

# **Firefighter Fatality Investigations**

**Annual Report  
FY 2021**

**October 2021**



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## **Executive Summary**

From September 1, 2020, to August 31, 2021, the State Fire Marshal's Office (SFMO) conducted four firefighter fatality incident investigations.

### **Captain Frazier Lee Holbert**

**Carrollton Fire Department**

September 9, 2020

Medical



### **Investigator Lemuel Bruce**

**Houston Fire Department**

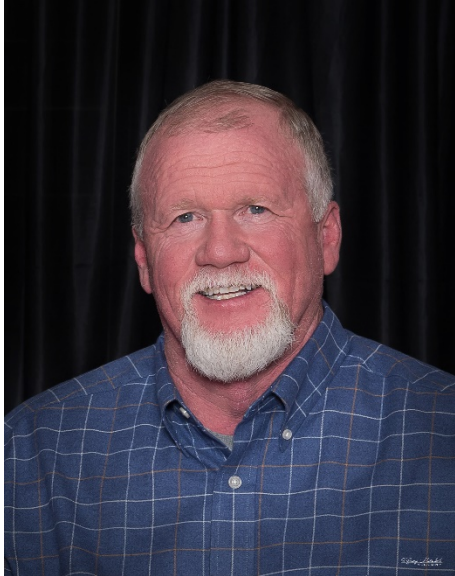
October 16, 2020

Shooting



**Firefighter Danny Ireton**  
**Stanton Volunteer Fire Department**

August 4, 2021  
Vehicle collision



**Firefighter Dylan Rodiek**  
**Jollyville Volunteer Fire Department**

August 16, 2021  
Medical



## **Texas Firefighter Fatality Investigation Authority**

State law requires the SFMO to investigate firefighter fatalities occurring in the line of duty or in connection with an on-duty incident. It must investigate the circumstances surrounding the death of the firefighter, including factors that may have contributed to the firefighter's death.

The term "firefighter" includes any individual who performs fire suppression duties for a governmental entity or volunteer fire department.

The State Fire Marshal must coordinate the investigative efforts of local government officials and may enlist established fire service organizations and private entities to assist. The State Fire Marshal appointed an investigation panel to provide Firefighter Fatality Investigation Program policy guidance. The following groups serve on the panel:

- State Firefighters' and Fire Marshals' Association of Texas
- Texas A&M Engineering Extension Service
- Texas A&M Forest Service
- Texas Chapter of the International Association of Arson Investigations
- Texas Commission on Fire Protection
- Texas Fire Chiefs Association
- Texas Fire Marshals Association
- Texas State Association of Fire Fighters
- Texas metropolitan fire departments (including Austin, Dallas, El Paso, Fort Worth, Houston, and San Antonio)

Texas Commission on Fire Protection (TCFP) establishes the criteria for gathering and analyzing firefighter injury data and sends its report to the State Fire Marshal for inclusion in this annual report.

Annual reports from TCFP's firefighter injury reporting program are attached and available at [www.tcfp.texas.gov/services/injury-reports](http://www.tcfp.texas.gov/services/injury-reports).

## **Fiscal Year 2021 Investigation Summary**

**September 9, 2020**

**Captain Frazier Lee Holbert, 57 years old**

**Carrollton Fire Department**

**Medical event while on duty**

On Wednesday, September 9, 2020, at approximately 12:05 p.m., Carrollton Fire Department firefighters found Captain Holbert unresponsive in his dorm room at the station. Captain Holbert was treated by Carrollton Fire Department personnel and transported to Carrollton Regional Medical Center.

Captain Holbert was transported later that day to Baylor Hospital Plano. On September 13, 2020, Captain Holbert succumbed to his condition.

On September 13, 2020, the Carrollton Fire Department notified the SFMO of Captain Holbert's death. SFMO Captain Brian Fine initiated an investigation.

Captain Holbert's treating physician diagnosed that his medical conditions were caused by a cerebrovascular accident (CVA or stroke).

This death is classified as an on-duty firefighter fatality.

**October 16, 2020**

**Investigator Lemuel Bruce, 44 years old**

**Houston Fire Department**

**Shot by suspect**

On Friday, October 16, 2020, Investigator Bruce was conducting surveillance for a serial arsonist investigation on the 2100 block of West 18th Street. At approximately 3:30 a.m., Investigator Bruce confronted a suspect and gunfire was exchanged. Investigator Bruce sustained gunshot wounds and was transported to Memorial Hermann Hospital, where he later died from his injuries. The suspect died at the scene.

Investigator Bruce was a firefighter with the Houston Fire Department and assigned to the Houston Arson Bureau. Houston Police Homicide conducted the investigation. The SFMO did not investigate because Investigator Bruce was assigned law enforcement duties at the time of his death.

This death is classified as an on-duty firefighter fatality.



**August 4, 2021**  
**Firefighter Danny Ireton, 60 years old**  
**Stanton Volunteer Fire Department**  
**Vehicle collision**

On Wednesday, August 4, 2021, Firefighter Danny Ireton and another firefighter were responding to a vehicle collision in a department apparatus. As Firefighter Ireton was operating the apparatus, he attempted to pass a semi-truck. The semi-truck made a turn, and the apparatus struck the semi-truck. Firefighter Ireton was pronounced dead at the scene. The other firefighter was taken to Midland Memorial Hospital with critical injuries.

The SFMO was notified of the death and Lieutenant Tim Ware was assigned the investigation.

This death is classified as an on-duty firefighter fatality.

**August 16, 2021**  
**Firefighter Dylan Rodiek, 35 years old**  
**Jollyville Volunteer Fire Department**  
**Medical event while on duty**

On Monday, August 16, 2021, the Jollyville Fire Department received a call out for a medical response. Firefighter/EMT Dylan Rodiek did not respond to the call. After returning to the fire station, fellow firefighters found Firefighter Rodiek deceased on the floor of his bunk room. The Williamson County Sheriff's Office conducted the scene investigation. An autopsy revealed that the cause of death was due to a cardiac event.

The SFMO was notified of the death and Lieutenant Tim Ware was assigned the investigation.

This death is classified as an on-duty firefighter fatality.

## **Pending Prosecution for FY 2017 Firefighter Fatality**

On May 18, 2017, at 9:12 p.m., the San Antonio Fire Department (SAFD) responded to a structure fire located in the 6700 block of Ingram Road, San Antonio, reported by a passerby.

SAFD Ladder 35 (L35) and Engine 35 (E35) arrived on the scene and observed smoke inside the Spartan Boxing Gym. Firefighters made forcible entry into the business through the front doors. E35 crew was assigned suppression and L35 firefighters Scott Deem and Brad Phipps were assigned to search the Spartan Boxing Gym.

During their search, Deem and Phipps located the fire and called for a hose line. Conditions rapidly worsened and Deem and Phipps declared a "Mayday." Efforts were focused on their rescue.

Several Rapid Intervention Teams (RIT) made entry to locate the firefighters. Firefighter Robert Vasquez became separated from his RIT while searching for Phipps and Deem. Phipps and Vasquez were located and extricated. Phipps sustained life-threatening injuries and was transported to Brooke Army Medical Center. Vasquez suffered minor injuries and was transported and later released from an area hospital.

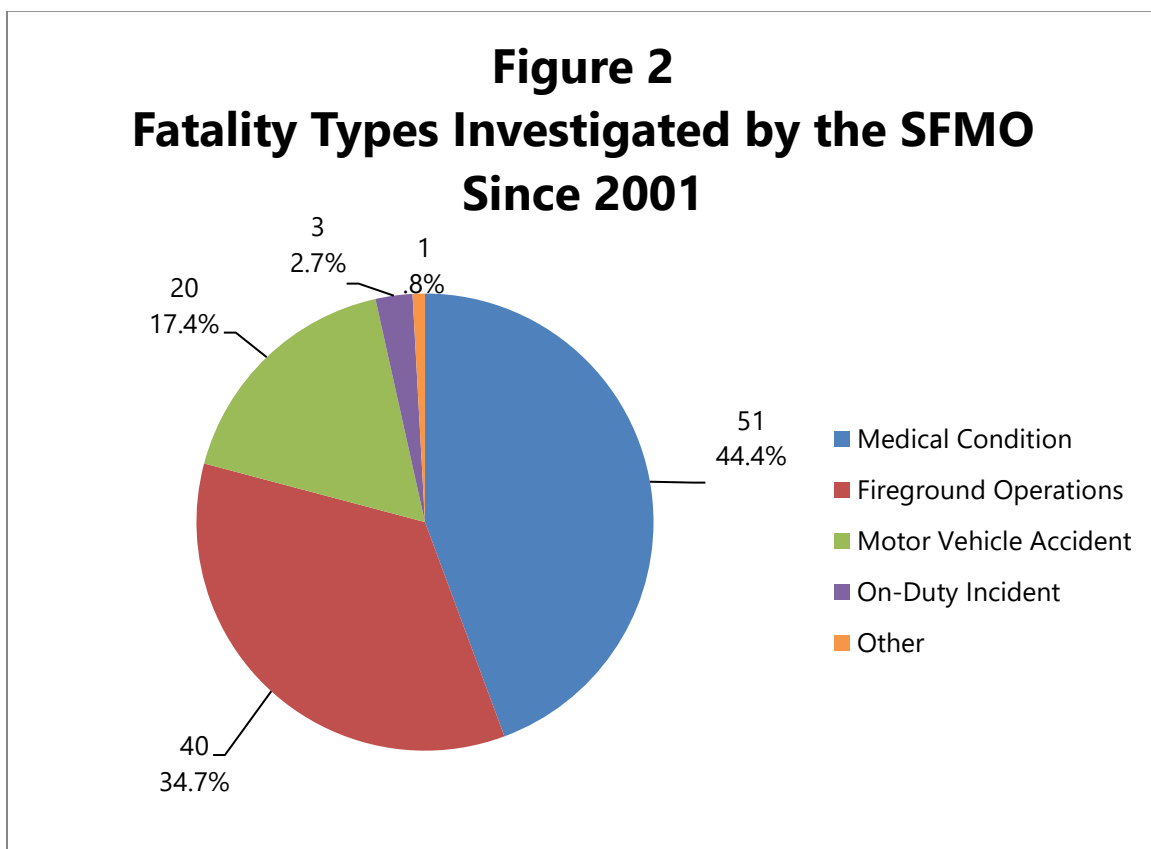
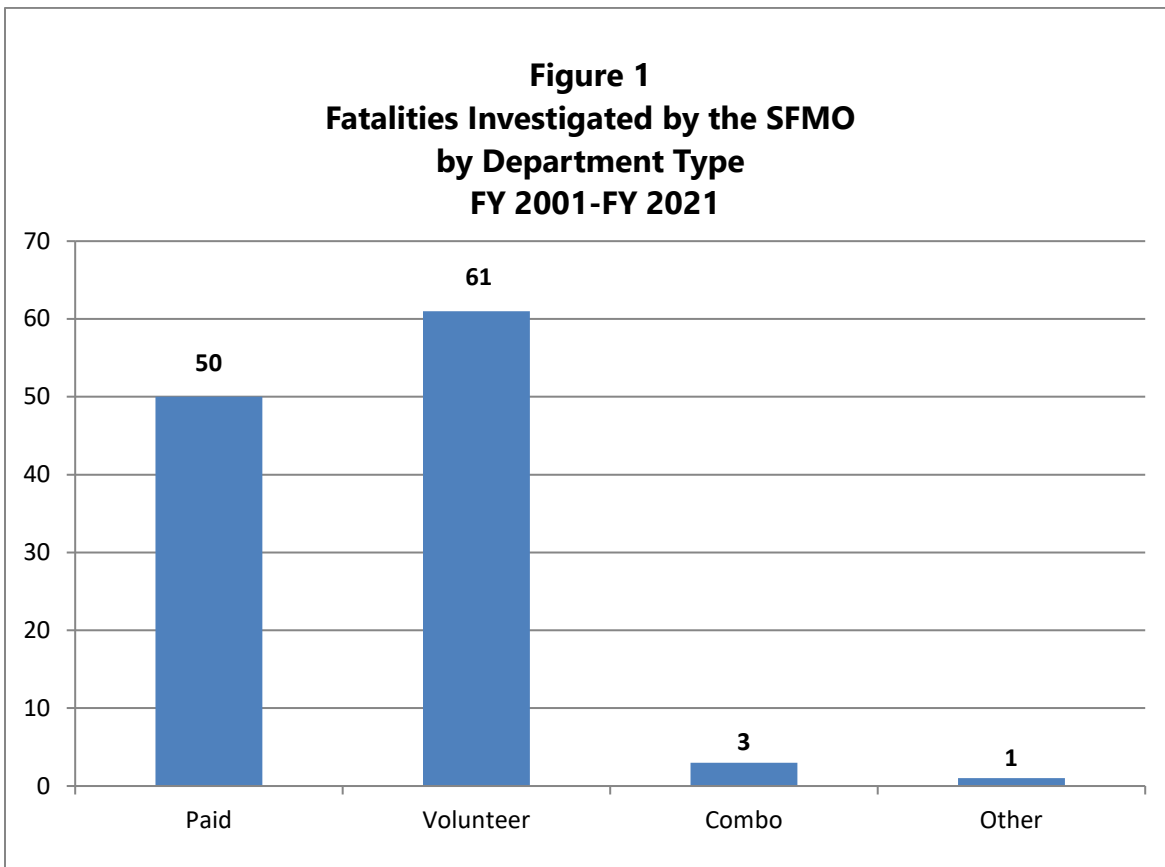
Continued attempts to contact Deem or to hear a PASS device were unsuccessful. Conditions worsened, and rescue operations were halted. Defensive tactics were used to suppress the fire. A secondary search was conducted and Deem was eventually found deceased inside the gym.

