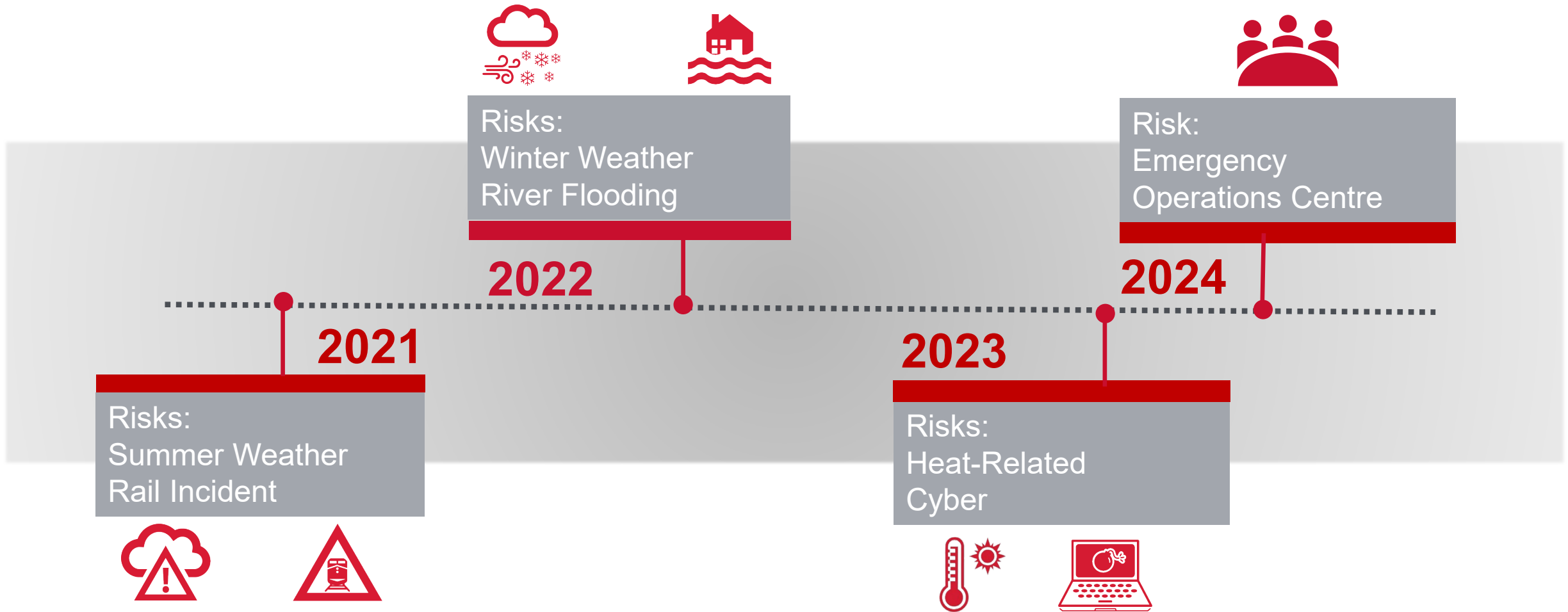




# Status of Emergency Preparedness Focus on Risk: Severe Spring & Summer Weather

2025 May 7

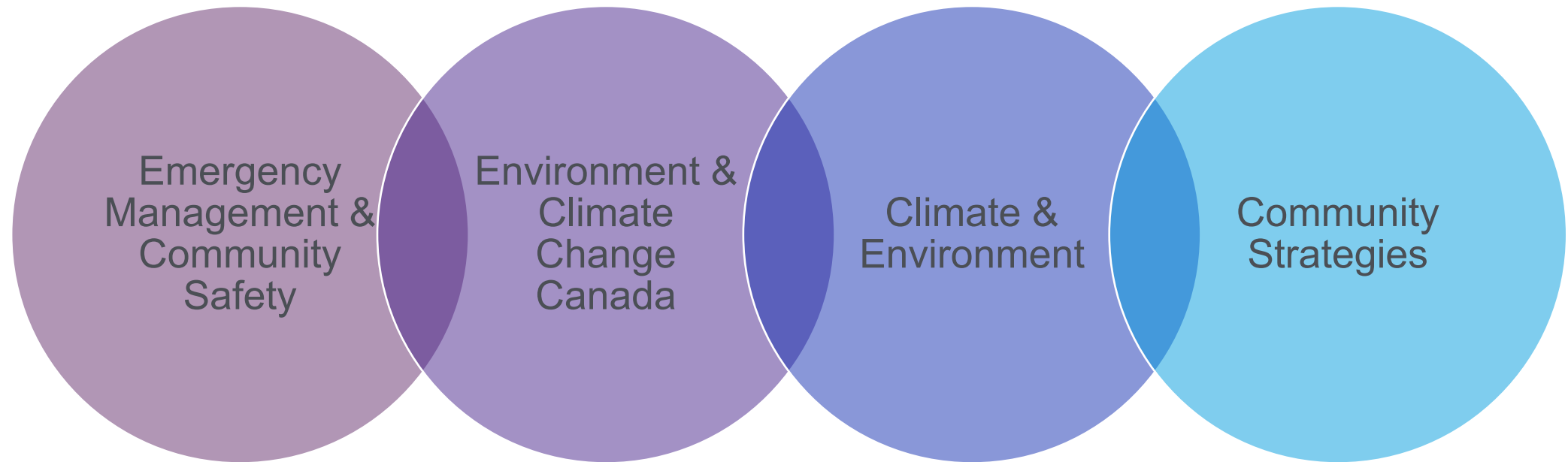




# Severe spring & summer weather risk profiles



	Tornado	Heavy Rainfall	Windstorm	Hailstorm	Thunderstorm
Risk level	High	High	Medium	Medium	Medium
Consequence	<p>Major</p>	<p>Moderate</p>	<p>Minor</p>	<p>Minor</p>	<p>Insignificant</p>
Risk trend					
Likelihood	<p>Unlikely</p>	<p>Likely</p>	<p>Likely</p>	<p>Almost Certain</p>	<p>Almost Certain</p>



