Building community resiliency and trust: A framework

David Brand

Director of Emergency Management, Red Deer County, Canada

David Brand

Dave Brand is the Director of Emergency Management for Red Deer County and team lead for the Central Region All-Hazards Incident Management Team. Dave is a civil engineer and a public sector administrator, with over 20 years of experience working with government agencies of all levels. He is also a professional leadership and transition coach, and certified as an Energy Leadership Index Master Practitioner from the Institute for Professional Excellence in Coaching. Dave has multiple certifications in heavy urban search and rescue, first response and all-hazards incident management, and oversees departments that include community workers and first-response personnel. Dave sees the challenges that face emergency managers and community members as opportunities to elevate relationships and team performance through increased empathy, authentic leadership, emotional intelligence and community engagement.

ABSTRACT

This paper outlines the context of emergency management in Canada and identifies some of the key factors that have contributed to public emergency preparedness initiatives reaching a saturation point. Readers will gain insight and actionable suggestions from the proposed Community Resiliency Framework. Readers will learn how emergency management agencies can engage and collaborate authentically with communities and leverage existing preparedness initiatives with new methodologies to increase community resiliency.

Community and Protective Services,
Red Deer County,
38106 Range Road 275,
Red Deer County,
AB T4S 2L9,
Canada

Tel: +1 403 357 2371;
E-mail: dbrand@rdcounty.ca

Keywords: community, resiliency, trust, engagement, collaboration, empowerment

INTRODUCTION

Emergency management experiences and approaches have many similarities but also many variations globally, across North America, and even within Canada itself. The article focuses on the emergency management context of a particular Canadian region, to include a review of past initiatives and what top-down, prescriptive, government-developed emergency management historically entailed, and how this system failed to move the needle on personal preparedness. From there, the article will transition to a case-study discussion around methods proposed to connect with the community, increase personal preparedness and rebuild trust in government emergency management.

Public trust in government has recently reached an all-time low; in the USA, for example, trust in the federal government fell to 21 per cent in 2022 — the lowest point in recorded history.[1] The numbers in Canada fare slightly better but still follow some alarming trends that should concern national, territorial/state/provincial and local governments as well as members of the civil service. Current events and an increase in divergent opinions about government appear to be transforming the emergency management landscape across Canada: roughly four in ten Canadians

trust the federal government,[2] while an equal number express strong distrust and the remaining minority are undecided. The timing of public anti-government events such as the Freedom Convoy in Canada and the January 2021 riot at the US Capitol underscore the need for emergency managers to consider the possibility of an inflection point in the profession.

Former US President Bill Clinton once said, 'We all do better when we work together. Our differences do matter, but our common humanity matters more'. This principle underpins the framework discussed in this article with respect to rebuilding public trust in government emergency management through citizen involvement and collaboration.

CANADIAN EMERGENCY MANAGEMENT

Canadians are known for a few things: maple syrup, the Royal Canadian Mounted Police (Mounties), national animals like the moose and the beaver, hockey, universal healthcare and saying sorry for absolutely everything (there are probably even statistics somewhere tracking the number of times in their lifetime that the average Canadian apologises to the wall after bumping into it). However, Canadians are not particularly well known for disaster preparedness and the emergency management continuum. This makes sense for a variety of reasons. Most notably, although Canada has a landmass 2 per cent larger than that of the USA, the 39 million people living in Canada are significantly outnumbered by the 333 million people living in the USA. This lower population density results in certain disasters being less likely to impact the population. At the same time, the US government annually budgets approximately US$10bn on Federal Emergency Management Agency[3] initiatives, while Canada has an annual budget of CAN$188m (US$140m) for federal emergency management,[4] thus compounding the discrepancy between population ratios and federal emergency management funding ratios. In other words, federal emergency management funding in the USA is roughly US$30 per capita, while Canadian federal emergency management funding is roughly CAN$5 per capita.

