncertainties related to climate change and the need to adapt to the impact of severe weather. This issue is highlighted by the fact that the Insurance Bureau of Canada has indicated that the majority of claim payouts are now related to severe weather and water damage.

Another pressure that is of significance is infrastructure life-cycle renewal. All components of stormwater infrastructure have a useful service life and will ultimately fail if these assets are not renewed, replaced or rehabilitated over the long term. Stormwater management ponds and watercourses in Mississauga are nearing the end of their useful service life and require rehabilitation (e.g. dredging of ponds). The City has been taking steps within its budget allocation to reinvest through prioritized capital projects. However, given the relatively young age of the City's stormwater pipe assets (average of 30 years into a 100-year service life), representing approximately \$1.6 billion in current replacement value, there has not been any significant immediate pressure to reinvest in this storm sewer/collection system. However, pipe assets cannot be ignored indefinitely and the City needs to be practical and consider raising funds for their inevitable renewal or replacement.

The current funding of the City's stormwater program is through a combination of development charge and tax levy. Development charges are used to finance the construction of new growth related capital infrastructure and are applied to all new developments. Tax revenue is used to construct and maintain capital infrastructure such as dredging of stormwater management ponds, watercourse rehabilitation and storm sewer replacement. It should be noted that this stormwater financing study is only considering financing options related to the tax component of the stormwater program.

Three stormwater program service levels were developed in consideration of the pressures discussed above. These service levels are called "Status Quo", "Interim" and "Sustainable", as described below.

#### *Status Quo Service Level*

- Based on the 2012 Capital and Operating Budgets and maintains the current level of service
- Unfunded Capital Program needs identified in the 2012 to 2021 Capital Budget and Forecast (primarily the Cooksville Creek Flood Remediation facilities and land costs) would remain unfunded
- Unfunded Operations and Maintenance pressures (such as enhancing watercourse maintenance, by-law enforcement and foundation drain collector (FDC) monitoring/maintenance) would remain unfunded
- No money would be put aside for future storm infrastructure (storm pipe system) renewal needs
- Estimated annual cost (tax component) = \$14,650,000

#### *Interim Service Level*

- Based on all Capital Program needs identified in the 2013 to 2022 Capital Budget and Forecast
- Includes currently unfunded Operations and Maintenance pressures
- Introduces a "Pipe Renewal" reserve fund, starting with a modest initial collection rate of 0.15% of the storm pipe system replacement cost (\$1.6 billion in 2012), or \$2.4 million, which would be increased by 0.01%, or \$0.16 million annually (not including inflation)
- Estimated annual cost (tax component) = \$26,610,000

#### *Sustainable Service Level*

- Based on all Capital Program needs identified in the 2013 to 2022 Capital Budget and Forecast
- Includes currently unfunded Operations and Maintenance pressures
- Introduces a "Pipe Renewal" reserve fund with an annual collection rate of 1% of the storm pipe system replacement

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cost (\$1.6 billion in 2012), or \$16 million (not including inflation) based on the expected life-cycle for this infrastructure of 100 years

- If this service level is chosen, all of the currently identified Capital, Operations and Maintenance and pipe renewal needs would be funded
- Estimated annual cost (tax component) = \$39,490,000

The cost breakdown of the stormwater program items is shown in Table 1. These figures reflect the tax component of the programs only.

Table 1: Breakdown of Average Annual Program Cost

Stormwater Program Item	Existing (2012)	Future (Average Annual Program)		
		Status Quo	Interim	Sustainable
Capital	\$8,030,000	\$8,030,000	\$15,540,000	\$15,540,000
Operations & Maintenance	\$6,620,000	\$6,620,000	\$7,950,000	\$7,950,000
Pipe Renewal Reserve	\$0	\$0	\$3,120,000	\$16,000,000
<b>Program Total</b>	<b>\$14,650,000</b>	<b>\$14,650,000</b>	<b>\$26,610,000</b>	<b>\$39,490,000</b>

After analysis of the various service levels by the project team and through internal and external consultation, the Interim service level was chosen as the most appropriate service level at this time. This approach balances cost and capital and operating pressures along with a modest step towards setting aside funds for future infrastructure renewal cost. Over time, gradual steps towards a Sustainable service level should be taken.

Stormwater Financing Model

As described earlier, traditional funding sources for the City's stormwater program are through development charges and property tax. Allocations from property tax are an unreliable means of generating revenue for stormwater related purposes as there are competing interests from the various business areas within the City for the same funds. Stormwater is considered to be a critical program that should not be underfunded. To address the need for more program funding, it is appropriate to consider a funding model that dedicates money for this service in a more predictable and transparent manner.

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A number of Ontario municipalities have already transitioned to alternative financing. Over the last few years, the Town of Aurora and the Cities of London, St. Thomas, Kitchener and Waterloo have implemented stormwater user fees of various types. Most notably, the City of Kitchener has implemented a stormwater rate that charges property owners in accordance with their individual stormwater runoff contribution based on the amount of impervious area on their property. The Cities of Markham and Toronto and the Town of Richmond Hill are also investigating alternative stormwater financing.

The major advantages of dedicated stormwater user fees over funds generated through property tax revenues are: (1) increased stability and predictability, (2) greater fairness and equity in calculating charges to individual properties, and (3) the opportunity for incorporating incentives for implementation of on-site stormwater management (e.g. through a credit program as described in further detail below).

In determining the most equitable approach to fund the City's stormwater program, the project team mainly focused on two stormwater user fee approaches, namely a flat fee (based on property size) and a stormwater rate (based on the amount of impervious area).

While a flat fee approach has certain advantages, such as lower administration costs and fewer database management requirements as compared to an impervious area based stormwater rate, this funding mechanism was not favoured as there is less correlation with runoff contribution from each property and therefore, it is less equitable than an impervious area based approach.

The approach preferred by the project team is a stormwater rate which allocates charges to properties based on the measured area of impervious surface. This method measures the hard surface areas of properties such as roofs, driveways and walkways and parking lots to determine their relative contribution of stormwater runoff. This is much more equitable than the current funding approach through property tax, which is based on the assessed value of a home, and it allows for greater ability to encourage environmental responsibility in the form of a credit to property owners for implementing on-site stormwater management measures. However, there are additional costs associated with administration, database management and billing implementation with the impervious area approach.

### Credit Program

A credit program allows property owners the opportunity to receive a reduction in their stormwater rate. Property owners who reduce stormwater runoff or who improve the quality of the stormwater runoff from their property to the City's stormwater system and/or the surrounding water bodies may qualify for a credit.

While the development of a credit program was not intended to be a part of the Stormwater Financing Study, many Stormwater Financing Stakeholder Group members have requested that a review be included. Suggestions were raised that an evaluation of the credit programs offered by the Cities of Kitchener and Waterloo would be of benefit to the study.

Through a preliminary review of the credit programs offered by the Cities of Kitchener and Waterloo, who have jointly developed their respective stormwater rate credit policies, it was determined that, in general, a maximum of 45 percent credit is offered to non-residential and residential properties based on varying criteria. This percentage is based on the portion of the Cities' respective stormwater program costs which can potentially be influenced by stormwater measures on individual properties.

When Mississauga staff compared the City's stormwater program based on the same approach, the findings were similar to that of Kitchener and Waterloo in that approximately 45 percent of the City's stormwater program costs can potentially be influenced by stormwater measures or activities on private and publicly owned properties.

While the development of a credit program has not commenced, it is reasonable to assume that credits given will likely be in the range of 45 percent, with credits above the maximum eligible amount being considered on a case-by-case basis.

Although the City recognizes the importance of on-site stormwater management measures on residential properties, the anticipated high administration cost for a credit application, approval and processing program may outweigh the net savings in the City's stormwater program resulting from this initiative. As such, staff recommends that an incentive program be explored which offers a one-time discount on the capital cost of implementing stormwater controls such as rain

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barrels.

Legal Considerations

Sections 9 and 11, and Part XII of the *Municipal Act, 2001* (the "Act") authorize the City to impose, by by-law, a fee or charge on persons in respect of services provided by a municipality, including stormwater management services. This authority is limited in two respects:

1. Section 2 of Ontario Reg. 584/06 provides that a fee or charge cannot be used for capital costs that could otherwise have been raised through the development charges process; and
2. Where provisions exist in other legislation that expressly exempt entities from paying these charges, then the City cannot legally impose these fees.

The Supreme Court of Canada has clearly stated that there must be a reasonable nexus between fees and charges imposed and services received, failing which a charge could be construed as an unauthorized tax. Accordingly, a reasonable connection must be established between the amount of the stormwater management fee and the cost of the service being provided. This test is met by the work undertaken by City staff in matching fee revenue with the cost of providing a stormwater management service and stormwater management infrastructure. In certain cases, where stormwater management infrastructure has been installed on chargeable property, it will be necessary to establish a credit system to create a reasonable connection between the amount of the service charge and the service being provided.

In respect of entities that may be exempt from paying fees and charges under the Act, it is important to note that an exemption from property tax does not provide an exemption from the payment of fees and charges. For example, land owned by a religious organization and used as a place of worship, a hospital or a university will be exempt from property taxation but will not necessarily be exempt from user fees or charges under the Act. Legislation establishing the Greater Toronto Airports Authority, Ontario Power Generation Inc., University of Toronto, Region of Peel and City of Mississauga, for example, does not provide an exemption from municipal user fees and charges. Ontario Reg. 584/06 establishes that the federal and provincial Crown are not liable to pay municipal fees and charges.

