



# Asset Management & Climate Change Tools

*Building Asset Management in  
Newfoundland & Labrador*

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2 May 2019

MNL Symposium - Gander, NL

***BAM!*** NL is offered through the  
**Municipal Asset Management Program (MAMP)**  
which is delivered by the  
**Federation of Canadian Municipalities (FCM)**  
and funded by the  
**Government of Canada.**



# Update on Asset Management Initiatives

Municipal Affairs and Environment

# This Presentation

## Background

- Asset Management
- MAE Efforts

## Toolkit

- Aim and Delivery Timeline
- High Level Tool Overview

## Questions

# Caretaker Period

“Caretaker Mode” during the Election Period

This presentation is meant to provide a factual overview of the Asset Management Efforts ongoing, and will not discuss policy or spending.

# Background – Asset Management

## What is Asset Management

*“A systematic process of maintaining, upgrading, and operating physical assets cost-effectively.”* (US DOT, 1999)

## Key Principles

- Asset Value
- Life-cycle and Risk Management
- Long Term Affordability

(NRC/FCM, 2005)

# Background – Asset Management

## Canadian Infrastructure Report Card (2016)

- Provides an assessment of the state of municipal infrastructure.
- Municipal governments own nearly 60% of Public Infrastructure.
- One third of municipal infrastructure is in very poor to fair condition.
- All communities, particularly smaller municipalities, would benefit from increased asset management capacity.

To put that in perspective...

# Background – Asset Management

Very Good  
Condition

*New  
Construction*



*Image/Information Source:  
Pavement Surface Evaluation and Rating (PASER) Manual.  
Transportation Information Center, University of Wisconsin-Madison*

# Background – Asset Management

Good Condition

*Tight and sealed  
transverse and  
longitudinal  
cracks.*



*Image/Information Source:  
Pavement Surface Evaluation and Rating (PASER) Manual.  
Transportation Information Center, University of Wisconsin-Madison*

# Background – Asset Management

Fair Condition

*Moderate to  
severe raveling  
in  
wheel paths.*



*Image/Information Source:  
Pavement Surface Evaluation and Rating (PASER) Manual.  
Transportation Information Center, University of Wisconsin-Madison*

# Background – Asset Management

Poor Condition

*Wide and raveled cracks.*



*Image/Information Source:  
Pavement Surface Evaluation and Rating (PASER) Manual.  
Transportation Information Center, University of Wisconsin-Madison*

# Background – Asset Management

Very Poor  
Condition

*Patches in poor  
condition,  
wheelpath  
rutting. Pulverize,  
strengthen and  
reconstruct.*



*Image/Information Source:  
Pavement Surface Evaluation and Rating (PASER) Manual.  
Transportation Information Center, University of Wisconsin-Madison*

# Background – MAE Efforts

## Municipal Capital Asset Management RFP (Fall 2016)

- A first step to developing a framework
- R.V. Anderson Associated Ltd.
- Final Report Delivered May 2017

## *“Municipal Capital Asset Management Plan Report”* Findings:

- > 55% of municipalities have less than 500 people
- Key principles of framework – Simple, Robust, Flexible, Clear.
- Recommended developing
  - Tools and Templates
  - Guidance Documents
  - Education Materials

# Background – MAE Efforts

## Sector Partner Consultation

- Consulted MNL and PMA about findings of RV Anderson Report

## Joint Committee formed

- To guide and support implementation of Municipal Asset Management in NL
- Members from DMAE, MNL, PMA

## BAM!NL

- DMAE representation
- MAMP program support

# Toolkit Overview

## Municipal Capital Asset Management RFP #2

- Provide an excel based toolkit for municipal use
- Aimed at answering 7 Questions of Asset Management
- Will be available late summer/early fall

# Toolkit Overview

## Tool Addresses:

- Inventory and Database
- Asset Valuation and Service Life
- Condition Self-Assessment Tools
- Risk Management
- Financial Planning

# Toolkit Overview

## Inventory and Database

- *Inventory Guidance document will outline requisite data collection standards for assets. Data collection standards must be suitable for provincial range of community sizes, and be sufficiently flexible to accommodate accordingly.*
- A robust, scalable database.

# Toolkit Overview

## Asset Valuation and Service Life

- *This tool will be developed to allow municipalities to determine the value of each asset type...provide guidance on method of valuation based on information at hand (original cost, indexed replacement cost, etc.).*
- *Tool will provide guidance on the anticipated service life for each asset type...*
- Establish Asset Value and anticipated Service Life.

