

**Community Services Report to
Emergency Management Committee
2019 May 08**

**ISC: UNRESTRICTED
EM2019-0445**

Status of Emergency Preparedness – A Focus on Risk

EXECUTIVE SUMMARY

This is the first in a series of panel presentations highlighting disaster risks that Calgary faces and the mitigation efforts in place to reduce the impact of these risks. The summary of this presentation will be collated with additional presentations and information to form the annual Status of Emergency Preparedness Report to be distributed to the Emergency Management Committee in Q4 of 2019.

The 2018 Disaster Risk Assessment (DRA), completed by the Calgary Emergency Management Agency (CEMA), assessed a total of 65 individual hazards and threats that pose a risk to Calgary. Over the course of 2019-2022 business cycle, CEMA will provide Council with an in-depth understanding of Calgary's risk environment and the work The City of Calgary and our other Agency members are doing to address these risks. At the 2019 May 8 meeting, representatives from The City of Calgary, Alberta Agriculture & Forestry and Alberta Health Services will present detailed risk analysis related to drought (high risk), major water contamination (widespread forest fires, medium risk), wildland fires (medium risk), and poor air quality (medium risk).

ADMINISTRATION RECOMMENDATION:

That the Emergency Management Committee of Council considers the information from the panel presentations and discussion at the 2019 May 8 meeting to inform the Status of Emergency Preparedness report.

PREVIOUS COUNCIL DIRECTION / POLICY

At the Emergency Management Committee of Council on 2018 November 7 CEMA committed to sharing a preview of the Disaster Risk Explorer with each member of the Committee.

The City of Calgary Emergency Management Bylaw 25M2002, Section 6 (2) states: "The Director shall;

- a. Prepare and co-ordinate emergency plans and programs,
- b. Act as director of emergency operations on behalf of the Agency,
- c. Co-ordinate all emergency services and other resources used in an emergency, and
- d. Submit to Council annually through the Emergency Management Committee, a report on the status of emergency preparedness in the City."

BACKGROUND

Emergency management is not solely about responding to events; prevention, mitigation, and preparedness activities are essential in managing disaster risk. The 2018 DRA analyzed 65 risks to Calgary and identified the 13 risks currently representing the highest priority. For purposes of discussion, presentations to Committee will focus on these priority risks and other risks that are trending upwards.

CEMA undertakes periodic Disaster Risk Assessments on behalf of The City of Calgary to gain a greater understanding of the disaster risk environment in Calgary and to prioritize future actions towards reducing disaster risk. The disaster risk assessment is a foundational

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component of disaster risk management programming that can provide context to strategic planning activities, public awareness campaigns, and broader policy decisions. As managing disaster risk is a shared responsibility, CEMA shares disaster risk information with the public so that people understand their risk and have the information they require to prepare for emergencies. CEMA leverages the expertise, reach and role of over 60 Agency members to proactively treat risk. These Agency members all have unique roles to play in the day-to-day function, resilience and vibrancy of Calgary.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

The frequency and intensity of extreme weather events are being affected by a changing climate. According to the Insurance Bureau of Canada (IBC) Albertans have been hit hard by severe weather events. According to IBC's most recent annual Facts Book, in the last five years Alberta has accounted for about \$6.2 billion in insured losses, which is about 60% of all natural catastrophic insured losses in Canada. Between 1983 and 2008, property and casualty insurers paid out an average of about \$400 million a year (in today's dollars) on weather-related losses across Canada. Between 2009 and 2018, insurers paid out an average of \$1.4 billion. This aligns to the results in the DRA, with eight of the thirteen high risks being weather-related.

Disaster losses are increasing largely due to population growth, urbanization, and increasing values exposed within high-risk areas. In Calgary, there has been over \$5 billion in estimated disaster losses since the year 2000. For the period 2010 – 2016, direct losses in Calgary averaged \$600 million per year. For The City of Calgary organization, estimated total losses for this period were close to \$500 million, which is an average of greater than \$70 million per year.

Despite Calgary not experiencing a major hydrological drought in recent urban history, the prairie region of Canada remains vulnerable to this risk. This risk is expected to continue to rise as our climate continues to warm. The onset of a drought can be slow and the duration of exposure to drought conditions is unknown. As our risk of drought increases, there is an increase in the likelihood and impact of wildland fire challenges, and the potential for poor air quality, as both can encroach and enter into city boundaries.

Stakeholder Engagement, Research and Communication

In addition to communication through our community and education programs, disaster risks will also be communicated to the public through the Disaster Risk Explorer website and Disaster Risk Report that were both released Q2 2019. The new website aims to cultivate awareness so individuals and communities are motivated to take preparedness actions that are appropriate to the risks identified in the DRA.

