

This publication is part of the *xTREME toolkit* (eXtreme events Toolkit for Rural Emergency Management Enhancement) which is available online [www.resilientresearch.ca](http://www.resilientresearch.ca) as part of a project titled “Ontario Rural Municipal Emergency Management and Critical Infrastructure: Enhancing Planning and Preparedness Capacities for Climate Change Resilience”

### Authors

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### Acknowledgements

**We thank members of the project advisory board who provided valuable feedback on this project**

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**Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA)**  
**Wilfrid Laurier University**



Insert the Name of your Community  
Insert your Community Logo  
Insert the Date of the Exercise



# Tabletop Exercise Flash Flood

Hosted By: Municipality of \_\_\_\_\_

# Welcome

- Insert name of Facilitator
  - Title
  - Name of Community/Organization/Company where the Facilitator is from
- Administrative Items
  - Emergency exits
  - Washrooms
  - Vibration mode for cellular devices
  - “No duff” in case of real emergency

# Greetings & Opening Remarks

- Mayor \_\_\_\_\_, Town of \_\_\_\_\_

# Facilitation Team

Use this slide if there is more than one Facilitators and/or Subject Matter Expert(s)

- Name
  - Role (example: Deputy Exercise Facilitator)
  - Title and Organization
  
- Name
  - Subject Matter Expert
  - Title and Organization

# Evaluators & Observer

## Evaluators

- Name
  - Title, Name of Organization
- Name
  - Title, Name of Organization

## Observer

- Name
  - Title, Name of Organization

# Participant Introductions

- Exercise Players
  - Roundtable self-introductions by all members of the Community's Emergency Control Group

# Exercise Agenda

Time	Activity
8:30 a.m. – 8:45 a.m.	Welcome and Exercise Overview
8:45 a.m. – 10:15 a.m.	Module 1: Pre-event Warning Phase
<b>10:15 a.m. – 10:30 a.m.</b>	<b><i>Nutritional Break</i></b>
10:30 a.m. – noon	Module 2: Response to Emergency Incident
<b>Noon – 1:00 p.m.</b>	<b><i>Lunch (Location/Room)</i></b>
1:00 p.m. – 2:15 p.m.	Module 3: Post-event Recovery
<b>2:15 p.m. – 2:30 p.m.</b>	<b><i>Nutritional Break</i></b>
2:30 p.m. – 3:00 p.m.	Hot-Wash
3:00 p.m.	Closing Remarks by Mayor

# Exercise Needs Assessment

- 2016 Hazard Identification and Risk Assessment (HIRA) identified floods as a high-priority hazard
- Municipality has an Emergency Plan dated \_\_\_\_\_, and it was last tested/exercised on \_\_\_\_\_
- 2016 Exercise After-Action Report identified the following problems and issues: \_\_\_\_\_
- List the improvement measures from the Correction Action Plan require validating

# Exercise Needs Assessment

- Annual Municipal compliance with Ontario Regulation 380/04- Part II Municipal Standards
  - The **emergency control group** shall conduct an annual practice exercise for a simulated emergency incident in order to evaluate the municipality's emergency response plan and its own procedures. ON. Reg. 380/04, s. 12 (6).

# Exercise Scope

- This exercise is a tabletop exercise for the members of the (insert name of Community) Emergency Control Group, led by the Mayor.
- Exercise play is limited to discussions at the strategic level as it relates to a flash flood in the community that significantly impacts critical infrastructure.

# Statement of Purpose

- The purpose of today's tabletop exercise is to:
  - Understand the implications to the Community's critical infrastructure from a changing climate with the increases in the frequency and severity of weather;
  - Determine such vulnerabilities, risks, and impacts;
  - Devise and implement adaptive strategies; and
  - Improve the Community's emergency plans and procedures

# Exercise Objectives

- Understand the link between climate change and the increasing frequency and strength of extreme weather
  - *Core capability:* Planning
- Validate the Community's Hazard Identification and Risk Assessment (HIRA), and confirm that extreme weather hazards have been sufficiently considered in the HIRA
  - *Core capability:* Planning
- Test the Emergency Plan and extreme weather hazard-specific annexes to validate emergency procedures
  - *Core capability:* Planning

# Exercise Objectives

- Educate members of the Community Control Group and emergency responders of their role in emergencies, and enhance inter-organizational coordination
  - *Core capability:* Operational coordination
- Evaluate the municipality's ability to notify Town residents and businesses within \_\_\_ minutes of a flood warning issued by \_\_\_\_\_ Conservation Authority/ Ministry of Natural Resources and Forestry
  - *Core capability:* Public Information & Warning
- Evaluate the Emergency Personnel Call-In Policy for activating essential staff
  - *Core capability:* Planning

