

JUNE 2013 FLOOD DEBRIEF RESULTS & 2014 EMERGENCY EVENT PREPAREDNESS

EXECUTIVE SUMMARY

This report is an update on the initial results of the June 2013 flood debriefs conducted between 2013 September and 2014 March by Calgary Emergency Management Agency (CEMA) with the Administration Leadership Team (ALT), City business unit staff, and CEMA members, partners and staff. It focuses on The City's emergency response and early recovery efforts between 2013 June 20 and 2013 July 4, the timeframe during which a State of Local Emergency was declared.

Since June 2013, a number of initiatives have been completed to strengthen The City's preparedness and response capabilities ahead of Spring 2014, the months during which flooding is most likely to occur.

ADMINISTRATION RECOMMENDATION(S)

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

RECOMMENDATION OF THE EMERGENCY MANAGEMENT COMMITTEE, DATED 2014 APRIL 30:

That the Administration Recommendation contained in Report EM2014-0321 be approved.

PREVIOUS COUNCIL DIRECTION / POLICY

On 2006 February 13, Council approved report DS2006-04, "2005 Flood Policy and Procedures Changes Report" which included 74 recommendations to enhance emergency management within the city of Calgary. All of the recommendations were adopted.

On 2013 July 2, the Priorities and Finance Committee approved report PFC2013-0578, "Flood Status Update" which provided initial cost estimates for The City's emergency flood response.

On 2013 September 16, Council approved report PFC2013-0646, "2013 Flood Recovery Task Force Update Report" which outlined the framework for long-term community recovery across the city.

On 2013 December 16, Council approved report EM2013-0822, "2013 June Flood Emergency Response and Initial Recovery Efforts," which summarized the key emergency management, response and early recovery efforts provided by The City, CEMA and its members and partners.

BACKGROUND

Following the June 2013 flood, a series of debrief activities took place with Corporate staff and CEMA members, partners and staff to identify strengths in the emergency response and initial recovery efforts to be leveraged in the future, and to identify opportunities for improvement.

In addition to the debrief process, CEMA has also retained the Conference Board of Canada to independently review The City's emergency response to the 2013 flood. The Conference Board of Canada, in consultation with The City Auditor's Office, will evaluate The City's response

JUNE 2013 FLOOD DEBRIEF RESULTS & 2014 EMERGENCY EVENT PREPAREDNESS

against emergency management best practices and standards, and provide its results and recommendations in the second quarter of 2014. These findings will be presented to Council, along with a full report of results from the corporate-wide and CEMA debriefs at the 2014 June 04 Emergency Management Committee.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

Administration obtained the services of external consultants to conduct reviews of the 2013 flood response (The Conference Board of Canada) and recovery efforts (Jacobs Consulting). With the support of the City Auditor's Office, an internal review is also being conducted through an intensive debrief process. This process has identified six core areas under which findings were categorized related to strengths and opportunities for improvement in emergency response and initial recovery: 1) Community response; 2) Communications; 3) Business continuity; 4) Resource management; 5) Workforce safety and wellbeing; and 6) Cutting red tape.

Independent Evaluations of The City's Emergency Response and Initial Recovery Efforts

As part of its recovery, The City engaged Jacobs Consulting to undertake a limited analysis of its disaster recovery from the June 2013 flood with the primary objective of identifying opportunities for The City to obtain and maximize available federal and provincial disaster funding under law, promote regulation and policy to aid in the city's robust recovery and mitigate against future threats.

While the report focuses primarily on recovery, it does make note of the contributions of Calgary's "highly effective, centralized response operation through its Emergency Operations Centre," and how The City "recognized the need for strong, internal resources to lay the groundwork for permanent restoration of damaged infrastructure and initiated the Recovery Operations Centre on June 22nd" (*Jacobs Consulting: City of Calgary – Disaster Recovery Funding Analysis, 2014 February 14*).

