City of Oshawa
Municipal Natural Assets Initiative
Oshawa Creek Corridor

Michelle Whitbread, Manager
Operations Policy and Research
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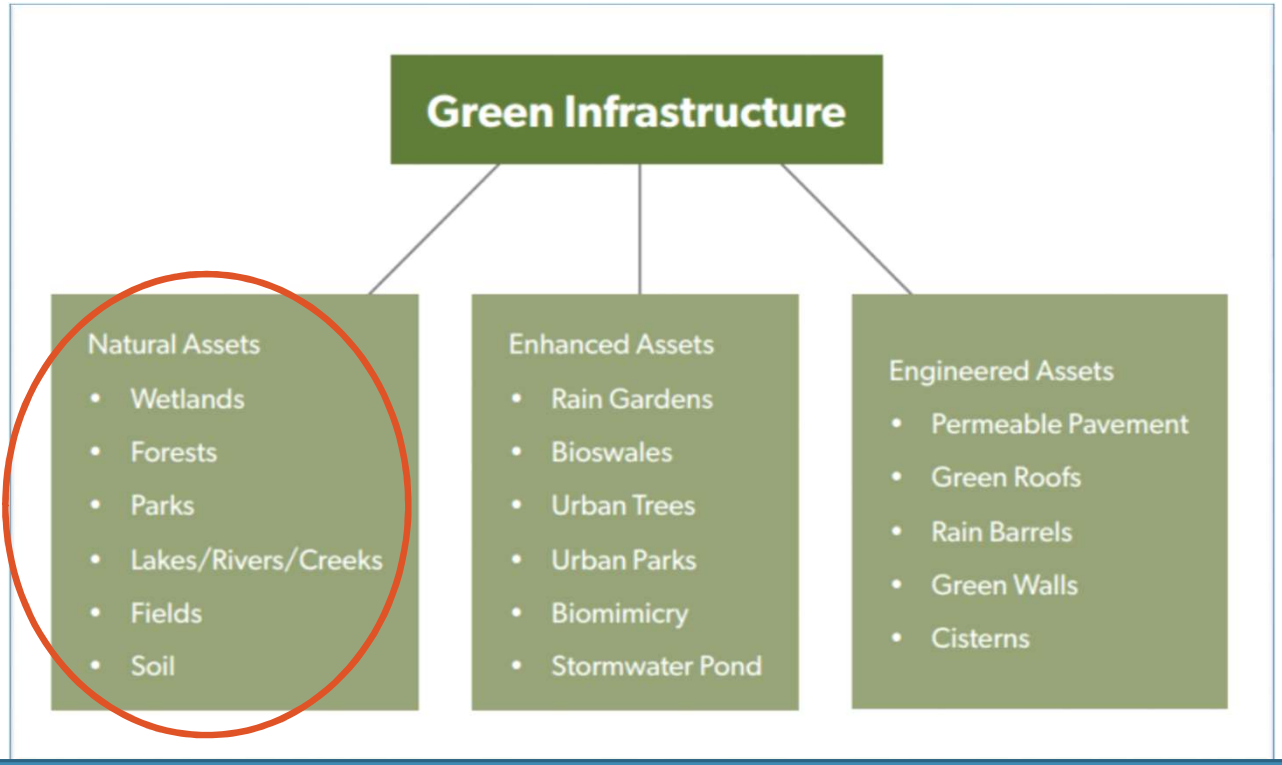
Overview

- Natural Assets
- Municipal Natural Assets Initiative
- City of Oshawa Pilot Project Summary

Municipal Natural Assets



For local governments, natural assets can include forests, which intercept stormwater and recharge aquifers, wetlands, which capture surface runoff and reduce flooding risk, and coastal areas, which protect against storm surges and sea level rise, among others.

Asset Management

Benefits

- Demonstrates value and savings associated with investing in maintenance and expanding green infrastructure than to build and manage engineered infrastructure.
- Builds business case, secures funding and supports integrated decision making – operations, management, maintenance.
- Improve long-term planning.
- Deliver municipal services more efficiently.
- Improves management and the overall health of the natural system (connectivity and diversity).

Town of Gibsons, B.C.

Development Cost Charge Bylaws can be updated to include natural assets for improvement and rehabilitation.

www.oshawa.ca

Asset Management

Challenges

- Municipalities use natural assets to varying degrees, the assets are typically over-used, and the dependence on the asset is unrecorded.
- A limited number of examples of municipalities deliberately substituting natural assets for engineered assets.
- Absence of a common methodology across municipalities.
- Public Sector Accounting Board (PSAB)) limits what can be reported within public sector financial statements and excludes natural assets.