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Legislation establishing the Canada Lands Company Ltd, Sheridan College, the Dufferin-Peel Catholic District School Board, the Peel District School Board, Metrolinx and Canada Post Corporation are examples where legislation provides that these entities are exempted from municipal fees and charges.

#### Stormwater Financing Approach

After consideration of the different service levels and funding mechanisms, internal and external consultation and legal advice, the following stormwater financing approach is recommended:

- Target the funding level for the stormwater program based on the Interim service level
- Implement a stormwater rate based on a tiered single family unit (SFU) rate structure
- Charge the stormwater rate to all properties except those exempted from payment of municipal fees and charges through legislation
- Recover the exempted properties' share of the stormwater program cost from the stormwater rate
- Develop a credit program for non-residential properties and an incentive program for residential properties, and that the cost of these credits and incentives be recovered by the stormwater rate

#### *Property Tax Funding*

Before delving into the recommended approach, it is important to first set a benchmark by identifying what the impact would be on tax payers if the funding for the various service levels were to remain on the property tax levy. The table in Appendix 3 presents the annual stormwater cost for various properties under the three service levels previously discussed compared to current cost. Table 2 below is an abbreviated version of the table in Appendix 3 to aid discussion on property tax funding.

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Table 2: Funding of Stormwater Program Through Property Tax  
(present value)

Stormwater Program Item	Existing (2012)	Tax Financing of Future Stormwater Management Program		
		Status Quo	Interim	Sustainable
Program Cost	\$14,650,000	\$14,650,000	\$26,610,000	\$39,490,000
Property Tax & PLT Allocation	2.46%	3.96%	7.19%	10.67%
Single-Family Detached Home (Annual Cost)				
Average assessed value	\$28.58	\$48.01	\$87.21	\$129.42
Condominium (Annual Cost) - Example				
Sherobee Road	\$15.86	\$26.64	\$48.39	\$71.82
Multi-Family (7+ Units) (Annual Cost)				
Goreway Drive (per unit)	\$10.54	\$17.71	\$32.18	\$47.75
Commercial (Annual Cost) - Example				
Mall	\$10,445	\$17,548	\$31,875	\$47,303

As shown under the *Existing (2012)* column, approximately 2.4 percent of the revenues generated from property taxes and payments in lieu of taxes in 2012 were allocated to fund the City's stormwater program. It is important to note that this only accounts for \$8.7 million of the total program cost, with the remaining \$5.9 million coming primarily from reserves (taxes and revenue collected from other years). While recognizing that using reserves to fund the stormwater program is no longer sustainable, the *Status Quo* column shows that to fully fund the existing stormwater program of \$14.65 million from the current tax levy, approximately 4 percent of the total property tax and payment in lieu of tax collected would be necessary. On the same note, it would require 7.2 percent and 10.7 percent to fund the Interim and Sustainable service levels respectively. As an example, for a single-family home assessed at the average value in Mississauga (based on a sample size of 600 single family detached homes), the homeowner is currently paying \$29 annually into the City's stormwater program. If the property tax allocation was increased to fund the Status Quo \$14.65 million program (instead of \$8.7 million currently), that same homeowner would pay \$48 annually for stormwater. The cost would increase to \$87 and \$130 annually to support the stormwater program based on the Interim and Sustainable service levels.

*Stormwater Rate Option*

Appendix 4 presents a breakdown of the estimated stormwater rates under the recommended Interim service level approach, with the Status Quo and Sustainable service levels shown for comparison purposes.

Results from the statistical analysis of single-family detached homes suggest that a Tiered Single-Family Unit (SFU) is appropriate as the preferred billing unit for Mississauga as it best accounts for the variability in impervious area without requiring that all residential properties be measured. There is a dramatic difference in the impervious area of the smallest and largest 10 percent of single-family homes when compared to the average value, and establishing distinct SFU values for each tier (0.7 SFU for small homes, 1.4 SFU for large homes) is consistent with the fairness and equity principles. Single-family homes would be assigned to one of three tiers: small (the lowest 10-percentile impervious area size), medium (between 10- and 90-percentile), and large (90-percentile and above).

In developing the estimated stormwater rates, several assumptions were made. An annual rate administration cost estimate of \$770,000 has been included in the base rate. This estimate is founded on the assumption that the stormwater bill would be added to an existing utility billing system. However, if a new billing system needs to be developed, the costs would be higher. Therefore, this amount is subject to change once the appropriate billing system is defined. Further, allowances for credits (5-7%) and non-payments (1-3%) have also been built into the base rate. These allowances will require adjustment once a credit program and policy have been developed.

The estimated base rates representing the annual cost per single family unit (SFU), which 80 percent of single family detached homes fall under, are shown for the three service levels:

- Status Quo: \$52.68 per year
- Interim: \$93.60 per year
- Sustainable: \$137.64 per year

This means that the average single family residential homeowner will pay \$7.80 monthly to fund the Interim Service Level.

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Comparison of Tax versus Estimated Stormwater Rate

The table in Appendix 5 provides a comparison of representative charges based on tax and estimated stormwater rates under the Interim service level based on the recommended approach described above. Table 3 summarises Appendix 5 with a breakdown of the costs. It should be noted that these figures are in present day values (no inflation).

Table 3: Comparison (Tax versus Estimated Stormwater Rate)

Stormwater Program Item	Existing (2012)	Status Quo		Interim Service Level	
		Tax	Tax	Tax	Rate
<b>Single-Family Detached Home (Annual Charge)</b>					
10-percentile (Small Tier)	\$22.10	\$37.13	\$67.44	\$64.52	
Average assessed value (Medium Tier)	\$28.58	\$48.01	\$87.21	\$93.60	
90-percentile (Large Tier)	\$40.69	\$68.36	\$24.16	\$127.84	
Brooks Drive	\$28.37	\$47.66	\$86.57	\$93.60	
Robin Drive	\$42.69	\$71.72	\$130.28	\$93.60	
Homelands Drive	\$27.39	\$46.01	\$83.58	\$93.60	
Beacham Street	\$31.08	\$52.22	\$94.85	\$93.60	
King Richard's Place	\$40.14	\$67.44	\$122.50	\$93.60	
<b>Condominium – Example (Annual Charge)</b>					
Sherobee Road	\$15.86	\$26.26	\$48.39	\$21.45	
<b>Multi-Family (7+ Units) – Example (Annual Charge)</b>					
Goreway Drive (per unit)	\$10.54	\$17.71	\$32.18	\$17.10	
<b>Commercial – Example (Annual Charge)</b>					
Mall	\$10,445	\$17,548	\$31,875	\$48,587	
<b>Tax Exempt – Example (Annual Charge)</b>					
Church (Dundas Street)	\$0	%0	\$0	\$1,399	

As shown above, property owners will see a significant cost increase across the board under the proposed financing approach when compared to the existing (2012) scenario. However, as noted previously, the existing 2012 portion of tax levy accounts for only \$8.7 million of the total \$14.65 million program cost with the remainder made up through reserves. The *Status Quo* column reflects the cost if the full \$14.65 million program is fully funded through tax

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levy. Further, the service level being funded under the proposed scenario is a \$26.6 million program. When a comparison is made between tax and stormwater rate based on the full \$26.6 million under the Interim service level, there is a shift in revenue distribution from residential to non-residential. While moving from the tax levy to a stormwater rate will see differences in charge ranging between -25 percent to +39 percent for single family detached homes, the condominiums and multi-family units will see a significant decrease, while the non-residential properties with large impervious area will generally be impacted the most. Also, tax-exempt properties that are not exempt from municipal fees and charges will now need to pay a stormwater rate.

#### Issues and Concerns

The public and stakeholders generally agree with the importance of addressing capital investment and operation/maintenance program deficiencies for the City's stormwater program. However, issues have been raised during the study process as highlighted below:

- The process is moving too quickly (insufficient consultation time)
- Concerns from the commercial and industrial sectors with shifting the cost of the stormwater program from the residential sector to non-residential sector
- Concerns from tax-exempt properties who traditionally did not have to pay for the City's stormwater program
- The need to look into a credit program as part of this study
- Concerns that staff is not recommending credits to residential homeowners but instead is looking into incentives/rebates

#### Billing Implementation

Staff is currently investigating available billing system options and information on these options will be provided in a separate memorandum.

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**STRATEGIC PLAN:** The undertaking of a Stormwater Financing Study falls under the Living Green Strategic Pillar and all of its strategic goals to *Lead and Encourage Environmentally Responsible Approaches, Conserve, Enhance and Connect Natural Environments* and *Promote a Green Culture*.

By controlling the quality and quantity of stormwater reaching our streams and rivers, stormwater management systems protect the health and safety of the public and the natural environment.

**FINANCIAL IMPACT:** The overall revenue generated through a stormwater rate will provide a dedicated and reliable funding source to address the many stormwater related pressures. It should be noted that \$900,000 has been approved in the 2012 Capital Plan to undertake the implementation phase; however, this was based on best estimates and may be insufficient. Staff will bring back a further report to General Committee with an implementation plan and related cost.