Disasters in Canada that impact unpopulated or less-populated areas are less likely to be noticed or reported, and less likely to qualify for disaster recovery funding under current frameworks. For example, according to the Northern Tornadoes Project[5] at Western University, it is likely that only 26 per cent of all tornadoes in Canada were detected during the period 2019–2021. While the detection probability increases to 40 per cent for supercell-type tornadoes — the type of nearly all violent (EF4/EF5) tornadoes — only 28 per cent of Canadian tornadoes during this period occurred within the Doppler range of radars. In addition to this, only 12.5 per cent of EF2 or higher-rated tornadoes in Canada resulted in tornado warnings at least ten minutes in advance.

Canada's vast geographic population density of four people per square kilometre ranks 223rd in the world, but as the impacts of climate change influence weather patterns, shrink the size of the northern tundra by thawing permafrost, and create warmer mean ocean temperatures, the need for emergency preparedness is paramount to protect Canadians from the impacts of disasters. Of the ten most costly insured-loss disaster years in Canadian history, nine have occurred since 2011, with the lone outlier being the 1998 Quebec ice storm.

Despite being the fourth largest and fourth most populated of the 13 Canadian provinces and territories — Alberta's

landmass of over 660,000 square kilometres is only 2 per cent smaller than the state of Texas — Alberta accounts for over CAN$10.28bn of estimated disaster costs since the year 2000, and 53 per cent of national disaster costs in that same time frame. Eight out of the ten costliest disasters in Alberta have occurred in the last ten years.[6]

Red Deer County is a mixed rural and urban municipality at the population centre of the province, located along a major transportation corridor halfway between Alberta's two largest cities — Edmonton and Calgary — and surrounding Alberta's third largest city, the City of Red Deer. Red Deer County's landmass is 4,000 square kilometres (1 million acres) — larger

than the state of Rhode Island and slightly smaller than Delaware. Not counting the COVID-19 pandemic or any other public health emergencies, Red Deer County has directly experienced disasters in 38 per cent of the past 21 years, as shown in Figure 1.[7] Armed with this knowledge, it behooves us to be prepared and to ensure that our citizens are engaged in our emergency management continuum.

CURRENT PREPAREDNESS MESSAGING

Public Safety Canada is the federal government department that oversees Canadian emergency management and delegates emergency management responsibility as
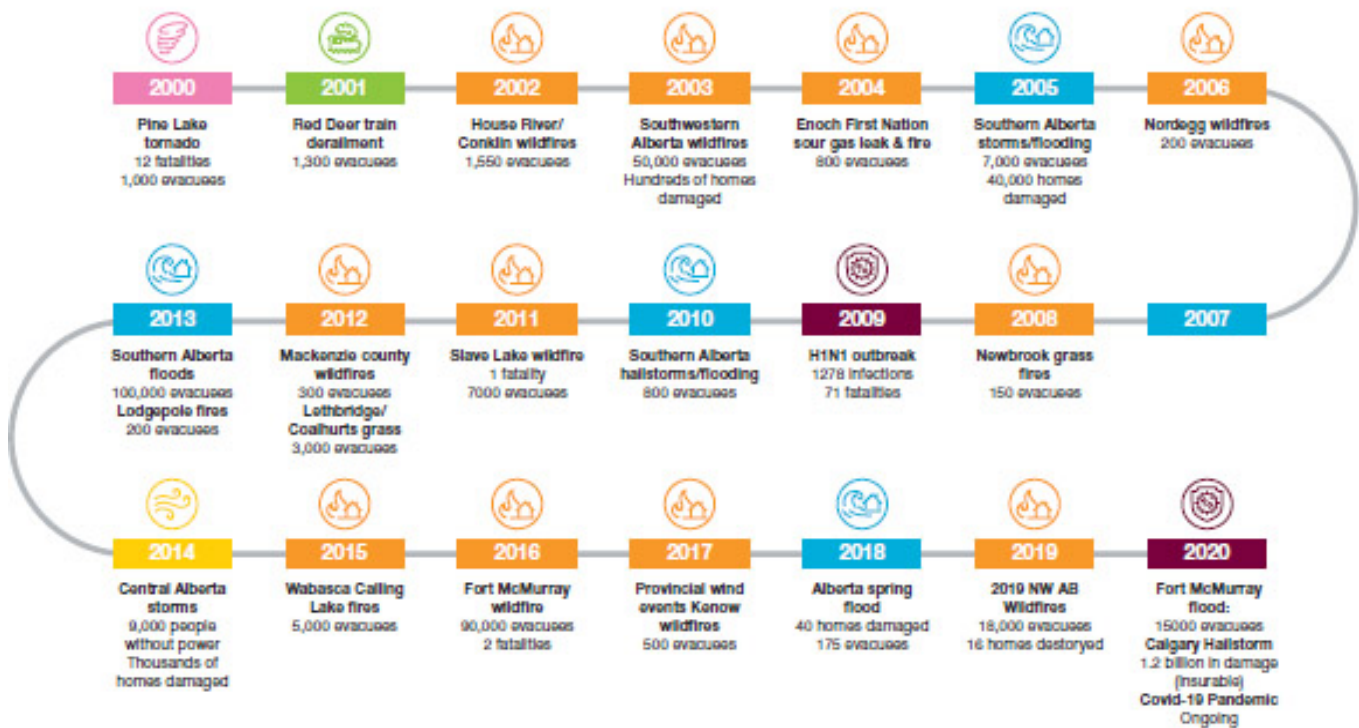
Figure 1   Disaster history in Alberta

