

**FIRE FIGHTER ADVISORY COMMITTEE
AGENDA**

June 27, 2019, 9:00 A.M.

1701 N. Congress Ave., William B. Travis Building, Room 1-104, Austin, Texas

The Fire Fighter Advisory Committee will convene in open session to deliberate and possibly take formal action on any of the following agenda items:

1. Roll call - 9:00 a.m.
2. Adoption of March 21, 2019 Fire Fighter Advisory Committee meeting minutes.
3. Report from the Curriculum and Testing Committee with discussion and possible action on recommendations regarding possible changes to the Certification Curriculum Manual as follows:
 - a. Updated Reference List for the Hazardous Materials Awareness Curriculum.
 - b. Updated Reference List for the Hazardous Materials Incident Commander Curriculum.
 - c. Updated Reference List for the Hazardous Materials Operations - Mission Specific Competencies Curriculum.
4. Discussion and possible action regarding proposed amendments to 37 TAC, Chapter 429, Fire Inspector and Plan Examiner, Subchapter B, Minimum Standards For Plan Examiner.
5. Discussion and possible action regarding proposed amendments to 37 TAC, Chapter 439, Examinations For Certification, Subchapter A, Examinations for On- Site Delivery Training.
6. Discussion and possible action regarding proposed amendments to 37 TAC, Chapter 459, Fire and Life Safety Educator
7. Discussion of the 2018 data collected on fire fighter injuries, and possible action on developing recommendations to be submitted to the commission for approval and submission to the State Fire Marshal's Office.
8. Discussion and possible action on setting future meeting dates, locations and agenda items.
9. Adjourn meeting.

1. Roll call--- 9:00 a.m.

2. Adoption of the March 21, 2019 Fire Fighter Advisory Committee meeting minutes.

TEXAS COMMISSION ON FIRE PROTECTION

Presiding Officer Mike Wisko called the March 21, 2019 meeting of the Fire Fighter Advisory Committee to order at 9:00 a.m. at the William B. Travis Building, 1701 N. Congress Ave., Room 1-104, in Austin, Texas.

Member	Jim Reidy	Michael Wisko	Vince Abrigo	Ken Swindle	Keith Schmidt
Attendance	Jason Collier	Daniel DeYear	Daniel Buford	Daniel Anderson	
					*absent entire meeting
					**absent part of meeting

Staff Tim Rutland Deborah Cowan Andrew Lutostanski, Assistant Attorney General

1. Roll call Assistant Presiding Officer Daniel DeYear called roll and a quorum was present.

2. Election of Officers A motion was made by Jason Collier and seconded by Daniel DeYear to maintain current officers: Mike Wisko, Presiding Officer, Daniel DeYear, Assistant Presiding Officer and Keith Schmidt, Secretary. The motion carried.

3. Adoption of Minutes A motion was made by Jim Reidy and seconded by Vince Abrigo to approve the minutes of the December 13, 2018, fire fighter advisory committee meeting as discussed. The motion carried.

4. Curriculum And Testing Committee Report A motion was made by Daniel DeYear and seconded by Jason Collier to accept the recommended changes to the Certification Curriculum Manual as presented and forward to the commission for approval. The motion carried.

5. 37 TAC, Chapter 427 A motion was made by Jim Reidy and seconded by Daniel DeYear to reject the amendments to 37 TAC, Chapter 427, Training Facility Certification as proposed by the commission. The motion carried.

6. 37 TAC, Chapter 449 A motion was made by Daniel DeYear and seconded by Jim Reidy to reject the amendments to 37 TAC, Chapter 449, Head of a Fire Department as proposed by the commission. The motion carried.

7. 37 TAC, Chapter 435 After discussion, no action taken.

8. Injury Report After discussion, no action taken.

9. Request by Daniel DeYear Tim Rutland, Executive Director gave an update on the feasibility of an annual report on common compliance inspection violations. No action necessary.

10. Future meeting All meeting dates were previously set for 2019.
dates

11. Adjournment A motion was made by Daniel DeYear and seconded by Ken Swindle to adjourn. The
motion carried.

Mike Wisko
Presiding Officer

- 3. Report from the Curriculum and Testing Committee with discussion and possible action on recommendations regarding possible changes to the Certification Curriculum Manual as follows:**
 - a. Updated Reference List for the Hazardous Materials Awareness Curriculum.**
 - b. Updated Reference List for the Hazardous Materials Incident Commander Curriculum.**
 - c. Updated Reference List for the Hazardous Materials Operations - Mission Specific Competencies Curriculum.**

REFERENCE LIST FOR THE HAZARDOUS MATERIALS AWARENESS CURRICULUM

This Reference List is provided as a general guide for both instructors and students to locate information pertaining to the specific objectives in the TCFP Curriculum. This list is **not** all-inclusive and does not in any way limit TCFP development and use of questions to test the objectives of the curriculum:

Required References

Texts

- Certification Curriculum Manual*. Texas Commission on Fire Protection. (Most current edition). Austin, TX: Texas Commission on Fire Protection.
- Code of Federal Regulations, Title 29 Part 1910.120, Appendix A*. United States. U.S. Department of Labor, Occupational Safety & Health Administration.
- Emergency Response Guidebook*. United States. (Most current edition). Washington, DC: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.
- Essentials of Fire Fighting and Fire Department Operations, 6th edition*. International Fire Service Training Association. (2013). Stillwater, OK: Fire Protection Publications, Oklahoma State University.
- Fundamentals of Fire Fighter Skills, 3rd edition*. International Association of Fire Chiefs, & National Fire Protection Association. (2014). Sudbury, MA: Jones and Bartlett.
- Hazardous Materials Awareness and Operations, 2nd 3rd edition*. Schnepf, R. (~~2010~~ **2019**). Sudbury, MA: Jones & Bartlett.
- Hazardous Materials for First Responders, 4th edition*. International Fire Service Training Association. (2010). Stillwater, OK: Fire Protection Publications, Oklahoma State University.
- Hazardous Materials/Weapons of Mass Destruction Response Handbook, 6th/2013 edition*. McGowan, T. (2012). Quincy, MA: National Fire Protection Association.
- NFPA 472: Standard for Professional Competence of Responders to Hazardous Materials Incidents*. (2013 ed.). Quincy, MA: NFPA Publications. National Fire Protection Association
- Standards Manual for Fire Protection Personnel*. Texas Commission on Fire Protection. (Current edition). Austin, TX: Texas Commission on Fire Protection.

Recommended References

The most current edition of the following publications and media are recommended (not required) supplemental material for program use.

Media

DOT Chart 15: Hazardous Materials Marking, Labeling and Placarding Guide. (or current edition) United States. Washington, DC: U.S. Dept. of Transportation, Pipeline and Hazardous Materials Safety Administration.

Emergency Response Guidebook 2012. [DVD]. United States. (2012). Washington, DC: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Hazmat Awareness. Action Training Systems, Inc. (2008). [2 Disc DVD Set - Recognition & Identification]. Poulsbo, WA: Action Training Systems.

Hazardous Materials Awareness and Operations [DVD]. International Association of Fire Chiefs, & National Fire Protection Association. (2006). Sudbury, MA: Jones and Bartlett.

REFERENCE LIST FOR THE HAZARDOUS MATERIALS INCIDENT COMMANDER CURRICULUM

This Reference List is provided as a general guide for both instructors and students to locate information pertaining to the specific objectives in the TCFP Curriculum. This list is **not** all-inclusive and does not in any way limit TCFP development and use of questions to test the objectives of the curriculum:

Required References

Texts

Certification Curriculum Manual. Texas Commission on Fire Protection. (Most current edition). Austin, TX: Texas Commission on Fire Protection.

Code of Federal Regulations, Title 29 Part 1910.120, Appendix A. United States. U.S. Department of Labor, Occupational Safety & Health Administration.
http://edocket.access.gpo.gov/cfr_2007/julqtr/pdf/29cfr1910.120.pdf

Emergency Response Guidebook. United States. (Most current edition). Washington, DC: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Hazardous Materials Awareness and Operations, 2nd 3rd Edition. Schnepf (~~2010~~ **2019**). Sudbury, MA: Jones & Bartlett.

Hazardous Materials for First Responders, 5th edition (2017). Stillwater, OK: Fire Protection Publications, Oklahoma State University.

Hazardous Materials: Managing the Incident. Chester Noll, G. G., Hildebrand, M. S., & Yvorra, J. G. (2005). MD: Red Hat Publishing Company, Inc.

Hazardous Materials/Weapons of Mass Destruction Response Handbook, 5th edition. Trebisacci, D. G. (2008). Quincy, MA: National Fire Protection Association.

NFPA 472: Standard for Professional Competence of Responders to Hazardous Materials Incidents. (2008 ed.). Quincy, MA: NFPA Publications. National Fire Protection Association

NIOSH Pocket Guide to Chemical Hazards. Cincinnati National Institute for Occupational Safety and Health. (Most current edition). OH: US Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health. <http://www.cdc.gov/niosh/npg/>

Standards Manual for Fire Protection Personnel. Texas Commission on Fire Protection. (Most current edition). Austin, TX: Texas Commission on Fire Protection.

Recommended References

The most current edition of the following publications and media are recommended (not required) supplemental material for program use.

Texts

Bretherick's Handbook of Reactive Chemical Hazards. Urben, P. G., Pitt, M. J., & Bretherick, L. (2007). Amsterdam: Elsevier.

Chlorine Emergencies: An Overview for First Responders. Chlorine Institute. (2007). Arlington, VA: The Chlorine Institute.

CHRIS: Chemical Hazards Response Information System. United States. (1992). COMDTINST, M16465.11B. Washington, DC: U.S. Dept. of Transportation, U.S. Coast Guard.

Dangerous Properties of Industrial and Consumer Chemicals. Cheremisinoff, N. P., King, J. A., & Boyko, R. (1994). New York, NY: M. Dekker.

Emergency Care for Hazardous Materials Exposure. Currance, P., Bronstein, A. C., & Clements, B. (2005). St. Louis, MO: Mosby.

Emergency Handling of Hazardous Materials in Surface Transportation. Association of American Railroads. (2009). Washington, DC: Association of American Railroads.

Fire Protection Guide to Hazardous Materials. National Fire Protection Association. (2001). Quincy, MA: National Fire Protection Association.

Hazardous Materials: Managing the Incident: Field Operations Guide. Chester Bevelacqua, A. S., Hildebrand, M. S., & Noll, G. G. (2007). MD: Red Hat Publishing, Inc.

Hawley's Condensed Chemical Dictionary. Lewis, R. J., & Hawley, G. G. (2007). West Sussex, England: Wiley.

Symbol Seeker: Hazard Identification Manual. Burns, P. P. (2002). Preston, England: Symbol Seeker.

Media

Hazardous Materials Containment Series. Action Training Systems. [4 Disc DVD Set]. Hazardous materials containment - series of 4 titles. Seattle, WA: Action Training Systems.

Hazardous Materials: Managing the Incident DVD Series. Massingham, G., Noll, G. G., Hildebrand, M. S., & Noll, G. G. (2005). [8 Disc DVD Set]. Edgartown, MA: Emergency Film Group.

