



City of
Peterborough

To: **Members of the Committee of the Whole**

From: **W.H. Jackson, Director of Utility Services**

Meeting Date: **February 6, 2017**

Subject: **Report USEC17-001**
Water Resource Protection Update on the Funding Feasibility Study

Purpose

A report to present the Water Resource Protection Funding Feasibility Study with recommendations to move forward with the City's Stormwater Quality Master Plan including additional funding requirements.

Recommendations

That Council approve the recommendations outlined in Report USEC17-001, dated February 6, 2017 of the Director of Utility Services as follows:

- a) That the presentation from XCG on the Water Resource Protection Funding Feasibility Study be received;
- b) That Council endorse the Stormwater Quality Management Master Plan as detailed in Appendices 1 and 2 of Report USDIR15-003, dated September 28, 2015, the Summary of which is included as Appendix A in Report USEC17-001;
- c) That, related to a dedicated stormwater protection fee, the 2018 Draft Budget and Work Program include:
 - i. Continued funding of the \$3M for stormwater activities that is presently committed annually in previous budgets;
 - ii. The first year of a 10-year phase-in, or \$620,000, to gradually fund an additional annual amount of \$6.2M in stormwater funding through a dedicated stormwater protection fee billed on the municipal property tax bill;

- iii. Stormwater protection fee charges to individual properties based on the Variable Rate Option which considers the impervious surface associated with the property;
 - iv. Incentive programs including subsidies and stormwater credit programs that allow property owners to reduce their runoff and possibly receive credit for doing so;
- d) That, related to an increased sanitary sewer surcharge, the 2018 Draft Budget and Work Program include the first year of a 10-year phase-in, or \$350,000, to gradually fund an additional annual amount of \$3.5M in sanitary funding through increases in the sanitary sewer surcharge;
- e) That an additional 1.0 FTE for implementation of the Stormwater Quality Master Plan be approved for 2017 funding for which to come from the existing Capital Budget for Stormwater projects; and
- f) That staff prepare public education material before implementation of any fee or fee increases described in Recommendations c) and d).

Budget and Financial Implications

The resulting operating costs and capital projects recommended in the Stormwater Quality Master Plan presented as Appendix 1 and 2 in Report USDIR15-003 are attached as Appendix A herein and will be implemented through the annual budgeting process as applicable and be funded through the stormwater protection fees.

Table 1 lists the annual funding required for the additional operating and capital requirements.

Table 1: Summary of Annual Funding Required for Sanitary and Stormwater Systems

	Sanitary	Stormwater	Total
Gross Need	\$18.5M	\$9.2M	\$27.7M
Presently included in Budget	\$15M	\$3M	\$18M
Additional Annual Funding Required	\$3.5M	\$6.2M	\$9.7M
Incremental Increase each year for 10 yrs	\$350,000	\$620,000	\$970,000

The increase for the sanitary sewer costs would result in an increase in the Sewer Surcharge rate of 2.2% each year for 10 years. The increase for the stormwater costs would result in different fees depending on the zoning of the property. Table 2 provides the impact to the all inclusive process broken down into property categories per year for 10 years.

Table 2: Preliminary Estimates of Stormwater Fee to Achieve \$620,000 Annually

Zoning Type	% of Revenue Target	Average. Annual Stormwater Fee
Residential	64.50%	\$ 17.00
Industrial	12.80%	\$ 246.00
Commercial	11.00%	\$ 79.00
Institutional, Public Service and University/College	11.70%	\$ 291.00
Total	100.00%	

The immediate needs would see one FTE employee join the City to address the legislated requirements the City is currently unable to address. This position would also take on responsibilities associated to the stormwater protection fee. This will be funded through capital with the likelihood of being funded through both capital and the stormwater protection fee in the future. As such, there is no impact to the tax levy component of the annual operating budget.

Background

At its meeting of September 28, 2015, City Council in considering Report USDIR15-003, referred the following Recommendations b) and d) back to staff "...until more information is provided on user fees";

- b) That Council endorse the Stormwater Quality Management Master Plan as detailed in Appendices 1 and 2 of Report USDIR15-003 including any staffing increases necessary to the success of the Master Plan;
- d) That staff begin implementing the recommendations of the Stormwater Quality Management Master Plan as detailed in Appendix 2 of Report USDIR15-003 using existing Sewer Surcharge Reserve Funds as appropriate.

At its meeting of April 18, 2016, City Council in considering Report USEC16-008 awarded the Request for Proposal to complete a Feasibility Study (the "Study") for the review of the existing sanitary sewer rate and a potential stormwater rate to protect our water resources to XCG Consulting Limited. This study addresses Councils' requirement to receive more information on stormwater protection fees towards the approval of Recommendations "b)" and "d)" of Report USDIR15-003. Until approval is granted, staff are unable to implement legislative requirements and hiring the

appropriate personnel for implementation of the Stormwater Quality Master Plan which began in 2011.

The material within this report completes the number one action item of the Stormwater Quality Master Plan being a proposed rate study reporting herein. The rate study completed offers Council additional information prior to endorsing the plans action items. This report describes what is required for the opportunity to fund and manage wastewater through a transparent asset management oriented approach allowing the City to protect its infrastructure and the environment.

Discussion

1.0 Overview

Urbanization is creating more hard surfaces resulting in higher volumes of stormwater runoff that is polluting our rivers, creeks and lakes and increasing urban flooding. Local governments are facing key struggles such as funding, flooding and pollution in dealing with this issue. The traditional infrastructure of pipes, ponds and culverts is costly to maintain and changing weather patterns are placing stress on this infrastructure as well as placing people and property at risk. Canadian municipalities are under pressure to mitigate these changes in climate and are searching for a more financially sustainable, resilient and less polluting system. Local governments in Canada are now adopting a dedicated funding stream for stormwater. Peterborough can learn from all those who have implemented a dedicated stormwater funding source.

A study by the NOAA (National Oceanic and Atmospheric Administration) Coastal Service Centre assessed the economic benefits of green infrastructure as a method of reducing the negative effects of flooding in the Great Lakes Region. Through a series of economic modeling they determined that implementing green infrastructure to reduce peak stormwater discharges by only 10% resulted in reduced economic losses from flooding events by 39-46%. Another study by the Environmental Protection Agency indicated that every \$1 spent on flood mitigation saves \$5 in damages. With a dedicated funding source in place the community can turn to such solutions both on municipal properties as well as private properties through partnerships.