Municipal Natural Assets Initiative

Making Nature Count

"Support(ing) municipalities in measuring and managing natural assets within the context of their asset management business processes, which will in turn support the sustainable delivery of municipal services and improved management and health of natural assets".

Smart Prosperity Institute

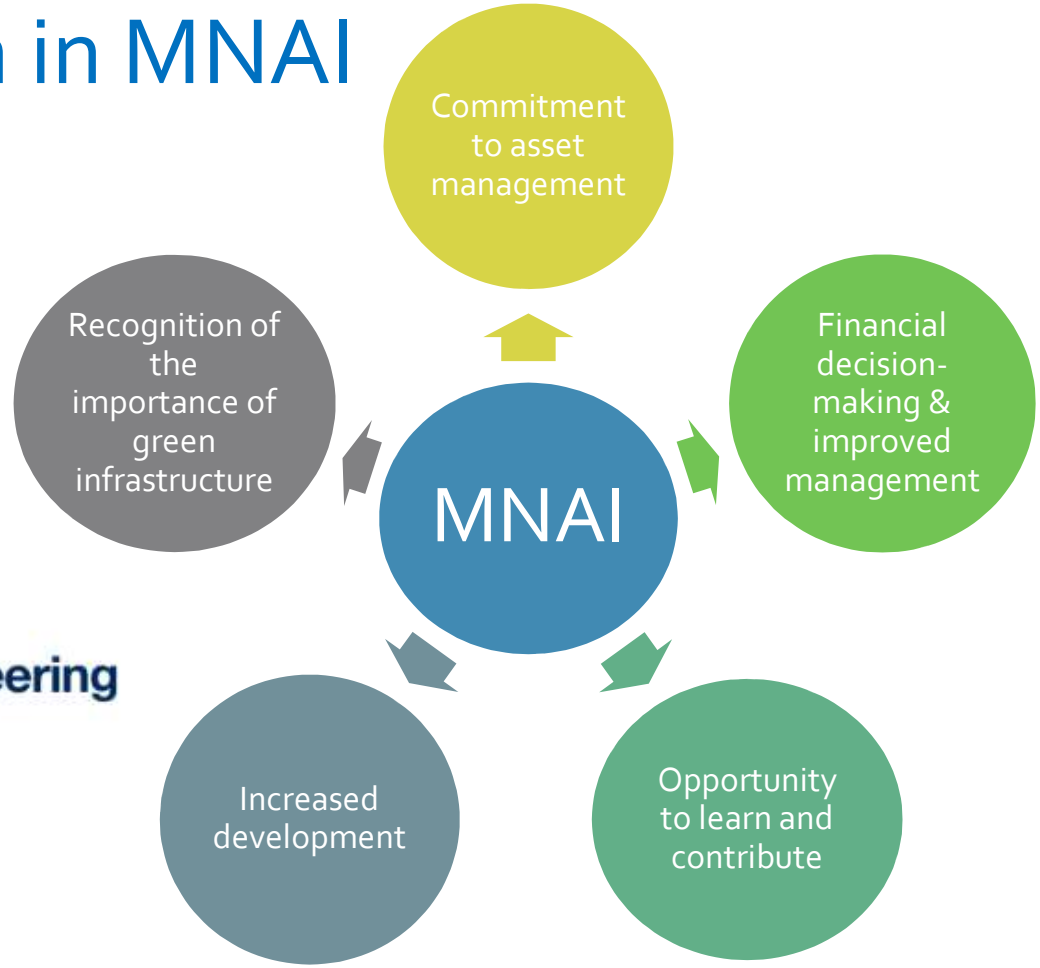
DAVID SUZUKI FOUNDATION
One nature.