**REFERENCE LIST FOR THE
HAZARDOUS MATERIALS OPERATIONS - MISSION SPECIFIC COMPETENCIES CURRICULUM**

This Reference List is provided as a general guide for both instructors and students to locate information pertaining to the specific objectives in the TCFP Curriculum. This list is **not** all-inclusive and does not in any way limit TCFP development and use of questions to test the objectives of the curriculum:

Required References

Texts

Certification Curriculum Manual. Texas Commission on Fire Protection. (Most current edition). Austin, TX: Texas Commission on Fire Protection.

Code of Federal Regulations, Title 29 Part 1910.120, Appendix A. United States. U.S. Department of Labor, Occupational Safety & Health Administration.
http://edocket.access.gpo.gov/cfr_2007/julqtr/pdf/29cfr1910.120.pdf

Emergency Response Guidebook. United States. (Most current edition). Washington, DC: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Essentials of Fire Fighting and Fire Department Operations, 6th edition. International Fire Service Training Association. (2013). Stillwater, OK: Fire Protection Publications, Oklahoma State University.

Fundamentals of Fire Fighter Skills, 3rd edition. International Association of Fire Chiefs, & National Fire Protection Association. (2014). Sudbury, MA: Jones and Bartlett.

Hazardous Materials Awareness and Operations, 2nd 3rd Edition. Schnepf (~~2010~~ **2019**). Sudbury, MA: Jones & Bartlett.

Hazardous Materials for First Responders, 4th 5th edition. International Fire Service Training Association. (~~2010~~ **2017**). Stillwater, OK: Fire Protection Publications, Oklahoma State University.

Hazardous Materials: Managing the Incident, 4th edition. Noll, G. G., Hildebrand, M. S., Schnepf, R. & Rudner, G.D. (2014). Burlington, MA: Jones and Bartlett.

Hazardous Materials/Weapons of Mass Destruction Response Handbook, 6th/2013 edition. McGowan, T. (2012). Quincy, MA: National Fire Protection Association.

NFPA 472: Standard for Professional Competence of Responders to Hazardous Materials Incidents. (2013 ed.). Quincy, MA: NFPA Publications. National Fire Protection Association

NIOSH Pocket Guide to Chemical Hazards. National Institute for Occupational Safety and Health. (Most current edition). Cincinnati, OH: US Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health. <http://www.cdc.gov/niosh/npg/>

Standards Manual for Fire Protection Personnel. Texas Commission on Fire Protection. (Most current edition). Austin, TX: Texas Commission on Fire Protection.

Recommended References

The most current edition of the following publications and media are recommended (not required) supplemental material for program use.

Texts

Bretherick's Handbook of Reactive Chemical Hazards. Urben, P. G., Pitt, M. J., & Bretherick, L. (2007). Amsterdam: Elsevier.

Emergency Care for Hazardous Materials Exposure. Currance, P., Bronstein, A. C., & Clements, B. (2005). St. Louis, MO: Mosby.

Field Guide to Tank Cars. Bureau of Explosives. (2010). Pueblo, Colorado: Association of American Railroads.

Fire Protection Guide to Hazardous Materials. 2010 edition. National Fire Protection Association. Quincy, MA: National Fire Protection Association.

Hawley's Condensed Chemical Dictionary. 15th edition. Lewis, R. J. (2007). West Sussex: Wiley.

Hazardous Materials: Managing the Incident Field Operations Guide. 2nd edition. Bevelacqua, A. S., (2014). Jones and Bartlett.

Media

Chlorine Emergencies: An Overview for First Responders. Chlorine Institute. (2007). Arlington, VA: The Chlorine Institute.

Hazardous Materials Containment Series. Action Training Systems. [4 Disc DVD Set] Hazardous materials containment - series of 4 titles. Seattle, WA: Action Training Systems.

Hazardous Materials: Managing the Incident DVD Series. Massingham, G., Noll, G. G., Hildebrand, M. S., & Noll, G. G. (2005). [8 Disc DVD Set] Edgartown, MA: Emergency Film Group.

How to Use the Chlorine Institute Emergency Kit "A" for 100 lb. and 150 lb. Chlorine Cylinders. Chlorine Institute. (Sept. 2013). New York, NY: The Chlorine Institute. [DVD + pamphlet]

How to Use the Chlorine Institute Emergency Kit "B" for Chlorine Ton Containers. New Chlorine Institute. (Dec. 2013). York, NY: The Chlorine Institute. [DVD + pamphlet]

How to Use the Chlorine Institute Emergency Kit "C" for Chlorine Tank Cars and Tank Trucks. Chlorine Institute. (Feb. 2014). New York, NY: The Chlorine Institute. [DVD + pamphlet]

4. **Discussion and possible action regarding proposed amendments to 37 TAC, Chapter 429, Fire Inspector and Plan Examiner, Subchapter B, Minimum Standards For Plan Examiner.**

CHAPTER 429

FIRE INSPECTOR AND PLAN EXAMINER

SUBCHAPTER B

MINIMUM STANDARDS FOR PLAN EXAMINER

§429.201. Minimum Standards for Plan Examiner Personnel.

(a) Plan examiner duties are defined as the review of building or other structure plans for the purpose of determining compliance with adopted fire codes and standards.

(b) Special temporary provision. Individuals are eligible to apply for Plan Examiner certification if they hold an active Fire Inspector certification and any of the following criteria is met:

(1) the individual passed the Plan Examiner section of a Fire Inspector exam at any time; or

(2) the individual is or has been assigned to plan review duties with a local jurisdiction. Verification of plan review duties must be in the form of a letter from the head of the plan review program for the jurisdiction; or

(3) the individual is or has served as an instructor for a Fire Inspector training program approved by the commission for Fire Inspector certification. Verification of instructor duties must be in the form of a letter from the chief training officer of the program.

(4) This subsection will expire on September 1, 2020.

§429.203. Minimum Standards for Plan Examiner I Certification.

In order to be certified as a Plan Examiner I, an individual must:

(1) possess valid documentation as a Plan Examiner I from either:

(A) the International Fire Service Accreditation Congress; or

(B) the National Board on Fire Service Professional Qualifications issued by the Texas A&M Engineering Extension Service using the 2009 or later edition of the NFPA standard applicable to this discipline and meeting the requirements as specified in §439.1(a)(2) of this title (relating to Requirements—General); or

(2) complete a commission approved Plan Examiner I training program and successfully pass the commission examination as specified in Chapter 439 of this title (relating to Examinations for Certification). An approved training program shall consist of one of the following:

(A) completion of the commission approved Plan Examiner I Curriculum, as specified in the commission's Certification Curriculum Manual; or

(B) successful completion of an out-of-state, NFA, and/or military training program which has been submitted to the commission for evaluation and found to meet the minimum requirements as listed in the commission approved Plan Examiner I Curriculum as specified in the commission's Certification Curriculum Manual; or

(C) documentation of the receipt of a Plan Examiner I certificate issued by the State Firemen's and Fire Marshals' Association of Texas that is deemed equivalent to a commission approved Plan Examiner I curriculum.

§429.205. International Fire Service Accreditation Congress (IFSAC) Seal.

- (a) Individuals who pass the state examination may be granted an IFSAC seal for Plan Examiner I by making application to the commission for the IFSAC seal and paying the associated fee.
- (b) In order to qualify for an IFSAC seal, an individual must submit the application for the seal prior to the expiration of the examination.

5. **Discussion and possible action regarding proposed amendments to 37 TAC, Chapter 439, Examinations For Certification, Subchapter A, Examinations for On-Site Delivery Training.**

CHAPTER 439**EXAMINATIONS FOR CERTIFICATION****SUBCHAPTER A****EXAMINATIONS FOR ON-SITE DELIVERY TRAINING****§439.1. Requirements—General.**

- (a) The administration of examinations for certification, including performance skill evaluations, shall be conducted in compliance with commission rules and; as applicable, with:
- (1) International Fire Service Accreditation Congress (IFSAC) regulations; or
 - (2) National Board on Fire Service Professional Qualifications (Pro Board) regulations for examinations administered by the Texas A&M Engineering Extension Service. Only Pro Board examinations administered by the Texas A&M Engineering Extension Service will be accepted by the commission for certification. In order for a Pro Board document to be accepted for certification, it must:
 - (A) List the commission issued course approval number for which the examination was conducted;
 - (B) Indicate that the examination was conducted in English; and
 - (C) List any special accommodations provided to the examinee. The commission may not issue a certificate for an examination conducted under special accommodations other than those specified in §439.13 of this title (relating to Special Accommodations for Testing).
- (b) It is incumbent upon commission staff, committee members, training officers and field examiners to maintain the integrity of the state certification examination process (or portion thereof) for which they are responsible.
- (c) The commission shall reserve the authority to conduct an annual review of Pro Board examinations, procedures, test banks, and facilities utilized by the Texas A&M Engineering Extension Service. The commission may also conduct a review at any time for cause and as deemed necessary to ensure the integrity of the certification examination process.
- (d) Exams will be based on the job performance requirements and knowledge and skill components of the applicable NFPA standard for that discipline, if a standard exists and has been adopted by the commission. If a standard does not exist or has not been adopted by the commission, the exam will be based on curricula as currently adopted in the commission's Certification Curriculum Manual.
- (e) Commission examinations that receive a passing grade shall expire two years from the date of the examination.
- (f) An examination for Basic Structure Fire Protection shall consist of four sections: Fire Fighter I, Fire Fighter II, Hazardous Materials Awareness Level, and Hazardous Materials Operations Level including the Mission-Specific Competencies for Personal Protective Equipment and Product Control. The examinee must pass each section of the examination with a minimum score of 70% in order to qualify for certification.
- (g) An examination for Basic Fire Inspector shall consist of two sections: Inspector I, and Inspector II. The examinee must pass each section of the examination with a minimum score of 70% in order to qualify for certification.

- (h) An examination for Basic Structure Fire Protection and Intermediate Wildland Fire Protection shall consist of five sections: Fire Fighter I, Fire Fighter II, First Responder Awareness, First Responder Operations, and Intermediate Wildland Fire Protection. The examinee must pass each section of the examination with a minimum score of 70% in order to qualify for certification.
- (i) All other state examinations consist of only one section.
- (j) The individual who fails to pass a commission examination for state certification will be given one additional opportunity to pass the examination or section(s) thereof. This opportunity must be exercised within 180 days after the date of the first failure. An examinee who fails to pass the examination within the required time may not sit for the same examination again until the examinee has re-qualified by repeating the curriculum applicable to that examination.
- (k) An individual may obtain a new certificate in a discipline which was previously held by passing a commission proficiency examination.
- (l) If an individual who has never held certification in a discipline defined in §421.5 of this title (relating to Definitions), seeks certification in that discipline, the individual shall complete all certification requirements.
- (m) If an individual completes a commission approved training program, or a program that has been evaluated and deemed equivalent to a certification curriculum approved by the commission, such as an out-of-state or military training program or a training program administered by the State Firemen's and Fire Marshals' Association of Texas, the individual may use only one of the following examination processes for certification:
 - (1) pass a commission examination; or
 - (2) submit documentation of the successful completion of the Pro Board examination process administered by the Texas A&M Engineering Extension Service; and
 - (3) meet any other certification requirements in order to become eligible for certification as fire protection personnel.
 - (4) An individual cannot use a combination of the two examination processes in this subsection from a single commission approved class for certification. An individual who chooses to submit to the commission examination process may not utilize the other process toward certification.
- (n) An individual or entity may petition the commission for a waiver of the examination required by this section if the person's certificate expired because of the individual's or employing entity's good faith clerical error or expired as a result of termination of the person's employment where the person has been restored to employment through a disciplinary procedure or a court action. All required renewal fees including applicable late fees and all required continuing education must be submitted before the waiver request may be considered.
 - (1) Applicants claiming good faith clerical error must submit a sworn statement together with any supporting documentation that evidences the applicant's good faith efforts to comply with commission renewal requirements and that failure to comply was due to circumstances beyond the control of the applicant.