In the future, all stormwater shall be considered a resource. A mix of affordable and sustainable green, gray, and natural infrastructure can be used to manage storm related infrastructure. Pollutant lot level control and management of runoff volume is required as a complement to traditional stormwater controls. Peterborough has the opportunity to fund and manage this asset as a true utility with a comprehensive asset management plan that benchmarks for future success.

The purpose of the Study is to review the financial needs for both the sanitary sewer and stormwater assets of the City in a holistic manner. Both systems require continuous maintenance, rehabilitation and renewal to protect the environment and our water resources. The most recent proposed Growth Plan for the Greater Golden Horseshoe

explicitly states that “Municipalities should generate sufficient revenue to recover the full cost of providing and maintaining municipal water and wastewater systems”. Within this statement wastewater is defined as sanitary and stormwater.

While almost all municipalities fund the sanitary sewer systems through a dedicated fee as Peterborough does, it is calculated differently for each. Our current sanitary system financial model recovers 95% of the water use billing as its fee. The actual cost for the City’s sanitary system in the long-term suggests that a higher rate is required under current conditions.

Much like other local governments across Canada, our stormwater services are financed predominantly through property taxes. With challenges of funding, climate change and environmental legislation facing municipalities, the movement toward a dedicated stormwater funding in Canada has increased since the 1990’s. Benefits to implementing a stormwater protection fee include:

- dedicating a funding stream allocated back to providing the service;
- awareness and transparency showing owners what they pay for the service and what is required for capital and operating costs;
- fairness where owners pay based on stormwater contribution as opposed to property assessment; and
- economic incentives giving owners the opportunity to reduce their costs associated to delivering the service.

Although the funding feasibility study reviewed both sanitary and stormwater systems, the majority of the public consultation process was focused on the stormwater funding stream because it currently does not exist.

2.0 Consultation Process

City staff and XCG Consulting Limited have consulted with members of the public and stakeholders through various means and venues. Specifically, internal and external stakeholder groups have been formed, as detailed in Appendix B.

The process also included three distinct focus groups consisting of:

- tax exempt organizations;
- business owners; and
- ratepayers.

Individuals for these focus groups were randomly selected via third party telephone recruitment to remove any potential for bias group selections. The Consultant also developed a project email (info@peterboroughwaterresources.ca) and website (<http://www.peterboroughwaterresources.ca>) to gain feedback on the process. The website contained two online surveys the general public filled out; one prior to setting any direction for a dedicated fee and another which included information collected through the consultation process including information from other municipalities.

Two public discussion sessions were held in the foyer of City Hall, an outreach booth was set up at the local farmers market and a full page leaflet was included in the City's June delivery of the tax bill.

3.0 Consultation Feedback

The purpose of the consultation activities were two fold. Firstly, to describe the process/purpose to all interested stakeholders and secondly, to seek advice about:

- 1) knowledge and value of stormwater management,
- 2) guiding principles for decision making,
- 3) willingness to undertake stormwater management actions on individual properties,
- 4) possible options for developing a dedicated funding stream, and
- 5) the best ways to communicate as the project progresses.

The response from a diverse cross section of the community provided the project team with robust feedback, including identification of trends and themes. The consultation has connected with hundreds of individuals that live and/or work in the City as well as representation of groups and organizations throughout the City. The overall trends across the consultation methods can be summarized as follows:

- Most community members recognize the need to maintain and improve the stormwater system.
- For many Peterborough residents, the memory of the flood events of 2002 and 2004 are clear, and they want the City to improve the system so that the risk of such events happening again is reduced.
- A number of residents pointed out the need for improved maintenance of storm ponds, and emphasized that stormwater management is needed for environmental protection.
- Many respondents to our public surveys indicated that they are opposed to any new fee that would be charged to property owners or tenants to cover the costs of maintaining and improving the stormwater system.
- Many suggested that the City should be able to address these needs using the existing tax revenue, pointing to the fact that they believe property taxes are already high enough.
- Many suggested that the City should be able to find cost efficiencies or change spending priorities so that more of the available revenue can be directed to the stormwater system.
- While a number of respondents appeared supportive of a dedicated fee, concerns were expressed about affordability and how the fee would be calculated.
- While the user-pay principle is generally accepted, the downtown commercial property owners expressed concern about a fee calculated based on the amount of hard surface on a property because they feel there is little opportunity of reducing the amount of hard surface in the downtown area.

- Based on all the feedback it appears that those community members who place high importance on environmental issues and the potential impacts of climate change are particularly supportive of placing higher importance on improving the stormwater management infrastructure, and appear to be the most favourably disposed to implementation of a dedicated stormwater fee. These participants often emphasized the need for the program to include public education and financial incentives for property owners to take beneficial measures on their own properties.
- Across the consultation activities, there was concern about the impact that any dedicated fee for stormwater services could have on lower-income households and tenant households in Peterborough, and this needs to be taken into account in designing the program. There was universal emphasis on ensuring that any such fee be fair to all, and that the money collected should be used only for the intended purpose.

The City currently finds itself needing to increase investment in efforts to improve stormwater management infrastructure, public health, and environmental protection to meet legislated requirements. The short term impacts are clearly recognized through the public comments and were as expected by the project team. Many other Municipal Councils heard the same comments from their rate payers prior to making the difficult decision to implement a rate. To ensure that a decision is made in the best interest of the public, the stakeholders consultation process developed the following set of decision making Guiding Principles that should be followed if a dedicate stormwater rate is implemented.

- I. Environmental and public health effectiveness including public health
- II. Fairness
- III. Economic efficiency
- IV. Providing incentives
- V. Social acceptance
- VI. Adaptable to change
- VII. Straightforward to explain and administer

4.0 Financial Need

The annual operation, maintenance, legislative requirements, administration and capital costs for both the Stormwater and Sanitary systems have been reviewed and cost recovery models have been created. This includes the current practices as well as long term needs for reliable systems. The review also included a full cost of service analysis for a truly sustainable system all as reported below.

Table 3 provides a summary of the 10 year or short-term needs.

Table 3: Summary of Annual Funding Required for Sanitary and Stormwater Systems

	Sanitary	Stormwater	Total
Gross Need	\$18.5M	\$9.2M	\$27.7M
Presently Included in Budget	\$15M	\$3M	\$18M
Additional Funding Required	\$3.5M	\$6.2M	\$9.7M

4.1 Sanitary System

A 10-year gap analysis confirmed an estimated annual gap of almost \$3,500,000 exists in the sanitary system.

