Innovative Financing Approaches for Municipal Stormwater Management
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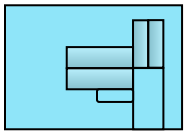
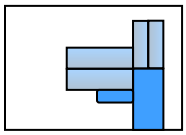
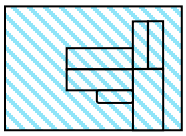
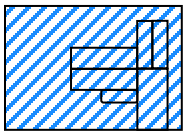
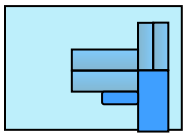
A parcel-based approach to stormwater fees is considered the most equitable and targets those properties that generate the most runoff. There are various measures for establishing a parcel-based stormwater fee as summarized in Table 1 below.

Table 1: Alternative Measures of Contributing Area for Stormwater User Fees

Gross area – The total area of a property. Directly related to the total incident rainfall onto a property without consideration of impervious area. Not necessarily correlated to runoff volumes due to the influence of impervious area, slopes etc. If soils are saturated or rainfall is extreme gross area will correlate with runoff.	
Impervious area – The area of hardened surface on a property (roof tops, pavement, sidewalks) that prevents infiltration and causes rainfall to runoff as soon as it falls. Impervious area "exerts the greatest influence on the peak rate, volume and quality of runoff." (Water Environment Federation 2013).	
Gross Area Factored by a Runoff Coefficient – The gross area of a property multiplied by an assumed average runoff coefficient (RC) for that type or class of property. RC for a surface is a value representing the percentage of rainfall that is turned into stormwater runoff and it captures the combined effect of various characteristics of the surface and the rainfall. RC of an impervious area is close to 1.0 while it might be near zero for a highly permeable area.	
Gross Area Classified by Intensity of Development – Properties are classified by the intensity of development. The percentage of impervious area is assumed to lie within a range for each category, for example, 'undeveloped land' rated at 0% to 3% impervious, 'very heavy development' rated at 71% to 100%. Gross area plus an intensity-of-development rating factor provides the basis for the SW charge.	
Equivalent Hydraulic Area – Impervious and pervious areas are multiplied by hydrologic response factors to estimate the overall relative impact of a property on stormwater runoff. This is a data intensive approach that captures the impact on runoff of undeveloped properties that have no impervious areas.	

Source: Fortin, M; Gauley, B; Patterson, T; *Economic Instruments to Facilitate Stormwater Management on Private Property*; Credit Valley Conservation (February 2018)

In addition to SWM fees, other potential mechanisms for municipalities to finance green stormwater infrastructure are summarized below:

Tax Exempt Municipal Lease Financing

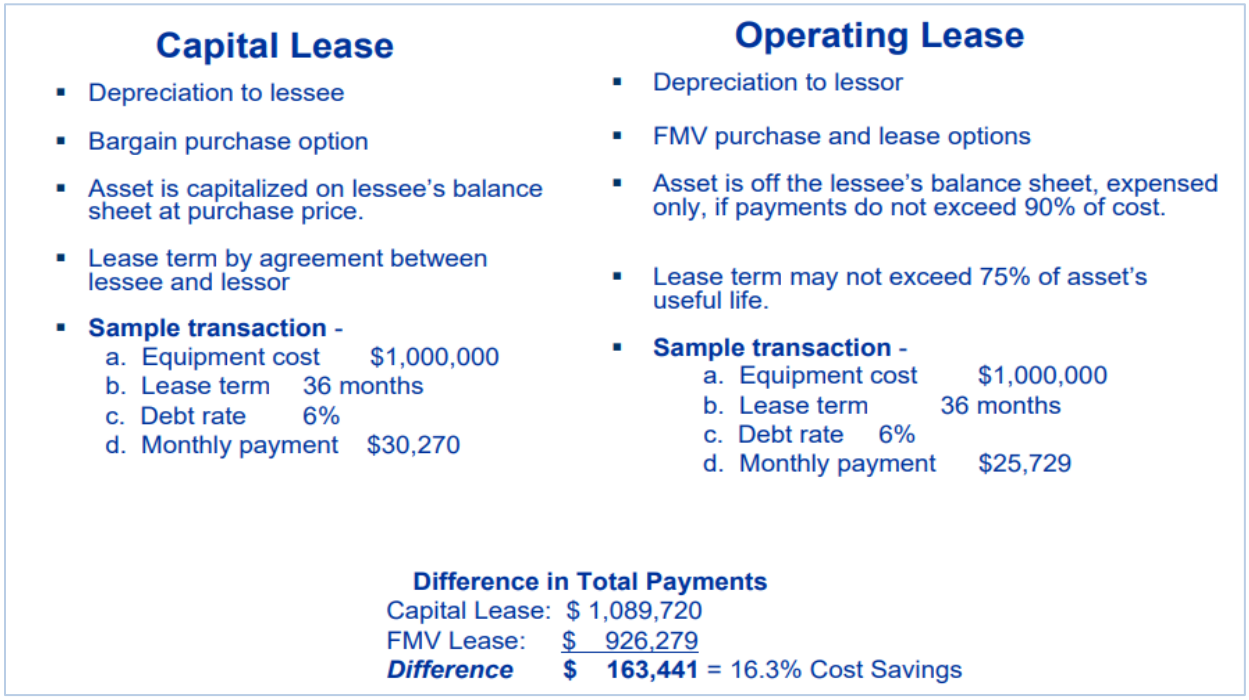
Tax exempt municipal lease financing is considered a pay-as-you-go tool of financing. Although such lease agreements have typically been used by municipalities to finance equipment and commercial facility space, tax exempt lease-to-purchase (capital lease) or an operational lease arrangement present a significant opportunity for municipalities to finance Green Infrastructure (GI) without upfront capital expenditures.