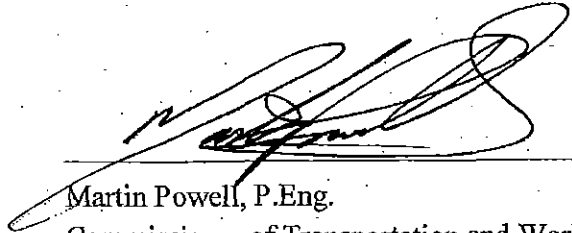
**CONCLUSION:**

1. The work undertaken by the project team has determined that the most appropriate stormwater financing option that is dedicated and more equitable is a stormwater rate based on a tiered single family unit (SFU) rate structure.
2. A stormwater program based on the Interim Service Level is the most appropriate as it provides the capital and operating funding needed to address the current pressures that the City is facing, with a modest step toward setting aside funds for future infrastructure renewal cost.
3. A number of entities are exempted from payment of municipal fees and charges through legislation and that these exempted properties' share of the stormwater program cost should be spread across the user base.
4. A credit program will need to be developed which will provide credits to non-residential properties that provide on-site stormwater management measures and incentives to residential properties and spread these costs across the user base. This credit program will coincide with billing implementation.

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**ATTACHMENTS:**

- Appendix 1: Public Comments
- Appendix 2: Pressures on Stormwater Program
- Appendix 3: Property Tax Option
- Appendix 4: Estimated Stormwater Rate (Tiered SFU, with Fee Exemptions)
- Appendix 5: Comparison: Tax versus Estimated Stormwater Rate



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Martin Powell, P.Eng.  
Commissioner of Transportation and Works

*Prepared By: Lincoln Kan, P.Eng.  
Manager, Environmental Services*

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PUBLIC INFORMATION MEETING No. 1  
June 27, 2012  
Stormwater Financing Study

**Record of Attendance & Additional Comments Form**

Please print your name and mailing address clearly. We regret that if your name and address are not legible we will be unable to contact you.

Name: <u>Robb Castle</u>	Address: <u>one five</u>	Phone #: <u>905 896 1868</u>
Email: <u>the wifes @ bell net</u>		

Additional Comments/Questions:

Please drop-off sheet in Comments Box or mail/fax it by July 18th, 2012 to:

City of Mississauga  
Transportation and Works Department  
Environmental Services  
201 City Centre Drive, Suite 800  
Mississauga, ON L5B 2T4  
Fax: 905-615-3173

The personal information on this form is collected under authority of Section 11 of the Municipal Act, 2001, and will be used to inform you of any future meetings regarding the Stormwater Financing Study, to respond to your comments/concerns if necessary and to maintain a record of attendance at the public meeting. Questions about the collection of this personal information should be directed to: Mr. Lincoln Kan, Manager, Environmental Services by phone (905-615-3200 ext. 4086) or by mail to the above address.



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# PUBLIC INFORMATION MEETING No. 1

June 27, 2012

## Stormwater Financing Study

The City of Mississauga is interested in hearing the community's comments, questions, concerns and suggestions regarding the current Stormwater Financing Study. Please take a few minutes to complete this brief comment sheet. All comments will be carefully considered as part of this project.

1. Did the information presented tonight provide a clear understanding of the stormwater management issues facing the City?

YES

2. What do you believe are Mississauga's most critical stormwater issues (e.g., flood protection, erosion control, operations/maintenance, pollution prevention, environmental impacts, etc.)?

WE ALL KNOW NOW THAT WE HAVE UNDERSTOOD / UNDERSTAND THE CAG  
① FLOOD PROTECTION ; ② OPERATIONS / MAINTENANCE  
SO #1 IS PROTECTING AND #2 CRITICAL MAINTENANCE

3. How should the City address aging stormwater infrastructure? (select one)

- Repair only when structural failure occurs or is imminent (i.e., let future generations deal with problems as they arise);
- Collect money now to renew and rehabilitate infrastructure in the highest priority areas (i.e., proactively reinvest in consideration of future generations); or
- Other/Comment:

4. How should the City's stormwater management costs be allocated? (select one)

- Based on each property's taxable value;
- Based on each property's stormwater runoff contribution; or
- Other/Comment:

FOR THE IDENTICAL  
APPLY CHARGES ON LAND AREA,  
THAT'S CITY'S EFFORT TO ENCOURAGE  
THE GROWTH OF NEWER HOMES

5. The main funding options presented tonight included: property taxes, development charges, and a stormwater user fee. Are there any other funding options that should be considered?

TO REDUCE STORM WATER FLOWS WE NEED  
MORE SENSIBLE FINANCIAL INCENTIVES TO HELP  
INDUSTRIAL & COMMERCIAL OPERATIONS USE STORM  
PERMEABLE SURFACES

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**Gregory, Mike (Canada)**

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**From:** Lincoln Kan <Lincoln.Kan@mississauga.ca>  
**Sent:** Wednesday, July 11, 2012 8:10 AM  
**To:** Gregory, Mike (Canada); Jeremy Blair  
**Subject:** FW: Stormwater Financing Committee - Public Comments

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**From:** John Kendell [mailto:johnkendell@rogers.com]  
**Sent:** July 10, 2012 10:04 PM  
**To:** Lincoln Kan  
**Subject:** Stormwater Financing Committee - Public Comments

Hi Lincoln,

It has been a couple years since we met. I hope you are well. I continue to manage CRAA with a substantially growing membership and active executive. Mike Ewaschuk, a volunteer with CRAA will be our lead member working with the city on this project and I will assist where needed. He attended the meeting several weeks ago.

However I thought I would take a moment to share my knowledge, input and experience how it relates to the Credit River watershed and more importantly the fish within and the related values, benefits and needs.

Storm water management, improvement and reduction are top priorities to CRAA and our membership (which is running close to 5,500 now). The impacts on the river and tributaries such as habitat loss, sediment, erosion, etc are well known and an issue that must be dealt with to ensure this recourse is available for the future.

I have noted my comments below for the public meeting 1 and related documents...sorry it is so long!

John Kendell  
416-704-8896 mobile  
905-821-0891 fax  
President, CRAA  
[www.craa.on.ca](http://www.craa.on.ca)

**PUBLIC INFORMATION MEETING No. 1**  
**June 27, 2012**  
**Stormwater Financing Study**

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The City of Mississauga is interested in hearing the community's comments, questions, concerns and suggestions regarding the current Stormwater Financing Study. Please take a few minutes to complete this brief comment sheet. All comments will be carefully considered as part of this project.

**1. Did the information presented tonight provide a clear understanding of the stormwater management issues facing the City?**

Based on my knowledge of the river and urban storm flow the information was very general, but suitable for the broader public except it did lack one important component. While the impacts of erosion and flooding

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were shown, there was no information on how that impacts fish and their habitat. How erosion destroys spawning areas, fills in pools, high sediment (especially from new development) smothers eggs and suffocates fish. A photo of a dead fish in the muddy water or fish gasping for air in sediment laden water would illustrate the issue of 'how and why' the fish are impacted.

Comment on slide 4 Water cycle – the photo of row crops as “Low Runoff” is false. You should use a photo of a forest. Row crops have much higher runoff and lower evaporation rates (sort of a half way point between forest and urban). (Fallow agricultural fields also transmit enormous quantities of deleterious sediments to watercourses. Runoff is promoted via rain impact on the exposed soil, which destroys soil aggregates with fine particles clogging interstitial spaces, resulting in decreased infiltration. So the point being made is that agriculture that does not employ best management practices also generates stormwater runoff, albeit this is not much of a concern in Mississauga.)

Comment on slide 6 – The photo of the Credit Valley Golf Club Ice Jam flooding. This flooding was caused by an ice jam that has more to do with the deforestation of the valley between Dundas and the QEW which results in high anchor ice, ice building and thus flooding. The water flow in the river is primarily snow melt from the entire watershed and local urban runoff from Mississauga was a small portion of the cause.

General comments – Wood debris jams and natural (pre colonization level) erosion are natural and essential components of dynamic channel equilibrium. Wood debris jams are only an issue at road crossings where insufficiently small crossings have been installed. Erosion is an issue where it interferes with poorly selected locations for infrastructure and buildings. Erosion is also an issue when its rate is higher than the historic normal, via impervious cover or some other activity (i.e. row-crop agriculture) which has decreased the historic infiltration to runoff ratio.

**2. What do you believe are Mississauga's most critical stormwater issues (e.g., flood protection, erosion control, operations/maintenance, pollution prevention, environmental impacts, etc.)?**

All of the above.

First step is to select priority areas (this must be a fast process, not a 3 year study but rather your teams knowledge of what is needed, working with CVC staff and community partners such as CRAA. I strongly suggest the bulk of efforts towards subwatersheds/storm systems on the Credit watershed as a priority given the fishery, endangered species and visibility. An example might be Loyalist Creek as noted below as a priority. Other safety priorities and opportunities (i.e. large benefit sites that want to have work done (i.e. Square One Parking Lot) need to be addressed simultaneously as needed. By putting say 50-75% of effort to one watershed you can make substantial, measurable gains in a short period of time (1-2 years). Once a target area is substantially updated move to the next one. It might take 20 years, but step by step you and your team will have made a huge, measurable improvement to the river, habitat and water quality.

I'd like to point out stormwater impacts to the Credit River and tributaries: In summer in Loyalist Creek, I've measured spikes in water temperature from 19°C to over 30°C in a couple of minutes from thunderstorms running off extremely hot pavement, which is more than sufficient to kill all salmonids. Retro-fitting with stormwater ponds must always be bottom drawn and checked to ensure they are releasing cold water with reduced sediment. This creek was historically a coldwater creek, and is still used by salmonid smolts and fry in the summer when the river temps exceed their thermal thresholds. It is critical that we manage it; and other tribs, back towards coldwater streams by reducing impervious cover and promoting infiltration. The high impervious cover in the Loyalist Creek watershed has resulted in wide and shallow channels, or expensive

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armour stoning or engineered stabilized channels. Some portions of the creek are also buried in pipe (Erin Mills Parkway area). Similarly, the main stem of the Credit River tends to be wider and shallower than it should be because of a combination of artificially high stormwater runoff in the watershed and lack of riparian forest. The result is a lack of heterogeneity in fish habitat, and conditions that are conducive to river-warming which are deleterious to the coldwater fishery and many native and endangered species. Again, minimizing artificial stormwater runoff will help remediate this.