Over the long term (100 years) the finding gap is greater (approximately \$6,000,000 per year) but for purposes of the Stormwater Quality project, the 10-year estimate has been used because of the more accurate assumptions that are available when only forecasting 10 years forward.

4.2 Stormwater System

The 10-year gap analysis for the stormwater system estimated an annual gap of \$6,200,000.

As for the Sanitary system, the long term gap for stormwater is much higher (\$18,800,000) but again, the 10-year forecast is more accurate and hence will be used in this analysis.

4.3 Proposed Sanitary and Stormwater Fees

A dedicated funding source exists for the sanitary infrastructure but not for the stormwater infrastructure. A dedicated revenue stream for stormwater management created through a protection fee system will ensure that existing and future infrastructure requirements are not competing with other municipal services for resources. It will ensure that costs for stormwater services are open and transparent to residents. They will better understand their load on urban stormwater management systems and their ability to make positive changes through on-site stormwater reductions. A stormwater protection fee will also meet the proposed changes in the Places to Grow Act to generate sufficient revenue to recover the full cost of providing and maintaining stormwater systems.

When considering the guiding principles of Fairness, Economic Efficiency and Social Acceptance it is immediately understood that reaching a fully sustainable funding model would be difficult to achieve in a short time period. Accordingly, it would be reasonable to assume a 10-year phase-in for the increased sanitary/stormwater rates. This means

an additional \$970,000 would be required annually over and above the previous years funding for each of the next 10 years to close the current required funding need.

4.4 How to Close the Funding Gap

To close the funding gap, three options exist that best suit Peterborough's environment. Regardless of which funding alternative is chosen, a dedicated fee toward each of the sanitary, stormwater and wastewater systems will exist. The \$970,000 annual net need (assuming a 10-year phase in period) can be addressed through;

- The stormwater protection fee being included in all inclusive budgetary process;
or
- An additional stormwater protection fee over and above the all inclusive process;
or
- A combination of the above.

Each of the options as discussed below are presented with the existing funding levels remaining in place. Both the proposed funding and existing funding will all be dedicated to the respective infrastructure.

4.4.1 Stormwater Protection Fee Included in the All Inclusive Budget

Under this alternative, the fee would be addressed through the annual budgetary process. This comes with the understanding that \$970,000 will be required for each of the next 10 years to be dedicated towards storm and sanitary infrastructure. It will be part of the "All Inclusive" rate that is generally set out by Council early in the budget process and may come at the expense of other capital projects or operating processes.

4.4.2 Additional Stormwater Protection Fee

In this scenario the user fee is in addition to the All Inclusive rate established by Council. With this alternative, estimated impacts to the rate payers are shown in Table 4.

Table 4: Additional Annual Stormwater Protection Fee Required for Sanitary and Stormwater Systems

	Sanitary	Stormwater
Additional Funding Required	\$3.5M	\$6.2M
Annual Need for 10 year phase in	\$350,000	\$620,000
Annual Impact to End User	Increase sewer rate by 2.2% each year	Approximately \$17.00 annually added to the average residential property

Additional funding details looking at all forms of land use required to close the stormwater funding gap component are provided in Appendix C.

4.4.3 Combination of All Inclusive and Additional Stormwater Protection Fee

A third option is to fund the stormwater protection fee through both the All Inclusive process and the Additional Fee alternatives. This form can take any ratio of each method. Under this alternative, phasing in over a 10-year period could occur where the majority of the funding could come from the All Inclusive process in the front end of the 10 years shifting slowly to the user by the end of the 10 years.

4.4.4 Preferred Method

To respect the guiding principles set forth by the public process, staff considered the alternatives listed above against the principles. Each of the options has advantages and disadvantages when viewed through an Economic Efficiency and Social Acceptance lens.

The all inclusive alternative has a particular advantage from a socially acceptable viewpoint. The end user will notice a dedicated fee but will not have the additional impact of a fee over and above the all inclusive rate. This, however, essentially diverts funds from one activity to another potentially under funding other important projects.

An additional stormwater protection fee will provide additional funding to move capital projects forward. With this option, however, comes the financial burden to the end user.

Combining the two options presents additional decision points regarding the amounts going to either the All Inclusive or the Stormwater Protection Fee. Ultimately the desire would be that the Fee be fully implemented by the end of the 10 year phase in period.

None of the options will satisfy all criteria but based on public input, the option of including additional sanitary and stormwater fees in the All Inclusive tax rate is the preferred method at this time.

4.4.5 Discussion

One clear outcome of the community consultation conducted to date, is the desire across the community for better education regarding the City's stormwater infrastructure. There appeared to be universal agreement that this should go hand in hand with incentive programs to encourage property owners to take measures on their own property to reduce stormwater volume and stormwater pollution. Both education and incentives have the ability to reduce the Stormwater Protection fees described above and should form part of any method chosen by Council. Incentive programs could take one of two forms:

- A subsidy program in which property owners are provided with a one-time payment (subsidy) to implement beneficial measures on their lot. Such programs are already in place, such as the City's program to provide subsidized cost for backyard composters, and the local rain barrel program by which PUG offers a one-time rebate.

- A credit program, by which a property owner receives a reduction in their stormwater fee based on credit applied for measures taken on their property.

Stormwater management has advanced greatly from where it once was. To accomplish the management of a resilient system, while advancing sustainability and community livability, additional funds are required. Through dedicated funding having no impact via the all inclusive budget process, or negligible impact to the average residential property, the opportunity to make gains beyond just controlling stormwater are endless. This is especially true when incorporating green infrastructure and realizing the long term cost savings potential.

The key message throughout similar processes nationwide is creating a dedicated funding source that pays for the infrastructure in which the fee is collected and asset used. To increase the tax rate would only serve to see stormwater infrastructure continue to compete with other City objectives and was therefore considered to be status quo. It is also important to note that regardless of which option is chosen, including the status quo option, the City will need to ramp up the stormwater needs to meet legislated requirements set out by the Province.

5.0 Implementation of Stormwater Rate Options

Application of a dedicated stormwater rate can occur in a number of ways. All properties can be considered equal and charged the same rate or subsets/classes of properties can be developed with varying rates between the classes. These alternatives are discussed in more detail below.

5.1 Benefits and Challenges of a Dedicated Stormwater Protection Fee

In a recent paper (New Solutions for Sustainable Stormwater Management in Canada, Sept 2016) by Sustainable Prosperity, the benefits and challenges of implementing a Stormwater Fee are described as detailed in Table 5 and Table 6.

