

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

Pride, professionalism, teamwork and respect.

## 2019 Annual Report

### Message from the Fire Chief



We know that our communities trust and value Calgary Fire Department (CFD) services. In the 2019 Citizen Satisfaction Survey, CFD received a 100 per cent importance rating and a 98 per cent satisfaction rating. Despite the ongoing financial challenges in Calgary, 99 per cent of respondents stated that The City should invest the same or more in CFD.

To meet the needs of citizens, the Calgary Fire Department continuously refines its service delivery model based on the evolving characteristics of the community, assessed levels of risk across the city, demand for services and community expectations. In 2019, service demands remained stable at 62,904 calls, with critical medical intervention calls, as part of the Medical First Responder program, representing approximately 47 per cent of our calls.

Our priorities for 2020 include continuing to enhance the delivery of high quality public safety services valued and expected by Calgarians. This involves constantly evaluating service levels and using information and research to enhance service delivery; ensuring that the right services are provided in the right way for Calgarians; identifying cost savings that benefit taxpayers; capitalizing on opportunities for financial sustainability; and seeking opportunities to increase the positive impact the Calgary Fire Department makes in the community.

Internally, we will continue to support employee well-being through emphasizing training and physical and psychological safety; and supporting respect and inclusion initiatives to encourage positive behaviours in the workplace.

Steve Dongworth  
FIRE CHIEF

### The CFD is committed to providing the following three lines of services:

#### 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 increasing knowledge and awareness that promotes safe behaviours 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 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 2019, our **1,474** employees delivered fire and community services to **1.28 million** Calgarians.

**94 per cent** of our employees are uniformed staff, and of the total workforce, **87 per cent** provide frontline emergency services to citizens. Reductions in staff numbers combined with ongoing population growth means that the ratio of frontline firefighter to citizens was 1:998 in 2019, an increase of 7 per cent since 2014.

## Delivering Fire & Life Saving Education

The number of residential fires has started to decline in Calgary, however fire-related injuries have not. The occupant's reaction to the fire is a strong factor in survivability.

Our most vulnerable are children, seniors, new Canadians and people with mobility challenges. Public fire safety education and training are the key to reducing the fire problem and reducing fire injuries and deaths.

We strive to reach one in nine Calgarians annually with safety information through non-emergency face-to-face engagement and The City website.

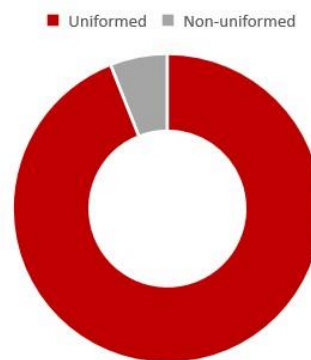
## Citizen Satisfaction

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 Calgary Fire Department** **98% agree**

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

Uniformed and Non-uniformed Staff



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

### Prevention and enforcement

Ensuring applicable fire and building codes are in place	1,246 plans reviewed
Ensuring compliance with the Alberta Building and Fire Codes	147 charges resulting in close to \$89,010 in fines
Ensuring occupant and property safety in businesses and facilities	16,489 inspection activities 13,877 firefighter audits
Ensuring bars, nightclubs and special events follow safety laws and regulations	151 locations visited reaching 91,341 patrons

### Education and public assistance

Firefighter community interactions	69,064 people engaged
Home Safety Program – bringing safe practices and fire prevention education to citizens	26,021 homes visited
Targeted fire and life safety education programs	28,763 high-risk citizens visited
After the Emergency Program – providing caring support to citizens following a crisis	466 residences visited
School-based education in identified high-risk communities	26,309 students engaged
Youth Firesetter Intervention Referral and Education Service	20 youth clients
Fire Prevention Week	753 event attendees
Firefighter story time	2,513 children
Spray and Play	19 events reaching 904 students
School Fire Drills	204 schools visited
Fire Safety Education Trailer	Attended 16 schools (1,234 students) and 11 community events (6,858 Calgarians), reaching an estimated 8,092 people

## 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 five minutes. 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 2019, eight residential fires spread beyond the structure of 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, reduces the chance of survival by up to ten per cent. After ten minutes, the chance of success from defibrillation is only five per cent. Treatment within three to five 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 \$34 million in fire loss, firefighters saved an estimated \$396 million in property and content value from fire loss, a save rate of **92 per cent**.

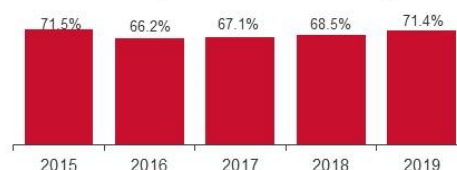
Estimated fire loss, value saved and save rate, 2019



## Flame Spread

This year, our public safety outcome was to contain 66 per cent of fires to the room or object of origin. In 2019, we limited fire spread in **71 per cent** of building and structure fires.

