

Calgary



# Calgary Fire Department

## Vision

To be an international fire service leader.

## Mission

To serve the community through excellence in fire prevention, education, protection and safety.

## Values

Teamwork, pride, professionalism, and respect.

## 2017 ANNUAL REPORT

### Message from the Fire Chief



The Calgary Fire Department (CFD) is dedicated to the health, safety and vitality of Calgarians. We deliver our services through an integrated program of emergency and non-emergency response, fire and life safety education, inspection and enforcement, and work with others to support disaster planning and preparedness.

The work we do is meaningful. Each day, our members provide competent and compassionate service to citizens who are experiencing some of the worst moments of their lives. In 2017, 100 per cent of citizens surveyed stated they were satisfied with our services, and 95 per cent stated the city is safer because of the quality services we provide.

Though Calgary's population is not growing as quickly as anticipated, geographical expansion and densification continue to create a dynamic response environment. New and emerging issues, such as the opioid crisis, continue to inform our response to ensure Calgarians have equitable access to fire and community safety services.

As Calgary continues to change around us, we must be increasingly flexible and proactive in the way we plan for and respond to emergencies and crisis events. Our citizen-centric approach enables us to have a positive impact at the neighbourhood and community level with a continued goal of reaching one in nine Calgarians every year in a non-emergency setting.

As we strive to become an international fire service leader with an inclusive and respectful culture, we will continue to maintain our high quality of service, look for opportunities to build relationships across The City, and manage our growth thoughtfully and deliberately.

Steve Dongworth  
FIRE CHIEF

### Fire and Emergency Response

Providing responses to fires, fire-related incidents, critical medical interventions, motor vehicle collisions, chemical and hazardous material releases, and specialized rescues.

### Fire and Life Safety Education

Providing fire and life safety education/prevention and initiatives for Calgarians, with an emphasis on those considered at higher risk to increase knowledge and awareness of safety, and to promote behaviours that contribute to safe living in our communities.

### Fire Inspection and Enforcement

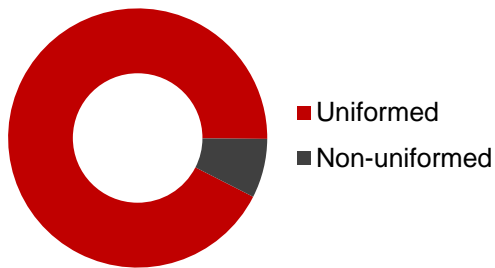
Providing services to building and property owners to enhance public safety, compliance with safety codes, minimize fire-related risks, and protect lives, property and the environment.

## EMPLOYEES

Our people are key to our success and are our most important assets. They protect and safeguard citizens by delivering fire and community safety services to Calgarians living and working in communities across the city.

In 2017, our **1,516** employees delivered fire and community services to **1.25 million** Calgarians.

**93 per cent** of our employees are uniformed staff, and of the total workforce, **87 per cent** provide frontline emergency services to citizens.



## SAFETY AND EDUCATION



## CITIZEN SATISFACTION

We are meeting the expectations of citizens as we continue to refine our services to meet their changing needs. We provide services as efficiently and effectively as possible to ensure we demonstrate responsible fiscal management while never losing sight of what is most important – the safety of our citizens and firefighters.

**I am satisfied with the service provided by the Fire Department** **100%**

% Who Agree

**The Fire Department's programs and services are important** **100%**

% Who Agree

We reach more than one in nine Calgarians annually through community fire and life safety initiatives.

### Prevention and inspections

Ensuring applicable fire and building codes are in place	1,331 plans reviewed
Ensuring compliance with the Alberta Building and Fire Codes	6 charges resulting in close to \$163,000 in fines
Ensuring occupant and property safety in businesses and facilities	13,971 inspection activities 18,548 firefighter audits
Ensuring bars, nightclubs and special events follow safety laws and regulations	187 locations visited reaching 82,804 patrons

