Green Infrastructure
ONTARIO COALITION

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Re: Consultation on Proposal for Municipal Asset Management Planning Regulation

The Green Infrastructure Ontario (GIO) Coalition supports the province's leadership in developing a regulation for municipal asset management planning. Such a regulation will establish a more structured framework for what to include in asset management plans and strengthen the work already being undertaken by municipalities across the province.

We strongly urge the province to integrate green infrastructure into the new regulation. Like other infrastructure, green infrastructure benefits from an asset management approach that helps ensure long term sustainability and delivery of benefits to residents (level of service). Specifically, we ask that you:

1) Include green infrastructure in the definition of "Core Infrastructure Assets"; and
2) Make green infrastructure a mandatory component of municipal asset management policies, strategies and plans.
3) Identify best practices for green infrastructure in each of the key areas: Infrastructure asset inventory, levels of service, life cycle management and financial strategy.

Green Infrastructure Definition

Green infrastructure consists of both natural capital and vegetative and other technologies designed to use natural processes to perform ecosystem services.

For the reasons we outline below, green infrastructure should be included in the regulation as a core infrastructure asset. We advise that the regulation incorporate the green infrastructure definition already established by the Ontario government in the Provincial Policy Statement (PPS 2014), given the Official Plan policies for all municipalities are required to be consistent with this definition:

> "natural and human made elements that provide ecological and hydrological functions and processes. Green infrastructure can include components such as natural heritage features and systems, parklands, stormwater management systems, street trees, urban forests, natural channels, permeable surfaces, and green roofs."

Rationale

Green infrastructure can be a cost-effective complement (or alternative) to grey infrastructure, a relationship that is specifically cited in Ontario's PPS 2014. It is also an important and underutilized tool for increasing community resilience to the effects of climate change, such as urban heat island effect and extreme weather events.

A cost effective option

The adoption of green infrastructure practices can help municipalities optimize investments that achieve proposed levels of service, while maintaining assets at the lowest lifecycle cost. Its cost-effectiveness and multi-benefit results make it prudent that municipalities regularly consider green infrastructure in approaching infrastructure spending and asset management planning and decisions. In the context of water infrastructure, green infrastructure has been found to provide cost benefits through two mechanisms: decreased costs of flood damage, and reduced cost of constructing and maintaining stormwater management and drainage infrastructure. Properly scaled and sited green infrastructure can deliver equivalent hydrological management of runoff as conventional stormwater infrastructure at comparable or lower costs. It has been estimated that green infrastructure is 5%-30% less costly to construct and about 25% less costly over its life cycle than conventional infrastructure of comparable performance.[1]

Many cities in the US are taking a fully integrated approach to stormwater management by making long term investments in both green and grey infrastructure.[2] For example, the New York City Green Infrastructure Plan is projected to save the city $1.5 billion over 20 years by including both grey and green investments. Washington DC has been designing areas to be reliant on green infrastructure for stormwater management, given the optimum performance realized for water quality improvements.

Climate Change

Green infrastructure provides a range of services that can make a substantial contribution towards climate change adaptation, and an important contribution towards climate change mitigation and emissions reductions, as well as lowered risk. These services include improving water quality, reducing stormwater runoff, flooding, and erosion, decreasing high urban temperatures, reducing energy use, and contributing to local food production. Combined with their potential cost savings, green infrastructure practices are increasingly recognized as a desirable 'win-win' approach to tackling climate change, in part because they also help to deliver multiple other social, economic and environmental benefits[3] while creating great places to live, work and play. Green infrastructure practices are adaptable to a variety of conditions and scales and help municipal governments make sensible infrastructure investments in the context of uncertainty and volatility of future climate conditions.

Alignment with Existing Provincial Mandate

Including green infrastructure as a required component of municipal asset management policies, strategies and plans would prompt municipalities to consider the services provided by green infrastructure when making costly infrastructure decisions, and help them manage their existing assets sustainably. It would also help align the

new asset management planning legislation with the growing number of provincial policies that recognize green infrastructure as an important tool for communities.

The Ontario Ministry of Infrastructure's 10-year Infrastructure Plan includes green infrastructure as a practice that can reduce the need for costly, large- scale infrastructure solutions. It is specifically cited as a way to reduce the burden on built systems, and integrating green infrastructure into the new asset management legislation would be consistent with the innovative solutions outlined in the 10-year Plan.

Including green infrastructure in the regulation also provides a key opportunity to integrate asset management planning with other provincial plans and policies, aligning priorities across legislations. The Climate Change Strategy and Action Plan, proposed Growth Plan for the Greater Golden Horseshoe, and the Great Lakes Protection Act, each include the need for green infrastructure to address climate change, support growth and protect our great lakes.

Why now?

Need for municipal support

An increasing number of municipalities across the province recognize the value of implementing green infrastructure practices and are looking for leadership on how best to do so. The recent Association of Municipalities of Ontario (AMO) Conference included a session on green infrastructure practices, and Ontario's Ministry of Environment and Climate Change is currently updating its stormwater guidance manual to include a requirement to reduce runoff volumes using green infrastructure (low impact development). The new asset management planning regulation should keep up with the emerging policy context and integrate green infrastructure assets because they have the same needs, and require the same provincial support and guidance as conventional infrastructure assets. Effective management of green assets also requires collaboration and information-sharing among municipalities, which the province is best-positioned to foster. Furthermore, in addition to the guide, establishing best practices in the key areas would create a very valuable, more user-friendly tool for municipalities big and small.

Integration from the beginning

It is critical that asset management planning legislation include green assets in the early stages of development and guidance. The planning and design phases of infrastructure projects is the most opportune time to consider integrating green infrastructure. Integration of green infrastructure into planning, capital works planning and coordination, and project planning and design from the beginning is also the best way to ensure maximum cost saving by creating co-benefits, and avoiding areas of conflict. It is also important financially, to plan and manage new and existing green assets in the same framework as their grey counterparts. Green infrastructure assets should not be an afterthought. They are an important type of infrastructure that complements grey, conventional infrastructure, and should be considered and integrated into asset management planning in order to drive sustainable and cost-effective infrastructure spending.

Green Infrastructure Ontario Coalition Background

Over the last seven years the GIO Coalition has been successfully promoting the implementation of green infrastructure across Ontario. With over 140,000 people working full time in the industry, from nurseries to designers to contractors, GIO provides a united voice for the sector. The living green infrastructure we promote includes both natural vegetative systems and green vegetative technologies located in urban, suburban and rural areas. The coalition's steering committee members include:

Conservation Ontario | Evergreen |Green Communities Canada | Green Roofs for Healthy Cities | Landscape Ontario Horticultural Trades Association | LEAF (Local Enhancement and Appreciation of Forests) | Ontario Association of Landscape Architects | Ontario Parks Association | Toronto and Region Conservation | Forests Ontario

www.greeninfrastructureontario.org

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[1]Green Infrastructure and Issues in Managing Urban Stormwater. Congressional Research Service. Online: http://nationalaglawcenter.org/wp-content/uploads/assets/crs/R43131.pdf

[2] U.S. EPA, Green Infrastructure Case Studies: Municipal Policies for Managing Stormwater with Green Infrastructure. Online at: http://www.sustainablecitiesinstitute.org/topics/water-and-green-infrastructure/stormwater-management/green-infrastructure-case-studies-municipal-policies-for-managing-stormwater-with-green-infrastructure

[3] http://www.greeninfrastructurenw.co.uk/climatechange/