

## **CALGARY FIRE DEPARTMENT MEDICAL RESPONSE UNIT PILOT PROJECT UPDATE**

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### **EXECUTIVE SUMMARY**

In 2015 April, the Calgary Fire Department (CFD) submitted a Council Innovation Fund application and received a one-time grant of \$175,000 to introduce Medical Response Units (MRUs) to two stations with high medical call volumes. The project was to provide an alternative response to medical calls with two-person units to contribute to improving CFD response times and reliability. As a result of the pilot, the CFD saw an overall improvement in performance and citizen outcomes and is considering additional MRUs.

### **ADMINISTRATION RECOMMENDATION(S)**

That the Priorities and Finance Committee recommend that Council receive this report for information.

### **PREVIOUS COUNCIL DIRECTION / POLICY**

Approved at PFC on 2015 April 21, the item was then presented to the May 11 Combined Meeting of Council where Council adopted the recommendations contained in PFC2015-0384, and directed Administration to report back on the evaluation of the pilot project no later than June 2016.

On 2015 November 4, the MRU pilot was also endorsed in the Calgary Fire Department's Zero-Based Review (CPS2015-0800).

### **BACKGROUND**

The MRU pilot project was initiated to address an increase in CFD medical responses, particularly since 2009. The annual number of calls for medical assistance increased 40 per cent between 2009 and 2015, and now account for just over half of all CFD's responses. The increase in medical calls, particularly in high call volume stations, impacts CFD's response to other incident types. Most significantly, responding to a high volume of medical calls can mean that units are not available to respond quickly to other incident types. In order to respond to these trends, CFD placed two MRUs in high call volume stations as a pilot, freeing up engines to attend to fire and rescue emergency calls. The pilot MRUs are more manoeuvrable than fire engines or other heavy apparatus and have the ability to fit into tighter spaces, particularly in the downtown core.

### **INVESTIGATION: ALTERNATIVES AND ANALYSIS**

To assess the effectiveness and viability of using MRUs, the CFD repurposed two existing CFD vehicles as MRUs and put them into operation at the Forest Heights Station #12 and in the Downtown East Station #01. New vehicles to replace these original MRU vehicles are currently being outfitted.

The MRUs primarily respond independently to medical incidents that do not involve motor vehicle collisions. When not responding, the firefighters who staff the MRUs perform the same duties as other CFD frontline staff. From 2015 July to 2016 March, the MRU at Station #1 responded to 1,496 calls, and the MRU at Station #12 responded to 1,144 calls, making the MRUs some of the busiest units in the city. MRUs responded to over 78 per cent of the life-threatening medical calls within their assigned districts, and almost 42 per cent of the total calls

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in their immediate area. Using MRUs to respond to these calls resulted in improvements in the following areas:

### **Citizen Outcomes**

- Life saving: In seven cases where the MRU was the first arriving unit, the crew administered the automated external defibrillator (AED). Early intervention like this in cardiac events has been proven to reduce the likelihood of brain damage and increase the chance of patient survival.
- Response reliability: Response reliability measures how often a station was the primary responding station within its own district. Reliability improved by 11 per cent in Station #01's district and remained consistent in Station #12's district at 94 per cent, despite an increase in the overall number of incidents. Generally, higher response reliability coincides with quicker response times. During 158 incidents responded to by the MRUs, the available engine responded to another call before the MRU was cleared from the incident scene. This included seven confirmed fires and 19 hazardous material incidents.

### **Response Performance**

- The demands placed on fire apparatus have lessened, and there was a 12-second improvement in response times to medical calls in the downtown area.
- Comparing responses to medical incidents in districts with and without MRUs, and with similar call volumes, shows that first arriving units are on scene over 30 seconds faster in districts with MRUs.
- The fire incident response times for engines from Stations #01 and #12 improved by one minute and 27 seconds, and the number of times they responded within seven minutes improved by six per cent.
- Since MRUs were implemented, response time performance for an effective response force (i.e. enough people to respond to the incident) improved city-wide by 56 seconds; performance within the MRU response districts improved by as much as 20 seconds.
- In 2015, the annual response time target for fire suppression incidents improved by five per cent, and life threatening emergency medical incidents improved by two per cent.

### **Benefit of Future MRUs:**

CFD identified four additional stations as potential future locations for MRUs. This is based on future assessed workload, call type, percentage of medical calls, and impact on response performance. Placing MRU's at these four additional stations would likely have the greatest impact on city wide and district response performance, as well as improve citizen outcomes to both fire and medical incidents.

### **Stakeholder Engagement, Research and Communication**

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CFD engages Calgarians on an ongoing basis to better understand their opinions through citizen satisfaction surveys. CFD also engages its employees via internal surveys, polls, working groups, and through ongoing dialogue sessions.

### **Strategic Alignment**

This Report aligns with the following 2015-2018 Council Priorities:

- a city of inspiring neighbourhoods
- a well-run City

This Report supports the following 2015-2018 Action Plan objective:

- N1. Keep communities safe by meeting and maintaining standards for crime prevention, fire response, and enforcement.

This Report supports the following Zero-Based Review recommendation:

- Direct the CFD to complete the medical response unit pilot and evaluate its impacts, and to consider expansion subject to the results of the evaluation.

### **Social, Environmental, Economic (External)**

Responsiveness and efficient service delivery is a primary focus for CFD. The MRU pilot project has contributed to a more efficient and well-run city, and has improved citizen outcomes.

### **Financial Capacity**

#### **Current and Future Operating Budget:**

There are no current or future operating budget implications from this update.

#### **Current and Future Capital Budget:**

There are no current or future operating budget implications from this update.

### **Risk Assessment**

Failure to maintain the pilot would mean the gains the CFD has made with respect to reliability of response and availability of engines would not be sustained.

### **REASON(S) FOR RECOMMENDATION(S):**

As part of the Innovation Fund application, CFD committed to reporting back to Council on the Medical Response Unit pilot project.

### **ATTACHMENT(S)**

1. Application to the City of Calgary Council Innovation Fund PFC2015-0384 (April 21 & May 11 Revisions)
2. Calgary Fire Department Medical Response Unit Pilot Project Update (By the Numbers)