



Calgary Fire Department

ZBR FINAL IMPLEMENTATION UPDATE

BACKGROUND

In 2015 September, the Priorities and Finance Committee approved recommendations resulting from the Calgary Fire Department (CFD) Zero-Based Review (ZBR) (PFC2015-0695). It highlighted efficiency and effectiveness recommendations in three main areas:

Recommendation Area	Description
1 Organization Efficiency and Effectiveness	<ul style="list-style-type: none"> Reorganizing the management and leadership structure to improve stability, succession planning and communication and enhancing diversity and inclusion practices; Continuing the Medical Response Unit pilot (sending two-person units to moderate risk medical incidents). Working closely with Alberta Health Services to improve coordination on medical response;
2 Resource Optimization	<ul style="list-style-type: none"> Changing the approach to recruit training and orientation and increasing utilization of the training facility and potential revenue streams; Continuing to implement dynamic deployment and increasingly deploying resources and evaluating performance based on risk and demand using predictive modelling software; and Pursuing complementary means to reduce fire loss (e.g. building code changes, residential sprinklers).
3 Asset and Facility Management	<ul style="list-style-type: none"> Pursuing multi-use facilities including co-location with other City facilities and/or private uses such as retail or residential; and Continue pursuing efficient and effective fleet management practices.

The consultant's ZBR report estimated a target of \$14.1 to \$15.1 million in annual savings by 2018. CFD's actual productivity gains and cost savings were **\$14.1 million** by the end of 2018, made up of \$1.0 million in cost savings and \$13.1 million in cost avoidance.

The financial benefits identified by the ZBR's recommendations identified potential efficiency savings of \$14.1-\$15.1 million in annual operating (base) costs through a mix of productivity gains, cost savings and increased revenue generation once fully implemented. Costs of servicing future growth were more efficiently absorbed as a result of the ZBR recommendations and these savings were incorporated into Action Plan 2015-2018 as reductions.



PROGRESS UPDATE

All recommendations resulting from the CFD ZBR are completed. Of the \$14.1-\$15.1 million in annual financial benefits to be achieved by 2018, CFD realized \$14.1 million in 2018 from base. In addition to the \$8.4 million in cost avoidance identified through Action Plan 2015-2018 (included in the ZBR total), in 2016 CFD realized \$3.1 million in annual savings and by 2018, this increased to \$5.7 million annually through savings and avoidance. While on the low end of the predicted savings, CFD has developed a Training Master Plan which, when implemented, may increase the potential revenue stream from the Training Academy.

Recommendations	Current Status	Fire Predicted Savings		Fire Realized Savings				Fire Anticipated Savings
		Low End	Upper End	2015	2016	2017	2018	2019 - Ongoing
Ongoing annual savings (current + previous yrs' savings)		\$14,100,000	\$15,092,000	\$0	\$3,100,000	\$5,000,000	\$14,100,000	\$14,100,000
New annual savings (new savings arising in current yr.)				\$0	\$3,100,000	\$1,900,000	\$9,100,000	\$0
Management and Leadership	Complete	\$1,000,000	\$1,000,000		\$800,000	\$0	\$200,000	
Resource Optimization	Complete	\$13,100,000	\$14,092,000		\$2,300,000	\$1,900,000	\$8,900,000	
Asset and Facility Management	Complete	\$0	\$0		\$0	\$0	\$0	

In addition to the financial benefits, the recommendations also identified the following non-financial benefits or opportunities for effectiveness improvements:

- Reorganizing the management and leadership structure to improve stability in leadership positions, workload balance and communication across CFD through better organization of work and subject matter expertise into direct reporting relationships;
- Improving diversity and inclusion practices;
- Strengthening the dynamic deployment system, which helps to optimally position fire stations, trucks and equipment to apply a greater focus on results and outcomes for citizens as the basis for future decisions on fire service provision; and
- Participating in the multi-use facility planning process for fire station development to better use space in the community for municipal needs and deliver more "one-stop shop" services to Calgarians.

