

PREVENTION



PREPAREDNESS



MITIGATION



RESPONSE



RECOVERY



A MORE RESILIENT TOMORROW

CALGARY EMERGENCY MANAGEMENT AGENCY:

THE STATUS OF EMERGENCY PREPAREDNESS IN CALGARY

A report for the Emergency Management Committee

Cover images:

1. Prevention: Summer 2016 severe thunderstorms flooded streets and communities throughout Calgary
2. Preparedness: Canada Task Force 2 rescue teams practice a confined space rescue as part of EMX17, an interprovincial disaster exercise conducted with British Columbia
3. Mitigation: Flood mitigation activities continued throughout 2016
4. Response: City of Calgary staff deployed to Fort McMurray in May 2016 to assist with response to the wildfires
5. Recovery: The City of Calgary hosted thousands of evacuees from Fort McMurray in Spring 2016

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OUR WORK

The Calgary Emergency Management Agency (CEMA) works with our City of Calgary colleagues, government agencies, businesses, non-profit groups, first responders and citizens to promote and strengthen emergency preparedness, resilience and the coordinated response to, and recovery from, major emergencies and disasters in Calgary.

OUR PEOPLE

CEMA staff have a diversity of experience that allow us to provide a holistic, multi-faceted approach to emergency management. Our employees bring with them backgrounds in areas such as academia, business, private industry, social work, firefighting, municipal services and consulting that allow us to apply a unique lens to emergency management decisions.

60

AGENCY MEMBERS

extend the capabilities and reach of CEMA into our communities



Calgary Neighbourhoods and CEMA created a Non-Profit Liaison role to act as the central point for communication and coordination between The City and non-profit sector during emergencies.

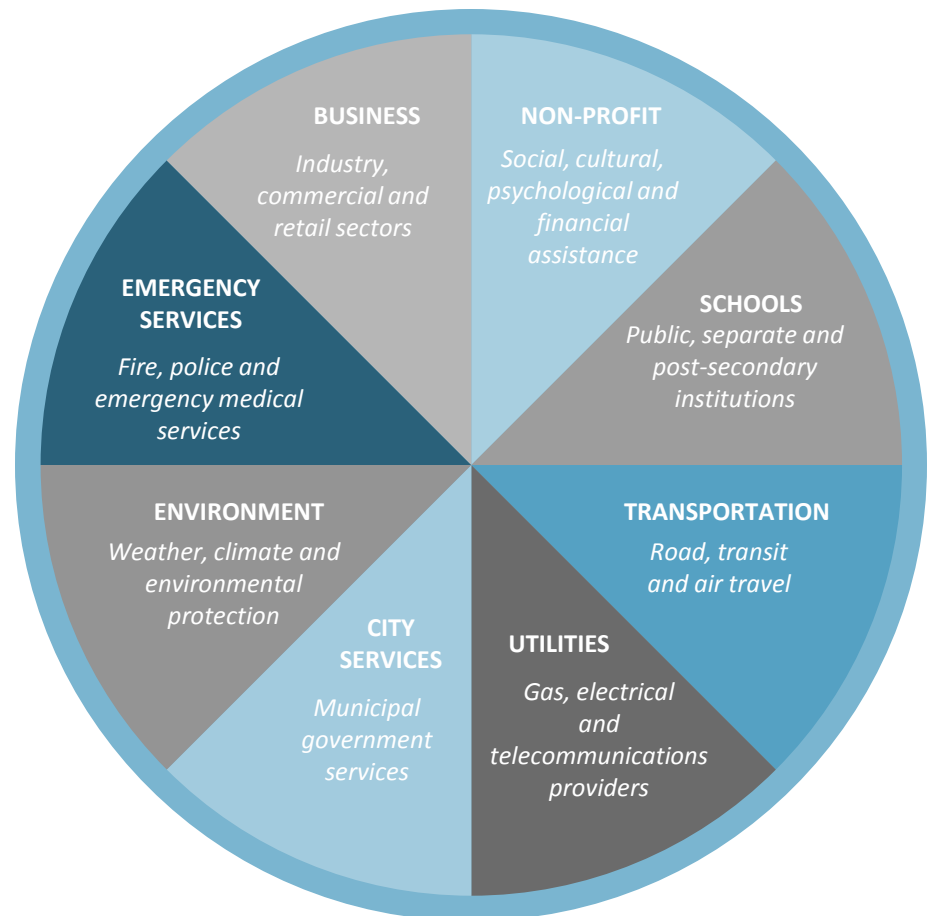


Through the Calgary Chamber of Commerce, CEMA connects with 12,000 businesses in Calgary to share emergency updates and build business resiliency.

