

First Responders Group – Canada-U.S. Enhanced Resiliency Experiment (CAUSE)

Enhancing Cross-Border Capability

Border region stakeholders have limited ability to communicate, share information, and collaborate during critical incidents due to disparate systems and procedures and the lack of interagency agreements. The Canada-U.S. Enhanced Resiliency Experiment (CAUSE) is a multi-year series of joint experiments to demonstrate how voice and data communications interoperability greatly enhance regional and cross border operations and resiliency.

The U.S. Department of Homeland Security Science and Technology Directorate's First Responders Group and Defence Research and Development Canada's Centre for Security Science co-sponsor CAUSE.

The Beyond the Border Initiative

On February 4, 2011, President Barack Obama and Prime Minister Stephen Harper announced the U.S.-Canada joint declaration, *Beyond the Border: A Shared Vision for Perimeter Security and Economic Competitiveness*.

On December 7, 2011, President Obama and Prime Minister Harper released the *Beyond the Border Action Plan*, which detail joint priorities and specific initiatives for achieving the Beyond the Border vision.

The CAUSE Resiliency Series supports the principle of the 2011 U.S.-Canada *Beyond the Border Action Plan* to "pursue activities that promote the harmonization of the Canadian Multi-Agency Situational Awareness System (MASAS) with the U.S. Integrated Public Alert and Warning System (IPAWS) to enable sharing of alert, warning and incident information to improve response coordination during binational disasters."

CAUSE: A History

In June 2011, the CAUSE I experiment project engaged the operational emergency management communities in British Columbia and bordering U.S. states. The key outcomes were enhanced interoperability with earthquake alerts emanating from the National Resources Canada alerting system, and the demonstrated benefits of enabling live links between MASAS and IPAWS to share infrastructure damage information (road and bridge closures) in real time.



St. John, New Brunswick, fire chief uses a mobile app to view operational status in New Brunswick and Maine

In March 2013, CAUSE II demonstrated the ability to exchange information between 12 local, state, provincial and national agencies using various systems and software, including Virtual Maine, MASAS, IPAWS, Virtual USA, Mutual Aid Support System and Mission Ready Package Tools.

Looking Ahead: CAUSE III and Beyond

CAUSE III addressed cross border communications interoperability, with a specific focus on four areas:

- 700 MHz/PSBN interoperability protocols
- Alerts, warnings and notifications
- Cross border mutual aid best practices
- Sharing social media for emergency management

With two test beds in the Northeast and Midwest in November 2014, CAUSE III helped to build trusted relationships in support of the *Beyond the Border Action Plan* to demonstrate enhanced resilience. This was illustrated through shared communications, data, and alerts and warnings between each nation's systems, used to augment situational awareness, reduce workload, and facilitate operational decision making.

The DHS S&T Virtual Social Media Working Group (VSMWG) played a leading role in CAUSE III. Building upon concepts developed in past experimentation, the group focused on the integration of digital volunteers and social media into official emergency management operations. Experimentation goals included incorporating non-traditional support and dynamic data sources into the National Incident Management System (NIMS).

