

Resilient City

Re: PE15.2

Preparing for a Changing Climate



Credit: synestheticstrings

Status Update & Next Steps

Resilient City

Preparing for a Changing Climate



Adopted the Climate Change Risk Management Policy

...outlined responsibilities and a governance structure for implementing the policy and directed that staff report back in 2016

History

A Focus on Climate Mitigation & Adaptation



Toronto's **Future Weather***



**DAILY
TEMPERATURE
MAXIMUM**

44°

celsius

2040-50

37°

2000-09



HOT DAYS

66

above 30°

2040-50

20

2000-09



**EXTENDED
HEAT WAVES**

2.5

per year

2040-50

0.6

2000-09



**DAILY
RAINFALL
MAXIMUM**

166

millimetres

2040-50

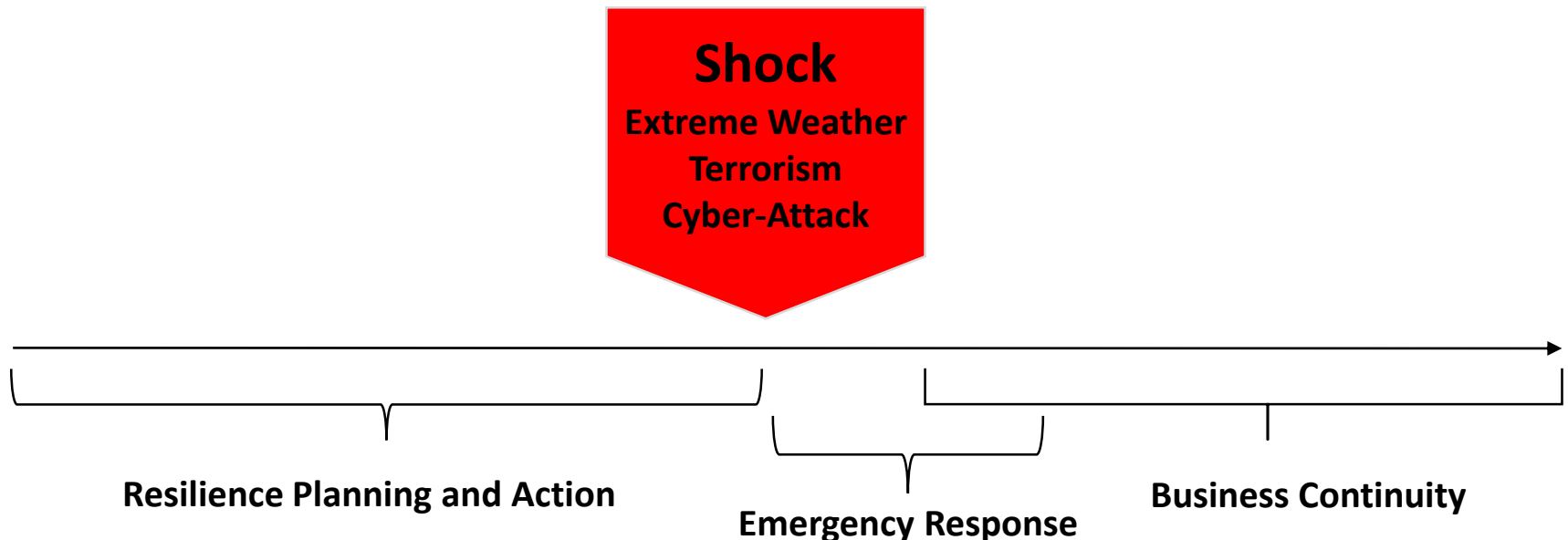
66

2000-09

Climate Drivers Study, 2011

Resilience experience

Resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks.



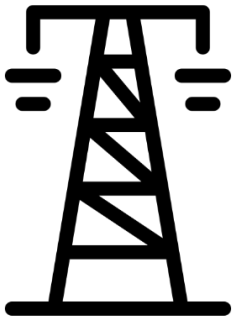
Resilient City Working Group (RCWG)



18 Internal and External Organizations

High Level Risk Assessment

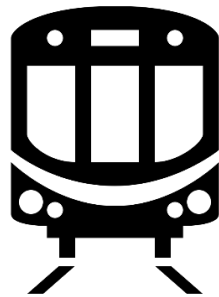
Understanding risks and interdependencies