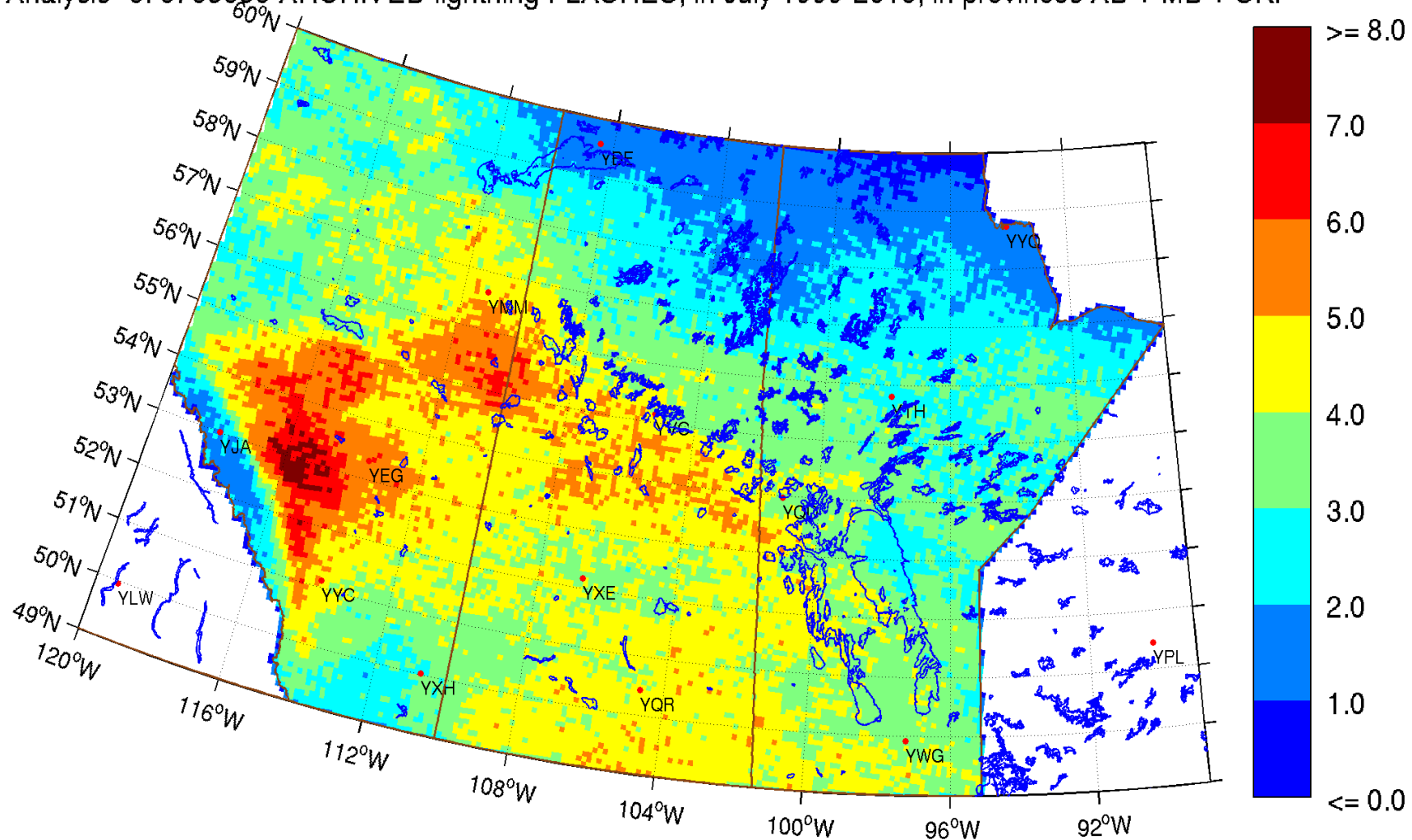




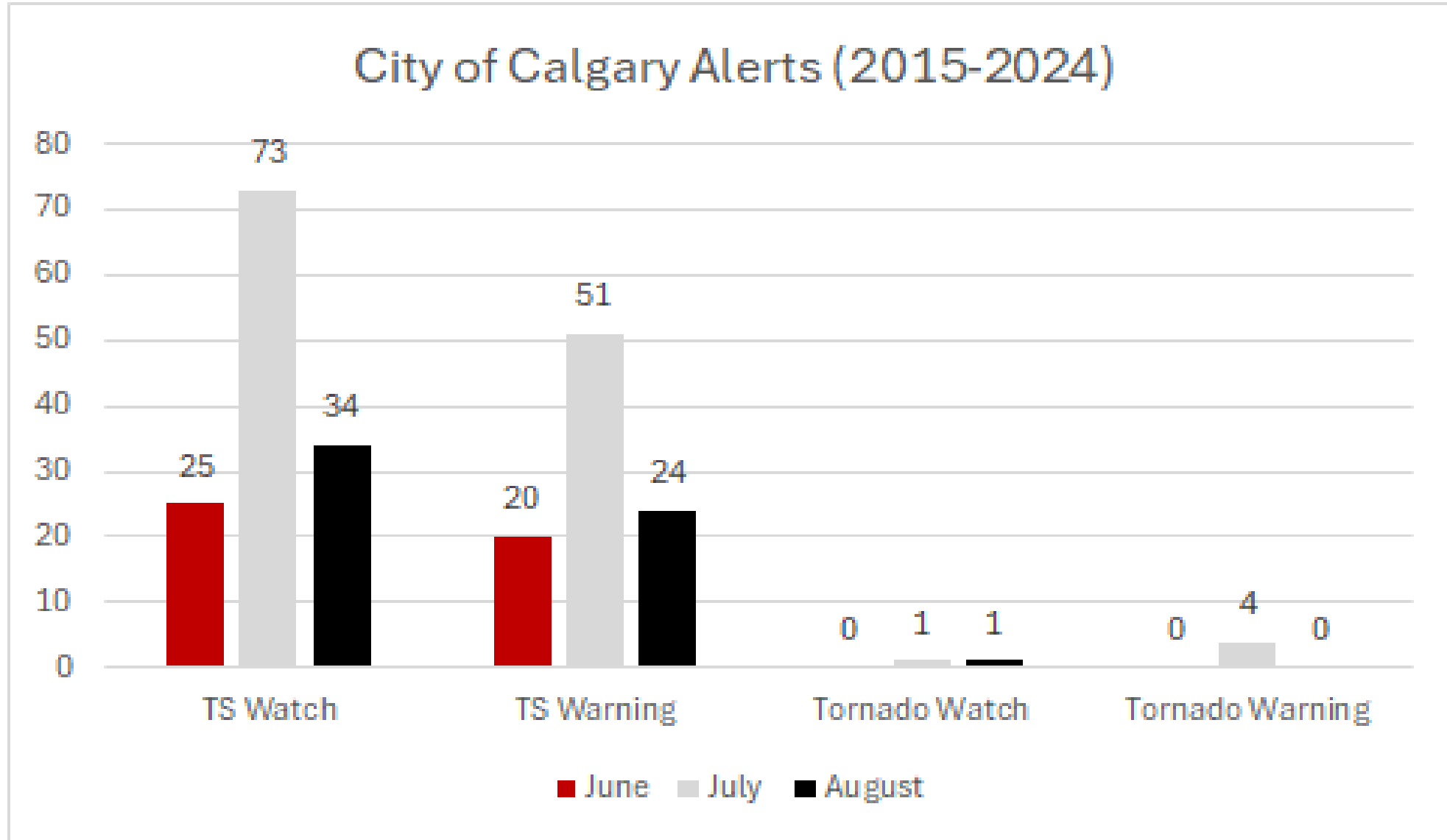
# Environment & Climate Change Canada

Alysa Pederson – Warning Preparedness Meteorologist

Analysis\* of 8785858 ARCHIVED lightning FLASHES, in