

# Calgary Fire Department 2023 Annual Report



# Contents

Message from the Fire Chief .....	1
The Calgary Fire Department organization chart.....	2
CFD service lines .....	3
2023 spring survey of Calgarians.....	3
Looking back at 2023: Trends and accomplishments.....	4
Operating and capital budget.....	5
Our people, community and culture.....	6
New fire station development.....	8
City-wide response time and community growth .....	9
Fire and emergency response performance .....	10
Service level and response time target performance.....	12
Redeployment of medical response unit .....	15
Opening of Belvedere Fire Station 45.....	15
Fire inspections and enforcement performance .....	16
Fire safety education performance .....	21

In 1999 the Calgary Fire Department (CFD) became the first Canadian fire service to receive accredited agency status with the Commission on Fire Accreditation International, and today is the sixth largest fire service in the world to be accredited, and one of nine Canadian fire services to have received this prestigious designation. Of more than 30,000 fire agencies in North America, only 324 have achieved this status so far. The accreditation process has helped the CFD continue to identify and develop best practices, review its current practices, assess hazards and risks, understand the fire safety needs of citizens, promote excellence in the fire service and strive for continuous improvement.



**Commission on  
Fire Accreditation  
International**

## Tawnshi, Oki, Danit’ada, Âba Wathtech, Hello

The Calgary area, where the Bow and Elbow rivers meet, is a place of confluence where the sharing of ideas and opportunities have naturally come together. Whether you call this place Otoskwunee; Moh’kinsstis; Wicispa Oyade; Guts’ists’i; or Calgary, we are all community. We would like to take this opportunity to acknowledge that we are gathered on the traditional territories of the nations signatory to Treaty 7 in southern Alberta. This includes the Blackfoot First Nation tribes of Siksika, the Piikani, the Kainai, and the Amskaapipiikani; the Stoney Nakoda First Nation tribes of Chiniki, Bearspaw and Goodstoney; and the Tsuut’ina First Nation. The City of Calgary is also homeland to the historic Northwest Metis and to Metis Nation of Alberta, Region 3. We acknowledge all Indigenous urban Calgarians who have made Calgary their home.

# Message from the Fire Chief

The CFD is dedicated to the health, safety and vitality of Calgarians as well as our most important asset, our people. Through our lines of service, our 1,597 employees provide an integrated program of emergency and non-emergency response, fire inspections and enforcement, and fire and life safety education. Our services support The City of Calgary's purpose of making life better every day for citizens.

To meet the needs of citizens and the community, the CFD continuously refines its service delivery model based on the evolving characteristics of the community, the various types and levels of risk assessed across the city, demand for services and community expectations. Since the start of the coronavirus pandemic, the CFD has seen a significant increase in demands for service that continues to grow. To meet the needs of Calgarians, our people remain dedicated, resilient and steadfast in serving and protecting our city, while continuing to focus on our shared values of pride, professionalism, teamwork and respect.

Since 2020, the CFD's demand for service has grown by approximately 15 per cent per year. In 2023, the Fire Department responded to over 90,000 emergency incidents. Of these, firefighters attended 17 per cent more fire and fire-related incidents and 18 per cent more critical medical emergencies compared to the same time last year. Notably, the downtown core saw a significant concentration of critical medical emergencies. To maintain effective response performance and quality service to Calgarians, a Medical Response Unit was successfully re-deployed at Station 1 and responded to over 6,000 incidents. Furthermore, Station 45 successfully opened to provide emergency response coverage in the community of Belvedere and surrounding areas.

Despite the continuous increase of incidents and resulting strain on our resources, response time performance remained consistent in 2023. We appreciate the significant investment made by Council in the CFD during the 2023-2026 Service Plans and Budget process. Thoughtfully implementing the new resources will ensure we can keep up with ever-increasing demands for service along with the continuing rapid pace of growth in our city.

In alignment with the broader corporate direction and with a focus on supporting Council's strategic direction, throughout 2024 the Fire Department will focus on:

- Excellent services for every Calgarian
- A safe, healthy and inclusive workplace
- Sustainability and our future
- Service improvement and innovation
- Leadership and employee development

The CFD will continue to manage service level demands in new community growth areas as well as our existing neighbourhoods in 2024. We will apply evidence-based knowledge and expertise to mitigate impacts as far as we possibly can, while also leveraging our greatest resource – our people – to do everything we can to keep our communities safe.



Steve Dongworth  
Fire Chief



## Our mission

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

## Our vision

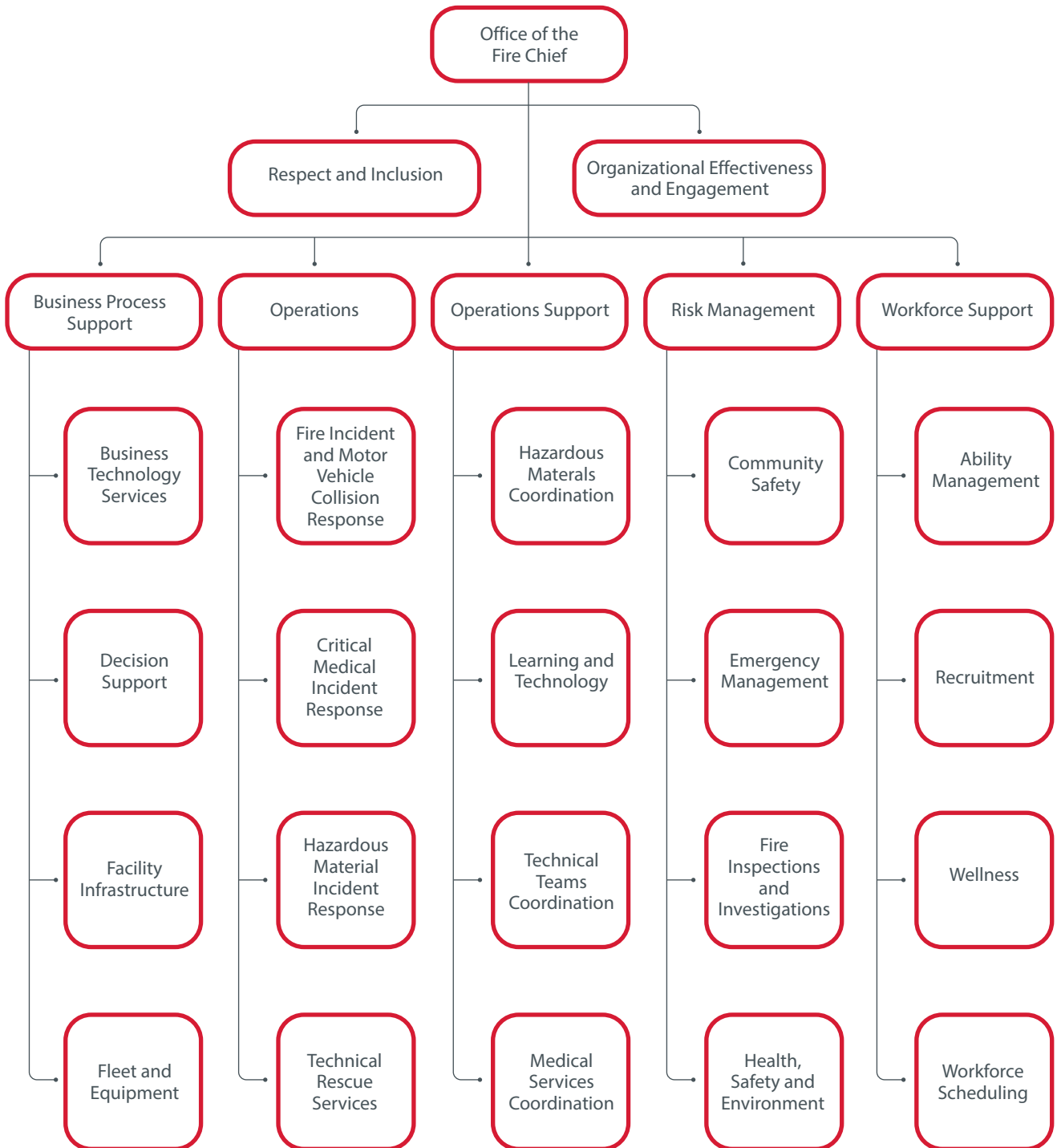
To be an international fire service leader.

## Our values

Pride, professionalism, teamwork and respect guide our actions and guide how we work with the communities we serve.



# CFD organization chart





# CFD service lines

CFD is proud to serve Calgarians in three service categories. Learn more about **Calgary's service lines**.

## Fire and emergency response

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

## Fire inspections 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.

## Fire 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.

# 2023 spring survey of Calgarians results

Forty-four services and programs offered by The City of Calgary were evaluated in the **2023 spring survey of Calgarians**. Of these, the CFD's three service lines received over 95 per cent scoring on importance and over 90 per cent rating for satisfaction. While the satisfaction rating for fire and emergency response has statistically declined compared to spring 2021, Calgarians consistently rate this service as 100 per cent in terms of importance. Additionally, the satisfaction rating for fire inspection and enforcement has improved by 7 per cent and Calgarians express a desire for increased investment in fire safety and education compared to spring 2021.

