Fire Protection

By Richard G. Schulte, Schulte & Associates, Evanston, IL

Fire Safety in America: Good News and Bad News

Proponents of more restrictive fire safety requirements in building codes often cite a statistic that the fire death rate in the United States and Canada is roughly twice the average fire death rate in other industrialized countries. In 2000, the Federal Emergency Management Agency (FEMA) issued a report titled, *America at Risk*, which includes the following passages:

"The frequency and severity of fires in America do not result from a lack of knowledge of the causes, means of prevention or methods of suppression. We have a fire "problem" because our nation has failed to adequately apply and fund know loss reduction strategies."

"As a consequence, America today has the highest fire losses in terms of both frequency and total losses of any modern technological society."

Given the above, one could conclude that building fire safety is indeed a serious problem in the United States, however, statistics published by the National Fire Protection Association (NFPA) actually tell quite a different story.

NFPA statistics on fire department responses indicate that, although fire departments in the United States responded to nearly twice as many calls in the year 2000 as in 1980, the number of fire department responses to actual fires decreased by more than 40 percent in this same time period. That's good news, considering that the population of the United States increased by approximately 24 percent in this same time period, from roughly 226 million in 1980 to roughly 281 million in the year 2000.

NFPA statistics on fire fatalities and fire injuries that occurred in the United States also show considerable improvement over the last two decades.

The number of civilian fatalities that occurred in the United States in 2000 is down more than 45 percent when compared with the number of civilian fire fatalities that occurred in 1977. The number of firefighter fatalities that occurred in 2000 is down 35 percent when compared with the number of firefighter fatalities that occurred in 1977. This is more good news, particularly when considered against the backdrop of the population increase in the United States.

U.S. FIRE DEPARTMENT RESPONSES

	1980	2000	% Change
Total Responses	10,819,000	20,520,000	+89.66%
Fire Responses	2,988,000	1,708,000	-42.84%
False Alarms	896,500	2,126,500	+137.20%
Medical Responses	5,045,000	12,251,000	+142.83%

While the statistics show a marked improvement in the number of civilian fire fatalities that occur in the United States, even these statistics are deceiving. If you look at the recent statistics published by the NFPA, you will see that typically more than 80 percent of the fire deaths that occur each year in the United States occur in residential occupancies and that 75 percent of the residential fire fatalities typically occur in one- and two-family dwellings. In other words, more than 60 percent of the fire fatalities that occur in the United States typically occur in one- and two-family dwellings.

In July 2003, the National Fire Protection Association published a report titled, *Firefighter Fatalities in the United States – 2002*. The following are excerpts of some of the statistics from the NFPA report

• A total of 97 American firefighter died in the line of duty in 2002.

• Of the 97 firefighters who died in the line of duty in 2002, 30 were career firefighters.

• Of the 30 career firefighters who died in the line of duty, 14 of these firefighters died on the fire ground.

• Of the 14 career firefighters who died on the fire ground, nine died while fighting fires in residential occupancies, while four other career firefighters died while fighting fires in mercantile occupancies.

The NFPA report also includes statistics on firefighter fatalities that have occurred in the United States between 1977 to 2002. These statistics indicate

Continued page 10

U.S. FIRE FATALITIES AND INJURIES

	Civilian Fatalities	Civilian Injuries	Firefighter Fatalities	Firefighter Injuries
1977	7,395	31,190	157	112,540
1980	6,505 (-12.0%)	30,200 (-3.2%)	138 (-12.1%)	98,070 (-12.9%)
1985	6,185 (-16.4%)	28,425 (-8.9%)	128 (-18.5%)	100,900 (-10.3%)
1990	5,195 (-29.7%)	28,600 (-8.3%)	107 (-31.8%)	100,300 (-10.8%)
1995	4,585 (-38.0%)	25,775 (-17.4%)	97 (-38.2%)	94,500 (-16.0%)
2000	4,045 (-45.3%)	22,350 (-28.3%)	102 (-35.0%)	——-

Fire Protection

Continued from page 8

that the number of firefighter fatalities has ranged from a high of 172 deaths in 1978 to a low of 75 deaths in 1992. Again, the NFPA statistics on firefighter fatalities in the United States show considerable improvement.

Now, for the bad news – nobody is telling the American public about the good news. If you listen to the "experts," you would think that America has a serious "fire problem" and that it's getting worse, rather than improving. Given the statistics cited above, it seems reasonable to ask why FEMAis telling us a "doom-and-gloom" story about fire safety in America when the statistics clearly indicate that America has never been more fire safe than it is today.

Maybe it's time to start ignoring the "experts" (who keep crying wolf) and just begin to use a little common sense about building fire safety for a change. Common sense fire protection is a concept that ought to be supported by everyone in the fire protection field.

Note: Anote in the NFPAstatistics on U.S. firefighter fatalities indicates that the 340 firefighter fatalities that occurred on Sept. 11, 2001, are not included in the statistics on firefighter fatalities. The exclusion of the firefighter deaths that occurred at the collapse of the World Trade Center towers is similar to the exclusion of the deaths that occurred at the World Trade Center tower collapse in the Federal Bureau of Investigation (FBI) murder statistics for 2001. □

About the Author

Richard Schulte is a 1976 graduate of the fire protection engineering program at the Illinois Institute of Technology. After working in various positions with - in the fire protection field, he formed Schulte & Associates in 1988. His con - sulting experience includes work on the Sears Tower and numerous other notable structures. He has also acted as an expert witness in the litigation involv - ing the fire at the New Orleans Distribution Center. He can be contact - ed by sending email to rschulte@plumbingengineer.com.

This and several of Mr. Schulte's pre - vious columns comprising a series on the World Trade Center collapse can be downloaded (in PDF format) from the ***Plumbing Engineer*** *Web site, www.plumbingengineer.com. They are located in the "Resources" section.*