In winter, judging by the amount of salt used by residents in my neighbourhood alone, we are likely impacting all Mississauga tributaries (such as Carolyn, Mullet, Loyalist Creeks) and possibly the main river. In a study on Laurel Creek in Waterloo, salt concentrations in the creek via runoff were occasionally recorded at acute levels of toxicity (i.e. instant effects). On the main Credit River there appears to be weaker and weaker formation of winter ice. This is likely a function of warmer winters, but may be exacerbated by salt runoff. Flow of winter ice through the main river channel scours new pools and recruits new wood to the channel (where the riparian zone is forested). The lack of these normal spring freshets must be regarded as deleterious given that this is a historic condition that drives the physical formation of fish habitat. We need this process to continue and would like to see the amount of salt reaching the river and its tributaries decrease through use of Low Impact Development, and general incentives to reduce impervious cover.

The general intent of the above two paragraphs is that both direct runoff and poorly designed/maintained stormwater ponds are having a massive impact on river productivity/sustainability and its tributaries. Reducing impervious cover will help reduce the above noted impacts and potentially re-establish some natural shallow-groundwater inputs to the river and tribs, which are critical to salmonid smolts and fry that require coldwater refuge through the summer.

### **3. How should the City address aging stormwater infrastructure? (select one)**

- Repair only when structural failure occurs or is imminent (i.e., let future generations deal with problems as they arise);
- Collect money now to renew and rehabilitate infrastructure in the highest priority areas (i.e., proactively reinvest in consideration of future generations); or
- Other/Comment:

The city is partially on the right course (retrofitting older systems), however the work is far too slow and not concentrated enough to show tangible benefits to the natural stream/watershed systems pertaining to the Credit River. While the city has 31 streams (per the slides), the Credit River is the only system with a major sport fishery and home to several endangered and threatened species such as American eel, lake sturgeon, Redside dace and Atlantic salmon.

However a broad, well coordinated (watershed or sub watershed basis) and legislated approach is mandatory to succeed:

- Mandatory disconnection of downspouts where possible (change existing development regulations as well – they simply do not make sense as I have brought up in the past (more info below))
- Mandatory inclusion of swales, bio filters and other at or near source storm water control and infiltration at new sites and build them into existing systems where possible (everywhere possible). Any new developments, with only Low Impact technologies being acceptable.
- Tax based on impervious cover (as outlined) is great with incentives for people to solve stormwater on their property
- Would also like to see a program where we disconnect downspouts for free and provide a free rain barrel. City and other agencies (CVC, TRCA, NGO's like CRAA, TU, Sierra Club, etc).

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- Public education will be necessary through ward newsletters, Mayor update newsletters and direct newsletters from the works department or region of peel notices or some combination. Education about rain barrels, disconnected downspouts, success stories!

**4. How should the City's stormwater management costs be allocated? (select one)**

- Based on each property's taxable value;
- Based on each property's stormwater runoff contribution; or
- Other/Comment:

This is the only fair option. Would also like to see costs downloaded to the developer for new developments: Why should the municipality and its taxpayers have to pay for stormwater impacts caused by developers trying to maximize profit by squeezing as many homes into a space as possible!

**5. The main funding options presented tonight included: property taxes, development charges, and a stormwater user fee. Are there any other funding options that should be considered?**

The charges are too low based on \$4.40 per month for a single house. That is \$53.00 per year. My residential taxes are \$6,000. \$53 is less than 1%. I suggest rates 1.5 to 2 times higher. It costs about \$10-15 to disconnect a downspout, for the cost of one years charges any house in the city could be disconnected. Creating the financial incentive to encourage change is one good option. Legislation with a slight tax to pay for the disconnection to cover city costs would work better.

**6. Additional comments:**

The value of the sport fishery and other recreational use (boating, hiking, park use) and costs associated with sediment and flooding (erosion control, harbour dredging, fish stocking) should also be shown as the cost/benefit analysis. The costs of not solving the urban storm water problem are far greater than you have shown and the costs to fix the short term issues is also much higher than shown. Jim Tovey (Ward 1) said to me the other week the Port Credit fishery was estimated to be worth 2.5 million dollars per year. In 2007 CVC estimated the lower Credit fishery in Mississauga worth \$650,000 in direct spending. Fishing activity/participation has jumped 300-400% in the past 5 years suggesting the lower river fishery is now worth 1.5-2 million and growing. The steelhead run this year was up 600% from 8 years ago and 86% of the fish are wild. This is drawing thousands of anglers from Ontario. Every time it rains and the river floods people cannot fish...this is a huge economic loss for the city.

There will be some public backlash because people generally have no idea about the costs required for the infrastructure on which they depend. It must be clearly elaborated to the public the costs associated stormwater management, as you've done nicely on one of your slides.

**Scenario 1:**

You also need to present a clear message on how impervious cover is charged to land owners/business. For example (my house):

- My driveway is 2,000 sf and slopes to the road so it should be charged
- My front porch 300 sf drains to the road and should be charged
- My roof is disconnected and drains to the lawn – there should be no charge
- my walkway and patio in the rear yard drain to the grass and infiltrate so they should not be charged
- my pool is drained to the yard always so there should be no charge

Being clear with these and other scenarios is key to implement this.

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Also dealing with commercial/institutional properties is vital. Working with them to implement projects funded in part or whole by storm water tax revenue to stop runoff at the source.

Example 2:

Scenario 2:

One of my schools in Streetsville with roof, parking lot and playground is 95% impervious cover. When I installed the play area and sidewalk I wanted to install bio retention areas. The city development/building office would not allow me to. The only way I could was to also install a catch basin in the lot at a cost of \$20,000. The irony is my design would have stopped 50% of the runoff and held/infiltrated it. Instead all 95% goes straight to the storm sewer as a result of city building codes/requirements. Therefore part of the funding needs to address inconsistent planning/design rules in the city itself.

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PUBLIC INFORMATION MEETING No. 2  
November 20, 2012  
Stormwater Financing Study

Record of Attendance & Additional Comments Form

The City of Mississauga is interested in hearing the community's comments, questions, concerns and suggestions regarding this study. Please print your name and mailing address clearly. We regret that if your name and address are not legible we will be unable to contact you.

Name: JOE SILVA	Address: 1684 SALT DENE TERRACE	Phone #: 905 629-4567
Email: JOE.SILVA@Bell.Net		

Additional Comments/Questions:

I would like to receive a copy of  
Tonight's Presentation. Or be able to download  
a PDF copy.  
Thank you

Please drop-off sheet in Comments Box or email by November 30<sup>th</sup>, 2012 to:

Mr. Lincoln Kan  
Manager, Environmental Services  
City of Mississauga -- Transportation and Works Department  
Email: [Lincoln.Kan@mississauga.ca](mailto:Lincoln.Kan@mississauga.ca)  
Mail: 201 City Centre Drive, Suite 800, Mississauga ON L5B 2T4

The personal information on this form is collected under authority of Section 11 of the Municipal Act, 2001, and will be used to inform you of any future meetings regarding the Stormwater Financing Study, to respond to your comments/concerns if necessary and to maintain a record of attendance at the public meeting. Questions about the collection of this personal information should be directed to: Mr. Lincoln Kan, Manager, Environmental Services by phone (905-615-3200 ext. 4086) or by mail to the above address.

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## PUBLIC INFORMATION MEETING No. 2

November 20, 2012

### Stormwater Financing Study

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Name: SUSANNE THISTLE	Address: 6427 ALDERWOOD 6427 TRAIL	Phone #: 905 824 4994
Email: david.thistle@sympatico.ca		

#### Additional Comments/Questions:

- ① PIS. PUT PRESENTATION (P.O.R.) ON WEBSITE
- ② APPEAL PROCESS FOR CREDIT ~~APPEAL~~
- ③ WHAT IS THE COST OF THIS STUDY?

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 Manager, Environmental Services  
 City of Mississauga – Transportation and Works Department  
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Name: GLEN BROW	Address: GLEN SCHWARTZ & ASSOC. 700-10 KINGSBRIDGE GARDENS	Phone #: 9-568-8888
Email:	CIRCLE	

Additional Comments/Questions: ON BEHALF OF THE ARCHDIOCESE OF TORONTO:

FUNDING SHOULD BE THROUGH TAXATION OR CHURCHES SHOULD EXEMPT FROM ANY STORMWATER RATE CHARGE. CHURCHES ARE CHARITABLE ORGANIZATIONS. ANY ADDITIONAL FEES CHARGED TO A CHURCH WILL TAKE MONEY AWAY FROM SOCIAL OUTREACH PROGRAMS PROVIDED BY CHURCH COMMUNITIES TO THOSE IN NEED, THAT ARE NOT PROVIDED BY MUNICIPALITIES.

Please drop-off sheet in Comments Box or email by November 30<sup>th</sup>, 2012 to:

Mr. Lincoln Kan  
Manager, Environmental Services  
City of Mississauga – Transportation and Works Department  
Email: [Lincoln.Kan@mississauga.ca](mailto:Lincoln.Kan@mississauga.ca)  
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## PUBLIC INFORMATION MEETING No. 2

November 20, 2012

### Stormwater Financing Study

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The City of Mississauga is interested in hearing the community's comments, questions, concerns and suggestions regarding this study. Please print your name and mailing address clearly. We regret that if your name and address are not legible we will be unable to contact you.