OUR AGENCY MEMBERS:

A WHOLE COMMUNITY APPROACH

Our efforts are expanded exponentially through the reach and work of our Agency members who are responsible for critical infrastructure, essential services and public safety.



UNDERSTANDING EMERGENCY MANAGEMENT

An emergency is an urgent event that calls for immediate action to mitigate risk to life, property or the environment. Emergency management addresses a full spectrum of activities – prevention, mitigation, preparedness, response and recovery – that contribute to reducing risks, limiting the impact of events, ensuring timely response and supporting communities in recovering as quickly as possible after an event.

Safe, adaptable and capable communities, families and individuals are at the heart of our city's ability to weather any emergency. We pull together the people, knowledge and resource necessary to prepare for any emergency event and lead a team of expert members in a seamless response when an emergency strikes. Through any adversity, our goal is to maintain essential city services, minimize the impact on the city and quickly return citizens and businesses to a new normal.

OUR LEGISLATIVE ROLE

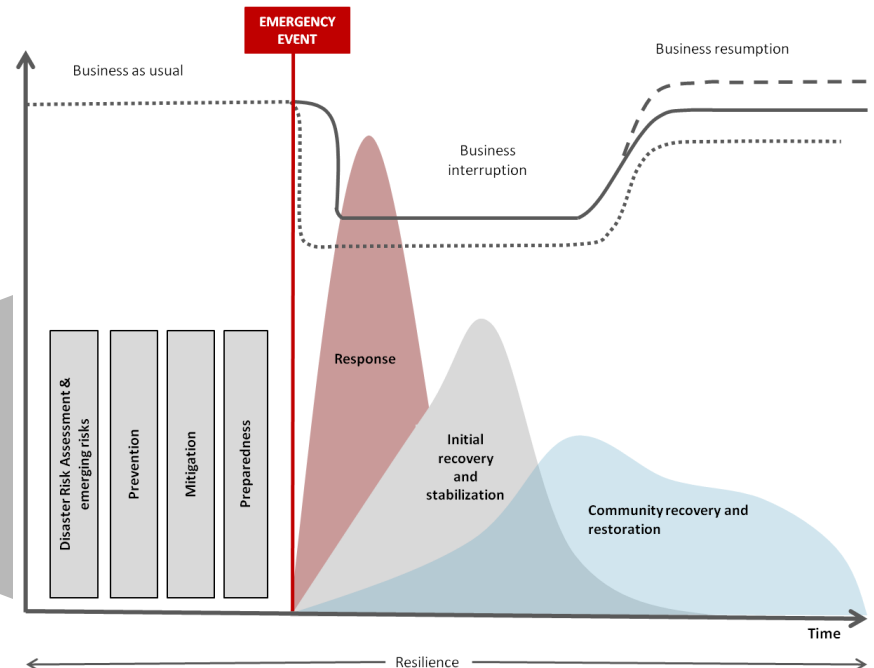
The Municipal Government Act outlines authorities granted to cities in the event of an emergency. The *Alberta Emergency Management Act* is the primary legislation related to emergency management in the province and establishes the powers and responsibilities of provincial and municipal governments and their emergency management agencies.

In Calgary, the Emergency Management Bylaw sets out the responsibilities of CEMA and its Chief as well as parameters of the Emergency Management Committee. The Municipal Emergency Plan outlines the structure and decision-making process during large-scale emergencies as well as the roles and responsibilities of Agency members.

CEMA's emergency management model provides a balanced approach to all phases to ensure programs, training and capacity are available to support each area.

The Sendai Framework is a 15-year planning instrument for disaster risk reduction, drafted by the United Nations Office for Disaster Risk Reduction and endorsed by the Government of Canada. It is designed to align the efforts of countries around the world towards substantial reduction of disasters and their impacts by the year 2030. CEMA's disaster risk reduction priorities are aligned with this international platform.