**Fire inspection and enforcement**



**Fire and emergency response**

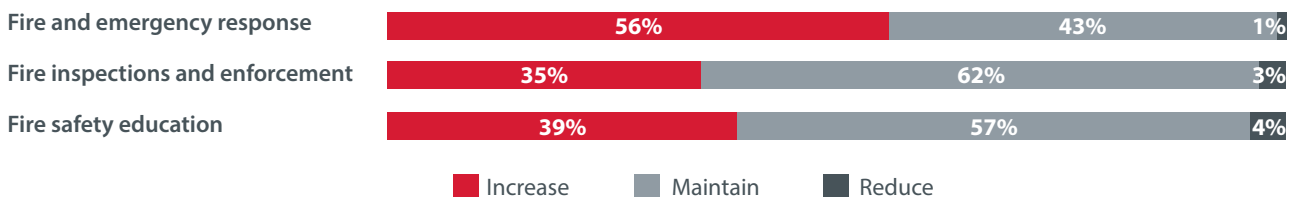


**Fire safety education**



The table below represents citizen's perspectives on whether investment should increase, remain the same or decrease for service lines. Results indicate that surveyed Calgarians feel CFD's service lines should either see funding increase or be maintained at current levels.

**Citizen perspective on service line investment levels**



# Looking back at 2023: Trends and accomplishments

<b>43</b> fire stations	<b>1.3 million</b> Calgarians protected (City of Calgary Fall Forecast, 2023)	<b>1,415</b> firefighters	<b>540,648</b> dwellings (Government of Alberta, 2021)	
<b>\$130,500</b> in fines levied	<b>36</b> civilian injuries due to fire	<b>9</b> civilian deaths due to fire	<b>Over \$1 billion</b> dollars saved from fires	<b>648</b> station tours
<b>92,918</b> incidents (81,099 in 2022)	<b>18,938</b> fire safety inspections	<b>49,978</b> Calgarians engaged, Fire Safety Education	<b>71.1</b> incident rate per 1,000 population	
<b>1,156</b> structure fires	<b>1:982</b> firefighter-to-population ratio	<b>13,286</b> fire safety reports	<b>1,338</b> plans and permits reviewed	<b>40%</b> reinspection ratio
<b>5,693</b> motor vehicle collisions	<b>25</b> school fire drills (September-December 2023)	<b>30,170</b> home safety visits	<b>51,966</b> critical medical interventions (44,062 in 2022)	
<b>83.3%</b> first engine on scene to fire/fire- related incidents within 7 minutes	<b>129%</b> more vulnerable Calgarians educated	<b>733</b> risk occupancy inspections	<b>10,804</b> 311 inspection requests	
<b>733</b> intentionally set fires	<b>Medical Response Unit</b> re-deployed at Station 01	<b>99.9%</b> technology system reliability	<b>Station 45</b> opened in October	
<b>897</b> fire investigations conducted	<b>Over 200,000</b> hours of incumbent firefighter training	<b>15 CFD members</b> recognized as Home Grown Heroes and Values Marchers		
<b>182</b> inspectors, investigators, mechanics, community safety educators, trainers, information technology, business professionals and administrative staff			<b>Over 100</b> new recruits graduated	
Participation in <b>Digital Overdose Response System</b> which provides support for citizens to summon emergency response during an overdose situation				
<b>Virtual Reality Fire Safety Program</b> launched		<b>Aided</b> Yellowhead County, Grande Prairie and Yellowknife during the wildfire season		

# Operating and capital budget

The majority of CFD's budget is a relatively fixed cost. Salaries and wages account for 95 per cent of the total operating budget. Next, are costs of apparatus and equipment, including operation and maintenance. The remainder of the budget covers programs and services, one-time costs and non-fixed cost spending.

In 2023, our adjusted Council-approved operating budget was \$249.4 million. As part of the One Calgary 2023-2026 budget cycle, the CFD had an increase in 2023 of \$3.7 million to fund 15 full-time employees made up of 11 front line fire fighters to staff a Medical Response Unit, three additional Safety Codes Officers and a Deputy Chief to support the Operational Effectiveness division.

Our capital budget provides for the maintenance of our physical assets; life-cycling of our facilities and equipment; needed apparatus, technology, and new station construction. In 2023, our Council-approved capital budget allocation was \$63.7 million.

<b>Budget comparison, operating and capital</b>	<b>2021</b>	<b>2021</b>	<b>2022</b>
Operating budget	\$233.7 million	\$239.4 million	\$249.4 million
Capital budget	\$49.8 million	\$48.5 million	\$63.7 million
Capital expenditures	\$18.6 million	\$14.5 million	\$21.5 million

<b>Capital expenditures by year end, 2023</b>	<b>Approved</b>	<b>Actual spend</b>
New stations	\$24.4 million	\$3.2 million
Station renovations	\$11.5 million	\$1.3 million
Business technology	\$4.3 million	\$1 million
Fleet and equipment	\$23.5 million	\$16 million
<b>Total</b>	<b>\$63.7 million</b>	<b>\$21.5 million</b>

<b>Operating budget comparison, lines of service</b>	<b>Budget</b>
Fire and emergency response	\$240.9 million
Fire inspection and enforcement	\$7.4 million
Fire safety education	\$1.1 million
<b>Calgary Fire Department total</b>	<b>\$249.4 million</b>



# Our people, community and culture

Great strides were made in 2023 as CFD continued honouring our people, enhancing leadership and elevating the voices of those from underrepresented groups. We continue efforts to apply an approach of looking through an inclusion lens at systems, policies and current ways of doing things. With a priority of respecting the contributions and individuality of every employee, our goal of demonstrating value for each of our people is contributing to a culture of acceptance, appreciation, understanding, perspective-taking and belonging. It's recognized that intentional communications, recognition, inclusive efforts and supporting individuality require intimate knowledge of our organization's history, tradition, relationship dynamics and culture.



Organizational Effectiveness and Engagement (OE&E) is working to identify gaps in support systems, encourage positive relationships within the workplace and with our communities, as well as celebrate the outstanding daily service that continues to be the hallmark of the Fire Department. Some of this work includes recognizing CFD members for their outstanding efforts which exemplify CFD's core values, demonstrate commendable actions, inspire dedication to our service mission and embody the compassion we have for others. Additionally, the OE&E portfolio collaborated on developing digital bulletin boards at 47 fire locations to post operationally relevant information which has served to unify our workforce, consistently inform, as well as providing a platform to recognize and celebrate CFD's values in action.



## Operations Support Division

The Operations Support Division is pivotal to CFD's mission, focusing on the continuous training and readiness of both incumbent and recruit firefighters. This division not only spearheads the advanced training of our hazardous materials and technical teams but also champions emergency preparedness and operational excellence. Through the design and delivery of specialized training programs, rigorous oversight of CFD teams, and provision of vital mental health support, the division ensures our firefighters are well-equipped, both physically and mentally, for the challenges they face.





2023 saw the introduction of two training programs aimed at elevating our emergency response capabilities. The Nozzle Forward Program, tailored to address the specific demands of Calgary's diverse urban environment, enhances our fire suppression efficiency and safety, strengthening our capacity to safeguard our community. Additionally, the Advanced First Aid (AFA) program trained all of our firefighters in superior medical response techniques, significantly improving survival and recovery outcomes. Key achievements include the induction and training of over 100 new firefighters and the advancement of 24 firefighters to senior firefighter positions, marking a year of significant growth and enhanced operational capability for the CFD.

## Respect and inclusion

The CFD is dedicated to creating a respectful, inclusive, and psychologically safe environment. We value diverse identities and perspectives within our ranks and the communities we serve. Our Respect & Inclusion Team collaborates closely with partners across The City to provide comprehensive training, essential skills, and resources for our personnel. We actively work to dismantle barriers and create fair systems for all. Our commitment to equity, diversity, and inclusion is evident in our pride, professionalism, teamwork and respect.

We actively participate in planning and organizing significant events such as Camp Courage, which empowers young women to explore firefighting careers. Additionally, we collaborate on Calgary Pride celebrations, promoting inclusivity and visibility for LGBTQ+ individuals. Our involvement in Orange Shirt Day, the City's National Day for Truth and

Reconciliation, underscores our commitment to reconciliation and understanding. Furthermore, we take pride in our partnership with Indigenous artist Kristy North Peigan. Together, we designed an Orange Shirt Day aerial salute, featuring Indigenous-inspired artwork on our fire trucks. This powerful visual symbolizes our respect for Indigenous cultures and our commitment to truth and reconciliation.