Name: <i>James Craig</i>	Address: <i>5534 Millbrook Ln. Miss L6M 3Z1</i>	Phone #: <i>416-529-8223</i>
Email: <i>James.craig@sympatico.ca</i>		

#### Additional Comments/Questions:

*I am very concerned re the impact of this necessary levy on faith communities & non-profits. These organizations serve a huge number of people in our city and are usually funded by donations. In these times of huge pressure on non-profits an additional cost will have a collective impact on the level of service they can deliver. These organizations are already doing so much to serve those in need as well as valuable preventative work with youth, seniors & families. I believe it will be socially and financially counter-productive to impose this levy on these organizations therefore I appeal to the city to grant an exemption to these organizations.*

Please drop-off sheet in Comments Box or email by November 30<sup>th</sup>, 2012 to:

Mr. Lincoln Kan  
Manager, Environmental Services  
City of Mississauga -- Transportation and Works Department  
Email: [Lincoln.Kan@mississauga.ca](mailto:Lincoln.Kan@mississauga.ca)  
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PUBLIC INFORMATION MEETING No. 2  
November 20, 2012  
Stormwater Financing Study

**Record of Attendance & Additional Comments Form**

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Name: Paul Wartman	Address: 2901 Coulson Court Mississauga, ON	Phone #: 905 502 0408
Email:		

Additional Comments/Questions:

- Facilitator/Presenter tip: Create a bike rack at the back of the room. Invite participants to put their questions/comments on so presentation is not interrupted. Followed by question period at end.
- Open up other opportunities/avenues for giving feedback. Not everyone is comfortable with asking a public question: Ex. Open up a website poll/survey to allow 24 hour access to info and to send questions
- Contact me if you want a grad student to work on a pilot project for residential incentives. (seriously, I'll get funding)  
wartmanpaul@gmail.com

Thank you for holding this

Please drop-off sheet in Comments Box or email by November 30<sup>th</sup>, 2012 to:

Mr. Lincoln Kan  
Manager, Environmental Services  
City of Mississauga -- Transportation and Works Department  
Email: [Lincoln.Kan@mississauga.ca](mailto:Lincoln.Kan@mississauga.ca)  
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Name:	Address:	Phone #:
CHARLES BROWN	382 MOONGLOW CRT,	905-279-9534
Email: cabrown382@aol.com		

Additional Comments/Questions:

PLEASE SEE MATERIAL ENFOLDED,  
CAB.

Please drop-off sheet in Comments Box or email by November 30<sup>th</sup>, 2012 to:

Mr. Lincoln Kan  
Manager, Environmental Services  
City of Mississauga – Transportation and Works Department  
Email: [Lincoln.Kan@mississauga.ca](mailto:Lincoln.Kan@mississauga.ca)  
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## THE STORMWATER INFRASTRUCTURE PROPOSAL

My name is Charles Brown. I have been a resident of Mississauga since 1967, living several blocks from the Cooksville Creek in Cooksville. I am very familiar with the flooding situation of the creek and am aware of the damage done by flooding to residences along Sherobee Drive. I sympathize with the residents who have suffered property damage and I agree action to avoid a recurrence is called for. In fact, effective action should have been undertaken before properties were affected when the problem was first identified almost 30 or so years ago. Had it been we would not be faced with this proposal and some of its unacceptable solutions and outrageous cost.

I speak specifically to the intention of measuring the asphalt surface for parking at my church and having the church assessed financially because of the stormwater that flows from it. When the church was built in 1957, an oversize dry well was installed to accept all the stormwater from its weeping tile. I had all downspouts disconnected to permit roof water to flow on to the church lawn. Water on the parking lot is channelled to a portion of church property that was lowered to store the runoff. The parking surface was sloped to permit this. This was done under my direction when the parking lot was surfaced two years ago. As well, the parking lot is at a level below that of the N. Service Road and water is more likely to flow towards us than away. We do not add to the stormwater problem. We are keeping our water on our property, but, interestingly, on several occasions have had water from the municipal roadway flow on to our lawn and on one occasion up to the edge of our Daycare play area. Clearly, our efforts to implement good environmental practices are to be ignored in this frantic rush to accumulate money to fix a problem that should have been dealt with 30 years ago. As a member of my church I cannot support this one size fits all style. We are not a contributor to the problem you are facing.

(e)(e)

## **Lincoln Kan**

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**From:** Lana Russell <lrussell@tmig.ca>  
**Sent:** 2012/10/02 7:55 PM  
**To:** Lincoln Kan  
**Cc:** David Ashfield; Kramer, Gary  
**Subject:** Meeting with the City of Mississauga on the Stormwater Financing Study  
**Attachments:** Mississauga 2012 Existing Land Use.pdf; Land Use & Imperviousness - Mississauga SWM Funding.pdf

Lincoln,

Thanks for hosting a meeting with Orlando Corporation on the above noted study. To start here are a few facts about Orlando's Mississauga operations:

- They own over 2000 acres of industrial lands in Mississauga;
- Orlando pays over \$62 million in taxes per year to Mississauga;
- They have owned and operated Business Parks for over 50 years in Mississauga; and
- They are good corporate citizens in the City.

Orlando Corporation also recognize the need for good Stormwater Management (SWM) and have been developing their Business Parks with appropriate on-site measures (roof top storage, parking lot storage and oversized pipes, as well as SWM ponds) to attenuate stormwater runoff to pre-development conditions, as specified by the City of Mississauga requirements for all development applications. These SWM improvements were made to each of Orlando's sites based on the assumption that the overall system would be sustainable. In addition, Orlando has made further storm drainage payments to the City of Mississauga in the amount of \$30-\$40 million over the past 30 years to supplement additional SWM improvements.

We would like to focus our questions in the following areas:

### **1) General Principles**

There are a few principles that need to be applied for the financing to be fair:

- o The fee needs to apply to everyone (including the GTAA).
- o The fee needs to be used for the purposes it has been collected.
- o There needs to be open and clear accounting of the monies collected / spent and on what.
- o There needs to be continued efforts to improve the efficiencies of the accounting system.

### **2) Anticipated Costs**

- o What is included in the \$16 billion SWM infrastructure figure?
  - Are the existing SWM Pond land costs included?
    - New land would not need to be obtained.
  - What is included in SWM pond costs?
    - Likely only one cleanout and a replacement of the outlet structures would be required rather than a full scale rebuild of the facility.
  - Can the current SWM fund estimate be broken down into components such as Water Quality, Quantity, Erosion, Water Balance, and Operation & Maintenance?
- o What does the \$16 million figure contain?
- o What happens to the \$10 million tax base now?
- o How was the previous reserve fund attained?

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- o What has the \$30-\$40 million been used for that Orlando has funded the City over the last 30 years via storm drainage payments?
- o Is the state of our desired stormwater beyond our ability to fund it?

### 3) Funding Formula

- o The formula and administration need to be kept simple and efficient.
- o Need to be based on the principle that everyone pays:
  - See attached 2012 City of Mississauga Land Use map and TMIG review of imperviousness.
  - The municipal roads would have a share attributed to them due to their high imperviousness.
  - Is this a City expense? How would the City portion be funded?

### 4) Credits

- o For areas that drain to "Orlando Constructed" SWM ponds that drain directly to creeks, we feel that there should be a large credit in the range of 80%.
- o How will the Cash-in-lieu that has been paid historically be credited?
- o When credits are established how does the shortfall of funds get replaced?
- o How are on-site controls to be accounted for since they are built, maintained and operated by Orlando?

### 5) Tax vs. SWM Fund

- o We believe the tax system is the best for collecting the funds since there is a balance that must be maintained with all public costs.
- o Elected officials need to make those tough decisions and develop the balance for public funding; increasing taxes; and the public good in a holistic manner.

I look forward to our conversation

Regards,  
Dave

Lana Russell on behalf of

David Ashfield, P.Eng.  
founding partner

TMIG | THE MUNICIPAL INFRASTRUCTURE GROUP LTD  
8800 Dufferin Street Suite 200 | Vaughan Ontario Canada L4K 0C5 | office 905.738.5700 ext 232 | mobile 647.200.8780 | fax 905.738.0065  
EXPERIENCE | EFFICIENCY | COMMITMENT

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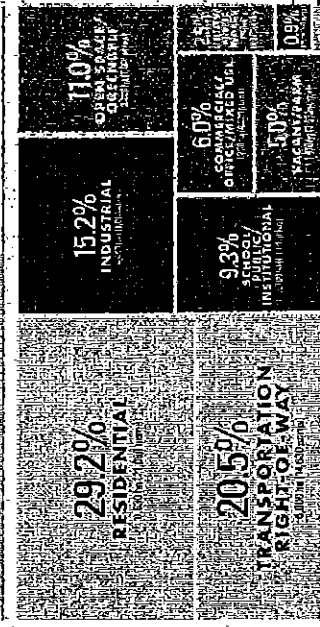
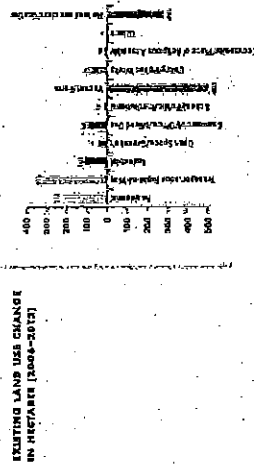
APPENDIX 3