Sendai Framework for Disaster Risk Reduction



FORT MCMURRAY WILDFIRE:

EMERGENCY MANAGEMENT IN ACTION

On a beautiful warm afternoon in early May, as a wildfire raged just beyond Fort McMurray city limits, every resident of the northern Alberta community was directed to immediately evacuate. They fled to towns and cities across the province seeking a safe place to stay. As emergency services across Alberta watched the fire advance, they quietly began to rally their staff and equipment should they receive a call for help. In the end, thousands of firefighters and specialized staff from across the province and Canada heard the call and responded to tackle the fire that came to be known as The Beast.

FORT MCMURRAY BY THE NUMBERS:

80,000

FORT MCMURRAY RESIDENTS

evacuated from their city in search of a place to stay

2,400

EVACUEES

from Fort McMurray were lodged in Calgary

\$3.7B

IN INSURABLE DAMAGE

made the Fort McMurray wildfire the costliest disaster in Canadian history

FORT MCMURRAY WILDFIRE:

CITY STAFF HELP FORT MAC FIGHT BACK

700+

CITY OF CALGARY EMPLOYEES
were deployed to Fort McMurray



Calgary Community Standards 9-1-1 call takers provided assistance to Fort McMurray's overwhelmed call centre



Water treatment plant operators helped maintain essential water systems in Fort McMurray



Transit operators helped shuttle evacuees in northern communities



Calgary Fire Department firefighters helped to protect Fort McMurray homes and buildings



Staff from a range of disciplines across The City came forward to provide their expertise and leadership

300+

CITY OF CALGARY EMPLOYEES
mobilized in Calgary and the Emergency Operations Centre to coordinate City support to Fort McMurray and evacuees

CROSS-DEPARTMENT WORK IN PROFILE: EMERGENCY SOCIAL SERVICES

During an emergency or disaster, CEMA's Emergency Social Services (ESS) sets up reception and lodging centres to provide support and accommodation to citizens evacuated from their homes. Our ESS team is made up of staff from across The City of Calgary who take temporary leave of their regular job to provide help at these centres when the need arises.

During the Fort McMurray wildfires, more than 100 City staff came together to assist evacuees at lodging centres. Due to the long duration of the evacuation, ESS introduced a "Bring a Friend" program to encourage members to recruit a known and trusted colleague to assist at the centres. The program was a huge success and is now part of the staffing planning for future lodging and reception centres.

FORT MCMURRAY WILDFIRE:

EMERGENCY SOCIAL SERVICES IN CALGARY

THE CHALLENGES

2,400 evacuees arrived via car, bus and airplane over the span of a week

90% Muslim population at some centres required cultural and language considerations

Norovirus outbreak at three lodging centres

Six weeks remaining in the school year

Individuals and families displaced from their normal lives for over a month

OUR SOLUTIONS

Partner with post-secondary institutions for immediate lodging solutions

Engage local Muslim organizations and mosques

Consult Alberta Health Services on strategies for containment and evacuee health

Engage Calgary's public and separate school boards to accommodate children

Coordinate with Agency members to make evacuees feel more at ease

SUCCESS

The largest number of evacuees in Alberta were housed in Calgary

Translation, Halal food and Ramadan prayer and food service provided

Changes to cleaning and food service helped contain the virus spread

Families were permitted to immediately enroll children in schools closest to them

Over 6,600 free entries provided to Fort McMurray residents at Calgary attractions

FORT MCMURRAY BY THE NUMBERS:

4

POST-SECONDARY SCHOOLS
opened their student residences to provide temporary lodging for evacuees

78

PETS ASSISTED
by University of Calgary Faculty of Veterinary Medicine

650

CHILDREN ENROLLED
in Calgary schools



ATOOSA

“It was nice to see that people cared about all of the small details when we arrived. The whole process was quick and we were able to get settled right away. I’m so impressed with the flow of information and that the CEMA staff at the reception centres remember my name among the hundreds of others who were also there.”

On May 3, Atoosa and her children hurriedly escaped Fort McMurray, heading north to a camp. After three days and with supplies running low, they were flown to Edmonton. There, they found the lodging centre full and were placed on a bus to Calgary.

When they arrived at 4:00 a.m. on May 7 at the Ambrose University lodging centre, they were greeted by CEMA and Red Cross representatives, and served a warm meal. In the coming days, ESS staff gave the family information about things to do in Calgary as well as complimentary passes to recreation facilities, the Calgary Zoo and Calgary Transit.