Phipps was released from the hospital on August 1, 2017, to continue recovery at home. The SFMO Firefighter Fatality Coordinator was notified of the incident and responded, and the SFMO State Response Team was dispatched.

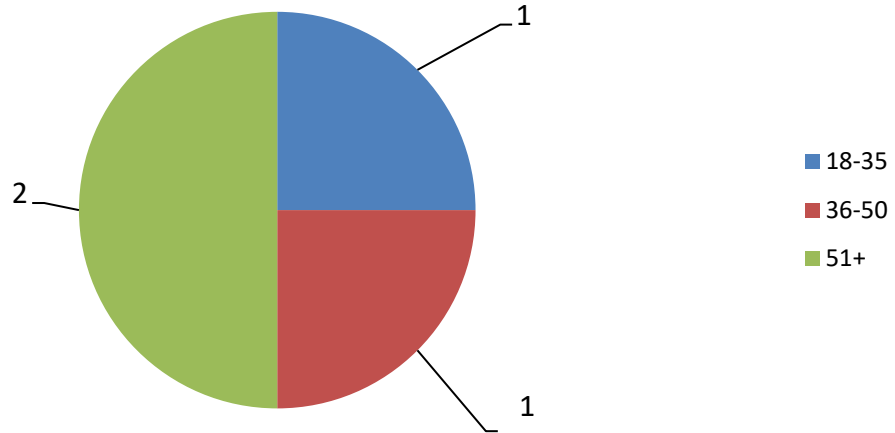
The joint investigation conducted by the SFMO, San Antonio Arson Bureau, and the San Antonio Police Department resulted in the arrest of the owner of the Spartan Box Gym. The Grand Jury indicted the owner for the arson that resulted in the death of Deem and injuries to other firefighters.

SFMO investigators continue to meet with the Bexar County District Attorney's Office to provide documentation on the fire's origin and cause investigation, as well as the firefighter fatality investigation. The judge has denied motions to move the trial, and the criminal case is pending prosecution.

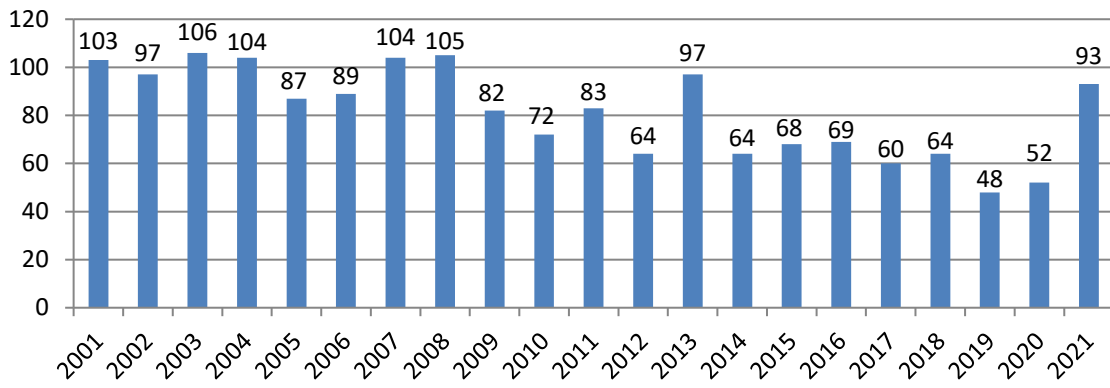
## Statistics and Comparisons of Firefighter Fatalities



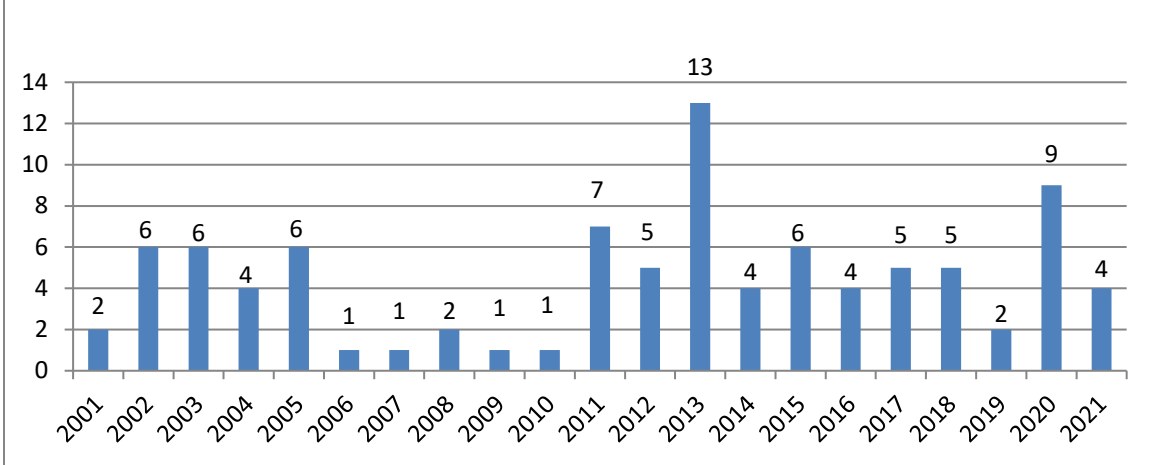
**Figure 3**  
**FY 2021 Fatalities Investigated by Age**



**Figure 4**  
**National On-Duty Firefighter Deaths**  
**2001-2021**



**Figure 5**  
**Texas On-Duty Firefighter Deaths**  
**2001-2021**



## Strategies for Preventing Firefighter Fatalities

The SFMO encourages use of strategies developed by both the SFMO and nationally recognized organizations to reduce firefighter fatalities.

- The SFMO communicates “lessons learned” from firefighter fatality investigations through the publication of investigation reports, sharing information with the Firefighter Fatality Investigation Panel, and presentations at fire service conferences.
- Firefighter fatality investigation reports are sent to affected fire departments then placed on the SFMO’s website ([www.tdi.texas.gov/fire/fmloddiinvesti.html](http://www.tdi.texas.gov/fire/fmloddiinvesti.html)). The SFMO is visiting fire departments that experienced a line of duty death to see what improvements have been made since the incident.

Departments are encouraged to:

- Participate in “Firefighter Safety Stand Down,” sponsored by the International Association of Fire Chiefs ([www.iafc.org](http://www.iafc.org)) and the International Association of Fire Fighters ([www.iaff.org](http://www.iaff.org)).
- Participate in the “Courage to be Safe” (CTBS) program that emphasizes the message “Everyone Goes Home.” Information on the CTBS program is available at [www.everyonegoeshome.com](http://www.everyonegoeshome.com). (See The 16 Firefighter Life Safety Initiatives on page 14.)
- Implement or expand existing fire prevention programs to help reduce the number of fires.
- Participate in the National Fallen Firefighters Foundation’s National Fire Service Seat Belt Pledge ([www.firehero.org](http://www.firehero.org)), which encourages firefighters to wear seat belts when riding in a fire department vehicle.
- Explore safer strategies and tactics for fighting fires in enclosed structures by publishing findings and recommendations revealed during firefighter fatality investigations.
- Provide information to the fire service and the public on the effectiveness of residential sprinklers in reducing civilian and firefighter fatalities as well as property loss caused by fire.
- Engage in pre-fire incident planning by suppression personnel for high-risk occupancies. Pre-fire planning should include consideration of life safety for firefighters and occupants, water supply, and structural hazards.
- Include fire prevention and firefighter fatality prevention in all firefighter training and education, including initial training in firefighter academies across the state.

- Emphasize the need for firefighter training on how modern construction technologies, such as lightweight structural materials and green building practices, can change building performance and fire behavior, and how these new technologies impact firefighter safety and fire-ground operations.  
([www.wbdg.org/files/pdfs/nfpa\\_firesafetygreenbuilding.pdf](http://www.wbdg.org/files/pdfs/nfpa_firesafetygreenbuilding.pdf))
- Implement a vehicle operations program, such as Emergency Vehicles Operators Course (EVOOC). Fire department personnel should become familiar with driving skills, vehicle and operator limitations, and liability issues related to the operation of fire department apparatus.
- Complete the National Safety Council's Defensive Driving Course ([www.nsc.org/safety-training/defensive-driving](http://www.nsc.org/safety-training/defensive-driving)) and renew the course every three years.

## **Everyone Goes Home: The 16 Firefighter Life Safety Initiatives**

The 16 Firefighter Life Safety Initiatives were developed in 2004 by representatives of major fire service constituencies at a Firefighter Safety Summit in Tampa, Florida.

At that time, the National Fallen Firefighters Foundation was tasked with spreading word about the initiatives throughout the fire service and developing material to support their implementation.

