

The Calgary Fire Department

2022 Annual Report



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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 Otokswunee; 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 Amskaapiikani; 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.

We also acknowledge that we are all Treaty beneficiaries, and we recognize that we have ongoing responsibilities to protect and honour all of life within our shared reality as treaty people.



Commission on
Fire Accreditation
International

In 1999 the Calgary Fire Department (CFD) became the first Canadian fire service to receive accredited agency status with CFAI, 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 270 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.

MESSAGE FROM THE FIRE CHIEF



The Calgary Fire Department 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 1,561 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 Calgary Fire Department 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, Calgary Fire 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.

The year 2022 was marked as the busiest year in the history of the Calgary Fire Department and in 2023, firefighters continue to feel the impact of demand for fire services following the Coronavirus pandemic.

The Calgary Fire Department will continue to manage service level demands in new community growth areas as well as our existing neighbourhoods in 2023. 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.

A handwritten signature in black ink, appearing to read 'SD', with a stylized flourish underneath.

Steve Dongworth
Fire Chief

Overall, incident responses are 15 per cent higher than in 2021. Not only did the number of times firefighters responded to a fire or fire-related event increase by nine per cent, so too did the number of responses to critical medical interventions which also saw a 20 per cent increase compared to the same time last year.

Despite the continuous increase of incidents and resulting strain on our resources, response time performance remained consistent in 2022. We appreciate the significant investment made by Council in the Calgary Fire Department 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 2023 the Fire Department will focus on:

- Delivering excellent services for every Calgarian;
- Fostering a safe, healthy and inclusive workplace;
- Ensuring the sustainability and future of our services;
- Encouraging service improvement and innovation; and
- Empowering leadership and employee development.

Our Mission

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

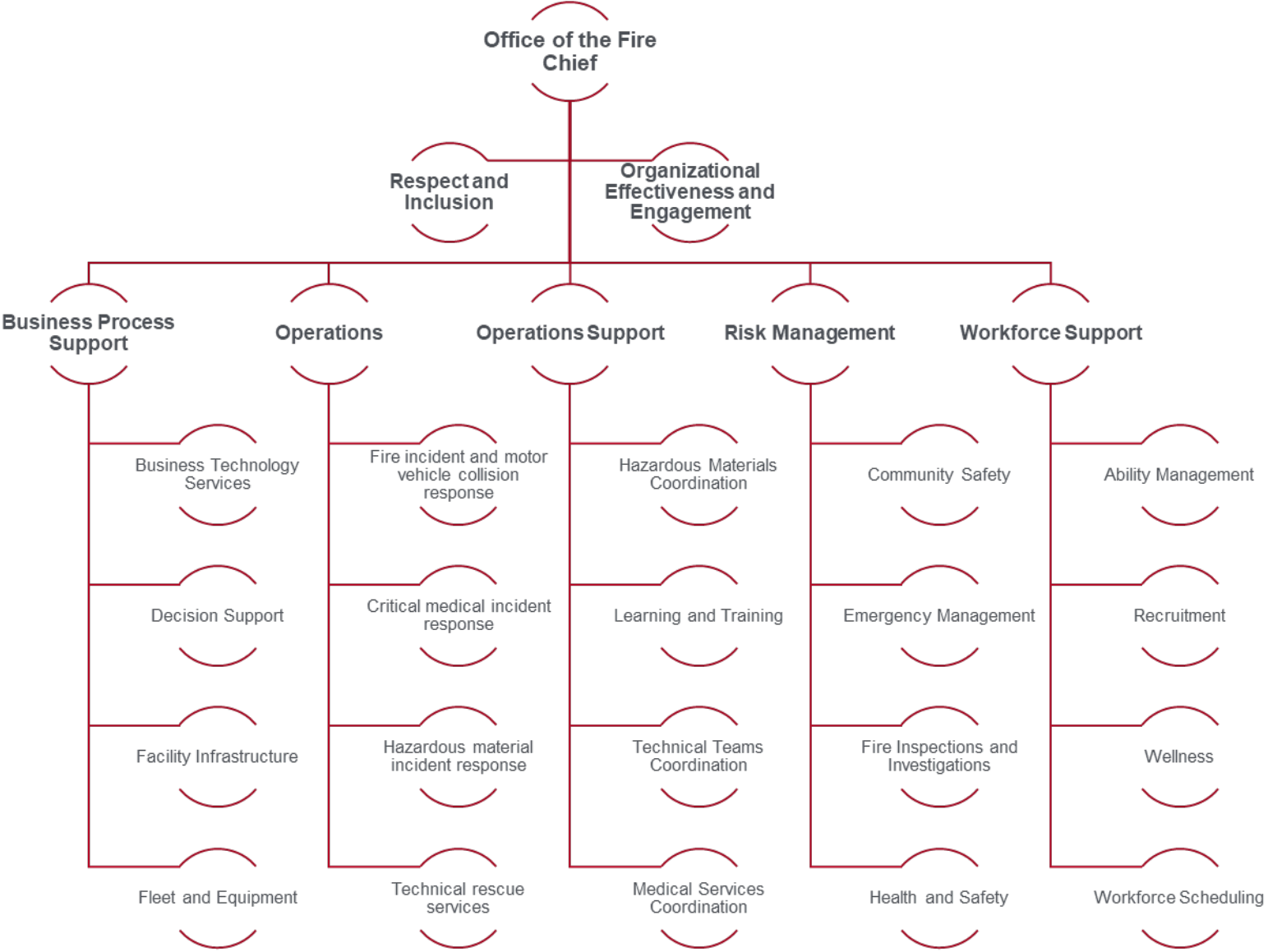
Our Vision

To be the international fire service leader

Our Values

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

THE CALGARY FIRE DEPARTMENT



THE CALGARY FIRE DEPARTMENT’S (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

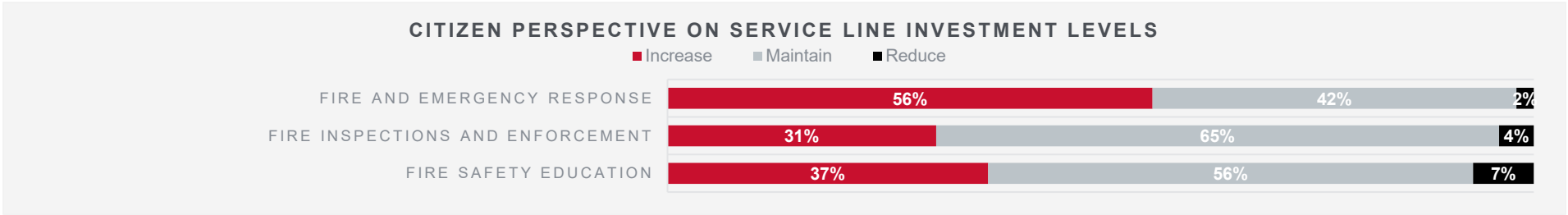
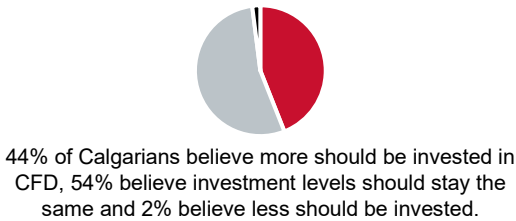
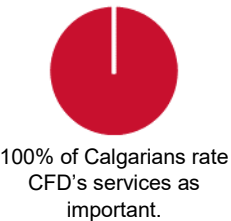
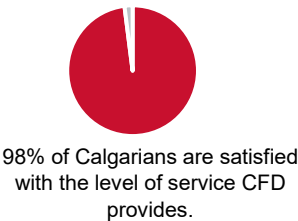
Providing services to building and property owners to enhance public safety, compliance with safety codes, minimize fire-related risks and protect lives, property and the environment.

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.

CITIZEN PERSPECTIVES AND SATISFACTION

The [annual Citizen Satisfaction Survey](#) provides opinions on what The City is doing well and what needs improvement. In 2022, CFD had the highest level of satisfaction of 35 tested services and programs.



The [2022 Spring Pulse Survey](#) provided citizens 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.