Organization Efficiency and Effectiveness

72

(No change from 2017)

Effectiveness Measure: Inclusion Index

Source: Corporate Employee Survey, 2018

All ZBR recommendations in this category have been implemented including reducing and re-organizing the management and leadership structure, which has led to **\$1 million** in savings annually. All non-financial based recommendations have also been implemented including continuing the development and implementation of a *Diversity and Inclusion Program*, which has helped build collective skills in areas like unconscious bias, cultural competency, and inclusive leadership through ongoing staff

engagement, training, education and communications. CFD also continues to enhance diversity and inclusion messaging in recruitment campaigns and non-emergency community activities. Implementing a formal program allows CFD to build community relationships and attract and retain diverse candidates to the fire service and this is reflected in the CFD Employee Inclusion Index, averaging higher scores than the City of Calgary comparators in both 2017 (69) and 2018 (71). CFD continues to train firefighters to celebrate the diverse communities they serve and demonstrate that fire stations are a place where all cultures and traditions are welcomed.

CFD was also recently re-accredited for the fifth time through the Commission of Fire Accreditation International (CFAI), one of only three fire service agencies to do so in the world. Accreditation demonstrates CFD's ongoing commitment to citizen safety, organization improvement, along with demonstrating best practices related to efficiency and effectiveness.

Resource Optimization

All ZBR recommendations in this category have been implemented. As a result of these recommendations, CFD took steps to move to a growth management model which optimized resource deployment through a stronger focus on balancing risks, resources and public safety. The ZBR process has led CFD to anticipate and respond to city growth by applying effective deployment practices, considering changing risk and the need for new resources. By emphasizing outcome measures in determining and evaluating service levels, innovative options were realized in planning for apparatus and station locations including deployment of resources

75%

(+16% from 2014; 15% short of long-term goal of 90%)

Effectiveness Measure: Arrival of effective response force within 11 minutes at serious and escalating fires

Source: CFD FireHub, 2018

69%

(+2% from 2017; 21% short of long-term goal of 90%)

Effectiveness Measure: Flame spread limited to with the room object of origin

Source: FireHub, 2018

based on time of day and other risk factors – a key component of dynamic deployment. In 2018, CFD limited fire spread in 69 per cent of building and structure fires, steadily improving by about 1.5 per cent annually since 2016, which is also reflected in the improvement in property loss from fires within Calgary (down almost \$20 million since 2017.) Year-over-year improvement

in these outcome measures indicates that implementing the ZBR's resource optimization recommendations have assisted in maximizing CFD's cost-effective model. Resource optimization efficiency has also been shown in the effective response force measure, which has steadily improved since 2014, though is still shy of our long-term goal.



This work was strengthened by software advancements in predictive modelling to support the new model for resource allocation.

Guided by the results of the Zero-Based Review, this work contributed to a reduction in the annual operating budget of **\$13.1 million** annually, including savings realized through Action Plan 2015-2018.

The ZBR report originally estimated an additional \$200,000 by the end of 2017 for revenue generated by the CFD Training Academy, an estimate based on fully renting out the training academy facilities to external parties, ideal circumstances in a thriving economy. While CFD fell short of this target, with an estimated one-time revenue generation of \$73,800 in 2018, the facility utilization has increased due to the expansion of non-revenue generating programs such as Environmental Safety Management meetings, supporting Council's One City vision. The number of internal City of Calgary business units or emergency responder partners using the Training Academy has increased year-over-year since 2015, as has the number of recruit classes required to support new community growth. The Training Academy has also followed through on further ZBR recommendations by placing an increased emphasis on investment in training for established CFD members, reducing the availability for external revenue. Although delayed due to these increasing demands for incumbent training and continued recruit classes, CFD completed its Training Master Plan in 2019 which formally incorporated the consultant's ZBR recommendations, including identifying the next steps required to achieve improved revenue targets. The plan will also address the recently updated *Alberta Occupational Health and Safety Act* requirements and other changes in the training environment.



In July of 2018, Council reconfirmed CFD's response to critical medical interventions (IGA2018-0548) including the operation of strategically placed Medical Response Units (MRUs), which have also resulted in improved response times to critical medical interventions by providing dedicated resources in the areas experiencing the most critical medical incidents, an innovative change to deployment operations. The utilization of MRUs also allowed CFD's engines to be more available to respond to fires and other emergency calls. Though the pilot was extremely successful, CFD removed the MRUs for further budget savings requested in 2019 July. CFD is also continuing to work with Intergovernmental and Corporate Strategy to advocate for The City of Calgary to be compensated for responding to emergency calls that are within the jurisdiction of Alberta Health Services and has sent letters to the Deputy Minister asking for the same.