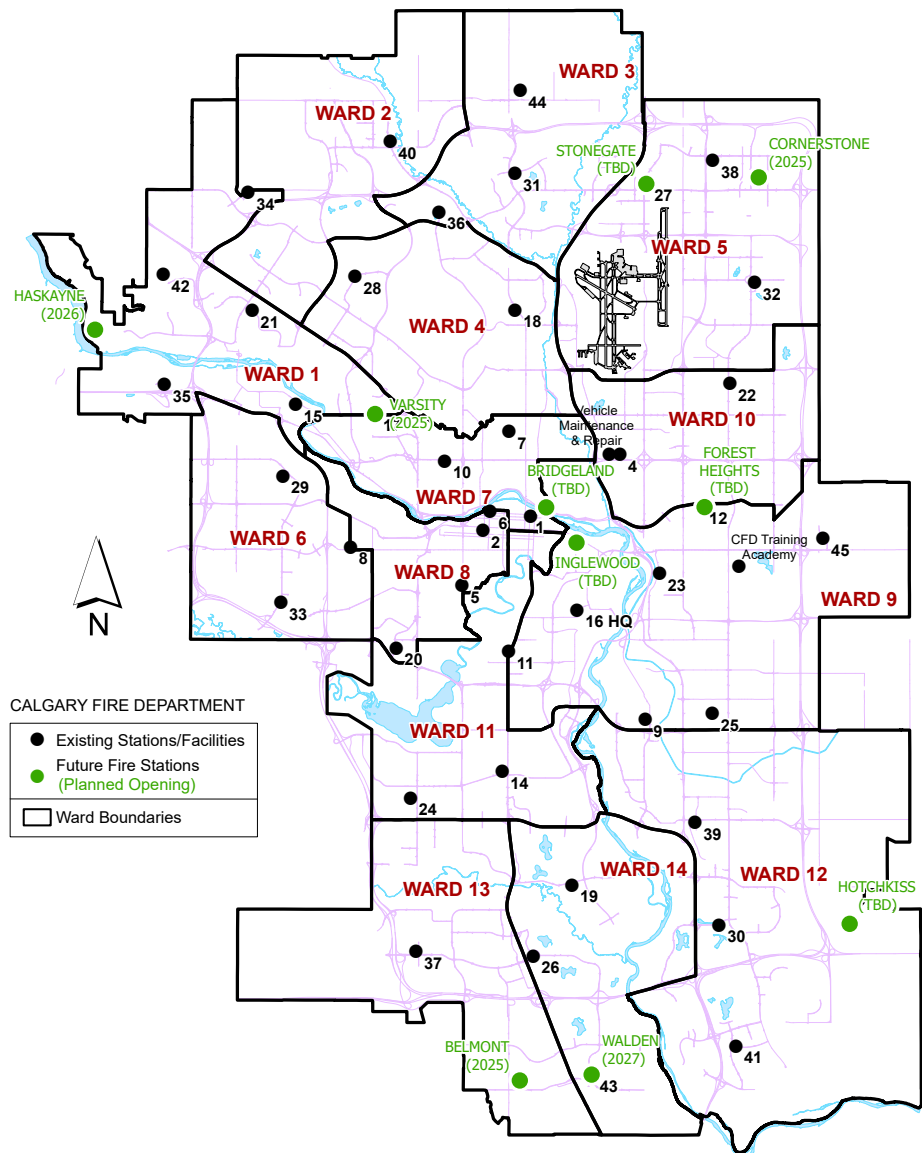
We've also expanded our collaborations both internally and externally. Our Station Engagement Project involves visiting crews across the city and engaging with four platoons. These interactions deepen our understanding, build connections and enhance our ability to serve the community effectively.



# New fire station development

Fire station development timelines as of end of 2023	Station number	New growth/ replacement station	Anticipated delivery
Cornerstone – 134 Cornerstone Heights N.E.	38	Permanent	2025
Varsity – 3740 32nd Ave. N.W.	17	Replacement	2025
Belmont – TBD	TBD	New growth	2025
Haskayne – TBD	TBD	New growth	2026
Walden – 969 Walden Dr. S.E.	43	Replacement	2027
Hotchkiss – 170, 174 and 178 Hotchkiss Manor S.E.	TBD	New growth	TBD
Inglewood – 1216 11th Ave. S.E.	3	Replacement	TBD
Bridgeland – 15 4th St. N.E.	1	Replacement	TBD
Forest Heights – TBD	12	Replacement	TBD
Stonegate – TBD	27	Replacement	TBD

The map shows locations of existing, replacement and planned new fire stations that are needed to meet target response times. City Council approved the stations as part of the Growth Management Plan for Calgary, which can adjust over time based on population growth and available budget.





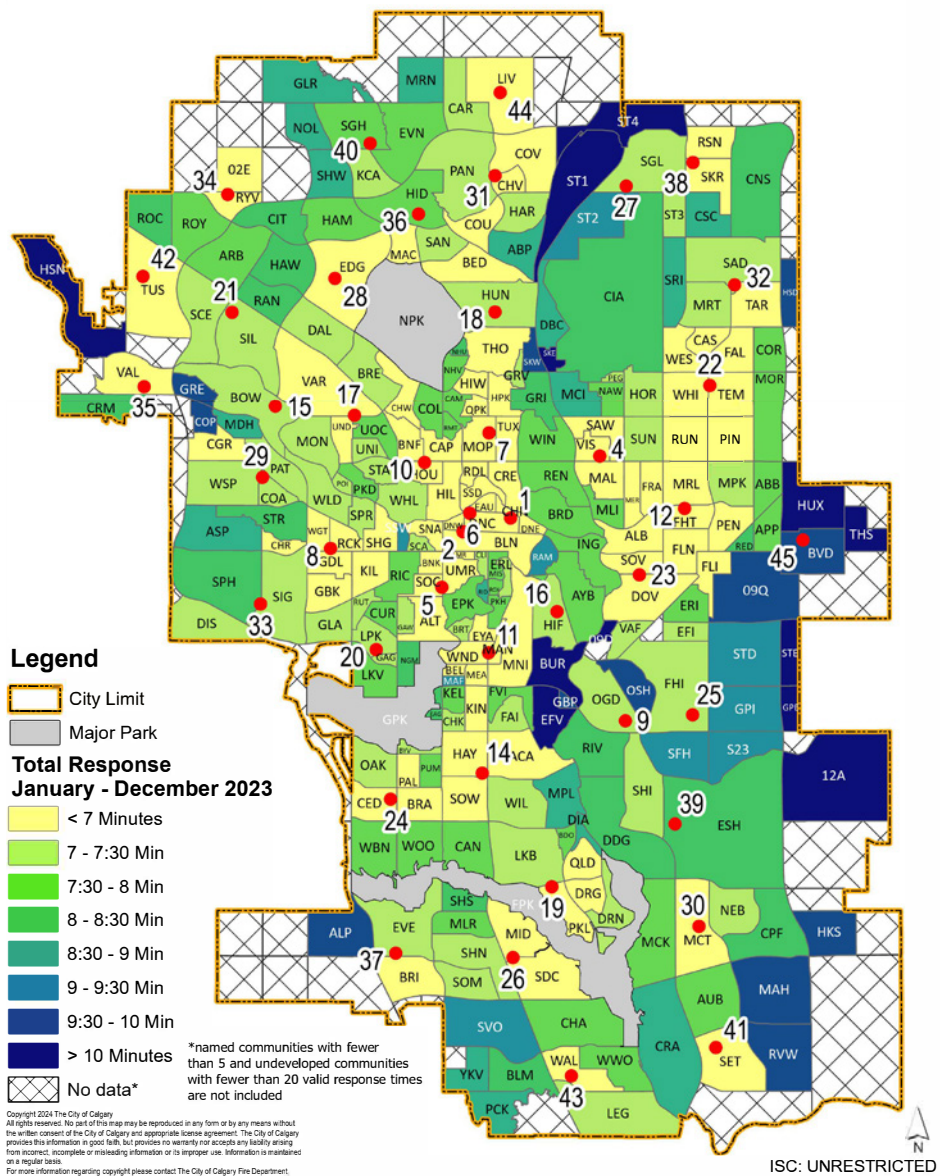
# City-wide response time and community growth

As communities continue to develop, we are working to ensure adequate emergency response coverage is available to meet citizen needs supported in our Council-approved targets and The City’s Growth Management Plan.

The CFD has a Council-approved target response time of seven minutes, 90 per cent of the time of all 9-1-1 fire calls we receive. This means that for nine out of 10 calls, we aim to arrive within seven minutes. The 90th percentile is used instead of an average because it more closely reflects what Calgarians can realistically and reliably expect from CFD in terms of response time.

The map draws on data from 70,367 validated CFD response times to incidents in 2023 and shows areas where CFD cannot respond reliably within target levels. Total response times up to seven minutes are shown in yellow.

The remaining response times are divided into 30-second intervals, using a gradient of colours as indicated in the legend. This map represents a one-year period. Some communities may have had only one call during that time period with a response time that may not reflect what community members can expect over a longer period or different period of time; those communities with no incidents during the one year period are represented in white with hash mark overlay to identify no data. Furthermore, named communities with fewer than five undeveloped communities with fewer than 20 valid response times are not included.



# Fire and emergency response performance

The fire and emergency response service line is delivered primarily by CFD's Operations Division. This front-line service encompasses response to fire and fire-related incidents, critical medical interventions, hazardous material calls and motor vehicle collisions. Firefighters also mitigate risk and hazards for Calgarians by responding to public service and assistance calls. In addition, trained firefighters provide specialized technical rescue services including rescue from incidents involving wind, water, aquatic rescue, high structures, collapsed buildings and confined spaces.