Soon after arriving, Atoosa and her husband found a suitable school for their kids and lauded the support they received from the principal, teachers and students. Throughout the evacuation and lodging process, Atoosa commended the consistent flow of information they received.

Since immigrating to Canada from Iran four years ago, Atoosa has noticed how willing Canadians are to share with each other and feels very lucky to have received assistance from CEMA during this disaster.

FORT MCMURRAY WILDFIRE: CANADA TASK FORCE 2

REGIONAL RESILIENCE

Canada Task Force 2 (CAN-TF2) is Alberta's all-hazards disaster response team for municipal, provincial and national disasters. The team is called upon for emergencies where there has been large-scale infrastructure destruction or structural collapse, whether the result of natural, technological or human-induced events. While CEMA works to build community and city resilience, our CAN-TF2 team is a vital contributor to national and regional resilience. The team is called upon whenever an emergency exceeds the capacity of local agencies or requires specialized skills, equipment or expertise.



FORT MCMURRAY BY THE NUMBERS:

3,000

MEALS PREPARED

by the CAN-TF2 chef in one 24-hour period

162

MEDICAL CASES TREATED

by CAN-TF2 doctors and medical staff

\$5M

IN SPECIALTY EQUIPMENT

available from CAN-TF2 to assist in Fort McMurray response

CANADA TASK FORCE 2: CAPABILITIES

CAN-TF2 deploys to an emergency within six hours and is within a ten-hour response to 96 per cent of Alberta's population. Self-contained teams stay on site up to 14 days to stabilize the community and bolster local rescue and incident management resources.



Technical and canine search teams locate people trapped in collapsed structures using specially trained dogs and electronic search equipment.



Heavy urban search and rescue teams use a variety of rescue and construction equipment to remove debris from collapsed structures to rescue victims.



Communications teams provide radio, satellite and voice technology to supplement existing systems or replace systems knocked out by a disaster.



Logistics teams provide CAN-TF2 with support and sustainment services, such as transport, equipment and vehicle maintenance, shelter, lodging and food.



Emergency medical assistance teams are staffed by physicians and advanced care paramedics to provide emergency care for team members in the field.



Flood and water transport teams move rescue personnel and supplies through water ways and flood areas as well as pump out buildings.



Incident Management Team supports the local authorities within their emergency operations centre.

WITH THE REINTRODUCTION OF GOVERNMENT OF CANADA FUNDING IN 2017, CAN-TF2 MAY BE CALLED UPON TO RESPOND TO A DISASTER ANYWHERE IN CANADA.

CEMA and CAN-TF2 regularly monitor events occurring across the country to maintain awareness and readiness to respond whenever needed.

SUCCESS: COMMUNITY DONOR

This past year marked the first time in its history that CAN-TF2 received community donations for its program. The Kinsmen Club of the Stampede City donated the trailer used for its Portraits of Honour project to CAN-TF2 to be repurposed for CAN-TF2's use.

In addition, the Kinsmen Club of the Stampede City Foundation donated \$100,000 to CAN-TF2 for the purchase of new equipment and training to further enhance the capabilities and capacity of the team. This support from the Community is essential in helping secure the future sustainability of the team.



Kin Canada
Kinsmen Club
of the Stampede City

EMPOWERING VOLUNTEERS: READYCALGARY



PREPARING CALGARIANS

READYCALGARY is a CEMA program that informs, educates and build resiliency to the impacts of emergencies and disasters in the city. It is designed to first prepare individuals and families for emergencies, and then empower communities to act effectively and safely in response to an emergency impacting their residents.

Citizens and community association members are encouraged to attend and take their learnings back to residents. Representatives are provided materials and lessons to share with their communities to support preparedness, response and recovery efforts at a grassroots level.

READYCALGARY Kids is an extension of the **READYCALGARY** program designed for children. It is now delivered to most Grade 5 students across the city as part of their regular school curriculum.

