



# Flood

# Management in

A Provincial Government Overview- UNSM

Spring Conference

# Nova Scotia

# Flooding and Climate

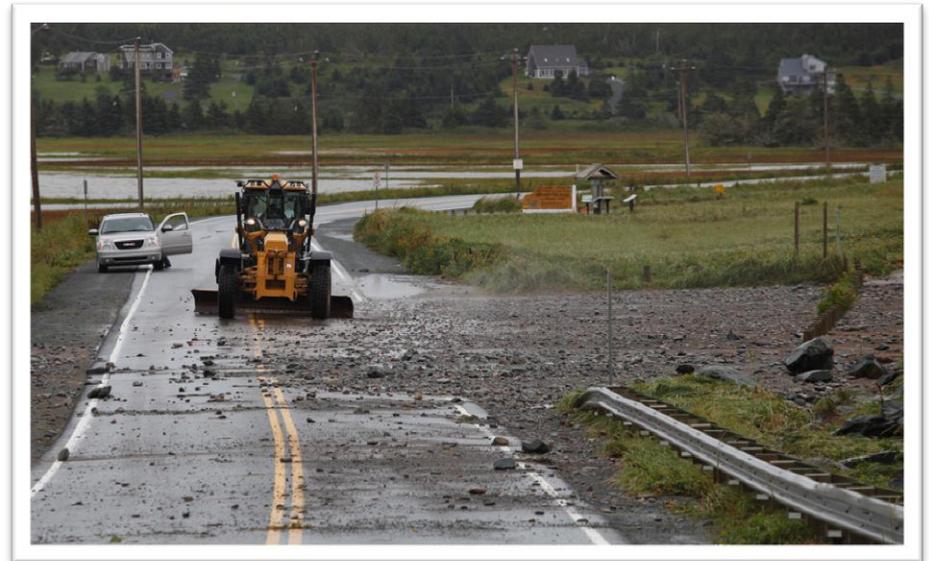
Change

- Historically, flooding in Nova Scotia is caused by

1. snowmelt
2. ice jam
3. convectional storms
4. cyclonic storms
5. combination of each

- Sea-level rise, rising temperatures, and extreme precipitation, are all expected to increase the risks associated with flooding and extreme weather.

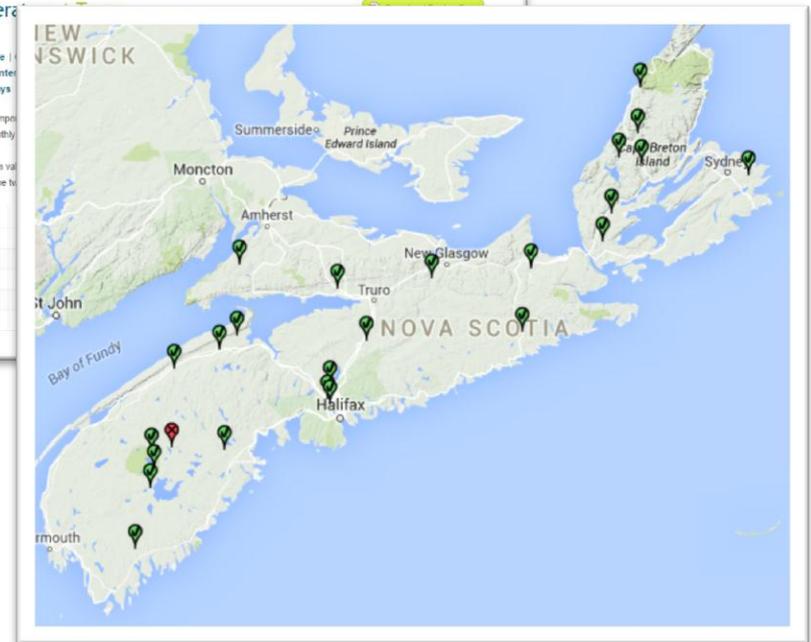
Climate change means we need to re-think....



# Nova Scotia

## Environment

- Climate Change information and advice
- Active Network of Hydrometric Stations
- Lead Partner with the Atlantic Climate Adaptation Solutions Assoc. (ACASA)



# Provincial Flood Mitigation Framework (FMF)

- New provincial approach announced in April, 2013
  - 10 initiatives aimed at supporting communities and strengthening provincial leadership
- The Flood Mitigation Framework
  - First step in building provincial capacity towards understanding flood risks, developing coordinated governance and collaboration, supporting communities in managing flood risk, and integrating climate change adaptation into decision making.