- (2) Applicants claiming restoration to employment as a result of a disciplinary or court action must submit a certified copy of the order, ruling or agreement restoring the applicant to employment.

§439.3. Definitions.

The following words and terms, when used in this chapter, have the following definitions unless the context clearly indicates otherwise.

- (1) Certificate of Completion--A statement by the provider of training certifying that an individual has successfully completed a commission-approved certification curriculum or phase program for a particular discipline, including having been evaluated by field examiners on performance skills identified by the commission. The certificate of completion qualifies an individual to take an original certification examination. The certificate expires two years from the date of completion. If an individual does not take the certification examination prior to the expiration of the certificate of completion, he or she must again complete the curriculum in order to obtain a new certificate of completion.
- (2) Curriculum--The competencies established by the commission as a minimum requirement for certification in a particular discipline.
- (3) Designee--An entity or individual approved by commission staff to administer commission certification examinations and/or performance skills in accordance with this chapter.
- (4) Eligibility--A determination of whether or not an individual has met the requirements set by the commission and would therefore be allowed to take a commission examination.
- (5) Endorsement of eligibility--A statement testifying to the fact that an individual has met all requirements specified by the commission and is qualified to take a commission examination. An endorsement of eligibility will be issued by a member of the commission staff.
- (6) Examination--A state test which an examinee must pass as one of the requirements for certification.
- (7) Examinee--An individual who has met the commission requirements and therefore qualifies to take the commission examination.
- (8) Field examiner--An individual authorized to evaluate performance skills in commission approved curricula. The field examiner must possess a Fire Instructor Certification or other instructor qualification as allowed by §427.307(h) and (i) of this title (relating to On-Site and Distance Training Provider Staff Requirements) for Wildland courses only, complete the on-line commission field examiner course, and sign an agreement to comply with the commission's testing procedures. The field examiner must be approved by the commission to instruct all subject areas identified in the curriculum that he or she will be evaluating. The field examiner must repeat the examiner course every two years and submit a new Letter of Intent.
- (9) Lead Examiner--A member of the commission staff or a designee who has been assigned by the commission to administer a commission examination.
- (10) Letter of Intent--A statement, signed by an individual applying to the commission for field examiner status, that he or she is familiar with the commission's examination procedures, and agrees to abide by the policies and guidelines as set out in Chapter 439 of this title (relating to Examinations for Certification).
- (11) Sectional examination—A test that covers one section of a multiple section examination.

§439.5. Procedures.

- (a) Procedures for conducting examinations are determined by the commission.
- (b) All application processing fees due to the commission must be paid in a timely manner. Late payments shall be assessed a late fee in accordance with §437.13 of this title (relating to Processing Fees for Test Application).
- (c) Each examination must be administered by a lead examiner.
- (d) The lead examiner must:
 - (1) ensure that the tests remain secure and that the examination is conducted under conditions warranting honest results;
 - (2) monitor the examination while in progress;
 - (3) control entrance to and exit from the test site;
 - (4) assign or re-assign seating; and
 - (5) bar admission to or dismiss any examinee who fails to comply with any of the applicable provisions of this chapter.
- (e) All official grading and notification must come from the commission or its designee. The preliminary test results shall be made available within seven (7) business days after completion of the examination.

§439.7. Eligibility.

- (a) An examination may not be taken by an individual who currently holds an active certificate from the commission in the discipline to which the examination pertains, unless required by the commission in a disciplinary matter, or test scores have expired and the individual is testing for IFSAC seals.
- (b) An individual who passes an examination and is not certified in that discipline, will not be allowed to test again if the original examination grade is still active, unless required by the commission in a disciplinary matter.
- (c) In order to qualify for a commission examination, the examinee must:
 - (1) meet or exceed the minimum requirements set by the commission as a prerequisite for the specified examination;
 - (2) submit a test application, meet any other prerequisite requirements, and submit the appropriate application processing fee(s);
 - (3) receive from the commission an "Endorsement of Eligibility" letter and provide this letter to the lead examiner;
 - (4) bring to the test site, and display upon request, a current and valid government issued identification which contains the name and photograph of the examinee;
 - (5) report on time to the proper location; and

- (6) comply with all the written and verbal instructions of the lead examiner.
- (d) No examinee shall be permitted to:
- (1) violate any of the fraud provisions of this section;
 - (2) disrupt the examination;
 - (3) bring into the examination site any books, notes, or other written materials related to the content of the examination;
 - (4) refer to, use, or possess any such written material at the examination site;
 - (5) give or receive answers or communicate in any manner with another examinee during the examination;
 - (6) communicate at any time or in any way, the contents of an examination to another person for the purpose of assisting or preparing a person to take the examination;
 - (7) steal, copy, or reproduce any part of the examination;
 - (8) engage in any deceptive or fraudulent act either during an examination or to gain admission to it;
 - (9) solicit, encourage, direct, assist, or aid another person to violate any provision of this section; or
 - (10) bring into the examination site any electronic devices.
- (e) No person shall be permitted to sit for any commission examination who has an outstanding debt owed to the commission.

§439.9. Grading.

- (a) If performance skills are required as a part of the examination, the examinee must demonstrate performance skill objectives in a manner consistent with performance skill evaluation forms provided by the Commission. The evaluation format for a particular performance skill will determine the requirements for passage of the skill. Each performance skill evaluation form will require successful completion of one of the following formats:
- (1) all mandatory tasks; or
 - (2) an accumulation of points to obtain a passing score as indicated on the skill sheet; or
 - (3) a combination of both paragraphs (1) and (2) of this subsection.
- (b) The minimum passing score on each written examination or section thereof shall be 70%. This means that 70% of the total possible active questions must be answered correctly. The commission may, at its discretion, invalidate any question.
- (c) If the commission invalidates an examination score for any reason, it may also, at the discretion of the commission, require a retest to obtain a substitute valid test score.

§439.11. Commission-Designated Performance Skill Evaluations.

- (a) The commission-designated performance evaluations are randomly selected from each subject area within the applicable curriculum containing actual skill evaluations. This applies only for curricula in which performance standards have been developed.
- (b) The training provider shall test the commission designated performance skills for competency. The skill evaluations may only take place after all training on the identified subject area has been completed. The date(s), time(s) and location(s) for the commission designated skill evaluations must be submitted on the commission designated skill schedule contained within the Training Prior Approval system. The commission must be notified immediately of any deviation from the submitted commission designated skill schedule. All skills must be evaluated by a commission approved field examiner. The individual who served as the instructor of a particular subject may not evaluate the performance skill for the subject.
- (c) In order to qualify for the commission certification examination, the student must successfully complete and pass all designated skill evaluations. The student may be allowed two attempts to complete each skill. A second failure during the evaluation process will require remedial training in the failed skill area with a certified instructor before being allowed a third attempt. A third failure shall require that the student repeat the entire certification curriculum.
- (d) If performance skill evaluations are not conducted for a student during the course of instruction, they must be conducted within ninety days (90) following the end date of the course. In a case such as this the training provider must also obtain a new set of commission designated skills for which to evaluate the student; the provider may not use the same set of skills provided during the original course of instruction. If performance skill evaluations are not conducted within the ninety day (90) period, the student must repeat the course. The ninety (90) day period may be extended for students who were unable to complete their performance skill evaluations due to injury, illness, military commitment, or other situation beyond their control.
- (e) The training facility must maintain records (electronic or paper) of skills testing on each examinee. Test results must be recorded and saved on the applicable performance skill sheets provided in the commission Curriculum Skills Manual, and must include all information called for on the skill sheet.
- (f) For certification disciplines in which an IDLH environment may exist, all skill testing participants shall have available for use NFPA compliant PPE and SCBA as defined in §435.1 of this title (relating to Protective Clothing) and §435.3 of this title (relating to Self-Contained Breathing Apparatus).

§439.13. Special Accommodations for Testing.

- (a) Special accommodation testing is for those individuals that have a documented disability which may hamper their success on a Texas Commission on Fire Protection written examination. Some accommodations that can be allowed are:
 - (1) A testing room to oneself (examinee is allowed to read the questions out loud to him or herself). To accommodate the request the examinee will have to test in the Commission's Austin headquarters location or any location deemed appropriate by the Commission.
 - (2) The test to be split in two with up to an hour break in between (no access to the first half of the examination will be allowed during or after the break). To accommodate the request the

examinee will have to test in the commission's Austin headquarters location or any location deemed appropriate by the Commission.

- (3) The questions to be printed in a larger font (approximately 7% larger).
 - (4) The test to be copied on off-white paper (i.e., cream colored).
 - (5) The use of highlighters or a highlighter sheet.
 - (6) Any requests that changes the condition of the examination or the examination process.
- (b) If the applicant is seeking a special accommodation test, the applicant must submit written documentation of the disability and a written statement as to which of the allowable accommodations is being requested. The applicant may ask for accommodations not listed above. The request will be reviewed and the applicant will receive a written response regarding the Commission's position on the request.

§439.19. Number of Test Questions.

- (a) Each examination may have two types of questions: pilot and active. Pilot questions are new questions placed on the examination for statistical purposes only. These questions do not count against an examinee if answered incorrectly. **The maximum possible number of pilot questions will be 10% of the number of exam questions, rounded up.**
- (b) The number of questions on an examination, sectional examination, or retest will be based upon the specific examination, or number of recommended hours for a particular curriculum or section as shown in the table below. Any pilot questions added to an examination, sectional examination, or retest will be in addition to the number of exam questions.

Figure: 37 TAC §439.19(b)

Examination	Section	Number of Exam Questions	Maximum Possible Number of Pilot Questions	Time Allowed
Basic Structure FP	Hazardous Materials Awareness	25		
	Hazardous Materials Operations	25		
	Firefighter I	100		
	Firefighter II	75		
	TOTAL	225	25 23	4.5 Hours
Basic Fire Inspector	Inspector I	50		
	Inspector II	50		
	TOTAL	100	15 10	2.0 Hours
Basic Structure FP/ Intermediate Wildland FP	Hazardous Materials Awareness	25		
	Hazardous Materials Operations	25		
	Firefighter I	100		
	Firefighter II	75		
	Intermediate Wildland FP	25		
TOTAL	250	25	5.0 Hours	
FOR ALL OTHER EXAMINATIONS, SECTIONAL EXAMINATIONS, AND RETESTS				
	Recommended Hours	Number of Exam Questions	Maximum Possible Number of Pilot Questions	Time Allowed
IF THE RECOMMENDED HOURS FOR THE CURRICULUM OR SECTION IS:	Less than 30	25	5 3	30 Minutes
	31 to 100	50	5	1.0 Hour
	101 to 200	75	10 8	1.5 Hours
	201 to 300	100	15 10	2.0 Hours
	301 to 400	125	20 13	2.5 Hours
	401 or More	150	25 15	3.0 Hours

CHAPTER 439
EXAMINATIONS FOR CERTIFICATION
SUBCHAPTER B
EXAMINATIONS FOR DISTANCE TRAINING

§439.201. Requirements—General.