# 2012 EXISTING LAND USE

## EXISTING LAND USE OVERVIEW

TOTAL AREA OF MISSISSAUGA (SQUARE KILOMETRES)	29,210 ha 72,180 acres
PERCENTAGE OF LAND IN DOWNTOWN MISSISSAUGA CONSISTING OF APARTMENTS	20.1%
PERCENTAGE OF LAND CONSISTING OF DETACHED HOMES IN NEIGHBORHOODS	36.5%
PERCENTAGE OF OFFICE LANDS LOCATED IN CORPORATE CENTRES	64.6%



Read more about the 2012 existing land use and view this map as a KML at [mississauga.ca/data](http://mississauga.ca/data)



COMMUNITY PLAN OF KILLBUCK ASSEMBLY  
2012 (18th Floor)

# Breakdown of Land Uses and Imperviousness

City of Mississauga SWM Funding

Land Use	Total Land Area (acres)	Average Imperviousness (%)	Resultant Impervious Area (acres)	% Share of Impervious Area
Residential	21,080	40%	8,432	19.31%
Transportation Rights-of-Way	14,830	90%	13,347	30.57%
Industrial	11,000	90%	9,900	22.67%
Open Space / Greenbelt	7,950	20%	1,590	3.64%
School / Public / Institutional / GTAA	6,680	75%	5,010	11.47%
Commercial / Office / Mixed Use	4,320	90%	3,888	8.90%
Vacant / Farm	3,630	20%	726	1.66%
Utilities / Public Works	1,470	30%	441	1.01%
Community / Place of Religious Assembly	660	50%	330	0.76%
Other	220	0%	0	0.00%
<b>TOTAL</b>	<b>71,840</b>	<b>—</b>	<b>43,664</b>	<b>100.00%</b>

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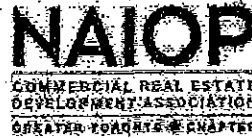
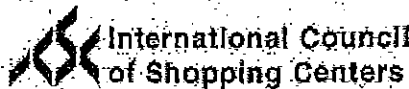
(c)(i)



**City of Mississauga:  
Comments on Stormwater Financing Study**

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September 28<sup>th</sup>, 2012



(g)(g)

**About BOMA Toronto:**

Over 800 of Toronto's most influential Property and Facility Managers, Developers, Leasing Agents, Service Providers, Industry Influencers and Commercial Real Estate Professionals in its membership roster, representing 80 per cent of all commercial and industrial real estate companies in the Greater Toronto Area and beyond.

**About ICSC:**

Founded in 1957, ICSC is the premier global trade association of the shopping center industry. Its more than 55,000 members in over 90 countries include shopping center owners, developers, managers, marketing specialists, investors, retailers and brokers, as well as academics and public officials. As the global industry trade association, ICSC links with more than 25 national and regional shopping center councils throughout the world.

**About NAIOP Greater Toronto:**

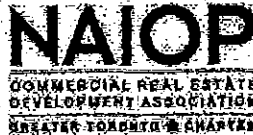
NAIOP Greater Toronto Chapter represents commercial real estate developers, owners and investors of office, industrial, retail and mixed-use properties. It provides strong advocacy, education, and business opportunities, and connects its members through a powerful local and North American network.

By fostering the right business climate where members can share ideas, cultivate new relationships and stay on top of the most current industry information and trends, NAIOP strives to be the leading association for the commercial real estate industry in the Greater Toronto Area.

**About REALpac:**

REALpac is Canada's senior national industry association for owners and managers of investment real estate. Our members include publicly traded real estate companies, real estate investment trusts (REITs), private companies, pension funds, banks and life insurance companies with investment real estate assets each in excess of \$100 million. The association is further supported by large owner/occupiers and pension fund advisors as well as individually selected investment dealers and real estate brokerages.

(K)(K)



**Subject:** Comments on City of Mississauga Stormwater Financing Study

On behalf of the *Building Owners and Managers Association Toronto* ('BOMA'), the *International Council of Shopping Centers* ('ICSC'), the *Commercial Real Estate Development Association Greater Toronto* ('NAIOP'), and the *Real Property Association of Canada* ('REALpac'), we would first like to thank the City of Mississauga for engaging stakeholders in a topic that is of crucial importance to our industry.

By way of background, *BOMA Toronto*, *ICSC*, *NAIOP Greater Toronto*, and *REALpac* have been very active on stormwater related consultations in the past, and recognize the importance of addressing capital funding and reinvestment deficiencies for any major municipality.

Principally, this coalition seeks to ensure that funding is fairly and evenly distributed amongst the commercial and residential sector alike.

As a result of materials presented during stakeholder meetings and the clear direction as to where the City of Mississauga is heading, we believe it is imperative that the city understand the negative externalities that come with certain financing mechanisms.

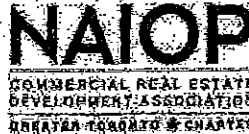
**Stormwater User Fee:**

*BOMA Toronto*, *ICSC*, *NAIOP Greater Toronto*, and *REALpac* are strongly opposed to a stormwater user fee being applied in the City of Mississauga and see the following as issues related to it:

- Change in billing methodology to impervious area shifts stormwater costs between classes of property and between properties within each class;
  - shifts liability from residential property to non-residential property; and
  - shifts liability to horizontal properties with large parking areas (ie shopping centres/box stores and industrial facilities);
- A major source of stormwater runoff is from common municipal roads, sidewalks, municipal buildings and municipal parking facilities. A shift in funding responsibility to non-residential property through the use of impervious area will allocate a disproportionate share of these common use facilities to non-residential owners;
- Advocates of stormwater charges based on impervious area state that the area measure is more equitable as it quantifies the relative contribution of stormwater runoff as a function of land use practices and development decisions of property owners. In reality, many of these decisions were established many years ago based on municipal zoning requirements, particularly respecting off street parking requirements;
- Off street parking design standards requiring impermeable surfaces were previously mandated. Only recently has technology allowed for hard surface permeable parking areas, however, at a significant cost premium;
- Businesses such as shopping centres, industrial facilities, car dealers, vehicle repair shops and gas stations require large impervious sites to operate their businesses and will be heavily impacted;



International Council  
of Shopping Centers



ICSC

- Commercial properties requiring off street parking are disadvantaged when compared to street front business which only utilize exempted street parking;
- The shifting of stormwater costs from residential to non-residential will result in an effective increase in fixed costs to business that are already overtaxed relative to residential. Advocates of using impervious area based on fairness and equity are promoting a selective user pay system based on run-off. In fact, large commercial properties pay more to municipalities than the value of services they get in return. Perhaps Mississauga should also be considering a change to user fees from property taxes for such municipal services as libraries, community centres, roadways and parks not used by business. Large properties also provide their own fire protection, security, waste and snow removal reducing the need for additional municipal fire, police, waste and snow removal services.
- The increase in fixed costs to commercial properties would translate to a reduction in commercial property values and a corresponding decrease in assessed values.
- Tenants compete for business on a regional level and the switch to a stormwater charge in Mississauga will place tenants at a disadvantage relative to their competition in neighbouring municipalities;
- A change to impervious area will require the creation of a new costly administration to measure and calculate charges based on impervious area including the creation of an impartial dispute resolution process to handle area disagreements. The database will have to be maintained and constantly updated to reflect physical changes; and,
- Switch to an impervious area calculation will shift the burden to commercial property owners, the economic engine for the city of Mississauga and will result in loss of employment within the city of Mississauga.

#### Recommendations for the City of Mississauga:

*BOMA Toronto, ICSC, NAIOP Greater Toronto, and REALpac* support that the increase in level of service for stormwater management, however we recommend that the level of service increases for stormwater should be funded through increased property taxes together with appropriate development charges or impact fees (new development), and cash-in-lieu charges (infill/redevelopment). Property taxes are allocated based on current property values and, therefore, are an indirect proxy of ability to pay. As with most other public services, we believe that property assessment is the most equitable basis for distributing the cost of stormwater services within a municipality.

We would be pleased to make a deputation before City Council to outline our concerns with some of the financing mechanisms presented in the stakeholder consultation process. We believe that we have not been given enough timely information and even at this late date have yet to receive any financial data on how this will affect our properties. We are recommending that this process includes direct consultation with our membership following the release of the financial information. In line with the principles outlined earlier in this submission, our goal is to work with the City of Mississauga to ensure that any stormwater financing option is fair, equally distributed amongst the commercial and residential sector. Please feel free to contact any of us below should you have any questions regarding the information presented in this submission.

1(m)(m)



International Council  
of Shopping Centers



Sincerely,

Paul Morse  
Chief Executive Officer  
REALpac  
[pmorse@realpac.ca](mailto:pmorse@realpac.ca)

Ryan J. Eickmeier  
Manager, Government  
Relations & Policy  
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Chris Conway  
President & Chief Staff Officer  
BOMA Toronto  
[cconway@boma.ca](mailto:cconway@boma.ca)

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**Lincoln Kan**

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**From:** Gray, Derek <Derek.Gray@gtaa.com>  
**Sent:** 2012/09/28 3:36 PM  
**To:** Lincoln Kan  
**Subject:** RE: Stormwater Financing Stakeholder Group - Additional Meeting (GTAA)

Lincoln:

I will not be able to make it to the proposed date as I'm returning from a conference in the US at that time.