# Toolkit Overview

## Condition Self-Assessment Tools

- *This tool will allow municipalities the ability to identify the condition of their assets **without having to engage a consultant.***
- Determine Condition of Assets.

# Toolkit Overview

## Risk Management

- *Guidance document aspect will outline risk management principles, methods for ranking risks based on community priorities, and provide guidance on risk mitigation.*
- Assess Risks.

# Toolkit Overview

## Financial Planning

- *Tools to provide guidance on short and long term financial planning, budgeting, capital reserves, growth strategies, and contingency planning for communities.*
- Determine the Financial aspects related to Assets.



# CLIMATE CHANGE VULNERABILITY

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Knowing the Impacts and  
Preparing for Adaptation

This initiative is offered through the Municipalities for Climate Innovation Program, which is delivered by the Federation of Canadian Municipalities and funded by the Government of Canada.



FEDERATION  
OF CANADIAN  
MUNICIPALITIES

FÉDÉRATION  
CANADIENNE DES  
MUNICIPALITÉS

**THE PAST CENTURY** was the warmest century globally in the past 1000 years

**THE PAST DECADE** was the warmest decade globally on record

**THE YEAR 2017** was officially declared the hottest year on record without el nino

# What is Climate Change?



**The shift in long-term average weather patterns.**

Climate change is normal and natural over long periods of time. In recent years, climates have been changing very quickly. This is a problem for humans, and many other species.




**5 ENHANCED GREENHOUSE EFFECT:** increasing levels of CO<sub>2</sub> increase the amount of heat retained, causing the atmosphere and Earth's surface to heat up.

# IPPC 2018 Report

examined >6000 studies

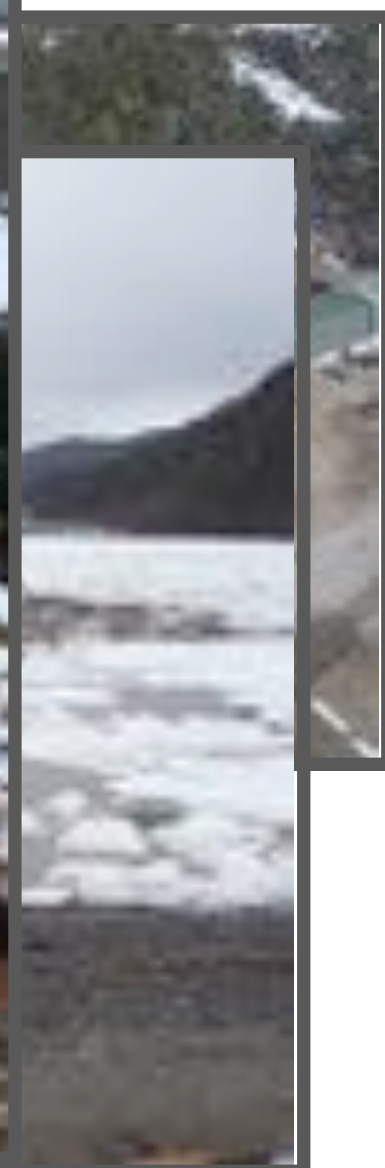
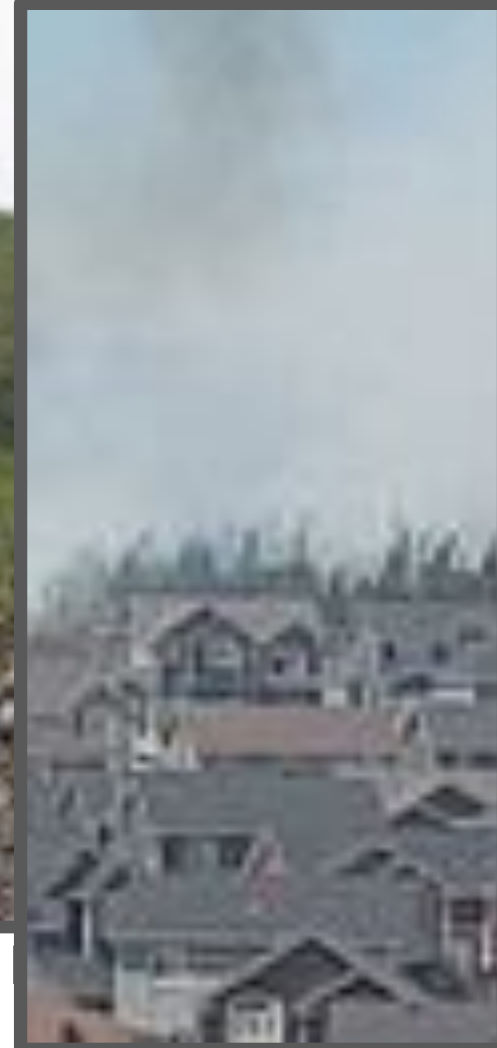
- Humans have caused ~1° of global warming since pre-industrial times
- Likely to reach 1.5° between 2030 and 2052 if things continue at current rate
- Impacts of 1.5° increase will be felt across ecosystems, human communities, and economies.
- Warming caused by past and on-going emissions will persist for centuries to millennia; but, these emissions alone unlikely to cause global warming of 1.5° in the next few decades.
- To stabilize global warming at 1.5°, fossil fuel use must be halved in <15 years, and eliminated in 30 years.
- Global emissions increased by 2.7% in 2018. Without full involvement and alignment of technical, social, and political efforts, limiting warming to 1.5° and even 2° won't be possible.