LOOKING BACK AT 2022: TRENDS AND ACCOMPLISHMENTS

43 fire stations	1.3 million Calgarians protected (Federal Census, 2021)	1384 firefighters	540,648 dwellings (Government of Alberta, 2021)	\$790.9 million dollars saved from fires	\$130,500 in fines levied	28 civilian injuries due to fire	8 civilian deaths due to fire	430 station tours
81,099 incidents (70,645 in 2021)			14,857 fire safety inspections			54,382 Calgarians engaged, Fire Safety Education		
61.4 incident rate per 1,000 population	1,020 structure fires	1:944 firefighter-to-population ratio	12,589 fire safety reports	1187 plans and permits reviewed	31% reinspection ratio	4278 vulnerable Calgarians educated	24 school fire drills (September-December 2022)	29,626 home safety visits
44,062 critical medical interventions	83.2% first vehicle on scene to fire/fire-related incidents within 7 minutes	5,589 motor vehicle collisions	454 high risk occupancy inspections	112 temporary patio and tent permits	585 intentionally set fires	99.9% technology system reliability	65 new recruits graduated	Over 100,000 hours of training
177 inspectors, investigators, mechanics, community safety educators, trainers, information technology, business professionals and administrative staff					19 Youth Firesetter Intervention Referral and Education Service (Y-FIRES) clients			
Funding secured for CFD psychologist program		167 fire investigations conducted		5% increase in female applicants		New mental health screening for new recruits		
Launch of Disclosure and Resolution Resources			Completion of The City of Calgary COR Health and Safety Audit			Submission of 2023-2026 Service Plans and Budgets		
Completion of the 2021-2059 Downtown Study and Operational Review: helping CFD plan for the future			Implementation of Risk Based Inspection model			Drop-in Centre Partnership: creative solutions to help address needs of vulnerable Calgarians		



OUR PEOPLE, COMMUNITY AND CULTURE

Great strides were made in 2022 as CFD continued to honour our people and elevate 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 honouring 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 is recognized that communications, recognition, inclusion efforts and supporting individuality requires intimate knowledge of our organization's history, tradition, relationship dynamics and culture.

The newly incorporated and industry-leading portfolio of Organizational Effectiveness and Engagement 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 Calgary Fire Department. Our people are truly our most valuable assets and their commitment to public service is bolstered by working in a caring, equitable and appreciative environment. Our Training Academy works to ensure firefighters are well prepared to respond to incidents, helping to ensure the safety of Calgarians and CFD members. The Respect and Inclusion portfolio helps CFD move towards achieving our goal of building a respectful, inclusive and safe environment.

The Training Academy

The Fire Department's Training Academy reviews all applicable standards and legislation related to operational program areas, including those set out by the National Fire Protection Association (NFPA), the Canadian Standards Association (CSA), the Alberta Occupational Health & Safety Act, Code and Regulations, and the Alberta Code of Practice for Firefighters. Collectively, these standards outline the pre-requisite knowledge and minimum job performance requirements for different positions, which are then used to identify training needs for each position within the Fire Department. These requirements are combined with a learning outcomes approach, which is the educational methodology used by the Calgary Fire Department.

In 2022, the Fire Training Academy trained and graduated 65 recruits, 40 new Senior Firefighters and 48 new Company Officers which totaled over 100,000 training hours. Most notably, CFD trained firefighters in residential and high-rise firefighting in new programs were grounded in new scientific research and data from the Underwriters Laboratory and the National Institute of Standards and Technology. In 2023, we look forward to training 160 new recruits to support our frontline operations and growing city.



Respect and Inclusion

CFD is committed to evolving our culture towards one where everyone can work in a respectful, inclusive and psychologically safe environment that fosters a sense of belonging and trust, where our people can be themselves and feel supported and enabled to perform their best when called upon by the people of Calgary. Our dedicated Respect & Inclusion team works with our partners in The City to ensure our people have the training, skills and resources needed for an inclusive and psychologically safe workplace, while simultaneously identifying and removing barriers to creating equitable systems for all.

CFD takes purposeful steps to increase our understanding and build relationships with the many identities and cultures we serve. We reach out to equity-deserving communities to promote fire safety education and prevention and encourage [firefighting as a career](#). In 2022, we hosted Camp Courage Calgary, participated in Calgary Pride, and supported The City's National Day for Truth and Reconciliation event.



Camp Courage

Camp Courage's mission is to introduce youth to careers as first responders, helping to develop their confidence, leadership skills and problem-solving ability. The camp provides information, inspiration, education and opportunities to engage with the physical demands of the roles. The goal of this cost-free program is to give young women and gender-diverse youth a sense of empowerment and the confidence to believe they can pursue any career or goal they desire.

Learn why [Camp Courage](#) is the experience of a lifetime.

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 2022, our adjusted Council-approved operating budget was \$239.4 million excluding a one-time budget that was carried into future periods. As part of the planned budget process, the CFD had an increase in 2022 of \$10 million to fund 62 full-time employees made up of 56 front line Fire Fighters and six additional trainers to help with the increased training demands. This increase was roughly a 4 per cent increase in our budget year over year. Despite the addition of 56 frontline positions, CFD is running light and lean considering the increase in population. CFD's operating cost per \$1,000 property value is \$0.86, one of the lowest of Canadian major municipalities and considerably lower than the median of \$1.12 (MBN Canada).

Our capital budget provides for the maintenance of our physical assets; life-cycling of our facilities and equipment; needed apparatus, equipment and technology; and new station construction. In 2022, our Council-approved capital budget allocation was \$48.5 million.

Budget Comparison, Operating and Capital	2020	2021	2022
Operating budget	\$228.8M	\$233.7M	\$239.4M
Capital budget	\$35.7M	\$49.8M	\$48.5M
Capital expenditures	\$8.9M	\$18.6M	\$14.5M
Capital expenditures by year end, 2022	Approved	Actual Spend	
New Stations	\$22.3M	\$0.9M	
Station Renovations	\$6.4M	\$1.9M	
Business Technology	\$3.6M	\$0.2M	
Fleet & Equipment	\$16.2M	\$11.4M	
Total	\$48.5M	\$14.5M	
Operating budget comparison, Lines of Service	Budget		
Fire and Emergency Response	\$231.4M		
Fire Inspection and Enforcement	\$6.9M		
Fire Safety Education	\$1.1M		
Calgary Fire Department Total	\$239.4M		

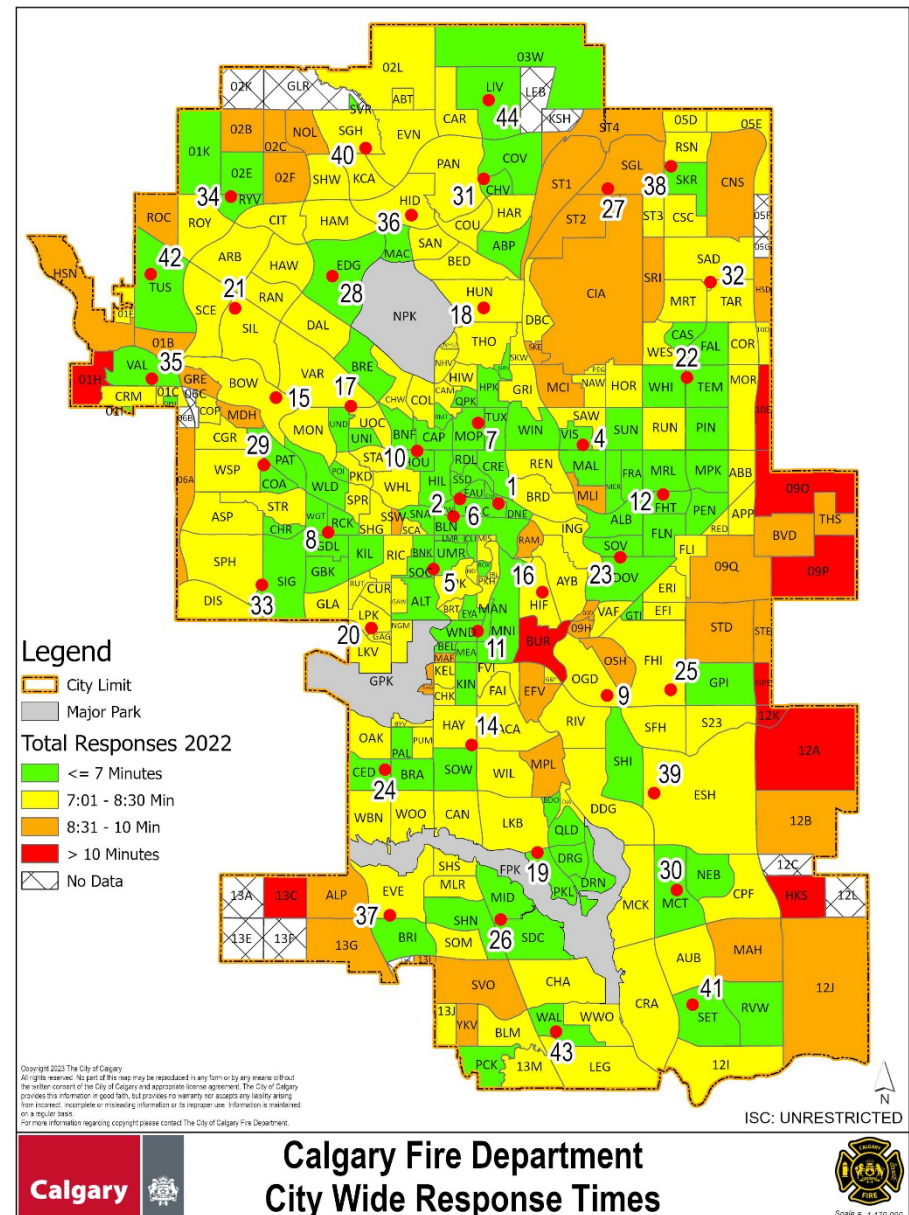
CITY-WIDE RESPONSE TIME, COMMUNITY GROWTH AND FIRE STATION DEVELOPMENT

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 Calgary Fire Department has a target response time of seven minutes, 90 per cent of the time for all 911 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 adjacent map draws on data from 62,443 validated CFD response times to incidents in 2022 and shows areas where CFD cannot respond reliably within target levels. Total response times up to seven minutes are shown in green and those greater than 10 minutes are in red.