Since then, the initiatives have become the foundation for thousands of fire departments and EMS organizations working to ensure their firefighters and medics return home safely after every shift.

### **1. Cultural Change**

Define and advocate the need for a cultural change within the fire service relating to safety, incorporating leadership, management, supervision, accountability, and personal responsibility. (See Appendix 1: *Changing the Culture of Safety in the Fire Service*, by Ronald J. Siarnicki and Richard Gist.) U.S. Fire Administration National Safety Culture Change Initiative *FA-342/April 2015*.

### **2. Accountability**

Enhance the personal and organizational accountability for health and safety throughout the fire service.

### **3. Risk Management**

Focus greater attention on the integration of risk management with incident management at all levels, including strategic, tactical, and planning responsibilities.

### **4. Empowerment**

All firefighters must be empowered to stop unsafe practices.

### **5. Training and Certification**

Develop and implement national standards for training, qualifications, and certification (including regular recertification) that are equally applicable to all firefighters based on the duties they are expected to perform.

### **6. Medical and Physical Fitness**

Develop and implement national medical and physical fitness standards that are equally applicable to all firefighters, based on the duties they are expected to perform.

### **7. Research Agenda**

Create a national research agenda and data collection system that relates to the 16 Firefighter Life Safety Initiatives.



## **8. Technology**

Utilize available technology wherever it can produce higher levels of health and safety.

## **9. Fatality, Near-Miss Investigation**

Thoroughly investigate all firefighter fatalities, injuries, and near-misses.

## **10. Grant Support**

Grant programs should support the implementation of safe practices and procedures and/or mandate safe practices as an eligibility requirement.

## **11. Response Policies**

National standards for emergency response policies and procedures should be developed and championed.

## **12. Violent Incident Response**

National protocols for response to violent incidents should be developed and championed.

## **13. Psychological Support**

Firefighters and their families must have access to counseling and psychological support.

## **14. Public Education**

Public education must receive more resources and be championed as a critical fire and life safety program.

## **15. Code Enforcement and Sprinklers**

Advocacy must be strengthened for the enforcement of codes and the installation of home fire sprinklers.

## **16. Apparatus Design and Safety**

Safety must be a primary consideration in the design of apparatus and equipment.

## Firefighter Safety Recommendations

Recommendations from past SFMO investigation reports.

1. Define and advocate the need for a cultural change within the fire service relating to safety, incorporating leadership, management, supervision, accountability, and personal responsibility. **U.S. Fire Administration National Safety Culture Change Initiative FA-342/April 2015.**
2. Establish standard operating procedures (SOPs) for minimum requirements of a fire service-related occupational safety and health program in accordance with the **National Fire Protection Association (NFPA) Standard 1500, Standard on Fire Department Occupational Safety and Health Program**, 2018 Edition.
3. Provide mandatory pre-placement and annual medical evaluations to all firefighters, consistent with **NFPA 1582, Standard on Comprehensive Occupational Medical Program for Fire Departments**, 2022 Edition, to determine their medical ability to perform duties without presenting a significant risk to the safety and health of themselves or others.
4. Perform annual physical performance (physical ability) evaluations to ensure firefighters are physically capable of performing the essential job tasks of firefighting. **NFPA 1583, Standard on Health-Related Fitness Programs for Firefighters**, 2022 Edition.
5. Ensure that firefighters are cleared for duty by a physician knowledgeable about the physical demands of firefighting, the personal protective equipment used by firefighters, and the various components of **NFPA 1582, Standard on Comprehensive Occupational Medicine Program for Fire Departments**, 2018 Edition.
6. No risk to the safety of responders shall be acceptable where there is no possibility to save lives or property. **NFPA 1561**, Chapter 5, Section 5.3.20, 2020 Edition; **Texas Commission on Fire Protection Standards (TCFP) Standards Manual**, Chapter 435, Section 435.15, Part b, Paragraphs 1 and 2.

**7.** Always attack a wildland fire from the burned area. If this is done and a sudden change in conditions or wind occurs, the unit can retreat farther into the black where fuel has previously been consumed. "Attack from the Black," a Texas Forest Service training DVD, "The black is the best safety zone"  
<http://tfsweb.tamu.edu/AttackFromTheBlack/>.

The Fireline Handbook has been retired and replaced with an electronic file, a pdf, called **Wildland Fire Incident Management Field Guide (PMS 210)**, April 2013.

**8.** Egress routes and safety zones should be well identified and communicated to everyone on the scene before fire operations begin. Staging areas should not interfere with ingress or egress to afford safety to the firefighters. **NFPA 1143**, Annex A Section 5.4.2 Section (3) © 2018 Edition; **TCFP Standards Manual**, Chapter 435, Section 435.15, Part a; **IFSTA (2013) Essentials of Fire Fighting**, (6<sup>th</sup> Edition), Chapter 6, page 315, Fire Protection Publications, Oklahoma State University; **National Wildfire Coordinating Group**, *Wildland Fire Incident Management Field Guide (PMS 210)*, April 2013, Chapter 1, Firefighter Safety.

**9.** All firefighters on the scene of a fire and actively engaged in firefighting operations should be in approved, full personal protective equipment (PPE) suitable for the incident. **National Wildfire Coordinating Group**, *Wildland Fire Incident Management Field Guide (PMS 210)*, April 2013, Chapter 1, Firefighter Safety; **IFSTA (2013) Essentials of Fire Fighting**, (6<sup>th</sup> Edition), Chapter 6, Fire Protection Publications, Oklahoma State University.

**10.** Fire departments must use a system of accountability whereby the incident commander can easily and immediately be able to determine not only that a firefighter is on the fire ground but also his or her location and task assignment at any given time. **TCFP Standards Manual**, Chapter 435, Section 435.13, Part b, Paragraphs 3 and 4; and Part d.

**11.** Instruct firefighters and command staff that hydration alone will not prevent heat-related illness (HRI). **NIOSH Report F2011-17**, April 2012.

**12.** Establish a stationary command. A stationary command offers many advantages; one of the most important is a quiet vantage point from which to receive, process, and relay information. A stationary command post remote from task level operations is also beneficial in building and maintaining an effective fire ground organization. **NFPA 1561**, Section 5.3.8.1, 2020 Edition. Following the initial stages of the incident, the incident commander shall establish a stationary command post. *Fire Command*, (2<sup>nd</sup> Edition, 2002), Chapter 1, "The Command Post," Allan V. Brunacini, Von Hoffman Corp. **IFSTA (2013) Essentials of Fire Fighting**, (6<sup>th</sup> Edition), Chapter 1, page 39, Fire Protection Publications, Oklahoma State University.

**13.** The use of all PPE, including Self-contained Breathing Apparatus (SCBA) is mandatory when operating in areas where members are exposed or potentially exposed to the hazards for which PPE is provided. **NFPA 1500**, Chapter 7, 2021 Edition; Protective Clothing. **IFSTA (2013), Essentials of Fire Fighting**, (6<sup>th</sup> Edition), Chapter 5; **TCFP Standards Manual**, Chapter 435, Fire Fighter Safety.

**14.** Use tools and tactics that help reduce the dangers of roof operations. Become familiar with those indicators that are a precursor to collapse. **IFSTA (2013) Essentials of Fire Fighting**, (6<sup>th</sup> Edition), Chapter 11, pp. 476 and 556-560, Fire Protection Publications, Oklahoma State University; **IFSTA (1994) Fire Service Ventilation**, (7<sup>th</sup> Edition), pp. 86-89, Fire Protection Publications, Oklahoma State University.

**15.** Consider monitoring and recording fire ground activity. **NFPA 1221**, Chapter 7, Sec. 7.6, 2019 Edition; Recording.

## **Appendix 1: Texas Commission on Fire Protection Injury Report**

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# TEXAS COMMISSION ON FIRE PROTECTION INJURY REPORT

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January 1, 2020 to December 31, 2020



TEXAS COMMISSION ON FIRE PROTECTION

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# Mission

The commission shall gather and evaluate data on fire protection personnel injuries and develop recommendations for reducing injuries.

## Why we are collecting injury data

Under Texas Government Code §419.048, the Texas Legislature charged the commission with gathering and evaluating data on injuries. The rules requiring regulated entities to report injuries to the commission are in Texas Administrative Code §435.23. The commission encourages volunteer entities to report injuries so that it can gain as accurate a picture as possible concerning injury trends in the Texas fire service. The injury reporting program began in March 2010.

## Information the commission collects

- Minor, serious, and fatal injuries, as well as toxic exposures
- Activities where fire personnel are injured
- Types of injuries (burns, strain-sprains, wounds, etc.)
- Body parts being injured
- Tasks performed at the time of injury
- Missed time
- Work assignment after injury
- Malfunctions/failures of personal protective equipment (PPE), self-contained breathing apparatus (SCBA), personal alert safety systems (PASS devices) and standard operating procedures (SOPs)

## How this will help the fire service

- Identify common injuries and exposures
- Identify trends in injuries and exposures
- Identify needed training
- Evaluate and find improvements in procedures
- Track lost time injuries (requested by user community)



# Executive Summary

The information in this report is collected by the Texas Commission on Fire Protection (TCFP) via an on-line injury reporting application. The report is a comprehensive analysis of injuries and exposures to Texas fire fighters. These injuries and exposures were reported to the TCFP in 2020 by fire departments throughout the state, and this report contains charts and graphs depicting the results of the information that was collected. The report also compares Texas fire fighter injury statistics with national statistics that were gathered by the National Fire Protection Association (NFPA) in 2019.

Under Texas Government Code §419.048, the Texas Commission on Fire Protection is charged with developing and establishing criteria to receive and analyze injury information pertaining to Texas fire fighters. The commission reviews this information to develop recommendations to help reduce injuries to fire protection personnel. The commission provides this information to the State Fire Marshal's Office (SFMO) by September 1 of each year for inclusion in the SFMO's annual *Firefighter Fatality Investigations Report*. The commission has enacted rules about reporting injuries in the Texas Administrative Code (TAC) Title 37, Chapter 435, and has established the criteria and policies for reporting and analyzing the information.

The commission originally built the data systems necessary to gather this information in 2010. In 2017 the data systems were migrated from a Microsoft Access database structure to a new system which was developed in-house and designed specifically to meet the information resource needs of the TCFP. Fine-tuning of this new system is ongoing as we receive feedback from stakeholders. The reporting process is accomplished online. Fire departments regulated by the commission have been notified of the requirement to report. Several volunteer departments, which are not regulated by the commission, are also participating voluntarily.

## **A Reminder for Fire Departments**

Any injuries to fire protection personnel that are reported to the Texas Worker's Compensation Commission must be reported to the Texas Commission on Fire Protection. This includes cancer diagnoses.

This report concludes with recommendations from the commission to help reduce the number of fire fighter injuries in Texas and to improve the injury reporting program.

# Abstract

This report contains data submitted by regulated and non-regulated entities. The data collected in 2020 was the tenth full year of reporting.