Defence Research and Development Canada also completed a technical advisory note analyzing the role of social media during the 2013 flood, including an evaluation of the people, governance, technology, and implementation associated with its use during this time. Their review indicates social media was a useful tool for augmenting traditional emergency capabilities, with room for growth and improvement through its further use to improve situational awareness, engage the public, coordinate and collaborate with stakeholders and leverage intelligence and crowd-sourcing abilities (*Defence R&D Canada: #YYCflood: The role of social media during the 2013 Calgary flood, 2014 February 14*).

Preliminary findings from the Conference Board of Canada review of The City's overall emergency response and initial recovery efforts during the flood are characterized into five key areas: EOC and Incident Command System; crisis communications; social media; volunteer management; and preparedness and resilience. Preliminary results closely align with the core areas identified during the corporate-wide and CEMA debrief process which refers to similar successes and challenges. Many of the initiatives identified in the report have already been implemented or are currently in progress, and will be detailed in a final report to be provided on

JUNE 2013 FLOOD DEBRIEF RESULTS & 2014 EMERGENCY EVENT PREPAREDNESS

2014 June 04 Emergency Management Committee, in conjunction with the findings the Conference Board of Canada report.

City Efforts to Prepare For the 2014 Flood Season

In 2013, The City had an opportunity to test its emergency management plans. Despite last year's successes, those plans continue to be strengthened. To provide members of Council and their staff with emergency readiness and preparedness activities and information, a briefing session has been scheduled for 2014 May 01 and 02. In addition, the following actions have been undertaken:

- Enhanced public communications including:
 - Launching the City's flood preparedness website;
 - Creation and updating of Calgary Flood Preparation: Frequently Asked Questions; and
 - Creation of the Mayor's briefing video, as well as videos prepared by the Director of Emergency Management, and Deputy Chief of the Calgary Emergency Management Agency.
- Engagement with the community including:
 - City support to provincial community meetings in Hillhurst/Sunnyside and Bowness;
 - Support to Councillors' community meetings in Discovery Ridge;
 - Organizing of Disaster Alley, a community event on 2014 May 03 and 04;
 - Support for community groups undertaking emergency response planning; and
 - Support for City-led Open Houses in Elbow River Valley (May 7) and Bow (May 15).
- Establishment of the Flood Issues Management Team to address current and emerging issues.

A number of other initiatives have already been implemented to help further strengthen The City's overall response to, and initial recovery from, any large-scale emergency. Since June 2013, The City, CEMA members, partners and staff have:

- Extended and expanded relationships with non-profit and community organizations to improve community collaboration, encourage self-sufficiency and provide assistance for Calgary's vulnerable populations and neighbourhoods;
- Improved processes, planning and tools to further increase the speed of communications with citizens, employees, CEMA members and partners and frontline responders during a large-scale emergency or disaster;
- Strengthened business continuity planning to ensure provision of key City services during a large-scale emergency;
- Identified additional critical infrastructure requiring protective measures or specialized response considerations during large-scale emergencies to ensure continued critical utility and communications services and protection of historic and cultural assets; and
- Improved the ability to quickly amass employees and supplies to assist with emergency management activities.

Strengthened situational awareness through:

- Enhanced monitoring of flood indicators including snowpack, weather systems, river flow rates, ground saturation and dam levels;

JUNE 2013 FLOOD DEBRIEF RESULTS & 2014 EMERGENCY EVENT PREPAREDNESS

- Development of deployment models for a multitude of flow rate scenarios based on studies on water movement, flow and control;
- The development of a comprehensive communications plan that included community open houses, Frequently Asked Questions brochure, flood website, citizen email updates, weekly video updates and community specific preparedness initiatives

Enhanced mitigation through:

- River bank stabilization and erosion protection have occurred at locations through the flood plain;
- Storm drainage and sanitary lift station improvements as well as sewage plant upgrades will strengthen the resiliency of the city's water infrastructure;
- River clean up to reduce debris and other hazards in waterways;
- Changes to The City's water diversion strategy now includes three-foot water tubes purchased to bolster previous one-foot tube stock;
- Continued exploration by the expert panel on long-term measures to be pursued with partners in the Province, including upstream dams and a water diversion tunnel.