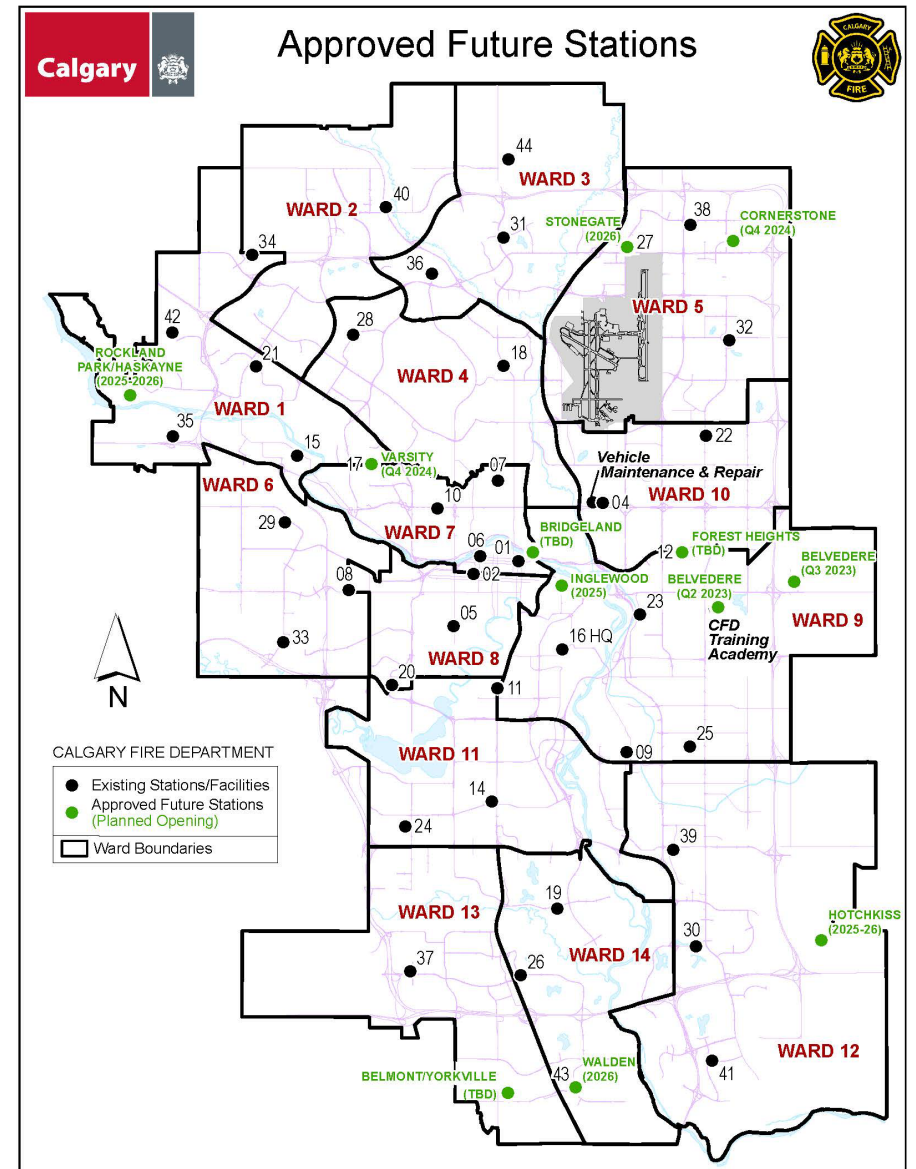
The remaining response times are divided into 90-second intervals, using a gradient of colours as indicated in the legend. This map represents a one-year period. Some communities may have had only one call during that time period with a response time that may not reflect what community members can expect 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.



New Fire Station Development

Fire Station Development Timelines as of end of 2022	Station Number	New/replacement station	Anticipated delivery
Belmont/Yorkville TBD	46	New temporary station	TBD
Belvedere (temporary trailer) 5727 23 Ave. S.E.	45	New temporary station	2023 Q2
Belvedere (long term temporary station) 55 East Hills Blvd S.E.			2023 Q3
Bridgeland (Replaces #1) 15 4 St. N.E.	1	Replacement of permanent station	TBD
Cornerstone Cornerstone Ht. & Cornerstone St. N.E.	38	Replacement of temporary with permanent station	2024 Q4
Forest Heights TBD	12	Replacement of permanent station	2026
Inglewood (Multi-Service) (Replaces #1) 1216 11 Ave. S.E.	3	Replacement of permanent station	2025
Stonegate Bay 110, 11358 Barlow Tr. N.E.	27	Replacement of temporary with permanent station	TBD
Walden 969 Walden Dr. S.E.	43	Replacement of temporary with permanent station	2026
Varsity (Multi-Service) 3740 32 Ave. N.W.	17	Replacement of permanent station	2024 Q4
Rockland Park/Haskayne TBD	TBD	New temporary station	2025-26
Hotchkiss TBD	47	New temporary station	2025-26

The adjacent map shows locations existing, replacement and planned new fire stations needed to meet target response times. All stations are approved by City Council as part of the Growth Management Plan for Calgary. Station development can change over time based on actual population growth and budget. Based on current development timelines, 12 locations will be built or replaced before the end of 2026.



FIRE & 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.

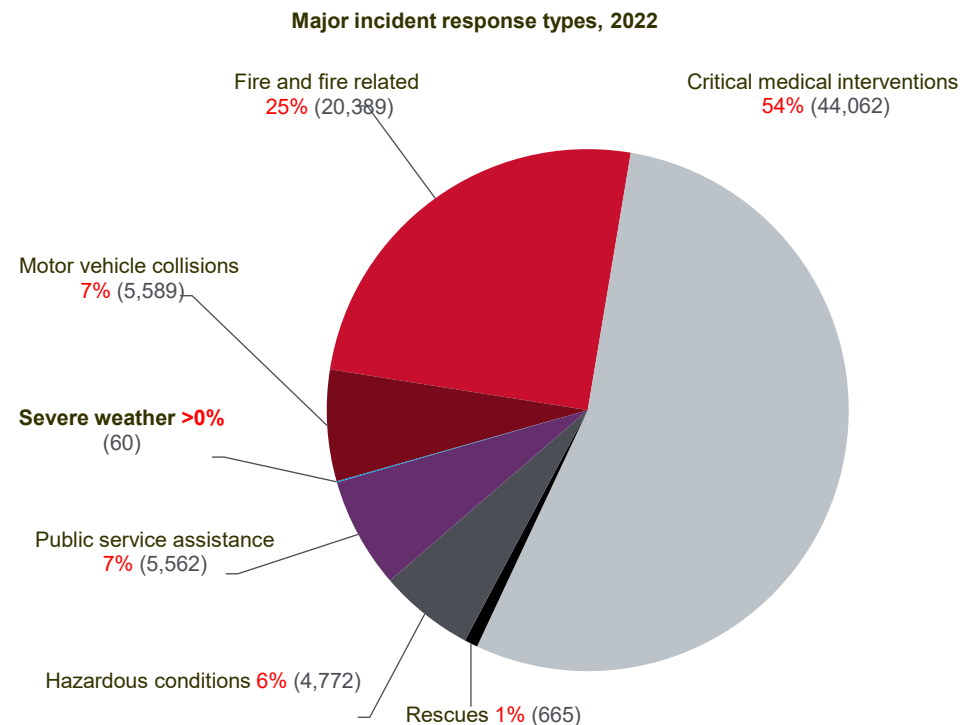
While CFD experienced record call volumes in 2021, call volumes continued to increase throughout 2022, making 2022 CFD's busiest year ever. Significant fires and medical calls have shown the biggest increase; however, increases have been seen in all incident response categories with the exception of a minor (eight per cent) decrease in fires at single-family residential structures. To help address the challenge of this increasing call volume and to help meet the needs of Calgary's vulnerable, CFD partnered with the Calgary Drop-In Centre to ensure effective and efficient emergency response could be provided. While CFD remains close to meeting our Service Level and Response Time Targets for the first emergency unit to arrive, we are challenged to meet our target when multiple resources are required for large-scale fire suppression incidents. To address this continuous increase in incidents and the resulting strain on CFD's ability to maintain service levels, Council made significant investments to Fire and Emergency Response as part of the 2023-2026 Service Plans and Budgets. CFD remains committed to implementing these resources in a thoughtful and responsible manner to ensure Calgarians receive adequate service, even in the face of increasing service demands and rapid municipal growth.