July 1999-2018, in provinces AB + MB + SK.



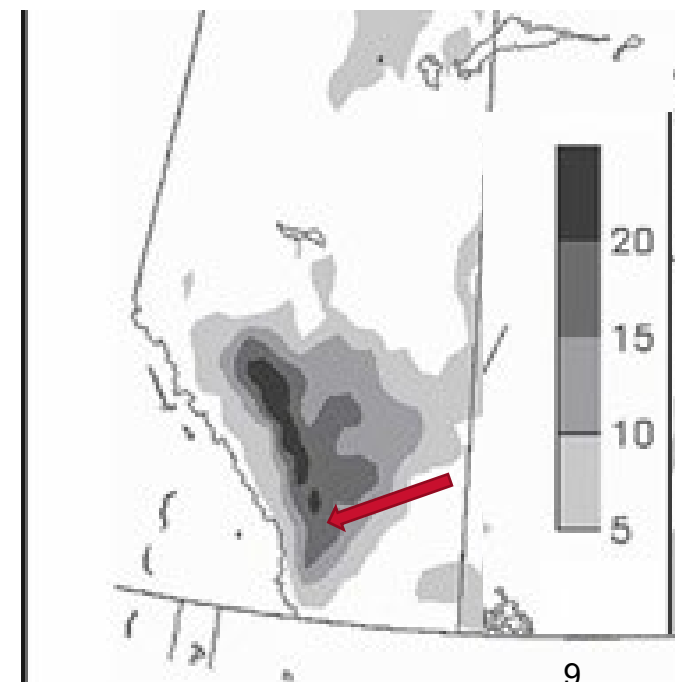
# Severe Thunderstorm risks for Calgary







Model Severe hail days for Alberta from June 1 to August 31, 2000.  
(Brimelow et al 2006)