The examination requirements for those completing distance training shall be the same as those in Subchapter A of this chapter, except as noted in this subchapter.

§439.205. Performance Skill Evaluation.

If the performance skill portion of a state exam is to be evaluated by an approved field examiner who will not observe the completion of the skill while in the immediate physical presence of the examinee, a letter of assurance from the candidate's training officer or fire chief is required stating that the fire department assures the integrity of the evaluation procedure. If the candidate is not a member of a fire department, then a certified fire instructor, fire chief, or training officer may provide a letter of assurance that meets the requirements of this section. The provider of distance training is required to keep a record of this assurance and provide it to the commission upon request.

6. Discussion and possible action regarding rule review for 37 TAC, Chapter 459, Fire and Life Safety Educator.

CHAPTER 459

FIRE AND LIFE SAFETY EDUCATOR

SUBCHAPTER A

MINIMUM STANDARDS FOR FIRE AND LIFE SAFETY EDUCATOR I

§459.1. Fire and Life Safety Educator I Certification.

- (a) A Fire and Life Safety Educator I is defined as an individual who performs professional work in the coordination and delivery of public fire and life safety education, and fire prevention programs.
- (b) All individuals holding a Fire and Life Safety Educator I certification shall be required to comply with the continuing education requirements in Chapter 441 of this title (relating to Continuing Education).
- (c) A regulated entity that employs an individual certified as Fire and Life Safety Educator I must report the individual's employment via the commission's online data management system (FIDO system).

~~[(d) Special temporary provision. Individuals are eligible to take the commission examination for Fire and Life Safety Educator I certification by:]~~

~~[(1) providing documentation acceptable to the commission that the individual has successfully completed Fire and Life Safety Educator I certification training that meets the minimum requirements of National Fire Protection Association Standard 1035; or]~~

~~[(2) providing documentation acceptable to the commission of proficiency in fire and life safety education as an employee of a government entity, a member in a volunteer fire service organization, or an employee of a regulated non-governmental fire department; or]~~

~~[(3) holding certification as a Fire Instructor I or higher.]~~

~~[(4) This subsection will expire on February 28, 2019.]~~

§459.3. Minimum Standards for Fire and Life Safety Educator I Certification.

In order to be certified as a Fire and Life Safety Educator I, an individual must:

- (1) possess valid documentation of accreditation from the International Fire Service Accreditation Congress as a Fire and Life Safety Educator I; or
- (2) complete a commission approved Fire and Life Safety Educator I program and successfully pass the commission examination as specified in Chapter 439 of this title (relating to Examinations for Certification). An approved Fire and Life Safety Educator I program must consist of one of the following:
- (A) completion of an in-state Fire and Life Safety Educator I program meeting the requirements of the applicable NFPA standard and conducted by a commission certified training provider that was submitted and approved through the commission's training prior approval system; or

(B) completion of an out-of-state educational institution of higher education, and/or military training program that has been submitted to the commission for evaluation and found to meet the requirements of the applicable NFPA standard.

§459.5. Examination Requirement

Examination requirements in Chapter 439 of this title (relating to Examinations for Certification) must be met to receive Fire and Life Safety Educator I certification.

§459.7. International Fire Service Accreditation Congress (IFSAC) Seal.

Individuals completing a commission-approved Fire and Life Safety Educator I program may be granted an IFSAC seal for Fire and Life Safety Educator I by making application to the commission for the IFSAC seal and paying applicable fees. Individuals must submit the fee for the seal prior to the expiration of the examination to qualify for the IFSAC seal.

CHAPTER 459**FIRE AND LIFE SAFETY EDUCATOR****SUBCHAPTER B****MINIMUM STANDARDS FOR FIRE AND LIFE SAFETY EDUCATOR II****§459.201 Fire and Life Safety Educator II Certification.**

- (a) A Fire and Life Safety Educator II is defined as an individual who performs professional work in the coordination and delivery of public fire and life safety education, and fire prevention programs.
- (b) All individuals holding a Fire and Life Safety Educator II certification shall be required to comply with the continuing education requirements in Chapter 441 of this title (relating to Continuing Education).
- (c) Special temporary provision. Individuals are eligible to take the commission examination for Fire and Life Safety Educator II by:
 - (1) holding Fire and Life Safety Educator I certification and meeting one of the following requirements:
 - (2) providing documentation acceptable to the commission that the individual has successfully completed Fire and Life Safety Educator II certification training that meets the minimum requirements of the National Fire Protection Association Standard 1035; or
 - (3) providing documentation acceptable to the commission of proficiency in fire and life safety education as an employee of a government entity, a member in a volunteer fire service organization, and/or an employee of a regulated non-governmental fire department or
 - (4) hold a TCFP Fire Instructor II certification or higher.
 - (5) This subsection will expire on February 29, 2020.

§459.203 Minimum Standards for Fire and Life Safety Educator II Certification.

In order to be certified as a Fire and Life Safety Educator II, an individual must:

- (1) hold as a prerequisite Fire and Life Safety Educator I certification; and
- (2) possess valid documentation of accreditation from the International Fire Service Accreditation Congress as a Fire and Life Safety Educator II; or
- (3) complete a commission approved Fire and Life Safety Educator II program and successfully pass the commission examination as specified in Chapter 439 of this title (relating to Examinations for Certification). An approved Fire and Life Safety Educator II program must consist of one of the following:
 - (A) completion of an in-state Fire and Life Safety Educator II program meeting the requirements of the applicable NFPA standard and conducted by a commission certified training provider, that was submitted and approved through the commission's training prior approval system; or

(B) completion of an out-of-state, educational institution of higher education, and/or military training program that has been submitted to the commission for evaluation and found to meet the requirements of the applicable NFPA standard.

§459.205 Examination Requirement

Examination requirements in Chapter 439 of this title (relating to Examinations for Certification) must be met to receive Fire and Life Safety Educator II certification.

§459.207. International Fire Service Accreditation Congress (IFSAC) Seal.

Individuals completing a commission-approved Fire and Life Safety Educator II program may be granted an IFSAC seal for Fire and Life Safety Educator II by making application to the commission for the IFSAC seal and paying applicable fees. Individuals must submit the fee for the seal prior to the expiration of the examination to qualify for the IFSAC seal.

- 7. Discussion of the 2018 data collected on fire fighter injuries, and possible action on developing recommendations to be submitted to the commission for approval and submission to the State Fire Marshal's Office.**

Texas Commission on Fire Protection

Injury Report

JANUARY 1, 2018 TO DECEMBER 31, 2018



TEXAS COMMISSION ON FIRE PROTECTION

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Executive Summary

This report includes the abstract, mission, reports, information and data collected by the Texas Commission on Fire Protection's injury reporting program. The report includes fire fighter injuries reported to the Texas Commission on Fire Protection in 2018, with charts and graphs depicting the collected information. The report also compares Texas fire fighter injury statistics with statistics gathered by the National Fire Protection Association (NFPA) in 2017.

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 fire protection personnel injuries. 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 then 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 Texas Commission on Fire Protection. 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.

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 2018 was the eighth full year of reporting.

Grand Totals – 2018

Total number of incidents (injury reports) submitted: 3,484

Total number of individuals who sustained an injury or exposure: 3,850*

Total number of injuries reported: 3,061

Total number of exposures reported: 870

**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. (3,850 < 3,061 + 870)*

Because the injury reporting system was reconfigured in 2018, the information collected by the TCFP has evolved. It's important to note 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)

Texas fire departments reported 3,061 injuries to the Texas Commission on Fire Protection in calendar year 2018. Of these, 789 occurred during fire suppression activities, representing 26 percent of the total reported injuries (see Table 1).

Injuries from emergency medical services (EMS) activities surpassed injuries from fire suppression activities in 2018. EMS activities accounted for 1011 of the 3,061 total reported injuries, or 33 percent of the total injuries.

After EMS and fire suppression, the next highest number of injuries reported in 2018 occurred in the performance of station duties, with 631, or 21 percent, of the total reported injuries.

Wellness/fitness and skills training again rounded out the top five activities: 417 wellness/fitness injuries (14 percent of the total) and 399 skills training injuries (13 percent of the total).

The total number of injuries reported in station duties, wellness/fitness activities, and skills training (which are all non-emergency activities) represented nearly half (47 percent) of the total injuries reported in 2018.

NOTE: Exposures

In addition to the 3,061 injuries reported by Texas fire departments, TCFP also received reports of 870 exposures. Exposures, in the new injury reporting application, are not counted as injuries; rather, they are now their own (separate) category.

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, critical and fatal injuries
- 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

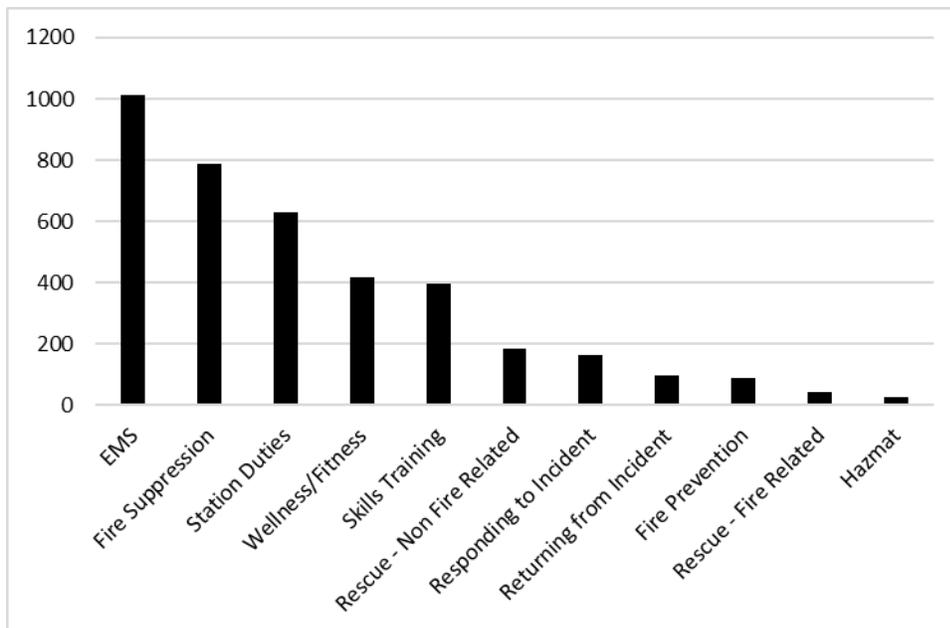
- Identify common injuries
- Identify trends in injuries
- Identify needed training
- Evaluate and find improvements in procedures
- Track lost time injuries (requested by user community)

Fire Protection Personnel Injuries

Table 1: Total Injured or Exposed Individuals by Activity and Severity, 2018

Activity	Minor	Serious	Fatal	Total
EMS	827	184	0	1011
Fire Suppression	597	191	1	789
Station Duties	434	196	1	631
Wellness/Fitness	286	131	0	417
Skills Training	276	123	0	399
Rescue - Non-Fire Related	157	26	0	183
Responding to Incident	98	64	0	162
Returning from Incident	56	41	0	97
Fire Prevention	69	20	0	89
Rescue - Fire Related	39	5	0	44
Hazmat	27	1	0	28
Total	2866	982	2	3850

Figure 1: Total Injured or Exposed Individuals by Activity, 2018



Injuries by Activity

EMS activities resulted in the highest number of minor injuries for 2018 (see Table 2). The total number of serious fire suppression injuries is down significantly, compared to previous years. (See Table 3. The commission defines a serious injury as one which results in the employee missing one or more full duty shifts.)