13,000

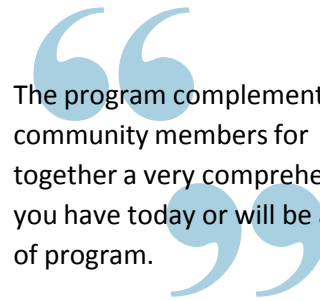
CHILDREN

&

200

SCHOOLS

participated in **READYCALGARY Kids** in 2016

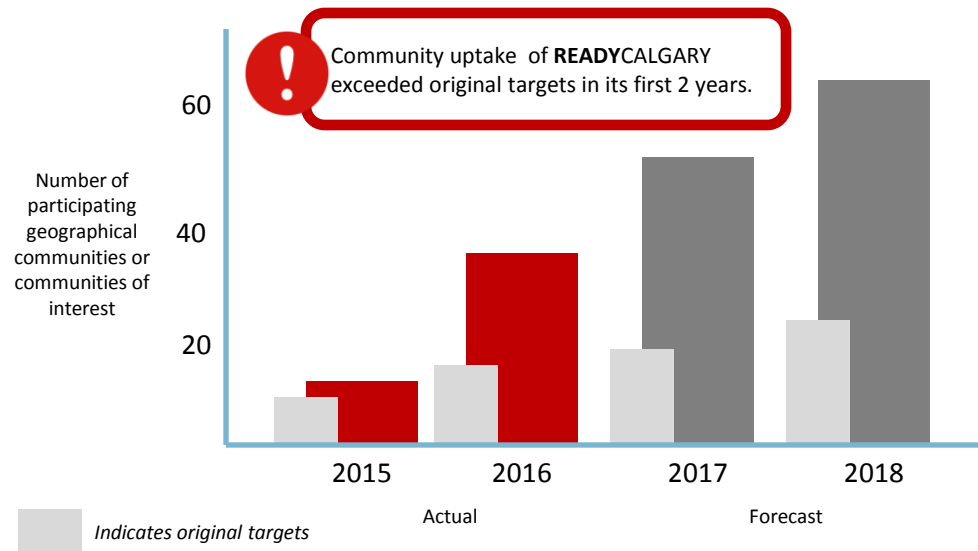


The program complements our communities efforts to better prepare our community members for an emergency or disaster situation. CEMA has put together a very comprehensive program that will either complement what you have today or will be a perfect starting point if you don't have this type of program.

Ismaili Muslim Council for the Prairies

SUCCESS:

COMMUNITY PARTICIPATION



PREPARING CITY SERVICES:

CORPORATE BUSINESS CONTINUITY



RESILIENT CITY SERVICES: ASSESSING VULNERABILITY

CEMA has developed a process to identify services in The City of Calgary that must be able to continue to operate following any emergency; these are called essential services. We work with business units to determine what requirements are necessary to deliver the essential service and assess which requirements have vulnerabilities. Those vulnerability gaps are then addressed through each business unit's business continuity plans.

Is the service essential?

Business units determine if a service is essential based on key criteria:

- 1 Would loss of the service have a high impact on health, safety or security of citizens or employees?
- 2 Would loss of the service result in catastrophic costs?
- 3 Would loss of the service have high impact to the economic well being of citizens or The City of Calgary?

If a service is essential, the next step is to examine the resources necessary to deliver the service.

Are the requirements supporting the essential service vulnerable?

Business units determine if a requirement is vulnerable based on key criteria:

- 1 Does a workaround exist for the resource?
- 2 Does the workaround replace over 50% of the functionality of the original resource?
- 3 Can the workaround be activated within the necessary time?

BUSINESS CONTINUITY & EMERGENCY MANAGEMENT

Emergency management focuses on emergency containment and response, while business continuity focuses on the continuation of critical services until a return to normal business operations is possible. Within The City of Calgary, responsibility for business continuity coordination falls with CEMA. Most business units have Business Continuity Coordinators assigned to determine the recovery procedures and strategies necessary to resume essential or critical services during a disruptive event.

56% of the requirements for essential services are resilient

44% of the requirements for essential services are vulnerable



All business units must have a business continuity plan which includes planning for vulnerability gaps