the Authority Having Jurisdiction (AHJ) to each province and territory. Each province or territory can further choose to delegate emergency management responsibility to local municipal governments — also known as local authorities — or Métis settlements, which is the framework in Alberta. Public Safety Canada and various AHJs lead the annual Emergency Preparedness Week initiative during the first week of May. For at least the past decade, emergency preparedness messaging in Canada has been the same: 'Know the Risks, Make a Plan, Get a Kit'. This mantra is repeated on the Public Safety Canada website at getprepared.gc.ca and echoes the messaging contained on the US Department of Homeland Security's ready. gov webpage.

Albertans live in the province where most Canadian disasters occur, and where the financial, psychosocial and environmental impacts of these events have generational impacts. Despite this fact and the individual emergency preparedness messaging that has been shared with residents regularly and emphatically, the 2022 'Preparedness Survey of Albertans'[8] reveals some troubling information:

- Fewer than 40 per cent of Albertans surveyed know the risks in their communities;
- Approximately 25 per cent of Albertans surveyed have their own plan or are aware of emergency response plans that are in place; and
- Approximately 25 per cent have an emergency kit, while just over half of survey respondents indicated that they would have enough supplies to shelter in place.

In Canada, the COVID-19 pandemic revealed a very interesting societal juxtaposition regarding government, government responsibility, government controls, individual and collective social responsibility, and other factors. On the one hand, there were signs and banners and sidewalk chalk markings thanking frontline workers for all of their hard work — people came to the table with kindness, caring, compassion and understanding. In an interesting survey shared by Wharton organisational psychologist and author Adam Grant, willingness to help out a stranger and charitable giving actually increased globally in 2021, during the heart of the pandemic but also at the time when attitudes about the pandemic restrictions were shifting worldwide. As the pandemic wore on, however, people grew weary of being told what to do. They grew tired of not being able to partake in their normal social activities. They grew increasingly distrustful of government advice, and the results became evident.

During Emergency Preparedness Week in May 2021, as Alberta's provincial government relaxed pandemic-related restrictions, provincial and municipal emergency management agencies issued all-hazards preparedness messaging — for hazards other than a human health emergency — and were swiftly rebuked on social media and in public forums. The message from public commentators followed a theme of dissent, eschewing government direction as directive and authoritarian. Despite this public dissent, emergency management agencies continued post pandemic with positive reinforcement messaging and logical initiatives to increase personal preparedness. For Red Deer County, one such initiative was the creation of a farm emergency plan template. As a municipality of 1 million acres with only 20,000 people and a governmental focus on the preservation of agricultural land in the heart of grain-growing Alberta, the intent was to empower farm communities to have their own preparedness initiatives.