Definitions

Minor = Injury that does not result in the employee missing a full duty period.

Serious = Injury that results in the employee missing one or more full duty periods.

Fatal = The injured individual did not survive.

Table 2: Minor Injury Activities, 2014 - 2018

Activity	2014		2015		2016		2017		2018	
	Count	Percent								
EMS	900	28.03%	792	28.24%	882	27.89%	929	28.99%	827	28.86%
Fire Suppression	808	25.16%	618	22.03%	866	27.39%	662	20.66%	597	20.83%
Station Duties	465	14.48%	396	14.12%	434	13.73%	481	15.01%	434	15.14%
Skills Training	365	11.37%	288	10.27%	311	9.84%	291	9.08%	276	9.63%
Wellness/Fitness	254	7.91%	278	9.91%	252	7.97%	254	7.93%	286	9.98%
Rescue – Non-Fire	206	6.42%	204	7.27%	161	5.09%	206	6.43%	157	5.48%
Responding to Incident	105	3.27%	122	4.35%	117	3.70%	156	4.87%	98	3.42%
Rescue - Fire Related	11	0.34%	22	0.78%	20	0.63%	113	3.53%	39	1.36%
Fire Prevention	43	1.34%	41	1.46%	47	1.49%	50	1.56%	69	2.41%
Returning from Incident	42	1.31%	33	1.18%	37	1.17%	42	1.31%	56	1.95%
Hazmat	12	0.37%	11	0.39%	35	1.11%	21	0.66%	27	0.94%
Total	3211	100.00%	2805	100.00%	3162	100.00%	3205	100.00%	2866	100.00%

Table 3: Serious Injury Activities, 2014 - 2018

Activity	2014		2015		2016		2017		2018	
	Count	Percent								
Station Duties	160	19.42%	174	19.31%	172	18.76%	185	21.29%	196	19.96%
Fire Suppression	177	21.48%	160	17.76%	179	19.52%	157	18.07%	191	19.45%
EMS	164	19.90%	185	20.53%	158	17.23%	147	16.92%	184	18.74%
Wellness/Fitness	127	15.41%	125	13.87%	146	15.92%	129	14.84%	131	13.34%
Skills Training	104	12.62%	126	13.98%	141	15.38%	120	13.81%	123	12.53%
Responding to Incident	16	1.94%	44	4.88%	36	3.93%	53	6.10%	64	6.52%
Rescue – Non-Fire	38	4.61%	46	5.11%	52	5.67%	27	3.11%	26	2.65%
Returning from Incident	19	2.31%	13	1.44%	18	1.96%	28	3.22%	41	4.18%
Fire Prevention	11	1.33%	12	1.33%	11	1.20%	15	1.73%	20	2.04%
Rescue - Fire Related	3	0.36%	12	1.33%	3	0.33%	7	0.81%	5	0.51%
Hazmat	5	0.61%	4	0.44%	1	0.11%	1	0.12%	1	0.10%
Total	824	100.00%	901	100.00%	917	100.00%	869	100.00%	982	100.00%

Table 4: Number of Individuals Who Sustained Fatal Injuries, 2018

Activity	Count	Percent
Fire Suppression	1	50.00%
Station Duties	1	50.00%
Total	2	100.00%

Emergency vs. Non-Emergency Injuries

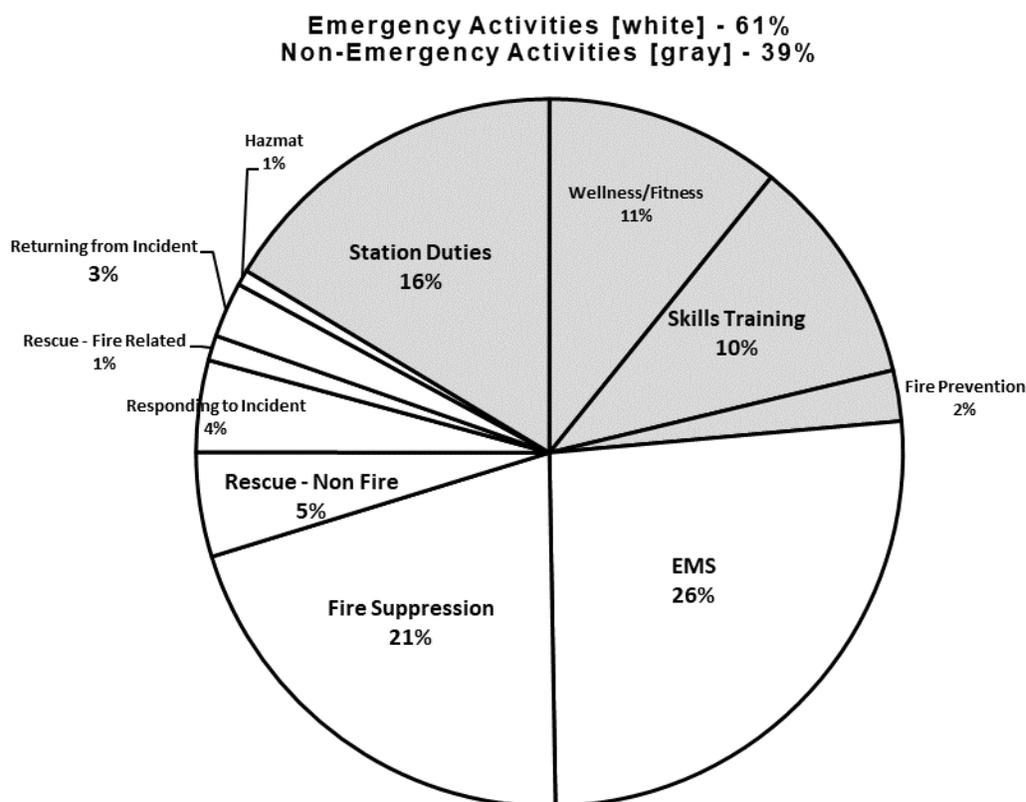
Table 5: Number of Injured Individuals by Emergency Activity and Severity, 2018

Activity	Minor	Serious	Fatal	Total
EMS	827	184	0	1011
Fire Suppression	597	191	1	789
Rescue – Non-Fire	157	26	0	183
Responding to Incident	98	64	0	162
Rescue - Fire Related	39	5	0	44
Returning from Incident	56	41	0	97
Hazmat	27	1	0	28
Total	1801	512	1	2314

Table 6: Number of Injured Individuals by Non-Emergency Activity and Severity, 2018

Activity	Minor	Serious	Fatal	Total
Station Duties	434	196	1	631
Skills Training	276	123	0	399
Wellness/Fitness	286	131	0	417
Fire Prevention	69	20	0	89
Total	1065	470	1	1536

Figure 2: Percent of Injured Individuals in Emergency and Non-Emergency Activities, 2018

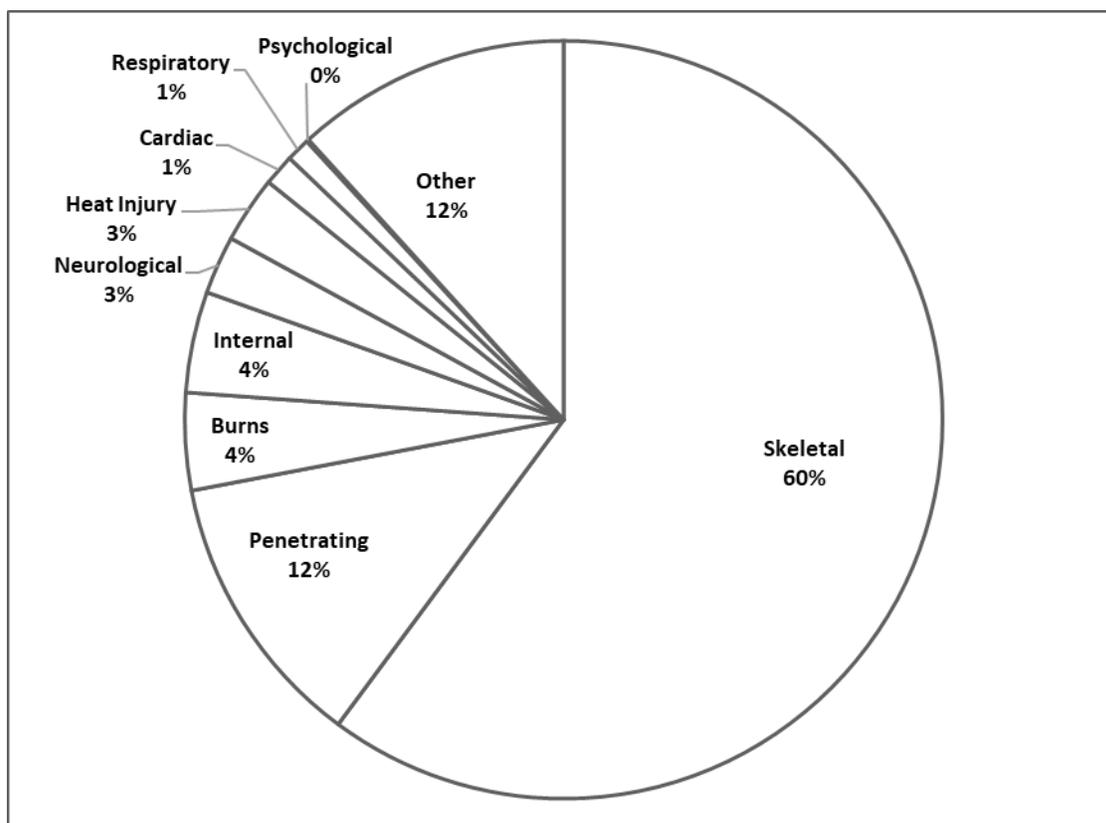


Types of Injuries

Table 7: Types of Injury, 2018

Type of Injury	2018	
	Count	Percent
Skeletal	1841	60.14%
Penetrating	363	11.86%
Burns	127	4.15%
Internal	132	4.31%
Neurological	76	2.48%
Heat Injury	87	2.84%
Cardiac	41	1.34%
Respiratory	31	1.01%
Psychological	3	0.10%
Other	360	11.76%
Total	3061	100.00%

