

MUNICIPAL INITIATIVES IN CLIMATE CHANGE ADAPTATION AND RESILIENCY

AMANB Resiliency Planning Charrette
Fredericton, NB



October 1, 2014

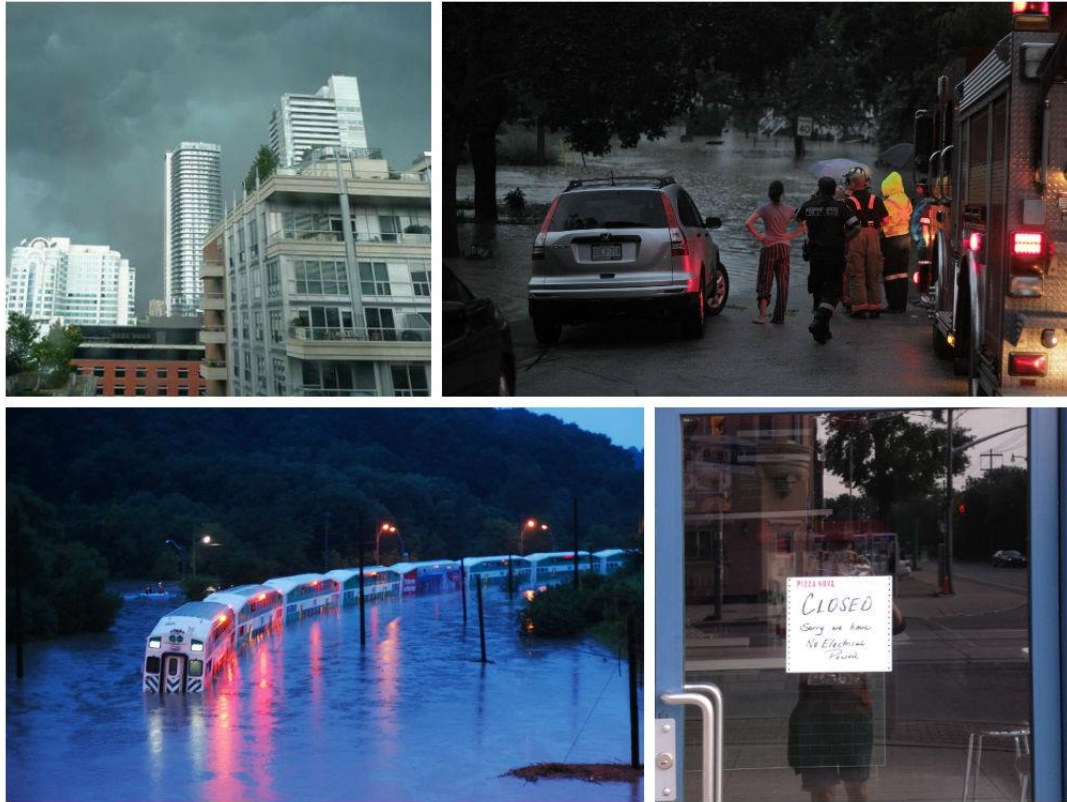
PRESENTATION OUTLINE

- Context
- State of municipal adaptation planning in Canada
- An ideal time to begin adaptation/resiliency efforts?
 - New programs, guides and resources available
- Examples
- Adaptation at FCM/GMF
- Questions, comments, etc.



