

STATE FIRE MARSHAL'S OFFICE

Firefighter Line of Duty Death Investigations



ANNUAL REPORT FY 2002

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Firefighter Line of Duty Death Investigation FY02 Annual Report

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TEXAS DEPARTMENT OF INSURANCE STATE FIRE MARSHAL'S OFFICE AUSTIN, TEXAS

Firefighter Line of Duty Death Investigation FY02 Annual Report

Executive Summary

During state fiscal year 2002, the State Fire Marshal's Office (SFMO) conducted six firefighter line of duty death investigations. These investigations were conducted using newly created statutory authority conferred upon the Texas Department of Insurance, State Fire Marshal's Office, during the 77th Texas Legislature.

Investigations of these six firefighter deaths provided unique insight into firefighting operations, equipment use, health issues and other aspects of the Texas fire service.

As the SFMO involved all Texas firefighter associations and fire-related state agencies in the investigation process, the results reflect a multifaceted view of the circumstances surrounding the tragedies. In addition to staff from the State Fire Marshal's Office, fire service associations contributed hundreds of hours of time during the development of the procedures and while conducting the investigations. Additionally, fire departments experiencing a line of duty death participated fully in the investigations, making statements, logs, equipment and other information available to the investigators. The State Fire Marshal's Office is truly grateful for the involvement of these individuals. Their contributions ensured that the investigative effort provided meaningful assistance to the affected departments and that the reports added to the body of knowledge that will hopefully prevent firefighter line of duty deaths in the future.

FY02 Texas Firefighter Death Composite

The six, firefighter line of duty deaths recorded in FY02 resulted from a variety of causes and circumstances. The causes of these six deaths aligned closely with the national-level firefighter death statistics as reported by the U.S. Fire Administration in their recently released study.

Heart attacks, vehicle accidents and asphyxia were noted in the national study and were reflected in generally the same ratios in FY02 Texas deaths. Regarding the vehicle accidents, the national study also noted ejection from vehicles and failure to wear safety belts as contributing to the deaths. These same factors were observed in the Texas deaths.

The following table provides a snapshot of each Texas firefighter line of duty death incident. A full copy of the summary from each investigation report is included as an appendix to this document.

Firefighter Name	Date of Death	Incident Description
Jay Jahnke	October 13, 2001	High-rise fire, air tank depleted
David R. Butler	December 24, 2001	In route to fire, heart attack
Vincent Davis	February 11, 2002	Apartment fire, wall collapsed
Kevin L. Baker	April 7, 2002	Assisting with rescue, heart attack
Roger Dunn	August 12, 2002	Fireground support, heart attack
Travis Wiens	August 12, 2002	Wildfire suppression, vehicle accident

National Firefighter Death Composite

The United States Fire Administration (USFA) released its comprehensive study on firefighter deaths in October 2002. The *USFA Firefighter Fatality Retrospective Study: 1990-2000* provided an in-depth analysis as to the causes for more than 1,000 on-duty deaths that occurred in the United States. The goal of the study was to identify trends in firefighter mortality, and promote use of the information to help reduce firefighter deaths.

In the study, USFA found that:

- The leading cause of death for firefighters is heart attack (44%) followed by trauma (27%), and asphyxia and burns (20%).
- Each year in the United States, approximately 100 firefighters are killed while on duty and tens of thousands are injured. Although the number of firefighter fatalities has steadily decreased over the past 20 years, the incidence of firefighter fatalities per 100,000 incidents has actually risen over the last 5 years, with 1999 having the highest rate of firefighter fatalities per 100,000 incidents since 1978.
- Firefighters under the age of 35 are more likely to be killed by traumatic injuries than they are to die from medical causes (e.g., heart attack, stroke). After age 35, the proportion of deaths due to traumatic injuries decreases, and the proportion of deaths due to medical causes rises steadily.
- Since 1984, motor vehicle collisions (MVCs) have accounted for between 20 and 25 percent of all firefighter fatalities, annually. One quarter of the firefighters, who died in MVCs, were killed in private/personally owned vehicles (POVs). Following POVs, the apparatus most often involved in fatal collisions were water tankers, engines/pumpers, and airplanes. More firefighters are killed in tanker collisions than in engines and ladders combined.
- About 27 percent of fatalities killed in MVCs were ejected from the vehicle at the time of the collision. Only 21 percent of firefighters were reportedly wearing their seatbelts prior to the collision.