Figure 3: Types of Injuries, 2018

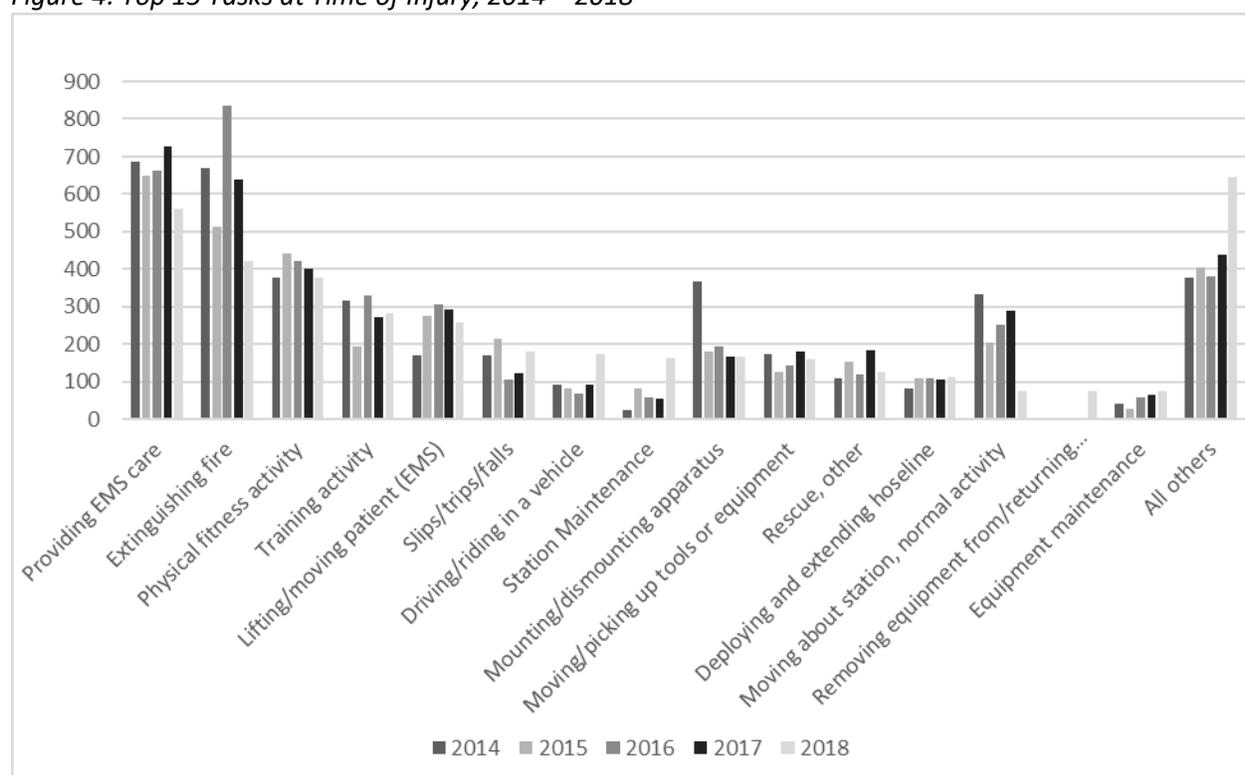


Task at Time of Injury

Table 8: Top 15 Tasks at Time of Injury, 2014 - 2018 (ordered by 2018, descending)

Task	2014	2015	2016	2017	2018
Providing EMS care	686	649	661	728	561
Extinguishing fire	669	513	837	638	420
Physical fitness activity	376	442	420	401	376
Training activity	317	193	331	273	281
Lifting/moving patient (EMS)	171	275	306	294	259
Slips/trips/falls	171	215	105	122	180
Driving/riding in a vehicle	94	82	70	92	173
Station Maintenance	26	81	59	55	165
Mounting/dismounting apparatus	367	180	193	166	167
Moving/picking up tools or equipment	173	128	142	179	160
Rescue, other	110	155	118	183	126
Deploying and extending hoseline	82	108	111	106	112
Moving about station, normal activity	335	206	252	289	76
Removing equipment from/returning equipment to storage	n/a	n/a	n/a	n/a	75
Equipment maintenance	43	29	57	65	75
All others	379	406	380	440	644
Total	4055	3721	4097	4090	3850

Figure 4: Top 15 Tasks at Time of Injury, 2014 – 2018



Injuries by Body Part

Table 9: Injuries by Body Part, 2014 - 2017 (ordered by 2017, descending)

Body Part	2014	2015	2016	2017
Multiple body parts, whole body	901	659	1007	1064
Hand and fingers	345	328	359	365
Knee	367	369	376	315
Hip, lower back, or buttocks	244	316	283	292
Back, except spine	372	207	244	248
Shoulder	230	241	238	221
Ankle	177	202	192	179
Multiple Parts	160	180	124	151
Face	118	140	116	127
Arm, lower, not including elbow or wrist	94	84	109	121
Leg, lower	86	117	132	113
Foot and toes	79	71	85	87
Head	73	69	82	78
Ear	52	60	74	76
Chest	64	40	82	76
Eye	98	75	70	73
Multiple body parts, upper body	27	52	61	73
Elbow	66	51	47	72
Wrist	68	48	74	56
Other body parts injured	265	500	342	303
Total	3886	3809	4097	4090

Because TCFP migrated to a new data management system in 2017, the data collected in 2018 was categorized differently than it had been in the past. This is why Table 9 only goes through 2017, and we now have new tables (10 & 11) for 2018 data.

Table 10: Injuries by Body Part Type, 2018

Body Part by Type	2018
Upper Extremities	856
Internal	104
Head	301
Back	487
Neck	63
Lower Extremities	804
Multiple Parts	321
Chest	102
Hip	23
Total	3061

Table 11: Injuries by Body Part Sub-Type, 2018

Body Part by Sub-Type	2018
Back: Back	198
Back: Buttocks	1
Back: Lower Back	279
Back: Neck	4
Back: Spine	5
Chest: Abdomen	5
Chest: Abdominal Area	10
Chest: Chest	87
Head: Cheek	5
Head: Chin	7
Head: Ear	77
Head: Eye	63
Head: Face	113
Head: Jaw	1
Head: Mouth	15
Head: Nose	20
Hip: Groin	9
Hip: Hip	13
Hip: Pelvis	1
Internal: Genito-urinary	4
Internal: Heart	5
Internal: Internal	66
Internal: Intestinal tract	5
Internal: Lungs	8
Internal: Stomach	15
Internal: Trachea	1
Lower Extremities: Ankle	205
Lower Extremities: Foot	92
Lower Extremities: Knee	346
Lower Extremities: Lower leg	110
Lower Extremities: Toes	13
Lower Extremities: Upper Leg	38
Multiple Parts: Lower Body	26
Multiple Parts: Unknown	28
Multiple Parts: Upper Body	75
Multiple Parts: Whole Body	192
Neck: Neck	58
Neck: Throat	5
Upper Extremities: Elbow	67
Upper Extremities: Hands	356
Upper Extremities: Lower Arm	8
Upper Extremities: Shoulder	234
Upper Extremities: Upper Arm	112
Upper Extremities: Wrist	79
Total	3061

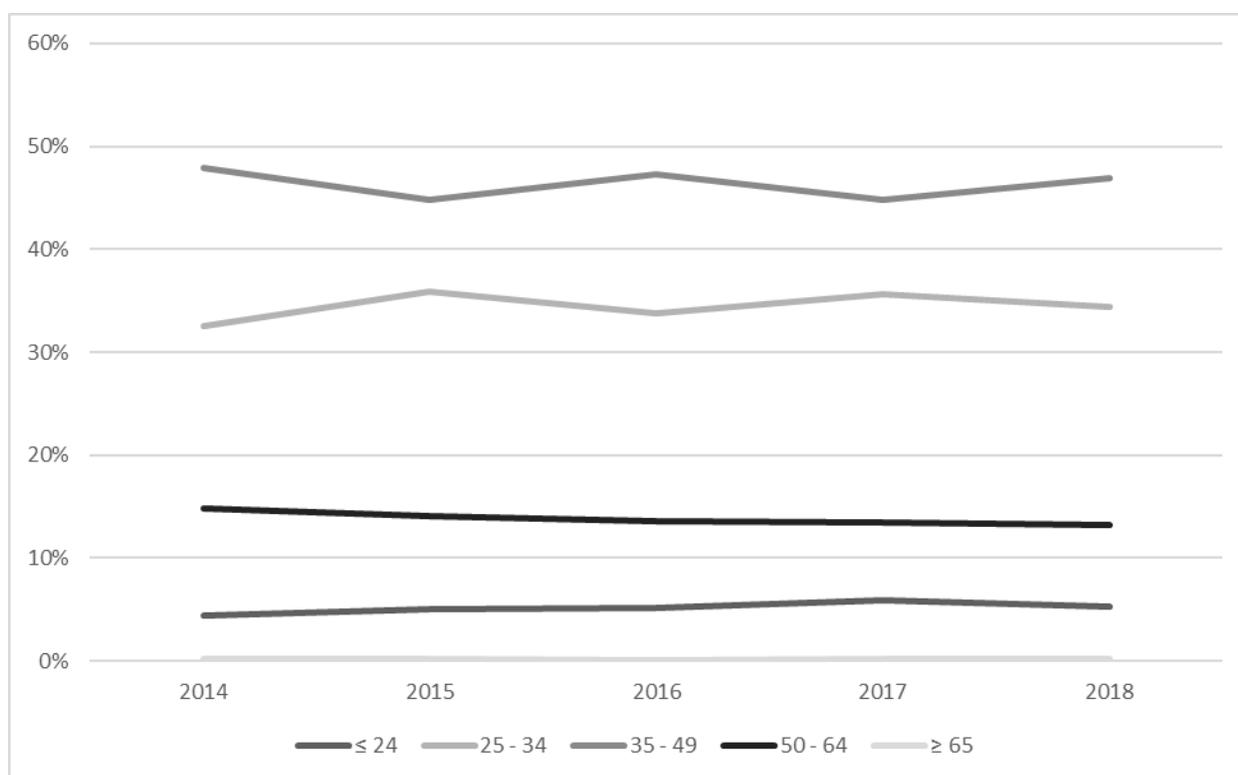
Individuals by Age Group

Table 12: Individuals* by Age Group, 2014 - 2018

Age Group	2014		2015		2016		2017		2018	
	Count	Percent								
≤ 24	179	4.41%	187	5.03%	213	5.20%	242	5.92%	204	5.30%
25 - 34	1322	32.60%	1334	35.85%	1382	33.73%	1460	35.70%	1326	34.44%
35 - 49	1945	47.97%	1669	44.85%	1939	47.33%	1832	44.79%	1805	46.88%
50 - 64	602	14.85%	524	14.08%	559	13.64%	550	13.45%	509	13.22%
≥ 65	7	0.17%	7	0.19%	4	0.10%	6	0.15%	6	0.16%
Totals	4055	100.00%	3721	100.00%	4097	100.00%	4090	100.00%	3850	100.00%

*Includes injured individuals and exposure individuals.