### Education and public assistance

Firefighter in-station and community interactions	Over 71,000 people engaged
Home Safety Program – bringing safe practices and fire prevention education to citizens	27,468 homes visited
Targeted fire and life safety education programs	16,607 high-risk citizens visited
After the Emergency Program – providing caring support to citizens following a crisis	136 residences visited
School-based education in identified high-risk communities	1,130 students engaged
Youth Firesetter Intervention Referral and Education Service	20 youth clients
Fire Prevention Week	2,000 event attendees
Fire Safety Education Trailer	Attended 18 schools, 9 Calgary Housing complexes, and 29 community events

# Why Do Seconds Matter?

## Every fire is different

Fires burn differently depending on materials involved, fuel sources and weather conditions, such as wind. The latest research on sprinklers shows that they are effective at containing indoor residential fires about 90 per cent of the time, but do not address other fire risks including external fires and attic fires. Of all the fires that Calgary Fire encounters on a residential property, approximately 42 per cent would not be mitigated by sprinklers as the origin of the fire is outdoors, or within the home where sprinklers have not been installed.

## Fires can double in size every 30 seconds

Typically, new home construction results in faster flame spread beyond the room of origin, and can spread to nearby structures. According to the National Fire Protection Association (NFPA), fires can spread up to 1,100 per cent in the first four minutes.

## Fire can spread to multiple homes in under 10 minutes

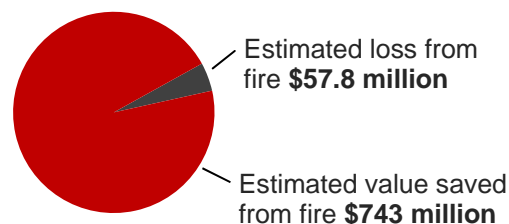
Fire personnel and equipment must arrive quickly as fires spread very rapidly and can flashover in less than ten minutes. According to NFPA, the probability of civilian death increases by 1,090 per cent when a fire moves beyond the room of origin, and the probability of civilian injury and average dollar loss per fire more than doubles. Within Calgary, the probability of civilian death can increase by 243 per cent when the fire moves beyond the room of origin and under the same circumstance, the dollar loss due to fire increases by 1,736 per cent. Calgary has experienced fires that range from staying contained to the room of origin to expanding to two or three homes in very short periods of time. In 2017, 28 residential fires spread beyond the structure or origin.

## Every second counts when it comes to saving lives

In the case of critical medical interventions, such as cardiac arrest, according to the American Heart Association, each minute a patient waits for cardio-pulmonary resuscitation, the chance of survival is reduced by up to ten per cent, and after ten minutes, the chance of success from defibrillation is only five per cent. Treatment within 3 to 5 minutes of a heart attack increases a patient's survival rate by up to 70 per cent.

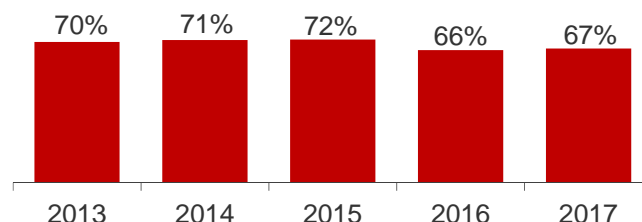
## FIRE LOSS / SAVE RATE

Although there was an estimated \$57.8 million in fire loss, firefighters saved an estimated \$743 million in property and content value from fire loss, a save rate of **93 per cent**.



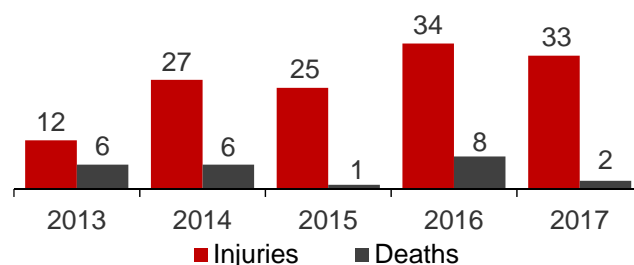
## FLAME SPREAD

Our current public safety outcome is to contain 71 per cent of fires to the room or object of origin. In 2017, we limited fire spread in **67 per cent** of building and structure fires, four per cent short of our target.



## CIVILIAN INJURIES AND DEATHS

Our continued efforts with fire prevention and community safety activities resulted in three fewer civilian fire-related injuries. Despite best efforts, two citizens lost their lives to fire in 2017.