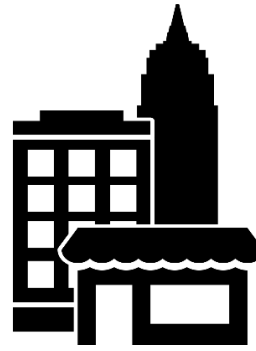
Utilities



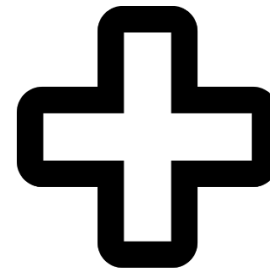
Water



Transportation



Buildings



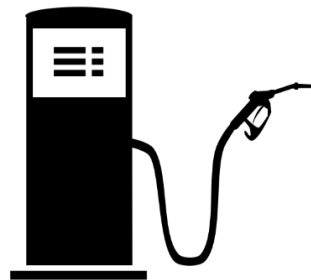
Health



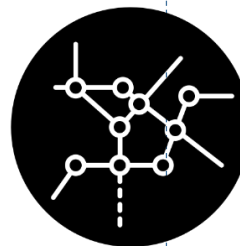
Public Safety



Economy/Finance/Insurance



Liquid Fuels



Additional
Networks



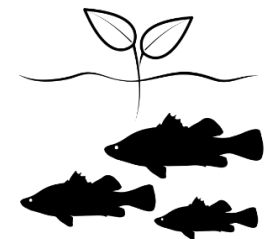
Social Services



Food



Solid
Waste



Natural
Environment



Water

Water, Wastewater & Stormwater



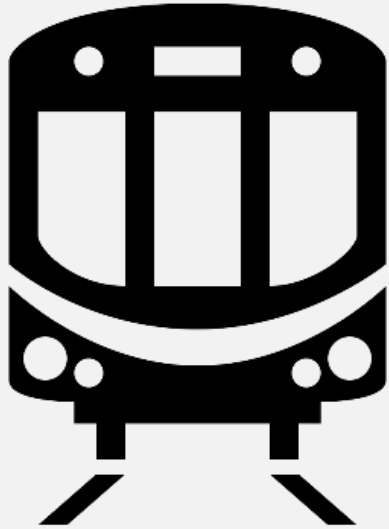
- Toronto Water
- Engineering & Construction Services
- City Planning
- Public Health



Toronto and Region
Conservation

for The Living City®





Transportation

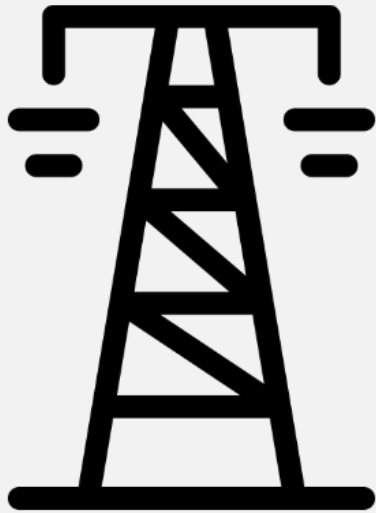


- Transportation Services Division
- Engineering & Construction Services



METROLINX

An agency of the Government of Ontario



Utilities

Energy & Telecom



High Level Risk Assessment

A Collaborative Process

[JAN – FEB 2016]



- Preparatory meetings with thematic area organizations
- Joint Kickoff Meeting

[FEB – MAR 2016]



Transportation Services

TTC

Metrolinx

High Level Risk Assessment

Engineering &
Construction Services

Toronto Region
Conservation Authority

EED collate to 'Risk and
Dependency Registries

[APRIL 2016]



Transportation Services

TTC

Metrolinx

- Collectively refine 'Risk and Dependency Registries'
- Identify new/existing actions to address risks

[MAY – JUNE 2016]