Figure 5: Individuals by Age Group, percentages, 2014 – 2018



Injury Activities Resulting in Lost Time

Table 13: Activities Individuals Were Doing that Resulted in Lost Time, Totals, 2018

Activity	Count	Days Missed	
		Average	Sum
EMS	118	39	4687
Fire Suppression	116	33	3878
Station Duties	114	27	3162
Wellness/Fitness	80	32	2621
Skills Training	73	34	2545
Responding to Incident	37	33	1242
Returning from Incident	25	53	1327
Rescue - Non-Fire	16	32	525
Fire Prevention	14	32	449
Rescue - Fire Related	3	8	24
Hazmat	1	13	13
Total	597	31	20473

Table 14: Activities Individuals Were Doing that Resulted in Time, 2018, between 1 and 30 days

Activity	Count	Days Missed	
		Average	Sum
Fire Suppression	87	11	1042
Station Duties	86	10	925
EMS	70	11	771
Wellness/Fitness	56	12	685
Skills Training	49	10	519
Responding to Incident	23	7	183
Returning from Incident	13	14	182
Rescue - Non-Fire	11	8	96
Fire Prevention	9	13	119
Rescue - Fire Related	3	8	24
Hazmat	1	13	13
Total	408	11	4559

Table 15: Activities Individuals Were Doing that Resulted in Lost Time, 2018, between 31 and 90 days

Activity	Count	Days Missed	
		Average	Sum
EMS	34	52	1779
Station Duties	19	52	993
Skills Training	17	61	1046
Wellness/Fitness	17	47	812
Fire Suppression	16	57	920
Responding to Incident	12	70	841
Returning from Incident	7	58	411
Fire Prevention	4	56	225
Rescue - Non-Fire	3	60	180
Total	129	57	7207

Table 16: Activities Individuals Were Doing that Resulted in Lost Time, 2018, 91+ days

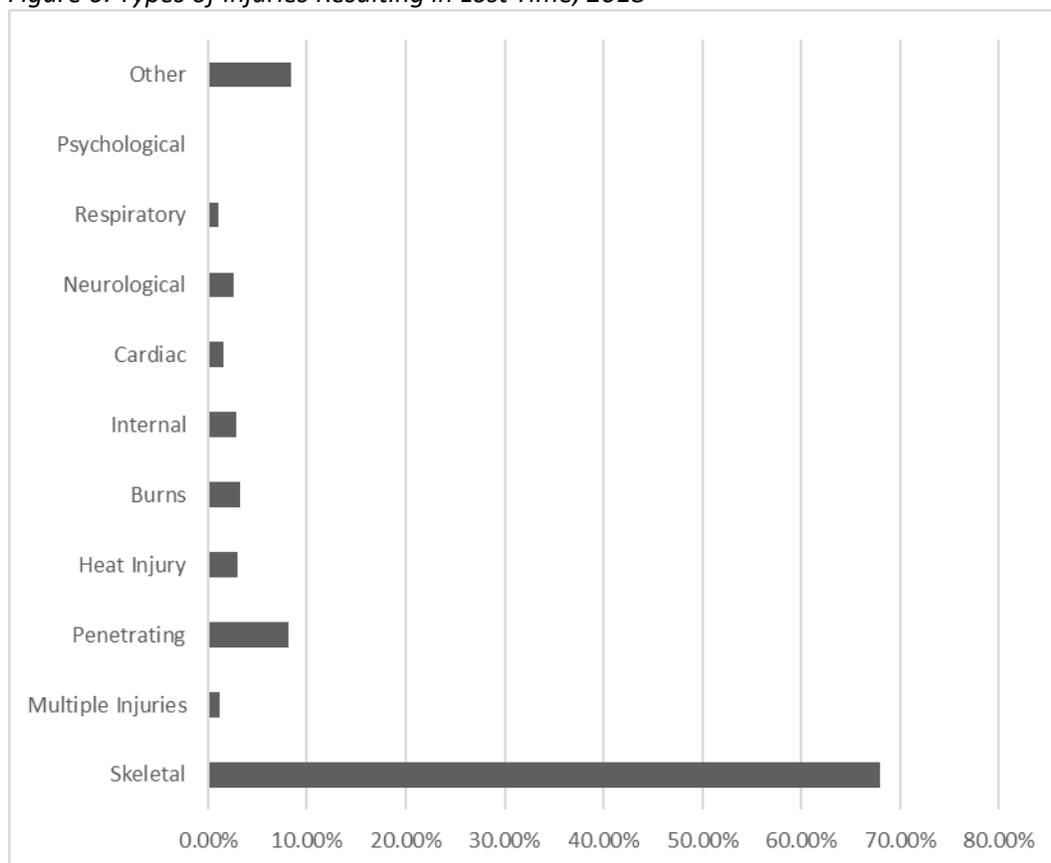
Activity	Count	Days Missed	
		Average	Sum
EMS	14	152	2137
Fire Suppression	13	147	1916
Station Duties	9	138	1244
Skills Training	7	140	980
Wellness/Fitness	7	160	1124
Returning from Incident	5	146	734
Rescue - Non-Fire	2	124	249
Responding to Incident	2	109	218
Fire Prevention	1	105	105
Total	46	136	8707

Types of Injuries with Lost Time

Table 17: Types of Injuries Resulting in Lost Time, 2018

Type of Injury	Count
Skeletal	402
Multiple Injuries	7
Penetrating	48
Heat Injury	18
Burns	19
Internal	17
Cardiac	9
Neurological	15
Respiratory	6
Psychological	1
Other	50
Totals	592

Figure 6: Types of Injuries Resulting in Lost Time, 2018



Burn Injuries

Table 18: All Burns, 2014 - 2018

All Burns - Types	2014	2015	2016	2017	2018
Thermal (Heat/Fire)	76	85	92	96	108
Scald or Steam	33	10	9	13	12
Chemical	2	0	3	4	6
Electrical	2	0	2	0	1
Totals	113	95	106	113	127

Table 19: Burns by Body Part Sub-Type, 2018

Body Part Sub-Type	Count
Back: Back	1
Back: Buttocks	0
Back: Lower Back	0
Back: Neck	0
Back: Spine	0
Chest: Abdomen	0
Chest: Abdominal Area	0
Chest: Chest	2
Head: Cheek	2
Head: Chin	2
Head: Ear	17
Head: Eye	4
Head: Face	9
Head: Jaw	0
Head: Mouth	0
Head: Nose	1
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
Lower Extremities: Ankle	0
Lower Extremities: Foot	6
Lower Extremities: Knee	0
Lower Extremities: Lower leg	8
Lower Extremities: Toes	0
Lower Extremities: Upper Leg	0
Multiple Parts: Lower Body	0
Multiple Parts: Unknown	0
Multiple Parts: Upper Body	10

Multiple Parts: Whole Body	5
Neck: Neck	2
Neck: Throat	0
Upper Extremities: Elbow	0
Upper Extremities: Hands	30
Upper Extremities: Lower Back	0
Upper Extremities: Shoulder	9
Upper Extremities: Upper Arm	11
Upper Extremities: Wrist	8
Total	127

**Table 20: Burns by Body Part, 2014 - 2017,
Historical data**

Body Part	2014	2015	2016	2017	2018
Hand and fingers	18	14	27	22	30
Ear	13	22	14	16	17
Arm, lower, not including elbow or wrist	9	3	2	12	n/a
Multiple parts	16	8	4	12	5
Face	13	12	16	9	14
Neck	9	6	4	7	2
Wrist	5	4	9	7	8
Shoulder	5	5	3	6	9
Multiple body parts, upper body	4	5	8	4	10
Leg, lower	1	6	3	3	n/a
Undetermined	0	0	3	2	n/a
Arm, upper, not including elbow or shoulder	2	2	1	2	11
Back, except spine	2	0	0	2	1
Pelvis or groin	0	0	0	2	0
Knee	0	0	1	2	0
Elbow	0	0	0	1	0
Head	3	4	2	1	n/a
Neck and shoulders	1	0	0	1	n/a
Chest	0	0	1	1	2
Foot and toes	2	1	3	1	6
Eye	1	0	0	0	4
Throat	0	0	0	0	0
Hip, lower back, or buttocks	1	0	1	0	0
Lower extremities	2	1	2	0	8
Upper extremities	6	2	2	0	n/a
Total	113	95	106	113	127

For Table 20 above, the 2018 column (shaded in gray) was pieced together from the data in Table 19 in order to view trends and patterns.

Exposures

Due to the change in our information management system, the exposure data collected in 2018 is less specific than the exposure data collected in previous years. This is why we currently have “historical data” in separate charts and figures than that for 2018.

Table 21: Exposure by Sub-Type, 2018

Exposure + Sub-Type	Count
Chemical: Ammonia	1
Chemical: Benzene	2
Chemical: Bleach	1
Chemical: Not listed	137
Chemical: Unidentified	73
Physical: Animal venom	6
Physical: Meningitis	38
Physical: Not listed	138
Physical: Plant toxin	27
Physical: Unidentified	87
Respiratory: Blood	69
Respiratory: Influenza	4
Respiratory: Not listed	108
Respiratory: Saliva	24
Respiratory: Tuberculosis	98
Respiratory: Unidentified	50
Respiratory: Vomit	7
Total	870

Table 22: Exposure by Route, 2018

Route	Count
Absorption	289
Ingestion	58
Inhalation	482
Injection/Puncture	41
Total	870

Figure 7: Exposure by Route, 2018, percentages

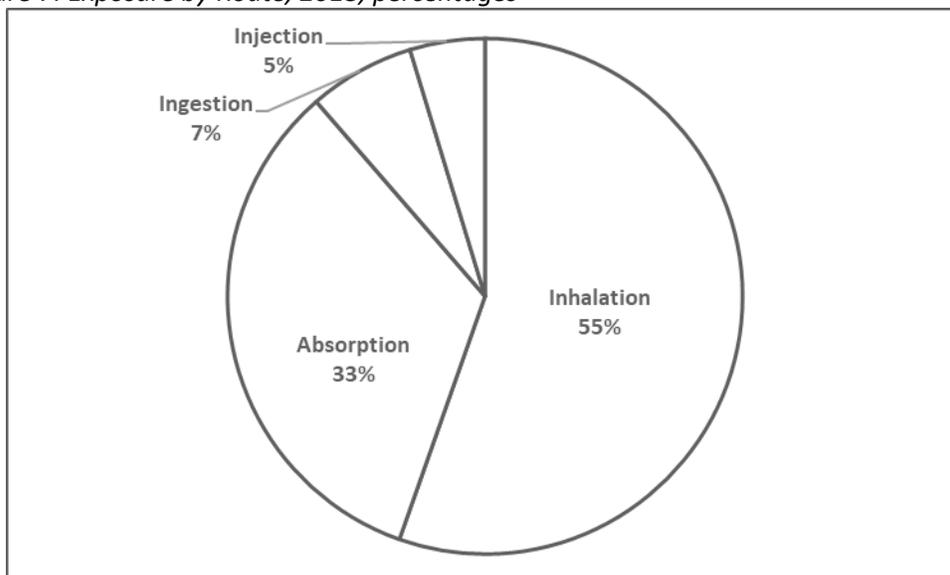


Table 23: Exposure by Substance, 2018

Substance	Count
Gas/vapor	330
Liquid	306
Solid	234
Total	870

Figure 8: Exposure by Substance, 2018, percentages

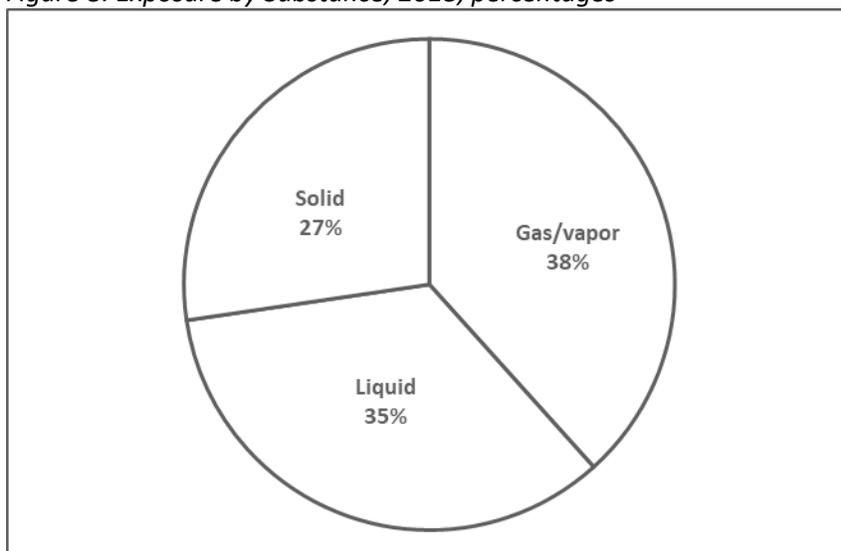


Table 24: Routes of Exposure, 2014 – 2017, historical data (ordered by 2017, descending)