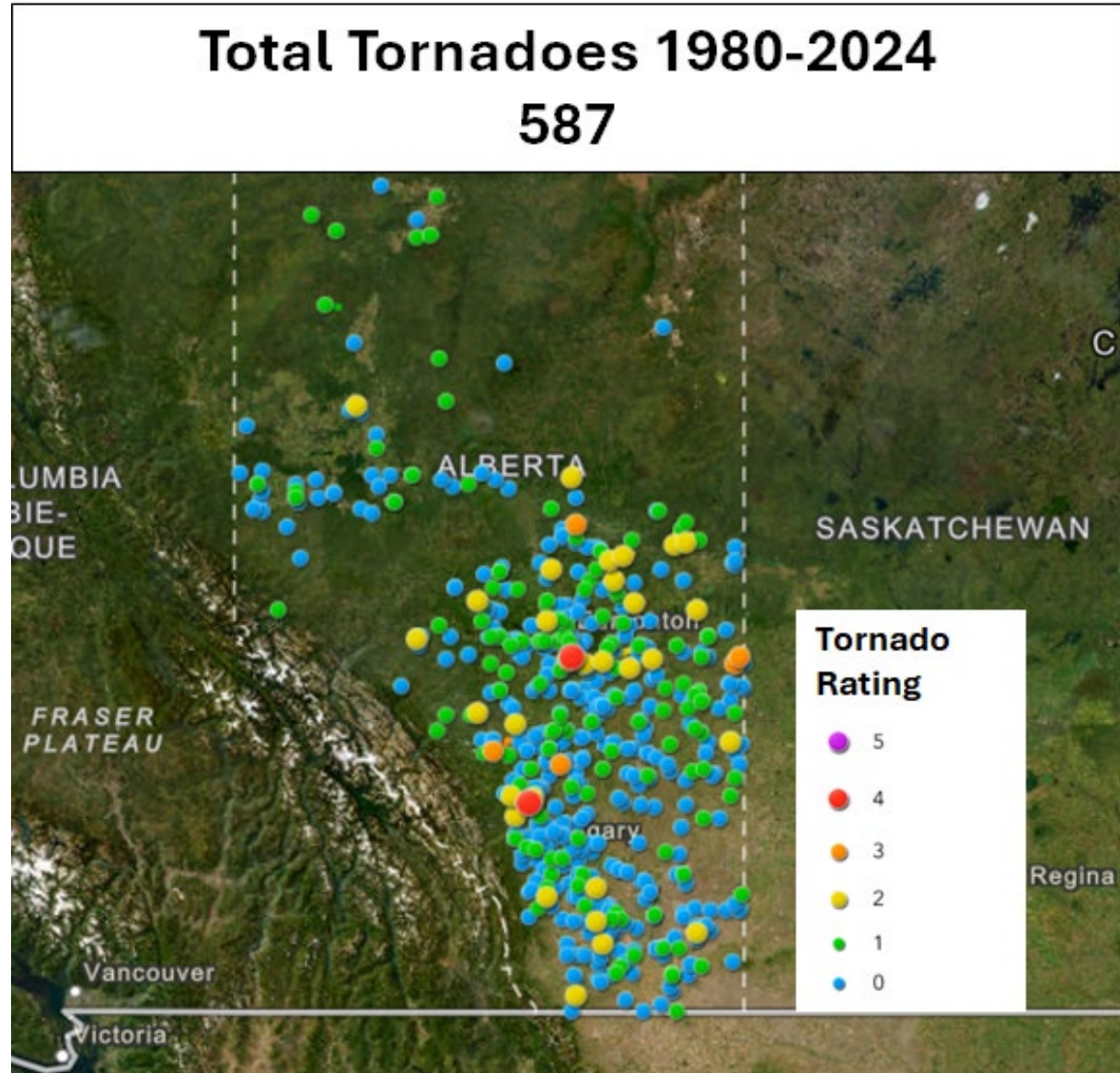




Barn Collapse, July 14, 2019  
Eston, SK.



- Average of 12-15 confirmed tornadoes per year
- Damage measured on the EF scale since 2013
  - F scale pre-2013
- Tornadoes in cities are rare in Alberta





- Typical tornadoes are small
- Most common between 1 pm & 8 pm in Alberta





Canada's first F5 tornado – Elie, MB



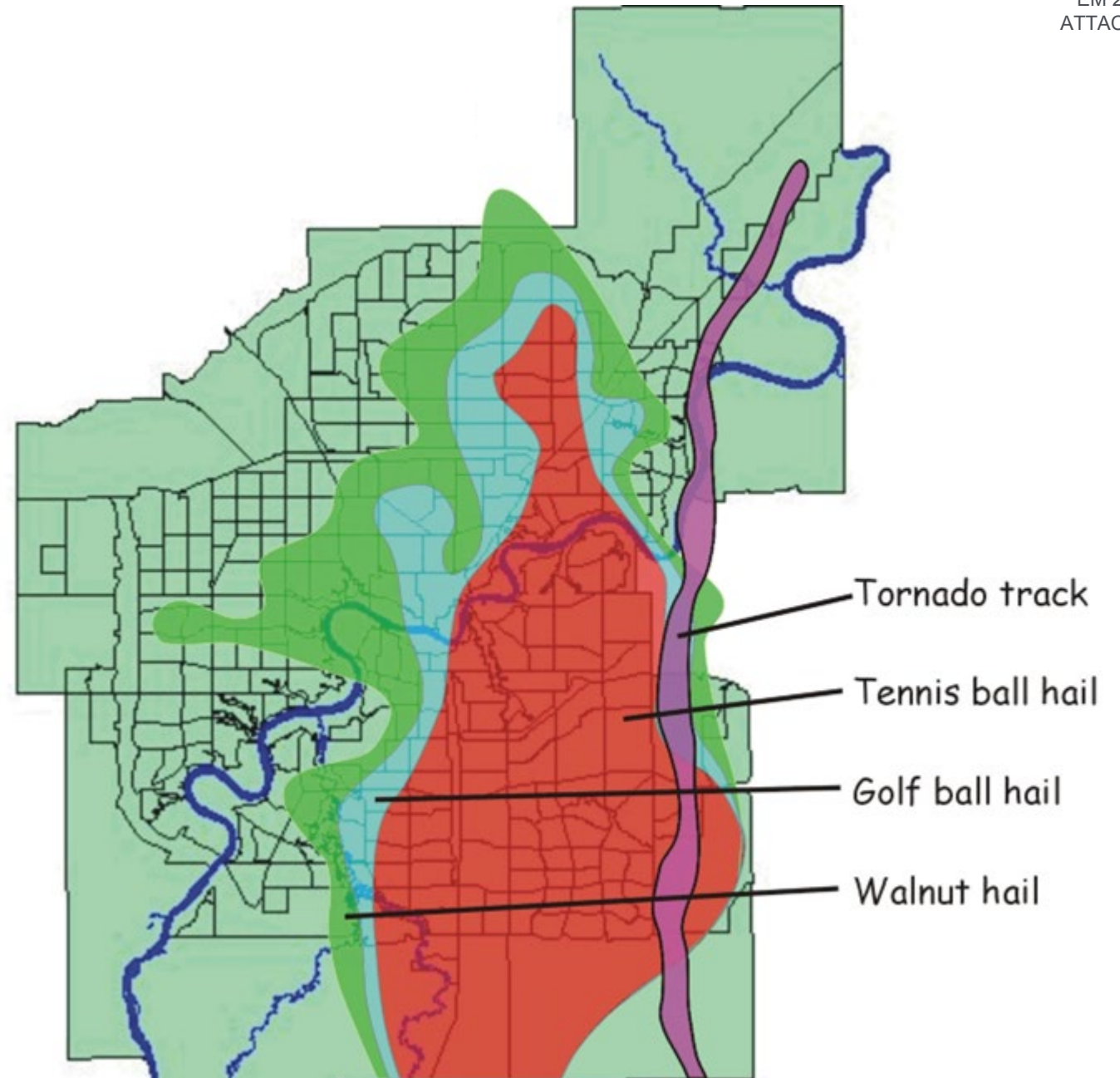
- Most recent significant tornado in AB
  - Didsbury, AB  
July 1, 2023
  - EF-4 with maximum wind of 275 km/h
  - Travelled 15.3 km & was 620m wide