## Grand Totals – 2020

Total number of incidents (injury reports) submitted: 5,530

Total number of individuals who sustained an injury or exposure: 6,406\*

Total number of injuries reported: 2,552

Total number of exposures reported: 4,077

*\*Note that an individual could have more than one injury or could have an injury and an exposure. This explains why the total number of individuals who sustained an injury is less than the total number of injuries + total number of exposures. (6,406 < 2,552 + 4,077)*

Because the injury reporting system was reconfigured in 2018, the information collected by the TCFP has evolved over the last couple of years. **It's important to remember that one incident report can have multiple individuals involved, and each of those individuals can have one or more injuries.** For example:

Joe and Bob were burned in a fire while on duty. This resulted in:

- One incident (one injury report), with
- Two individuals who...
- Sustained three injuries
  - Joe was burned on the hand and arm (two injuries)
  - Bob was burned on the leg (one injury)

557 of the 756 regulated departments used TCFP's injury reporting system in 2020. That's a reporting rate of 74%. These departments reported a total of 6,406 individuals who were either injured or exposed in calendar year 2020. Of these, 525 individuals incurred their injuries/exposures during fire suppression activities, representing 8 percent of the total reported injuries (see Table 1).

Injuries and exposures from emergency medical services (EMS) activities surpassed those from fire suppression activities in 2020. EMS activities accounted for 3,192 of the 6,406 total individuals who were injured or exposed, or 50 percent.

After EMS and fire suppression, the next highest number reported in 2020 occurred in the performance of station duties, with 1,454, or 23 percent, of the total reported injuries.

Skills training and wellness/fitness activities again rounded out the top five activities: 429 skills training injuries (7 percent of the total) and 422 wellness/fitness injuries (7 percent of the total).

We feel it's important to note that the total number of injured or exposed individuals reported in station duties, wellness/fitness activities, and skills training (which are all non-emergency activities) accounted for 36 percent of the total injuries reported in 2020.

### A Note About COVID-19

It's important to mention that the COVID-19 pandemic, in many instances, caused the numbers of injuries and exposures to spike sharply in the areas of EMS-related duties (i.e., patient care) and station duties (i.e., contact with contagious co-workers). Please keep this in mind as you review the report.

# State of Texas vs. NFPA

## Comparison between the State of Texas (2019) and National Fire Protection Association (NFPA) U.S. Firefighter Injuries (2019)

For the purposes of comparison, the commission has mapped its categories to the NFPA categories as follows:

- "Fireground" includes the commission's Fire Suppression and Rescue – Fire Related categories.
- "Non-Fire" includes Rescue Non-Fire, EMS and Hazmat.
- "Other On-Duty" includes Fire Prevention, Station Duties and Wellness/Fitness.

The NFPA's "Responding and Returning" and "Training" categories appear to correspond closely to the commission's categories. (The NFPA numbers include Texas statistics, although the reporting populations may not be the same.)

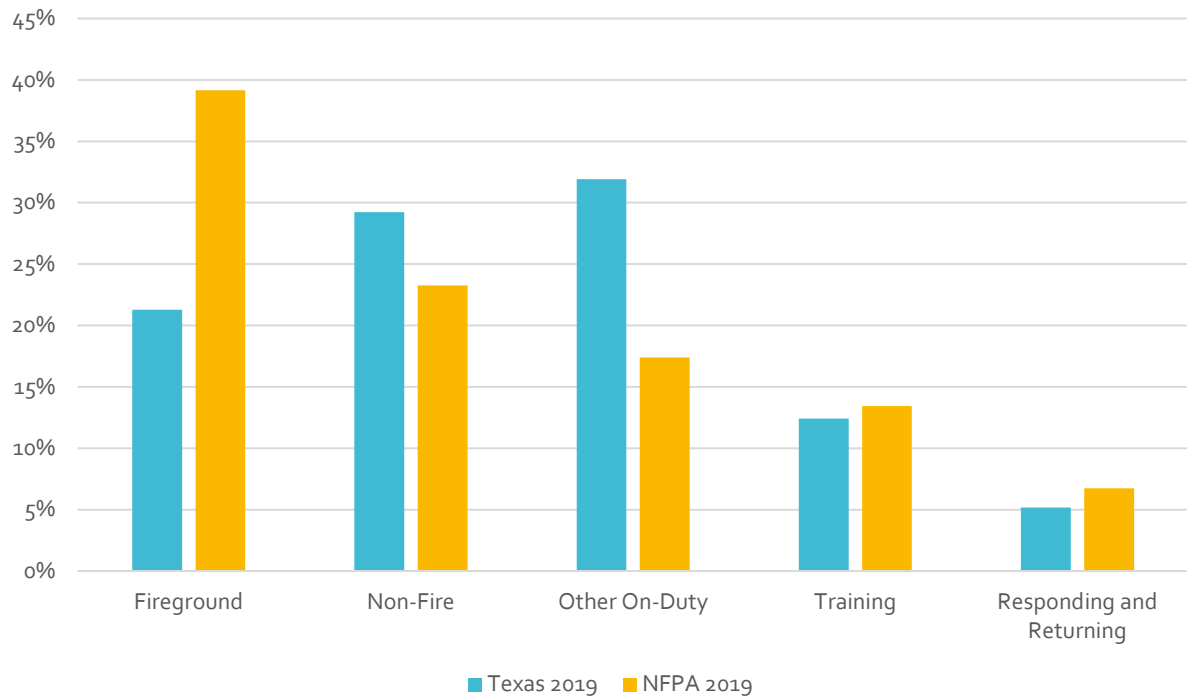
*Comparing Texas 2019 and NFPA 2019*

**Table 1: Comparison of Texas 2019 and NFPA 2019**

Category	Texas 2019		NFPA 2019	
	Count	Percent	Count	Percent
Fireground	804	21%	23,825	39%
Non-Fire	1,105	29%	14,150	23%
Other On-Duty	1,206	32%	10,575	17%
Training	469	12%	8,175	13%
Responding and Returning	196	5%	4,100	7%
<b>Total</b>	<b>3,780</b>	<b>100%</b>	<b>60,825</b>	<b>100%</b>

NFPA data is from the [Firefighter Injuries in the United States in 2019](#) report, copyright ©2019 National Fire Protection Association, Quincy, MA.

**Figure 1: Injuries by Activity, percentages  
(Comparing Texas 2019 and NFPA 2019)**

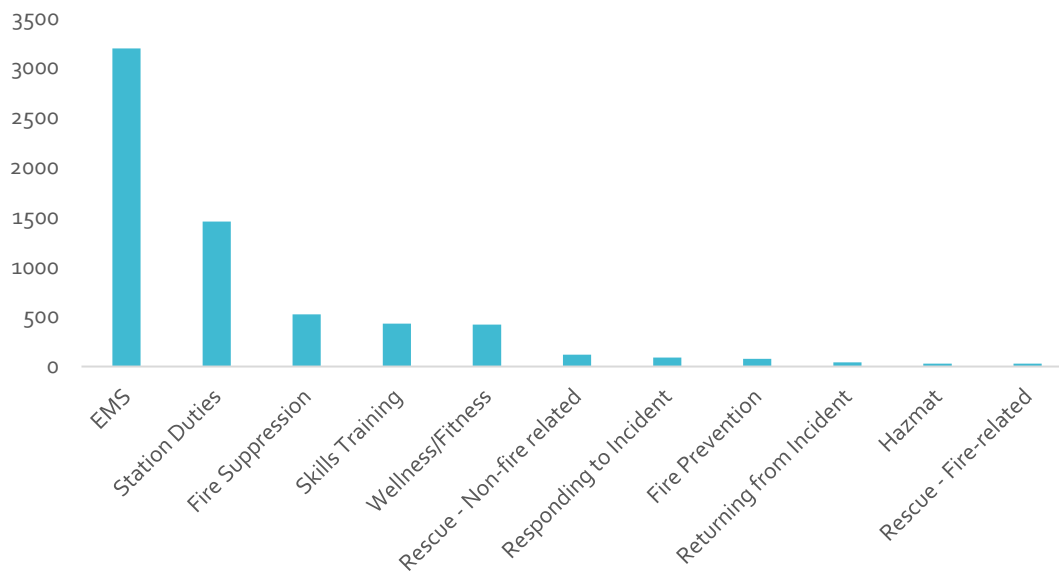


## Fire Protection Personnel Injuries

*Table 2: Total Injured or Exposed Individuals by Activity and Severity, 2020*

Activity	Minor	Serious	Fatal	Total	2019	2018
EMS	2,529	660	3	3,192	922	1,027
Station Duties	722	731	1	1,454	739	639
Fire Suppression	397	127	1	525	763	799
Skills Training	304	125	0	429	469	400
Wellness/Fitness	306	116	0	422	407	417
Rescue - Non-fire related	89	29	0	118	157	183
Responding to Incident	68	23	0	91	143	163
Fire Prevention	49	27	0	76	60	90
Returning from Incident	28	13	0	41	53	91
Hazmat	22	7	0	29	26	28
Rescue - Fire-related	26	3	0	29	41	44
<b>Total</b>	<b>4,540</b>	<b>1,861</b>	<b>5</b>	<b>6,406</b>	<b>3,780</b>	<b>3,881</b>

*Figure 2: Total Injured or Exposed Individuals by Activity, 2020*



## Injuries/Exposures by Activity

EMS activities resulted in the highest number of minor injuries in 2020 (see Table 3), which is consistent with the previous five years. **The total numbers of minor and serious injuries and exposures is up significantly in 2020 compared with previous years due to the COVID-19 pandemic.**

<b>Definitions</b>
<b>Minor</b> = An injury/exposure that does <u>not</u> result in the employee missing a full duty period.
<b>Serious</b> = An injury/exposure that results in the employee missing one or more full duty periods.
<b>Fatal</b> = The injured/exposed individual did not survive.

**Table 3: Minor Injury/Exposure Activities, 2016 – 2020**

Activity	2016		2017		2018		2019		2020	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
EMS	882	27.89%	929	28.99%	843	29.09%	776	25.84%	2,529	55.70%
Station Duties	434	13.73%	481	15.01%	437	15.08%	591	19.68%	722	15.90%
Fire Suppression	866	27.39%	662	20.66%	607	20.95%	616	20.51%	397	8.74%
Wellness/Fitness	252	7.97%	254	7.93%	286	9.87%	290	9.66%	306	6.74%
Skills Training	311	9.84%	291	9.08%	277	9.56%	330	10.99%	304	6.70%
Rescue - Non-Fire	161	5.09%	206	6.43%	157	5.42%	140	4.66%	89	1.96%
Responding to Incident	117	3.70%	156	4.87%	99	3.42%	114	3.80%	68	1.50%
Fire Prevention	47	1.49%	50	1.56%	69	2.38%	46	1.53%	49	1.08%
Returning from Incident	37	1.17%	42	1.31%	57	1.97%	39	1.30%	28	0.62%
Rescue - Fire Related	20	0.63%	113	3.53%	39	1.35%	37	1.23%	26	0.57%
Hazmat	35	1.11%	21	0.66%	27	0.93%	24	0.80%	22	0.48%
<b>Total</b>	<b>3,162</b>	<b>100.00%</b>	<b>3,205</b>	<b>100.00%</b>	<b>2,898</b>	<b>100.00%</b>	<b>3,003</b>	<b>100.00%</b>	<b>4,540</b>	<b>100.00%</b>

(Numbers in red above = least amount of injuries for the five-year period.)