Table 5: The Benefits of Implementing a Stormwater User Fee¹

Dedicated Revenue Stream:	Revenues collected through user fees are allocated back to providing the service for which they are charged, creating a dedicated revenue stream for funding the stormwater program. It no longer has to compete with other local government services for budget space and can better account for adaptation and renewal requirements as they arise.
Greater Awareness and Transparency:	A stormwater user fee shows property owners exactly how much they are paying for this service, creating greater awareness and understanding of not just each individual's contribution of stormwater to the system, but the overall system requirements in terms of capital and operations and maintenance costs.
Fair Assignment of Costs:	Charging each property owner based on the estimated amount of stormwater services used is a fairer assignment of cost than charges based on assessed property values or water consumption, which are unrelated to the amount of stormwater the site generates.
Economic Incentive:	Implementing stormwater user fees can also create a potential economic incentive for consumers to reduce their monthly costs by reducing the amount of stormwater runoff they generate.

Table 6: The Challenges Local Governments Experienced in Implementing Stormwater User Fees²

Public perception:	User fees can mistakenly be perceived as a new charge or tax when in fact they shift an existing cost to a new financing model. Based on early adopter experiences (see Section 3), early and comprehensive public consultation and education will be key to addressing this challenge.
User fee design:	How a stormwater user fee is calculated determines the level of fairness, accuracy, and cost-effectiveness of the fee. But local governments must balance these factors with their resources and capacity to implement the fee. As outlined in Section 2, there are a number of ways in which a stormwater user fee can be designed and implemented. It will be up to each local government to determine the most appropriate method based on its unique context.
Cost shifts between stakeholders:	In Kitchener, 17.9% of costs for stormwater services were shifted from residential users to the non-residential sector. In some cases, this can result in much higher bills to non-residential property owners, which can cause concerns and resistance to the user fee. Many municipalities have addressed this by phasing in the user fee over a period of time to allow property owners to budget for the costs. As well, many municipalities also provide a strong credit program for non-residential

1,2 New Solutions for Sustainable Stormwater Management in Canada, Sept 2016, Sustainable Prosperity, Sara Jane O'Neil, Stephanie Cairns

5.2 Stormwater Protection Fee Calculation Options

Through the public consultation process, the project team presented various options to collect fees for a dedicated stormwater rate. The “Flat Fee”, “Variable Fee” and “Tiered Flat Fee” approach were discussed heavily throughout the process. Each of the options is being used in one form or another in other Ontario municipalities. Each was evaluated against the guiding principles to determine how well they each meet, or adhere, to the statements provided. Appendix D summarizes each option and their respective ability to meet the guiding principles.

The “flat fee” could consider items such as land use or assessed property value and applies a fee associated to these characteristics of the property. The “variable rate” method measures the amount of impervious surface area of the property to calculate the fee for individual properties. The “tiered flat fee” system is a hybrid of the two methodologies above. This approach would categorize properties by zoning type, imperviousness and/or size with different rates associated to each category.

5.2.1 Preferred Method

The “variable rate” option is considered the most appropriate method. It is practical to have the mapping of impervious surfaces updated on a regular cycle of 5 years as the City is already in the practice of having regular updates to high-resolution aerial photo coverage. Updating the data of property imperviousness measurements on the same regular cycle should therefore be possible resulting in minimal annualized costs. During intervening years, it is expected that it will be feasible and practical for City staff to address new development lots through development agreements. Appendix E provides a more detailed evaluation for the three alternatives.

5.3 Billing Options for Sanitary and Stormwater Protection Fees

Two general options exist to identify the dedicated fees on the City’s current systems; the existing water/sewer billing procedure or the property tax billing process. A detailed comparison of methods involving these options is provided in Appendix F.

5.3.1 Preferred Method

At this time the preferred method of identifying the collected fees is a hybrid system. The sanitary sewer surcharge remains on the water bills and the new stormwater protection fee is proposed to be on the property tax bills. This will be pending resolution of any administration problems and also examining in greater detail the costs to administer the program.

6.0 Next Steps

The additional information on a stormwater protection fee as requested by Council in September of 2015 is contained herein. Any decisions made by Council at this time will await the 2018 Budget process before implementation. Finalizing the rate for each property, and developing the billing process is a time consuming process requiring staff

efforts. Should Council chose to endorse the recommendation contained within this report, the following items will be addressed in a systematic process throughout 2017 with a fee implementation proposed in 2018:

- Refinement of Fee Calculation
- Stormwater Credit Program and Public Education
- Advance notice of fee to come
- Addressing questions related to fee in advance fee release.

Summary

Based on community consultation completed to date, the Peterborough community understands the importance of maintaining and improving the storm drainage infrastructure in the City. The importance of the system to the community stems largely from the concern about risk of flooding and the potential effects of climate change in this regard. As well, many members of the community are aware that stormwater management is needed to help protect local waterways, the natural environment and the source of our drinking water.

This level of importance points to the need for some level of dedicated funding for the stormwater system. Consideration needs to be given to existing Provincial legislation that stipulates minimum maintenance requirements and that each municipality should develop a sustainability plan for stormwater. Without a stormwater financing plan in place the City will need to make the difficult decision to sacrifice current capital plans to fund the legislated requirements to stormwater infrastructure regardless of the outcome and recommendations within this report.

The main reason for dedicated funding for the stormwater system is the importance of this system to the protection of public health and safety and the protection of the natural environment. Community consultation conducted during this project has shown the importance of the storm drainage system to the Peterborough community. Particularly the community's concern about the flooding experienced in major storm events in the summers of 2002 and 2004 and minor storm events in subsequent years causing damages. The impact of these events and the potential for it to happen again remains a significant issue for Peterborough residents. Furthermore, there is wider recognition in the community about the impact that stormwater can have on pollution of local creeks, the Otonabee River and Little Lake.

The public process was a difficult journey for both the project team and the general public. It was recognized that the public had conflicting concerns with respect to a dedicated fee versus the health, safety, and environmental concerns. Staff believe that the information presented herein can address the greater good required for stormwater to both the community and environment while being mindful of the financial times. The City's budget process is an all encompassing review of the financial impact to the residents and as such the stormwater fee will form part of this existing process.

Every effort should be made to apply management techniques through new science and local institutions, experiences, technical innovations, and responsive regulations. For the community to truly value and understand the many benefits of stormwater infrastructure, the City should manage this asset like other utilities. This will form part of our business practice towards community resiliency and quality of life.