2022 Incident Trends

In 2022, firefighters made 135,766 responses (engine or alternate apparatus) to 81,099 calls for help; a 15 per cent increase in responses and 12 per cent increase in calls when compared to the same time last year. With Calgary's growth and approved new community development, the Calgary Fire Department 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.

Critical medical interventions: Critical medical interventions represent 54 per cent of CFD's response – a 20 per cent increase from 2021 call levels. In 2022, firefighters arrived before Alberta Health Services Emergency Medical Services (AHS-EMS) to initiate and deliver medical treatment and spent an average of 14 minutes and 28 seconds on scene prior to AHS-EMS arrival – 1 minute 41 seconds longer than in 2021.

Compared to 2021, CFD responded to 17 per cent more overdose and poisoning calls, 23 per cent more opioid- and fentanyl-related calls, administered 27 per cent more Naloxone, and saw an eight per cent increase in psychiatric behaviour and suicide attempt-related calls.



Incident Response Comparison	2021	2022	Increase/decrease
Fires (all)	2,098	2,439	Increase
Structure fires	856	1,020	Increase
Single-family residential	263	241	Decrease
Apartment and multi-family residential	189	249	Increase
Commercial/Industrial	61	77	Increase
Other structures	343	453	Increase
Critical medical interventions	36,598	44,062	Increase
Motor vehicle collisions	4,871	5,589	Increase
False alarms	11,261	12,425	Increase
Other (hazardous condition, investigation, rescue, public service assistance, ruptures/explosions, severe weather, etc.)	15,826	16,584	Increase
Number of apparatus responses	120,896	135,766	Increase
Incident rate per 1,000 population	54.9	61.4	Increase

Fire and fire-related responses includes response to fires, investigation of possible ruptures and explosions, and fire alarm investigations. From 2021 to 2022, number of responses increased by approximately nine per cent. This year, four large loss fires occurred, resulting in a total of \$7.4 million in loss. Total loss due to fire incidents was \$35 million, while the estimated value saved from fire exceeded \$790 million.

Fire loss, estimated value saved, 2022	Value
Total loss, large loss fires	\$7.4M
Bonavista Missionary Church fire	\$1.1M
Coast Mountain Sports building fire	\$3.1M
J.J. Lee Tae Kwan Do School fire	\$1.2M
Lakeview house fire	\$2M
Total loss, all fire incidents	\$35M
Fire loss per capita	\$26.58
Estimated value saved from fire	\$790.9M

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 15 per cent increase and 16 per cent increase in calls from 2021 to 2022 respectively.

Hazardous condition and rescues: Incident response levels to both hazardous condition and rescues remained steady from 2021 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. Two categories of response time objectives are used to measure incident response performance:

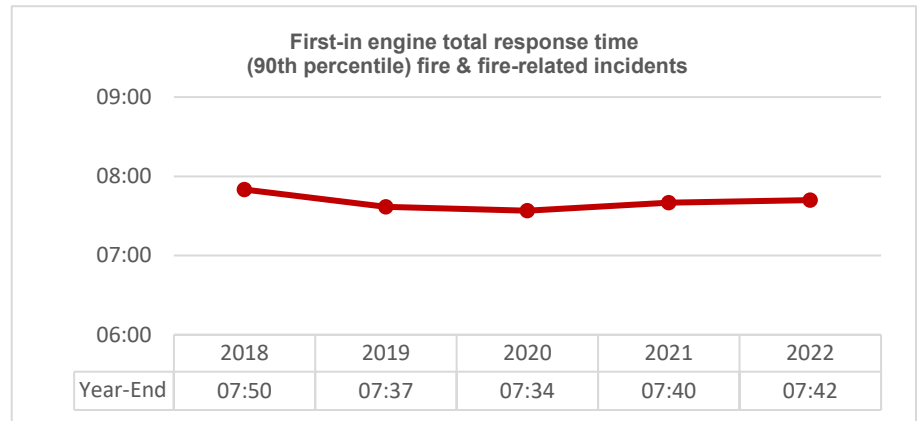
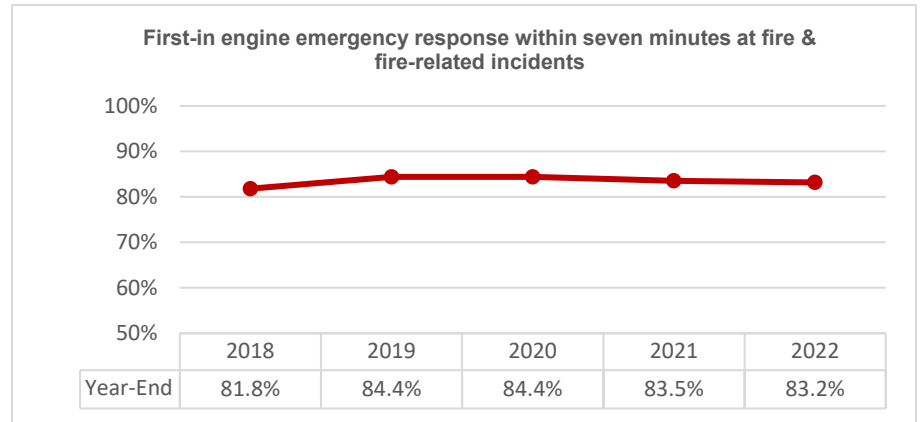
- 1) First-in (or first arrive) unit. This measures the arrival of a fire engine staffed with a minimum of four personnel to an incident scene.
- 2) Effective response force (ERF). ERF, also called initial full alarm assignment, is the minimum number of firefighters, fire engines and other specialty 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.

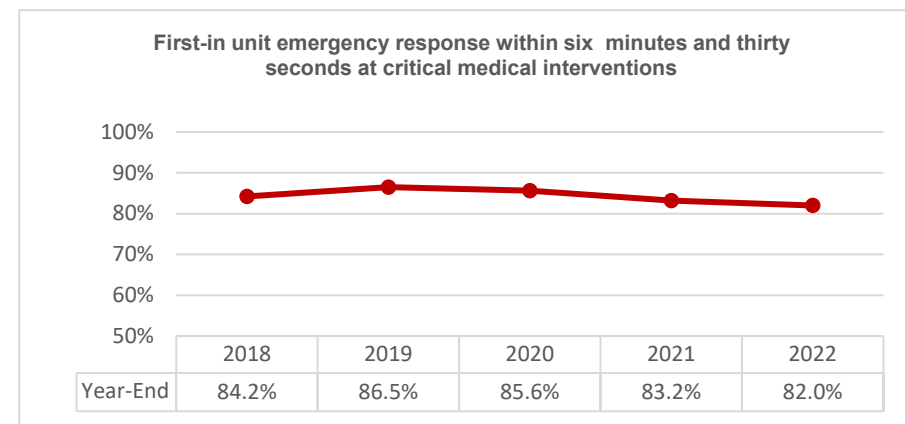
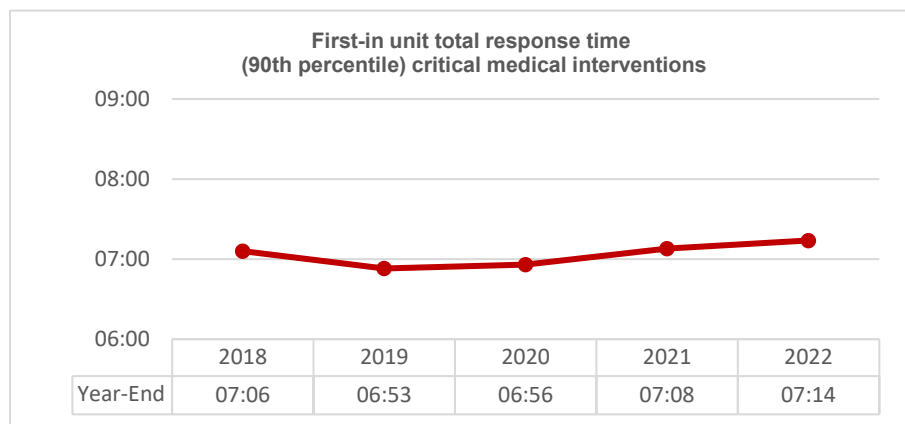
First-in unit

CFD's long-term performance benchmark is for 90 per cent of first-in unit priority responses to arrive on scene within six minutes and thirty seconds for critical medical incidents and 7 minutes for all other incident types. For 2022, Council approved that this target should be met 85 percent of the time for fire and fire related incidents, and 87 per cent of the time for critical medical incidents. In spite of significant redeployment of apparatus and strains on our service delivery capacity, CFD's response times and commitment to training remain strong with little deviation from long-standing performance targets. In 2022, 90 per cent of responses in Calgary arrived on scene within seven minutes and 27 seconds. A first-in engine arrived within seven minutes 83.2 per cent of the time, only 1.8 per cent short of our Council-approved 2022 response-time target of 85 per cent. Our performance at the 90th percentile in 2022 is sitting at seven minutes and 42 seconds (two seconds slower than the same period in 2021).

