


Item No. 10.1.1
Halifax Regional Council
February 12, 2013

TO: Mayor Savage and Members of Halifax Regional Council

SUBMITTED BY:

Original signed by 

Richard Butts, Chief Administrative Officer

Original Signed by 

Mike Labrecque, Deputy Chief Administrative Officer

DATE: December 6, 2012

SUBJECT: Stormwater Infrastructure Funding Interim Solution

ORIGIN

- April 24, 2012, Regional Council;
- January 2009 HRWC Board Report requesting HRM participation in funding Stormwater Infrastructure; and
- 2007 Transfer Agreement between HRM and Halifax Water

LEGISLATIVE AUTHORITY

Part IV, Finance, Power to expend money, 79, (1), (p), (al): The Council may expend money required by the municipality preventing or decreasing flooding, and wastewater facilities and stormwater systems.

By-Law L-100 Respecting Local Improvement Charges

RECOMMENDATION

It is recommended that Halifax Regional Council:

1. Approve the interim two-year stormwater infrastructure solution, including the Community Affordability Feature, as per the attachment;
2. Limit this annual financial commitment from the Halifax Regional Municipality (HRM) to a maximum of \$3 million (Net HST included), sourced from the annual Halifax Water dividend payment to Halifax Regional Municipality; and
3. Direct staff to:
 - A. Jointly prepare, within two years, an Integrated Stormwater Policy, which includes an accountability matrix with respect to stormwater management; and a five-year stormwater infrastructure capital program with permanent funding options, for the consideration of HRM, Halifax Water, and the Nova Scotia Utility and Review Board (NSURB), for a permanent program; and
 - B. Provide bi-annual updates to the Environment and Sustainability Standing Committee and the Board of Directors of Halifax Water on completion and progress on identified outstanding responsibilities in the accountability matrix.

BACKGROUND

On April 24, 2012, Regional Council approved the following motion: *That HRM staff, in conjunction with Halifax Water, establishes a policy to develop public infrastructure that will assist in mitigating a variety of public and private drainage issues, and to identify equitable cost recovery methods that will appropriately finance new infrastructure.*

Problem Statement:

Flooding events and impacts are resulting in an increased public expectation of stormwater infrastructure to remedy private property impacts that are not funded through either the tax rate or the utility rate.

Context of the Problem:

A significant cause of flooding problems suffered by property owners in HRM is related to the development standards in place in the 1950s, 60s, and 70s. Some examples are: urban-type development with no piped or deep stormwater systems, poor lot grading, and no designated formal major overflow route. More recently, flooding in some areas has become more frequent and more serious, apparently as a result of greater frequency and intensity of extreme weather events. Generally agreed engineering solutions to remedy a portion of those properties, indicate a necessary investment in deep storm sewers. Another portion of those properties require a retroactive design and engineering of major stormwater overflow systems. Also, there are properties where a feasible engineered solution does not exist because remedy is either physically not possible or costs associated with remedy are prohibitive.

Stormwater Problems:

There are two typical flooding scenarios that this staff report is addressing. The first is the lack of a standard deep storm sewer in the street, which would facilitate the gravity drainage of private property, including basements. The second is the lack of a formal major storm system in some areas, which contributes to flooding problems during major storm events.

One of the key aspects of storm sewers built to current standards is that they are typically deep enough for basements of buildings adjacent to the street to connect to that storm sewer by gravity, which thereby provides private property owners with a reliable system into which they can discharge their stormwater, even in the event of a power outage.

Areas with less than full storm sewer systems also have very high rates of stormwater infiltration/inflow into the wastewater system, which is of concern to Halifax Water. This creates significant problems within the wastewater system, such as sewage overflows, reduction of system capacity for development purposes, backups into basements, and bypasses and washouts of treatment plant processes, with associated under-treatment of wastewater. Some of these problems represent a risk to public health and result in environmental impacts on the receiving waters. According to Halifax Water, the discharge of stormwater from private property into the wastewater system is a significant contributor to the problem of wet weather flows and overflows related to our wastewater system. This practice is contrary to applicable legislation and also the Rules and Regulations of Halifax Water. The opportunity to reduce wet weather flow into the wastewater system through the installation of deep storm sewers

is the motivation for the Halifax Water Board to approve, in January 2009, a cost sharing policy for a 1/3 contribution towards new deep storm sewers.