Submitted by,

W.H. Jackson, P.Eng
Director of Utility Services

Contact:
Bruno Bianco
Manager, Infrastructure Planning
Phone: 705-742-7777 ext 1756
Toll Free: 1-855-738-3755
Fax: 705-876-4621
E-mail address: bbianco@peterborough.ca

Attachments:

Appendix A: Report USDIR15-003 Appendix
Appendix B: Membership of the Stakeholder Groups
Appendix C: Preliminary Estimates of Stormwater Fee to Achieve \$550,000 Annually
Appendix D: Summary of Stormwater Fee Calculation Options
Appendix E: Comparison of Stormwater System Protection Fee Calculation Methods
Appendix F: Comparison of Billing Methods

Appendix A – Report USDIR15-003 Appendix

Appendix 1: Stormwater Quality Management Master Plan Summary

1. Summary

The project included a water sampling program within local creeks and at the storm ponds. Results indicate that stormwater discharges are partly or possibly wholly responsible for pollutant concentrations in local creeks rising above Ministry of Environment and Climate Change (“MOECC”) accepted objectives (E.g. MOECC's Provincial Water Quality Objectives) during wet weather. The sampling data also indicate that the stormwater ponds are having the intended effect of reducing pollutant concentrations. As in many municipalities, older portions of the City do not have any direct form of stormwater treatment built into the drainage system; stormwater discharges untreated into local creeks or the river. The project has addressed this issue by looking at various short-term and long-term options for reducing the volume and contamination of stormwater across the City. As well, the project has examined opportunities for retrofit improvement of existing drainage systems, to identify locations where it may be feasible to install new and innovative forms of stormwater treatment.

2. Recommendations

A number of recommendations dealing with various aspects of stormwater quality management were developed as listed below.

- Improvements to maintenance and operation of existing stormwater ponds; including specific requirements for routine inspection, maintenance and record-keeping to maintain compliance with MOECC regulations.
- Removal of accumulated sediment from existing stormwater ponds that require it to maintain performance and compliance with regulations.
- Proposed modifications to some of the existing stormwater ponds, to improve their performance.
- Update to the City's sewer-use bylaw governing allowable discharges into the storm sewer system.

Public Awareness and Outreach

- Public awareness and outreach program to improve local residents, businesses and property owner's awareness of steps they can take to reduce stormwater volume and the amount of drainage pollution washed off their property.

Collaboration and Linkages

- Establish working group or forum for agencies, organizations and others with an interest in stormwater management that meets regularly (e.g. twice per year) to facilitate ongoing input, networking, discussion and action. This will help the City

keep abreast of evolving information and research, including climate change and best practices for adaptation

System Surveillance

- A program of routine monitoring of pollutant concentrations in selected storm-sewer pipes (the larger ones) and in local creeks, to help track water quality trends.

Land Development Planning and Design

- New policies incorporated into the City's Official Plan, to promote better and innovative design in new land development projects to help reduce the environmental impact of urban drainage.
- Update to the City's engineering Design Standards to promote or require site design approaches that reduce stormwater volume and pollutant runoff, while maintaining good property drainage.

Funding Mechanisms

- Storm system user fee: The plan recommends that the City implement a separate "storm system user fee" that would apply to all properties (residential, commercial and industrial) that contribute storm drainage into the municipal drainage system. This fee could be based on property characteristics (lot size and amount of impervious surface) and would be used to provide dedicated funding for operation of, and improvement to, the municipal storm drainage system, and would thereby help the City meet the requirements of the Province's *Water Opportunities Act* (2010).
- Cash-in-lieu policy for small land development proposals: a policy that allows the City, in certain defined circumstances, to accept cash-in-lieu of installation of approved stormwater treatment systems on small development properties. This measure is intended to allow the City to develop a fund to pay for new stormwater facilities at strategic locations in the City, while minimizing the proliferation of small privately-owned stormwater treatment devices.

New Infrastructure

- The study included a City-wide review of potential locations where new stormwater treatment facilities might be installed, to improve stormwater treatment. A long list encompassing 16 locations was developed. Based on environmental and cost considerations, this was narrowed down to a short list of 4 candidate sites on City-owned properties identified as:
 - R5 at Bears Creek Woods Park;
 - R7 along the east side of Otonabee River between the river and Rotary Greenway Trail in the vicinity of Moir Street;
 - R10 in James Stevenson Park; and
 - R12 in Walker Avenue Park.

- These four sites, including preliminary concept layouts for each site, were presented at the second PIC held on June 13, 2013 at the Canadian Canoe Museum. During and after PIC #2, there were concerns about these proposed facilities clearly expressed by residents who live in the vicinity of the proposed sites. The public concerns included neighbourhood compatibility, loss of valuable parkland, public safety, loss of tree cover and potential for creation of mosquito breeding areas. The outcome was clear direction that further neighbourhood consultation and careful and considerate design analysis would be required to implement stormwater treatment facilities at any of these four selected locations.

Accordingly, the final recommendation of the plan is that subject to further analysis and public consultation, new facilities could be implemented at each of these four sites if it can be demonstrated that the planned facility fits with current uses of the location; fits within the neighbourhood setting; and is designed in conjunction with neighbourhood consultation to address the local community concerns that were expressed during this study

3. Costs

The following tables summarize the costs to implement the recommended program elements.

Table 1-1: Existing Infrastructure Renewal and Improvement	
Existing System Restoration to satisfy MOE Certificate of Approval (sediment removal and other corrective measures) (one time cost)	\$ 2.1 M
Measures to Improve Existing Systems Performance (one time cost)	\$ 2.0 M
Annual Capital Maintenance Costs to satisfy current regulatory requirements (Recurring costs)	
• Wet Pond Sediment Removal	\$134,000
• Dry Pond Sediment Removal	\$ 51,000
• Main Cell Sediment Removal	\$ 82,000
Total	\$ 4.4 M

Table 1-2: System Maintenance	
Annual maintenance at existing SWM ponds: Structured program to include routine inspections, landscape maintenance and routine removal of accumulated grit and sediment; accompanied by record-keeping system to allow for reporting and tracking of deficiencies.	\$ 84,000
Storm-sewer catch basin cleaning and sewer flushing program: Maintain existing CB clean-out program (increasing CB clean-out frequency is not a cost-effective means of pollution abatement)	\$ 150,000
Street-sweeping program Maintain existing program (based on use of 4 mechanical sweepers). Switching to regenerative-air/vacuum sweepers cannot be justified based on available research on net effectiveness of such sweepers. Mechanical sweepers required to remove winter road sand/grit.	\$ 700,000
Total	\$ 934,000 per year