# Edmonton Tornado - July 31, 1987

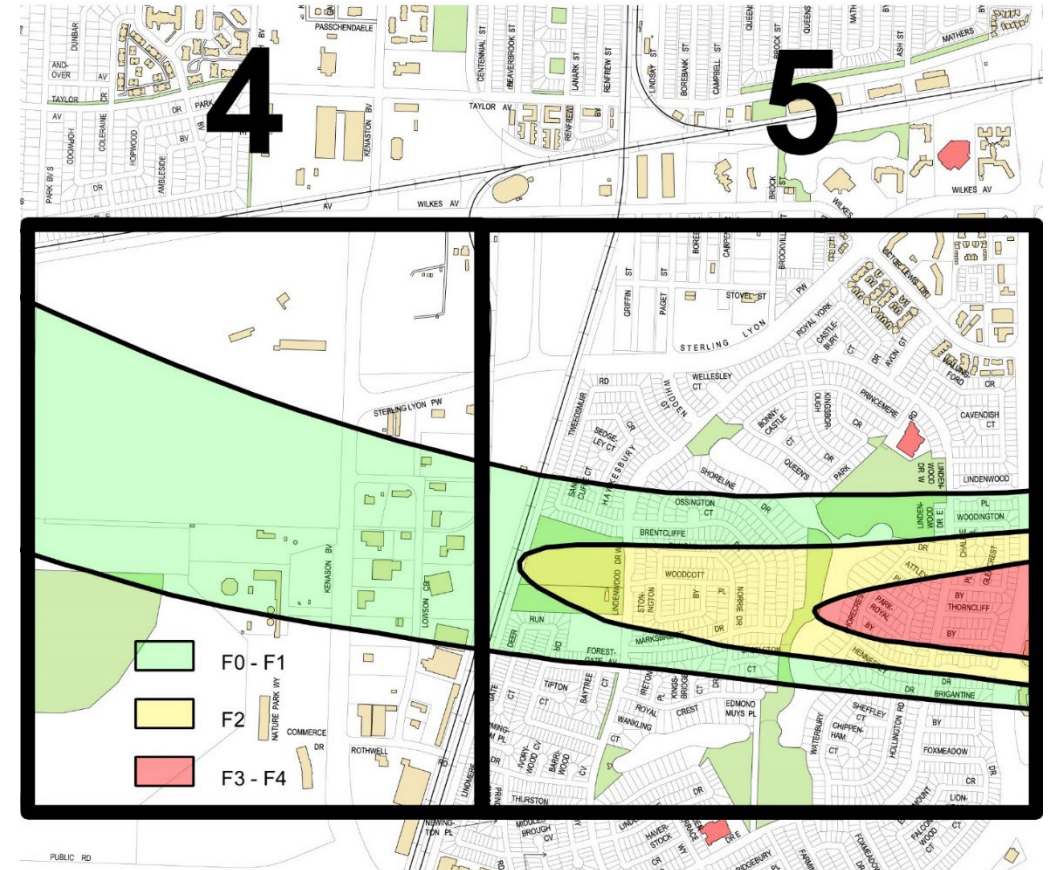






# What if a Canadian city suffered an EF4 tornado?

- 6800 homes damaged/destroyed
- over 200 businesses/commercial buildings
- over 3000 injuries, 100 deaths
- at least \*\$1.5B damage from tornado alone
- additional \*\$150m - \$1B hail damage