Lack of Formal Major Storm Sewer:

Major Storm routes are designed to convey storm flow from large rain events that exceed the design volume of the minor piped system and route via street cross section, swales, large pipes or natural topography to avoid property damage or public harm and inconvenience. The lack of a major storm route during a large storm event appears to be a significant cause of local flooding.

Funding Gaps:

The key challenge associated with addressing these stormwater system problems is the funding gap and a funding mechanism. The NSUARB utility model requires the benefitting party or parties to cover the cost of new infrastructure.

Responsibility Question:

Stormwater management is a multi-agency responsibility shared between NS Transportation and Infrastructure Renewal (NSTIR), NS Environment (NSE), HRM, Halifax Water, developers, and private property owners. Within this framework, HRM and Halifax Water have specific responsibilities with respect to stormwater management in HRM, as defined by the Merger Transfer Agreement and by relevant legislation and regulations. One of the stated purposes of the Transfer Agreement is: *To evolve the operation and administration of municipal waste water services and municipal stormwater services towards a system whereby the general taxpayer of HRM does not subsidize the utility rate payer of HRWC, and the utility rate payer of HRWC does not subsidize the general taxpayer of HRM.* The recommendations in this report, including the funding cost-share for the various types of projects are consistent with this provision of the Transfer Agreement, in that funding is to be provided by the benefitting parties: HRM, Halifax Water, and/or private property owners.

DISCUSSION

Intention:

The intent of this interim two-year Stormwater Infrastructure solution, is to initiate a capital works program to address a number of stormwater related problems while a permanent framework and associated responsibilities are developed.

During this interim period (two years) it is intended to delineate a definitive five-year capital program in order to best inform Regional Council, the Halifax Water Board of Directors, and the Utility and Review Board with permanent funding options and solutions. At the same time, prior to a recommendation on a permanent funding solution, there are integrated management policy questions that require resolution.

Integrated Stormwater Management Policy:

The purpose of the Stormwater Policy is to provide direction and clarification to HRM and to Halifax Water in such key areas of stormwater management as:

- land development practices/use of natural hydrologic approaches
- protection of our natural water resources, including groundwater and flood plains

- erosion and sedimentation control
- mitigation of private property flooding
- upgrading of substandard stormwater service and infrastructure
- funding of stormwater programs and services
- public education and communication
- roles and responsibilities of HRM and Halifax Water in these various aspects of stormwater management, consistent with the 2007 Merger Transfer Agreement

Homeowner responsibility:

Older homes that may not have the current design standards for a minor and major storm system have the experience of flooding impacts. There are a variety of homeowner options and responsibilities to protect their homes from basement flooding. The simple fact of the matter is that homes that have experienced basement flooding in the past, should generally expect the risk in the future. Mitigation/adaptation actions include:

1. Connection of building foundation drains to an existing or new deep storm sewer system;
2. Landscaping/property regrading;
3. Sump pumps;
4. Backwater valves;
5. House actions (downspout disconnections, eaves troughs, basement windows); and
6. Not finishing basement, or finishing to adapt to risk of flooding (i.e. using concrete or vinyl flooring, no carpet).

Development of Sustainable Funding Framework:

Municipal staff recognize that HRM funding for a capital program to provide new infrastructure does not follow the principles of the Public Utilities Act associated with the NSUARB rate framework, nor meet the normal criteria of the cost causation principle. However, it is clear that Halifax Water funding must conform to the Public Utilities Act and the utility is best positioned to manage issues related to the NSUARB. As such, it will be the intent of the municipality to work with the utility board to better delineate and define a five-year capital program to meet this public service expectation, with options for the consideration of Halifax Water Board of Commissioners, Halifax Regional Council and the NSUARB. Permanent funding options will require collaboration with financial staff and may require new legislative authority.