Table 1-3: Additional Measures	
System Surveillance Program <ul style="list-style-type: none"> • Monitor major outfalls in dry weather for bacteria, metals, nutrients (20 outfalls, 6 times per year) • Monitor creeks in dry and wet weather (25 locations, 6 times per year) 	\$ 120,000 per year
Public Awareness Campaign: Designed to promote Source Control and compliment infrastructure solutions by raising awareness and support <ul style="list-style-type: none"> • Develop objectives and key messages; e.g. inform general public of pollution sources and issues. • Target a broad audience, primarily property owners. • Promote source-control measures on private properties, e.g. rain barrels, vehicle maintenance practices, lawn maintenance, etc. • Integrated effort across City departments. • Cross-connect with Peterborough's Urban Forest Strategic Plan (June 2011) and Sustainable Peterborough • COST: Estimate \$80,000/year for one part-time staff and materials development. 	\$ 80,000 per year
Total	\$ 200,000 per year

Appendix 2 – Implementation Program

The Stormwater Quality Management Master Plan (the “Plan”) identifies a number of different initiatives to be undertaken by the City to improve the long-term quality of stormwater runoff in the City. Given the broad nature of the Plan it is impractical to implement all aspects at once. Staff and XCG have therefore developed the recommended program described below.

Implementation and fulfillment of the capital works components of the Plan is expected to take a number of years. Operation and policy components of the Plan will also take a number of years to fully implement and will be an ongoing commitment on the part of the City. Implementation of the Plan recommendations is proposed to follow the schedule shown in Table 2-1:

Table 2-1: Implementation

Stormwater Quality Management Master Plan Implementation				
Item	Details	Start	End	Comment
1	User-Rate Study and Reporting	2015	2016	<ul style="list-style-type: none"> • Stormwater User-Rate development • Cash-in-lieu policy
2	Assess Staffing Needs and Recruit	2015	2016	<ul style="list-style-type: none"> • Funded through User-Rate
3	Official Plan Update	June 2015		<ul style="list-style-type: none"> • Specific policy section related to SWM
4	City Design Standards	Annual Process		<ul style="list-style-type: none"> • Promote LID • Refer to recent and emerging technical guidance documents • New design standards
5	Public Awareness	2106	Ongoing	<ul style="list-style-type: none"> • Raise awareness and support to promote source control and compliment infrastructure solutions
6	Collaborations and Linkages	2016	Ongoing	<ul style="list-style-type: none"> • Working groups or forums to facilitate ongoing input, networking, discussion and action
7	Existing Infrastructure Renewal and Improvement	2016	Ongoing	<ul style="list-style-type: none"> • Facility restoration • Measures to improve pond performance

Stormwater Quality Management Master Plan Implementation				
Item	Details	Start	End	Comment
8	System Maintenance	Ongoing		<ul style="list-style-type: none"> • Annual maintenance at existing facilities • Storm-sewer catch basin cleaning and sewer flushing • Street-sweeping program
9	System Surveillance	2016	Ongoing	<ul style="list-style-type: none"> • Monitor major outfalls in dry and wet weather • Monitor creeks in dry and wet weather
10	Sewer Use Bylaw	2016	2016	<ul style="list-style-type: none"> • Review and update
11	New Infrastructure Planning and Development	2018	Ongoing	<ul style="list-style-type: none"> • Community consultation, planning and design for new facilities
12	Master Plan Review and Update	2020	2025 Ongoing	<ul style="list-style-type: none"> • Review plan and update to reflect industry best practices

The priority for the City is to implement those measures that are needed to maintain regulatory compliance (Items 7 in Table 2-1) at the existing stormwater pond facilities. These recommended measures and the associated estimated costs are presented in Table 2-2 below. A concurrent priority is for the City to implement routine inspections of the existing stormwater pond facilities.

Table 2-2 Existing SWM Ponds: Required Measures (Item 7, Table 2-1)

Facility	Description of Works or Measures Required	Estimate of Capital or One-time Cost
#2: Heritage Park Pond	Clean out accumulated sediment from both forebays. Estimated volume of material to remove is 1,000m ³ .	\$280,000
#3: Cunningham Pond	Clean out accumulated sediments from both forebays. Estimated volume of material to remove is 400m ³ .	\$145,600
#3: Cunningham Pond	Confirm with facility constructor that pond liner and under-drain system installed per facility design report.	No cost attributed
#3: Cunningham Pond	Monitor liquid level during spring, summer and fall to determine if required normal water level and permanent pool volume are achieved and maintained.	\$8,750
#9: Chemong Park Plaza Pond	Remove accumulated sediment from forebay to restore to original design. Estimated volume of material to remove is 150m ³ .	\$79,450
#12: Hemlock Street Pond	Confirm that C of A. 3-1040-95-006 applies. If so, the facility requires expansion to achieve detention volume of 1,243m ³ .	\$112,700
#15: Foxmeadow Pond	Remove accumulated sediment from main pond cell and from forebay to restore to design volume and depth. Estimated volume of material to remove is 150m ³ .	\$73,850
#15: Foxmeadow Pond	Correct erosion problem along forebay berm to restore it and minimize further problems.	\$51,660
#17 Fairview Estates Pond	Remove material from main pond to restore original design volume. Volume of material to remove estimated at 2,500m ³ .	\$555,800
#19: Loggerhead 1	Remove accumulated sediments from forebay within 2 years. Estimated volume of material to remove is 300m ³ .	\$109,900
#21: Glenforest	Modify outlet control structure to raise normal water level (NWL) to design elevation of 236.00m, to increase permanent pool volume from current 1,140m ³ to design value of 3,200m ³ .	\$134,960
#21: Glenforest	Remove accumulated sediment from forebay to restore to original design depth of 1.5m. Estimated volume of material to remove is 400m ³ .	\$133,000
#23: Wentworth Street	Remove accumulated sediment from forebay to achieve minimum depth of 1.0m per original design. Estimate of volume of material to remove is 100m ³ .	\$58,100