Exposure Routes	2014	2015	2016	2017
Airborne pathogens	369	141	290	354
Undetermined	120	287	273	325
Blood pathogens	183	181	194	174
Body Fluids	109	167	121	173
Chemical (household/industrial)	313	53	310	147
Plant Toxins	24	54	37	36
Chemical (carbon monoxide)	3	3	27	1
Total	1121	886	1252	1210

Figure 9: Routes of Exposure, 2014 – 2017, historical data

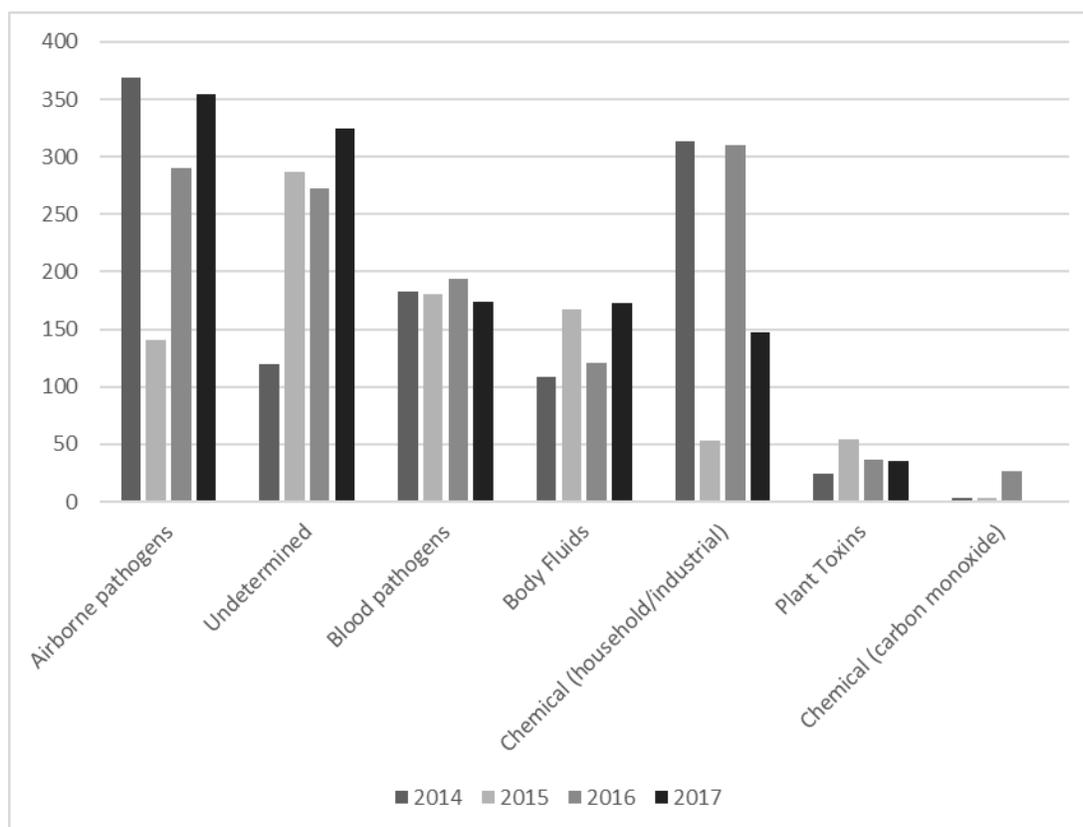


Table 25: Exposure description, 2014 – 2017, historical data (ordered by 2017, descending)

Exposure description	2014	2015	2016	2017
Unknown	103	256	148	290
Blood	177	167	161	153
Chemicals/household/industrial	89	36	310	122
Asbestos	384	51	51	112
Tuberculosis	93	73	128	109
Body fluids	109	92	91	101
Meningitis	65	91	62	104
Animals or wildlife	63	75	90	58
Sickness, other	60	21	24	49
Poison plants	24	61	37	37
Vomit	16	19	14	17
Chlorine	0	4	1	14
Mold	0	4	26	10
Airborne, other	15	7	40	7
Staph	0	3	0	7
Carbon monoxide	6	8	26	5
HIV	0	11	4	4
Scabies	9	4	21	4
Hepatitis C	6	10	14	3
MRSA	4	0	14	3
Bacterial pneumonia	0	1	0	1
Explosive residue	0	0	0	0
Influenza	8	0	0	0
Lice	0	0	0	0
Strep	0	0	1	0
Total	1231	994	1263	1210

Cancer

The commission received nine reports of cancer diagnoses from fire departments in 2018:

Thyroid - 3

(Males, 36, 45, 53)

Skin - 2

(Males, 43, 45)

Testicular - 2

(Males, 37, 47)

Lymphoma - 1

(Male, 65)

Unidentified - 1

(Male, 45)

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 small 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.

A Reminder for Fire Departments

All injuries to fire protection personnel that are reported to the Texas Workers' Compensation Commission must be reported to the Texas Commission on Fire Protection.

SOP Issues

In 2018 there were 30 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 26: Injuries Attributed to SOP Issues, 2018

Activity	Minor	Serious	Total
Fire Suppression	10	9	19
Ems	5	2	7
Responding to Incident	0	1	1
Skills Training	2	0	2
Station Duties	0	1	1
Totals	17	13	30

Table 27: Injuries Attributed to PPE & PASS Failures

Activity	Minor	Serious	Total
Fire Suppression	7	1	8
EMS	1	0	1
Skills Training	2	0	2
Rescue - Fire Related	1	0	1
Rescue - Non-Fire	2	0	2
Totals	13	1	14

Fatalities

The commission's 2018 injury report includes two 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 nine Texas fire fighter fatality incident investigations between September 1, 2017 and August 31, 2018. Comprehensive information about the investigations may be found on their website at the following web address:

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

State of Texas vs. NFPA

Comparison between the State of Texas (2018) and National Fire Protection Association (NFPA), U.S. Firefighter Injuries – 2017

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.

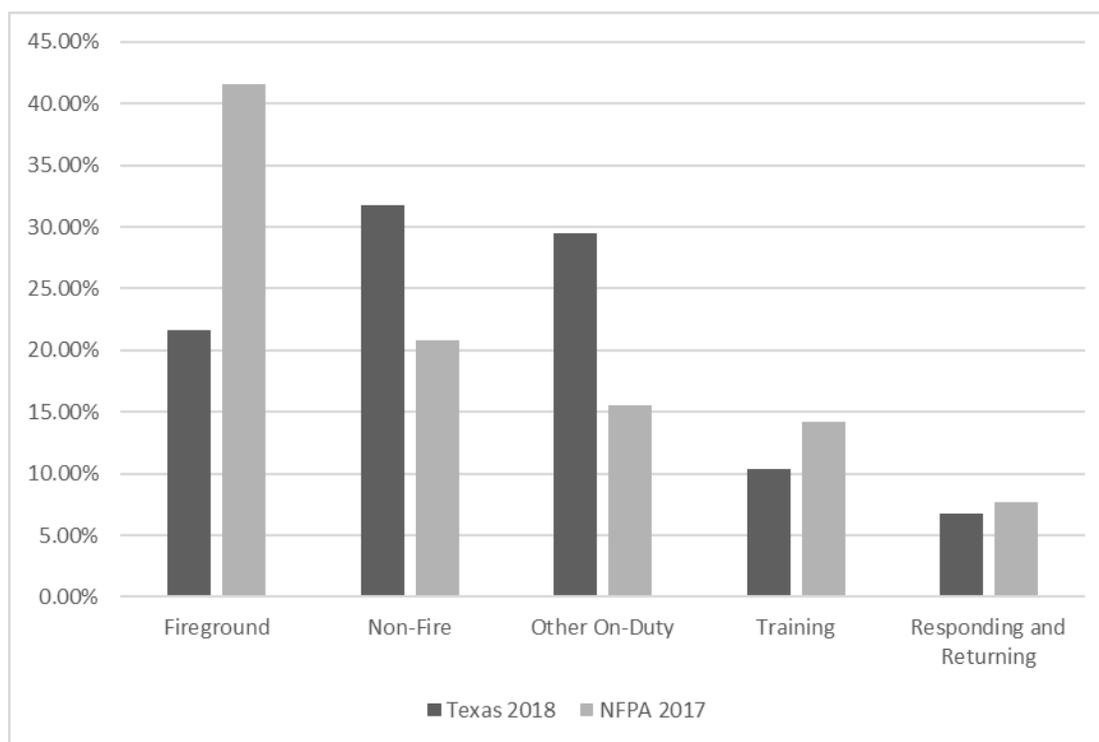
The NFPA’s “Responding and Returning” and “Training” categories appear to correspond closely to the commission’s categories. (The NFPA numbers include Texas statistics, although the reporting populations may not be the same.)

Table 28: Comparison of Texas 2018 and NFPA 2017

Category	Texas 2018		NFPA 2017	
	Count	Percent	Count	Percent
Fireground	833	21.64%	24495	41.63%
Non-Fire	1222	31.74%	12240	20.80%
Other On-Duty	1137	29.53%	9165	15.58%
Training	399	10.36%	8380	14.24%
Responding and Returning	259	6.73%	4555	7.74%
Total	3850	100.00%	58835	100.00%

*NFPA data is from [U.S. Firefighter Injuries in 2017](#), copyright ©2018 National Fire Protection Association, Quincy, MA.

Figure 10: Injuries by Activity Percentages – Comparing Texas 2018 and NFPA 2017



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 to the Texas fire service:

◇ **Insert commission recommendations here:**

◇ Recommendation

◇ Recommendation

◇ Recommendation

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](#)

See also the commission's web page: [NFPA Standards adopted by the commission.](#) (double-check this link before publication)

8. Discussion and possible action on setting future meeting dates, locations and agenda items.

9. Adjourn meeting