- Approximately 60 percent of all firefighter fatalities were individuals over the age of 40, and one-third were over the age of 50. Nationwide, firefighters over the age of 40 make up 46 percent of the fire service, with those over 50 accounting for only 16 percent of firefighters. About 40 percent of volunteer firefighters are over the age of 50, compared to 25 percent of career firefighters.
- The majority of firefighter fatalities (57 percent) were members of local or municipal volunteer fire agencies (including combination departments, which are comprised of both career and volunteer personnel). Full-time career firefighters account for 33 percent of firefighter fatalities. Numerically more volunteer firefighters are killed than career personnel, yet career personnel lose their lives at a rate disproportionate to their representation in the fire service.
- In many fire departments, EMS calls account for between 50 and 80 percent of their emergency call volume. These EMS incidents result in only 3 percent of firefighter fatalities. Trauma (internal/head) accounts for the deaths of 50 percent of firefighters who were involved in EMS operations at the time of their fatal injury. Another 38 percent involved in EMS operations died from heart attack.
- For the past 25 years, the United States Fire Administration (USFA) has tracked the number of firefighter fatalities and conducted an annual analysis. Through the collection of this information on the causes of firefighter deaths, the USFA is able to focus on specific problems and direct national efforts to finding solutions for the reduction of firefighter fatalities in the future. The information in this study is also used to measure the effectiveness of current programs directed toward firefighter health and safety.

Authority

Effective September 1, 2001, House Bill 1450 amended Chapter 417, Texas Government Code by adding Section 417.0075 requiring the State Fire Marshal's Office (SFMO) to conduct an investigation if a firefighter dies in the line of duty in connection with a fire-fighting incident in this state.

The statute requires the SFMO to investigate the circumstances surrounding the death of the firefighter, including the cause and origin of the fire, the condition of the structure, and the suppression operation, to determine the factors that may have contributed to the death. The State Fire Marshal is required to coordinate the investigative efforts of local government officials and may enlist established fire service organizations and private entities to assist in the investigation.

Investigation Procedures

Immediately following the passage of HB 1450, the State Fire Marshal's Office conducted a survey of other states' fire investigation programs. This research

revealed that Texas is the only state that, by law, mandates the State Fire Marshal's Office to investigate firefighter fatalities.

The State Fire Marshal's Office requested the assistance of organizations representing firefighters, fire chiefs, fire marshals and other entities in drafting the procedure for conducting a firefighter line of duty death investigation. Organizations included in the drafting of the original standard operating procedure (SOP) were the:

- State Firemen's & Fire Marshals' Association of Texas,
- Texas State Association of Fire Fighters,
- Texas Fire Marshal's Association,
- Texas Fire Chief's Association,
- Texas Commission on Fire Protection,
- Texas Forest Service
- Texas Engineering Extension Service, Emergency Services Training Institute, Texas A&M University System, and
- Firefighter's Ministries.

Additional assistance in developing investigation forms was provided by the:

- National Institute for Occupational Safety and Health,
- International Association of Fire Fighters,
- International Association of Fire Chiefs,
- United States Fire Administration, Federal Emergency Management Agency, and
- National Fire Protection Association.

The SOP resulting from this effort was used throughout FY02. The SOP is a dynamic document and is formally evaluated after each firefighter line of duty death.

In addition to the development of the SOP, other FY02 activities supporting the successful implementation of the process included:

- *Automating LODD information gathering.* The SFMO voice mail system was modified to assist public safety agencies in notifying the SFMO of an LODD. The voice system automatically routes callers to a 24-hour answering service that takes preliminary information and immediately notifies SFMO management of the fatality.
- *Formation of a Fire Ground Operations Task Force (FGOTF).* This task force is comprised of various fire service groups and provides assistance to SFMO in evaluating fire scene tactics and personal protective equipment.
- *Creation of a Benefits Task Force.* This group was formed by state fire service groups to assist survivors and fire departments with grief counseling services, death benefits information and firefighter funeral procedures.

Line of Duty Death Investigation Protocol

Upon notification of a firefighter LODD, the SFMO:

- Dispatches the closest Deputy State Fire Marshal to provide immediate assistance, gather preliminary information and to secure the scene.
- Designates an SFMO Deputy State Fire Marshal as the Incident Team Leader (ITL), who is responsible for coordinating the investigative efforts of SFMO with local fire and law enforcement agencies. Additional SFMO personnel may be sent to assist, depending on the nature of the investigation.
- Requests additional assistance from the Fire Ground Operations Task Force and the Benefits Task Force, as appropriate.
- Notifies Texas Department of Insurance executive staff and Public Information Office as well as state, federal, and national fire service organizations and agencies.