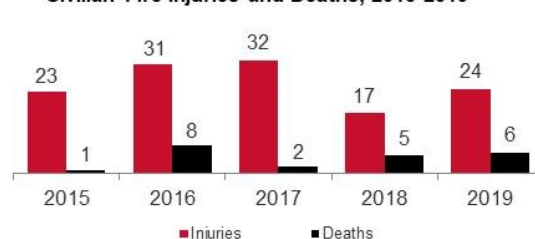
Flamespread limited to room or part of room or part of room/area of origin



## Civilian Injuries and Deaths

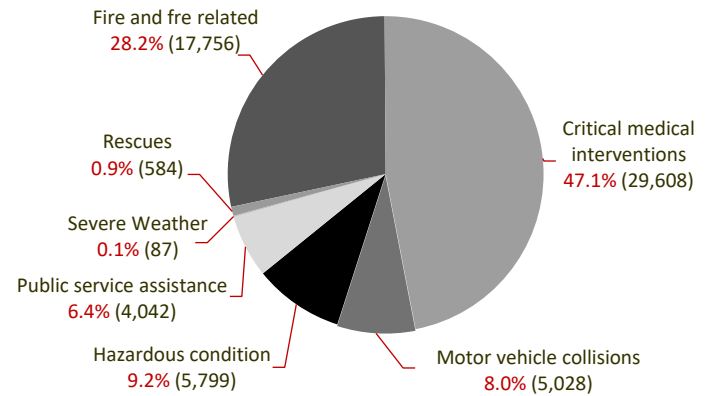
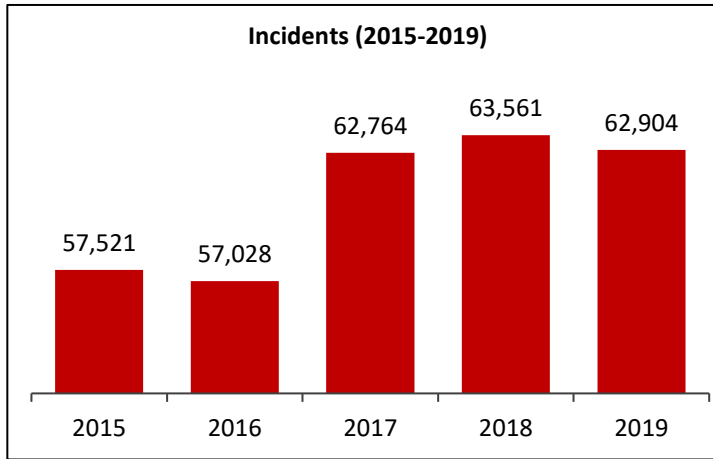
Between 2018 and 2019, there was a 41 per cent increase in fire-related injuries. Despite our efforts, six citizens lost their lives to fire in 2019.

Civilian Fire Injuries and Deaths, 2015-2019



	2015	2016	2017	2018	2019
Total population	1,230,915	1,235,171	1,246,337	1,267,344	1,285,711
Number of fire incidents	1,620	1,277	1,344	1,342	1,266
Fire incident rate (per 1,000 population)	1.3	1.0	1.1	1.1	.98
Loss from fires (est.)	\$44,375,810	\$31,880,529	\$57,782,544	\$37,342,817	\$34,511,816
Fire loss per capita	\$36.05	\$25.81	\$46.36	\$29.47	\$26.84
Value of property affected by fire (est.)	\$2,673,696,611	\$664,770,617	\$800,817,585	\$656,792,404	\$430,768,808
Value saved from fire (est.)	\$2,629,320,801	\$632,890,088	\$743,035,041	\$619,449,587	\$396,256,992
Percentage of value saved	98%	95%	93%	94%	92%

## Responses



In 2019, firefighters responded to **62,904** calls where citizens needed help, a **1 per cent decrease** from the previous year.

Calls for critical medical interventions remained steady at 47 per cent of our total calls in 2019.