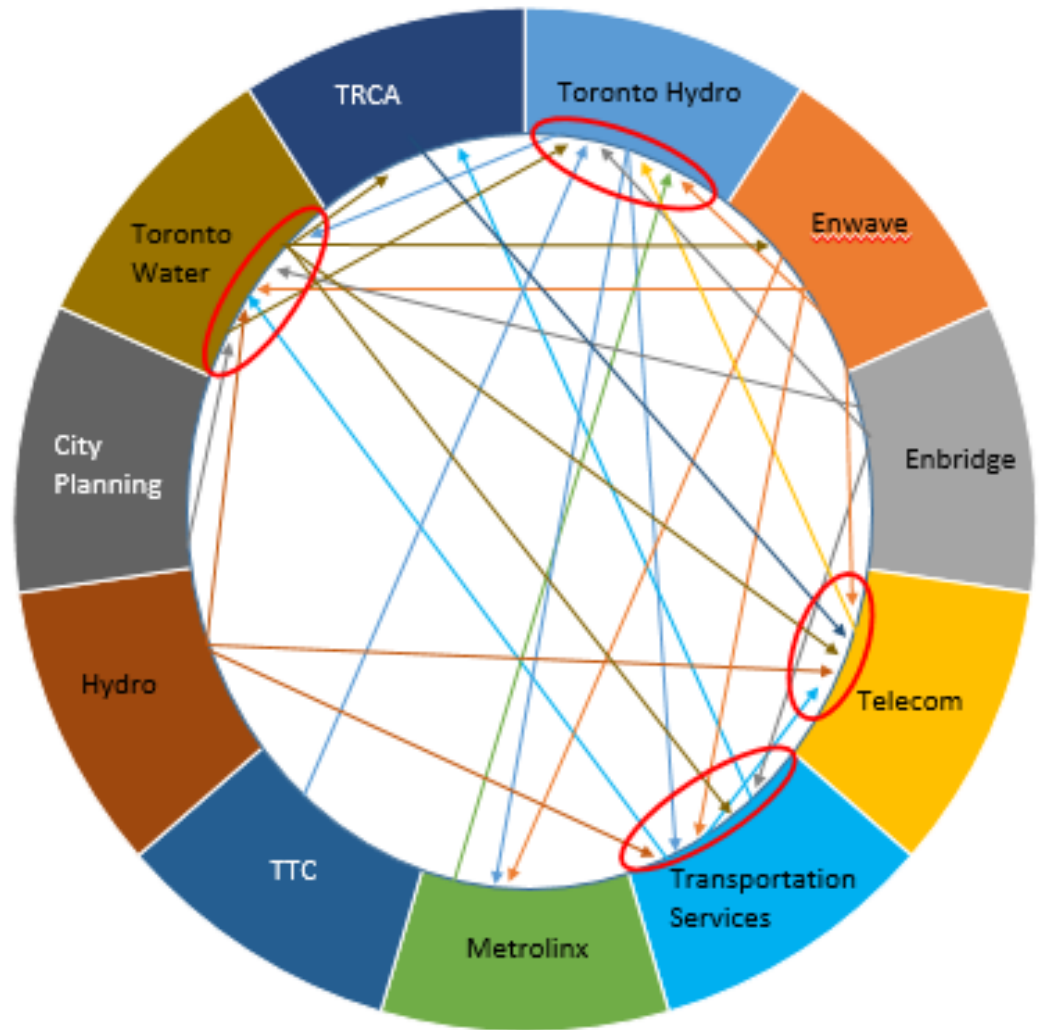
- Collectively refine 'Risk and Dependency Registries'
- Identify actions/initiatives, gaps

- Have findings vetted by Senior Management
- Present findings to RCWG and EET in preparation for report to Council

Report to Council
(Nov 2016)

High Level Risk Assessment

Key Findings and Lessons Learned



* Graphic concept adapted with permission from MUST Urbanism (2016)

High Level Risk Assessment

Findings and Key Messages



WikipediaCommons

The work has only just begun.

Adoption of the CCRMP by City Agencies and Corporations



Educational Resources

Extreme Weather Ready Portal

City of Toronto / ... / Environment & Energy / Extreme Weather / Extreme rain and flooding

Extreme Weather Share

EXTREME WEATHER AHEAD **ARE YOU READY?**
Know the risks. Prepare now.

Overview **Extreme rain and flooding** Extreme heat Extreme cold, ice and snow Extreme wind

Extreme rain and flooding

Several record-breaking rainfalls have occurred in Toronto in recent years, resulting in flooding and extensive damage to public and private property as well as public utilities, roads, transportation networks and the natural environment. Flooding can also be caused by melting snow and ice.

A record rainfall on July 8, 2013, for example, caused extensive flooding, widespread power outages and an estimated \$850 million in insurance claims by residents and businesses across the GTA.

By 2050, Toronto's maximum daily rainfall is expected to more than double, rising to 166 mm from 66 mm today ([Source: Toronto's Future Weather and Climate Driver Study, 2011](#)).

[Expand All](#) [Collapse All](#)

- + [Know your risks](#)
- + [Actions you can take now](#)
- + [During extreme rain or flooding](#)
- + [After extreme rain or flooding](#)

City news & updates

During extreme weather events, the City of Toronto will provide updates and information about City programs and services through the media, 311, Twitter, and its website at www.toronto.ca.

