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A LOOK AT U.S. FIRE FIGHTER FATALITY STATISTICS FOR 2011

By Richard Schulte

The National Fire Protection Association (NFPA) collects and compiles information on fire fighter fatalities in the United States and each year publishes a report on these statistics. The following are a few excerpts from the latest NFPA report on fire fighter fatalities titled "*Firefighter Fatalities in the United States-2011*" authored by Rita F. Fahy, Paul R. LeBlanc and Joseph L. Molis dated June 2012:

> "*Of the 61 firefighters who died while on duty in 2011, 35 were volunteer firefighters, 21 were career firefighters, three were employees of state land management agencies, and two were employees of federal land management agencies.*"
>
> "*The largest share of deaths occurred while firefighters were operating on the fire ground (30 deaths).*"
>
> "*Twenty-two of the 30 fire ground deaths occurred at 20 structure fires. . .Thirteen of the 30 fire ground victims were career firefighters, 12 were volunteer firefighters and five were firefighters with state or federal land management agencies.* "
>
> "*Six deaths occurred during training activities.*"
>
> "*The remaining 10 firefighters died while involved in a variety of non-emergency-related on-duty activities.*"
>
> "*For 22 of the 31 victims of sudden cardiac events in 2011, post mortem medical documentation was available and showed that 13 were hypertensive, six had coronary artery disease, five were diabetic, and four were reported to have had a history of cardiac problems -- such as prior heart attacks, bypass surgery or angioplasty/stent placement. Some of the victims had more than one condition.*"
>
> "*The firefighters who died in 2011 ranged in age from 18 to 82, with a median age of 45 years. Two were age 80 or over.*"
>
> "*Firefighters aged 50 and over accounted for more than two-fifths of all firefighter deaths over the five-year period, although they represent only one-fifth of all career and volunteer firefighters in the U.S.*"

"*Twelve of the 22 firefighter deaths at structure fires occurred in residential properties. Seven fires in one- and two-family dwellings killed eight of the 12 and four died in four fires in apartment buildings. Two other firefighters were killed in fires involving vacant dwellings. . .One firefighter died at a church fire, one at a nursing home fire, one at a furniture store, and one at an office building.*"

"*In 2011, four firefighters died in separate vehicle crashes. In addition to those deaths, three other firefighters were struck and killed by vehicles.*"

"*In 2011, there was one death that resulted from a false alarm or false call; in this case, a system malfunction. Over the past 10 years, 22 firefighter deaths have resulted from false calls, including malicious false alarms and alarm malfunctions.*"

"*The 30 deaths on the fire ground in 2011 is close to the 10-year average of 31, although it is a sharp increase over the 21 deaths in 2010. Deaths on the fire ground continue to be a concern, because traumatic deaths in recent years while operating inside structures have been occurring at rates higher than reported in the 1970s and 1980s, although the number of fires has been decreasing.*"

The number of firefighter fatalities which have occurred in the United States has decreased rapidly over the last few years. The decline in firefighter fatalities in the US is illustrated in the following table:

Year	Number of Fatalities
2005	87
2006	89
2007	106
2008	105
2009	82
2010	73
2011	61
Total (2005-2011)	**603**
AVERAGE (2005-2011)	**87**

Clearly, programs and efforts to reduce the number of fire fighter fatalities which occur in the United States are paying dividends. These programs and efforts include the following:

- Fire fighter life safety efforts by the National Fallen Firefighter Foundation (NFFF)
- Publication of **NIOSH 2005-132** and **NIOSH 2010-153**
- Fire fighter physical fitness programs
- Fire prevention enforcement programs

Of particular interest from a building/fire code standpoint is the number of firefighter fatalities which occur in structure fires. According to the NFPA, approximately 500,000 structure fires occur annually in the United States. In 2011, the 500 thousand structure fires only resulted in 22 firefighter fatalities. In other words, 1 firefighter fatality occurs in roughly every 22,000 structure fires in the US. When you think about, that's a rather amazing statistic-firefighting in building structures is actually pretty safe.

Also of note in NFPA report is the following statement:

> "*Deaths on the fire ground continue to be a concern, because traumatic deaths in recent years while operating inside structures have been occurring at rates higher than reported in the 1970s and 1980s, although the number of fires has been decreasing.*"

Although the report provides no explanation as to why the rate of traumatic firefighter fatalities is increasing for interior firefighting operations when compared to the rates which occurred in the 1970's and 1980's, there seems to be several possible explanations for this, including the following:

- "Light-weight" structural supports
- Improvements in protective gear for fire fighters
- More interior manual firefighting operations being conducted

Although the most common explanation for the increase in firefighter fatalities during interior structure fire operations is the increased use of "light-weight" structural supports in the construction industry, a more likely cause in the increase in the rate of firefighter fatalities (while conducting interior firefighting operations) is that the improvements in the protective gear worn and used by firefighters make it possible to conduct more and riskier interior firefighting operations.

One way to reduce the rate of firefighter fatalities involved with interior manual firefighting operations is to take away the modern protective gear used by firefighters in order to discourage the aggressive interior manual firefighting tactics currently being utilized by the fire service. Another, more practical means of reducing the rate of firefighter fatalities involved with interior manual firefighting tactics is for fire officers to simply heed the recommendations contained in NIOSH 2005-132 and NIOSH 2010-153.

It's time to stop the use of overly aggressive interior manual firefighting.

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