Columns

FIRE SAFETY IN AMERICA IN 2005: MORE GOOD NEWS

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Each autumn the National Fire Protection Association (NFPA) publishes its estimates of fire losses that occurred in the United States in the previous year. This year's report, titled "Fire Loss in the United States During 2005," written by Michael J. Karter Jr., is available in pdf file format at no charge on the NFPA Web site. The Web address of this report is www.nfpa.org/assets/files/PDF/OS.fireloss.pdf.

Following are a few of the statistics for 2005 that can be found in the report:

- The NFPA estimates that approximately 1.6 million fires occurred in the United States.
- Of these fires, approximately 511,000 were structure fires. This is a decrease of roughly 2.9 percent in the number of structure fires when compared to 2004.
- Structure fires accounted for 31.9 percent of all fires occurring in the United States.
- Approximately 77.5 percent of the structure fires occurred in residential occupancies.
- An estimated 31,500 structure fires were intentionally set fires.
- 259,000 vehicle fires are estimated to have occurred.
- 3,675 civilian fire fatalities are estimated to have occurred in United States.
- Fires in one- and two-family dwellings caused 69.9 percent of all civilian fire fatalities.
- Fires in multi-family dwellings caused 12.5 percent of all civilian fire fatalities.
- Fires in all residential occupancies (this includes dwellings, hotels, dormitories, boarding houses and similar occupancies) were responsible for a total of 83.1 percent of all civilian fire fatalities.
- Fires in commercial (non-residential) buildings caused an estimated 50 civilian fire fatalities. This is 1.36 percent of all civilian fire fatalities that occurred.

- Fires in highway vehicles caused an estimated 500 civilian fire fatalities. This is 13.6 percent of all civilian fire fatalities.

- An estimated 315 civilian fire fatalities were caused by intentionally set fires.

- Overall, the total of civilian fire fatalities occurring in residential occupancies in the United States in 2005 decreased by 5.3 percent when compared to 2004, while the total number of civilian fire fatalities that occurred decreased by 5.8 percent.

The NFPA report also contains the following statistics, which help to put the statistics cited above in context:

- The NFPA estimates that 1.098 million structure fires occurred in 1977. The number of structure fires that occurred in 2005 has decreased by 53.4 percent when compared to 1977.

- The number of civilian fire fatalities that occurred in one- and two-family and multiple family dwellings is estimated to have peaked at 6,015 fatalities in 1978. The number of civilian fire fatalities occurring in dwellings in 2005 has declined by 49.6 percent when compared to 1978.

Also of interest are the statistics in the NFPA report on fire losses on a national basis and on a regional basis for 2005. These statistics are as follows:

- Nationally, there were 5.4 fires per thousand Americans in 2005.

- The region with the greatest number of fires per thousand population was the Northcentral region, with 6.2 fires per thousand population.

- The region with the least number of fires on a population basis was the West region, with only 3.9 fires per thousand population.

- Nationally, the civilian fire fatality rate was 12.4 fatalities per million population in 2005.

- The region with the greatest number of civilian fire fatalities on a population basis was the Northcentral region of the country, with 15.5 fire fatalities per million population.

- The region with the least number of fire fatalities on a population basis was the West, with only 6.8 fire fatalities per million population.

- Nationally, the per capita property loss due to fire was 36 dollars.

- The region with the greatest per capita property loss was the Northcentral region, with a per capita loss of 43.8 dollars.

- The region with the least per capita fire loss was the West, with a per capita loss of 31 dollars.

The above statistics are good news. But, because the population of the United States has been increasing over the years, the news is even better than indicated by the raw statistics. Based upon census statistics, the population of the United States in 1980 was roughly 226 million people; the U.S. population now stands at 300 million people. The population increase over the years further magnifies the declines in the number of fires and the number of civilian fire fatalities.

We've made enormous progress against the hazard of fire since the late 1970s, and the number of structure fires and civilian fire fatalities (along with firefighter fatalities) continues trending downward. Of course, not everyone agrees with this sentiment. Groups such as the National Association of State Fire Marshals (NASFM) and the Alliance for Fire and Smoke Containment and Control (AFSCC) look at these same statistics as if they were bad news.

In the recent code change cycles for the International Building Code, both the NASFM and the AFSCC have submitted code changes addressing fire safety that will make the code requirements for new buildings more restrictive. Interestingly enough, most of the code changes submitted by these two groups address commercial (non-residential) buildings, even though the fire record of commercial buildings is excellent, particularly in comparison with the fire record of one- and two-family dwellings.

To put the fire safety record of commercial (non-residential) buildings in better perspective, it should be noted that in the United States in 2005, on average, only one civilian fatality occurred as a result of a fire in commercial buildings each week. Given the vast size and population of the United States, this statistic is nothing short of an incredible safety record. To put this number in perspective in a way to which most people can relate, on average, roughly 117 Americans died each day in highway accidents in 2005. In other words, more than 800 times as many Americans died in highway accidents in 2005 as died in fires in commercial buildings.

Given the comparison between civilian fire fatalities in commercial buildings and highway fatalities, it is my opinion that efforts to reduce the number of fire fatalities in commercial buildings further by adopting more restrictive code requirements for new building construction is a misguided effort. A better approach to reducing the number of both civilian and firefighter fire fatalities (and fire injuries) in both commercial and residential buildings is the enforcement of the Fire Code. The Fire Code is a maintenance code that requires that safety features (i.e. both active and passive fire protection features, as well as egress facilities) required for new buildings be maintained over the entire life of the building. It seems to make little sense to adopt more restrictive code requirements for new buildings if the safety features that are currently required for new buildings are not maintained.

At the International Code Council code change hearings recently held in Orlando, Florida, testimony in support of one code change proposal indicated that the only acceptable number of fire fatalities in the United States is zero. In the real world, reducing the number of fire fatalities to zero is simply not possible and, certainly, not economically feasible. Given that more than 40,000 Americans die each year on our highways, it seems logical that our resources devoted to safety would be better spent on trying to reduce the number of highway fatalities rather than spent on complying with more restrictive fire safety provisions for new commercial building construction. After all, new buildings complying with our present building codes are the safest buildings in our national building infrastructure. As with building fire safety, the answer to reducing the number of highway fatalities is not better vehicles, or better roads, but the enforcement of our existing traffic regulations.

For some reason, Americans love to enact new requirements for safety, but, all too often, never get around to actually enforcing those requirements (until after an accident occurs). The most difficult part of any safety program is enforcement. Perhaps it's time to start to actually enforce the maintenance provisions contained in the Fire Code and then wait a few years to see whether or not we actually need more restrictive requirements for new buildings. I would hope that, since the membership of the National Association of State Fire Marshals is in charge of code enforcement in existing buildings, this organization would put more emphasis on the maintenance of fire safety features in existing buildings rather than on developing more restrictive requirements for new building construction, particularly commercial buildings.

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