Innovative Financing Approaches for Municipal Stormwater Management
Draft Memo

Municipal operational and capital lease arrangements are allowed under Reg 635/05 of the Ontario Municipal Act. The tax-exempt status of such arrangements in combination with deferred capital costs, provides municipalities in Ontario with a potential mechanism for financing GI.

Both operational and capital lease arrangements can help with capital asset management and planning and ease the peak and valleys in budgeting acquisitions. Where lease agreements establish a residual value upfront, the municipality has a guarantee of the residual value of the asset.

The RBC summarizes the advantages and disadvantages of two types of municipal lease arrangements as follows:



Source: RBC presentation; Municipal Finance Officers Association of Ontario (2011)

"Leasing has a number of advantages, the most important being cash conservation—substantially lower costs when compared to purchasing. The lower costs accrue for several reasons. First, one pays only for the value of the equipment used during the lease—the lease payments cover only that part of the capital asset that is actually being used. Lease terms are always shorter than the asset's useful life and typically run for less than a year to only a few years in length. Second, leases do not generally require a cash investment in the form of a down payment. Many leases can be 100% financed through regular payments. Third, since ownership of the asset always resides with the vendor, leases allow certain tax deductions, such as depreciation, to be passed on to local governments which are tax-free entities and cannot use this tax benefit without third party involvement. Fourth, governments can sometimes secure easier credit terms with a lease, such as negotiating a longer payment period. This results in even lower regular payments and eases pressure on cash flow."[i]

Innovative Financing Approaches for Municipal Stormwater Management
Draft Memo

Tax Increment Financing

Tax Increment Financing (TIF) is typically used for redevelopment or revitalization. TIF has potential for securing implementation Green Infrastructure, alone or in combination with other planned improvements or redevelopment. Essentially, TIF uses the future growth in property taxes – due to the increased property valuations generated by the improvement in infrastructure, services, private development projects, etc. – to fund the debt financing of infrastructure.[ii]

In general, TIF is a method of using future incremental property tax revenues generated by the redevelopment of a property to offset the upfront costs of redevelopment. In other words, as a property or area is redeveloped, the increase in the assessed value of the property raises the amount of taxes payable by that property. The difference between the taxes paid by the property prior to redevelopment and the taxes paid following redevelopment is referred to as the "tax increment." In essence, TIFs earmark a portion of the taxes that arise from new development, and redirect these revenues to provide grants to property developers within a designated area, rather than having these incremental tax amounts contribute to a municipality's overall tax revenues[iii]

In Ontario, a TIF involves municipalities making funds available, in the form of annual grants, on a site-specific or area-specific basis to support redevelopment or revitalization, with the grants being funded by the increase in property taxes over the original level.[iv] The authority for the use of TIF is established under the Community Improvement Plan provisions of the Planning Act.

The Municipal Act specifically prohibits a municipality from providing bonuses to businesses enterprises, including grants, loans or other forms of financial assistance. A municipality may, however, using authority established under the Planning Act and subject to provincial approvals, make grants to owners of lands to pay for rehabilitating lands or buildings within a community improvement project area, provided the rehabilitation is consistent with and conforms to an approved community improvement plan.

The developer(s) is/are responsible for the upfront costs of the project or projects, and must pay the increased taxes arising from the higher assessed value following redevelopment, but the annual grants from the municipality offset the initial costs of the redevelopment. At the end of the grant period, the municipality receives the full property tax value associated with the redeveloped property.

The Ontario Tax Increment Financing Act (2006), provides the legislative framework that informs TIF implementation in Ontario municipalities. However, within this legislation, no localized regulations have been developed. No jurisdiction has developed regulations as to how TIFs are calculated and operationally executed within a local boundary. There are several notable elements of the Act, which significantly impact how a TIF could be implemented in Ontario for GI. Section 1 of the Act identifies eligible projects as described below.

- Construction of municipal infrastructure or facilities to assist in:
    - the redevelopment or intensification of previously developed areas
    - development of an urban growth centre defined in the Places to Grow Act

- Environmental remediation of land in a previously developed area[v]

According to the Canada West Foundation, "Tax incremental financing is one of the most important tools for dealing with existing infrastructure, which is perhaps the most difficult to finance and fund."[vi]

SWM Offset Fee for Municipal Right-of-Way Projects

Any utility project in the municipal ROW must implement GI/LID measures to an established target(s) for SWM. If the target cannot be achieved due to site restrictions, the utility must pay 1% to 2% of the total cost of the project to the municipality to implement GI/LID in another priority location that meets or exceeds the established target(s). The fee applies to municipal, regional, state, and federal government road and transportation projects and/or to third-party projects such as gas lines, electrical conduits, and fibre optic conduits, etc. in ROWs.

Bonds and Public-Private Partnerships

Municipal bonds

General obligation and revenue bonds and public-private partnership agreements (with or without associated bond arrangements) are other potential mechanisms for financing GI. These mechanisms have not been included as they need to be considered in a larger municipal policy context.

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[i] Vander Ploeg, Casey; *New Tools for New Times A Sourcebook for the Financing, Funding and Delivery of Urban Infrastructure*; Canada West Foundation. Sep 2006

[ii] IBID

[iii] Toronto City Council; Using Tax Increment Financing as a Development Incentive within the Draft Etobicoke Centre Secondary Plan Area. Toronto (2002)

[iv] IBID

[v] IBID

[vi] Vander Ploeg, Casey; *New Tools for New Times A Sourcebook for the Financing, Funding and Delivery of Urban Infrastructure*; Canada West Foundation. Sep 2006