When the SFMO Incident Team Leader (ITL) arrives at the scene of a LODD, the ITL meets with local fire and law enforcement officials to determine what investigative efforts are underway and coordinates the deployment of SFMO personnel. Additional resources may be requested from local, state, and federal agencies. The LODD ITL is responsible for coordination and preparation of the final LODD report.

SFMO and local investigators conduct a fire scene investigation to determine the origin and cause of the fire. LODD incidents involving wild fires may require assistance from Texas Forest Service investigators. If the fire is determined to have been caused by intentional or negligent action, SFMO investigators coordinate any criminal investigation with local law enforcement. An origin/cause determination report is prepared for the ITL.

SFMO inspectors and local fire and building inspectors may conduct an examination of the condition of the building where the LODD occurred. The building is examined for compliance with state and local fire codes and for conditions that may have led to rapid fire or smoke spread or the entrapment of the deceased firefighter. If the building was equipped with any automatic fire protection systems such as fire sprinklers or fire alarms, these system are examined to determine if they performed properly during the fire. A report is prepared for the ITL.

The Fire Ground Operations Task Force assists SFMO in evaluating the tactics used in fighting the fire, utilization of personnel and equipment, performance of protective equipment, and fire scene communications. The Texas Commission on Fire Protection may be requested to conduct an examination of firefighter personal protective equipment for compliance with national standards and adopted state rules. The National Institute for Occupational Safety and Health conducts free testing and evaluation of firefighting breathing apparatuses and components. Reports from these groups are prepared for the ITL.

The Benefits Task Force assists survivors of deceased firefighters with grief counseling and information on state, federal, and private death benefit programs. These benefits may exceed \$900,000, depending on the incident. Additional benefits to survivors include college tuition waivers at state universities and colleges for the children and spouse. Critical incident stress debriefing and counseling can be arranged for to assist other firefighters in the loss of their friend and co-worker.

Information on conducting a traditional fallen firefighter's funeral is available for those families and fire departments that request assistance.

As the on-scene investigation into the LODD concludes, the ITL meets with all investigative groups and task forces to ensure consensus is reached regarding the origin and cause of the fire and the cause of the LODD. Additional investigation may be required before a final determination is made. The ITL coordinates any off-site or continuing investigative activities with local authorities.

When all aspects of the LODD investigation have been completed, the ITL prepares a draft report of the LODD investigation using a standard narrative format. Upon completion of the draft report, it is distributed to the task force entities that participated in the investigation for review and comment. A final review session is conducted with all participants before submission to the State Fire Marshal for final approval and presentation to the Commissioner of Insurance. The report is made available to the fire department of the deceased firefighter and released to the public. An electronic version is posted on the Texas Department of Insurance/State Fire Marshal's Office Internet web site.

LODD Program Educational Outreach

To ensure that the Texas fire service was knowledgeable about the LODD process, the SFMO developed and delivered a comprehensive outreach program.

- Presentations were conducted by SFMO employees in most major metropolitan areas of the state. Based on public presentation reports, information on LODDs has been made available to over seven hundred fire service personnel, law enforcement officers, emergency medical service personnel and other interested parties. In addition, an information booth was staffed at the Annual Texas A&M Fire Training School during registration and was viewed by an estimated 2,500 persons.
- The SFMO developed an LODD brochure to compliment the presentations and to reinforce procedures should an LODD occur. The brochure includes an Immediate Action Guide for fire departments experiencing a LODD and provides instructions on notification of survivors, preventing the destruction of evidence, and dealing with the media. The 24-hour notification number is highlighted throughout the brochure.

- Articles regarding the LODD program have been published in the journals and newsletters of every major Texas fire service organization.
- Electronic copies of the enabling statute, brochure, and individual firefighter LODD investigation reports are available on the TDI Internet web site. Several national fire service web sites have provided links on their web sites directing users to the investigative reports. The first report released generated hundreds of "hits" within days of the release, indicating widespread interest.

Information regarding SFMO LODD procedures has been requested by the National Fallen Firefighters Foundation, an information-clearing house operated by the United States Fire Administration in Emmitsburg, Maryland.

Recommendations

Based on the conditions found during the FY02 LODD investigations, the SFMO makes the following general recommendations. Incident-specific recommendations are incorporated into each LODD report:

Medical Screening

- Fire departments should make every reasonable effort to screen firefighters for heart disease in an effort to reduce the number of heart attack deaths.
- Fire departments must encourage applicants to be forthright in disclosing medical conditions that may endanger their lives or the lives of other firefighters or civilians.