**Areas 4-5: Tuxedo Industrial Park and Lindenwoods**







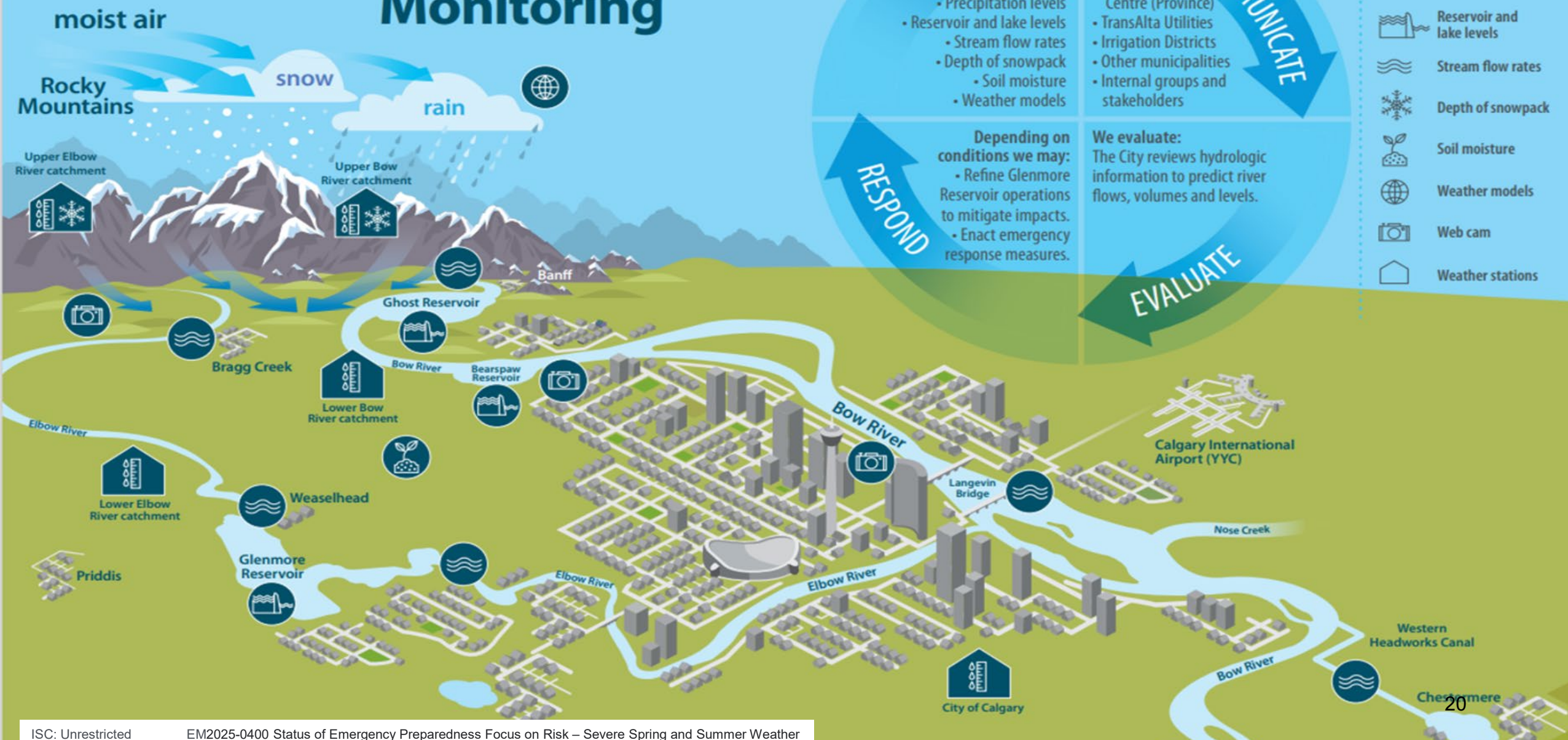


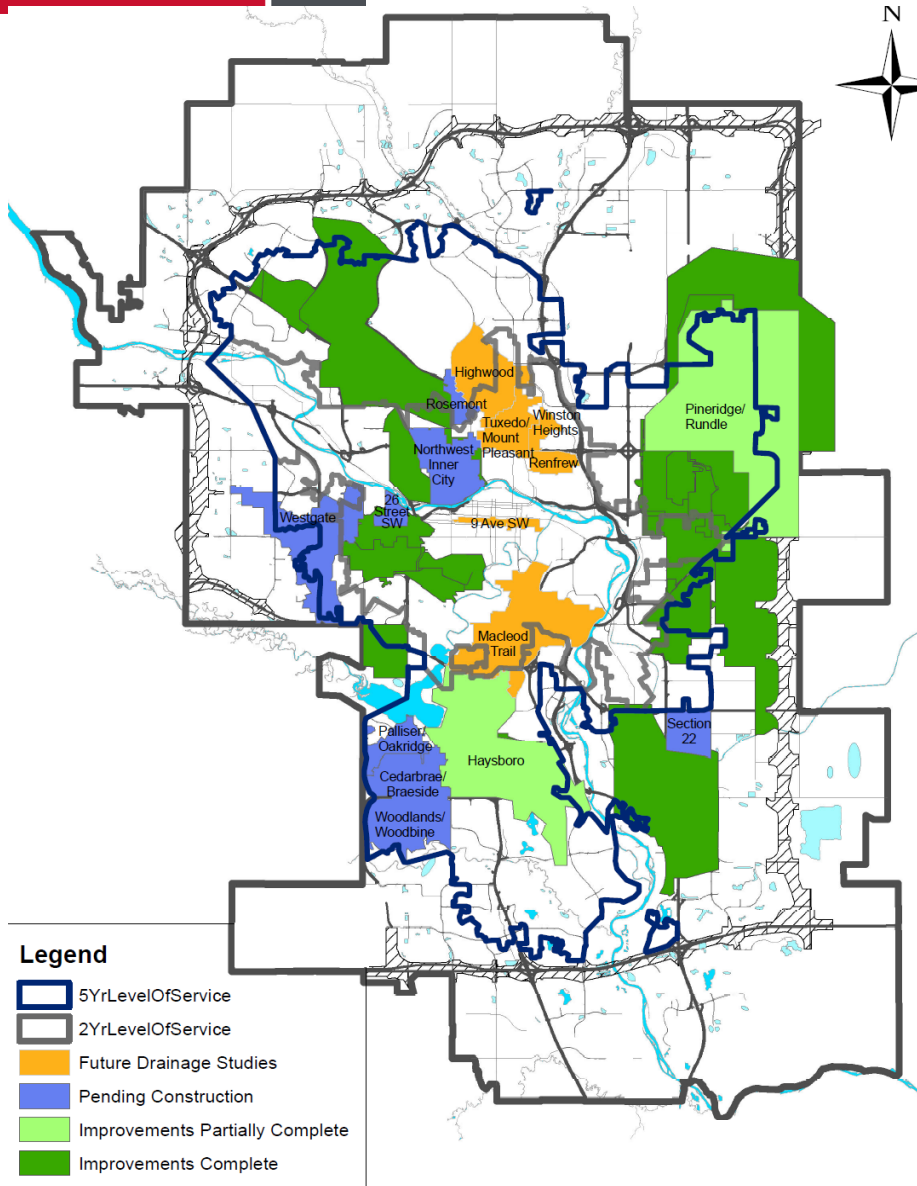
# Climate & Environment

Frank Frigo – Manager, Environmental Management



# Understanding Flood and Drought Monitoring

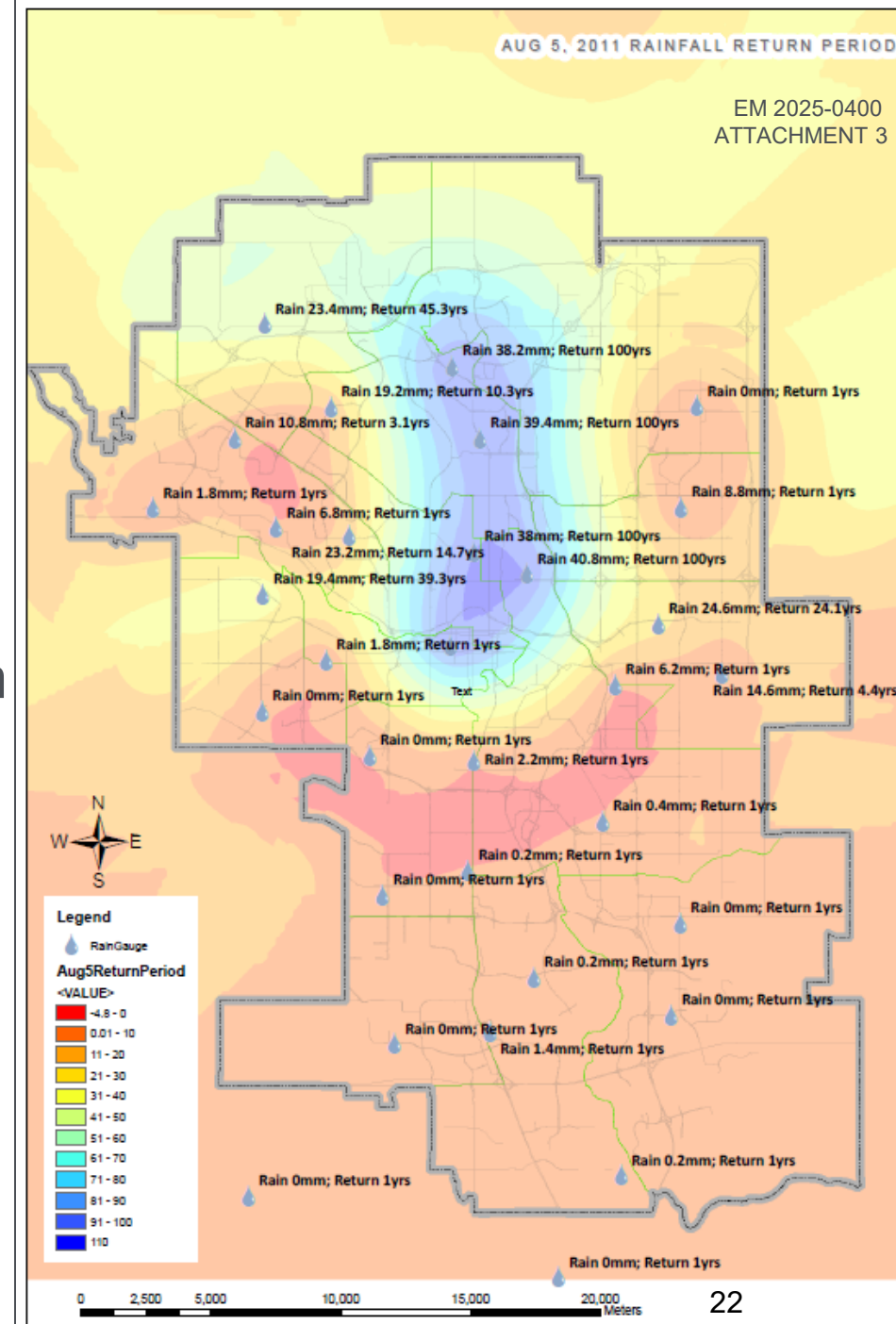






# Intense storm forecasting

- Intense storm cells are:
  - Very localized; 10-50 km<sup>2</sup>
  - Rapidly developing / Quick moving
- Forecasting / warning possible only at City-wide level
- Makes proactive response impractical & puts onus on infrastructure that operates automatically
- 2023 Stormwater Management Strategy - 4 keys:
  - Established community drainage systems,
  - Lifecycle operations & maintenance,
  - Green stormwater management approaches,
  - Service metrics/targets.