The three components of the interim funding solution include:

A. Requirement for Halifax Water Board and NSUARB Approval:

On June 25, 2012, the NSUARB ordered that Halifax Water is to comply with the following: *Receive prior Board approval before HRWC enters into any cost sharing arrangements, including deep stormwater services.* As such, following Council direction on this matter, any funding from Halifax Water will require approval from the NSUARB, in addition to the Halifax Water Board.

B. Local Improvement Charge (LIC):

The application of a local improvement charge, which will be levied via By-Law L-100, Respecting Local Improvements, will be consistent with past applications for new local infrastructure. The By-Law provides the property owner the ability to pay for new infrastructure over a twenty year period. The policy decision to fund through a Local Charge has both supporting and contrary rationale:

Supporting Rationale	Contrary Rationale
<ul style="list-style-type: none"> • Principles of user pay or cost causation. • Residents have not paid for the level of proposed stormwater infrastructure in their property purchase values. • Consistent with application of LIC with sidewalks and street improvement projects. • Incentive for homeowner to affect private property remedies (i.e. backwater flow valve, lot grading, and adaptation) before petitioning municipality for infrastructure. • Preserves options and precedence for post-interim funding framework. 	<ul style="list-style-type: none"> • Unlike sidewalks, or new water or wastewater service, only a small proportion of residents in an LIC catchment area may realize a perceived benefit. • Application can be a financial hardship, often resulting in an effective doubling of taxes owed to the municipality. • Increased municipal administration.

C. General Funded:

Staff is recommending a portion of the interim funding solution be provided by the general taxpayer.

Supporting Rationale	Contrary Rationale
<ul style="list-style-type: none"> • Protection and elongation of life of street and road infrastructure • Public Safety: Reduction of icing and street flooding • Public Service: The HRM Charter states that:...the functions of the Municipality are to: <ul style="list-style-type: none"> (i) provide good government (ii) provide services, facilities and other things that, in the opinion of the Council, are necessary or desirable for all or part of the Municipality, and (iii) develop and maintain safe and (iv) viable communities 	<ul style="list-style-type: none"> • Not obligated • Will require reduction in contribution towards other capital programs (streets and roads, transportation) • Not all residents are offered water, wastewater, and stormwater infrastructure service from Halifax Water (outside service boundary)

Proposed Interim Funding Contribution Summary:

The following table illustrates the proposed funding summary:

Pressure	HRM	Halifax Water	Resident	Other
Deficient minor storm system		100%		
Infrastructure renewal		100%		
Regulatory Compliance		100%		
Growth				Development: 100%
Infrastructure provision to remedy private property minor storm water impacts with Deep Sewer	33 1/3%	33 1/3 % of Capital Cost, 100% of ongoing operational costs	33 1/3%*	
Infrastructure provision to remedy private property minor storm water impacts where street is the minor storm system	50%	0% of Capital Costs, 100% of ongoing operational costs	50%	
Infrastructure provision to remedy municipal minor storm water impacts (street floods/icing)	100%			
Retrofit Major Storm System (where not historically required)	50%	0% of Capital Costs, 100% of ongoing operational costs	50%	

*Subject to proposed Community Affordability feature

FINANCIAL IMPLICATIONS

The HRM portion of the two-year interim solution will be funded by the annual Halifax Water dividend, to a maximum of \$3 million per year. This budget includes any portion of the residents' Local Improvement Charge for which the municipality agrees to take responsibility, as it relates to the Community Affordability feature.

Currently, Project No. CR000001 – Storm Sewer Upgrades, has 2012/13 uncommitted funding available to carry forward of \$1.2 million plus a 2013/14 proposed budget of \$200,000 for a total of \$1.4 million. The project budget will be increased in 2014/15 to \$3 million. No funds are budgeted for 2015/16. The budget availability has been confirmed by Finance.

Budget Summary: Project No. CR000001 – Storm Sewer Upgrades

Cumulative Unspent Budget \$ 1,181,484.02

COMMUNITY ENGAGEMENT

There have been a number of communities in the municipality that have been seeking remedy for flooding issues. Communities that will be subject to consideration of a LIC will be consulted in accordance to the requirements of By-Law L-100.

ENVIRONMENTAL IMPLICATIONS

Flooding issues are an increasing problem related to the increase in extreme weather events. Stormwater in the wastewater system which results in sewer backups, overflows, and treatment facility malfunctions, present a potential risk to public health and have negative impacts to the receiving natural environment.