	2015	2016	2017	2018	2019
Fire and fire-related	15,269	14,780	15,694	15,915	17,757
Critical medical interventions	25,001	25,120	28,397	30,317	29,607
Motor vehicle collisions	4,679	4,759	5,380	5,153	5,028
Hazardous conditions	7,821	7,214	6,864	6,692	5,799
Public service assistance	3,873	4,301	5,728	4,833	4,042
Severe weather	185	173	85	80	87
Rescues	693	680	616	571	584
<b>Total</b>	<b>57,521</b>	<b>57,027</b>	<b>62,764</b>	<b>63,561</b>	<b>62,904</b>



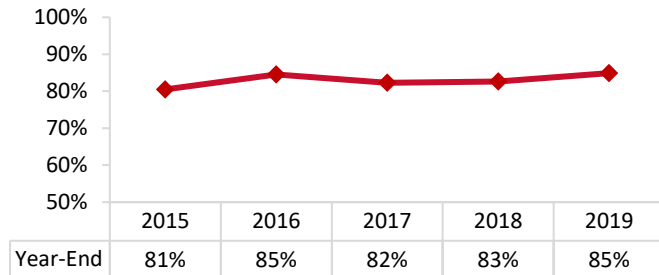


## Response Time Performance

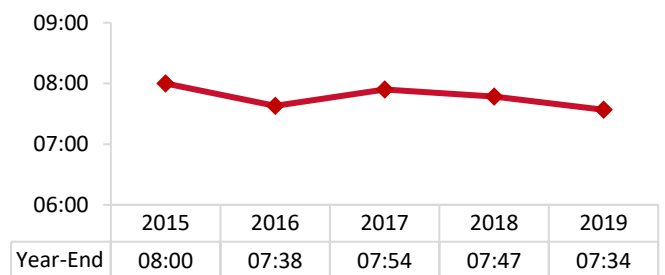
Although we exceeded our annual short-term total response time target for the arrival of a first-in unit at fire suppression and critical medical intervention incidents, it is still taking just under two minutes longer than the Council-approved long-term target to assemble 12 firefighters on scene at high-risk fire suppression incidents, 90 per cent of the time.

Even though call volumes remain at the highest level we have ever seen –we are getting closer to our long-term target of arriving on-scene within seven minutes, 90 per cent of the time at fire and fire-related incidents.

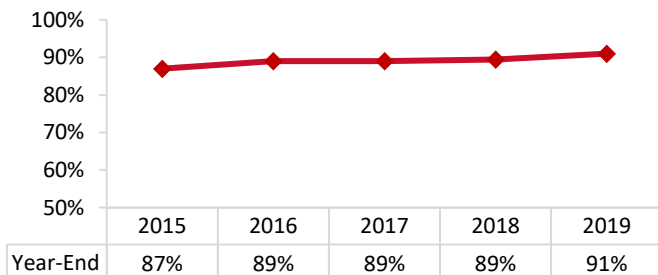
**First-in unit total response within seven minutes at fire and fire-related incidents**



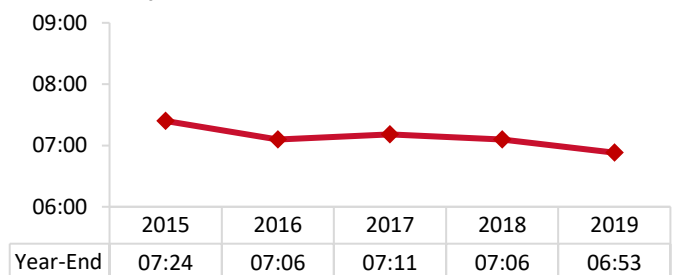
**First-in unit total response time (90<sup>th</sup> percentile) fire and fire-related**



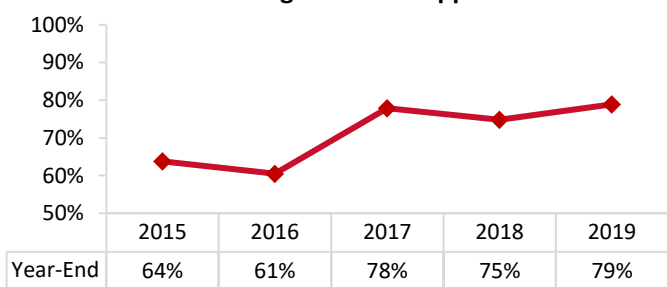
**First-in unit response within seven minutes at critical medical interventions**



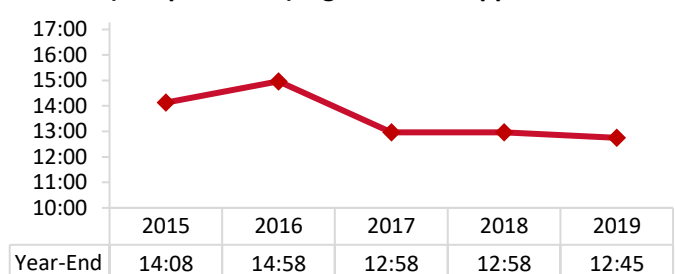
**First-in unit total response time (90<sup>th</sup> percentile) critical medical interventions**