Brooke & Associates CONSULTING

TOWN OF GIBSONS

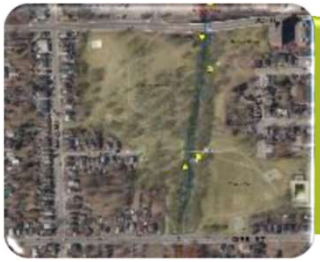
FCM FEDERATION OF CANADIAN MUNICIPALITIES | FÉDÉRATION CANADIENNE DES MUNICIPALITÉS

Oshawa's Participation in MNAI



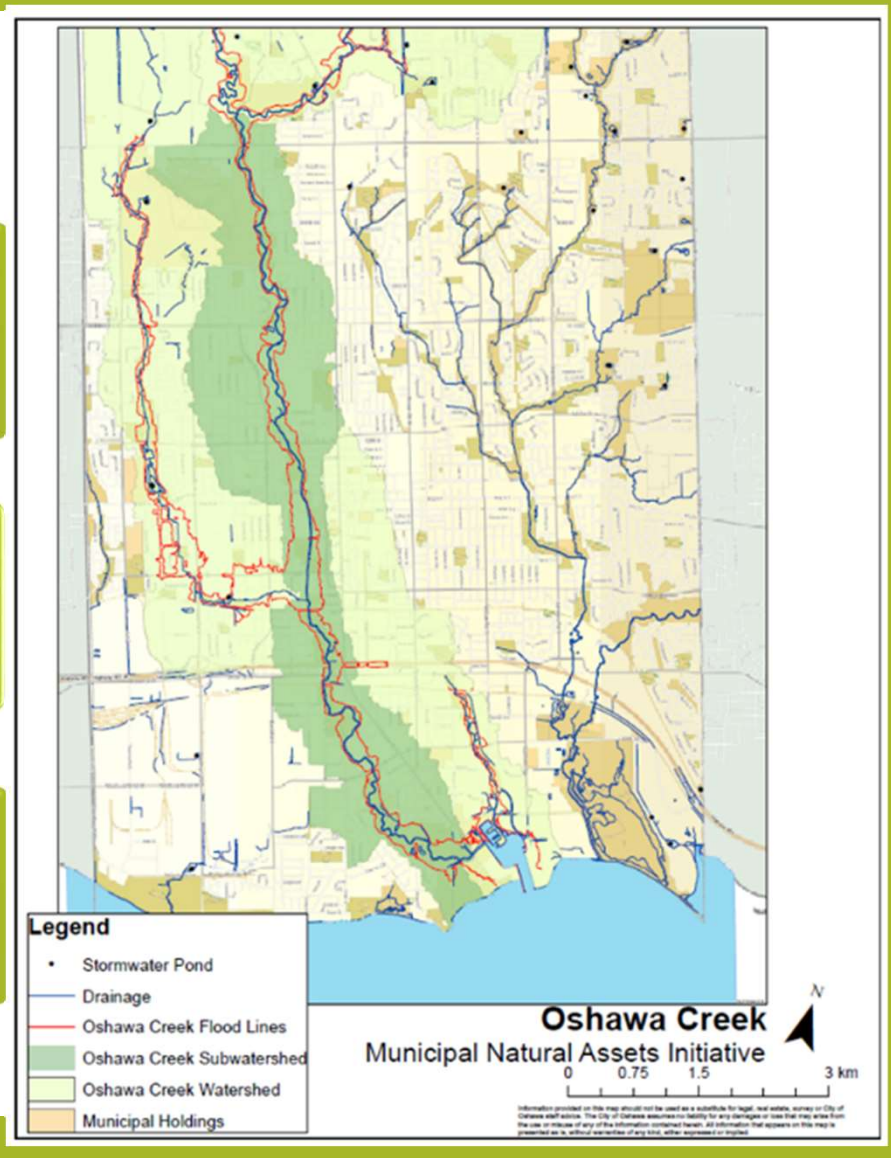
Oshawa Pilot Study

Study Area



Opportunities

Challenges



Municipal Natural Assets Initiative

Scoping

- Oshawa Creek
- Challenges include flooding, erosion, invasive species, declining/aging tree canopy
- Channelization including CP Railway embankment
- Risks to infrastructure

Conditional Assessment

- Residential, commercial and industrial
- Urbanization upstream
- 41 direct outfalls (water quality and quantity)
- Located within incised valley land
- Regulated flood plan
- Infrastructure – trails, BIA, parking, parks

Beneficiary Assessment

- City infrastructure
- Development upstream
- Private property

Modeling

- UofT Water Resource Engineering Student
- Use Visual Otthymo and Hec-Ras Models
- Model changes in impervious area, consider changing climate
- Compare to engineered infrastructure

Project Outcome

- Identify actions over medium and long term to maintain health, increase water storage and decrease erosion:
- LID and green infrastructure
- Improve resiliency
- Decrease erosion
- Provide cost savings through avoided engineered controls upstream

Thank you.

Durham Region Natural Environment Climate Change Summit

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thank you

thank you