



September 15, 2016

The Honourable Amarjeet Sohi
Minister of Infrastructure and Communities
Government of Canada

**Re: Phase 2 Federal Infrastructure Plan Consultations
Conservation Authorities – Supporting Federal Government priorities in helping
communities reduce their flood risk, managing and adapting to extreme
weather and leading green infrastructure partnerships in Ontario.**

Conservation Ontario represents the network of Ontario's 36 conservation authorities, local watershed-based natural resource agencies located throughout Ontario. Approximately 90 percent of Ontario's population lives in watersheds managed by conservation authorities. Conservation authorities are legislated under the Province of Ontario's *Conservation Authorities Act*.

Conservation Ontario applauds the Federal Government for investments in various types of infrastructure through the Phase 1 Infrastructure Plan and for undertaking the current Phase 2 consultations focused on the areas of Communities, Green Infrastructure, Public Transit and Social Infrastructure. This submission focuses on the areas of Communities and Green Infrastructure and includes highlights of details we provided in our [Conservation Ontario 2016 Federal Pre-Budget Submission](#) to the Minister of Finance (February 23).

Conservation Ontario commends the Federal Government for recognizing that climate change is the critical issue of our time, affecting Canada in many different ways. One of the impacts conservation authorities are tracking and responding to are more frequent and extreme weather events through our flood management programs, services and infrastructure in partnership with local municipalities and the Province. Floods are the most frequent natural hazard in Canada. In Ontario, flooding is the leading cause of public emergency often resulting in damage to property and infrastructure, costly business disruption and has even led to loss of life.

We encourage the Federal government to require projects to develop integrated solutions that provide multiple benefits. Conservation authorities use the Integrated Watershed Management framework to evaluate the effects on the environment from various land use, infrastructure or management actions now and into the future considering such factors as climate change, flooding, water quality, and erosion.

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Using such frameworks, solutions can be optimized and benefits or protection of natural features or the addition of green infrastructure demonstrated.

Definition of Green Infrastructure

Conservation Ontario's definition of Green Infrastructure refers to "natural" or "living" green infrastructure that consists of both natural capital and vegetative and other technologies designed to use natural processes to perform ecosystem services. This is consistent with the Ontario Provincial Policy Statement (2014) definition of green infrastructure: "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."

This definition is also consistent with the Green Infrastructure Ontario (GIO) Coalition's definition of Green Infrastructure. Conservation Ontario is a founding member of GIO Coalition and we encourage you to also consider the [Green Infrastructure Ontario Phase 2 Submission](#)

Conservation authorities are ready to work with Infrastructure Canada to implement and manage infrastructure projects in Ontario. This includes making investments in climate resilient traditional grey infrastructure like flood mitigation systems (e.g. dams) as well as "living" green infrastructure such as vegetative technologies and the protection and restoration of natural lands.

Conservation Ontario and the conservation authorities along with our provincial and municipal partners can work with the federal government to meet their objectives of identifying immediate and long term flood mitigation and infrastructure investment needs, asset management planning, and to develop data collection and data sharing capacity. In Ontario we have a model for implementation that can be explored and shared with the Federal Government and other Provinces and Territories.

Conservation authority flood and erosion control infrastructure is a combination of traditional 'grey infrastructure' and living 'green infrastructure'. Conservation authorities collectively own and operate over 900 dams, dykes, channels and erosion control structures with a replacement value of \$2.7 billion. The construction of this flood infrastructure dates back to the 1880's when dykes were built in London Ontario. The first dam constructed for flood control in Canada was the Shand Dam in the Grand River Watershed in 1942. Many of the Ontario dams were constructed in the 1950s through the 1970s with the last dam for flood control in Ontario constructed in 1976. Funding for construction was provided through Federal/Provincial/Municipal cost-share. Please see: [Protecting People and Property: Case For Investing in Flood Prevention Control and Management](#)

Currently, conservation authorities are only able to address a small portion of their more urgent and critical major maintenance concerns of aging infrastructure with funding from the Ontario government's Water and Erosion Control Infrastructure (WECI) program

A total of \$5 million/year is provided by the Ontario government and matched with another \$5 million/year from local municipalities. **This program is regularly oversubscribed** and often, smaller rural and northern infrastructure does not rank high enough in the risk management framework to receive funding and/or these municipalities are not able to match the provincial funding. This program is supported by a flood infrastructure data base which is managed by conservation authorities in partnership with the Province of Ontario.

Conservation Ontario recommends future Federal infrastructure programs include eligibility of this flood infrastructure which involves federal/provincial /municipal cost-share.

The Federal Government is to be commended for the Clean Water Waste Water Fund. Conservation Ontario is supportive of the eligible projects which includes naturalized systems for treating wastewater/stormwater. Conservation Ontario encourages the Federal Government to continue this program.

In the greater Toronto area approximately 75% of the developed area has no storm water controls as the lands were developed prior to modern storm water mitigation measures. Retrofitting these urban areas to treat storm quality and quantity have proven expensive and difficult squeeze into these densely populated areas. Applying storm water management will aid in mitigating overland runoff that contributes to localized flooding as evidenced by the July 8, 2013 storm. Federal investment in storm water management, including 'living' green infrastructure is essential to protecting our urban communities. Low impact development techniques, such as constructed wetlands, rain gardens, bioswales, and infiltration galleries are practices which help to capture, treat, infiltrate, filter and retain runoff at the source. These practices can be implemented as noted above through an integrated watershed management framework at multiple scales, including site-specific practices with smaller land requirements and less expense than traditional grey infrastructure approaches.

We also support integrated planning and delivery of integrated municipal drinking water, stormwater and wastewater systems to achieve efficiencies in management and resources, which provide co-benefits such as improved Great Lakes water quality and protection of water supplies and natural habitat for species at risk. Examples of CA projects have been provided in CO's 2016 Pre-budget submission.

Investment in human resources, tools and technologies are needed to support flood and stormwater management infrastructure.

The value of infrastructure, tools and human resources required to support management of flood infrastructure (dams, dykes), stormwater and optimization of wastewater management must not be underestimated. Building on 70 years of expertise, Conservation Ontario will continue to work with municipal and provincial partners, Public Safety Canada and Natural Resources Canada to develop federal floodplain mapping guidelines and provide input on natural hazard risk assessment tools, floodplain data, technologies and mapping.

We wish to commend the Federal government for continuing the National Disaster Mitigation Program which supports the small scale infrastructure, mitigation planning and the tools noted above.

Conclusion

Continued and enhanced investment in conservation authority flood management operations is critical in order to develop stronger resiliency to the increasing impacts of climate change on our natural resource systems.

The Federal government is encouraged to continue and consider making future investments in conservation authority green and grey infrastructure and related programs and services.

Conservation authorities are ready to assist the Federal government to develop a comprehensive infrastructure action plan that enables Canada, Ontario and our communities to better predict, prepare for and respond to weather related emergencies and natural disasters.

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