




COMMUNICATION UPDATE

TO:	Mayor and Members City Council
DATE:	December 6, 2022
SUBJECT:	Grindstone Creek Watershed Natural Asset Project - HW.22.12 (City Wide)
WARD(S) AFFECTED:	City Wide
SUBMITTED BY:	Cari Vanderperk Director, Watershed Management Public Works Department
SIGNATURE:	

In January 2019, Municipal Natural Assets Initiative (MNAI) partnered with the Friends of the Greenbelt Foundation and solicited expressions of interest for local governments to host a pilot project located in a watershed within or originating within Ontario's Greenbelt. Through this project, MNAI would offer scientific, financial, and municipal services management expertise.

Municipal natural assets refers to the stock of natural resources or ecosystems, such as forests and wetlands, that contribute to the provision of one or more services. For example, a wetland stores excess rainwater that is slowly released over time while pollutants are removed and peak flood volumes are decreased. At the local level, we all rely heavily on nature's services to improve our physical health, safety and overall quality of life.

The objective of the MNAI in Ontario's Greenbelt Project was to "help participating local governments identify, prioritize, value, and manage key natural assets. This would result in the natural assets providing core services such as storm water management in a cost-effective and reliable manner for the long-term, which can in turn: save money relative to engineered alternatives; reduce risk and potential liability and result in sustainable service delivery to the community."

Unlike traditional infrastructure, natural assets often extend beyond the boundaries of a single jurisdiction and require collaboration between conservation authorities, municipal departments, private property owners, and adjacent municipalities. As a result, in the

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spring of 2019 with Conservation Halton taking the lead, the Cities of Hamilton and Burlington, and the Royal Botanical Gardens put forward a successful proposal for the Grindstone Creek watershed. Grindstone Creek, with headwaters in Hamilton, flows through parts of Waterdown and urban Burlington to its mouth in Hamilton Harbour/Burlington Bay.

The purpose of the project was to explore the value of natural assets in Grindstone Creek in addressing natural resource issues, with a focus on storm water management. Subsequently, on November 19, 2019, a Memorandum of Understanding was signed by the Project Partners with the scope of the Natural Assets Management Project within the Grindstone Creek watershed defined as:

- Identifying:
 - (a) natural assets of interest
 - (b) the ecosystem functions of the identified assets
 - (c) the municipal services derived from the ecosystem function
- Determining scenarios to model (climate change, land use intensification)
- Determining beneficiaries of the services provided by the natural assets
- Determining the economic value of the functions provided by the natural assets

From 2019 to 2021, the Grindstone Creek Project produced data, modeling, and strategies for all Project Partners which included:

- Developing an interactive, web-based inventory with information on location, size, and extent of natural assets in the Grindstone Creek watershed, condition of natural assets, and risks to natural assets
- Modelling to assess role of natural assets in flood reduction (peak flow attenuation and infiltration)
- A valuation of how natural assets contribute to stormwater management and co-benefits
- Scenario development to consider future states of the watershed and analyses to inform continual improvement
- Recommended next steps to advance comprehensive natural assets management efforts

The MNAI has estimated the total value of the natural assets, for stormwater management, within the Grindstone Creek watershed at approximately \$2 billion. This dollar value reflects capital costs of implementing equivalent engineered infrastructure assets to provide the same stormwater management services. Operational costs, such as monitoring and maintenance, were not estimated and are an additional cost to be considered in the future.

To support effective decision-making, the project considered six scenarios including climate change impacts and different management and land-use practices. The project

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documents also established a replicable methodology and process to understand, measure, and value natural assets at a watershed scale. As a result the Grindstone Creek watershed was also estimated to provide an annual service value of approximately \$34 million in co-benefits, including recreation, erosion control, habitat biodiversity, atmospheric regulation, and climate mitigation. Most importantly, the project revealed how important collaboration across a range of organizations was to be able to pursue the management of natural assets at a watershed scale.

The final report, and subsequent summary report, have been completed and posted at www.mnai.ca/grindstone-creek-watershed-natural-assets-management-project/. The summary report provides a concise account of the findings including the ten recommendations, starting on page 22, that fall under the following categories:

- Improving watershed governance and strategy
- Restoring natural assets in high-risk areas
- Specific asset management-based activities

Next steps for the Project Team include assessing each recommendation. The recommendations that fall under the purview of the City of Hamilton will be addressed in the City of Hamilton Watershed Action Plan process. That process includes a collaborative effort with our community partners and agencies to plan, develop and execute municipally driven watershed improvement actions. Any financial or resource requirements will also be determined throughout the City of Hamilton Watershed Action Plan process. An Information Report will also be prepared for this initiative in Q1 2023 and brought forward to Public Works Committee.

The City's Corporate Asset Management team continues to be informed on the project and will be further consulted based on the evaluation of the identified recommendations.

It is clear that proper natural asset/land management cannot be achieved if it is confined within one's political boundary. The ability to effectively support nature's services relies on a combined, strategic effort from neighbouring stewards. Hamilton Water will continue to participate and collaborate with area stakeholders to further advance the City's commitment to environmental stewardship.

APPENDICES AND SCHEDULES ATTACHED

Not Applicable.