ALTERNATIVES

1. HRM may choose to not provide a funding solution for infrastructure to alleviate private property flooding.
2. HRM may choose to provide funding solutions in a variety of ways between homeowner and taxpayer. However, any decrease in the funding from one stakeholder will increase funding required from the other stakeholder. The implications are outlined in the Discussion section of this report.
3. HRM may choose to provide funding only to remedy impacts from minor storm events.

ATTACHMENTS

Attachment: Interim Stormwater Funding Solution

A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/cagenda.html> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Prepared by: Richard MacLellan, Manager, Energy & Environment, 490-6056

Financial Approval by: _____
Greg Keefe, Director of Finance & Information Technology/CFO, 490-6308

Report Approved by: _____
Jane Fraser, Director, Planning & Infrastructure, 490-7166

**Recommended Interim
Stormwater Infrastructure Funding Solution:**

Attachment

An interim pilot program for HRM shall fund a maximum of \$3 million annually to contribute to a capital program, for a two year period, designed to remedy private property flooding impacts under the described framework.

1. Projects are mutually agreed on by delegated authorities of the General Manager of Halifax Water and the Chief Administrative Officer of HRM;
2. Local residents are expected to:
 - a. Participate in funding solutions through an imposed Local Improvement Charge; and
 - b. Have demonstrated reasonable homeowner mitigation efforts including landscaping, sump pump installation, and backwater valves, would not remedy the risk.
3. Halifax Water will contribute 1/3 funding where the project involves the construction of a deep storm sewer system which will enable private property owners to cease discharging stormwater into the wastewater system by connecting to the new deep stormwater system;
4. HRM and Halifax Water will jointly develop a five-year Capital Project list during the interim policy duration; and
5. HRM Funding shall be sourced from the annual Halifax Water dividend.

Stormwater Infrastructure Framework:

Projects will be evaluated on how well they meet the following criteria:

- **Residential/Utility/Municipal Experience:** Potential projects will be identified by reviewing municipal, utility, and residential experience through information sources such as Hanson, Call Centre, operational experience, engineering design, and claims experience.
- **Solutions:** Solutions will be examined and assessed for technical practicality. Priority will be given to opportunities where practical and feasible solutions exist.
- **Diversion from wastewater system:** Projects that meet mutual benefit and attract the appropriate funding from Halifax Water, and which will facilitate the diversion of stormwater from wastewater systems, will be given higher priority.
- **Opportunities for secondary funding:** Any projects that create opportunities to attain other secondary funding (provincial or federal) will be given higher priority.
- **Severity of impact:** Projects that facilitate lowering risk to public health, reduced impacts on the environment, improved regulatory compliance, reduced street flooding, icing and structural problems, and larger numbers of benefitting properties, will be given higher priority.
- **Project integration opportunity:** In order to minimize remedy costs, opportunities to partner with other infrastructure projects (roadwork, waterworks) will be given a higher priority.

Community Affordability feature:

Many of the Deep Storm Sewer Infrastructure projects are anticipated to have a Local Improvement Charge of \$10,000 to \$30,000 per property. Further to that cost is the private cost of hooking up (including installation of pipe on private property), which may be in the approximate order of \$5,000 to \$10,000. Staff is recommending an affordability feature to the proposed interim funding framework whereby residents subject to the 1/3 funding responsibility for Deep Storm Sewer installations, through a Local Improvement Charge, would be protected by a maximum exposure as a percentage of their assessed value, with the municipality taking responsibility for the remainder. Staff is recommending that for the interim solution, the maximum LIC is 10% of assessed value.

Clarification points:

- The Local Improvement Charge, or the scope of the Community Affordability feature, does not include the cost to the homeowner to install the infrastructure on their individual properties.
- The effective date for the Community Affordability condition would be the date where Regional Council approves the Local Improvement Charge.
- The assessment will be the uncapped Property Valuations Services Corp amount.
- The Community Affordability feature is applicable solely to those stormwater infrastructure projects that consist of the installation of deep storm sewers which receive the 1/3 funding contribution from Halifax Water.