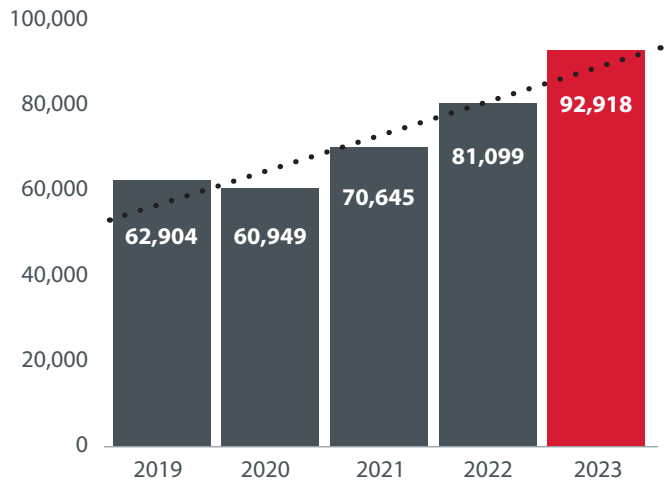
In 2023, the rate of demand for services increased beyond Calgary's growing population. This is evident from the 16 per cent rise in the incident rate per 1,000 populations compared to 2022. Overall incidents grew by 15 per cent, fires by 14 per cent and critical medical interventions by 18 per cent. Notably, the downtown area experienced disproportionately high call volumes, driven by overdoses and poisonings. The service responded to 40 per cent more poisoning and overdose emergencies in 2023 than in the previous year.

## 2023 incident trend

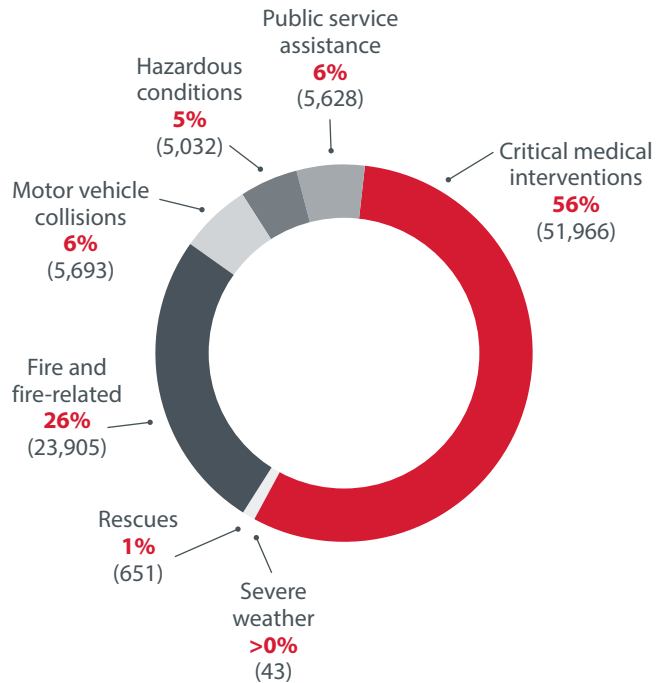
In 2023, firefighters made 151,735 responses (engine or alternate apparatus) to 92,918 calls for help, a 12 per cent increase in responses and 15 per cent increase in calls when compared to the same time last year. With Calgary's growth and approved new community development, the CFD anticipates new issues will emerge and the demand for service will increase as new structures are built and businesses change hands, requiring an even more flexible and proactive response environment.

In 2023, 56 per cent of the CFD's responses involved critical medical interventions. The CFD arrived on scene before Alberta Health Services Emergency Medical Services (AHS-EMS) 87 per cent of the time and during medical incidents, they spent an average of 13 minutes and four seconds on scene to initiate and deliver medical treatments.

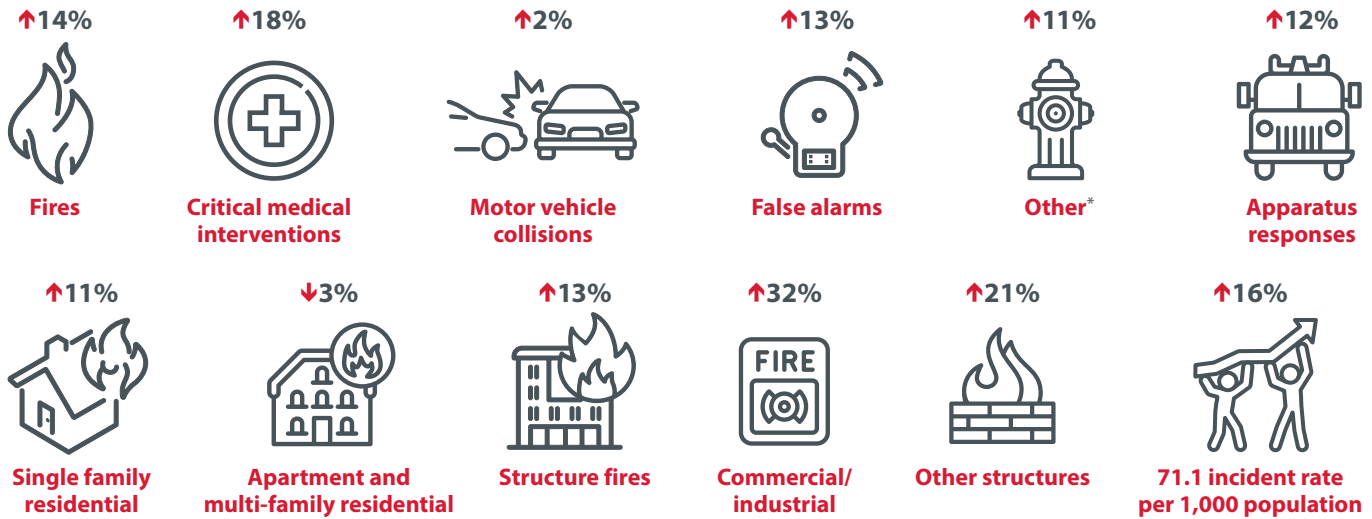
Demand for service



Major incident type responses



## Incident response comparison (per cent change 2022-2023)



\* Hazardous condition, investigation, rescue, public service assistance, ruptures/explosions, severe weather, etc.

**Fire and fire-related responses** includes response to fires, investigation of possible ruptures and explosions, and fire alarm investigations. From 2022 to 2023, the number of responses increased by approximately 14 per cent. This year, three large loss fires occurred, resulting in a total of \$12.7 million in loss. Total loss due to fire incidents was \$47.6 million, while the estimated value saved from fire exceeded \$1 billion.

Fire loss estimated value saved 2023	Value
Total loss, large loss fires	\$12.7M
One Stop Mechanical Service building fire	\$8.6M
Skyview Shores Manor building fire	\$3.1M
Foothills house fire	\$1.2M
<b>Total loss, all fire incidents</b>	<b>\$47.6M</b>
Fire loss per capita	\$24.3 M

**Motor vehicle collisions and public service assistance:** While response to motor vehicle collisions and public service assistance calls represent a relatively small proportion of overall incident responses, CFD experienced a two per cent increase and one per cent increase in calls from 2022 to 2023 respectively.

**Hazardous condition and rescues:** Incident response levels to both hazardous condition increased by five per cent and there were two per cent less rescues in 2023, compared to 2022.





# Service level and response time target performance

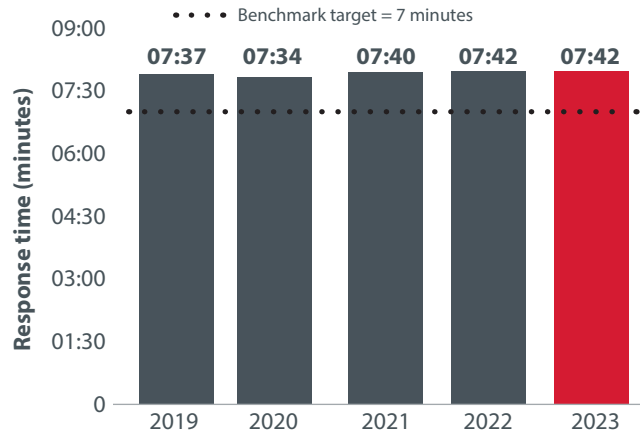
CFD's Council-approved service level and response time targets are used to capture the level of service citizens should expect from CFD, and performance is measured against these targets. Three categories of response time objectives are used to measure incident response performance:

- 1. First-in engine**  
This measures the arrival of a fire engine staffed with a minimum of four personnel to an incident scene.
- 2. First-in unit medical emergency response**  
Measures the first unit to arrive at a medical incident.
- 3. Effective Response Force (ERF)**  
ERF, also called initial full alarm assignment, is the minimum number of firefighters, fire engines and other specialty vehicles that must cumulatively reach a specific emergency incident location within a defined travel time. ERF is commonly used across Canada as a measure of resource deployment efficiency and typically is based upon municipally approved standards.

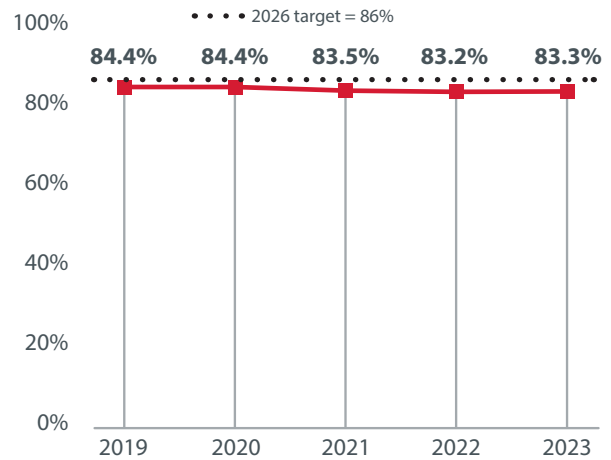
## First-in engine

A first-in engine arrived within seven minutes 83.3 per cent of the time, only 1.8 per cent short of our Council-approved 2026 response-time target. Our performance at the 90th percentile in 2023 is sitting at seven minutes and 42 seconds, equal to last year.