*Table 4: Serious Injury/Exposure Activities, 2016 – 2020*

Activity	2016		2017		2018		2019		2020	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Station Duties	172	18.76%	185	21.29%	201	20.49%	147	19.02%	731	39.28%
EMS	158	17.23%	147	16.92%	184	18.76%	146	18.89%	660	35.46%
Fire Suppression	179	19.52%	157	18.07%	191	19.47%	145	18.76%	127	6.82%
Skills Training	141	15.38%	120	13.81%	123	12.54%	139	17.98%	125	6.72%
Wellness/Fitness	146	15.92%	129	14.84%	131	13.35%	117	15.14%	116	6.23%
Rescue - Non-Fire	52	5.67%	27	3.11%	26	2.65%	17	2.20%	29	1.56%
Fire Prevention	11	1.20%	15	1.73%	21	2.14%	14	1.81%	27	1.45%
Responding to Incident	36	3.93%	53	6.10%	64	6.52%	28	3.62%	23	1.24%
Returning from Incident	18	1.96%	28	3.22%	34	3.47%	14	1.81%	13	0.70%
Hazmat	3	0.33%	7	0.81%	5	0.51%	4	0.52%	7	0.38%
Rescue - Fire Related	1	0.11%	1	0.12%	1	0.10%	2	0.26%	3	0.16%
<b>Total</b>	<b>917</b>	<b>100.00%</b>	<b>869</b>	<b>100.00%</b>	<b>981</b>	<b>100.00%</b>	<b>773</b>	<b>100.00%</b>	<b>1,861</b>	<b>100.00%</b>

(Numbers in red above = least amount of injuries for the five year period.)

*Table 5: Number of Individuals Who Sustained Fatal Injuries/Exposures, 2020*

Activity	Count	Percent
EMS	3	60%
Fire Suppression	1	20%
Station Duties	1	20%
<b>Total</b>	<b>5</b>	<b>100%</b>



## Emergency vs. Non-Emergency Injuries

*Table 6: Number of Injured Individuals by Emergency Activity and Severity, 2020*

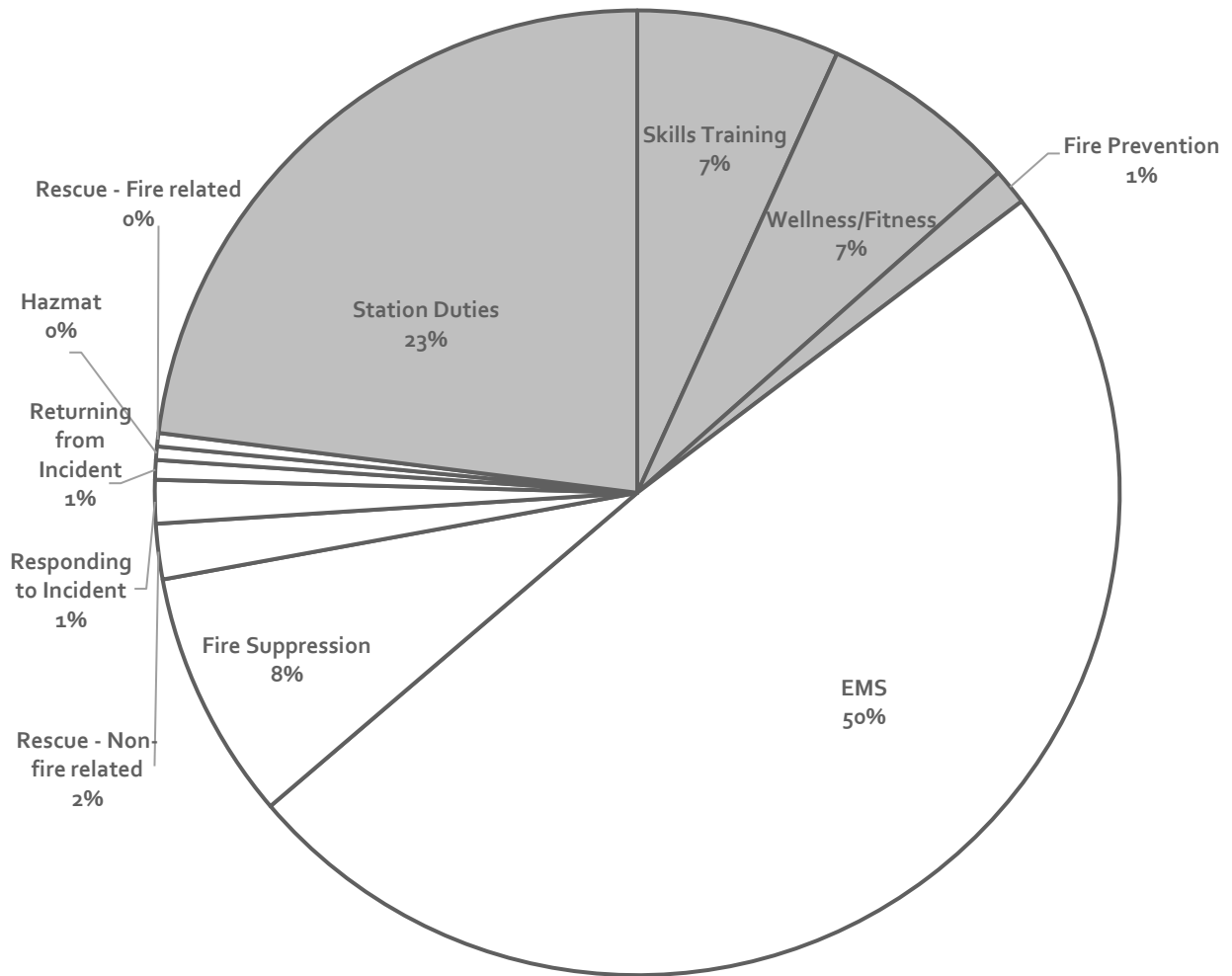
<b>Activity</b>	<b>Minor</b>	<b>Serious</b>	<b>Fatal</b>	<b>Total</b>
EMS	2,529	660	3	3,192
Fire Suppression	397	127	1	525
Rescue - Non-fire related	89	29	0	118
Responding to Incident	68	23	0	91
Returning from Incident	28	13	0	41
Hazmat	22	7	0	29
Rescue - Fire related	26	3	0	29
<b>Total</b>	<b>3,159</b>	<b>862</b>	<b>4</b>	<b>4,025</b>

*Table 7: Number of Injured Individuals by Non-Emergency Activity and Severity, 2020*

<b>Activity</b>	<b>Minor</b>	<b>Serious</b>	<b>Fatal</b>	<b>Total</b>
Station Duties	722	731	1	1,454
Skills Training	304	125	0	429
Wellness/Fitness	306	116	0	422
Fire Prevention	49	27	0	76
<b>Total</b>	<b>1,381</b>	<b>999</b>	<b>1</b>	<b>2,381</b>

Figure 3: Percentages of Injured Individuals in Emergency and Non-Emergency Activities, 2020

Emergency Activities (white) = 62%  
Non-emergency Activities (gray) = 38%

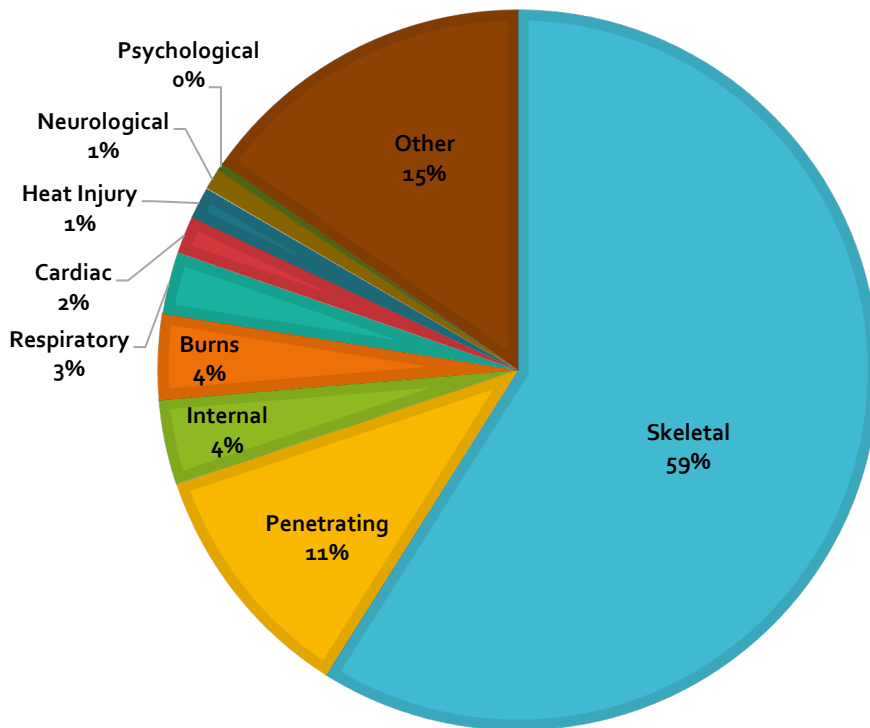


# Types of Injuries

*Table 8: Types of Injuries, 2020*

Type of Injury	2020	
	Count	Percent
Skeletal	1,504	59%
Penetrating	282	11%
Internal	98	4%
Burns	96	4%
Respiratory	70	3%
Cardiac	44	2%
Heat Injury	36	1%
Neurological	24	1%
Psychological	10	0%
Other	388	15%
<b>Total</b>	<b>2,552</b>	<b>100%</b>