If an applicant indicates a medical condition that poses a significant risk of injury or death, the department may choose to assign the applicant to non-emergency duties that would not subject the applicant to undue stress or physical exertion. Medical screening may be required to make a final decision in permitting applicants to undergo firefighting training and assignment as active firefighters.

Active firefighters and applicants that will operate fire apparatus should undergo periodic medical screening to detect conditions that could cause them to become incapacitated and lose control of the vehicle.

There are a large number of administrative functions and support roles that would allow otherwise medically disqualified applicants to serve the community without endangering themselves and others.

Firefighting Strategy and Tactics

- Pre-Fire Planning

A pre-fire planning program should be implemented to enhance tactical decision-making on the fireground. The use of pre-fire plans will enable responding personnel to determine the most accessible water supply, geographical building layout including: means of access, potential exposure problems, occupancy hazards, proper positioning for defensive operations, etc.

- Incident Management System

Officers assigned the responsibility for a specific tactical level management component at an incident shall directly supervise and account for the companies and/or crews operating in their specific area of responsibility.

The Incident Management System should be utilized at all emergency incidents. The adoption of the Incident Management System is recommended to ensure the effective use of common terminology during large scale and mutual aid incidents. Command must provide strong and clear direction for the incident.

- Personnel Accountability

A Safety or Accountability officer should be assigned to assure that accountability is accomplished.

Company unity must be maintained to facilitate accountability. All supervisors shall maintain a constant awareness of the position and function of all personnel assigned to operate under their supervision. This awareness shall serve as the basic means of accountability that shall be required for operational safety.

The incident commander shall initiate an accountability and inventory worksheet at the beginning of operations and shall maintain that system throughout operations.

Responder Boards must be forwarded to the Command Post or the sector/division officers to ensure quick identification of downed or missing personnel.

When an incident occurs, a PAR (Personnel Accountability Report) should first start with known affected units, then followed by affected sectors/divisions and then other assigned units.

- Communication recommendations

Use monitored tactical radio channels for general fire ground operations – Monitored channels can offer a greater degree of safety as a third party can effectively monitor /clarify sometimes hectic communications.

Use recorded tactical channels for fire ground operations – The use of recorded tactical channels allows for better reconstruction of potentially critical events, the ability to chronologically document specific events and provide for a more in-depth post incident analysis.

- **Rapid Intervention Teams**

The incident commander shall evaluate the situation and the risks to operating crews and shall provide one or more rapid intervention crew/company commensurate with the needs of the situation.

A Rapid Intervention Team (RIT) replacement team should be assembled when the original RIT is assigned to conduct a rescue effort during a prolonged fire attack.

Consideration should be given to establishing RIT teams for each division/sector actively involved in firefighting or high-risk activities.

Protective Equipment

- Protective clothing and protective equipment shall be used whenever firefighters are exposed or potentially exposed to hazards. All personnel, including engineers, support personnel, fire prevention, and medics, should be required to wear full protective equipment when operating in or around the fire ground.
- National standards, adopted by the Texas Commission on Fire Protection, require third-party certification labels on many types of personal protective equipment. Manufacturers should locate labels where they will not irritate the user's skin and attach them in a manner that will discourage removal.
- Require activation of personal alert safety systems (PASS) on all fireground.

Firefighters should be required to activate PASS devices prior to entering the fireground. Self-Contained Breathing Apparatus (SCBA) with integrated PASS devices should have the air supply turned on, activating the PASS alarm, before entering the fireground. This routine activation / use on the fire ground will provide all firefighters with an additional degree of safety regardless of their actions or operating positions on the fire ground.