Calgary priority ¹ incident responses	2022
Incident responses within 7-minute goal	53,733
Incident responses over 7-minutes goal	8,710
Total	62,443
Per cent of responses within 7 minutes	86.1%

¹Priority responses in this analysis include all priority (i.e., hot) first-arriving unit responses responding to incidents within city limits.





CFD is not meeting our long-term benchmark of first-in unit arrival within six minutes and thirty seconds for critical medical incidents. 2022 performance at the 90th percentile sits at seven minutes and 14 seconds (six seconds slower than the same period in 2021), and five per cent slower than our Council-approved 2022 response time target. 2022 represents the second year of measuring performance against this benchmark, as it was only in 2020 that the first-in unit performance measure was reduced from 7 minutes to six minutes and thirty seconds.

Effective Response Force (ERF)

ERF performance at high-risk fire incidents sits at 63.8 per cent – 4.2 per cent shy of our Council-approved 2022 target of 68 per cent. In 2022, performance at the 90th percentile was 13 minutes and 52 seconds, 32 seconds slower than the same period in 2021.

This represents a six per cent performance decline from 2021 in meeting the ERF benchmark of 11 minutes, 90 per cent of the time for serious and escalating fires. This decline is most likely due to the strain on resources and unit availability caused by the compounding effects of an increase in overall incidents and increased traffic volumes as Calgarians returned to the office throughout 2022. Historic trends, including resource and apparatus staffing constraints, increasing call volumes and incident density are likely to factor heavily on performance in the future. CFD will continue to monitor ERF performance as conditions stabilize moving out of the global pandemic.

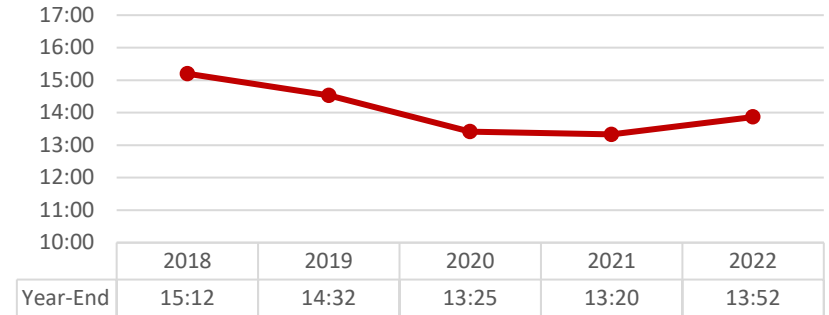
Additional performance measures

In addition to the Council-approved Service Level and Response Time Benchmarks, CFD used two additional metrics to track fire and emergency response performance. **Flame Spread** measures the percentage of time fires are contained to 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.

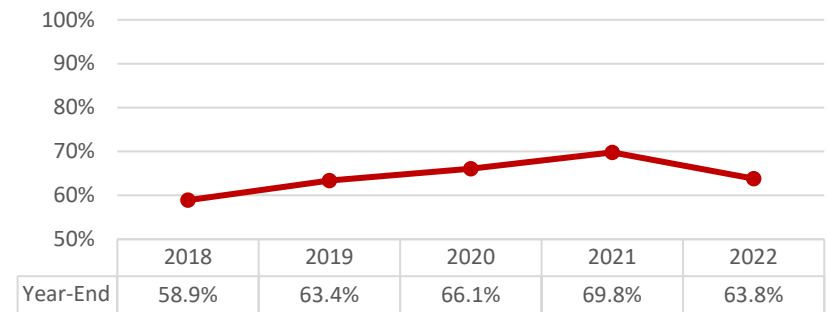
Flame Spread

CFD's current flame spread public safety objective is to contain 67 per cent of fires to the room or object of origin. In 2022, fire spread was successfully contained 83.9 per cent of the time in building and structure fires. This represents a performance improvement from 2021's rate of 67.5 per cent.

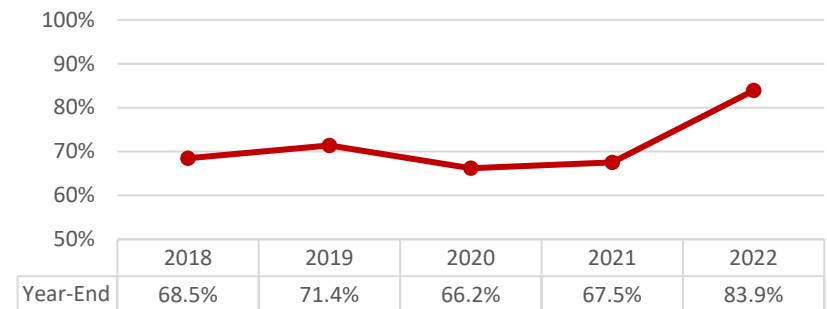
Full first-alarm assignment total response time
(90th percentile) high-risk fire suppression



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



Flame spread limited to within the room or object of origin

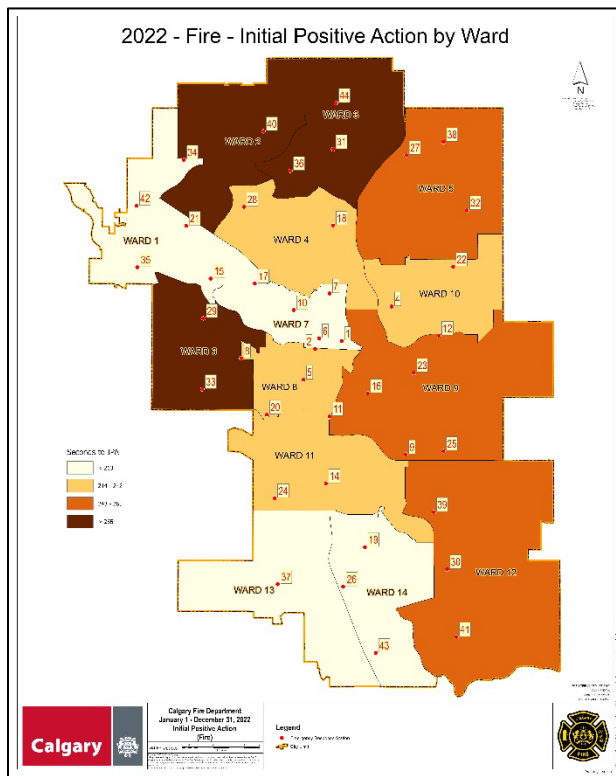


Initial Positive Action (IPA)

The IPA measure is currently collected for critical medical calls, motor vehicle collisions and fire calls. 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. Challenges include responses to multi-building condo units and institutions, address delay and errors when responding to incidents, and the increase in densification in high-rise, multi-family and multi-building complexes within the inner city and along transportation corridors. At fire incidents, the average time to IPA improved by three seconds, meaning that on average, firefighters began tactical response more quickly. At motor vehicle collisions (MVC), average time to IPA was 5 seconds slower in 2022. At critical medical intervention incidents, average time to IPA was 2 seconds slower in 2022 over 2021.