*“The primary objective of this Framework is to reduce the impacts of flooding in vulnerable Nova Scotia communities”*

# FMF- Actions

## Actions to Support Communities

<b>CS1: Flood Assessment Fund (FAF)</b>	Matching funds available to develop integrated and collaborative community flood assessments, meant to inform, educate and identify solutions to reduce flood risks.	NSE
<b>CS2: Flood Risk Infrastructure Investment Program (FRIIP)</b>	Matching funds available to communities to invest in identified flood mitigation infrastructure that will reduce flood risks.	DMA

# FMF- Actions

## Actions on Provincial Leadership

<b>PL1: Dyke Improvement and Reinforcement</b>	Funds dedicated solely to improve existing dykes to reduce flood risk in vulnerable communities.	NSDA and NS TIR
<b>PL2: Provincial Infrastructure Design and Engineering Standards</b>	Keep up-to-date with current design and engineering standards for provincial infrastructure to ensure it incorporates future flood risk considerations. Includes working closely with at risk communities when NSTIR work is scheduled in these areas.	NS TIR
<b>PL3: Prov/Mun Planning Tools and Support Programs</b>	Provincial planning and support tools will be reviewed and adjusted to ensure they a) adequately require communities to incorporate flood risk in their planning processes and b) include investment in flood mitigation measures as an eligible expense.	DMA
<b>PL4: Development Approvals</b>	The approval process for activities regulated through the Environment Act will be reviewed and adjusted to incorporate flood risk to vulnerable communities.	NSE
<b>PL5: Climate Data for flood risk assessments</b>	Work with communities to provide localized climatic data and projections for flood risk assessments.	NSE
<b>PL6: Scientific and geo-technical advice for coastal flood risk assessments</b>	NSDNR will continue to capture, store and make coastal flood and erosion risk information available. Work with NSE and communities to provide scientific and geo-technical advice for coastal flood risk assessments.	NSDNR
<b>PL7: Emergency Management Planning and Response</b>	EMO (DMA) will include future climate projections as a key piece of information to distribute to municipal emergency management coordinators as they prepare and update their EM plans for their respective areas.	EMO (DMA)
<b>PL8: Governance and Coordination</b>	Form an ad-hoc provincial group to guide, coordinate, implement and report on the Flood Mitigation Framework. Led by senior officials, accountable to deputy ministers via twice yearly updates/reports.	NSE

# FMF- Flood Working Group

- Team formed to coordinate flood management issues across government and support implementation of the Flood Mitigation Framework
- Representation from 7 provincial departments
  - Nova Scotia Environment
  - Department of Municipal Affairs (including Emergency Management Office)
  - Nova Scotia Department of Agriculture
  - Department of Natural Resources
  - Department of Fisheries and Aquaculture
  - Department of Internal Services
  - Department of Transportation and Infrastructure Renewal

# FMF- Key Actions

- Flood Assessment Fund (Nova Scotia Environment)
- Flood Risk Infrastructure Investment Program (Dept. of Municipal Affairs)
- Dyke maintenance and repair projects (NS Dept. of Agriculture)
  
- In the past 2 years, the province has invested aprox. \$9 Million for:
  - Flood Risk studies and flood plain mapping
  - Flood mitigation infrastructure projects
  - Dyke topping and rocking, aboiteau replacements

# Atlantic Flood Management Conference – March 5, 2015

- To promote “good practice” examples of flood management tools and approaches employed throughout Atlantic Canada
- Forum for networking, capacity building, sharing information



# Atlantic Flood Management Conference – March 5, 2015

- Key outcomes:
  - The hydro-climate regime of the past no longer exists.
  - Addressing water is a primary mechanism for managing climate impacts.
  - Provincial & municipal policy needed to address residential retreat.
  - Affordable access to expertly prepared maps key to flood management at the local level.
  - Analyzing cost/benefits of flood mitigation options is critical.
  - Liability exposure is a big concern.
  - The priority is to ‘protect where people sleep.’
  - Interaction and engagement between all levels of government and communities is needed.

# Municipal Climate Change Action Plans (MCCAPs)

- The MCCAPs were a *Reporting Requirement* of the Gas Tax Agreement / Municipal Funding Agreement Programs
- A description of actions, measures, practices and initiatives undertaken by the municipality to adapt and respond to impacts resulting from climate change.
- Collective analysis of MCCAPs nearing completion.



# New Developments

- Flood Risk Infrastructure Investment Program (FRIIP) now accepting applications for 2015-16 projects
  - \$500,000 for flood mitigation infrastructure projects and flood risk studies
  - 50/50 cost shared
  - Applications due May 29, 2015
  - More information can be found on the Municipal Affairs website
  - <http://novascotia.ca/dma/funding/infrastructure/flood-risk-infrastructure-investment-program.asp>
- National Disaster Mitigation Program

# Contact Info

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