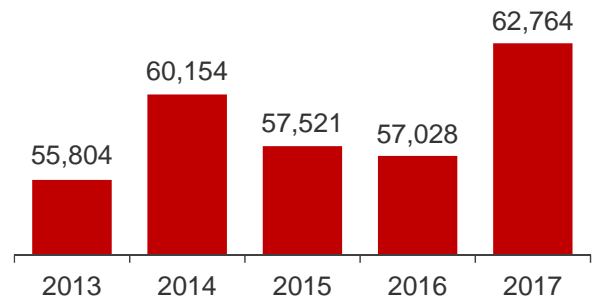
	2013	2014	2015	2016	2017
Total population	1,149,552	1,195,194	1,230,915	1,235,171	1,246,337
Number of fire incidents	1,902	1,843	1,620	1,277	1,344
Fire incident rate (per 1,000 population)	1.7	1.5	1.3	1.0	1.1
Loss from fires (est.)	\$39,954,859	\$33,241,618	\$44,375,810	\$31,880,529	\$57,782,544
Fire loss per capita	\$34.76	\$27.81	\$36.05	\$25.81	\$46.36
Value of property affected by fire (est.)	\$1,213,721,595	\$1,171,751,328	\$2,673,696,611	\$664,770,617	\$800,817,585
Value saved from fire (est.)	\$1,173,766,736	\$1,138,509,710	\$2,629,320,801	\$632,890,088	\$743,035,041
Percentage of value saved	97%	97%	98%	95%	93%





## RESPONSES

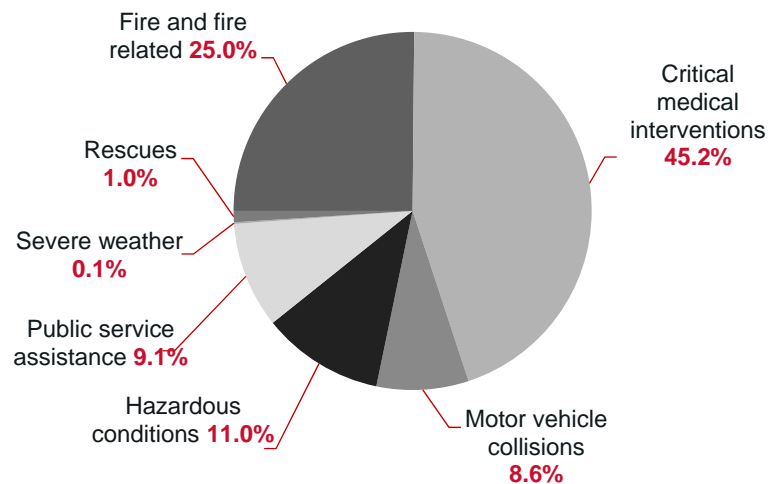
In 2017, firefighters responded to **62,764** calls where citizens needed help, a **10 per cent increase** over the previous year.



**25 per cent** of responses firefighters made were for a fire alarm or other indication of a possible fire.

Calls for critical medical interventions increased 13 per cent from the previous year, accounting for over **45 per cent** of our total calls in 2017.

Our community safety role continued to expand with increased calls to motor vehicle collisions and for public service assistance.



	2013	2014	2015	2016	2017
Fire and fire-related	15,091	15,148	15,269	14,780	15,694
Critical medical interventions	23,959	25,075	25,001	25,120	28,397
Motor vehicle collisions	4,007	4,011	4,679	4,759	5,380
Hazardous conditions	8,023	9,852	7,821	7,214	6,864
Public service assistance	3,894	4,691	3,873	4,301	5,728
Severe weather	119	793	185	173	85
Rescues	711	584	693	680	616
<b>Total</b>	<b>55,804</b>	<b>60,154</b>	<b>57,521</b>	<b>57,027</b>	<b>62,764</b>



## We strive to anticipate and respond to the changing needs of our community

As a result of the growing Fentanyl crisis, we obtained the nasal spray Naloxone and trained our fire crews to administer it to opioid overdose patients.

In 2017, firefighters attended to over 1,100 suspected Fentanyl overdose patients, and administered the life-saving Naloxone 318 times.