*Figure 4: Types of Injuries, 2020*

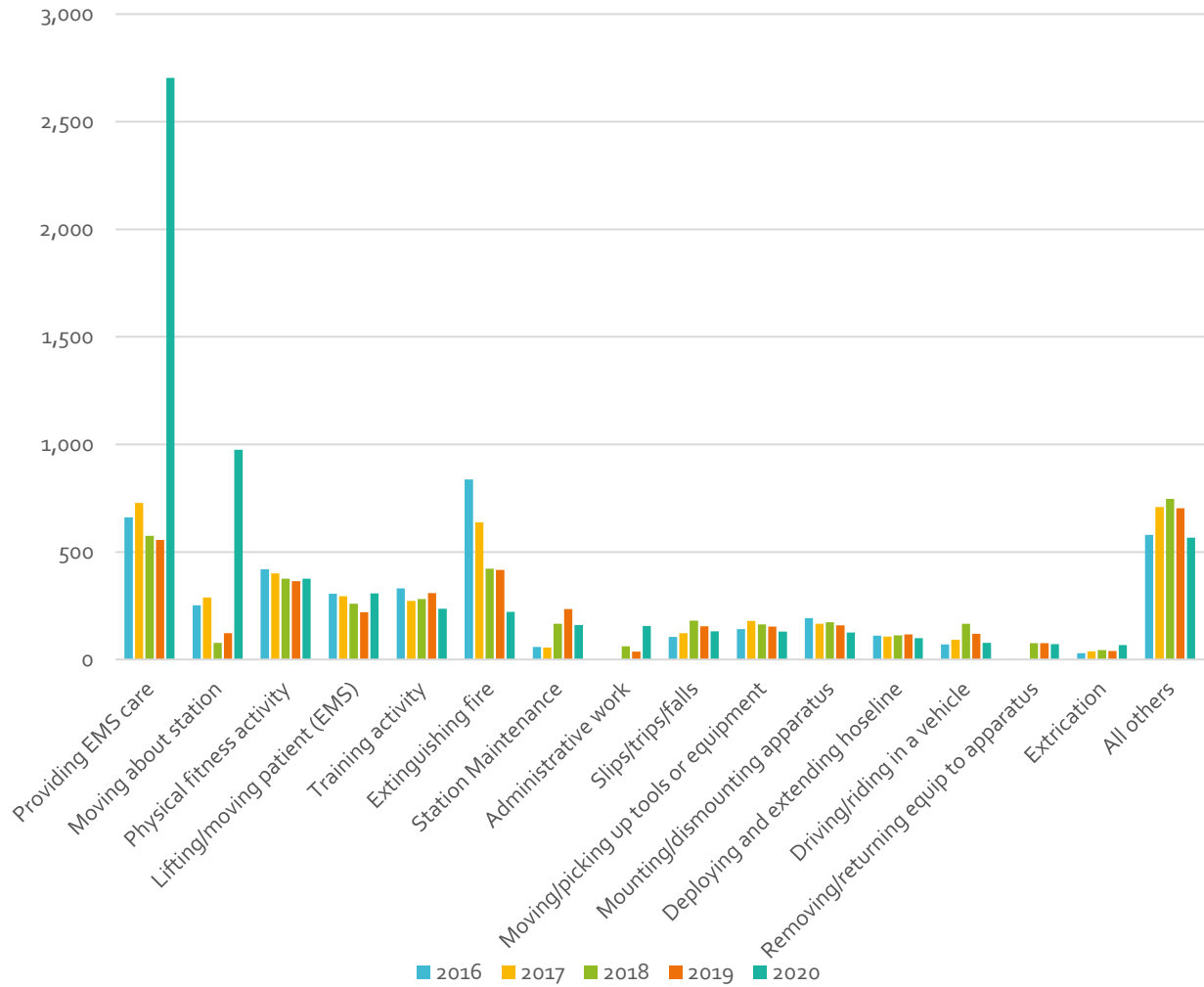


## Task at Time of Injury

*Table 9: Top 15 Tasks at Time of Injury, 2016-2020 (ordered by 2020, descending)*

<b>Task</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Providing EMS care	661	728	575	556	2,704
Moving about station	252	289	77	122	975
Physical fitness activity	420	401	376	364	376
Lifting/moving patient (EMS)	306	294	259	220	307
Training activity	331	273	281	309	236
Extinguishing fire	837	638	423	416	222
Station Maintenance	59	55	166	235	161
Administrative work	n/a	n/a	61	37	156
Slips/trips/falls	105	122	181	154	132
Moving/picking up tools or equipment	142	179	163	153	130
Mounting/dismounting apparatus	193	166	173	159	125
Deploying and extending hoseline	111	106	113	117	100
Driving/riding in a vehicle	70	92	166	119	77
Removing/returning equip to apparatus	1	n/a	76	76	71
Extrication	30	38	44	40	68
All others	579	709	747	703	566
<b>Total</b>	<b>4,097</b>	<b>4,090</b>	<b>3,881</b>	<b>3,780</b>	<b>6,406</b>

Figure 5: Top 15 Tasks at Time of Injury, 2016 – 2020



## Injuries by Body Part

*Table 10: Injuries by Body Part, 2016 – 2017 (ordered by 2017, descending)*

Injured Body Part	2016	2017
Multiple body parts, whole body	1,007	1,064
Hand and fingers	359	365
Knee	376	315
Hip, lower back, or buttocks	283	292
Back, except spine	244	248
Shoulder	238	221
Ankle	192	179
Multiple parts	124	151
Face	116	127
Arm, lower, not including elbow or wrist	109	121
Leg, lower	132	113
Foot and toes	85	87
Head	82	78
Ear	74	76
Chest	82	76
Eye	70	73
Multiple body parts, upper body	61	73
Elbow	47	72
Wrist	74	56
Other body parts injured	342	303
<b>Total</b>	<b>4,097</b>	<b>4,090</b>

Because TCFP migrated to a new data management system in 2017, the data collected in years 2018-2020 has been categorized differently than it had been in the past. This is why Table 10 only goes through 2017, and we now have new tables (11 & 12) for 2018-2020 data.

*Table 11: Injuries by Body Part Type, 2018 – 2020*

<b>Injured Body Part</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Upper Extremities	864	795	700
Lower Extremities	810	684	616
Back	490	466	445
Multiple Parts	318	255	281
Head	300	327	197
Internal	105	125	144
Chest	104	108	107
Neck	64	56	33
Hip	23	33	29
<b>Total</b>	<b>3,078</b>	<b>2,849</b>	<b>2,552</b>

*Table 12: Injuries by Body Part Sub-Type, 2018 – 2020*

<b>Body Part by Sub-Type</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Back: Back	198	194	191
Back: Buttocks	1	3	2
Back: Lower Back	282	258	248
Back: Neck	4	4	1
Back: Spine	5	7	3
Chest: Abdomen	5	4	2
Chest: Abdominal Area	10	4	9
Chest: Chest	89	100	96
Head: Cheek	5	7	4
Head: Chin	7	1	4
Head: Ear	77	117	50
Head: Eye	64	60	44
Head: Face	111	112	78
Head: Jaw	1	6	2
Head: Mouth	15	16	10
Head: Nose	20	8	3
Head: Skull	n/a	n/a	2
Hip: Groin	9	14	9

Hip: Hip	13	18	18
Hip: Pelvis	1	1	2
Internal: Genito-urinary	4	11	4
Internal: Heart	5	7	4
Internal: Internal	66	71	74
Internal: Intestinal tract	5	4	3
Internal: Lungs	9	11	51
Internal: Stomach	15	20	8
Internal: Trachea	1	1	0
Lower Extremities: Ankle	206	163	135
Lower Extremities: Foot	93	88	78
Lower Extremities: Knee	347	273	252
Lower Extremities: Lower leg	111	97	95
Lower Extremities: Toes	15	22	13
Lower Extremities: Upper Leg	38	41	43
Multiple Parts: Lower Body	26	19	20
Multiple Parts: Unknown	26	11	27
Multiple Parts: Upper Body	74	76	65
Multiple Parts: Whole Body	192	149	169
Neck: Neck	59	49	30
Neck: Throat	5	7	3
Upper Extremities: Elbow	68	44	34
Upper Extremities: Hands	361	326	319
Upper Extremities: Lower Arm	10	59	55
Upper Extremities: Shoulder	234	235	170
Upper Extremities: Upper Arm	112	72	45
Upper Extremities: Wrist	79	59	77
<b>Total</b>	<b>3,078</b>	<b>2,849</b>	<b>2,552</b>



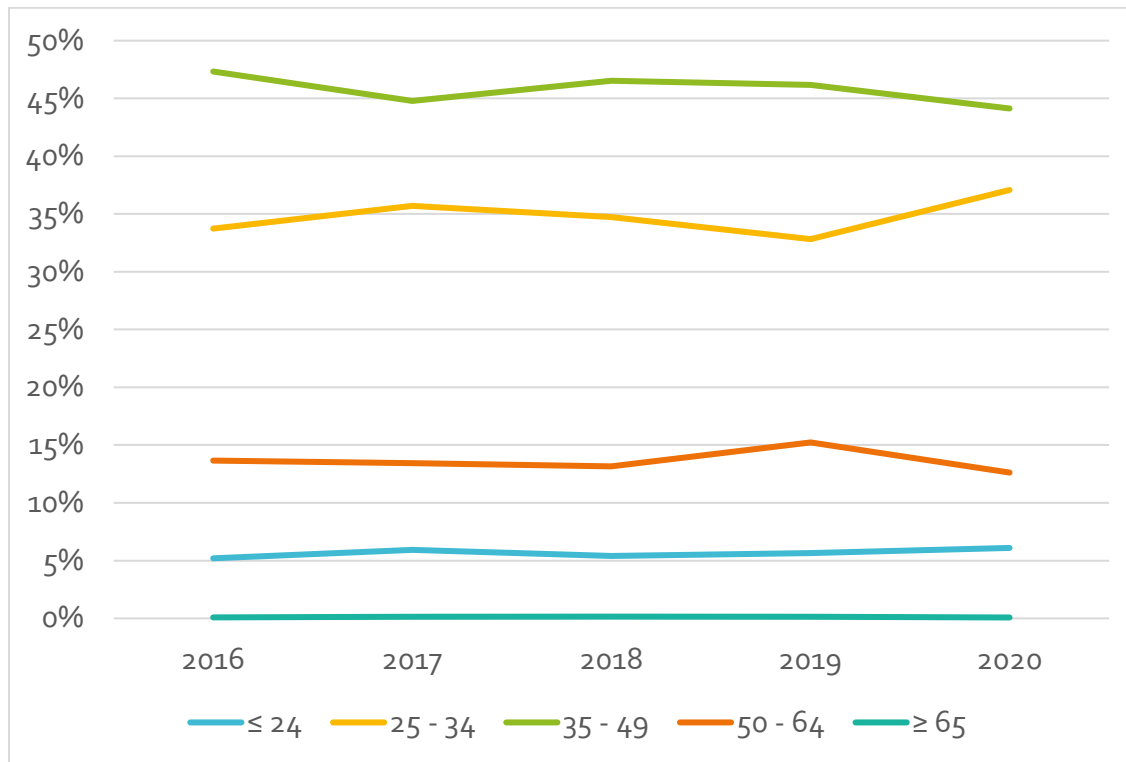
# Individuals by Age Group

Table 13: Individuals by Age Group\*, 2016 – 2020

Age Group	2016		2017		2018		2019		2020	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
≤ 24	213	5.20%	242	5.92%	210	5.41%	210	5.65%	389	6.10%
25 - 34	1,382	33.73%	1,460	35.70%	1,348	34.73%	1,220	32.82%	2,365	37.07%
35 - 49	1,939	47.33%	1,832	44.79%	1,806	46.53%	1,716	46.17%	2,815	44.13%
50 - 64	559	13.64%	550	13.45%	511	13.17%	566	15.23%	805	12.62%
≥ 65	4	0.10%	6	0.15%	6	0.15%	5	0.13%	5	0.08%
<b>Totals</b>	<b>4,097</b>	<b>100.00%</b>	<b>4,090</b>	<b>100.00%</b>	<b>3,881</b>	<b>100.00%</b>	<b>3,717</b>	<b>100.00%</b>	<b>6,379</b>	<b>100.00%</b>

\*Includes injured individuals and individuals with exposures.