**First-in engine 90th percentile response time to fire and fire-related incidents**



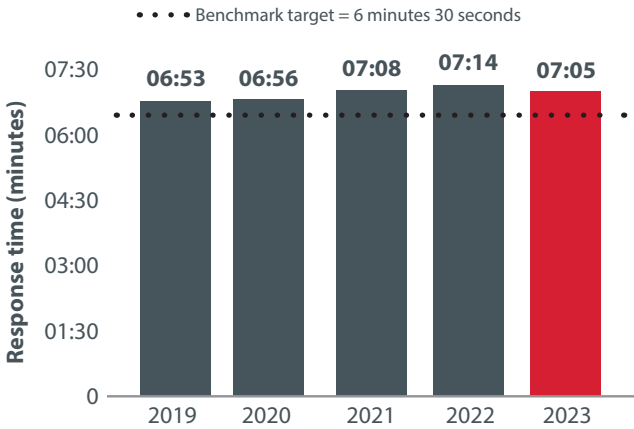
**First-in engine 7 minutes to fire and fire-related incidents**



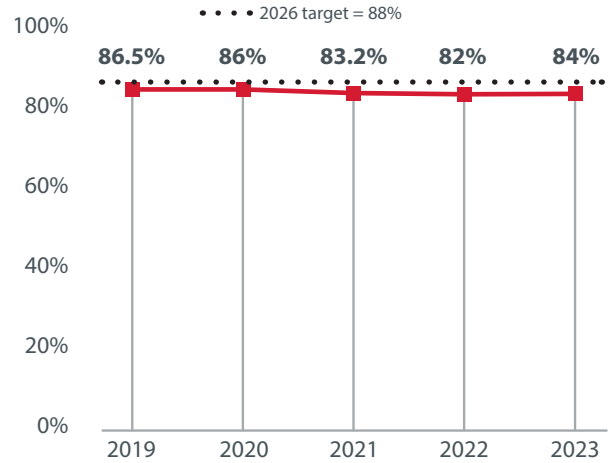
## First-in unit medical emergency response

CFD is not meeting our long-term benchmark of first-in unit arrival within six minutes and thirty seconds for critical medical incidents. 2023 performance at the 90th percentile sits at seven minutes and five seconds (nine seconds faster than the same period in 2022) and four per cent slower than our Council-approved 2026 response time target. 2023 represents the third year of measuring performance against this benchmark, as it was only in 2020 that the first-in unit performance measure was reduced from seven minutes to six minutes and thirty seconds. Demand for medical services and the number of interactions with Calgarians experiencing vulnerabilities continue to be concentrated in the downtown core.

### First-in unit 90th percentile response time to critical medical interventions



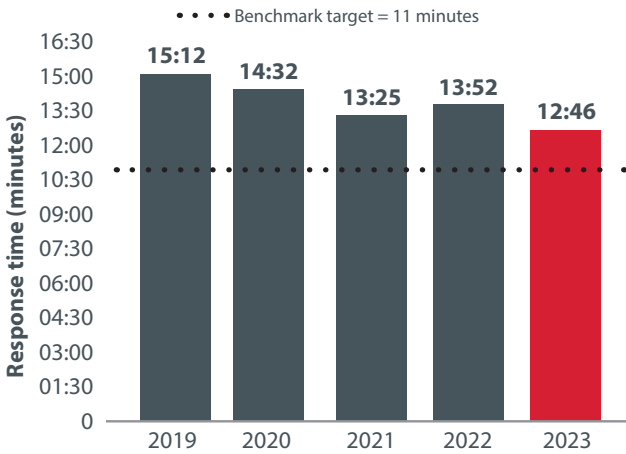
### First-in unit emergency response within 6 min 30 sec at critical medical interventions



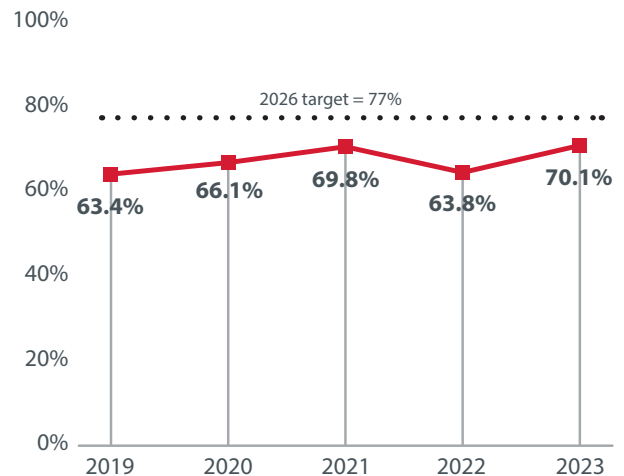
## Effective Response Force (ERF)

The service was able to assemble essential firefighting resources at serious and escalating fires within the 11-minute target 70.1 per cent of the time, a six per cent improvement from the previous year. Since the number of serious and escalating fires tends to be few, there can be significant variation in the 90th percentile statistic for this measure.

### Full first-alarm assignment within 11 minutes at high-risk fire suppression incidents



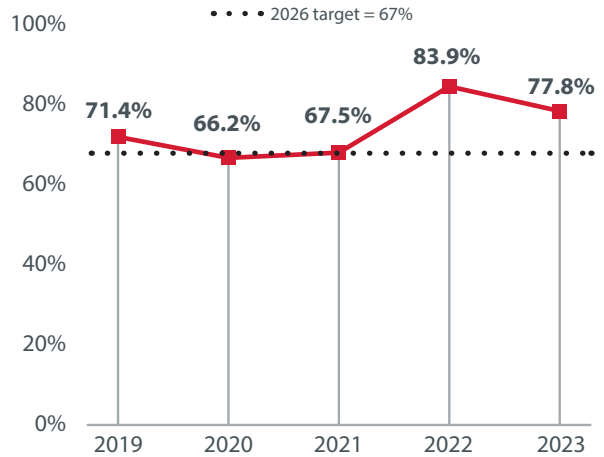
### Full first-alarm assignment total response time (90th percentile) high-risk fire suppression



## Additional performance measures

**Flame spread** measures the percentage of time fires are contained to the room or object of origin. CFD aims to contain 67 per cent of fires within the room or object where they start. While the service is outperforming projections there was a deterioration in the percentage of time flame spread was contained to room or object of origin compared to 2022. Changes to structural design, including building materials, decreasing spatial separation between occupancies and room layouts make it harder to consistently measure and contain flame spread. This, alongside a 14 per cent increase in fire incidents in 2023, could be contributing to the deterioration in performance despite the improvement in the time to assemble essential resources at serious fires.

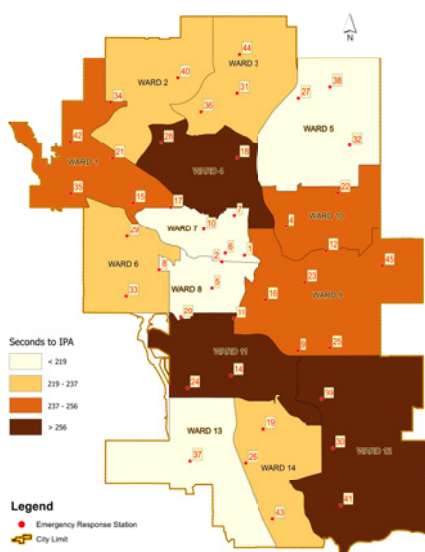
### Flame spread limited to within the room or object of origin



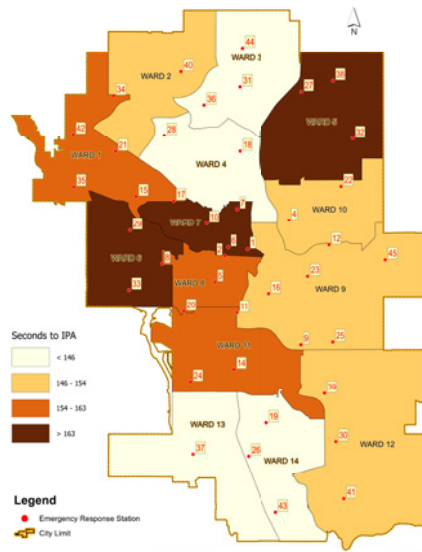
**Initial Positive Action (IPA)** measures the first tactical action undertaken by first responders at the scene of an incident to address or minimize the impact of an incident. This data assists in resource planning; station planning; crew training, including district familiarization and situational awareness; as well as planning reliable and responsive deployment strategies. Capturing time to IPA demonstrates the challenges and impact on response time performance that crews experience. Some challenges arise when responding to tall vertical structures (such as high-rises) and wide horizontal structures (like warehouses), as these factors impact the travel time it takes for crews to access the patient or incident once they arrive on the scene.

At fire incidents, the average time to IPA improved by 17 seconds in 2023, meaning that on average, firefighters began tactical response more quickly. At motor vehicle collisions, average time to IPA was one second faster in 2023. At critical medical intervention incidents, average time to IPA was one second faster in 2023 over 2022.