Facility	Description of Works or Measures Required	Estimate of Capital or One-time Cost
#25: Stewart Drive	Confirm implementation status of facility inlet modification proposed in February 2011 report by D.M. Wills.	Not cost attributed.
#27: College Park Pond	Clean out accumulated sediment from the forebay. Estimated volume of material to remove is 400m ³ .	\$138,600
#27: College Park Pond	Clean extended detention outlet (perforated 1500-mm CSP riser pipe) to lower normal water level to design value.	\$2,000
#28: Airport Road Plunge Pool	Clean out accumulated material from the sediment trap. Estimated volume of material to remove is 10m ³ .	\$20,160
#29 Major Bennett Pond	Remove accumulated sediment from Forebay No. 1. Estimated volume of material to remove is 50m ³ .	\$27,650
#29 Major Bennett Pond	Remove accumulated sediment from Forebay No. 3. Estimated volume of material to remove is 600m ³ .	\$172,200
#29 Major Bennett Pond	Inspect 2400mm manhole on 900-mm outlet pipe just north of Fisher Drive, and check steel weir plate for blockage of 290mm orifice (to restore normal water level).	No cost attributed.
Total of Above Items		\$2,104,380

In order to implement the measures necessary to ensure compliance an increase to operating and capital revenue is required. To facilitate funding of the program, the Plan recommends the City establish a “user-rate” system. This system is expected to be similar in nature to the current Sewer Surcharge paid by home owners and could be a function of property characteristics. Development of the User-Rate system will begin after Council provides direction to proceed. The recommended system is expected to be presented to Council in the first half of 2016 for approval.

In 2015, it is also proposed that current operation and maintenance practices continue and staff will assess the staffing needs to implement the Plan. It is proposed that an update to the Official Plan be incorporated into the current Official Plan update program and an update to the City’s Design Standards is recommended to be undertaken, in 2015.

Increased inspections, surveillance and maintenance programs will begin in 2016, funded by the proposed User-Rate system. In 2016, the recommended capital works necessary to maintain compliance of existing facilities will begin. Sediment removal from existing ponds will be an annual ongoing requirement, although due to many years without a formal program in place there is an immediate need to complete sediment removals in several stormwater management ponds. The following ponds are considered to be top priorities for sediment clean-out:

- Chemong Park Plaza Pond (Forebay over 70% full)
- Wentworth Street Pond (Forebay over 70% full)
- Foxmeadow Pond (Forebay over 60% full)
- Major Bennett Pond (Pond is almost full)

In order to prepare for the pond clean-outs the City will need to prepare specifications and tender documents. It is recommended that the City develop a standard procedure document to support pond clean-out projects.

Another priority is for the City to undertake routine pond facility inspections and to document and report the inspection results. Since the MOECC has recently been stepping up enforcement activity with respect to municipal stormwater ponds, including random unannounced inspection in which MOECC staff require that the municipality provide available documentation on operation and maintenance activities, this is a priority for the City and will begin in 2016, provided adequate funding is available.

The Plan also calls for the City to implement a testing and sampling program to sample stormwater quality at a number of large diameter outfalls throughout the year. Several of the recommended locations for testing also showed some levels of contamination during the study that suggested an emphasis be placed on sampling from these specific locations. The sampling program is suggested to begin in 2016.

City staff will begin developing the Community outreach and collaboration program in 2016 as well as the public education component of the Plan.

Beyond 2016, the City will continue the sediment cleanout as identified in the Plan. Upon completion of the urgently needed sediment removal the City will begin to implement the system improvement measures (existing ponds) in 2017 and 2018.

In 2018 the City will begin the process to plan new facilities including community consultations, in the locations identified in the Plan. It will take a number of years to complete the consultation, design and construction of each facility.

As part of the master plan process it is important to schedule regular review and comprehensive updates to the Plan. The first review of the Plan is anticipated for 2020, and every five years thereafter, and if necessary a comprehensive update will begin in 2025.

Appendix B: Membership of the Stakeholder Groups**Internal Stakeholders Group**

Manager, Infrastructure Planning
Manager of Public Works
Spatial Data Analyst
Manager of Financial Services
Revenue Administrator
Customer Service Coordinator
Acting Manager, Environmental Protection
Public Utilities Commission, Director Customer and Corporate Services

External Stakeholder Group Agencies (Attended)

Council of Canadians
Peterborough Public Health
Green Communities Canada
Sustainable Peterborough
GreenUp
Peterborough Home Builders Association
Otonabee Region Conservation Authority
Trent University

External Stakeholder Group Agencies (Invited - Not Yet Attended)

Curve Lake First Nation
Hiawatha First Nation
Chippewas of Rama First Nation
Transition Town Peterborough
Peterborough Economic Development
Ministry of Environment and Climate Change
Lansdowne Place Mall
DBIA
Sustainability Office of Fleming College
Peterborough Victoria Northumberland, Clarington Catholic School Board
The Salvation Army Peterborough Temple
Multifaith Federation

Appendix C: Preliminary Estimates of Stormwater Fee to Achieve \$620,000 Annually

Zoning type	# of properties	% of revenue target	Average lot size (ha)	Annual Stormwater Fee (note 1 and 2)		
				Average	Low (note 3)	High (note 3)
Residential	23,568	64.50%	0.08	\$ 17.00	\$ 9.00	\$ 32.00
Industrial	323	12.80%	1.43	\$ 246.00	\$ 10.00	\$ 1,065.00
Commercial	858	11.00%	0.32	\$ 79.00	\$ 9.00	\$ 508.00
Institutional, Public Service and University/College	250	11.70%	2.59	\$ 291.00	\$ 5.00	\$ 1,405.00
Total	24,999	100.00%	0.16			

Notes:

1. Annual stormwater fees to achieve a total annual revenue of \$ 620,000
2. These rates are preliminary and do not include reductions to account for on-site stormwater treatment that is in place on individual properties. This will need to be taken into account in finalizing rates.
3. The low-to-high range covers 95% of properties (i.e. 95% of properties within the zoning category have an estimated fee between the low and high values).

Appendix D: Summary of Stormwater Fee Calculation Options

Flat Fee

The "flat fee" is the easiest to implement and maintain. It could consider items such as land use or assessed property value and applies a fee associated to these characteristics of the property. This method, however, is perceived as unfair inasmuch as it may be difficult to rationalize why substantially different properties are charged the same fee. The flat fee approach does not adhere well to the user-pay principle.

Tiered Flat Fee

The "tiered flat fee" system is a hybrid of the two methodologies above. This approach would categorize properties by zoning type, imperviousness and/or size with different rates associated to each category. The categories in this approach would be more detailed than the flat fee approach but would not have individual property characteristics like the variable rate approach. Examples of the categories could be small residential, medium residential, large residential or low density residential, medium density residential and high density residential. Commercial, institutional and industrial properties can be categorized as small or large.