SURVIVING AND THRIVING:
UNDERSTANDING DISASTER RISK

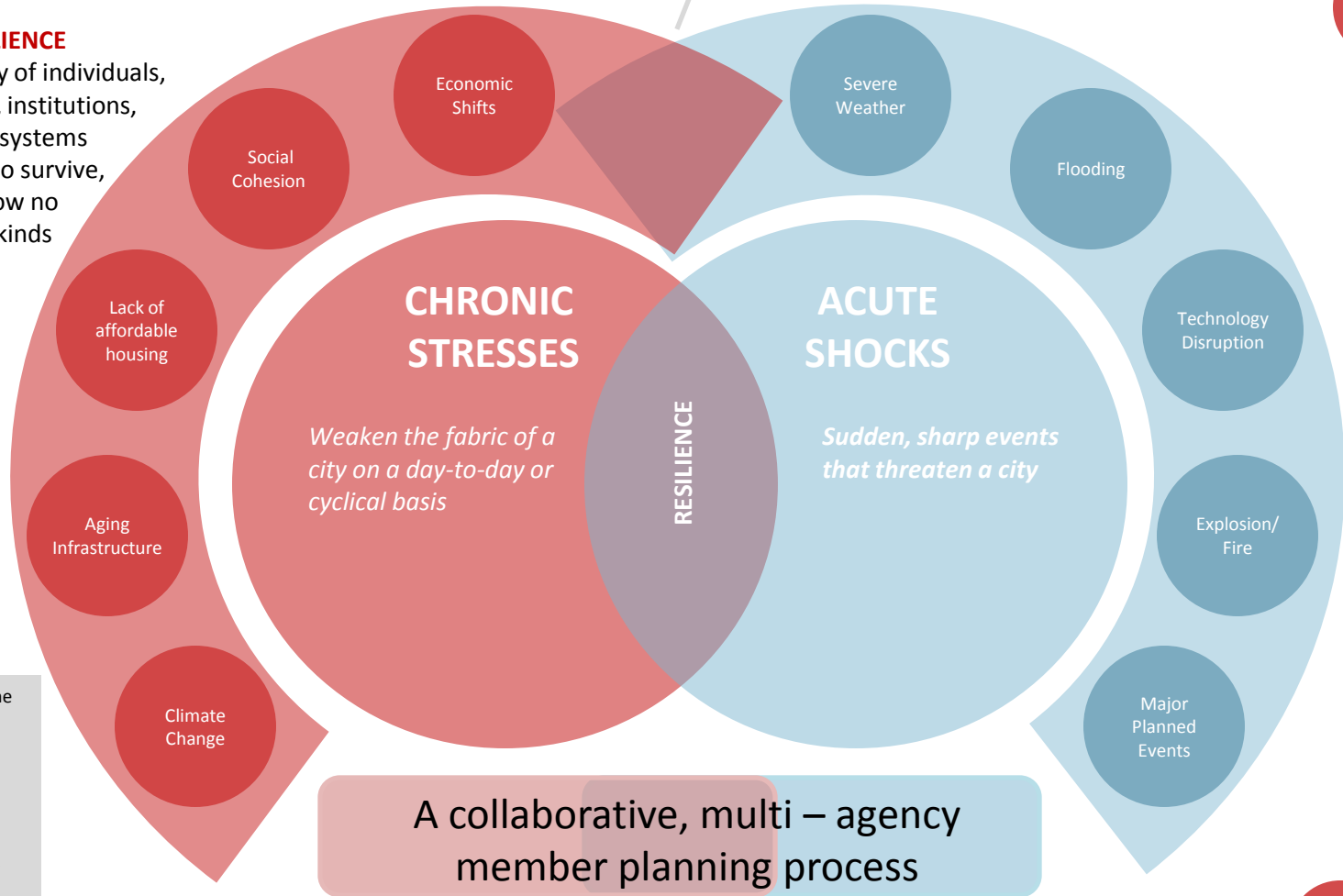


SHOCKS & STRESSES

Understanding Disaster Risk

URBAN RESILIENCE

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



ADVANCING RESILIENCE: CEMA 2015-2018 ACTION PLAN

1

ASSESSING RISK, VULNERABILITY AND CAPABILITY TO MANAGE EMERGENCY EVENTS

Identifying and communicating life, property and environmental risks to Agency members, citizens and those with a role in helping reduce the likelihood and impact of emergencies.

2

CONTINUALLY STRENGTHENING THE AGENCY AND ITS STAFF

Developing both CEMA staff and our Agency members to create a team capable of planning for and managing the most complex emergencies.

3

ADVANCING CORPORATE RESILIENCY AND BUSINESS CONTINUITY

Creating programs and processes to help City Business Units, Agency members and businesses throughout Calgary to continue to operate following an emergency.

4

EMPOWERING AND FOSTERING A STRONG CITY AND COMMUNITIES CAPABLE OF BOUNCING BACK FROM ADVERSITY

Advocating for disaster risk reduction activities and advancing preparedness initiatives at an individual, family and community level to create a resilient city.