**Full first-alarm assignment within eleven minutes at high-risk fire suppressions**



**Full first-alarm assignment total time (90<sup>th</sup> percentile) high-risk fire suppression**



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

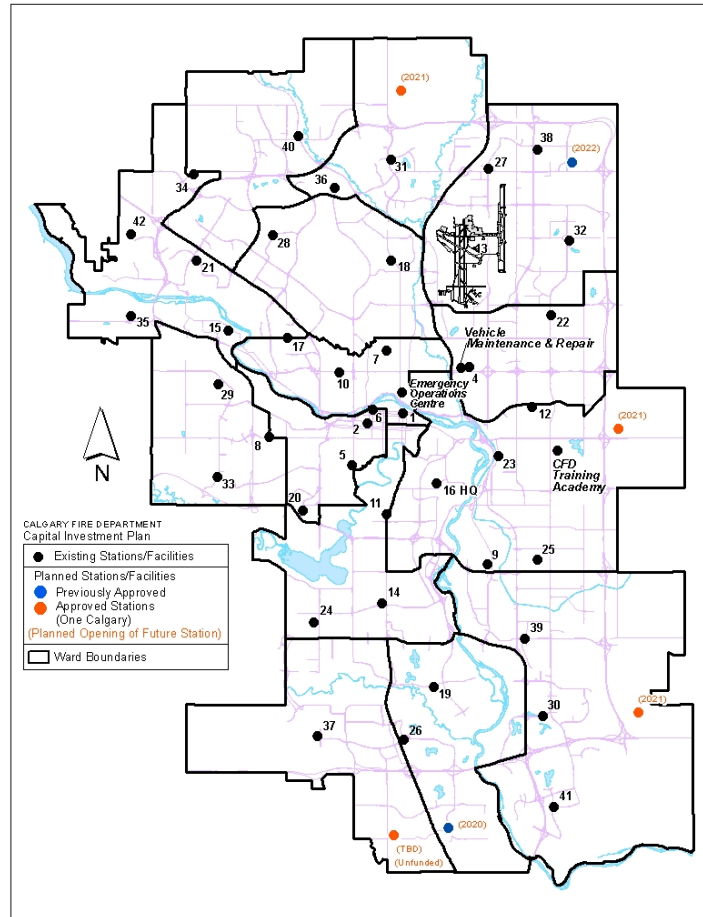
Providing firefighters with appropriate training, focused on safe operations, increases their safety and enables them to provide quality service to Calgarians. In 2018, in response to the Fentanyl crisis, firefighters were provided the nasal spray Naloxone and trained on how to administer it to opioid overdose patients. As a positive in 2019, we saw the number of fentanyl overdoses begin to decline. Firefighters attended to 1,452 suspected Fentanyl overdose patients, and administered the lifesaving Naloxone 133 times. As incidents related to opioid and other drug use continue, Calgary Fire is developing training for firefighters and other emergency responders on how to interact with citizens who may have used a drug substance, so that they may better assist the individual while ensuring the safety of themselves and bystanders.

## Demand for our services continues to be high

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.

## Future Fire Station Plans



## Budget

Our operating funds are planned, budgeted and approved as part of The City's multi-year business planning and budgeting process. Due to the ongoing economic downturn, however, Council reconsidered the budget mid-year resulting in a decrease of **\$9.3 million** and **55 FTEs** for CFD.

In 2019, our adjusted Council-approved operating budget was **\$224 million**.

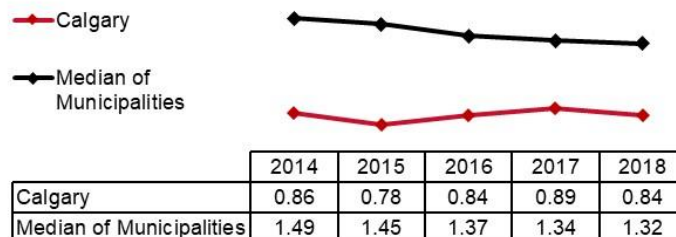
Our capital budget provides for the maintenance of our physical assets, for life-cycling of our facilities and equipment, and for needed apparatus, equipment, technology, and new station construction.

In 2019, our Council-approved capital budget allocation was **\$27.7 million**.

## Cost Comparison to Assessed Value

CFD's operating cost of **\$0.84** per \$1,000 property assessment (Municipal Benchmarking Network Canada survey results) is significantly lower in comparison with other municipalities (average of \$1.32).

Operating costs for fire services per \$1,000 property assessment (MBNCanada)



Additional information: visit [www.Calgaryfire.ca](http://www.Calgaryfire.ca) or call 3-1-1 ([www.calgary.ca/311Online](http://www.calgary.ca/311Online)).