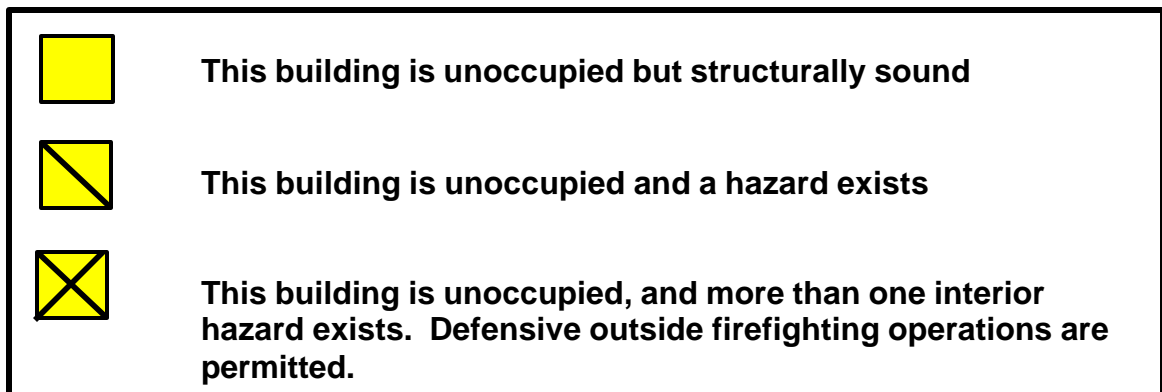
- SCBA air cylinders should be maintained not less than 90% full on breathing apparatus and extra cylinders kept on emergency response vehicles. Low air cylinders should be segregated from full cylinders until filled.

Buildings and Fire Protection Systems

- All high-rise buildings, regardless of date of construction, should be equipped with a total coverage automatic fire sprinkler system.
- Installation of floor level exit signs and illumination of exit paths may help occupants and firefighters to escape when standard exit signs and lights are obscured by smoke.
- Fire departments should identify dangerous vacant buildings by affixing warning placards to entrance doorways or other openings where fire fighters may enter.

Fires in buildings under construction or abandoned should be considered high risk. Specific operational guidelines/procedures that define the parameters of effective risk management should be developed and enforced. Personnel responding to such incidents must be prepared for unusually rapid fire spread, early structural collapse, non-traditional contents, limited accessibility, and unfinished building features including walls, ceilings, floors, etc. Development of a placarding system, utilizing easily recognized symbols, to identify high-risk buildings, such as vacant/abandoned buildings and buildings under construction/renovation, should be considered. Tactical planning strategies for these high-risk buildings should be developed.

Following are examples of warning placards developed and used by the New York City Fire Department.



Fire Department Vehicles

- New fire apparatus design should follow NFPA standards including protected seating of passengers, safety and warning equipment.
- Existing fire trucks should be closely examined for mechanical reliability.

- Conversion of vehicles to firefighting apparatus should be undertaken carefully with precautions taken against overloading, installing protective equipment such as seat belts for passengers, and maintaining stability against overturning and loss of control.
- Personnel should not be allowed to ride on the front of wildfire firefighting apparatus at any time. Firefighting should be limited to protected positions on the sides and rear of vehicles. Firefighters in these positions should be protected by safety cages or belts that will prevent falls from vehicles. Rollover protection equipment should be considered for these types of vehicles.
- Drivers and passengers should wear safety belts at all time vehicle is in motion.

Appendix A

FY2002 Investigation Summaries

The following summaries were extracted verbatim from individual line of duty death investigation reports. The full text of the individual reports is available on the TDI Internet web site. The summaries are listed in date order.

Captain Jay Jahnke

Houston Fire Department, October 13, 2001

A six-alarm high rise condominium fire claimed the life of a civilian and a veteran Houston firefighter that was attempting to rescue him.

At 4:43 a.m. on October 13, 2001, the Houston Fire Department received a report of a fire from employees working in the West building of the Four Leaf Towers Condominiums, located at 5110 San Felipe in Houston, Texas. Initial reports to the fire department communications division were of a fire alarm with smoke on the fifth floor and a person trapped.

HFD Engine Company 2, a three-man company commanded by Captain Jay Jahnke, was dispatched at 4:48 a.m. to the scene as part of the first alarm assignment, arriving at 4:54 a.m. Captain Jahnke, firefighter Michael Phillips, and Engineer/Operator Jimmy Johnson traveled to the fifth floor. Shortly afterward, Captain Robert Green and firefighter Dan Matt of Ladder 28 joined them. E/O Johnson returned to L28 and brought a thermal imaging camera to the floor, then returned to his engine to assist in establishing a water supply. The four personnel from E2 and L28 made entry to Unit 52 at approximately 5:03 a.m. to begin initial firefighting and rescue operations in Unit 52 on the fifth story of the 41-story high-rise condominium building.

As the initial attack crew entered Unit 52, they were met with moderate heat and heavy smoke conditions. An initial search of the foyer area of Unit 52 did not locate the male resident that was reported trapped. Firefighters Phillips and Matt respectively reported their breathing apparatus air supply was running low on air and they exited the fifth floor one at a time. Jahnke and Green then withdrew from Unit 52 into the corridor to make their way to the exit stairs after Jahnke stated he would probably be low on air soon. The self-closing door to Unit # 52 was held open by the abandoned hose line as the firefighters retreated. Heat and smoke were pushed into the north to south exit access corridor by gusty north winds entering broken windows of the north and west sides of the condominium and exiting through the corridor door.

