

Community Services Report to
Emergency Management Committee
2021 December 3

ISC: UNRESTRICTED
EM2021-1551
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Status of Emergency Preparedness Focus on Risk - Major Rail Incident

RECOMMENDATION:

That the Emergency Management Committee recommends that Council receive this report for the Corporate record.

RECOMMENDATION OF THE EMERGENCY MANAGEMENT COMMITTEE, 2021 DECEMBER 3:

That Council receive this report for the Corporate Record.

HIGHLIGHTS

- The City of Calgary has committed to informing Council and citizens of the priority disaster risks in Calgary as identified in the Disaster Risk Assessment. The assessment has determined that a major rail incident is one of the top 14 high risks that could impact Calgary. This Committee report provides in-depth information on this risk and the actions taken to prepare for it.
- **What does this mean to Calgarians?** Major rail incidents include collision, derailment, fire, explosion, accidental release of dangerous goods, emission of hazardous materials, and rail security incidents. A major rail incident is rare yet could be catastrophic if it occurred in a high-risk area. Additionally, rail is a critical sector that supports economic activity and delays to the rail transport system could result in significant economic impacts.
- **Why does it matter?** If citizens are aware of the top disaster risks for Calgary and understand how they can prepare, they will be able to take actions that protect themselves, their families, and communities. This information also informs policy and practice that focuses on mitigating disaster risk.
- Calgary is the hub of several major rail networks and is vulnerable to a rail incident due to major rail lines spread throughout the city. Dangerous goods and hazardous materials are frequently carried through Calgary that can be toxic, corrosive, flammable, or explosive.
- Strategic Alignment to Council's Citizen Priorities: A city of safe and inspiring neighbourhoods.
- Background and Previous Council Direction is included as Attachment 1.

DISCUSSION

Every four years, Administration coordinates city-wide disaster risk assessments to understand Calgary's disaster risk environment, share risk information with Calgarians, and prioritize activities and allocation of resources. In 2018, a Disaster Risk Assessment evaluated a total of 65 individual hazards and threats that pose a risk to Calgary. The Disaster Risk Assessment is reviewed yearly, and the 2021 results summary is in Attachment 2.

Risk is determined by the severity and frequency of an event, the number of people and assets exposed to the hazard, and socioeconomic, physical, and environmental factors that make them vulnerable. **The Disaster Risk Assessment has identified a major rail incident as a potential catastrophic but rare event.** There is a high density of people, infrastructure,

Approval: **Black, Katie** concurs with this report. Author: **McManaman, Stacey**
City Clerk's: L. Gibb / L. Kearnes

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economic activity, and services located along the rail corridor in Calgary that are exposed to this hazard.

In Canada, from 2010 through 2019, there was a steady increase in the average length of trains, total tonnage of goods shipped, and total number of carloads carrying dangerous goods. In addition, the shipment of fuel oil and crude oil moved by rail tripled from 2011 to 2019. The Lac-Mégantic, Quebec, disaster in 2013 was caused by a derailment of cars carrying crude oil and resulted in a catastrophic explosion in the downtown core of the community. The disaster resulted in the deaths of 47 people, greater than \$2 billion in losses, 115 businesses and 30 buildings damaged or destroyed, six million litres of crude oil released, and 2,000 people evacuated from their homes.

If a major rail incident occurred, direct impacts and cascading indirect community impacts could include fatalities, injuries, building damage, large-scale evacuations, service delays, utility interruptions, business closures, traffic rerouting, and community service delays. Incident response can be complex as it requires enhanced coordination and can impact communities outside the immediate event perimeter.

Preparing The City for a Major Rail Incident

The *Municipal Emergency Plan* provides an overarching plan to guide response and recovery to any type of emergency. Attachment 3 summarizes the *Municipal Emergency Plan* and the annexes within it.

The City of Calgary implements a range of plans, policies, and training to reduce the risk of a major rail incident:

- Regular spring and fall simulated scenario exercises to validate emergency plans, procedures, policies, and public communication strategies. In 2021 November, a major rail incident exercise was completed that resulted in many learnings.
- Strategic partnerships with Canadian National Railway and Canadian Pacific Railway allow for collaboration in public education, training, exercise programming, and emergency response planning.
- The *Freight Rail Corridor Emergency Response Plan* establishes the roles, responsibilities, and actions of relevant City business units responding to a rail incident.
- The *Development in Rail Corridor Policy* guides development next to freight rail corridors by proactively managing the risk of physical impact of train derailments and noise. The policy does not provide direction related to rail incidents involving dangerous goods, hazardous materials, fires, or explosions.

Calgary Fire Department is the primary local response agency for rail incidents, and it maintains advanced capabilities to respond to events of any size, such as:

- Regular updating of rail line access maps and contents and volumes transported.
- Established communication and response protocols with rail companies to ensure an effective and timely response.
- Specialized Hazardous Materials and Technical Rescue teams activated when incidents need their expertise.

The City of Calgary has several key measures in place to support community response to a rail incident. These include the municipal Emergency Operations Centre, which provides a central

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coordinating hub, as well as the Emergency Social Services team, which provides for the immediate physical and emotional needs of evacuated citizens during an emergency.

Preparing Calgarians for Major Rail Incident

The City of Calgary has education programs and services in place designed to prepare and offer support to Calgarians in the event of a major rail incident:

- Emergency preparedness campaigns are ongoing with partners, including participation in national Emergency Preparedness Week.
- The Calgary Disaster Risk Explorer online resource offers the opportunity to learn about local hazards, potential and historical impacts, and mitigation activities of Calgary's greatest risks. The explorer includes maps and resources to help Calgarians understand rail risk.
- Community outreach through the Ready Calgary Emergency Preparedness Program focuses on increasing the capacity of citizens to prepare for emergencies by raising awareness, increasing knowledge, and developing skills.

STAKEHOLDER ENGAGEMENT AND COMMUNICATION

- Public Engagement was undertaken
- Public Communication or Engagement was not required
- Public/Stakeholders were informed
- Stakeholder dialogue/relations were undertaken

Administration engages more than 60 Calgary Emergency Management Agency member organizations in education, training, exercise programming, emergency response planning, and communications. The agency consists of City of Calgary business units, government agencies, critical infrastructure operators, utilities, schools, industry groups, and community service providers.

IMPLICATIONS

Social

The work outlined in this report aligns with the *Social Wellbeing Policy* of prevention (d) *The City will aim to stop problems before they start, using a prevention approach* by ensuring the social impacts of disasters are being mitigated before disasters occur such as major rail incidents.

Environmental

A major rail incident, especially the release of dangerous goods/hazardous materials, could cause major and long-lasting damage to ecosystems, and species. These risks and potential impacts are reduced though the work profiled in this report.

Economic

Calgary Emergency Management Agency members' work addresses the *Economic Resilience Strategy to create a more Resilient Economy*, as mitigation efforts will result in significant future savings.

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Service and Financial Implications

No anticipated financial impact

Planning and responding to a major rail incident reside in the current Calgary Emergency Management Agency business plan.

RISK

A major rail incident poses significant risk for The City and could contribute to four of 17 corporate risks: business continuity, environmental, health and safety, and infrastructure management risk. Literature indicates that mitigating disaster risk and having strategies in place to decrease the impact is more economically, socially, and environmentally sound than managing disaster consequence.

ATTACHMENTS

1. Previous Council Direction, Background
2. Calgary Emergency Management Agency Disaster Risk Assessment Summary
3. Municipal Emergency Plan Functional and Incident-Specific Plans Summary

Department Circulation

General Manager/Director	Department	Approve/Consult/Inform
Stuart Dalglish	Planning and Development	Inform