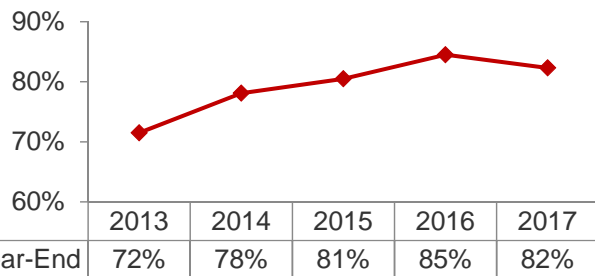


## RESPONSE TIME PERFORMANCE

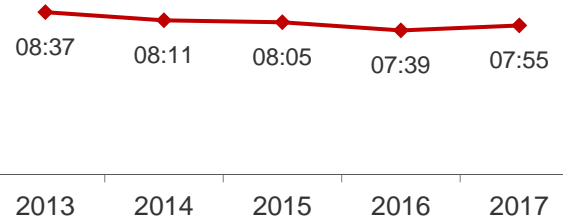
Although we exceeded our annual short-term total response time target for the arrival of a first-in unit at fire suppression and critical medical intervention incidents, it is still taking **over two minutes longer** than the Council-approved long-term target of assembling the resources needed to control a high-risk fire suppression incident within eleven minutes, 90 per cent of the time.

Even though call volumes are higher than ever before - and continue to increase each year - we are getting closer to our long-term target of arriving on-scene within seven minutes, 90 per cent of the time.

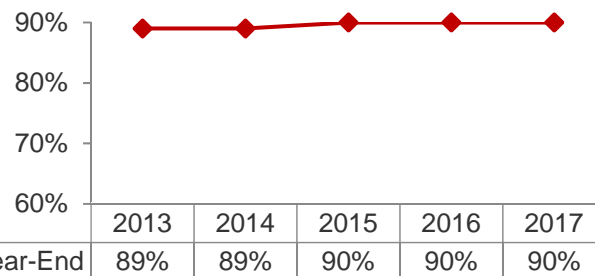
First-in unit emergency response within seven minutes at fire suppression incidents



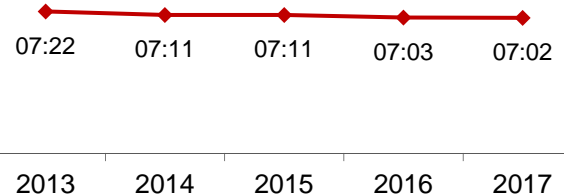
First-in unit total response time (90th percentile) fire suppressions



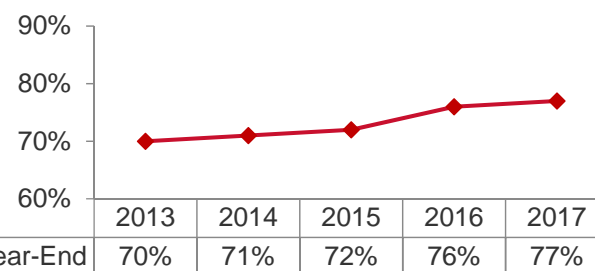
First-in unit emergency response within seven minutes at critical medical interventions



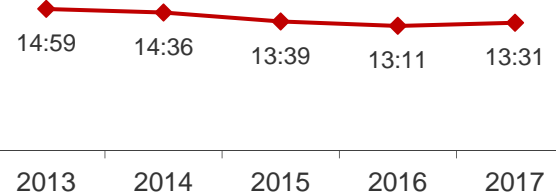
First-in unit total response time (90th percentile) critical medical interventions



Full first-alarm assignment within eleven minutes at high-risk fire suppression incidents



