Integrating Climate Change and Asset Management: Updating the BC AM Framework

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Asset Management for Sustainable Service Delivery: A BC Framework

- Released in 2014
- Funded by UBCM; Gas Tax
- “Developed to provide local governments with a high level view of the process of asset management…”
- Nationally recognized; International use
- Key resource for communities
Updating a 4 year old document?

Document development recognized limitation
Living document; future updates (page 4)

Only one reference each:
• Climate Change
• Natural Assets

The lack of linkages was intentional...
Why?

• Feedback from practitioners

• Recommendation from the Green Communities Committee: *Revise the Framework to integrate climate change implications, and to include the value of natural assets*

• Timing and funding
Project Status

- Project initiated in late 2017
- Project scope change – addition of *Primers*
  - Climate Change
  - Natural Assets
  - Land Use & Planning
  - Operations & Maintenance
- Peer review of CC Primer final draft
How many communities have taken steps to integrate climate change and asset management?
Climate Change is the Greatest Challenge of our Generation

AUDITOR GENERAL REPORT, 2018
Climate Change in British Columbia
Climate change amplifies risk and increases costs.
Parks

- Drought leading to increased stress on vegetation
- Potential water restrictions for built water features
- Increased temperatures leading to increased demand on parks with water features
- Change to water quality of adjacent lakes or rivers
- Increased erosion and decreased slope stability
Land Transportation

- Pavement softening and shorten life expectancy
- Road damage from erosion, landslides, and embankment failure
- Thermal cracking, rutting, frost heave, and thaw weakening
- Road washout
- Causeways, bridges, and low-lying roads have a high risk of being inundated or damaged
Other Impacted Asset Categories

BUILDINGS  
DRAINAGE & FLOOD PROTECTION  
WASTEWATER  
SOLID WASTE MANAGEMENT  
DRINKING WATER
Impact Natural Assets

- WETLANDS
- CREEKS
- DELTAS
- FORESHORE AREAS
- FORESTS
- GROUNDWATER AQUIFERS
- AND OTHER NATURAL ASSETS
How do you prioritize?
Asset Management

AM PROVIDES A SYSTEMATIC APPROACH FOR EVALUATING TRADE-OFFS BETWEEN SERVICE, COST, AND RISK FOR BUILT AND NATURAL ASSETS.
Use existing processes to balance investments, working toward the goal of sustainable service delivery.

Cost-efficient
AMBC Framework
Updating the Framework

- Scoping
- Updating Framework Document
- Developing Companion Primer

- Research
- Interviews

- Key Messages
- Draft Primer
- Final Content
- Final Primer Release
Primer Audience

- Staff from local governments in BC
  - Organizations of various sizes, capacities, and at differing stages of AM maturity
- Management / decision-making level
- Operational level
Primer Purpose

• Companion document to BC AM Framework, filling the gap between the Framework (outcomes) and the roadmap (how to)
• Introduce basic concepts
• Compel the reader to include climate change response in asset management processes
• Clarify the desired outcomes
• Introduce strategies and process for how
• Support the reader in navigating existing resources and references
Primer Format

WHAT

WHY

HOW

CALL TO ACTION AND KEY CONCEPTS

BENEFITS

APPROACHES AND OUTCOMES
What?
What?

- Impacts of climate change on local government infrastructure systems
- Cascading impacts
- Important definitions: exposure, sensitivity, adaptive capacity, vulnerability, risk, adaptation, mitigation
Why?

WHY INTEGRATE CLIMATE CHANGE RESPONSE AND ASSET MANAGEMENT?
The purpose of asset management is sustainable service delivery, and climate change is a threat to sustainable service delivery.
Asset management practices can increase a community’s resilience to the impacts of changing climate and improve response to natural disasters.
Asset management decisions will impact climate change.
Asset management helps local governments make decisions about climate change response in the broader context of local government service delivery and other priorities.
Integrating climate change response into asset management is a practical approach to managing liability risks.
How?

HOW TO INTEGRATE CLIMATE CHANGE AND ASSET MANAGEMENT?
AMBC Framework
Assess

- **AM PRACTICES**
  Assess AM practices to identify the current level of integration, gaps, and opportunities for increasing climate change integration throughout the AM Process.

- **ASSETS**
  Assess the vulnerability of assets to climate change and lifecycle emissions of assets.
Plan

• **AM POLICY**
  Formalize the organization’s commitment to integrating climate change response and AM in the AM policy.

• **AM STRATEGY**
  Identify the approach the organization is taking to integrate climate change mitigation, adaptation, and asset management.
Plan

• **AM PLAN**
  
  Identify specific impacts to levels of service, service delivery risks, actions for managing risks (capital and operational), and costs. Include considerations for adaptation and mitigation.

• **LONG TERM FINANCIAL PLAN**
  
  Update the long term financial plan to include considerations of climate change mitigation and adaptation. Include funding strategies and potential risks.
Implement AM practices with integrated climate change response.

Measure the resilience of the organization and services to changing climate. Reporting to staff, council, and the public.
Next steps

• Finalize and release primers
  • Climate Change – before end of October
• Updated BC AM Framework