Figure 6: Individuals by Age Group, percentages, 2016 – 2020



## Activities Resulting in Lost Time

**Table 14: Activities Individuals Were Doing that Resulted in Lost Time, 2020 Totals**

Activity	Count	Days Missed	
		Average	Sum
EMS	562	22	12,457
Station Duties	444	21	9,392
Wellness/fitness	76	47	3,581
Skills training	87	42	3,670
Fire suppression	76	36	2,795
Returning from incident	10	50	509
Rescue - nonfire-related	17	24	415
Responding to incident	16	39	624
Fire prevention	23	14	335
Rescue - fire-related	1	55	55
Hazmat	4	16	66
<b>Total</b>	<b>1316</b>	<b>33</b>	<b>33,899</b>

**Table 15: Activities Individuals Were Doing that Resulted in Lost Time, 2020 Between 1 and 30 days**

Activity	Count	Days Missed	
		Average	Sum
EMS	499	15	7,495
Station Duties	403	13	5,349
Skills Training	54	12	675
Wellness/Fitness	42	13	547
Fire Suppression	53	9	529
Fire Prevention	22	13	298
Rescue - Nonfire-related	14	15	211
Responding to incident	10	12	122
Returning from incident	6	10	64
Hazmat	3	6	18
<b>Total</b>	<b>1106</b>	<b>12</b>	<b>15,308</b>

**Table 16: Activities Individuals Were Doing that Resulted in Lost Time, 2020  
Between 31 and 90 days**

Activity	Count	Days Missed	
		Average	Sum
EMS	47	45	2,125
Skills Training	23	61	1,421
Station Duties	25	44	1,121
Wellness/Fitness	22	54	1,192
Fire Suppression	11	49	545
Responding to incident	4	52	209
Returning from incident	2	84	169
Rescue - nonfire-related	2	42	85
Rescue - fire-related	1	55	55
Fire Prevention	1	37	37
Hazmat	1	48	48
<b>Total</b>	<b>139</b>	<b>52</b>	<b>7,007</b>

**Table 17: Activities Individuals Were Doing that Resulted in Lost Time, 2020  
91+ days**

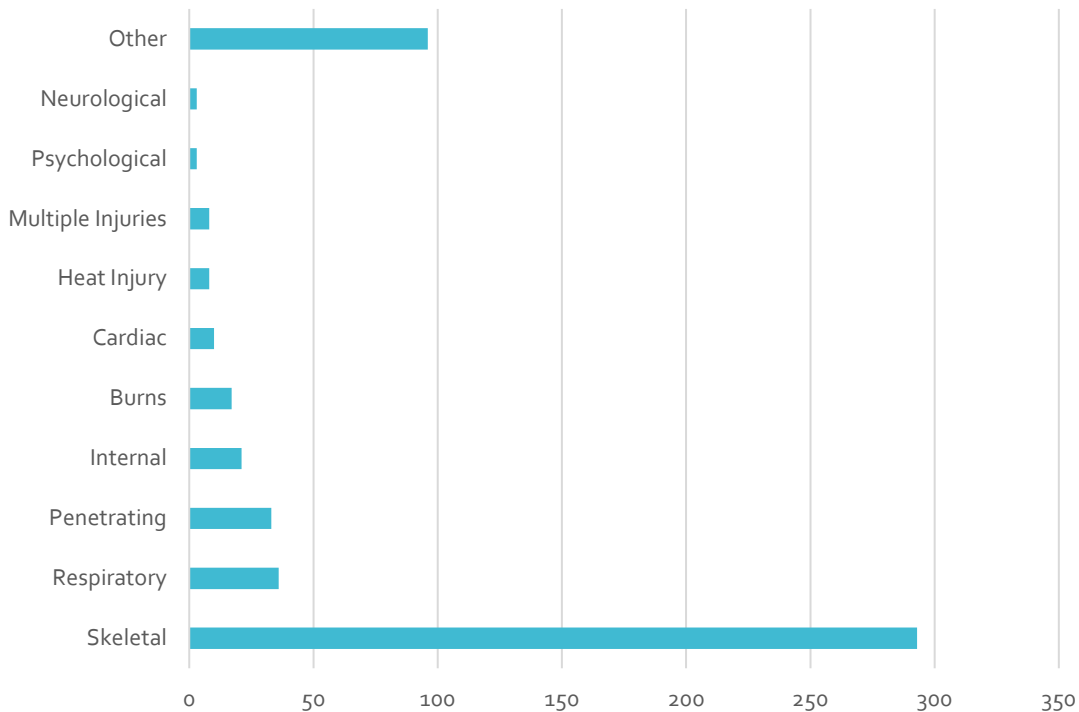
Activity	Count	Days Missed	
		Average	Sum
Station Duties	16	182	2,922
Wellness/Fitness	12	153	1,842
EMS	16	177	2,837
Skills Training	10	157	1,574
Fire Suppression	12	143	1,721
Returning from incident	2	138	276
Rescue - nonfire-related	1	119	119
Responding to incident	2	146	293
<b>Total</b>	<b>71</b>	<b>152</b>	<b>11,584</b>

# Types of Injuries with Lost Time

*Table 18: Types of Injuries Resulting in Lost Time, 2020*

Type of Injury	Count
Skeletal	293
Respiratory	36
Penetrating	33
Internal	21
Burns	17
Cardiac	10
Heat Injury	8
Multiple Injuries	8
Psychological	3
Neurological	3
Other	96
<b>Total</b>	<b>528</b>

*Figure 7: Types of Injuries Resulting in Lost Time, 2020*



# Burn Injuries

*Table 19: All Burns, 2016 – 2020*

All Burns - Types	2016	2017	2018	2019	2020
Thermal (Heat/Fire)	92	96	108	72	80
Scald or Steam	9	13	12	10	11
Chemical	3	4	6	6	2
Electrical	2	0	1	2	3
<b>Totals</b>	<b>106</b>	<b>113</b>	<b>127</b>	<b>90</b>	<b>96</b>

*Table 20: Burns by Body Part Sub-Type, 2020*

Body Part Sub-Type	Count
Back: Back	0
Back: Buttocks	0
Back: Lower Back	0
Back: Neck	0
Back: Spine	0
Chest: Abdomen	0
Chest: Abdominal Area	0
Chest: Chest	0
Head: Cheek	1
Head: Chin	3
Head: Ear	12
Head: Eye	3
Head: Face	8
Head: Jaw	0
Head: Mouth	0
Head: Nose	0
Hip: Groin	0
Hip: Hip	0
Hip: Pelvis	0
Internal: Genito-urinary	0
Internal: Heart	0
Internal: Internal	0
Internal: Intestinal tract	0
Internal: Lungs	0
Internal: Stomach	0
Internal: Trachea	0

According to the Texas State Fire Marshal's Office, there were 57,950 fires in 2020.

Lower Extremities: Ankle	1
Lower Extremities: Foot	4
Lower Extremities: Knee	1
Lower Extremities: Lower Leg	1
Lower Extremities: Toes	0
Lower Extremities: Upper Leg	1
Multiple Parts: Lower Body	0
Multiple Parts: Unknown	0
Multiple Parts: Upper Body	11
Multiple Parts: Whole Body	0
Neck: Neck	2
Neck: Throat	0
Upper Extremities: Elbow	1
Upper Extremities: Hands	20
Upper Extremities: Lower Arm	14
Upper Extremities: Shoulder	4
Upper Extremities: Upper Arm	0
Upper Extremities: Wrist	9
<b>Total</b>	<b>96</b>

*Table 21: Burns by Body Part, 2016 – 2020, Comparison to Historical Data*

Body Part	2016	2017	2018*	2019*	2020*
Ear	14	16	17	17	12
Hand and fingers	27	22	30	16	20
Face	16	9	14	10	12
Wrist	9	7	8	11	9
Multiple body parts, upper body	8	4	10	6	11
Eye	0	0	4	5	3
Hip, lower back, or buttocks	1	0	0	5	0
Foot and toes	3	1	6	4	4
Multiple parts	4	12	5	4	0
Arm, upper, not including elbow or shoulder	1	2	11	3	0
Lower extremities	2	0	8	3	3
Chest	1	1	2	2	0
Neck	4	7	2	2	2
Knee	1	2	0	1	1

Shoulder	3	6	9	1	4
Back, except spine	0	2	1	0	0
Elbow	0	1	0	0	1
Pelvis or groin	0	2	0	0	0
Throat	0	0	0	0	0
Arm, lower, not including elbow or wrist	2	12	n/a	n/a	14
Head	2	1	n/a	n/a	n/a
Leg, lower	3	3	n/a	n/a	n/a
Upper extremities	2	0	n/a	n/a	n/a
Neck and shoulders	0	1	n/a	n/a	n/a
Undetermined	3	2	n/a	n/a	0
<b>Total</b>	<b>106</b>	<b>113</b>	<b>127</b>	<b>90</b>	<b>96</b>

\*The 2018, 2019, and 2020 columns were pieced together from the data in Table 20: Burns by Body Part Sub-Type, from the 2018, 2019, and 2020 injury report data. This was done in order to view trends and patterns.

## Exposures

*Table 22: Exposure by Sub-Type, 2018 – 2020*

<b>Exposure + Sub-Type</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Chemical: Ammonia	1	3	0
Chemical: Battery Acid*	n/a	4	0
Chemical: Benzene	2	15	1
Chemical: Bleach	1	11	0
Chemical: Not listed	151	160	70
Chemical: Unidentified	73	55	27
Physical: Animal venom	6	17	5
Physical: Meningitis	38	40	33
Physical: Not listed	138	201	42
Physical: Plant toxin	27	14	12
Physical: Radiation*	n/a	4	1
Physical: Unidentified	87	66	13
Physical: UV Light*	n/a	2	1
Respiratory: Blood	69	73	78
Respiratory: COVID 19*	n/a	1	1,715
Respiratory: Influenza	4	19	7
Respiratory: Not listed	108	118	56
Respiratory: Saliva	24	22	28
Respiratory: Tuberculosis	98	76	31
Respiratory: Unidentified	50	37	6
Respiratory: Vomit	7	8	13
Other: Asbestos*	n/a	3	1
Other: Carbon Monoxide*	n/a	1	6
Other: Carcinogenic Substances*	n/a	1	13
Other: Contaminated Water/Sewage*	n/a	4	11
Other: Heavy Metals*	n/a	0	1
Other: Mold*	n/a	0	9
Other: Smoke/Products of Combustion*	n/a	5	19
Other: Virus	n/a	3	1,878
<b>Total</b>	<b>884</b>	<b>963</b>	<b>4,077</b>

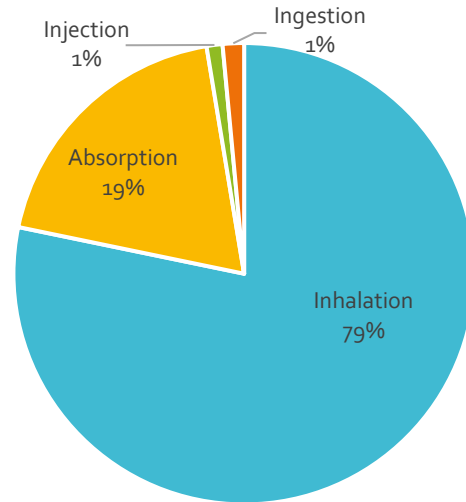
\*These exposure types were added to the injury reporting application in 2019, which is why they have n/a in the numbers column for 2018.