The template was built, scoured internally, referred to focus groups, including a standing committee comprised of public members dedicated to agriculture, and presented to municipal elected officials for feedback. The feedback was almost unanimously positive: 'What a great initiative!'; 'This would be such a value-add to our farming community and our emergency response teams'; 'What a way to reframe the old mantra of know the risks, have a plan, get a kit for those who are generally very independent and self-sustaining'. With this positive feedback, the template that would guide agricultural producers in creation of their own emergency plan was released publicly, complete with a rollout communicated via website and social media and in the county newspaper — which has a very high readership, especially among the farming population, and is delivered to every single county household. Agricultural producer groups expressed support of the concept and the County ran a contest for any citizens or businesses who chose to submit their plan based on the template. The County's Emergency Management Agency waited for the enquiries to come and the plans to roll in, yet received zero entries. The Agency circled back to the agricultural standing committee (all farmers) and asked how many of them had completed a plan based on the template: zero. Likewise, among farmers contacted directly: zero. The highly anticipated, much appreciated and heavily lauded preparedness planning initiative had fallen completely flat, even among those who had supported the concept in earnest.

CHANGING THE PARADIGM

Red Deer County's Emergency Management Agency recognised the shortcomings associated with conventional preparedness messaging and the lack of public engagement with the farm emergency plan template rollout. The Agency enlisted an emergency management student from the Northern Alberta Institute of Technology's Certificate in Applied Disaster and Emergency Management (CADEM) programme on a capstone project to examine conventional preparedness activities and develop a framework to better engage the community.

The preliminary analysis of current practices identified the existing process and management philosophy by which the County's emergency management agency views every challenge as an opportunity. The demographic and geographic nature of a dispersed rural community with pockets of urban density present a variety of challenges that each have a corresponding opportunity:

- *Challenge:*
  - Smaller population;
  - Fewer secondary schools;
  - Fewer training and equipment opportunities;
  - Longer response times;
  - Slower access to real-time information;
  - More traditional culture and biases.
- *Opportunity:*
  - Tailored resiliency plan;
  - More practical knowledge;
  - Incentive to share resources with others;
  - Stronger individual resiliency;
  - Fostering community networking environment;
  - Incorporation of cultural values and beliefs.

Further analysis of the current organisational focus on personal preparedness examined emergency management preparedness messaging and anecdotal accounts of prevailing public perceptions of emergency management. This examination

— along with a review of FEMA's 2019 report, 'Building Cultures of Preparedness'[9] — created more questions than answers regarding the effectiveness of the preparedness messaging approach and identified trust, inclusion, cross-cultural communication and support for local practices as guiding principles that could be used to increase preparedness efficacy.

As highlighted in 'Building Cultures of Preparedness':

'without trust from local residents in the system, trust in the institutions, the messengers, and the message, preparedness efforts will be ineffective, especially in those communities that are most difficult to reach and often most at risk … Trust building can be nurtured when disaster institutions invest in building relationships with communities.'[10]

THE COMMUNITY RESILIENCY FRAMEWORK

Using this information, the County's Emergency Management Agency created a Community Resiliency Framework[11] to increase community resilience through a focus on a true all-hazards approach, pre-disaster collaborative activities and publicly available information. The new framework starkly contrasts the legacy process, which focuses on identifying and issuing preparedness messaging for specific major hazards such as floods, tornadoes, windstorms, winter storms, hazardous materials incidents or wildfires. While the legacy process exhibits an individual incident focus based on information that is not publicly or readily accessible outside of government, building a culture of trust requires open access to information and community group involvement. Therefore, the new Community Resiliency Framework centres on three action-oriented pillars: engage, collaborate, empower.

The Community Resiliency Framework pillars first require consideration of how to expand historical engagement processes. During the COVID-19 pandemic, public consultation by conventional means was difficult — if not outright impossible or prohibited — so the post-pandemic environment allows emergency management agencies to explore new ways to engage the population. Former consultation processes involved hosting open houses or community engagement events or going to a specific group to engage with them. While this allows agencies to access a segment of the community, it is often the same people and/or a very narrow cross-section of the community. Attempts to collaborate with the public through guerrilla or 'pop-up' engagement sessions — such as setting up a booth at a local sports or special event where people were already gathered — also experience challenges with respect to depth of the engagement and access to a broad cross-section of the community.