Initial Positive Action comparison, 2021-2022 (min:sec)

	Measure	2021	2022	Change
Fire and fire-related incidents	Average	04:04	04:01	-00:03
Critical medical interventions	Average	02:35	02:37	+00:17
Motor vehicle collisions	Average	02:23	02:28	+00:02





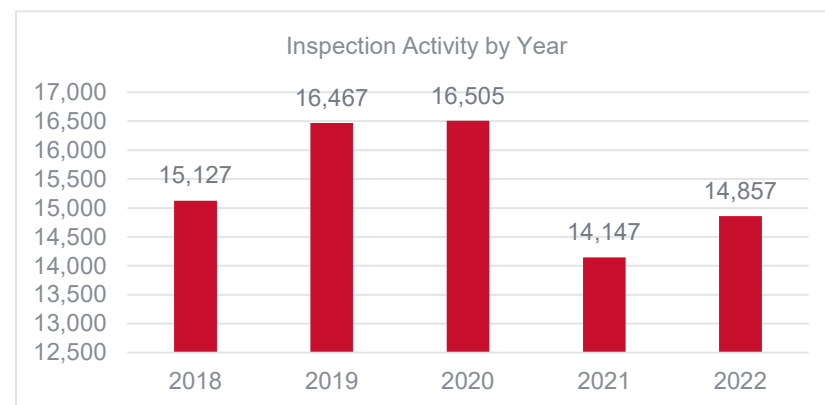
FIRE INSPECTIONS AND ENFORCEMENT PERFORMANCE

To meet legislated obligations under The City of Calgary's Quality Management Plan, and with the sole focus of ensuring the safety of Calgarians in and around buildings, CFD conducts approximately 30 types of inspections. These range from business license and Provincial approval inspections to risk-based, follow-up and special event inspections, as well as plans review (area structure plan, land use classification, support for building permit process, development permits, special event permits, etc.). In addition, to augment the inspection process, firefighters conduct fire safety reports of businesses throughout Calgary. Beyond these inspections, CFD actively participates in specialized committees and task forces that have been created to collaboratively leverage the expertise of subject matter experts across the municipality, using a risk-based approach to address the complex needs of our dynamic community. This approach has effectively identified and enabled the management of unsafe and problem properties.

Building Inspections

The Calgary Fire Department's Fire Inspection Team works with the business community and Calgarians to maintain safety code compliance – helping to ensure the safety of employees, customers and other members of the public.

In 2022, CFD Fire Safety Codes Officers completed 14,857 inspections, in addition to regular permit and compliance monitoring services. Although the inspection numbers are still below pre-pandemic levels, CFD saw increased requests for inspection services as Calgarians and their businesses resumed normal operations. Inspection rates of high-risk buildings increased by 68 per cent from 2021, while the reinspection ratio city-wide dropped by five per cent – indicating the effectiveness of the risk-based inspection model. Compliance cannot always be achieved via inspection and education and in 2022, 12 charges were laid under the Safety Codes Act and over \$130,500 in fines was accumulated from businesses that failed to comply with building and fire regulations.



Inspection activity comparison, 2021-2022

	2021	2022
Fire safety inspections	14,147	14,857
Reinspection ratio	36%	31%
High-risk occupancy inspections	271	454
Liquid storage tank (flammable and combustible) inspections	357	1231
Unscheduled and complaint-based inspections (not via 311 Service Request)	7,387	5,569
Requests for inspection received (via 311 Service Request)	10,216	9,289
311 Service Request, on-time completion rate	97%	96%

While the number of total inspections completed in 2022 increased dramatically from 2021 levels, CFD has yet to return to pre-pandemic inspection levels. It is anticipated that these levels will continue to normalize throughout 2023 with return to normal operations.

Flammable Liquid Storage Tank Inspections: To help ensure the safety of Calgarians and our environment, Technical Services inspects, certifies and registers liquid storage tanks containing flammable and combustible material. In 2022, over 1231 liquid storage tanks were inspected.

High-risk occupancy inspections

CFD implemented a data-driven risk-based inspections pilot program in late 2021 which continued throughout 2022 – a major milestone in the proactive management of fire risk in Calgary. Occupancies identified in the program are those with increased health, life safety, fire and environmental risk, and selection criteria can be adjusted to focus on specific needs or regulatory requirements (i.e., carbon monoxide detectors in childcare centres, etc.). CFD conducted 454 high-risk occupancy inspections in 2022, a 67 per cent increase from 2021 levels, and identified 135 violations that required reinspection and further action.

High-risk occupancy inspections	2022
Occupancy inspections	454
Occupancies requiring reinspection	135

Complaint-based and unscheduled inspections

CFD conducts inspections of public special events and large gatherings on a complaint basis, as well as unscheduled inspections of commercial properties and/or construction sites. In 2022, 9,289 requests were received through 3-1-1, a decrease of nine per cent from the previous year. On-time completion of these inspections was 96 per cent. An additional 5,569 unscheduled and complaint-based inspections were completed, a decrease of 25 per cent from 2021.

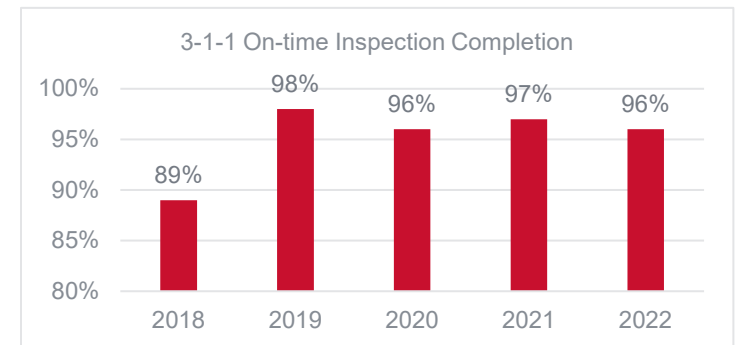
As businesses and public facilities reopened throughout 2022, focus shifted to commercial property inspections, from CFD's pandemic focus on multi-family dwelling inspections. In 2023, it is anticipated that inspection levels will rise as new staff are trained and certified to resolve capacity challenges.

Coordinated Safety Response Team (CSRT)

The Coordinated Safety Response Team (CSRT) provides a coordinated approach to identifying potentially unsafe conditions and conducts comprehensive joint reviews, inspections and investigations. CSRT is comprised of representatives from The City of Calgary (including CFD, among other municipal business units), the Calgary Police Service, Occupational Health and Safety Alberta, ALERT – Green Team South, Safer Communities and Neighbourhoods, and Alberta Health Services.

In 2022, CSRT focused on derelict and abandoned buildings, addressing 178 vacant properties and boarding up 71 more, as trending suggests that intentional and unintentional fires are more likely to occur in vacant and derelict properties. In Calgary, the number of structure fires in commercial, industrial or multi-family occupancies increased by 11 per cent from 2021 and 28 per cent from 2018, and the number of intentionally set fires has doubled since 2019.

CSRT response	2022
Vacant/derelict properties addressed	178
Vacant/derelict properties secured	71



Fire Safety Reports

After a two-year hiatus due to the COVID-19 pandemic, firefighters resumed taking fire safety reports in 2022. As part of this community risk reduction initiative, firefighters visit businesses throughout Calgary, conducting safety checks and fire safety inspections to ensure businesses are operating safely and to identify violations that require a more rigorous safety codes inspection from CFD's Safety Codes Officers. In 2022, due to a mid-year relaunch of the program and capacity issues driven by unprecedented levels of incidents city-wide, fire crews were only able to complete 48 per cent of assigned fire safety reports that identified 300 violations requiring reinspection from the Safety Codes team. It is anticipated that completion rates will normalize throughout 2023 as new recruits join fire crews to help alleviate capacity concerns.

Fire Safety Reports	2022
Occupancies assigned	26,000
Reports completed	12,589
Violations identified	300

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 Calgary Fire Department. Representatives from these enforcement agencies 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 has a particular focus on overcrowding in bars, assemblies and outdoor events to ensure compliance with applicable fire protection and fire safety laws. In 2022, the team visited 207 businesses, impacting safety for more than 98,905 citizens. These visits resulted in seven fire-related charges under the Safety Codes Act.

Public Safety Task Force response	2022
Businesses/venues visited	207
Charges issued	7

Plan and Permit Review

CFD's Technical Services group is responsible for examining plans associated with development permits and new community development, ensuring compliance with national, provincial and municipal codes and standards to ensure facilities are safe for occupants and the public. The input provided as part of this review process helps to ensure that as structures are built or renovated and as building materials and techniques change over time, the Calgary Fire Department is able to provide effective emergency response service. In 2022, 1,187 plans and permits were evaluated by CFD as part of Development and Building Approvals circulation procedures, in accordance with the National Fire Code and National Building Code – 2019 Alberta Edition.

Plan and permit review	2022
Plans and permits reviewed	1187

Special Events and Fire Permits

As businesses began to reopen and our community once again began to hold both public and private events, CFD's Special Events team work to ensure buildings could open safely and Calgarians could gather without harm. CFD's Fire Inspections and Investigation team works collaboratively with Calgarians to ensure events are fire safe, have appropriate fire safety plans, etc. as well as comply with the National Fire Code (Alberta Edition) to ensure the safety of event attendees, staff and volunteers.