Visibility in the corridor at that time was near zero. Jahnke and Green followed the fire hose as they left Unit 52. Jahnke was disoriented and stated they were going the wrong direction. Green encouraged Jahnke to continue following the hose. As they reached a tangle of hose near the hose cabinet connection, Jahnke became

separated from Green. At 5:10 a.m. Jahnke called for help on his portable radio and stated he was running out of air. Jahnke's last recorded transmission was at 5:13 a.m.

Approximately 5:34 a.m., Jahnke was located by a rescue team in the elevator lobby, halfway between Unit 52 and the exit stair door. Captain Jahnke's SCBA air supply had been depleted, his SCBA mask and helmet were off, and his personal safety alarm was sounding and flashing. With some difficulty, the rescue team removed Jahnke from the fifth floor and carried him down the stairs to the outside of the building at about 5:36 a.m. After aggressive resuscitative efforts at the scene, Jahnke was taken to Memorial Hermann Hospital, arriving about 6:03 a.m. Jahnke was pronounced dead shortly after his arrival at the hospital.

The Harris County Medical Examiner attributed the cause of Captain Jay Jahnke's death to asphyxia due to lack of oxygen.

Firefighter David R. Butler Spring Branch Volunteer Fire Department, December 24, 2001

A 43-year old volunteer firefighter died of a heart attack while driving a fire department vehicle to a mutual aid call for assistance at a single-family residential fire.

On December 24, 2001, at approximately 9:55 a.m., the Comal County Sheriff's Office received a 911 call reporting a structure fire on the 4900 Block of Ammann Road, in Bulverde, Texas. The Bulverde Volunteer Fire Department was dispatched to this incident, and the Spring Branch Volunteer Fire Department was requested for mutual aid.

At approximately 10:20 a.m. Spring Branch firefighter David R. Butler responded to the mutual aid call in Battalion Truck 61, a 1997 one-ton Dodge truck with a utility bed. The truck is used to carry fireground support equipment and was equipped with a compressed air cascade system for refilling breathing apparatus. Butler was the only occupant in the vehicle.

Butler was headed south on US Highway 281 when his vehicle veered off the road, crossed the median and northbound lanes, and then struck a tree and a rock embankment. At approximately 10:21 a.m., the Comal County Sheriff's Department received a telephone report of the accident. The Sheriff's Department dispatched fire department, ambulance, and law enforcement units to the accident scene.

Steven C. Hemphill, a retired Emergency Medical Technician from San Antonio, was passing by the accident scene. He approached Truck 61 and noticed Butler lying on the seat unrestrained by a safety belt. After checking Butler's condition and finding him unresponsive, not breathing, and without a pulse, Hemphill administered CPR until other emergency personnel arrived.

Butler was treated by Bulverde/Spring Branch Emergency Medical Service at the scene and transported by Air-Life to University Hospital in San Antonio, Texas, where he was pronounced dead at 11:51 a.m.

The Bexar County Medical Examiner reported that David R. Butler died from arteriosclerotic cardiovascular disease.

Butler, a one and one-half year member of the Spring Branch Volunteer Fire Department is survived by wife and two children.

Officer Vincent Davis ***Dallas Fire-Rescue, February 11, 2002***

A wall collapse during a six-alarm fire claimed the life of a veteran Dallas firefighter. The fire occurred at Creekside Hill Apartments, a vacant apartment building undergoing renovation. At 5:29 p.m. on Monday, February 11, 2002, Dallas Fire-Rescue received a report of a fire from a nearby resident. Initial reports to the fire department were of a visible fire with heavy smoke.

The first alarm assignment of units E26, E14, E36, T26, T36, and Battalion Chief 6 was dispatched. Some of the units observed heavy smoke as they left their stations. E26 arrived at the scene within two minutes and observed a large amount of fire in a two-story apartment building located at 2707 West Ninth Street. Battalion Chief 6 arrived approximately three minutes after the first engine and ordered a second alarm, which was dispatched at 5:33 p.m.

As part of the second alarm, E33 was ordered to move up to Station 14. Based on his observation of a large amount of smoke, the Captain of E33 elected to travel directly to the fire in anticipation of a third alarm. The third alarm was transmitted to E49, E33, E16, and T3 at 5:37 p.m. E33 arrived at the scene at 5:41 p.m., ahead of many of the second alarm companies.

