PRIMER ON NATURAL ASSET MANAGEMENT for FCM's 2018 Sustainable Communities Conference

This primer will:

- Introduce you to Municipal Natural Asset Management
- Explain why it is important to consider natural assets as part of your overall asset management strategy
- Help you chart your community's course towards implementing Municipal Natural Asset Management



Steps towards effective municipal natural asset management

Healthy creek distant from

Degraded creek near area

with land intensification

developments

Stormwater absorption,

conveyance, and flood

Stormwater absorption,

conveyance, and flood

protection

protection



Ecosystem services in municipality	Terrestrial parks	Urban forests	Wetlands	Shoreline/ coastal area	Terrestrial parks	Forests	Bay & waterways	Gardens/ cultural places			
Provisioning Services											
Water supply	1	2	2	1	3	3	5	1			
Regulating Services											
Water purification	4	4	5	1	3	4	1	1			
Flood protection	4	5	5	2	3	4	1	l and a second			
Climate regulation	1	2	2	4	2	5	2	1			
Soil quality & stability	4	4	4	2	4	5	2	2			
Cultural Services											
Landscape and	5	5	1	5	5	5	4	5			

neighbourhood amenity

Implementation -Phase

STEP 6

Determine what scenarios you want to understand

Start managing your natural assets

and climate change) and decide what variables

- Operations and maintenance plans are key to municipal natural asset management and can include monitoring, maintenance, acquisition, restoration.
- Plans should focus on service delivery from priority natural assets and be supported by multi department teams.
- Funding for plan implementation must be set aside in financial plans.
- Natural asset service value can be reflected in 'notes' sections of financial statements.
- Other steps will emerge from the process.

Hazards	Impact	Likelihood	Risk
Leak from gas storage tank	High	Medium	High
Spill from transport truck	High	Low	High
Storms, development	High	Low	Medium-high
Development and overuse	Low	Low	Low
Development and overuse	Medium	High	High

What are municipal natural assets?

- "Natural assets" are the stock of natural resources and ecosystems that yield a flow of benefits to people.
- "Municipal natural assets" are the stock of natural resources or ecosystems that are relied upon, managed, or could be managed by a municipality, regional district, or other form of local government for the sustainable provision of one or more municipal services.
- Natural Assets
- Wetlands
- Forests
- Parks
- Lakes/Rivers/Creeks
- Fields
- Soil

Enhanced Assets

Green Infrastructure

- Rain Gardens
- Bioswales
- Urban Trees
- Urban Parks
- Biomimicry
- Stormwater Pond

Engineered Assets

- Permeable Pavement
- Green Roofs
- Rain Barrels
- Green Walls
- Cisterns

 "Green infrastructure" is a broad category that includes natural assets and designed and engined

assets *and* designed and engineered elements that have been created to mimic natural functions and processes in the service of human interests, as depicted in the diagram.

Why manage municipal natural assets?

- Natural assets such as aquifers, forests, streams, riparian areas and foreshores can provide municipalities with vital services equivalent to those from many engineered assets.
- Emerging evidence shows that identifying, measuring and managing natural assets as part of an overall asset management strategy can save capital and operating costs and reduce risk.
- Local governments are finding that natural assets are resilient and adaptable to climate change. With effective monitoring, maintenance and rehabilitation now, natural assets can provide service and add value for decades in ways that many engineered assets cannot match.
- In some communities, development cost charges may be able to support the rehabilitation of natural assets.
- There are external funding sources to support the maintenance/rehabilitation of municipal natural assets.
- Some natural assets serve multiple purposes. For example, parks may reduce flooding risks as well as provide recreational benefits and can be managed to maximize several objectives.

Who can help me?

MNAI aims to make municipal natural asset management mainstream across Canada. Reach the MNAI team at **info.mnai@gmail.com** for more information. The Convening Partners of MNAI are: **Brooke and Associates; David Suzuki Foundation;** Smart Prosperity Institute; and, Town of Gibsons.

Other resources

- The MNAI Facebook page is updated with tools and news on projects and details of new projects coming online. https://www.facebook.com/municipalnaturalassets/
- Read communities' experiences here: http://bit.ly/2kTln7z
- Learn how the Town of Gibsons got started http://www.gibsons.ca/eco-assets
- Stormwater management model noted in Step 5: http://bit.ly/2gWYAUs
- TEEB for Cities: http://www.teebweb.org/publication/teeb-manual-for-cities-ecosystem-services-in-urban-management/

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