



Possibility grows here.

Greenbelt Foundation

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## Natural Solutions for a Green Recovery: Summer 2020 Grant Announcement Backgrounder

### Overview

The Greenbelt Foundation is announcing four natural infrastructure projects that will help municipalities in the Greater Golden Horseshoe save money, boost local tourism & recreation economies, create high-quality jobs, and build critical climate resilience. This announcement comes on the heels of recommendations made by the federal Taskforce for a Resilient Recovery, which urged Canadian governments to support Green Infrastructure projects as part of a green recovery from COVID-19.

The Greenbelt Foundation is announcing these four projects as a bundle of investments that use natural solutions to address pressing infrastructure problems. While these projects are very regionally-focused, together they are an excellent example of the Foundation's commitment to work in the Natural Infrastructure stream, and to the benefits of natural infrastructure, more broadly.

*Natural Infrastructure* is an important facet of *Green Infrastructure*, and refers specifically to naturally occurring landforms (i.e. healthy soils), ecosystems (i.e. a wetland) or organisms (i.e. a mature tree) that provide infrastructural services (or "ecosystem services") to surrounding communities.

### Background

The Greenbelt Foundation is one of the largest third-party investors in Canada that helps municipalities incorporate their natural assets into infrastructure plans and climate strategies. Since 2018, the Greenbelt Foundation has been working with Municipal Natural Assets Initiative (MNAI), alongside various municipal partners and conservation authorities, to mainstream the use of natural solutions at a municipal level to pressing infrastructure problems happening in Ontario communities. The Foundation is undertaking this work as a key part of helping Ontario become climate ready in the most cost-effective way possible.

This work also has incredibly important co-benefits. By helping municipalities value and invest in their natural assets, we are also helping them create high-quality greenspace for residents, local jobs for workers, and important habitat for biodiversity. The Greenbelt is home to 78 species-at-risk, and is part of the southern Ontario landscape, which is home to the greatest concentration of biodiversity in Canada, while also being Canada's most developed area.

Outside of our partnership with MNAI, Greenbelt Foundation also partners with Ducks Unlimited Canada and a number of other high-impact partners to help propel the use and understanding of natural infrastructure in the Greenbelt and beyond it.



## Newly Funded Projects:

### **Preventing Flooding and Erosion in Salt Fleet Conservation Area** (Hamilton Conservation Foundation)

This project focuses on restoring a historic wetland complex on the Niagara Escarpment in east Hamilton. Located within the Upper Stoney and Battlefield Creek Watersheds, the land was in agricultural production until recently, but was prone to waterlogging during the spring and storm events. With the City of Hamilton, the Conservation Foundation has already secured 109ha for restored wetland complexes and re-naturalized areas on four distinct parcels.

Wetland reconstruction will provide city flood control services. A mix of 306 homes and commercial properties are located downstream of the degraded portions of the watersheds and exposed to significant flooding each year. An ecosystem services valuation and business case for the project was completed by the Foundation in 2019. The study estimates that moving forward flood damages in any year would be up to \$95m. As climate change worsens, climatologists predict that costly flood events are likely to happen more often.

The project is a strong example of using natural infrastructure to mitigate an existing flood risk. Completed engineering studies and a detailed ecosystem services business case provide evidence of the effectiveness and costs of natural infrastructure investments and the ability to compare with grey infrastructure or 'do nothing' alternatives.

Co-benefits of the project include:

- The creation of a new Salt Fleet Conservation Area with recreation trails connected to the existing Dofasco Trail;
- Extensive naturalization, creating new wildlife habitat for a diverse range of species; and,
- Restoring ecosystem health, which will reduce erosion and degradation within the two watersheds, currently caused by large stormwater runoff volumes.

*“The Saltfleet Conservation Area wetland project has been developed to reduce the risk of flooding and erosion through creating and enhancing wetlands and associated natural areas. The lands acquired, totaling over 101 hectares (250 acres), will also provide trails in the east end of our watershed. This green infrastructure project has benefitted from the financial support of the Greenbelt Foundation and the Hamilton Conservation Authority is thankful for their support. We look forward to seeing the benefits of this project for our watershed as the project comes to fruition.”*

–Scott Peck, Deputy CAO / Director, Watershed Planning & Engineering, Hamilton Conservation Authority

### **Flamborough Centre Park Wetland Creation** (Conservation Halton Foundation)

Conservation Halton will restore a 1-hectare wetland ecosystem in the Grindstone Creek Watershed in the City of Hamilton. In Flamborough, a portion of a local recreation park that is currently a non-native mowed lawn will be converted back into a mix of swamp, riparian and marsh features. Due to a high water table, the site was underutilized by residents and finally abandoned by the City as active greenspace.