*Table 23: Exposure by Route, 2020*

Route	Count
Inhalation	3,208
Absorption	760
Ingestion	59
Injection/Puncture	50
<b>Total</b>	<b>4,077</b>

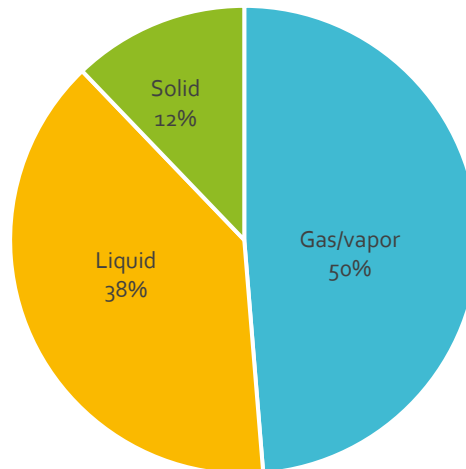
*Figure 8: Exposure by Route, 2020, percentages*



*Table 24: Exposure by Substance, 2020*

Substance	Count
Gas/vapor	2,029
Liquid	1,560
Solid	488
<b>Total</b>	<b>4,077</b>

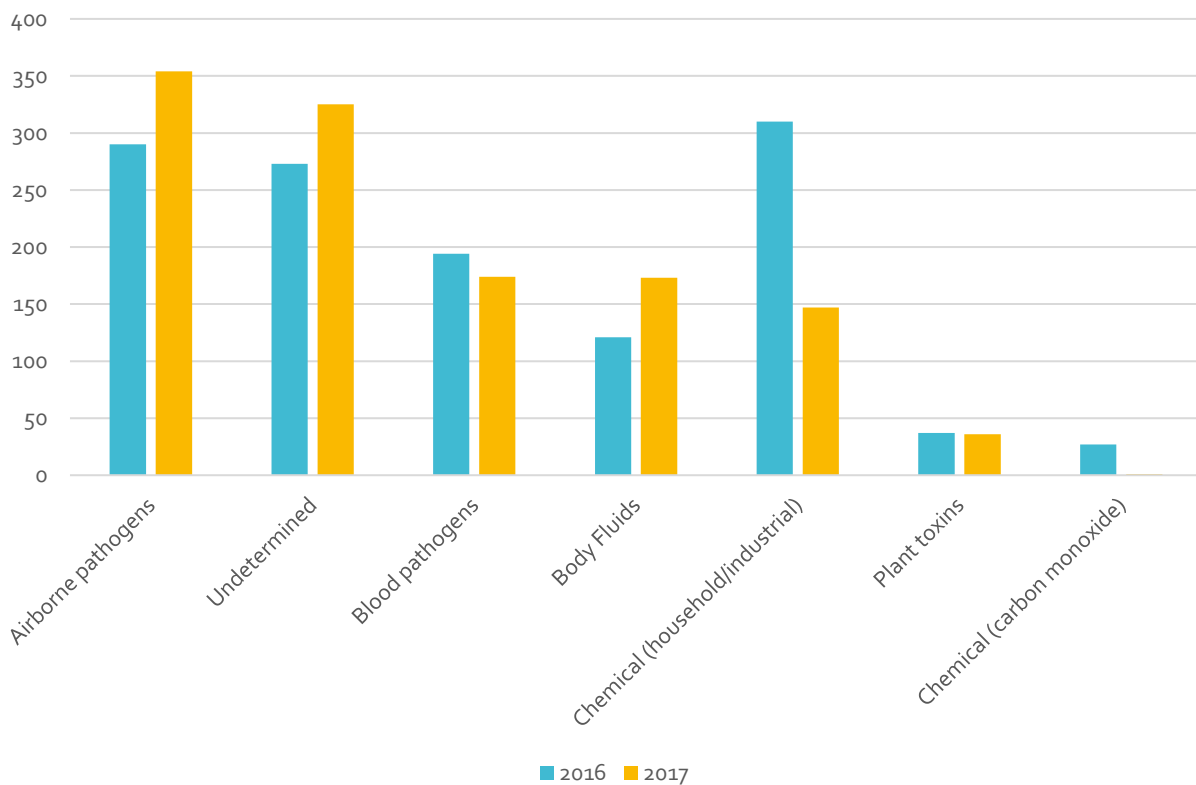
*Figure 9: Exposure by Substance, 2020, percentages*



*Table 25: Routes of Exposure, Historical Data, 2016 – 2017*

<b>Exposure Routes</b>	<b>2016</b>	<b>2017</b>
Airborne pathogens	290	354
Undetermined	273	325
Blood pathogens	194	174
Body Fluids	121	173
Chemical (household/industrial)	310	147
Plant toxins	37	36
Chemical (carbon monoxide)	27	1
<b>Total</b>	<b>1,252</b>	<b>1,210</b>

*Figure 10: Routes of Exposure, Historical Data, 2016 – 2017*



*Table 26: Exposure Description, Historical Data, 2016 – 2017*

<b>Exposure description</b>	<b>2016</b>	<b>2017</b>
Unknown	148	290
Blood	161	153
Chemicals/household/industrial	310	122
Asbestos	51	112
Tuberculosis	128	109
Body fluids	91	101
Meningitis	62	104
Animals or wildlife	90	58
Sickness, other	24	49
Poison plants	37	37
Vomit	14	17
Chlorine	1	14
Mold	26	10
Airborne, other	40	7
Staph	0	7
Carbon monoxide	26	5
HIV	4	4
Scabies	21	4
Hepatitis C	14	3
MRSA	14	3
Bacterial pneumonia	0	1
Explosive residue	0	0
Influenza	0	0
Lice	0	0
Strep	1	0
<b>Total</b>	<b>1,263</b>	<b>1,210</b>

# Cancer

In June of 2019, the Governor of Texas signed Senate Bill 2551 (SB 2551) which expanded the scope of the law in which firefighters and EMTs who suffer from cancer are presumed to have developed the condition during the course and scope of their employment. The types of cancer this law addresses include:

- cancers that originate at the stomach, colon, rectum, skin, prostate, testis or brain
- non-Hodgkin's lymphoma
- multiple myeloma
- malignant melanoma
- renal cell carcinoma

TCFP received **47** reports of cancer diagnoses from fire departments in 2020:

**Skin/Melanoma/Basal Cell/Squamous Cell carcinoma – 10**

(Males, ages 34, 36, 37, 37, 38, 38, 50, 50, 53, 56)

**Prostate – 9**

(Males – ages 48, 52, 53, 54, 58, 58, 59, 60, 62)

**Non-Hodgkin's Lymphoma – 7**

(Males – 30, 38, 47, 61, 61, 64, 64)

**Kidney/renal cell carcinoma – 3**

(Males – 50, 51, 51)

**Colon – 2**

(Males – 25, 42)

**Testicular – 2**

(Males – 26, 33)

**Thyroid – 2**

(Males – 29, 30)

**Breast – 1**

(Female – 49)

## A Reminder for Fire Departments

Any injuries to fire protection personnel that are reported to the Texas Worker's Compensation Commission must be reported to the Texas Commission on Fire Protection. This includes cancer diagnoses.

**Lung – 1**  
Male – 30)

**Stomach – 1**  
(Male – 43)

**Throat – 1**  
(Male – 68)

**Unidentified – 8**  
(Males – 31, 43, 45, 49, 53, 59, 61; Female – 18)

The commission strongly encourages fire departments to report cancer diagnoses; the commission recognizes that the number of job-related cancers reported during this time-period represents only a fraction of the cases that Texas fire departments are currently managing. There is a growing awareness of the impact that cancer is having on fire protection personnel nationwide, and the commission urges departments to use this reporting tool to help contribute to the education and awareness of the issue in Texas.

## SOP Issues

In 2020 there were 38 injuries attributed to failures of fire protection personnel to follow their departments' standard operating procedures (SOPs). All but a few were instances where the individuals were not wearing their provided PPE/SCBA gear in an environment or situation in which they should have been.

In its compliance inspections, the Texas Commission on Fire Protection verifies that fire departments have written SOPs that cover the appropriate subject matter.

*Table 27: Injuries Attributed to SOP Issues, 2020*

Activity	Minor	Serious	Total	2019	2018	2017
EMS	11	7	18	11	9	7
Fire Suppression	3	7	10	10	19	9
Skills Training	4	1	5	1	2	2
Responding to Incident	2	0	2	0	1	3
Station Duties	0	2	2	6	1	4
Wellness/Fitness	1	0	1	1	0	1
<b>Totals</b>	<b>21</b>	<b>17</b>	<b>38</b>	<b>29</b>	<b>32</b>	<b>26</b>

*Table 28: Injuries Attributed to PPE & PASS Failures, 2020*

Activity	Minor	Serious	Total	2019	2018	2017*
Fire Suppression	5	2	7	2	8	n/a
EMS	2	2	4	0	1	n/a
Skills Training	1	0	1	2	2	n/a
<b>Totals</b>	<b>8</b>	<b>4</b>	<b>12</b>	<b>4</b>	<b>11</b>	<b>n/a</b>

\*TCFP did not start collecting information on PPE & PASS failures until 2018.

## Fatalities

The commission's 2020 injury report includes five fatalities. Fatalities listed in this report include only those reported to the Texas Commission on Fire Protection (TCFP) by the entities it regulates.

The State Fire Marshal's Office conducted three Texas fire fighter fatality incident investigations between September 1, 2018 and August 31, 2019. Comprehensive information about the investigations may be found on their website at the following web address:

<https://www.tdi.texas.gov/fire/fmloddannuals.html>

## Recommendations

The commission would like to thank Texas fire departments for their ongoing participation in reporting fire protection personnel injuries. This report would not be possible without their efforts.

Based on their review of the data contained within this report, the commission offers the following recommendations:

### *Recommendations for the Texas Fire Service*

1. Departments should evaluate their SOPs related to station duties to see if improvements can be made.
2. Consider early detection testing for cancer.
3. NFPA 1851 is required by state law and departments are strongly encouraged to follow it.
4. Clean everything often (e.g., clean cab, clean tools, equipment, PPE, self-decontamination after incidents, etc.)



# Commission-Adopted Standards

The commission has adopted several NFPA and other nationally recognized standards to help keep Texas fire protection personnel safe. This list summarizes the relationships between some of the Texas laws and national standards and is not intended to be all-inclusive:

## Texas Government Code

[§419.040, Protective Clothing](#)

[§419.041, Self-Contained Breathing Apparatus](#)

[§419.042, Personal Alert Safety Systems](#)

[§419.043, Applicable National Fire Protection Association Standard](#)

[§419.044, Incident Management System](#)

[§419.045, Personnel Accountability System](#)

[§419.046, Fire Protection Personnel Operating at Emergency Incidents](#)

[§419.047, Commission Enforcement](#)

## Texas Administrative Code

[CHAPTER 425 FIRE SERVICE INSTRUCTORS](#)

[§443.9 National Fire Protection Association Standard](#)

[CHAPTER 435 FIRE FIGHTER SAFETY](#)

[§435.21 Fire Service Joint Labor Management Wellness-Fitness Initiative](#)

[§435.23 Fire Fighter Injuries](#)

[§435.25 Courage to be Safe So Everyone Goes Home Program](#)

[§435.27 Live Fire Training Structure Evolutions](#)

[CHAPTER 451 FIRE OFFICER](#)

[CHAPTER 457 INCIDENT SAFETY OFFICER CERTIFICATION](#)

Commission's web page

[NFPA Standards adopted by the commission](#)



# **Firefighter Fatality Investigations**

## **Annual Report**

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