In 2022, the team approved more than 112 temporary patios and tents, and issued 184 Temporary Occupancy Capacity cards for small and large events, outlining the maximum safe capacity for these venues. Additionally, CFD's Special Events team issued more than 160 permits for open flames, fireworks and special effects.

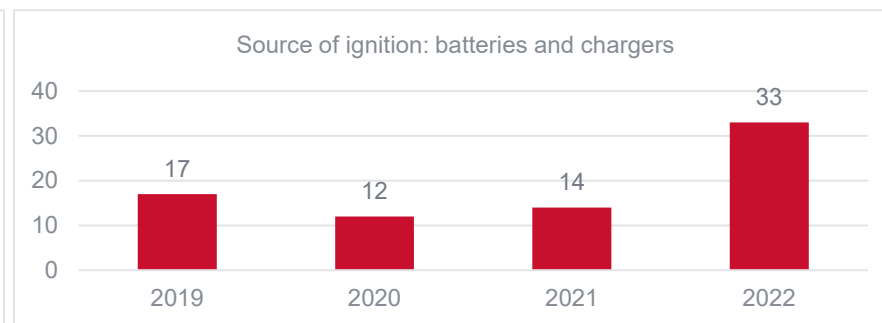
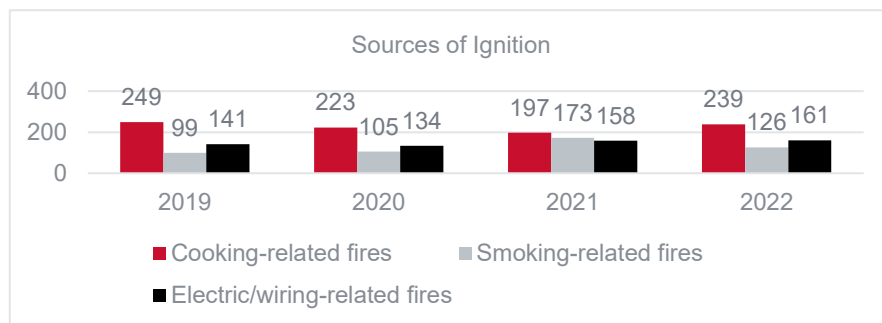
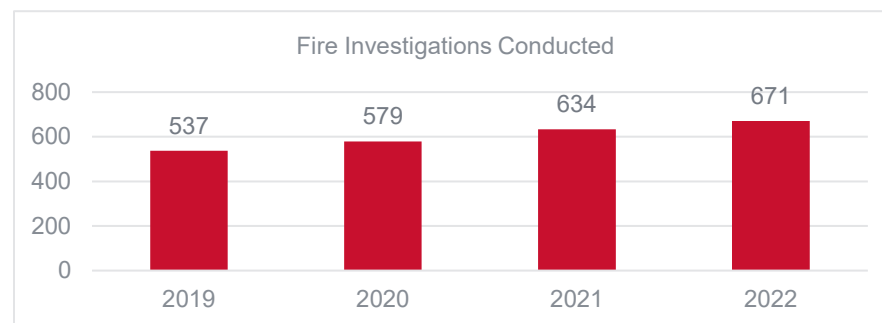
Special Event and Fire Permits	2022
Temporary patio and tent permits	112
Small and large event temporary load cards	184
Open flame, firework and special effect permits	160

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. If it is suspected that the cause of a fire is suspicious or perhaps deliberate, fire investigations will work in cooperation with the Calgarian 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.

Fire investigations comparison, 2021-2022	2021	2022
Fires (all)	2,098	2,439
Structure fires	856	1,020
Fire investigations conducted	634	671
Intentionally set fires	525	585
Source of Ignition		
Cooking related (stove top, toaster, smoker, barbeque, etc.)	197	239
Smoking-related materials or objects	173	126
Electrical equipment and wiring	158	161
Battery and chargers	14	33

The number of completed fire investigations increased by six per cent in 2022. In 2022, there was a 19 per cent increase in building fires and an 11 per cent increase in intentionally set fires, representing 24 per cent of all fires in 2022. Where the source of ignition could be determined, the top three sources were related to cooking activities; smoking activities, materials or smoking-related objects; and electrical equipment and wiring. Ignition caused by high-capacity batteries and chargers is emerging as an area of concern, with rates increasing by 135 per cent from 2021 to 2022. In 2021, smoking-related fires exceeded those caused by electrical objects or wiring issues, however in 2022, fires caused by electrical objects or wiring issues exceeded those caused by smoking activities, materials or objects.



Meet Willow and Jodie

Willow is CFD's own fire investigations dog – one of the few fire accelerant detection dogs in Canada. Together with her handler, Fire Investigator Jodie Grisdale, Willow helps figure out how fires start. Once a fire scene is deemed safe, Jodie and Willow sweep the site. If Willow smells an ignitable liquid, she alerts Jodie, who collects samples and evidence for testing in a forensic lab. They are brought on-scene not just for suspected arsons, but for any fire where the source is unknown. Willow and Jodie have investigated more than 100 fires in the past three years – and their results have changed the course of several investigations.

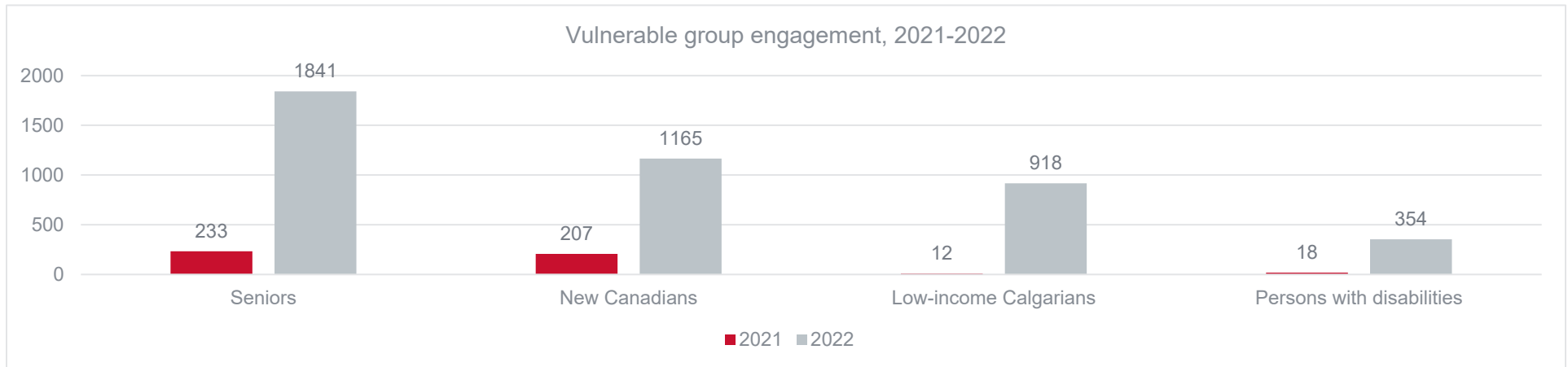
Willow is a full-time member of Jodie's family, and CFD is proud of the amazing work she does for the Calgary Fire Department and our community.



FIRE SAFETY EDUCATION PERFORMANCE

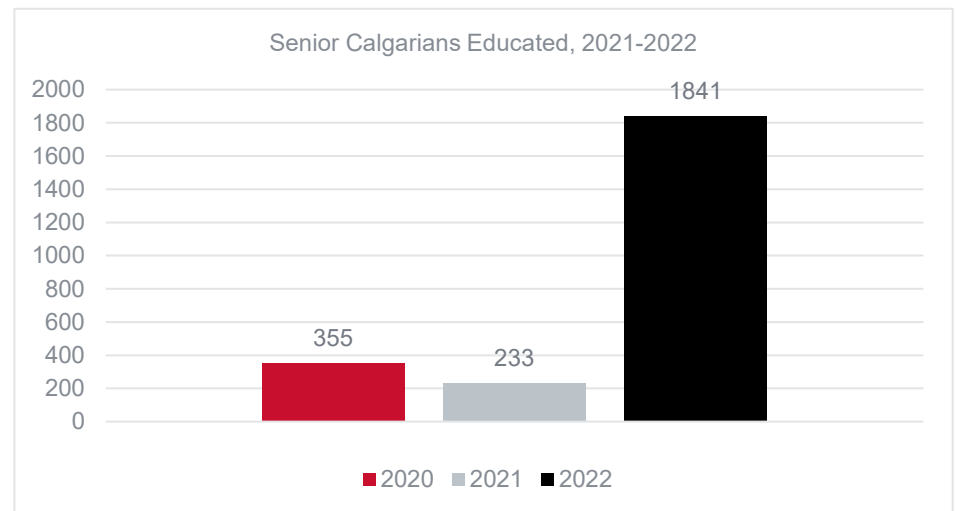
CFD designs and delivers public education activities and programs targeted at preventing fire and safety incidents. These programs are delivered to the general public including those facing vulnerabilities in our community – which includes but is not limited to children, lower-income Calgarians, New Canadians, persons with disabilities and Calgary’s aging population. 2022 saw a gradual resumption of in-person activities, where engagement throughout 2020 and 2021 focused on remote delivery through virtual, social media and The City of Calgary website. Each year since 2016, CFD has seen a 14 per cent positive change tied to these education and prevention efforts.