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The wetland will restore hydrological functions on the site to provide a greater area for flood storage in the watershed. The adjacent area includes a 190ha Provincially Significant Wetland Complex. Existing homes and agricultural fields upstream and downstream of the site experience ongoing flooding issues. The increase in storage capacity resulting from the project and flood mitigate potential will be determined during project design.

This project underscores the critical role of wetlands in providing natural flood control infrastructure and building community resilience to climate change. Part of a larger flood prone area that drains into the upper reaches of Grindstone Creek, the project will add flood storage capacity and is expected to reduce water flows downstream.

Restoration of wetland ecosystems (pit and mound swamp forest, wet mixed open marsh) and wildlife habitat features (woody and herbaceous plants) will also provide co-benefits to the community including:

- Improved water quality into Hamilton Harbour;
- Increased natural buffers;
- Natural heritage connectivity;
- Diversity of flora and fauna at the site; and,
- Improved quality of the remaining publically accessible portion of the site.

*“Investing in green infrastructure ultimately contributes to the building of more climate resilient communities. Thanks to funding from the Greenbelt Foundation, Conservation Halton is able to take the first steps in making the vision of the wetland restoration of an underutilized portion of Flamborough Park a reality. Not only will this project reduce localized flooding and increase biodiversity, it will also improve the quality of publicly accessible greenspace, enhancing the livability of the area for residents.”*

-Hassaan Basit, CAO, Conservation Halton

### **Petun Dam Removal – Black Ash Creek (Nottawasaga Valley Conservation Authority)**

Project removes a partially-failed dam in Black Ash Creek on the Niagara Escarpment in Collingwood. Water volumes and sediment in the 100m head pond located behind the dam pose a flood risk that will be avoided with naturalization of the pond and additional valley lands. A complete dam failure will damage roads, culverts and private properties downstream and release sediment and pollutants into Collingwood Harbour. Creek naturalization will cost significantly less than dam reconstruction and maintenance over its lifespan.

This project showcases the use of natural infrastructure to eliminate a flood risk. A number of similar unstable dams exist across the Greenbelt and its river valleys. This project can provide evidence that supports the removal and replacement of dams with natural infrastructure versus spending money on repairs. Foundation staff will determine the greater opportunity in the Greenbelt. Project partners and funders include the Nottawasaga Steelheaders, Blue Mountain Watershed Trust, Bruce Power, Enbridge,



and a local Foundation.

Co-benefits derived from naturalizing the Creek include:

- Improved water quality and groundwater recharge;
- Increased capacity of the Creek to support an important local sport fishery in the harbour; and,
- Beautification of one of the highest viewpoints on the Escarpment.

*"Thanks to the Greenbelt Foundation and other funding partners, NVCA staff and volunteers are able to decommission the dam at Petun Conservation Area. We knew that half the dam had failed prior to 1992. The remaining structure represents a threat for downstream flooding if it fails, and the water stored behind the dam is released in one event. By removing the dam and restoring a natural Niagara Escarpment stream and valley corridor, the project creates green infrastructure that lowers flood risk."*

-Fred Dobbs, Manager of Stewardship Services, NVCA

### **The Lake Scugog Enhancement Project (Kawartha Conservation)**

This project constructs a wetland ecosystem to improve the management of stormwater and filter nutrient rich waters moving into Port Perry Bay, in order to help bring the lake back to health. Stormwater runoff, carrying pollution and sediment, has severely degraded the Bay limiting boat access, fishing, and curbing recreation activities.

The project will also dredge soils and invasive aquatic species, extend the shoreline around the wetland, and create and enhance natural habitats. Without action, climate change is a major risk factor in accelerating eutrophication of the Bay resulting in greater economic losses in boating, fishing and other recreational uses and associated tourism dollars.

The ecosystem, aesthetic values and creational values of the Lake Scugog Watershed are estimated to provide \$220m in economic value to Port Perry annually and benefit over 20,000 area residents. The project has wide community support, developed in consultation with all levels of government, First Nations, conservation professionals and community stakeholders.

Project co-benefits include:

- Establishing healthy aquatic ecosystems that support spawning grounds for native fish species;
- Establishing healthy terrestrial ecosystems that provide greater habitat for Species at Risk, including migratory birds, waterfowl, amphibians, and reptiles; and,
- Providing a new and exciting community trail and fishing platform out in the Bay.

*"We are delighted to receive this grant from the Greenbelt Foundation to support the Lake Scugog Enhancement Project. This important project is a key collaboration between Kawartha Conservation, the Township of Scugog and the Scugog Lake Stewards that will create numerous benefits for people and the environment through the provision of a new wetland, enhanced navigation of Port Perry Bay and water quality improvements. With this grant we can positively move forward, with a focus on commencing construction in 2021."*

-Mark Majchrowski, CAO, Kawartha Conservation