The tiered flat-fee system would present data-processing requirements that are at least as costly as those for the variable-rate option. However this would in fact be more costly, as additional data processing would be required to sort properties into the respective tiers, and again in future if revision to the tier system were determined to be warranted. It would also struggle to meet the fair and equitable principle to the degree that the variable rate method does.

Variable Rate

The "variable rate" method measures the amount of impervious surface area of the property to calculate the fee for individual properties. The method best adheres to the user pay principle thus meeting the fairness guiding principle. It is easy to understand and explain which also meets a guiding principle used throughout the project. This method also uses geo-referenced technology that is easily updated and will likely be on a 3-5 year cycle which results in annualized costs that are relatively low.

Appendix E: Comparison of Stormwater System Protection Fee Calculation Methods

	Principle	Flat Fee	Tiered Flat Fee	Variable Rate
1	Environmental effectiveness including public health	All three options may be effectively equivalent if each is designed to provide the same amount of funding. In all cases, a program of one-time subsidies or rate credits may be required to promote implementation of beneficial measures (stormwater source reduction) by property owners, to maximize environmental effectiveness.		
2	Fairness	Lowest. May be considered as unfair by many property owners. Larger properties effectively subsidized by smaller properties.	Considerably better than flat fee. Recognizes that property size affects stormwater volume, and treats all properties in the same use and size category the same.	This option best adheres to the user-pay principle, and so provides best fairness. As well, this option is likely easier to explain to customers than the other options.
3	Economic Efficiency	May be the best, as simplest to administer and adjust in future to meet revenue requirements. Affordability could require assistance program to assist low-income owners.	Administrative costs will be much lower than variable rate approach, and once implemented may not be substantially higher than flat fee approach. Affordability could require assistance program to assist low-income owners.	Geo-referenced mapping of impervious surface was generated for the entire City in 2016 at a modest cost (\$12,000); and processing such mapping to compute impervious surface for each individual property is easily and quickly done using GIS software tools. Similar analysis will be necessary to support a tiered flat fee approach, so administrative costs for the variable-rate option are likely lower, as the results can be directly used to compute individual user fee, whereas the tiered flat-fee approach would require further data processing to sort properties into whatever tier system is adopted. Affordability could require assistance program to assist low-income owners.

	Principle	Flat Fee	Tiered Flat Fee	Variable Rate
4	Social Acceptance	May be perceived as unfair to smaller properties that pay same as larger properties.	Depending on how tiers are defined, this option could lead to some perceptions of unfairness especially within certain categories of properties (e.g. industrial) as a tiered flat-fee system may not adequately account for differences in individual properties within a single tier.	Likely the best chance of social acceptance, as this option best adheres to the user-pay principle and fairness.
5	Straightforward to explain and administer	Easiest to administer, and simple to describe; but explaining why all properties pay the same when they are not the same, may pose challenges.	<p>Depending on how the tiers are defined, explaining the rate structure and why different properties fit into one single tier, may pose some challenges.</p> <p>Requires regular updates to account for new property development, redevelopment, or other changes in property use. This could require the same type of impervious surface mapping and data processing required by the variable rate approach, with the added complication of needing to sort properties into prescribed tiers. The tier structure may need to be reviewed regularly to ensure satisfactory fairness across the City and within each tier. This makes the tiered flat fee approach possibly more complex and complicated than the variable-rate option.</p>	<p>Likely the easiest method to explain to individual owners, being based on direct measurement of hard surface area. Administratively, it is likely easier than a tiered flat-fee approach as it does not require sorting properties into tiers.</p> <p>Requires regular updates to impervious surface mapping to account for changes such as building additions or other changes in property use. If this is done on, for example, a five-year cycle than data-processing costs will be modest. During intervening years, procedures (e.g. manual data entry by City staff) can be used to add new development properties.</p>

	Principle	Flat Fee	Tiered Flat Fee	Variable Rate
6	Adaptable to future changes	Adaptable to changes in customer base or changes in projected revenue requirements. Likely easiest to adjust to reflect changes in projected revenue requirements. Rate stability can be maintained by having rate adjustments based on program review on a regular cycle (e.g. review rates each 5 years)	Requirement to adjust rate calculation for changes in projected revenue requirements will be more complicated than variable-rate option, because of use of tier system and potential need to adjust tiers to preserve fairness. Rate stability can be maintained by having rate adjustments based on program review on a regular cycle (e.g. review rates each 5 years).	Adaptable but there may be complexities. Requires routine updates to property database to allow billing rates to be adjusted to changes in or additions to subject properties. Requirement to adjust rate calculation for changes in projected revenue requirements may be complicated by ongoing changes in property database. Regular changes in property database may add complexity to efforts to maintain rate stability .

Appendix F: Comparison of Billing Methods for the Stormwater Protection Fee**Water/Sewer Billing**

The Sanitary Sewer Surcharge is currently being billed on the water bill by the PUC as a percentage of the water bill. Billing the stormwater protection fee on the water and sanitary sewer platform will utilize the information from the PUC billing process. With this option the City would work with PUC to add individuals that are not currently receiving a water and sewer bill. This billing method gives the City the flexibility to have a sanitary sewer surcharge and a stormwater protection fee or have an all encompassing wastewater rate that combines the two City assets. An important consideration may be related to the administrative costs for this option.

Billing through the existing water billing system appears to provide greater flexibility in terms of how the rate could be applied to the end user. The existing water bill also allows the stormwater rate to meet the fairness principle expressed by the public. The rate can be calculated based on physical property characteristics related to runoff in place of the assessed property value expectation of the tax bill. Lastly, customers are accustomed to seeing sewer services on the water bill with the general understanding that the water/sewer billing is based on user pay.

Property Tax Billing

Another option is to charge the stormwater protection fee on the property tax bill. In this case the City's sanitary sewer rate would continue to be on the Peterborough Utility Commission (PUC) water bill. With this option additional work is required to add tax exempt properties to the billing system who contribute to stormwater runoff. This may also confuse customers with added fees to the tax bill that may not be associated to the assessed value of their property. On the other hand, this option may be more appropriate to direct the stormwater fee to the property owners as opposed to the tenants where stormwater reflects the characteristics of the property and not individual tenant activity. This may be a particular concern in Peterborough due to the number of low income tenants' households.

Recommendation

Presently the sanitary sewer charge is included with the water bill. There is some rational to this inasmuch as water usage has a direct bearing on the effluent produced.

Stormwater is more directly related to the characteristics of the property, i.e.: more hard surfaces equates to greater stormwater runoff. Accordingly, it would seem reasonable to include the stormwater protection fee with the property tax.