5

COORDINATING EMERGENCY EVENT RESPONSE AND RECOVERY

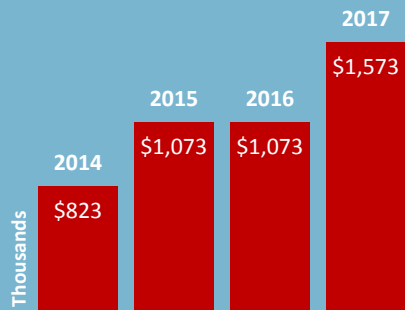
Refining and adopting processes and planning to create seamless emergency event monitoring, response and recovery.

OUR ACTION PLAN ADVANCES
COUNCIL PRIORITY:

A CITY OF INSPIRING NEIGHBOURHOODS

CEMA leads two Community Services strategies: Build resiliency to flooding and Enhance The City's capacity and resiliency to prepare for and respond to pandemics, natural disasters and emergency situations.

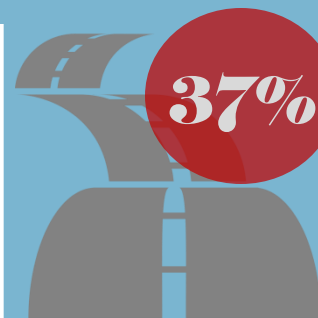
CONTRIBUTING TO RESILIENCE: ACCOMPLISHMENTS



Significant progress has been made in CAN-TF2 sustainability through securing of additional funding sources. The result has been a

91% increase

in CAN-TF2 funding between 2014 and 2017.

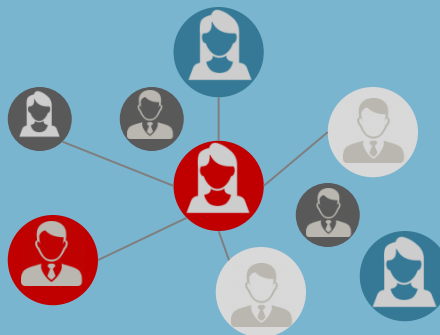


of CEMA Agency members own or contribute to the protection and management of critical infrastructure in the city. Through its new strategy, CEMA is helping advance critical infrastructure resiliency.

The CAN-TF2 Incident Management Team was formalized, consisting of senior leaders from

**9 disciplines &
7 jurisdictions**

The team assists municipalities with emergency management and was adopted by the Alberta Emergency Management Agency as a southern Alberta team to be deployed for regional disasters.



Partnerships that enhance services provided to evacuated citizens were established:

- The Emergency Wellness Response Team, comprised of 10 social agencies, provides emergency psychological assistance and support to victims of disasters.
- CEMA sits on the Post-Secondary Institution Emergency Management Group to facilitate assistance from and to the city's post-secondary facilities during emergency incidents.



representatives from our Agency members completed Emergency Operations Centre 101 training this past year to learn emergency management principles and processes.



CAN-TF2 received two awards; an Alberta Emergency Management Agency Achievement Award and Kinsmen Club of Stampede City Community Heroes Award for its role in the response to the Fort McMurray wildfire.

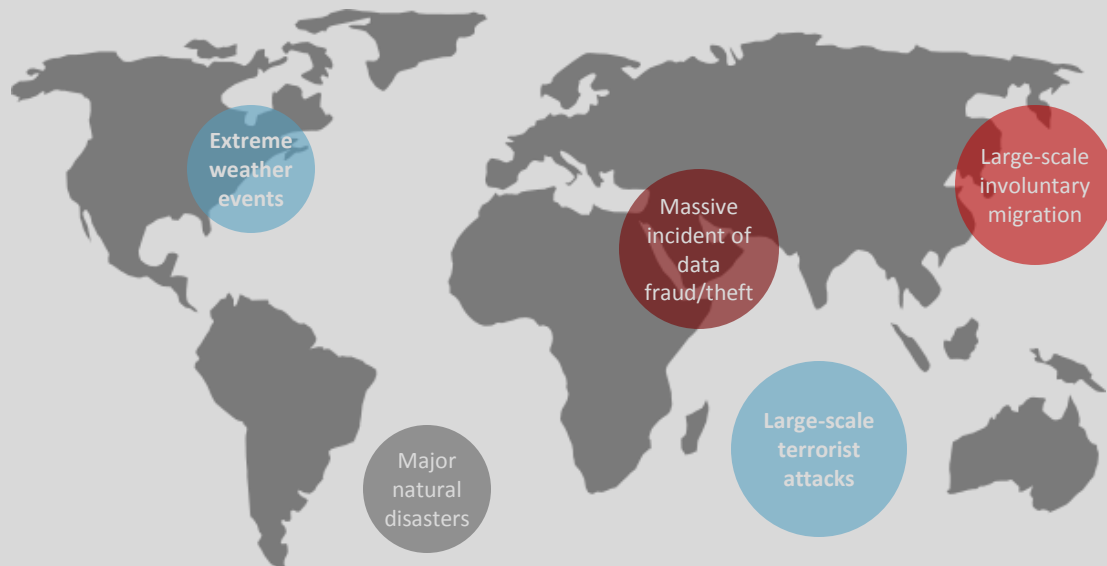
DID YOU KNOW?