In addition to sharing risk information with citizens and businesses, an in-depth assessment of risk is also provided to our more than 60 Agency members. CEMA uses its network of members to take a coordinated, collaborative One Calgary approach to addressing Calgary's disaster risk environment and prioritize activities towards reducing disaster risk.

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Strategic Alignment

Citizen Priority

CEMA's work on Disaster Risk Management supports the Citizen Priority of providing *A city of inspiring neighbourhoods*.

Corporate Priority

The service line Emergency Management & Business Continuity contributes to The City's resilience by understanding, informing, and reducing disaster risk, while empowering citizens to engage in emergency preparedness activities at home, work, and their community.

This work supports the Corporation's Sustainability Direction 2020 objective *Calgary, its communities and neighbourhoods are safe, resilient and supportive*.

Comprehensive Emergency Management Model

The comprehensive emergency management model is used by The Corporation to manage disaster risk and disaster consequence. The Disaster Risk Assessment is an integral part of this model and contributes to a whole continuum of emergency management.

Sendai Framework for Disaster Risk Reduction

The Sendai Framework for Disaster Risk Reduction is a United Nations strategy and international best practice for reducing disaster risk. The Canadian federal government is a signatory on this framework, and the Disaster Risk Assessment aligns to the outcomes and action items prescribed within.

Resilience Strategy

The Disaster Risk Assessment aligns to the outcomes of the Calgary Emergency Management Agency's contribution to The City of Calgary's Resilience Strategy.

Corporate Risk Register

The Corporate Risk Register continues to identify business interruptions as a high risk to the Corporation. The Disaster Risk Assessment will serve to inform City services of disasters of concern providing a foundation for emergency response and business continuity strategies.

Social, Environmental, Economic (External)

The impacts of drought can be long and severe, which can stress every type of environment including wetlands, wildlife and urban forests; parks and open spaces; and low river flows resulting in damage to aquatic ecosystems. Given certain conditions, the impacts can lead to the deterioration of mental health, closure of facilities, business interruptions, and development.

Secondary risks to drought, as presented by the panel, can significantly influence wildland fire behaviour as it is fuelled by vegetation and surface fuels such as grass, tress, deadfall and shrubs; which can further threaten Calgary's watershed and potable water supply, as well as significantly reduce air quality thereby causing other extreme health challenges. Fires within a given distance could spread into adjacent communities that could lead to evacuations, power outages, road closures, infrastructure impacts, and structural fire damages.

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Additionally, a wildland fire in another jurisdiction can significantly deteriorate our air quality. Exposure to this can aggravate pre-existing medical conditions citizens have, leading to increased medication use, doctor and emergency room visits, and hospital visits. While poor air quality events are generally the result of wildfire smoke in the summer there are other contributing causes that result in poor air quality.

Financial Capacity

Current and Future Operating Budget:

The risks, as presented on the panel, should be utilized by business units, individuals, families, communities and corporations to enhance their emergency response and business continuity planning. Within The City of Calgary, while this activity is typically already resourced by business units, a risk of significant implication could require intensified mitigation efforts, and associated operating budget, to ensure appropriate preparedness. This would be conducted within the budget planning of the affected business unit(s).

Current and Future Capital Budget:

The information presented by the panel can inform decision-makers of the context and relative prioritization of risks to determine if they should be treated, analysed further or monitored. The Disaster Risk Assessment may prompt The City of Calgary and individual business units to compare their operational plans against the risks identified and make decisions on what mitigation efforts they could undertake, which could result in significant costs.

Risk Assessment

The risk of inaction by decision-makers would result in delayed risk treatment and controls. Each of these risks can have major impacts on the environment, health, society, and economy of Calgary and surrounding region. There are secondary risks associated with each hazard as well, which can dramatically exacerbate the impact.

The underlying vulnerability ecosystem that contributes to disaster risk is constantly in flux. The DRA is a point-in-time snapshot of this dynamic disaster risk landscape. The Calgary Emergency Management Agency continues to monitor global events and changing risk landscapes to ensure our preparedness for events. It is important to recognize that the Disaster Risk Assessment is not predictive in nature and low risk or unrated events may still pose a risk to The City of Calgary.

The Calgary Emergency Management Agency will continue to employ an all-hazards, risk-based approach to emergency management.

REASON(S) FOR RECOMMENDATION(S):

The information and perspectives from Committee and Calgary Emergency Management Agency members at the 2019 May 8 meeting of the Emergency Management Committee will inform the Status of Emergency Preparedness Report in Q4 2019.

ATTACHMENT(S)

None