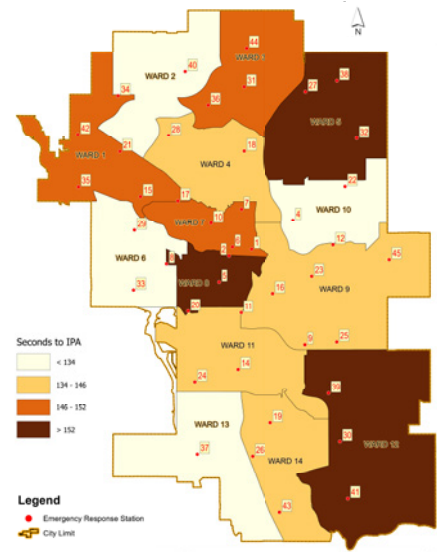
**Fire – 2023**  
Initial positive action by ward



**Medical – 2023**  
Initial positive action by ward



**Motor vehicle collisions – 2023**  
Initial positive action by ward



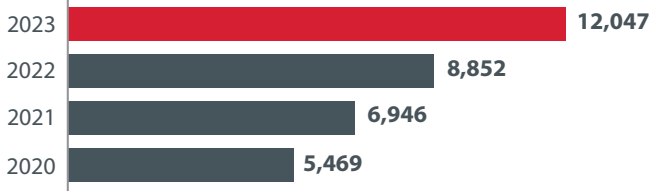


# Redeployment of medical response unit

The CFD has been challenged with a surge in medical calls, particularly in the downtown core. When units are tied up with medical emergencies, they may not be readily available for other critical situations. From 2019 to 2022 downtown Fire Station 1 experienced a 62 per cent rise in critical medical calls. In response, the CFD strategically redeployed a Medical Response Unit (MRU) in January 2023. The MRU is specifically designed to handle medical calls, allowing fire engines at Station 1 to focus on fire and rescue emergencies.

The redeployment of the MRU has proven effective. In 2023, it handled over 6,000 incidents, making it the busiest apparatus in the CFD fleet.

## Downtown Station 1 critical medical incidents



# Opening of Belvedere Fire Station 45

Station 45 opened in October 2023, providing emergency response coverage in the growing communities of East Hills and Belvedere, as well as surrounding areas.

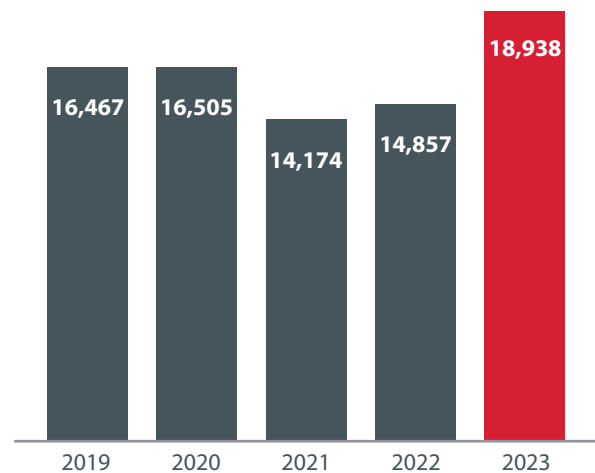
**Fire Station 45 – Belvedere**  
 2000 – 250 East Hills Square S.E.  
 Calgary, AB T2A 7A7



# Fire inspections and enforcement performance

To meet legislated obligations under The City of Calgary's Quality Management Plan (QMP), the CFD conducts approximately 30 types of inspections. These inspections range from business license and provincial approval inspections to risk-based, follow-up and special event inspections. CFD also engages in plan reviews, which includes evaluating area structure plans, land use classifications and providing support for the building permit process and development permits. Furthermore, firefighters can flag properties involved in an emergency incident and also complete fire safety reports for select businesses across Calgary, identifying concerns for follow-up through the inspection process by Fire Safety Codes Officers (SCOs). Beyond these routine inspections, CFD actively collaborates with specialized committees and task forces. By leveraging the collective expertise of subject matter experts throughout the municipality, they adopt a risk-based approach to address the multifaceted needs of our dynamic community. This strategic methodology has effectively identified and facilitated the management of unsafe and problematic properties.

Inspection activity by year



## Building inspections

The CFD's Fire Inspection Team collaborated effectively with the business community and Calgarians to maintain safety code compliance to ensure the safety of employees, customers and other members of the public. Their dedicated efforts have significantly contributed to reducing the number of fire incidents in Calgary over the past five years with 1.06 fire incidents for every 1,000 residents. In 2023, SCOs provided 18,939 inspections and responses to citizen complaints, requests or inquiries. Furthermore, the reinspection ratio city-wide increased by nine per cent due to high-risk properties or properties that have not received an inspection in an extended period based upon our risk-based approach compared to the previous inspection frequency and triggers.

### Inspection activity comparison 2022-2023

	2022	2023
Fire safety inspections	14,857	18,938
Re-inspection ratio	31%	40%
Risk-based inspections	454	1,183
Liquid storage tank (flammable and combustible) inspections	854	860
Unscheduled and complaint-based inspections (not via 311 Service Request)	5,569	7,491
Requests for inspection received (via 311 Service Request)	9,289	10,804
311 Service Request, on-time completion rate	96%	98%

### Flammable liquid storage tank inspections

In 2023, the Technical Services Team played a crucial role in ensuring the safety of Calgarians and the environment by efficiently inspecting, certifying and registering liquid storage tanks containing flammable and combustible materials. A total of 860 liquid storage tanks underwent comprehensive inspections, including tank inspections, tank plan review assessments and tank re-inspections. A new annual tank inspection requirement was introduced in 2023, focusing on underground tanks and those exceeding 2,500 litres. This addition is expected to result in nearly 500 more tank inspections in 2024.

### 311 inspection requests and non-311 inspection requests

CFD conducts inspections of public special events and large gatherings on a complaint basis using the 311 platform. In addition, they respond to unscheduled and complaint-based inspections (non-311 requests). Despite a 16 per cent increase in 311 inspection requests, the CFD consistently delivered high-quality service to Calgarians, achieving a 98 per cent on-time completion rate. Non-311 requests for inspections in 2023 yielded nearly 7,500, representing a significant 35 per cent increase compared to 2022.

#### 311 on-time inspection completion

2020	2021	2022	2023
96%	97%	96%	98%

### Risk-based inspections

In late 2021, the CFD introduced a data-driven risk-based inspections program. This initiative prioritizes inspections based on risk factors rather than relying solely on requests or complaints. The program includes both high-risk inspections (focused on businesses with high or medium risk profiles) and objective-based risk inspections. The latter is a phased approach that moves away from conducting inspections solely based on requests or complaints, instead using a matrix algorithm to assess risk. In 2023, fire inspectors conducted 89 initial high-risk inspections and an additional 185 re-inspections to gain compliance in high-hazard occupancies, which highlights the complexities of manufacturing and processing facilities. Additionally, the algorithm identified 644 initial objective-based inspections in 2023. These properties required an additional 265 re-inspections to ensure the safety of Calgarians and further support the need for a risk-based approach to fire inspections.

High-risk inspections	2023
Initial inspection	89
Re-inspection	186
Objective-based inspections	2023
Initial inspection	644
Re-inspection	265





## Co-ordinated Safety Response Team (CSRT)

Two SCOs are tasked with addressing problem properties in the community. The proactive approach involves securing vacant and fire-damaged properties to prevent unauthorized entry, thereby improving safety for residents. CFD collaborates with various corporate and external partners, including the Calgary Police Service, Calgary Building Safety Codes Officers, Calgary Community Standards (Bylaw), and Business Licensing. Additionally, external partners such as Alberta Health Services, SCAN, Occupational Health & Safety and Canadian Border Services contribute to this effort. Vacant/derelict properties are closely linked to social disorder, mental health and addictions. The risk to the public when problem properties exist includes public disorder, increased crime and the potential for fires.

The CSRT approach has been effective in reducing community risk in and around structures of concern including derelict and abandoned buildings. In 2023, CSRT addressed 128 vacant properties and boarded up 37 properties. This strategic intervention aligns with the trend that intentional and unintentional fires are more likely to occur in vacant and derelict properties. Furthermore, the number of structure fires in commercial, industrial or multi-family occupancies in Calgary increased by 30 per cent from 2022.

## Fire Safety Reports

CFD uses its broad base of fire suppression crews to complete Fire Safety Reports annually and to familiarize crews with occupancies and potentially

identify hazards that may require follow-up by SCOs. Provincially certified and designated Fire SCOs inspect businesses, buildings and hazardous processes, flammable and combustible liquid tank installations, and issue variances and orders to gain compliance of the business owner. In 2023, there were over 20,000 occupancies assigned to fire suppression crews, of these, 65 per cent were completed with only 128 (less than one per cent) occupancies resulting in a violation.

### Fire Safety Reports

	2023
Occupancies assigned	20,463
Reports completed	13,286
Violations identified	128

## The Public Safety Task Force

The Public Safety Task Force is a collaboration between the Calgary Police Service, Business Licensing, Alberta Gaming and Liquor Commission, and the CFD. Together, they conduct joint operations checks on licensed premises that have a history of violations or the potential for violations. Team-based operations checks are also conducted on a complaint basis. The Task Force places particular focus on overcrowding in bars, assemblies and outdoor events to ensure compliance with relevant fire protection and fire safety laws. In 2023, the Public Safety Task Force visited 189 bars, nightclubs and special events, including four charges to establishments for code violations impacting 140,920 citizens.