# Exercise Objectives

- Practice emergency management and crisis response skills
  - *Core capability:* Planning
- Timely emergency declaration, request for outside and/or provincial resources, and preparation of an Incident Briefing Report
  - *Core capability:* Situational Assessment

# Exercise Guidelines

- Open, low stress, no-fault environment
- Varying viewpoints and approaches are encouraged
- Base responses on current plans and capabilities
- Provide suggestion and recommended actions



Name of Exercise and Date

# Assumptions and Artificialities

- Capabilities, plans, systems, and processes will be evaluated
- Exercise scenario is plausible
- Exercise is conducted in compressed time
- All players receive information at the same time

# Exercise Structure

- 3 Modules
    - Narrative of scenario and key events
    - Moderated plenary discussion following group(s) discussion
    - Synopsis of key actions and responses
  - Module 1: Pre-event Warning Phase
  - Module 2: Response to Emergency Incident
  - Module 3: Post-event Recovery
- 

# Scenario Narrative

The weather for the past two weeks can be summarized as hot steamy nights, sticky days and torrential downpours. The night-time low temperature was hottest on record, with lots of wind and concentrated bursts of heavy rain amid drought. This has resulted in saturated soil and creeks and streams that have little capacity to drain the storm flow without flooding. Local flood watch messages have been issued stating that there is a potential for flooding in the community.

# Hottest Year Ever Recorded

Prolonged periods  
of heat causing  
health conditions  
and drought



# Module 1

## Pre-event Warning Phase

- See Appendix D of the **Exercise Plan** for updated weather reports from Environment Canada, and updated flood warning messages from the local Conservation Authority



# Current Conditions



# Module 1: Key Issues

- Increasing cases of asthma and other health problems related to poor air quality are straining the capacity of emergency medical services
- Older infrastructure, including bridges and culverts may be on the brink of failure
- The risk of a power outage from the increasing use of air conditioning is being compounded by erosion by the key above ground and/or underground electricity delivery infrastructure
- Drinking water and sewage treatment facilities are at risk from flooding
- Most local businesses do not have business continuity plans or overland flood insurance
- Combined storm water and sewer systems are increasing the flood and water contamination potential

# Module 1: Discussion Questions

- Please refer to pages \_\_\_ of the **Exercise Plan** for listing of Module 1 Discussion Questions.



- Briefing
  - 8:45 a.m. – 8:55 a.m.
- Group discussion of scenario and questions
  - 8:55 a.m. – 9:50 a.m.
- Brief back with Facilitator
  - 9:50 a.m. – 10:15 a.m.

# Module 1: Discussion Questions

- What programs does your municipality have in place to reduce the impacts of flooding?
- What are the sensitive and risk prone areas for flooding and drought in your community?
- What risks does your community have of future water shortages?
- What are the impacts of high temperatures on the health and well-being of your residents?

# Module 1: Discussion Questions

- What are the health risks from poor water quality?
- What are the risk to soils from increased seasonal aridity and wetness?
- What are the risks to agriculture and wildlife from scarcity and flooding?
- Are land management practices exacerbating flood risk?
- What is the risk of cascading infrastructure failures across interdependent networks?

# Module 1: Discussion Questions

- What are the risks to infrastructure from river, surface/ ground water flooding?
- What are the risks to public water supplies and electricity generation from drought and low river flows?
- What are the risks to business operations from water scarcity?
- What are the risks to businesses from flooding?

# Nutritional Break



# Scenario Narrative

- The local conservation authority issued a Flood Warning to your community, advising that flooding is imminent
- Flash or sudden flood is now occurring with little warning time across the community
- Municipal Emergency Plan is in operation
- Community Control Group has assembled