Items for discussion I believe should include at least the following:

- Credit/rebate system
  - As you are aware GTAA has spent over \$120million on stormwater capital since assuming the operation of Pearson Airport in addition to the associated O+M costs for these facilities.
- Exempt status and PILT
  - I think there needs to be some clarity to the group for the exempt status and those paying PILT.
- Rational Nexus
  - Almost all of the Toronto Pearson lands are go through some sort of stormwater facility/pond prior to leaving our property and directly outlet into the creeks.
- Storage for others
  - We provide some storage for other properties on our property.

If you have any questions or concerns, I am available at your earliest convenience.

Regards,

**Derek R. Gray P.Eng., A.A.E.,**  
**Manager Environmental Management Systems**

---

**From:** Lincoln Kan [mailto:Lincoln.Kan@mississauga.ca]

**Sent:** Friday, September 28, 2012 2:42 PM

**To:** Bri-Ann Stuart (Dixie Outlet Mall); Celina Wrobel (THC - May Chang); Christine Capewell (UTM); Christine Zimmer (CVC); Dan Labrecque (ROP); Darren O'Neil (Sheridan); Gray, Derek; DPCDSB; Gary Kramer (Orlando); Jeff O'Leary (Friends of Lake Wabukayne Stewardship); Jennifer Reid (St. Peter's Anglican Church); J-M Rouleau(Oxford); Kiruthiha Kulendiren (Lisgar); Linda Pinizzotto (COA); Matthew Coleridge (RJB - Square One); May Chang (THC); Michael Dewit (EAC); Michael Ewaschuk (CRAA); Paul Mountford (PDSB); Richard Dundas (GWHA); Roger Coote (Cooksville Task Force); Sameer Dhalla (TRCA); Sheldon Leiba (MBOT); Steve Blaney (Sherwood Forest RA)

**Cc:** John Murphy; Zubair Ahmed; Michael Masliwec; Kimberly Hicks; Gregory, Mike ; Brenda Breault; Joe Pitushka; Martin Powell; Mary Ellen Bench; Patti Elliott-Spencer; Wendy Alexander

**Subject:** Stormwater Financing Stakeholder Group - Additional Meeting

Good afternoon:

As discussed at Stormwater Financing Stakeholder Group meeting #5, an additional meeting has been scheduled for **Wednesday, October 17, 2012 at 6:30 pm**. The meeting location is **Committee Room 'A'** at the Mississauga Civic Centre (300 City Centre Drive, 2nd floor).

This meeting is intended to provide an opportunity for open discussions on the stormwater financing options presented by the City. As noted at our last meeting, please email me with questions that you would like to discuss at this meeting.

Regards,

1(0)(0)

Lincoln Kan, P.Eng. | Manager, Environmental Services | Transportation & Works  
( 905-615-3200 ext. 4086 | ☎ 905-615-3173 | [lincoln.kan@mississauga.ca](mailto:lincoln.kan@mississauga.ca)



Please consider the environment before printing

1(p)(p)

**Lincoln Kan**

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**From:** Gray, Derek <Derek.Gray@gtaa.com>  
**Sent:** 2012/11/16 10:25 AM  
**To:** Lincoln Kan  
**Cc:** Gregory, Mike (Mike.Gregory@aecom.com)  
**Subject:** RE: Stormwater Financing Stakeholder Group meeting #6 (GTAA)

Lincoln:

Further to the meeting on Wednesday I'd like to reiterate the concerns I raised during the meeting and one additional item.

1. The City's Legal opinion including the GTAA as an entity subject to user fees and charges. I noticed that Metrolinx, and Canada Post are listed as exempt.
2. The rational nexus of stormwater fees remaining fair and equitable considering the ability for the City to implement any stormwater management at the airport or on stormwater from the airport.
3. The PILT that the GTAA already provides to the City and the component that would be currently allocated to stormwater management by the City.
4. Since assuming the operation of Toronto Pearson International Airport the GTAA has made capital investment of over \$120 million capital investment in stormwater management plus the annual maintenance cost associated with these facilities and the stormwater infrastructure assumed from Transport Canada.
5. The Credit Program did not make reference to the City's stormwater that the GTAA manages and conveys on airport property.

If you have any questions or concerns, I am available at your earliest convenience.

Regards,

**Derek R. Gray P.Eng., A.A.E.,**  
Manager, Environmental Services  
Greater Toronto Airports Authority  
Operations and Customer Experience  
P.O. Box 6031, 3111 Convair Drive, Toronto AMF, Ontario, L5P 1B2  
Phone (416) 776-3049 | Fax (416) 776-7358 | Mobile (416) 573 - 7268  
[www.TorontoPearson.com](http://www.TorontoPearson.com)

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**From:** Lincoln Kan [<mailto:Lincoln.Kan@mississauga.ca>]  
**Sent:** Monday, November 12, 2012 3:01 PM  
**To:** Bri-Ann Stuart (Dixie Outlet Mall); Celina Wrobel (THC - May Chang); Christine Capewell (UTM); Christine Zimmer (CVC); Dan Labrecque (ROP); Gray, Derek; DPCDSB; Fred Theiss; Gary Kramer (Orlando); Jeff O'Leary (Friends of Lake Wabukayne Stewardship); Jennifer Reid (St. Peter's Anglican Church); J-M Rouleau (Oxford); Kiruthiha Kulendiren (Lisgar); Linda Pinizzotto (COA); Matthew Coleridge (RJB - Square One); May Chang (THC); Michael Dewit (EAC); Michael

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Ewaschuk (CRAA); Paul Mountford (PDSB); Richard Dundas (GWHA); Roger Coote (Cooksville Task Force); Sameer Dhalla (TRCA); Sheldon Leiba (MBOT); Steve Blaney (Sherwood Forest RA)  
Cc: Martin Powell; Brenda Breault; Patti Elliott-Spencer; John Murphy; Zubair Ahmed; Wendy Alexander; Steve Dickson; Mary Ellen Bench; Jeremy Blair; Gregory, Mike ; Arseneau, David ([David.Arseneau@aecom.com](mailto:David.Arseneau@aecom.com)); Kimberly Hicks  
Subject: Stormwater Financing Stakeholder Group meeting #6

Good afternoon:

The Stormwater Financing Stakeholder Group meeting #6 is scheduled for Wednesday, November 14, 2012 at City Hall in Committee Room 'A' from 6:00 pm to 8:00.


Please find attached the following items:

- Proposed agenda for meeting #6
- Minutes from Meeting #5
- Presentation from meeting #5
- Sign-in sheet from meeting #5

It would be appreciated if you can please review the minutes from the previous Stakeholder Group meeting and advise of any errors or omissions.

Thank you,

Lincoln Kan, P.Eng. | Manager, Environmental Services | Transportation & Works  
t 905-615-3200 ext. 4086 | f 905-615-3173 | [lincoln.kan@mississauga.ca](mailto:lincoln.kan@mississauga.ca)

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**Lincoln Kan**

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**From:** mikeyrogers <mdewit@rogers.com>  
**Sent:** 2012/05/09 8:58 AM  
**To:** Lincoln Kan; mike.gregory@aecom.com  
**Subject:** RE: Stormwater Financing Stakehold Group (SFSG #1 EAC comments)

Good meeting last night... my notes below are intended to help you move ahead and build on the excellent start you have made on this

A few thoughts for you to ponder

- For the possible methods of financing that you have already effectively excluded... for example PPPs you may want to provide the group with back ground on why ... in the PPP example, I understand why they are not in the table effectively (I think of a PPP as a mechanism when you need to act and cannot raise the funds, recognizing that a PPP actually has a net higher cost to the customer base – which is why I would not go with a PPP here) but even if this group does not ask the questions about why the other financing methods are not on the table, you should expect that others will ask, for example at a PIC
- As I noted last night, not every one will have currently understand the split of roles and responsibilities / regulatory domain and authority between Peel Region and the City, not to mention CVC / the province etc... this drives the need for stormwater management as well as who the City has to work with and it was good to see that the group was talking about the complexities that will affect what is possible / the development of an approach ... the more you can provide in a backgrounder to the group to help all of the group members are up to speed on the many players and drivers behind both why more \$ will need to spent and the complexity ...ahead of time ...then you can focus on details with the group having a more common starting point when we meet
- The point above really feeds into and is needed to get a clear scope description laid out ... ie what is it that the funding will be there for ... and as a professional doing environmental management for over 25 years I am very big on the need to define in detail what it is that you working to manage and also defining the limits of the tools you have in your tool box
- I realize that is all part of what you are planning to dive deeper into as you go and as the meetings go ... as you can see from last night the group will push you to be very clear as to what "it" is
- When the presentation last night went over slide 53: (one the important ones!) I was expecting to then not just hear about how ERUs work in the scheme (part of the red box on the slide – which was well presented by the way), but also what is different if the scheme goes to a "tiered residential rate" style for example... I did not really get the impression that was covered ... in order to move the discussion ahead to a logical resolution and recommendation in the fall the effect the step function subtleties of options at least slightly less detailed than the ERU style and slightly more than the ERU style will need to be covered to some degree so that the group can see what is gained and lost with shifts in complexity / accuracy

Regards ...

Until June or I think of other items .....

Michael DeWit  
905 274 0391  
Vice Chair EAC (for this email at least that is the hat I have on ☺)

My professional life is noted below

1 (S)(S)

Michael DeWit  
Technical Director, ICF International  
905 274 0391  
m 416 807 0391  
<http://www.icfi.com/about/our-people/icfi/dewit-mike>

Connect with us on social media.