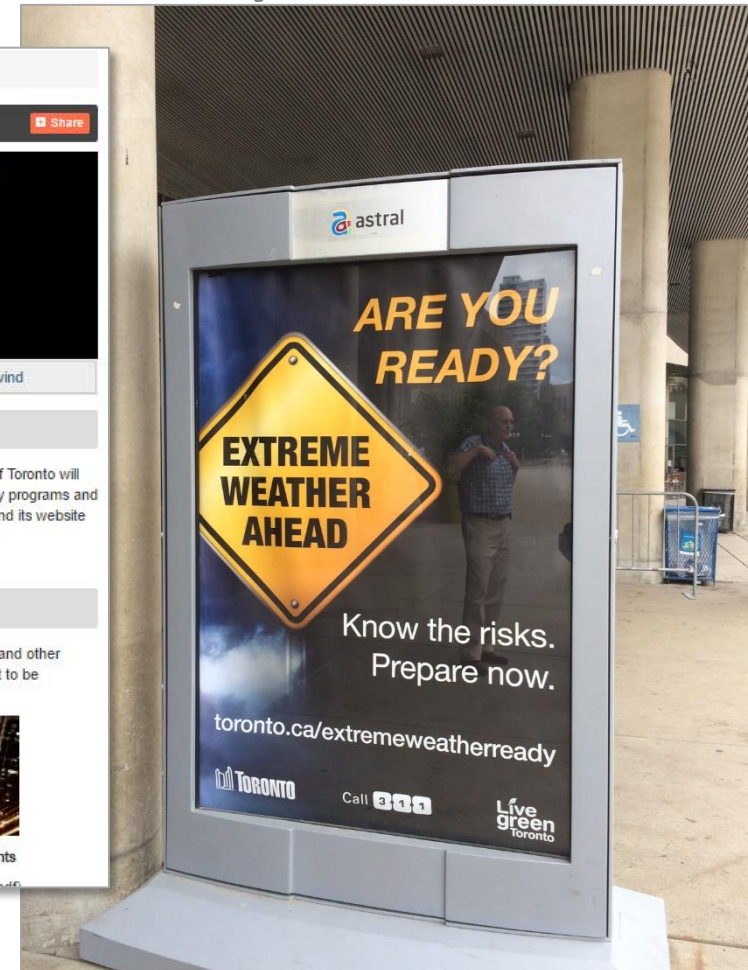
Get emergency ready

Emergencies caused by extreme weather and other events can occur at any time. It's important to be prepared.

Get Emergency Ready

Preparedness Guides for Toronto residents

Your Personal Preparedness Guide (pdf)