In 2022, CFD engaged a total of 54,382 individuals as compared to 58,774 in 2021.



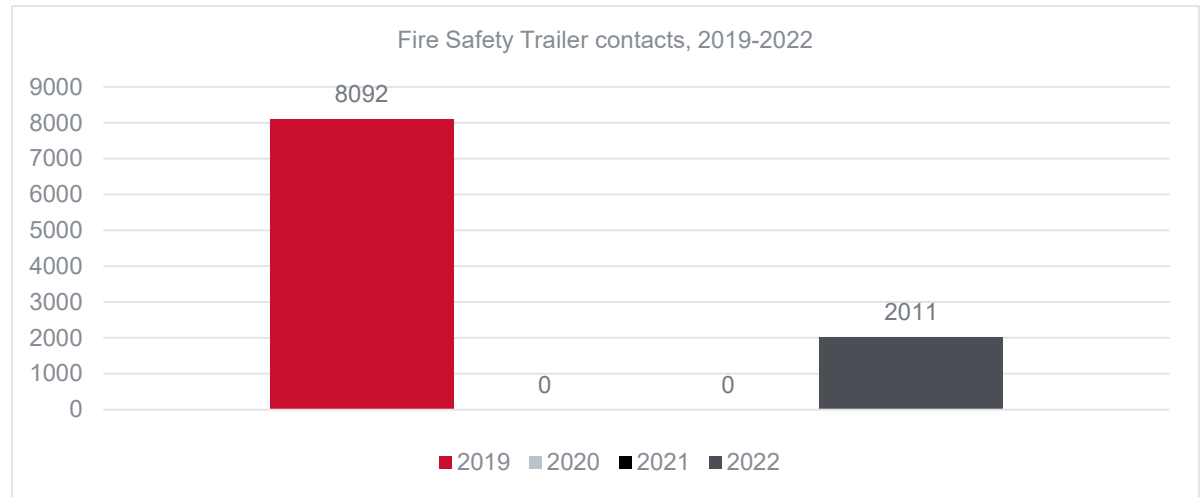
Calgary’s aging population

From age 65, older adults are twice as likely to be killed or injured by fires as compared to the population at large. 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. CFD 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. Our 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. In 2022, CFD engaged and educated 1,841 senior Calgarians.



The Fire Safety Trailer

The Fire Safety Trailer is a classroom on wheels consisting of a kitchen, bedroom and audio-visual supports, and is used to deliver Fire Safety education and messaging throughout Calgary. The trailer is primarily targeted for use with higher-risk populations, as determined by community risk assessment methodologies that identify which communities in Calgary face a larger risk due to fire, injury or death. When not actively engaged in higher-risk communities, the trailer is taken to other local events, where it is paired with CFD's Community Safety booths allowing citizens to engage with Calgary firefighters and fire safety education in meaningful ways. In 2022, 2,011 Calgarians participated in Fire Safety Truck programs. While this rate is only a quarter of pre-pandemic engagement levels, Fire Safety Trailer activities resumed mid-year after an over two-year hiatus.



2022 Fire Prevention Week and the Home Safety Program

Every October, CFD hosts a week full of special activities and events to share fire prevention information and strategies with Calgarians. In 2022, 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 presences at both the Kerby Centre 2022 Seniors' Expo and Genesis Centre.

As part of the 2022 Fire Prevention Week and in partnership with ATCO, CFD's Smoke Alarm Blitz focused on Calgary's Southeast quadrant to deliver fire safety education while installing smoke and carbon monoxide alarms in the homes of vulnerable Calgarians.

In addition to Fire Prevention week, the year-round door-to-door Home Safety Program leverages firefighters city-wide to visit homes in their district to ensure that homes are equipped with working smoke and carbon monoxide alarms, and that residents have created and rehearsed home escape plans. Higher-risk communities are the typical focus for this program; especially those that have witnessed a higher percentage of fire incidents, areas with a larger population of senior citizens, lower-income communities and trailer parks, and communities that are 10 years of age or older when smoke alarms may be expiring or expired. This program was paused throughout 2020 and 2021 due to the COVID-10 pandemic, but in 2022, the program resumed with nearly 30,000 homes being assigned to on-duty firefighters. While education is primarily available in English, materials can be provided in six additional languages by the attending firefighters. Efforts to engage Calgarians whose primary language is not English, as well as those Calgarians facing increased vulnerabilities, will continue throughout 2023.



2022 Smoke Alarm Blitz

Smoke alarms utilized in this program have been sponsored by Kidde Canada, and Calgary is proud to be one of only two Canadian municipalities with a partnership of this kind. The 29,626 homes visited in 2022 (99.2% completion rate) represented the largest number of homes ever visited as part of the program, even exceeding pre-pandemic levels.

In 2022, feedback surveys were moved to an electronic submission platform for the first time and incorporated a new performance measure. As part of the firefighter's visit, the citizen is asked if they felt that their home was safer following the CFD's visit and education. A total of 87.95% of the citizens engaged indicated that they felt their home is safer.

Home Safety Program performance	2022	Smoke Alarm Blitz performance	2022
Properties assigned	30,000	Homes visited	86
Visit completion rate	99.2%	Smoke alarms installed	60
Smoke alarms installed	667	Carbon monoxide alarms installed	56
Combination alarms installed	78		
Carbon monoxide alarms installed	252		
Batteries changes	112		

School Fire Drills

Since the launch of the School Fire Drill Program in 2018, firefighters have participated in school fire drills, attending in person and observing each school's fire safety and evacuation plan. Additionally, firefighters gain the opportunity to familiarize themselves with the school layout and safety systems, and identify any deficiencies that could present a safety risk. Beyond the in-school drill and observations, students and their families are provided with educational content tailored to their community.

2022 program upgrades include school fire drill scheduling improvements, including intake through the Calgary 3-1-1 online portal. Prior to 2022, school fire drills were scheduled by a direct phone call which, due to the firefighter shift schedule, made swift and easy communication difficult. The new online feature provides a simple, equitable way for all schools in Calgary to request firefighter attendance at a school fire drill, and thereby should result in an increase in CFD firefighters participating in school fire drills across Calgary. CFD attended 24 school fire drills in 2022. While lower than prior years, the in-person program only resumed in September, and it is anticipated that 2023 rates will align to pre-pandemic levels.



2022 Junior Fire Chief

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

Playing with fire is the leading cause of death for preschool-aged children. The focus of the Y-FIRES program is to alter fire-setting behavior in children through education and referral. Clients of the program are children aged 3-17 years who have been involved in serious or experimental fire play. Research has shown that a child or youth involved in fire setting without intervention stands an 81% chance of reoffending. Intervention programs, such as Y-FIRES, model true fire prevention education, with the potential to save millions in property damage, reduce fire-related injuries and save lives.

The Y-FIRES counseling program pairs youth fire setters and their families with specially trained firefighters to promote awareness of fire safety. These firefighters develop trust and understanding with these children and then, in a supportive environment, educate them about the potential consequences of their actions.

Alberta Health Services serves as a partner in the program registration process, to assist with the identification and treatment of mental health issues. Beyond the

counseling sessions, Y-FIRES families are given the opportunity to have a no-cost home inspection conducted to identify any additional risks and to have smoke alarms repaired or replaced, which is of essential importance to the safety of the family given the increased fire risk presented by living in the home.

In 2021, Officers managing the Y-FIRES program intended to utilize a virtual platform that aligned with protective health measures and reduce the risk for both the client and our CFD members. However, experiences using this virtual platform demonstrated that this delivery method was not nearly as effective as face-to-face engagement. Therefore, CFD chose to return to pre-pandemic procedures and meet with the child and family in person, a practice that continued throughout 2022.

In 2022, 19 youth fire setters were educated, with a total of 42 family members also participating in education sessions. Over the course of the year, CFD saw no repetition of fire-setting from clients who took part in Y-FIRES.