### Public Safety Task Force response

	2023
Businesses/venues visited	189
Charges issued	4





## Plan and permit review

The CFD's Technical Services group is responsible for reviewing development plans and permits, ensuring compliance with safety codes. As development activity surges due to population growth and urbanization, the group has expanded to three officers. This expansion aims to support sustainable growth, enhance public services and improve compliance with fire code regulations. In 2023, they evaluated 2,454 plans and permits, aligning with the National Fire Code and National Building Code – 2019 Alberta Edition

### Plan and permit review

Plans and permits reviewed

2023

2,454

## Special events and fire permits

The CFD's Special Events Team works to ensure indoor and outdoor events can operate safely, and that Calgarians can come together without harm.

Collaborating closely with other City business units, the Special Events Team ensures that events comply with the National Fire Code (Alberta Edition) and have appropriate crowd management and fire safety plans for attendees, volunteers and staff. In 2023, the team issued 61 per cent more temporary occupancy capacity cards for venues, outlining maximum safe capacities; 15 per cent more permits for open flames, fireworks and special effects; and 24 per cent more mobile food concession permits compared to 2022. Furthermore, there were 397 special event inspections, and their impact benefitted over two million event attendees.

### Special event and fire permits

Small and large event temporary load cards

2023

297

Open flame, firework and pyrotechnics

134

Mobile food concession permits

146

Special events inspections

397

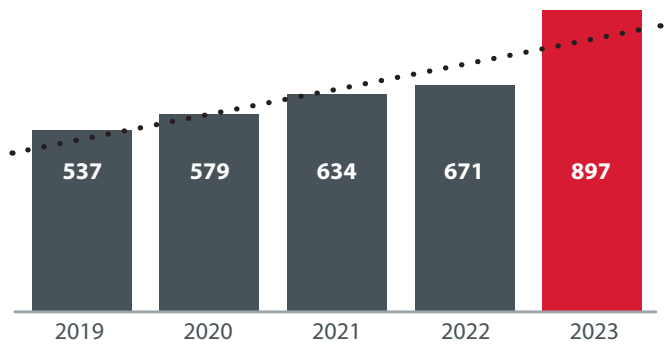


## Fire investigations

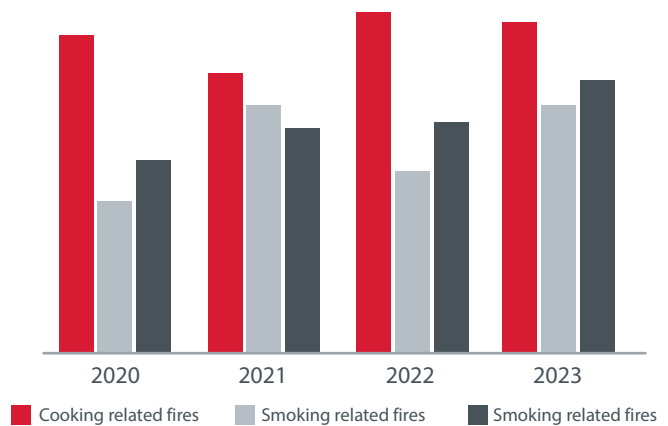
CFD's team of fire investigators work to identify the origin and cause of a fire or fire-related incident, and to help identify dangerous products and practices. All fire investigators meet the standards of NFPA 1033 certification and commit to obtaining a minimum of ten continuing education credit hours each year to maintain competencies. Furthermore, the canine and handler receive training by Maine Specialty Dogs through the State Farm Accelerant Detection Canine Program which requires annual recertification to ensure the competencies of both the handler and the canine. If it's suspected that the cause of a fire is suspicious or perhaps deliberate, fire investigations will work in cooperation with the Calgary Police Service to provide evidence from the incident scene and may be called upon to provide evidence regarding the source or origin of the fire in legal proceedings. Information from investigations is used to inform the development of targeted education programs and safety strategies to support Calgary's vulnerable populations, can drive recalls of safety items, and inform economic and incident trend analysis.

Since 2021, the number of fires has grown by 15 per cent year over year. In 2023, fire investigations increased by 34 per cent and intentionally set fires rose by 25 per cent compared to 2022. The top three sources of ignition, where determinable, are cooking, smoking activities, and electrical equipment and wiring. Notably, smoking-related fires surged by 40 per cent, and electrical fires increased by 20 per cent. In addition, the Fire Inspection Team observed a significant increase in fires related to high-capacity batteries and chargers, with a staggering 135 per cent rise from 2021 to 2022. To address this issue, they partnered with the Community Safety Section, which actively promoted education on fire safety related to these ignition sources and in 2023, there were 36 per cent fewer fires.

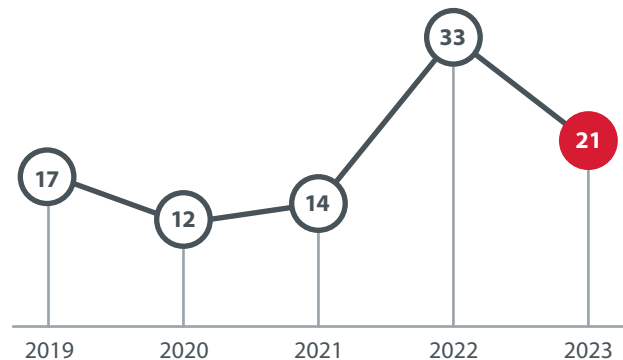
### Fire investigations conducted



### Fire sources of ignition



### Battery and charger as source of ignition



### Fire investigations comparison 2022-2023

	2022	2023
Fires (all)	2,439	2,787
Structure fires	1,020	1,276
Fire investigations conducted	671	897
Intentionally set fires	585	733
Source of ignition	2022	2023
Cooking related (stove top, toaster, smoker, barbeque, etc.)	239	232
Smoking-related materials or objects	126	174
Electrical equipment and wiring	161	192
Battery and chargers	33	21



# Fire safety education performance

The CFD's Community Safety Section is responsible for the development and delivery of fire safety education. First, the section provides front-line firefighters with general fire safety information to share with the public. At the same time, it subsequently prioritizes its efforts to engage and educate seniors, new Calgarians, lower-income, children and individuals with disabilities. Programming provided to the front-line firefighters includes door-to-door campaigns, school fire drills and access to safety-related literature readily available to share with Calgarians. The section continues to explore alternate ways to maximize service delivery to the community despite resource constraints.

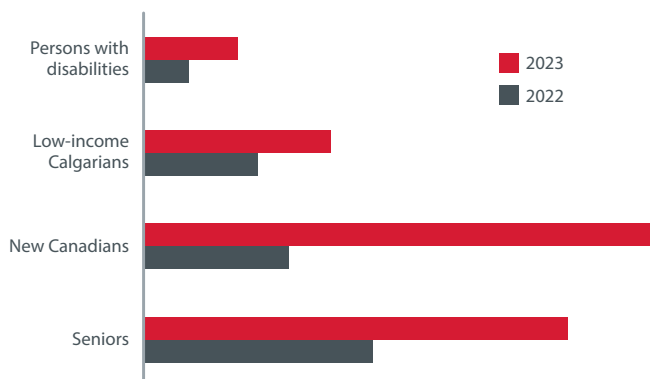
In 2023, the section engaged a total of 49,978 individuals as compared to 61,847 in 2022. Fire safety preparedness is more important now than ever before as fires in new construction homes burn faster and hotter, and produce more toxic smoke due to design factors, construction materials and contents. As more services become available on digital and virtual platforms, fire safety education is exploring new ways to reach Calgarians. In addition, to serve the community where they are and to include an equitable and focused inclusion, fire safety videos were translated into 11 languages (including English) by CFD's firefighters. The number of emergency incidents continues to rise, and the number of residential fires and critical medical incidents is trending upward. Population demographics suggest a need to address

risks for groups experiencing a higher degree of vulnerability. The section successfully connected more with vulnerable groups in 2023, compared to 2022. Notably, the section engaged with 253 per cent more new Canadians.

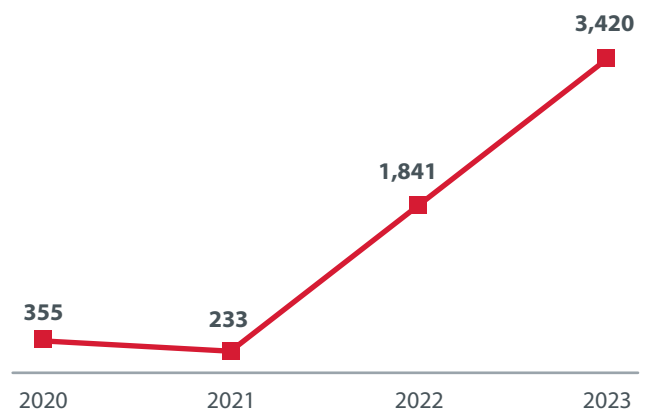
## Calgary's aging population

In 2023, CFD engaged and educated 85 per cent more seniors than in 2022. Individuals aged 65 and older are twice as likely to experience fatal or injury-related fires compared to the general population. By age 75, that risk increases to three times that of the general population—and to four times by age 85. It is estimated that by 2036, nearly one in five Calgarians will be a senior. The Community Safety Section strives to make a measurable improvement in the safety of older adults, helping them to maintain independence and allowing older adults to live at home safely for as long as possible. Seminars, lectures and other educational activities focus not only on fire prevention and safety but include discussions on how to prevent falls. Sessions are delivered both at seniors' residential complexes and in individual residential homes, and family and caregiver participation is encouraged. CFD's partnership with Meals on Wheels, whose clients are primarily seniors, provides another avenue to educate and strengthen fire and fall safety understanding for this sector of our population.