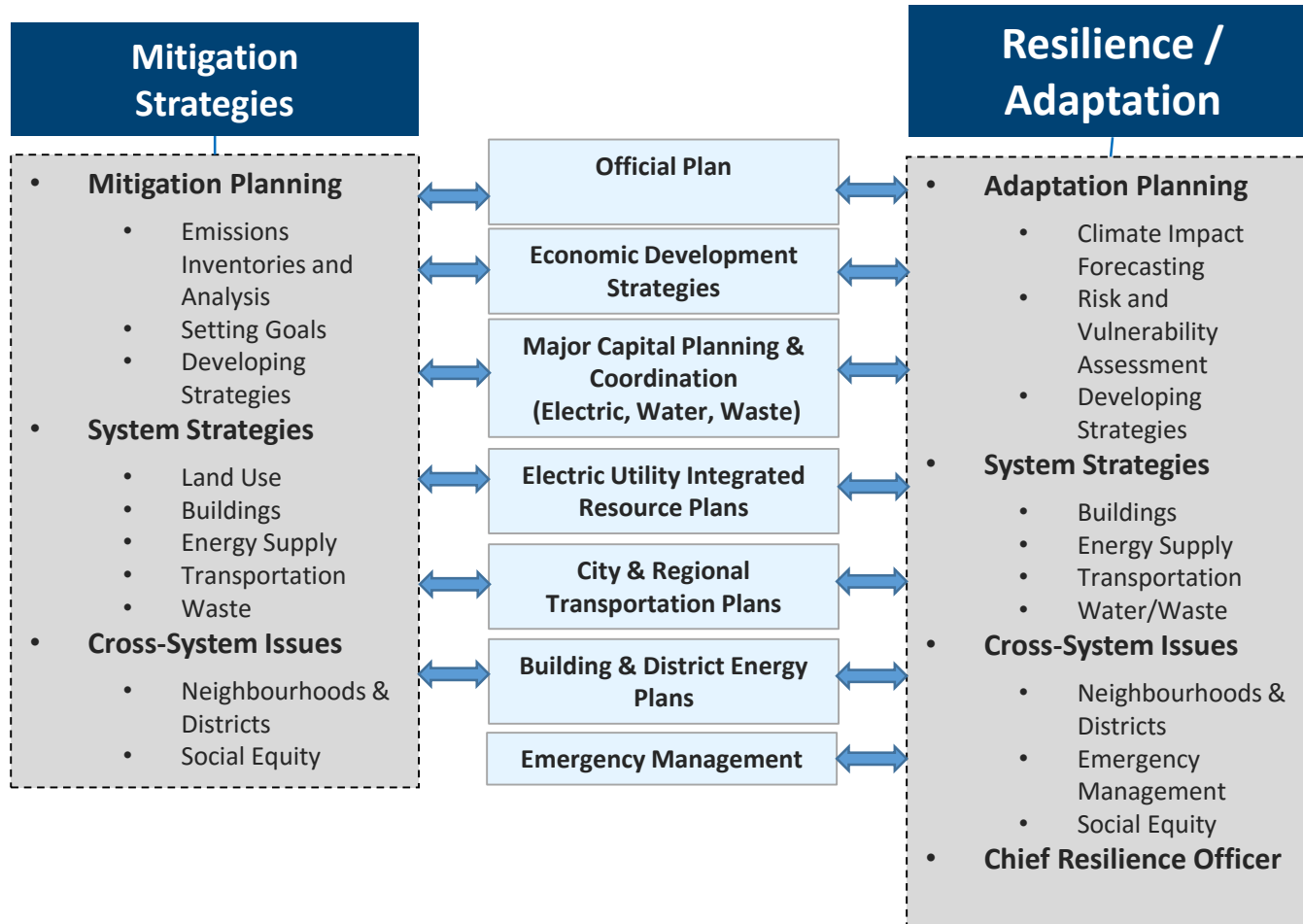


Toronto selected to join
100 Resilient Cities – Pioneered by
the Rockefeller Foundation



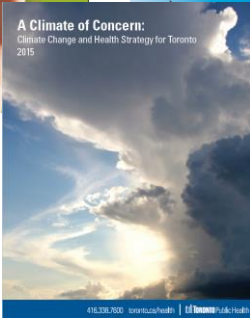
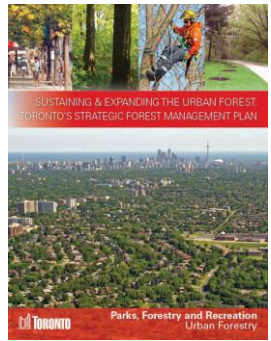
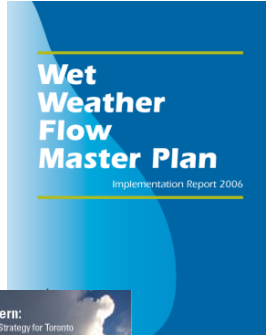
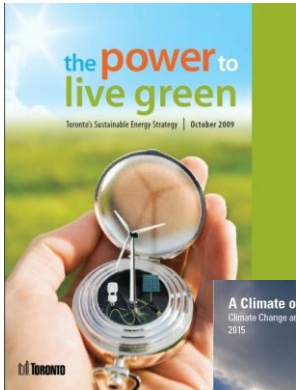
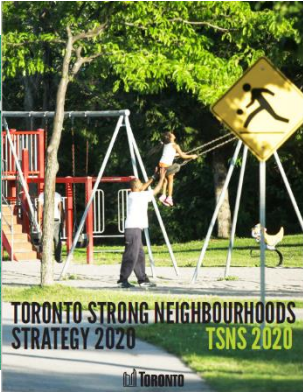
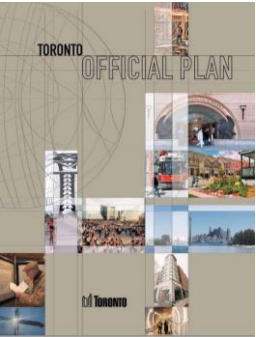
TORONTO

Addressing Stresses and Shocks



Modified from: USDN

Addressing Stresses and Shocks



Next Steps

Continuation of Work

- Additional work in remaining Thematic Areas
- Support for actions arising from work in Transportation, Utilities and Water Thematic Areas
- Strategic and programmatic Support for the 100RC initiative and the Chief Resilience Officer (CRO)
- Support for adoption/implementation of the CCRMP

- Coordination of the cross-corporate RCWG and reporting on adaptation/resilience actions.
- Support for detailed risk assessments using the Toronto CCRAT
- Maintenance of the Extreme Weather Portal and related communication-focused activities.

Thank you



Credit: [synestheticstrings](#)

Questions?