## Alanna Yontz – Business Continuity & Emergency Planner

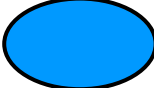


## Role in emergency response




Image source: 680 News


LEGEND




Calgary Emergency Management Agency



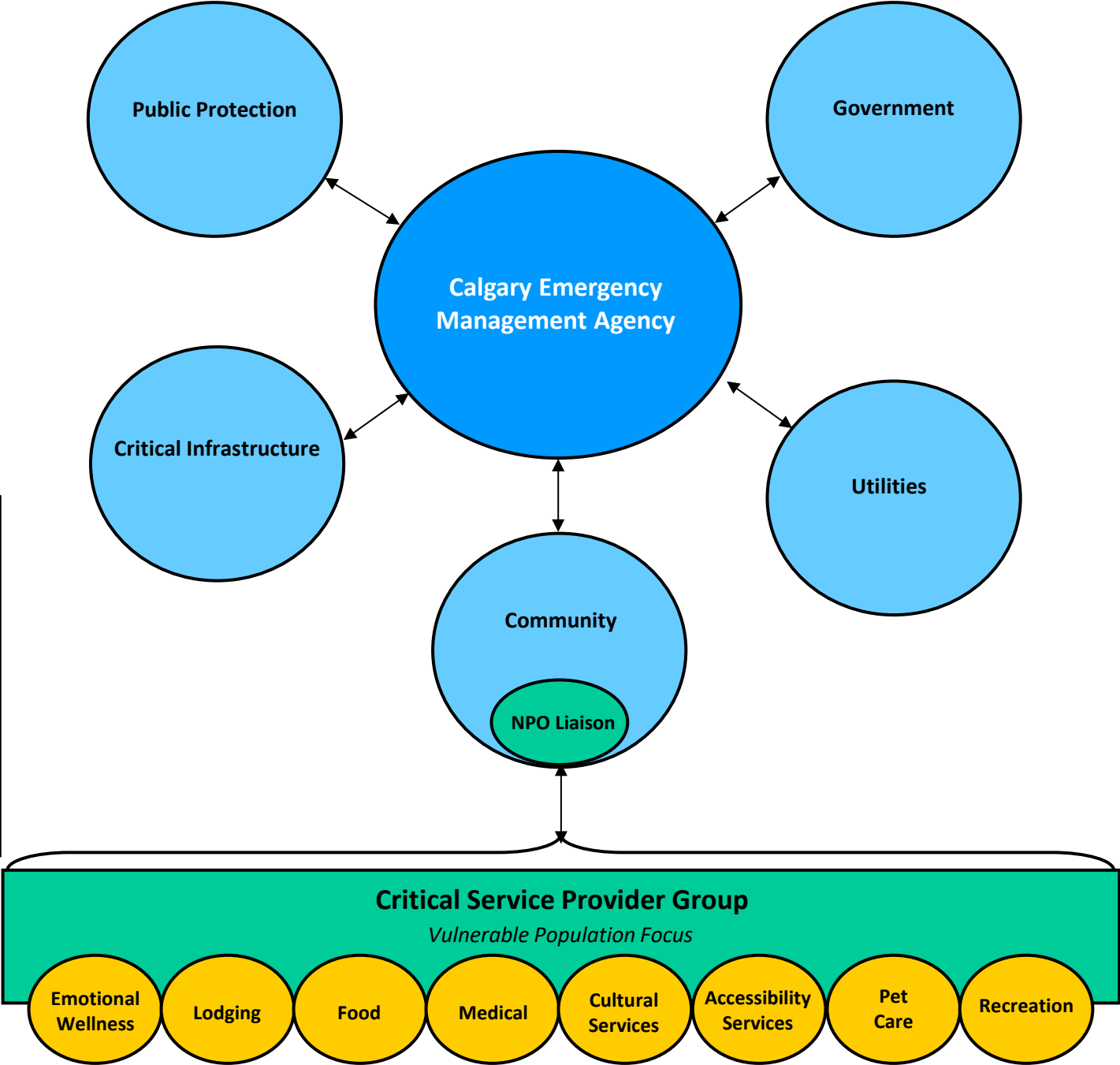
CEMA Sector & Agency Members

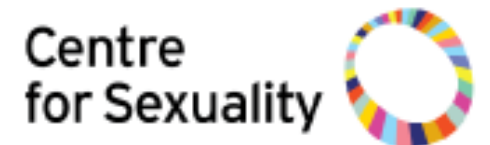


Non-Profit Organization Liaison



Critical Service Category







## Preparing for a severe weather event



*Emergency Social Services & Emotional Wellness Response Team Exercise*



## Coby Duerr – Deputy Chief, Emergency Management Operations



# Municipal Emergency Plan – Hazard Annexes



## Tornado Incident Response Plan

# of ESS  
Members

150

- Emotional Wellness
- Indigenous Health
- Cultural Resources

# of Business  
Units

32





# Severe Spring & Summer Weather preparedness

Calgary



## Are you ready?

No one ever thinks a disaster will happen to them. Your best strategy in dealing with a disaster is to be as prepared as possible. The Calgary Emergency Management Agency invites you to take a few simple actions to be better prepared in case of an emergency.



## SEVERE WEATHER

High Winds

Tornadoes



# SHELTER AREA

*\*Example of BARA signage*