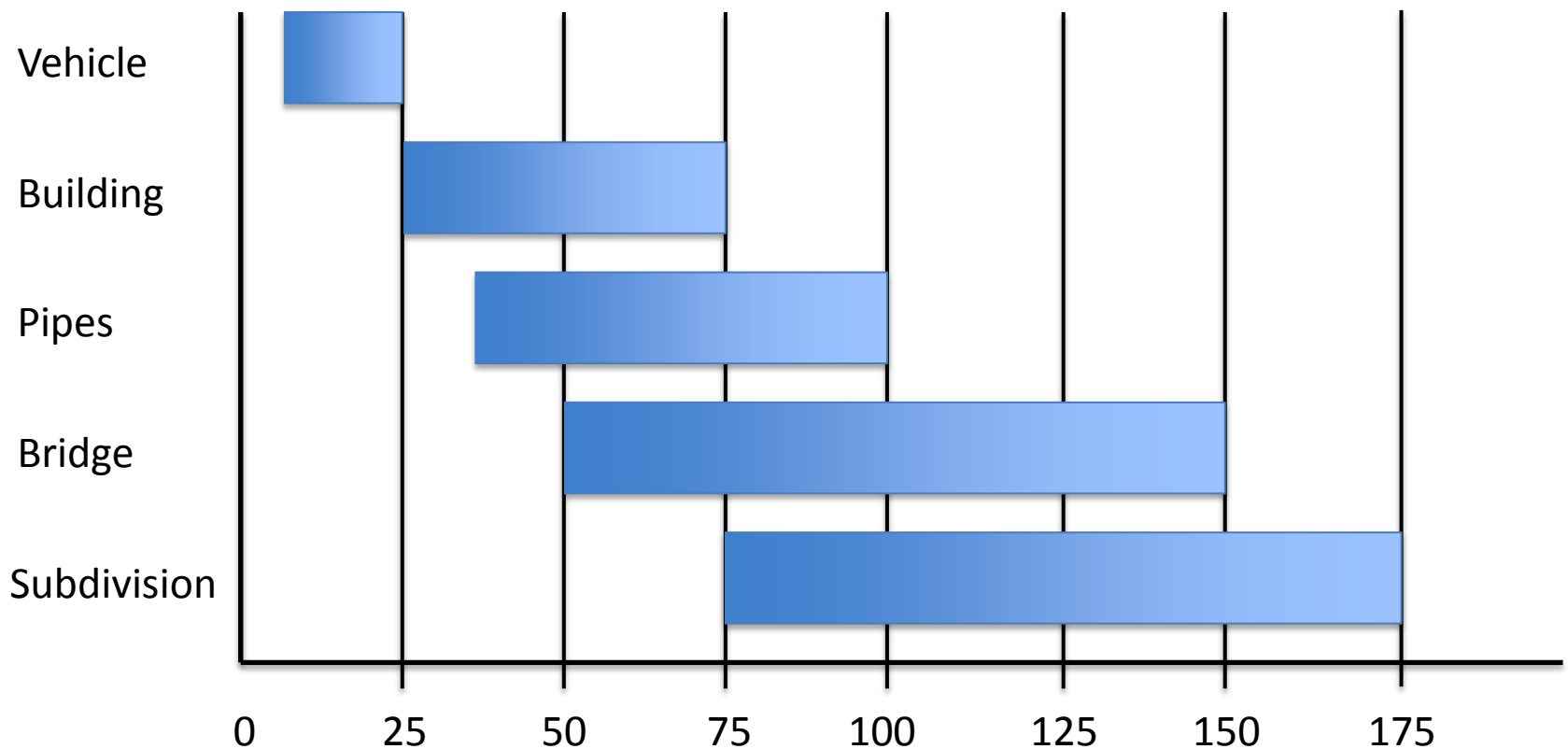
CONTEXT:

- Local governments are already experiencing CC impacts



CONTEXT:

- Today's infrastructure decisions become the infrastructure of tomorrow (and the next 50-150 years...)



CONTEXT:



Original Tacoma Narrows Bridge ("Galloping Gertie")

Opened in July 1940 and
collapsed four months later
due to aeroelastic flutter



Deh Cho Bridge, N.W.T

Opened in 2012 with an
expected 75-year lifespan.
Built to reduce vulnerability to
climate change impacts (e.g.
rising temperatures, thawing
permafrost)



ADAPTATION PLANNING IN CANADA

- Although many LGs are becoming increasingly aware of the issue, most have not yet begun to proactively develop a plan or strategy

Which of the statements below best describes your local government's situation?	
We have an adaption plan/strategy in place.	5%
We are now in the process of developing an adaptation plan/strategy.	7.5%
We do not have an individual adaptation plan/strategy, but we have incorporated adaptation into an existing plan or plans.	7.5%
We are now in the process of incorporating adaptation into an existing plan.	3.3%
We are beginning to discuss adaptation, but are not at the stage of developing a plan or strategy, or incorporating adaptation into an existing plan.	20.4%
We do not have an adaptation plan/strategy and are not considering adaptation planning at this time.	45.1%
Other	5.8%

Source: [2014 National Municipal Adaptation Survey](#) (NMAP)

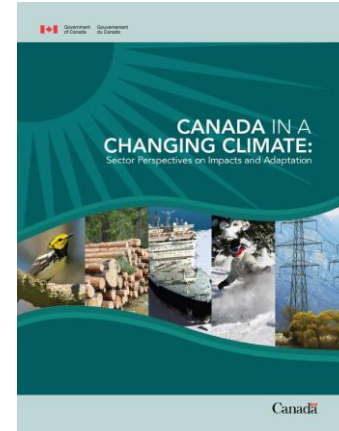
AN IDEAL TIME TO START?