**Newfoundland and Labrador**  
municipalities will need to respond to an  
increasing prevalence of impacts  
(symptoms) connected to:

- **Flooding**
- **Coastal Erosion**
- **Slope Movement**
- **Drinking Water Supply**
- **Winter**
- **Wildfire**

**What's the  
BOTTOM LINE?**



**St. John's, NL: Wild**

**Lark Harbour, NL: Winter storm, 2018**

**2010**

**Placentia Area, NL: Tropical Storm Chantal, 2007**

so what can your municipality  
**DO ABOUT IT?**



**Assess your vulnerability**



**Consider adaptation options**



**Make a plan**



**Take action**



# Assess your vulnerability



- 6 chapters
- 7-steps, to consider the impact from all angles
- Series of questions in a strategic order
- Round-table, discussion-based session
- Residents are the experts on their towns
- Every community is different
- Invite seniors, youth, taxpayers, current and past town staff and council, contractors, emergency response workers, community groups, famers and fishers, planners, etc.



# Assess your vulnerability

1



2



3



4



5



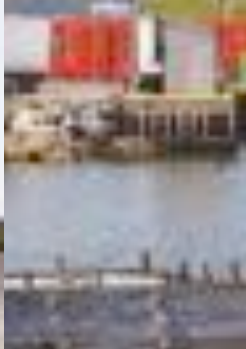
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# Consider adaptation options



## Drinking Water Security [Port aux Choix, NL]

- In 2009, a warm winter with little snow combined with a hot, dry spring and summer resulted in critically low town water supply levels.
- Town had to choose: (1) Close fish plant and water rationing for residents, (2) Close visitor's interpretation centre, or (3) draw down on Parks Canada water supply.
- Following this crisis, the town decided to:
  - Fixed leak to maintain maximum storage / distribution capacity
  - Deepened intake
  - Explored new groundwater sources
  - Discussed alternative surface water sources and partnerships with neighbouring towns.





# Take Action

1



**A. Municipalities for Climate Innovation Program (MCIP)**

**B. Municipal Asset Management Program (MAMP)**

**C. Green Municipal Fund**


## The Scoop:

- ✓ Provides funding for:
  - **Plans** (max \$175,000 grant, up to 50% of eligible costs)
  - **Feasibility Studies** (max \$175,000 grant, up to 50% of eligible costs)
  - **Pilot Projects** (max \$350,000 grant, up to 50% of eligible costs)
  - **Capital Projects** (max \$5m LIL, 15% grant, up to 80% of eligible costs)
- ✓ Sustainable Neighbourhoods, Energy Efficiency + Recovery, Transportation and Fuel Efficiency, Water Quality and Conservation, Waste Management Diversion, Brownfields
- ✓ Applications accepted year-round for plans, studies, and pilot projects, while there are bi-annual deadlines for full-scale capital projects.

# THANK YOU

Stay up to date on our project, and  
opportunities to collaborate at:  
[WWW.CCNL.CA](http://WWW.CCNL.CA)

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# Questions?



Click your way through  
the  
asset management  
readiness scale

***Please remember to fill out your evaluation forms.***