Resiliency questionnaires

To address these challenges, one proposed engagement method in the Community Resiliency Framework is the concept of creating and issuing resiliency questionnaires. Anecdotal observations from the past five years show that local citizens are becoming more responsive to properly curated surveys. While voter registration and turnout at all levels of government have been relatively stable for long periods of time, asking citizens to engage in a process to give feedback directly to the local municipality on a specific topic has been very successful when the input is needed, relevant and well communicated, and directly shows how submissions will translate into actionable changes. For example, the Red Deer County Community Needs Assessment in 2017 generated a response rate of nearly 80 per cent, while a more

recent survey in 2022 about a particular local community project generated a 60 per cent response rate. Unlike live public engagement sessions, a resiliency question-naire provides the opportunity to ask more complex or nuanced questions where respondents have more time to consider their answers. It provides the community with a chance for their concerns to be heard and it helps gauge overall commu-nity capacity in a format that is sustainable and repeatable. Sustainable and repeatable resiliency questionnaires allow emergency managers to develop a data baseline so that reassessment and progress comparison can occur in the future. A community resiliency questionnaire is similar to the provincial preparedness survey in terms of data gathering, but focuses on commu-nity-based concerns and hazards instead of gauging uptake of the generic and tra-ditional 'know the risks, have a plan, get a kit' messaging.

Local resiliency boards

Questionnaires and surveys allow for gran-ular data collection but miss out on the local or regional context of each commu-nity and do not always provide an adequate lens through which to view cross-cultural concerns. Therefore, a sequential step in the Community Resiliency Framework engagement process is to identify and develop local resiliency boards comprised of key community contacts that can speak on behalf of citizens in a certain area.

Many communities already have com-munity board organisations, although the current demands on daily life contribute to community board volunteers becoming harder to attract and retain. The creation of a regional 'superboard' where interested members are vetted or selected on a ward or divisional basis runs the risk that rep-resentation on the board can be skewed by special interests or can miss the bigger picture on behalf of a diverse community.

Therefore, the preferred strategy in the Community Resiliency Framework is to integrate emergency preparedness into the cultural mindset of existing boards and committees, and to develop community-driven boards where other committees do not exist. Initial sessions with these boards should aim to identify grassroots community resiliency champions, establish reasonable and realistic goals for emer-gency preparedness programmes, discuss opportunities for improvement and review the efficacy of current emergency pre-paredness initiatives. Emergency managers who desire meaningful engagement with the community must leave their PPE — positions, politics and ego — at the door and be willing to entertain brutally honest feedback about existing policies and pre-paredness programmes.

Resiliency education

Another Community Resiliency Framework engagement initiative focuses on engaging future generations in critical thinking around emergency management by partnering with educational institutions to deliver fun and stimulating activities that provide follow-up opportunities for additional learning about emergency preparedness. Emergency managers can work with educators to strike an appro-priate balance between games and formal presentations to reach this audience and increase immediate or short-term emer-gency preparedness actions. Many parents have experienced a child coming home from school with a fresh new idea for implementation or a required project sub-mission, such as residential fire escape plans, emergency kits, safety kits and companion animal emergency plans. Case studies and after-action reports for disas-ters in Alberta demonstrate the need for companion animal preparedness planning and emergency managers can leverage this desire to create awareness, particularly

among youth who are genuinely concerned about their scaled, feathered or furry family members.

Business engagement

The Community Resiliency Framework also identifies the need for a significant role involving the business population in holistic emergency preparedness instead of a focus on regulated preparedness and mitigation, response and recovery activities. In Alberta, mining and oil and gas extraction is the largest economic driver, comprising 27 per cent of the provincial gross domestic product in 2021.[12] The regulations associated with oil and gas extraction require each company to have emergency response plans and to share those plans with the respective local municipality. Municipal emergency management plans often reference emergency management vendors or contractors who supply resources specific to a hazard or emergency response protocol, but the Community Resiliency Framework calls for engaging the business community as a partner instead of simply a supplier. The framework contemplates this through local business engagement meetings where the emergency management agency and stakeholders can work collaboratively with business owners to discuss the entire continuum of emergency management, how the emergency management agency might be able to assist the business community during an emergency, and how the business community can best assist the agency. Similar to the framework concept of community resiliency boards, emergency managers can leverage existing business support frameworks like chambers of commerce or local business groups. Collaboration sessions between emergency management agencies and businesses or business groups should highlight collaborative opportunities that exist during emergencies. An example of a collaborative opportunity that was implemented during the 2019 Chuckegg Creek Wildfire in Northern Alberta is teaching incident personnel how to operate food service outlets in an evacuated community. Another option is highlighting how to integrate hospitality businesses and their trained employees into the resource tracking and personnel accountability processes utilised by the incident management team so that businesses can remain open in an evacuated remote community to support incident response and recovery personnel.