- Several new programs, guidebooks and resources have recently become available to support LGs:
 - ✓ ICLEI Canada’s [“Changing Climate, Changing Communities Guide and Workbook for Municipal Climate Adaptation”](#)
 - ✓ [Building Adaptive and Resilient Communities \(BARC\) Program](#)
 - ✓ Engineers Canada’s [PIEVC Protocol](#)
 - ✓ FCM and CSA’s e-learning course [“Adapting to Severe Weather and a Changing Climate”](#)
 - ✓ “Élaborer un plan d’adaptation aux changements climatiques” (Ouranos/Gouvernement du Québec)



AN IDEAL TIME TO START?

- Access to research on climate change impacts and projections is also increasing:
 - ✓ Natural Resources Canada's "[Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation](#)" (update to 2008 science assessment report)
 - ✓ New Brunswick's Flood Risk Reduction Strategy, etc.
 - ✓ www.adaptationlibrary.ca

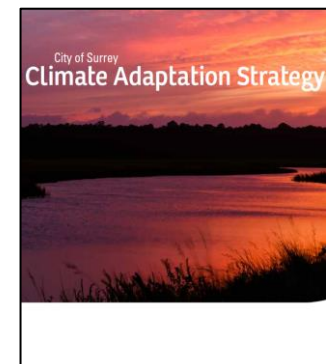
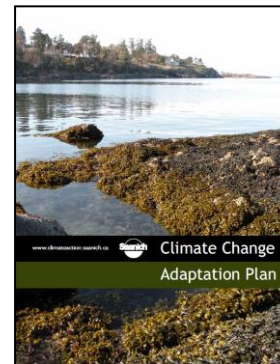
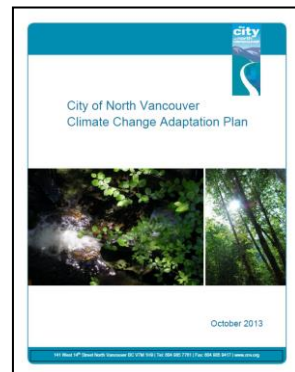
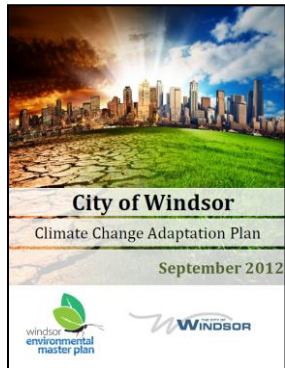


Adaptation Library
Community resources for climate adaptation



AN IDEAL TIME TO START?

- There is also now a group of “early-adopters” and leading municipalities whose plans we can look to for guidance, examples, etc.
 - ✓ District of Saanich, BC
 - ✓ City of North Vancouver, BC
 - ✓ City of Windsor, ON
 - ✓ City of Toronto, ON
 - ✓ City of Surrey, BC
 - ✓ City of Vancouver, BC
 - ✓ Ville de Sherbrooke, QC
 - ✓ Ville de Québec, QC
 - ✓ 50+ LGs in Nova Scotia?



EXAMPLE: DELTA, BC

- Join ICLEI Canada's BARC program in 2010 and has been working through the program's milestone framework
- Low-lying communities and farmland located in South Delta vulnerable to future sea-level rise, storm surges, flooding, etc.
- Municipal staff worked with residents and a team from UBC to examine what Delta's future would look like in terms of potential flooding and flood management solutions
- Visualizations were developed, which helped residents and decision makers understand the different flood adaptation efforts that could be taken within the community



EXAMPLE: NORTH VANCOUVER, BC

- Also a member of ICLEI's BARC program, the City completed its first [adaptation plan](#) in 2013
- Had experienced several extreme-weather events, including a 2005 landslide caused by heavy precipitation that led to loss of life and property damage.
- As a first step, the City decided to conduct a city-wide risk assessment of properties on steep slopes
- Worked with homeowners to undertake geotechnical work, part of which involved homeowners developing a safety plan



ADAPTATION AND GMF...

- Currently, FCM's Green Municipal Fund does not explicitly fund municipal initiatives in adaptation, **but** the parameters of the fund are evolving and there is more flexibility for innovative projects that promote integrated approaches with co-benefits.
 - **GMF grants for local climate action plans** (PCP Milestones 1-3): focus has traditionally been on mitigation (reducing GHGs) but adaptation elements can be incorporated into proposal provided their costs are not disproportionate
 - **GMF grants for sustainable neighbourhood action plans**: flexibility to include adaptation components as well (e.g. stormwater management, etc.)
 - **GMF loans and grants for capital projects** in five categories: brownfields, energy, transportation, waste, or water.

Ex. Project by the City of Granby, QC (GMF 13023) to solve problem of sewer backup in a particular neighbourhood of the city. Project included many adaptation elements, such as decreasing the amount of impervious pavement, installing a below ground retention basin and building a vegetated swale along the roadway.



THANKS!



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<http://www.fcm.ca/home/issues/environment/climate-change-adaptation.htm>