Fire-Rescue Officer Vincent Davis was filling in at unit E33. His normal assignment is at Station 26. Upon the arrival of E33 at the scene, E33's crew, including Davis and Battalion Chief 9 Springer, entered the upper courtyard on the south side of the "figure 8" shaped complex.

A covered breezeway provided access from the lower, north interior courtyard area of the complex to the parking area where E26, T26 and E14 were parked. Four preconnected hoselines from E26 were stretched through the breezeway to the interior of the complex, in use in a defensive attack. Captain Creager, of E33, instructed his crew to follow him to see if they could get another hose line off E14, since all four preconnects on E26 were in use.

E33's crew was under the roof of the breezeway, walking west toward E26 and the parking area when a portion of the roof of the breezeway collapsed upon Chuck

Womble and Davis. The time of the collapse is estimated to have taken place at approximately 5:47 p.m.

E33's Chuck Womble's legs were trapped under the collapsed roof. Davis was initially thought to have escaped the collapse by running into the courtyard. Rescue efforts to remove Womble from the debris were initiated and he was removed in approximately 15 minutes. He was later taken to a local hospital where he was treated for leg injuries and released. While Womble was being rescued, the Incident Commander, Deputy Chief 807 Mike Zak, called for a personnel accountability report (PAR). Captain Creager called for Davis on his radio with no response.

Davis' boot was located by a firefighter in the rubble. Personnel on the scene quickly dug through the bricks and found Davis in a sitting position with his head and chest pressed down upon his legs. Davis was not breathing when discovered. Resuscitation efforts began immediately and Davis was removed from the debris approximately 28 minutes after the collapse occurred. Aggressive advanced life support procedures were undertaken as Davis was transported to Methodist Central Hospital. Davis was pronounced dead at 6:55 p.m. The Dallas County Medical Examiner described the cause of death as "blunt force injuries and traumatic asphyxia."

Fire-Rescue Officer Vincent Davis, age 42, a ten-year veteran of Dallas Fire-Rescue, is survived by his wife and four children.

Firefighter Kevin L. Baker Mid-North Volunteer Fire Department, April 7, 2002

A rookie volunteer firefighter, age 39, died of a heart attack after assisting ambulance crewmembers in carrying a stretcher through deep mud and preparing an injured person for transport by helicopter ambulance.

On April 6, 2002 at 11:01 p.m., the Johnson County Sheriff's Department received a 911 call reporting a shooting with injuries at 7800 County Road 915. Sheriff's Deputies were dispatched at 11:03 p.m., and both the Mid-North Volunteer Fire Department and American Medical Response (AMR) ambulance company were notified at 11:05 p.m.

The Mid-North Volunteer Fire Department Fire Department is contracted with the Johnson County Rural Fire Prevention District to provide first response level emergency medical care.

Mid-North Engine 83 responded with a crew of three firefighters including firefighter Kevin L. Baker at 11:15 p.m., and staged at a safe distance from the scene of the shooting pending arrival of law enforcement. An AMR ambulance arrived with the engine at the staged location at 11:23 p.m.

After law enforcement personnel secured the scene, fire and EMS units entered the area, arriving at the driveway 50 yards from the shooting scene at 11:26 p.m. The area had received rain for several days prior to this incident and the ground was saturated. Baker, wearing leather lace-up work boots, blue jeans, a sweatshirt and a bunker coat, helped carry the ambulance cot and equipment across the muddy yard to where the mobile home was located. According to one of the ambulance attendants, the mud was so deep they had to forcibly pull their feet out of the mud at times while crossing the yard. The victim firefighter also assisted with carrying the shooting victim back across the yard to the ambulance.

Baker and Engine 83 then drove approximately $\frac{1}{4}$ mile to the intersection of two county roads where they secured a landing zone (LZ) for the helicopter ambulance. The helicopter landed as the ground ambulance arrived at the LZ with the shooting victim. As the shooting victim was being removed from the ground ambulance to be transferred to the helicopter, Baker stepped around to the side of the ambulance and collapsed. The shooting victim's mother saw Baker collapse and she told the rescuers that a firefighter had fallen.