Sharing stories between emergency management agencies, businesses and other stakeholders can highlight hardships and successes and inform the conversation on how to see every challenge as an opportunity. This will help identify gaps in existing emergency preparedness planning and allow emergency management agencies to address preparedness deficiencies in concert with the business community before a disaster strikes. Another proposed benefit of business collaboration sessions is to identify areas of repetition that are limiting community capacity — an example being an agency that prefers certain vendors and exhausts their resources without reaching out to other businesses in the community that may be able to share resources but are unaware of how to get engaged. The challenge of sourcing personal protective equipment and hand sanitiser during the initial stages of the COVID-19 pandemic provides a case study: local craft breweries and distilleries pivoted to producing alcohol-based hand sanitiser in a regulated environment while local artisanal and craft stores crowd-sourced knitted or custom-sewn facemasks. Emergency managers who engage with private industry and local businesses create opportunity to unlock the ingenuity and adaptability of cross-sector collaboration.

Community tabletop exercises

Emergency management organisations are generally well versed in tabletop exercises. In Alberta, local authorities are legislated to host at least one tabletop exercise per year and a functional exercise at least once every four years. Emergency management agencies often invite stakeholders (utility companies, law enforcement agencies, public health agencies, non-governmental organisations, etc) into these exercises and may even make the exercises public through collaboration with the media, but less often host exercises for the community itself.

The Community Resiliency Framework strategy of hosting community tabletop exercises is understandably laborious but has tremendous potential to build trust and layers of resiliency in the community. Combined with the other strategies in the framework, emergency managers can engage community members and accompany them on a journey to take preparedness personally. The suggested outline is to review preparedness plans collaboratively with community participants in a workshop or tabletop exercise format focused more on community preparedness and recovery requirements than emergency response functions. This concept requires role-play and creative imaginations in a professional context, asking participants to envision that they are not at the exercise as themselves, but as someone else in the community — for example, an urbanite who has been assigned the role of a farmer, or a business owner who is asked to view the emergency through the lens of a school child or a government regulator. The challenge of asking participants to envision themselves in another person's situation creates the opportunity to increase empathy, compassion and understanding across cultures, age ranges, educational backgrounds, genders, religions, economic classes and geographies in the community. The engagement format where none of the participants are bringing their own personal agenda allows community members to bring a fresh perspective to the conversation and collaboratively review existing response plans. Emergency management agencies can collect feedback from exercise participants in qualitative or quantitative form and can analyse that feedback to accommodate for gaps and oversights.

Local resiliency leaders

In an emergency management environment where limitless resources exist, agencies would be able to lead engagement and collaboration opportunities to create cultures of preparedness and increase community resiliency. Unfortunately, this is not the operating modality for most emergency management organisations in Canada. The Community Resiliency Framework therefore identifies the importance of driving engagement and collaboration through the third pillar: empowerment. Throughout any of the engagement and collaboration processes — surveys, educational programmes, business meetings and community engagement — emergency management agencies need to identify those people in the community who present themselves as local resiliency leaders. From there, agencies need to properly resource the local resiliency leaders with information, educational information kits, engagement initiative funding and other supports to help drive the resiliency conversation in the community. Emergency management agencies should trust and empower local resiliency leaders to coordinate community resiliency activities that are appropriate for the local community and allow the local resiliency leaders to gather authentic feedback and submit it to the agency without fear of repercussion. Once an emergency management agency has a network of local

resiliency leaders in place, the agency can act as the centralised administrative branch, sharing contact information among the network and ensuring that processes are in place to retain active, engaged local resiliency leaders while also building the next generation of resiliency leaders.