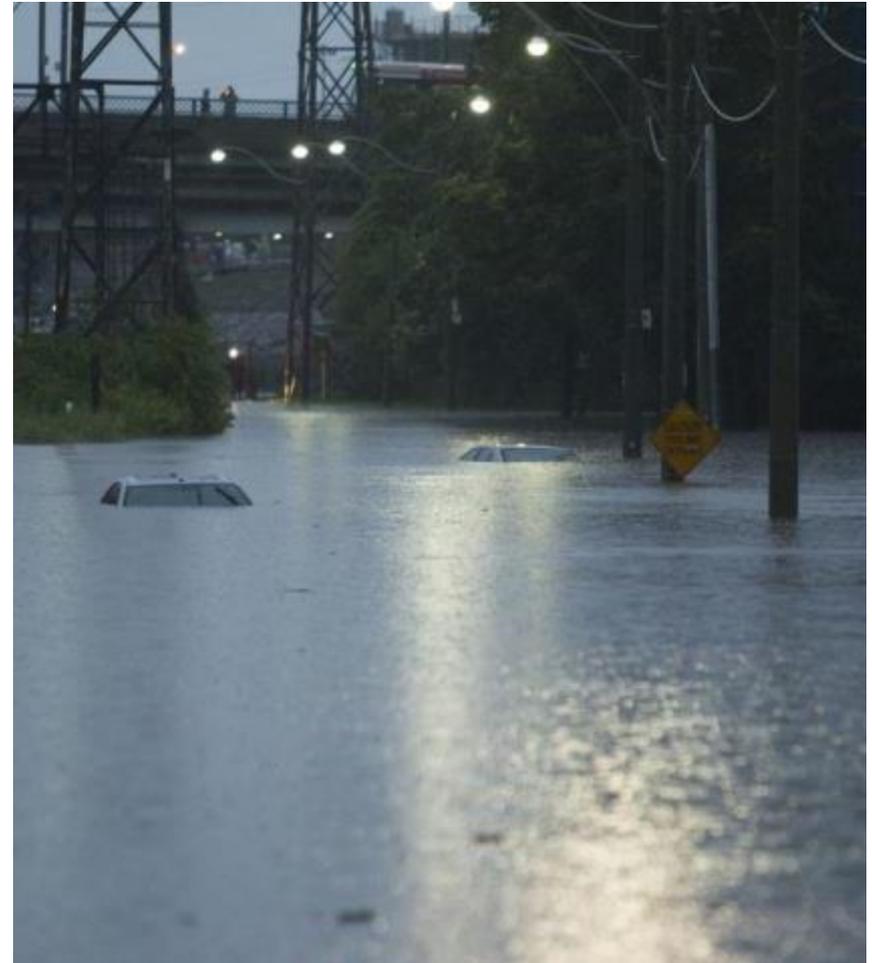
# Module 2

## Response to Emergency Incident

- See Appendix D in the **Exercise Plan** for updated reports from:
  - Environment Canada
  - Local Conservation Authority
  - Ministry of Natural Resources and Forestry



Name of Exercise and Date



# Flash Flooding



# Damage from the Flash Flood



Photo: City of Calgary / Fritz Tolentino

# Module 2: Key Issues

- Overland flooding plus flooded roads, homes and buildings
- Subsidence issues causing concern for buried infrastructure, including high pressure pipelines and high voltage electricity cables
- Reduced transmission capacity with loss of hydroelectric power to the community, and substations are flooded
- Telecommunication and supply chain disruptions
- High river flows impacting bridges, and gas pipelines
- Damage from fallen trees and large branches

# Module 2: Discussion Questions

- Please refer to page \_\_\_\_ of the **Exercise Plan** for listing of Module 2 Discussion Questions.



- Briefing
  - 10:30 a.m. – 10:40 a.m.
- Group discussions of scenario and questions
  - 10:40 a.m. – 11:30 a.m.
    - Town Staff (Room #1)
    - All Other Exercise Participants (Room #2)
- Brief back with Facilitator in Room
  - 11:30 a.m. – noon

# Module 2: Discussion Questions

- What are the key decisions and actions that the Community Control Group is taking as a whole, as well as per each Department/ Organization?
- What key issues and/or concerns do you have?
- How is the Mayor communicating with the public at risk/ public at large, and what are the key messages?
- What are the elements of the Situation Report, and how is information being collected and disseminated, and to whom?
- What assistance from outside the community may be called upon, and how will this be undertaken?

# Lunch – Location/Room



# Scenario Narrative

- The flash flood storm is over and the torrential downpour has stopped
- The 9-1-1 call-taking centre is overloaded with calls for assistance
- Citizens have returned to their homes to find extensive damage, and insurance adjusters are enroute to the community
- The volume of water in the river/stream has begun to recede
- Clean up and restoration activities have begun