Asset and Facility Management

All ZBR recommendations in this category have been implemented including identifying opportunities for multi-use stations and collaborating with other City partners in station design and development, with the most recent multi-use CFD fire station opening in the community of Tuscany in the summer of 2018. CFD was also one of the first business units to transfer facilities staff, budgets and assets to Facility Management. Completed in 2018, this was part of a Corporate-wide project to develop a Corporate Coordinated Operations and Maintenance (CCOM) program, which should ultimately result in an integrated facility services approach.



Going Forward

In the future, CFD anticipates that as the city becomes larger and more populated, CFD will have more demands for its services. Urban sprawl and densification will mean that our resources will likely be busier and have to travel further to provide emergency response to outlying areas. Overall call volumes and demand for emergency services are increasing year-over-year. However, cuts to CFD's operating budget as a result of the downtrend in the economy and a decrease in the tax revenue from commercial businesses has resulted in CFD removing some

frontline apparatus for service including medical response units (MRUs) and a rescue unit. CFD is committed to monitoring the impact of the removal of these units on its response time to emergency incidents, and also the impact on outcome measures affecting citizens, such as flames spread, property dollar loss due to fire and civilian deaths and injuries.



\$0.89

(+\$0.05 from 2017; maintained at ~\$0.86 since 2013)

Effectiveness Measure: Cost of Fire Service per \$1,000 Property Assessment
Source: MBNCanada, 2017

CFD continues to maximize financial efficiency through the One Calgary annual budget process and benchmarking results indicate CFD is performing on par or better than other Canadian municipalities in this area. The latest MBNCanada survey results indicate that CFD's fire service operating costs per assessed property value is significantly lower than comparable municipalities across Canada. Calgary's costs are \$0.89 per \$1,000 property assessment, while the median of all other participating municipalities is \$1.34 per \$1,000 property assessment.

CFD has also committed to make additional sustainability improvements through the 2019-2022 One Calgary process including seeking full cost recovery from the Province of Alberta for motor vehicle collisions on provincial roadways and pursuing full costs for special event services. CFD also supported a resolution put forward in the Fall 2019 AUMA convention to request reimbursement from the province for collecting and disposing of needle debris resulting from the addictions crisis.

65%*(No change from 2017; increase of 8% since 2014)***Effectiveness Measure: Per cent of contacts who improved their knowledge of how to spot hazards and prevent fires**

Source: CFD Perceptions & Expectations Survey, 2018

CFD continues to strive to create a more adaptable and sustainable organization which responds to trends that have arisen since the ZBR was first brought to Council in 2015 and is using the Corporate Innovation platform to better engage its members on creating ways to make the CFD more efficient and effective. CFD maintains partnerships with other City and external services to address social issues, such as the opioid and methamphetamine crises, and improve safety and quality of life. Partnerships also enable CFD to more effectively deliver public safety education through programs like the Fire Hydrant Mobile Spray Parks and the Firefighter Story-time early literacy partnership with the

Calgary Public Library. Effective delivery of public safety education is demonstrated through the number of Calgarians who report contact with CFD improved their knowledge of how to spot hazards in the home, up 8% since 2014. CFD is also developing a risk-based approach to inspections, enforcement and community safety to mitigate safety risks as a result of reduced maintenance on building life safety systems following the economic downturn, aging infrastructure and behaviours that increase the risk of fires for vulnerable populations.



In the future CFD will continue to focus on the mental health of our members as emphasized through the ZBR process. CFD has a range of proactive support programs to support the mental health of firefighters, including the Resilient Responder program and the Critical Incident Stress Management Program. CFD was also the first in Canada to pilot psychology services as part of annual firefighter wellness assessments. These programs

74*(-1 Point from 2017)***Effectiveness Measure: Mental Health Index**

Source: Corporate Employee Survey, 2018

are reducing stigma, breaking down barriers in promoting access to mental health supports and improving access to programming specific to the psychological hazards of emergency response, as demonstrated by the CFD Employee Mental Health Index, averaging higher scores than the City of Calgary comparators in both 2017 (72) and 2018 (73).