The attachment outlines the early findings, strengths and progress on preparedness made to date.

Stakeholder Engagement, Research and Communication

The early findings and initiatives completed to date are the result of a wide ranging and inclusive consultation process that incorporated feedback from the Administrative Leadership Team, City business units, CEMA members, partners and staff.

In 2013 September, a day-long debrief session was held with more than 120 participants including City employees representing all 29 City business units, as well as 24 CEMA members and partners representing city utilities, provincial and federal agencies, local organizations and nonprofit groups. These groups shared the results of their own business unit and agency debriefs that took place prior to the session as well as identified other opportunities for improved preparedness, response and collaboration. A similar debrief was also conducted with CEMA staff whose primary job functions involve emergency management and emergency social services planning, response and recovery.

In addition, CEMA and the Flood Recovery Operations Centre Task Force conducted a series of 40 workshops and interviews with the Administrative Leadership Team, Business Unit directors and managers and senior management from CEMA member and partner organizations to review the debrief analysis, address specific Business Unit or organizational feedback and identify areas for improvement.

The City Auditor's Office supports the debrief processes used by CEMA.

Strategic Alignment

This report and The City's response to the June 2013 flood aligns with Council's Fiscal Plan for Calgary 2012-2014: *"Ensuring every Calgarian lives in a safe community and has the opportunity to succeed."*

JUNE 2013 FLOOD DEBRIEF RESULTS & 2014 EMERGENCY EVENT PREPAREDNESS

Social, Environmental, Economic (External)

Social

Initial enhancements to emergency response and early recovery efforts are designed to provide better support for Calgary's most vulnerable populations, including seniors and those struggling with poverty, homelessness and addiction. Other initiatives have been employed to build community self-sufficiency and resilience, leverage volunteers to support initial recovery efforts and support the health and wellbeing of City staff as they assist during extended emergency events.

Environmental

Environmental and climate change factors are influencing the frequency and magnitude of events on a worldwide basis. The nature and scale of events expected to impact the city of Calgary are changing and expanding. The findings and early initiatives identified through the debrief process will strengthen response and early recovery to all types of natural disasters.

Economic (External)

CEMA and its partner and member agencies will continue to conduct recovery efforts in parallel with emergency response activities to support the timely and economical resumption of business activities. Initiatives completed related to business continuity planning will help ensure key City services remain available to citizens and businesses following a large-scale emergency. Additional improvements to date have also supported the transfer of initiatives designed to reduce red tape during response and early recovery into normal City operations to facilitate easier, timelier access to City services by citizens and businesses.

Financial Capacity

Current and Future Operating Budget:

There are no operating impacts at this time.

Current and Future Capital Budget:

There are no capital budget implications at this time.

Risk Assessment

Environmental and climate change factors are influencing the magnitude of events on a worldwide basis. Through its annual Hazard Identification and Risk Assessment, CEMA works to identify those events most likely to occur in Calgary and with the potential for the largest impact to allow Business Units to incorporate preparedness and mitigation activities into their annual business and continuity planning.

Findings from the debrief process will assist with reducing the impact of large-scale emergency events through timely, focused and coordinated emergency response; supporting rapid initial recovery; and reducing risk to citizens and frontline staff.

Success or failure during any response depends in large part on the ability of resources to be able to meet the demand. Our primary resource during the 2013 flood was City staff. Their dedication and professionalism through a protracted and stressful event allowed for effective

JUNE 2013 FLOOD DEBRIEF RESULTS & 2014 EMERGENCY EVENT PREPAREDNESS

and efficient response and recovery. It should be cautioned that future performance may be compromised if further large scale responses are required in the short term.

REASON(S) FOR RECOMMENDATION(S):

Early findings and initiatives resulting from flood debrief activities will contribute to improved corporate preparedness and emergency management of future large-scale emergency events.
--

ATTACHMENT

June 2013 Interim Flood Debrief & 2014 Emergency Event Preparedness