One of the ambulance crewmembers began immediate assessment of the victim firefighter while the others transferred the shooting victim to the helicopter. Baker was suffering from a seizure and cardiac arrest. Advanced cardiac life support (ACLS) measures were begun immediately, including administration of cardiac drugs and defibrillation. Baker failed to respond to CPR, which continued as the victim firefighter was transported by ground ambulance, departing the LZ at 12:08 a.m. and arriving at Huguley Memorial Hospital at 12:36 a.m. ACLS was continued at the hospital. Baker was pronounced dead after he failed to respond after twenty minutes of treatment. Baker's body was transported to the Tarrant County Medical Examiner for autopsy. Cause of death was attributed to hypertensive atherosclerotic cardiovascular disease.

Firefighter Kevin L. Baker, who had just joined the Mid-North Volunteer Fire Department a month earlier, was engaged to be married. Baker had no children.

Firefighter Roger Dunn Clute Volunteer Fire Department, August 12, 2002

A 48-year old volunteer firefighter died of a heart attack while conducting fireground support operations at a single-family residential fire.

At 3:31 p.m. on Monday, August 12, 2002, the Freeport Fire Department received a report of a fire at 1622 North Avenue P from a patrolling police officer. Initial reports from the patrol officer were of a visible fire with heavy smoke.

The Freeport Fire Department responded to the fire call at 3:33 p.m. Surfside EMS was dispatched at 3:34 p.m. and responded at 3:39 p.m. The first fire units arrived at 3:35 p.m. and reported visible flames. Mutual aid assistance from the Clute

Volunteer Fire Department was requested at 3:58 p.m. and Clute fire units responded at 4:01 p.m.

Clute firefighter Roger Dunn drove Clute Engine 801 to the fire scene, arriving at 4:10 p.m. Firefighter Dunn assisted another Clute firefighter in donning his personal protective equipment and breathing apparatus. Dunn then walked over to Freeport Engine 903 to speak with Freeport firefighter J.S. Caldwell. Shortly after Dunn arrived at the Freeport engine, he collapsed. The time of the collapse was approximately one minute after he arrived on the fire scene. Caldwell witnessed the collapse and summoned help.

Emergency medical care was immediately begun on the scene, and Firefighter Dunn was transported from the scene by Surfside EMS at 4:12 p.m. The ambulance arrived at Brazosport Memorial Hospital at 4:17 p.m., where emergency care continued.

Firefighter Dunn failed to respond to treatment and was pronounced dead at 4:43 p.m. The Galveston County Medical Examiner determined the cause of death of Clute firefighter Richard Dunn as atherosclerotic cardiovascular disease and hypertensive cardiovascular disease.

Firefighter Roger Dunn, a 16-year veteran of the Clute Fire Department, is survived by his wife and two children.

Firefighter Travis Wiens Wichita West Volunteer Fire Department, August 12, 2002

A 28-year-old probationary volunteer firefighter died of head injuries sustained when he was thrown from the front platform of a large brush firefighting engine and run over by the front wheel of the truck.

On August 12, 2002 at 4:17 p.m., the Wichita West Volunteer Fire Department received a report of a grass fire in the 9200 block of Seymour Highway, Wichita Falls, Wichita County, Texas. Wichita West Engine 721 and Engine 720, which was driven by Daniel Gutierrez with probationary firefighter Travis L. Wiens as a passenger, responded to the fire with the units arriving at 4:29 p.m. and 4:34 p.m., respectively.

High winds had spread the grass fire from the Seymour Highway to Old State Road and the fire was threatening to cross the road. Heavy smoke was being blown across the road. Wiens boarded a bumper platform on the front of the 5-ton converted military cargo truck and began to apply water to the fire.

As the truck reached the end of the fireline, Engine 720 began making a U-turn across the roadway to make another pass at extinguishing the fire. The fire truck was almost stationary across the full width of the roadway.

A $\frac{3}{4}$ ton pickup truck was westbound through the cloud of smoke when the driver saw the fire truck blocking the roadway. The driver applied the brakes, but was unable to stop and skidded into the front tire of the fire truck.

The impact threw the fire truck driver, Gutierrez, who was not wearing a safety belt, across the interior of the truck to the passenger seat area. The impact also threw firefighter Wiens off the front platform. Wiens lost his firefighters helmet during the fall from the platform and landed on the ground in front of the left front wheel of the fire truck. The truck, which was still in low gear with no one behind the wheel, lurched forward and rolled over Wiens' head. He sustained massive crushing head injuries and was pronounced dead on the scene.

Wiens' body was transported to the Tarrant County Medical Examiner for autopsy. Cause of death was attributed to crushing injuries of the head from the fall from the truck and subsequently being run over by the truck.

Probationary Firefighter Travis L. Wiens, who had served on the department approximately six months, is survived by his wife.