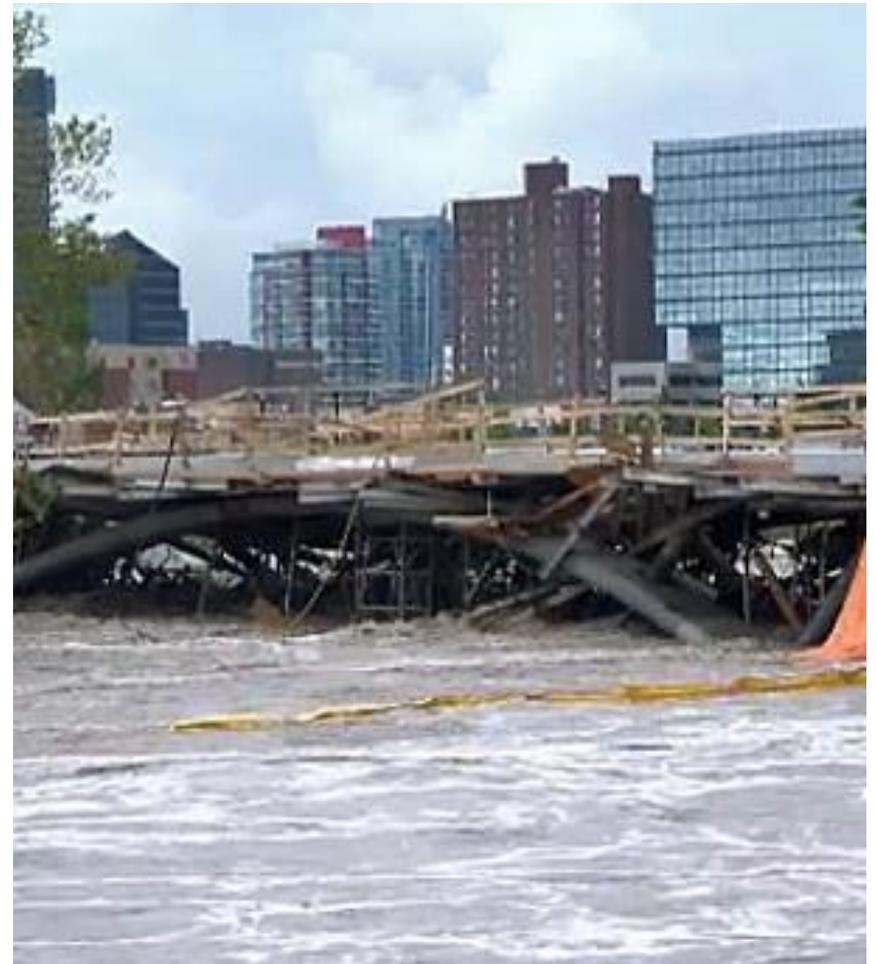
# Module 3

## Post-event Recovery

- See Appendix D of the **Exercise Plan** for updated reports:
  - Environment Canada Weather Report
  - Watershed Conditions Statement issued by the local Conservation Authority



# Damaged Infrastructure



# Damage from Fallen Trees



Name of Exercise and Date

# Recovery



Name of Exercise and Date

# Module 3: Key Issues

- Many damaged homes, businesses, buildings, cars, energy and transportation infrastructure, and agricultural assets
- Financial hardship of costly home repairs, lost wages
- Down wires and scattered debris that needs to be removed
- Emergency crews are running out of daylight
- Repair and restoration of damaged public facilities
- Outside emergent volunteers and curious people are attempting to get into the community
- Media outlets are covering the story

# Module 3: Discussion Questions

- Please refer to page \_\_\_ of the **Exercise Plan** for listing of Module 3 Discussion Questions.



- Briefing
  - 1:00 p.m. – 2:15 p.m.
- Group discussion of scenario and questions
  - 1:10 p.m. – 1:45 p.m.
    - Mass Casualty Response Group (Room 1)
    - All Other Exercise Participants (Room 2)
- Brief back with Facilitator
  - 1:45 p.m.– 2:15 p.m.

# Module 3: Discussion Questions

- What are the total economic consequences, taking into account the destruction of natural assets?
- What bill will tax payers be left picking up?
- How will displaced people be accommodated?
- How will the repair and restoration of damaged public facilities, and transportation networks be undertaken?
- How will the municipality communicate with the public regarding under the Disaster Financial Assistance Arrangements Program?
- What are the risks and opportunities from the changing demand for goods and services?

# Nutritional Break



# Hot-Wash



- Strengths
- Areas for Improvement

# Closing Comments

- Name , Exercise Facilitator
  - Participant Feedback Forms
  - Next Steps - Evaluation
  - After-Action Report will be e-mailed to the Community Emergency Control Group on \_\_\_\_\_
  - Announce date of the After-Action Meeting
- Mayor \_\_\_\_\_, Name of Community
  - Acknowledge the Facilitator, Observers, SME, Evaluators, and fellow members of the Community ECG
  - Thank the Emergency Management Program Committee, and Exercise Planning Team