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Lincoln Kan  
Manager, Environmental Services  
Transportation and Works Department  
201 City Centre Drive, Suite 800  
Mississauga, ON L5B 2T4

November 22, 2012

Dear Mr. Kan,

Thank you for giving the Credit Valley Conservation an opportunity to participate in the City of Mississauga Stormwater Financing Stakeholder Group and comment on the proposed stormwater utility fee recommendations. CVC would like to state our ardent support for the recommendations that are being proposed by the Mississauga Stormwater Finance Project Team. The stormwater utility fee recommendations are in line with those made in the 2010 *Credit River Water Management Strategy Update – Municipal Stormwater Financing Study*. A stormwater utility fee approach is not only a more equitable finance system but will also make Mississauga and CVC stormwater programs tremendously more effective at achieving the goals of the *Mississauga Stormwater Quality Control Strategy*, *The Living Green Master Plan* and CVC's *Credit River Watershed Management Strategy*.

A stormwater utility fee and credit system has the power to mobilize more public and private resources to address stormwater issues (erosion, flooding, water quality, climate change adaptation) than any other public incentive program alone. The advantages of the stormwater utility fee include:

- A stable dedicated funding source for the stormwater program allows for long-range planning, large-scale capital improvements, and leverage for debentures.
- The user fee is a fair and equitable finance method that is based on runoff contribution rather than property value and that can also be applied to tax-exempt properties.
- Presenting stormwater services as a utility fee apart from the tax bill provides a vehicle for educating Mississauga residents on stormwater issues and infrastructure and how to limit their own impacts.
- The non-residential credit program will motivate property owners to reduce stormwater runoff and pollutant discharge.

Over the past five years, CVC and the City of Mississauga have had a productive partnership in implementing sustainable stormwater management or Low Impact Development (LID) in the city. Through our various partnership efforts, we have implemented a network of real time in-stream gauge stations for flood warning and forecasting and water quality monitoring, pollution prevention demonstration projects with local businesses, monitoring to optimize road and parking lot winter maintenance practices to reduce impact on the environment and the first green

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LID streets in Ontario, Elm Drive near City Centre and 1st and 3rd streets in the Lakeview Neighbourhood.

CVC programs and expertise are well positioned to assist the City and property owners with the transition to a stormwater utility fee system:

- **Leaders for Clean Water - Offers LID and pollution prevention services for municipalities and property owners.** Through various LID guidance documents, peer review of engineering designs, onsite construction assistance, and focused performance monitoring, CVC can assist property owners in retrofitting their properties with LID to take advantage of the utility fee credits and incentive programs.
- **Making it Work: Professional Training - Provides municipal staff, the development community, and planning professionals the training and guidance tools they need to promote and deliver LID.** The training programs CVC offers help to build capacity of stormwater professionals to meet demand for retrofit stormwater management services. The guidance documents CVC has developed guide professionals through all aspects of LID, planning, engineering, landscaping and construction. Through the Ministry of Environment Showcasing Water Innovation Fund, CVC in partnership with the City of Mississauga is developing step by step guidance on how to retrofit different landuse sectors with LID, Industrial/Commercial, Residential and Institutional and Public Lands.
- **Community Engagement Program - We help watershed residents and community based organizations understand and use LID techniques through demonstration projects, pollution prevention programs and our [bealeader.ca](http://bealeader.ca) website.** CVC is educating the community through a variety of outreach approaches and marketing (environmental school curriculum, educational signage, demonstration projects in public spaces, public meetings) to understand the value of our water resources and the important functions of the stormwater infrastructure that the utility fees will improve and maintain.

The City of Mississauga has demonstrated their leadership in innovative water resource management and protection. CVC hopes the city will continue to show its leadership by approving the stormwater utility fee. The shift to a stormwater utility fee structure would be a significant step toward ensuring that our communities have safe, abundant, clean drinking water.

A handwritten signature in cursive script that reads 'Rae Horst'.

Rae Horst  
Chief Administrative Office  
Credit Valley Conservation

cc: Patricia Mullin, CVC Chair

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Pressures on Stormwater Program

- 1) Minimize storm related flood risks to all buildings/structures in the City:
  - a) Cooksville Flood Evaluation Study – flood storage facilities
  - b) Estimated cost - \$150 million (\$79 million in 2013 to 2022 capital program needs)
  - c) Flood evaluation studies of other flood prone areas still need to be done
  
- 2) Enhance water quality treatment initiatives:
  - a) Increase water quality treatment from current coverage of 15%
  - b) Construct, operate and maintain low impact development measures
  - c) Naturalization programs, social marketing
  
- 3) Enhance By-law Enforcement:
  - a) Additional staff resources for outreach, inspections and enforcement efforts
  - b) Storm Sewer Use By-law, Erosion and Sediment Control By-law
  - c) Encroachments into Storm Drainage Easements
  
- 4) Enhance monitoring and maintenance activities:
  - a) Improvements to sewer inspection and cleaning programs
  - b) Enhance stormwater management facility monitoring efforts
  - c) Expand Woody Debris Management program city-wide
  
- 5) Climate change adaptation:
  - a) Storm drainage network model
  - b) Infrastructure vulnerability assessments and upgrades
  
- 6) Regulatory requirements:
  - a) Increase in monitoring requirements
  - b) Legislation such as Ontario's Water Opportunities Act
  
- 7) Infrastructure life-cycle renewal costs:
  - a) Stormwater management pond dredging and rehabilitation
  - b) Watercourse rehabilitation and works renewal
  - c) Storm pipe infrastructure replacement

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Stormwater Program Through Property Tax

Stormwater Program Item	Existing (2012)	Charge	Δ	%	Charge	Δ	%	Charge	Δ	%
Tax Financing of Future Stormwater Management Program										
Program Cost	\$14,650,000	\$14,650,000			\$26,610,000			\$9,960,000		
Property Tax & PI Allocation	2.36%	3.95%			7.19%			10.67%		
Sustainable										
Single-Family Detached Home										
Average assessed value	\$28.58	\$48.01	\$19.43	68%	\$87.21	\$58.63	205%	\$129.42	\$100.85	353%
<i>Examples</i>										
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 (example)	\$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 (example)	\$10.54	\$17.71	\$7.17	68%	\$32.18	\$21.63	205%	\$47.75	\$37.21	353%
Commercial										
Mall (example)	\$10,445	\$17,548	\$7,103	68%	\$31,875	\$21,429	205%	\$47,303	\$36,858	353%
Tax Exempt										
Church-Dundas Street (example)	\$0	\$0	\$0	N/A	\$0	\$0	N/A	\$0	\$0	N/A

Note:

1. Current program includes \$8.7M (Tax & Payment In-Lieu-Of Taxes) plus \$5.9M (Reserves). As such, the 2.36% shown is based only on \$8.7M. Due to declining reserves, the program will ultimately need to be fully funded by tax.
2. Numbers are in present day value (no inflation).
3. The program cost represents the capital and operation cost (tax component).

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Appendix 4

Estimated Stormwater Rate (Tiered SFU, with Fee Exemptions)

Billing Units (SFU)	Service Level	Status Quo	Interim	Sustainable
	Program Cost	\$14,650,000	\$26,610,000	\$39,490,000
	Base Rate (\$/SFU/month)	\$4.39	\$7.80	\$11.47
<b>Single-Family Detached Home</b>				
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
<b>Condominium</b>				
0.2	Sherobee Road	\$12.07	\$21.45	\$31.54
<b>Multi-Family (7+ Units)</b>				
0.2	Goreway Drive (per unit)	\$9.63	\$17.10	\$25.15
<b>Commercial</b>				
519.1	Mall	\$27,346	\$48,587	\$71,448
<b>Tax-Exempt</b>				
14.9	Church (Dundas Street)	\$787	\$1,399	\$2,057

Notes:

1. Rate assumes 92% collection with annual administration estimate of \$770,000 (subject to refinement) - not reflected in the Program Cost above.
2. Figures in present day value (no inflation).
3. Numbers shown as estimates only.
4. The program cost represents the capital and operation cost (tax component).

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Comparison: Tax versus Estimated Stormwater Rate

Stormwater Program/Item	Existing (2012)	Interim Service Level							
		Tax (Program fully funded by tax)			Rate (Tiered SFU with Exemptions)			Difference	
		Annual Charge	$\Delta_{Existing}$	%	Annual Charge	$\Delta_{Existing}$	%	$\Delta_{Tax}$	%
<b>Single-Family Detached Home</b>									
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%
<b>Condominium (Example)</b>									
Sherobee Road	\$15.86	\$48.39	\$32.54	205%	\$21.45	\$5.59	35%	-\$26.95	56%
<b>Multi-Family (7+ Units) (Example)</b>									
Goreway Drive (per unit)	\$10.54	\$32.18	\$21.63	205%	\$17.10	\$6.56	62%	-\$15.07	47%
<b>Commercial (Example)</b>									
Mall	\$10,445	\$31,875	\$21,429	205%	\$48,587	\$38,142	365%	\$16,713	52%
<b>Tax Exempt (Example)</b>									
Church (Dundas Street)	\$0	\$0	\$0	N/A	\$1,399	\$1,399	N/A	\$1,399	N/A

Notes:

- Existing program includes \$8.7M (Tax & Payment In-Lieu-Of Taxes) and \$5.9M (Reserves). The cost shown under Existing (2012) reflects only the cost based only on \$8.7M.
- Rate assumes 92% collection with annual administration estimate of \$770,000 (subject to refinement).
- All values in present value (no inflation) and are estimates only.