### Vulnerable group engagement 2022 vs 2023



### Senior Calgarians engaged



## The Fire Safety Trailer

The Fire Safety Trailer is a mobile classroom equipped with a kitchen, bedroom and audio-visual resources. It travels throughout Calgary, delivering fire safety education. The trailer primarily serves vulnerable populations, identified through community risk assessments. When not in high-risk areas, it appears at local events alongside CFD's community safety booths, allowing citizens to engage with firefighters and learn about fire safety. Due to its portability, the program operates only in favorable weather conditions. During winter months, the focus shifts to the new Virtual Reality Program. In 2023, the section saw a significant increase in contacts compared to 2022.

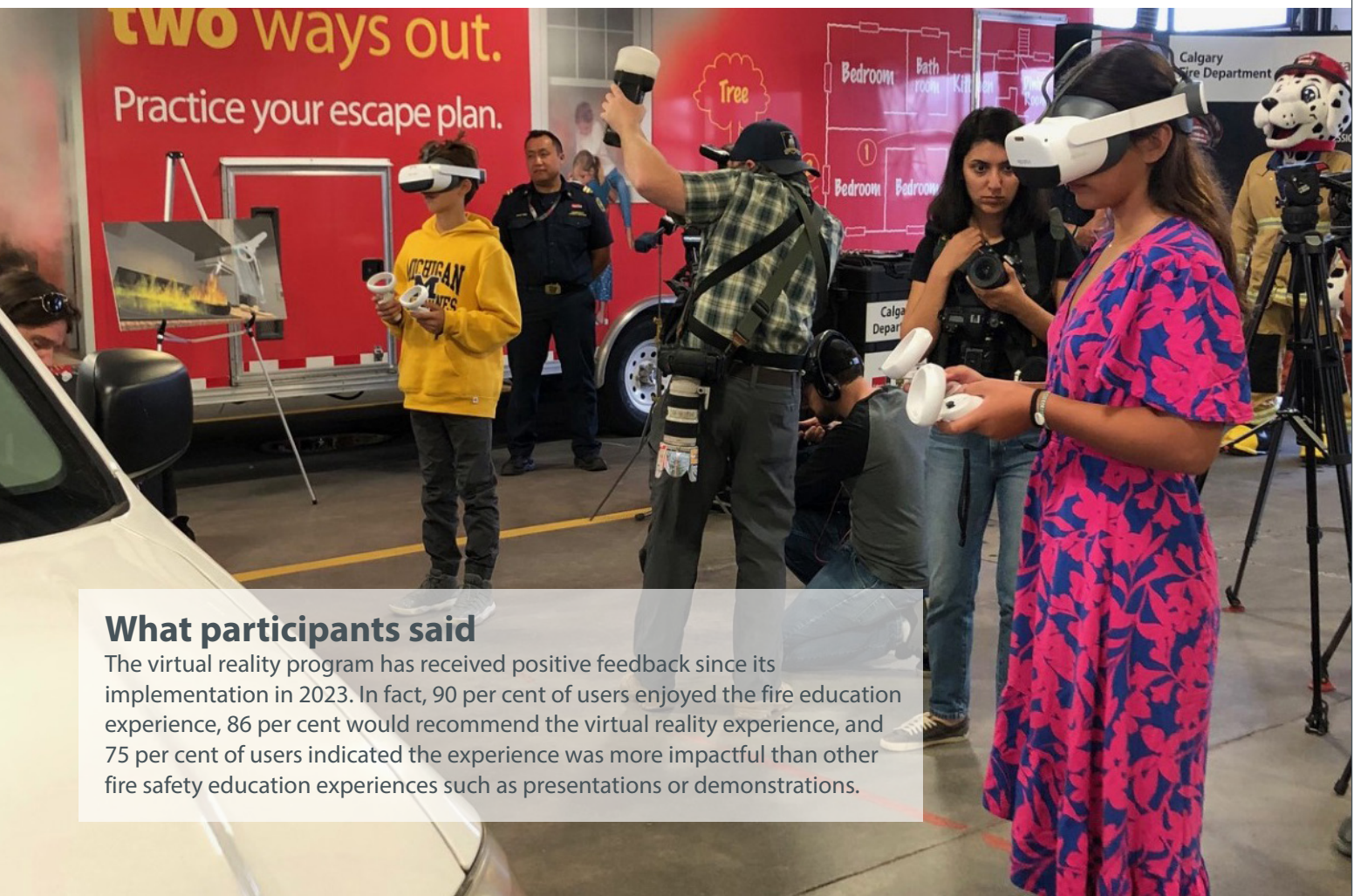
## Virtual reality education

In 2023, the CFD introduced an innovative virtual reality (VR) program led by Community Safety Officers. This program allows users to practice fire safety scenarios, including identifying hazards in bedrooms, safe cooking practices and proper use of fire extinguishers. It caters to a wide audience, including vulnerable communities and children aged 12 and above. By immersing users in domestic fire scenes and guiding them through decision prompts, the VR application



aims to increase learning and change behaviors effectively. Notably, this project applies an inclusion lens, ensuring accessibility for people of all abilities.

The VR module specifically focuses on kitchen fire safety, allowing users to experience the shock of discovering a kitchen fire in a typical Calgary home. Users are encouraged to safely extinguish the pan-fire with a lid, turn off the power to the stove, and egress from the home to safety. Future simulations can be tailored based on community risks and trends, and the program includes a "scorecard" to track positive behavioral changes.



## What participants said

The virtual reality program has received positive feedback since its implementation in 2023. In fact, 90 per cent of users enjoyed the fire education experience, 86 per cent would recommend the virtual reality experience, and 75 per cent of users indicated the experience was more impactful than other fire safety education experiences such as presentations or demonstrations.



## 2023 Fire Prevention Week and the Home Safety Program

Fire Prevention Week took place October 8 to 14, where CFD welcomed the community into four fire stations for open house tours to meet their local firefighters and learn about fire safety; hosted a Junior Fire Chief event; and had active presence at the Genesis Centre in Calgary's northeast quadrant (one of the leading areas for fire response).

As part of 2023 Fire Prevention Week, members of the CFD, along with representatives from ATCO (a local power and gas utilities company) facilitated an event called the Smoke Alarm Blitz where they visited townhome complexes in the Northeast community of Marlborough to install, test and replace smoke alarms. Participants also reminded families about the importance of practicing fire prevention in the kitchen by reminding citizens to never leave cooking unattended. In total, firefighters visited 98 homes, installed 82 smoke alarms and installed 45 carbon monoxide alarms.

In addition to Fire Prevention Week, the year-round door-to-door Home Safety Program mobilizes city-wide firefighters to visit homes in their districts, ensuring that residences are equipped with functional smoke and carbon monoxide alarms and that residents have

devised and practiced home escape plans. The program prioritizes higher-risk communities, particularly those with a history of fire incidents, a significant senior citizen population, lower-income neighborhoods and communities where smoke alarms may be nearing expiration due to their age. Since its inception in 1996, the Home Safety Program has achieved a significant milestone: over half a million homes visited in Calgary. These visits, made possible through sponsorship from Kidde Canada, make Calgary one of only two Canadian municipalities with such a partnership. In 2023, a record-breaking 30,786 homes were visited (with a 98 per cent completion rate), and feedback surveys transitioned to an electronic submission platform, incorporating a new performance metric. Notably, 81 per cent of engaged citizens reported feeling safer in their homes following the Calgary Fire Department's visit and education.

Home Safety Program performance	2023
Properties assigned	30,786
Visit completion rate	98%
Smoke alarms installed	1,250
Combination alarms installed	151
Carbon monoxide alarms installed	430
Batteries changed	168





## School fire drills

The School Fire Drill Program was initiated in 2018 where firefighters participated in school fire drills, attending in person and observing each school's fire safety and evacuation plan. In 2023, firefighters visited 25 schools and engaged over 11,000 Calgarians. A community risk index provides information about risk factors for each community for Community Safety Officers to identify relevant education programs. This aims to improve the quality and effectiveness of service delivery. Through our school fire drill program questionnaire, comparisons between 2022/2023, it's been noted that (on average between the two calendar years): 95.5 per cent of citizens polled have a working smoke alarm on every level of their home. Only 56 per cent test their alarms monthly. 53 per cent have developed and practiced a home escape plan including a safe meeting place. Ninety-nine per cent of the citizens polled claim that the fire safety information provided in the post fire-drill letter has made their home safer.

## Y-FIRES: Youth Fire Setters Intervention Referral and Education Services

In 2023, the Youth Fire Intervention program supported 17 vulnerable youth, with nine of these children referred to the CFD from outside the city limits.

The Y-FIRES counselling program pairs youth fire setters and their families with specially trained firefighters. These firefighters build trust and understanding with the children, educating them about the potential consequences of their actions in a supportive environment. Alberta Health Services collaborates in the program registration process, assisting with mental health identification and treatment. Beyond counseling, Y-FIRES families receive a no-cost home inspection to identify additional risks and ensure smoke alarms are functional—critical for safety, especially in homes with increased fire risk. Additionally, Community Safety Officers partnered with Calgary Housing to provide education to lower-income individuals.