CONCLUSION

The premise of the Community Resiliency Framework is essentially about flipping the script on existing emergency preparedness practices. Emergency management agencies can acknowledge that the current emergency preparedness focus for the incident response phase has worked well with respect to engaging emergency support functions but has been less successful at embedding the concept of personal preparedness among most of the populace. With less than 40 per cent of the community prepared for a disaster, the majority has no plan for the response and recovery phases. Despite best intentions, the top-down government preparedness approach simply is not great at building community resiliency. The past got emergency management to this point, but the community served by emergency managers needs new ways to get into the future. Emergency management agencies can incorporate those solid foundational principles into new applications that emphasise interactive and sustainable activities. Agencies can utilise these activities and the information discovered about unique community attributes to strengthen resiliency and must engage and empower local leaders to have a seat at the table and represent their communities in this holistic effort.

Initial engagement initiatives with the community in alignment with the Community Resiliency Framework have yielded positive feedback, including confirmation that being present, compassionate and visible are all elements to building trust between community and government. Transparent feedback has power and reinforces that emergency management agencies can make a difference by showing up and continuing to show up in communities. It highlights the opportunity to learn from resilient partners and those who currently have little to no awareness of emergency preparedness but want their emergency management agencies to make a difference. Emergency managers can engage, collaborate, and empower community members to increase preparedness to levels never seen before through building, repairing, and maintaining trust.

Resilience is the desired outcome of emergency management, founded in a community's ability to weather storms and disasters without experiencing significant loss or disruption to function. Building a culture of preparedness through the creation of resilient communities and collaboration with emergency management agencies requires that emergency managers get boots dirty in the preparedness phase instead of the response phase and do the hard work that it takes to rebuild trust in government institutions from the ground up. Emergency managers can build resilient communities by getting out of the office to meet with people, shaking hands, sharing stories, approaching with compassion, and showing genuine care about community members; that is the essence of the new Community Resiliency Framework.

REFERENCES

(1) Pew Research Center (2022) 'Public trust in government: 1958–2022', available at: https://www.pewresearch.org/politics/2022/06/06/public-trust-in-government-1958-2022/ (accessed 27th March, 2023).

(2) Nguyen, D., Frey, V., González, S. and Brezzi, M. (2022) 'Survey design and technical documentation

supporting the 2021 OECD Survey on Drivers of Trust in Government Institutions', OECD Working Paper on Public Governance, No. 53, OECD Publishing, Paris, available at: https://doi.org/10.1787/6f6093c5-en (accessed 27th March, 2023).

(3) Department of Homeland Security (2022) 'Federal Emergency Management Agency Budget Overview, Fiscal Year 2023 Congressional Justification', available at: https://www.dhs.gov/sites/default/files/2022-03/Federal%20Emergency%20Management%20Agency_Remediated.pdf (accessed 27th March, 2023).

(4) Public Safety Canada (2022) 'Departmental Plan 2022–23', available at: https://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/dprtmntl-pln-2022-23/index-en.aspx#s42 (accessed 27th March, 2023).

(5) Sills, D. (2022) 'Northern Tornadoes Project. A Preliminary Assessment of Tornado Warning Performance in Canada', available at: https://uwo.ca/ntp/blog/2022/ntp_national_tornado_warning_performance_assessment.html (accessed 27th March, 2023).

(6) Public Safety Canada (2022) 'Canadian Disaster Database', available at: https://www.publicsafety.gc.ca/cnt/rsrcs/cndn-dsstr-dtbs/index-en.aspx (accessed 27th March, 2023).

(7) Alberta Emergency Management Agency (2022) 'Disaster History in Alberta', available at: https://open.alberta.ca/publications/disaster-history-in-alberta (accessed 27th March, 2023).

(8) Alberta Emergency Management Agency (2022) 'Preparedness Survey of Albertans', available at: https://www.alberta.ca/preparedness-survey-of-albertans.aspx (accessed 27th March, 2023).

(9) Federal Emergency Management Agency (2019) 'Building Cultures of Preparedness: A report for the Emergency Management Higher Education Community', Government Printer, Washington, DC.

(10) Ibid.

(11) Hoffman, S. (2022) 'Red Deer County Community Resiliency Building Template', self-published, available from the author.

(12) Government of Alberta (2022) 'Gross Domestic Product at Basic Prices ($ billion)', available at: https://economicdashboard.alberta.ca/grossdomesticproduct (accessed 27th March, 2023).