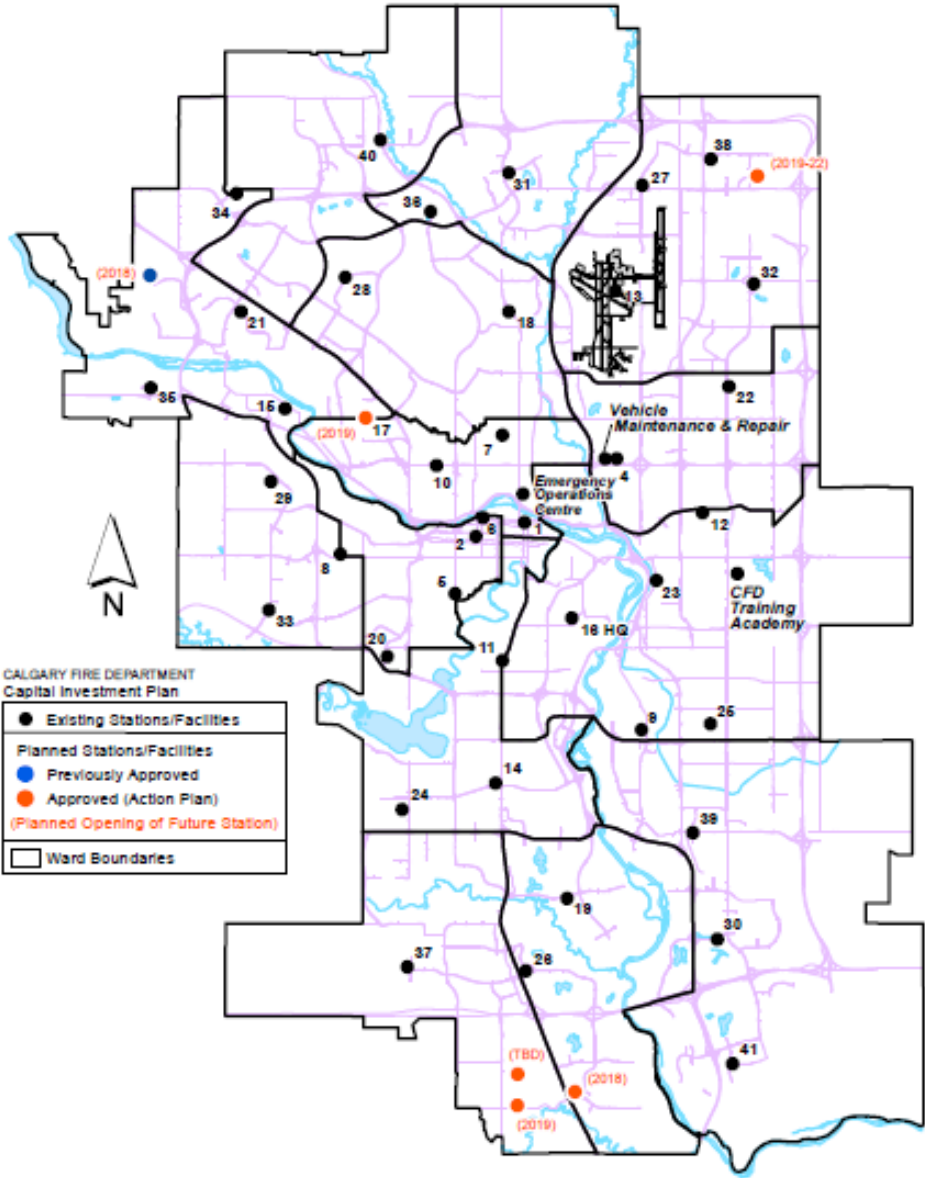
Full first-alarm assignment total response time (90th percentile) high-risk fire suppressions



# Demand for our services continues to increase.

Our goal is to effectively and efficiently balance fire and public safety service requirements, while ensuring every Calgarian has equitable access to appropriate, affordable and acceptable fire and community safety services.

We develop long-range capital plans and regularly evaluate where stations and resources should be allocated to ensure the optimal level of fire protection for the citizens of Calgary.



## BUDGET

Our operating funds are planned, budgeted and approved as part of The City's multi-year business planning and budgeting process.

In 2017, our Council-approved operating budget was **\$237.7 million**.

Our capital budget provides for the maintenance of our physical assets, for life-cycling of our facilities and equipment, and for needed apparatus, equipment, technology, and new station construction.

In 2017, our Council-approved capital budget allocation was **\$48.3 million**.

The latest MBNCanada survey results indicate Calgary is performing at the same level or better than comparative municipalities at outcome measures such as rate of residential fire injuries and fire fatalities.

Our fire service operating costs per assessed value of property was **\$0.84** per \$1,000, significantly lower than the comparative municipalities' average of \$1.37.