CEMA works in partnership with the Red Cross year round to find accommodations for citizens displaced from their homes due to smaller scale emergencies such as fires.

ISSUES TO WATCH:
GLOBAL TRENDS



The World Economic Forum identified the top five global risks in terms of likelihood for 2017.



World Economic Forum, The Global Risks Report 2017

THREE CONSIDERATIONS IN CEMA 2017 PLANNING

MASS CASUALTY INCIDENTS

Many natural disasters and criminally-caused events result in multiple deaths and injuries. The on-scene management of the area, identification of victims, movement of victims to areas for examination and care for survivors will place a tremendous strain on already stretched health care and medical examiner resources and facilities.

ACTIVE ASSAILANT EVENTS

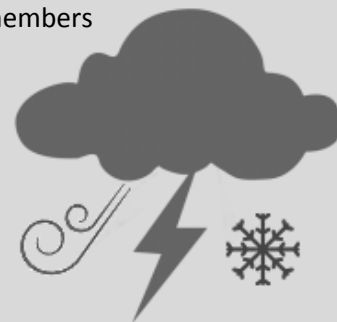
Terrorist and criminally caused mass casualty incidents (C-MCI) have been relatively rare within Canada; however, their growth on an international scale means we cannot ignore the likelihood such events will occur here. Emergency management planning for these types of events includes all the city and social services that would require coordination during such an emergency.

CYBER ATTACKS & SECURITY

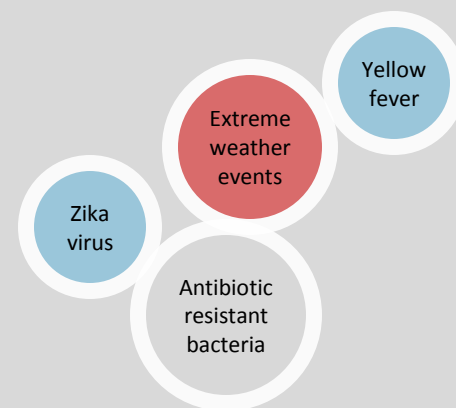
Attacks on government and critical infrastructure systems threaten delivery of essential services to citizens. In 2016, about 24,000 external attacks against the French Defense ministry were blocked by security. The minister warned of a real risk of cyberattacks on French civil infrastructure such as electricity, telecommunications and transport.

WEATHER EVENTS

The emergencies most likely to impact Calgarians are weather-related events. CEMA has monitored and coordinated the response to dozens of snow, thunder and severe storm events over the past several years. Our all-hazards planning approach combined with annual exercises ensures CEMA and our Agency members are well prepared to manage any weather event.



Other issues we are watching in 2017:



BUILDING RESILIENCE: KEY INITIATIVES IN 2017



Sources referenced for the Status of Emergency Preparedness in Calgary:

1. *Insurance Bureau of Canada*. (2017, January 6). Severe weather, natural disasters cause record year for insurable damage in Canada. Retrieved from: <http://www.ibc.ca/nb/resources/media-centre/media-releases/severe-weather-natural-disasters-cause-record-year-for-insurable-damage-in-canada>
2. *World Economic Forum*. (2017). The Global Risks Report 2017, 12th Edition. Retrieved from: <https://www.weforum.org/reports/the-global-risks-report-2017>
3. *Panda Security* (2017, March 2). When cyber-security becomes an affair of state. Retrieved from: <http://www.pandasecurity.com/mediacenter/security/advanced-cyber-security-becomes-an-affair-of-state/>

