

U.S. Fire Administration/National Fire Data Center

A Profile of Fire in the United States 1995-2004


Fourteenth Edition

February 2008



FEMA



The image shows two firefighters in silhouette against a bright, orange glow of a fire at night. Both firefighters are wearing helmets with illuminated headlamps. The firefighter on the left is in the foreground, looking towards the right. The firefighter on the right is further back, also looking towards the right. The background is filled with the intense light and smoke of a fire, with some dark silhouettes of trees and bushes visible. The overall atmosphere is one of a night-time emergency response.

Periodically, the U.S. Fire Administration (USFA) publishes a statistical portrait of the fire problem in the United States. This brochure summarizes the 14th edition of *Fire in the United States, 1995-2004*. The analysis addresses the national fire problem and subsets of this problem, such as residential and non-residential structure fires. It presents trends of fires, deaths, injuries, and dollar loss over the 10-year period, with emphasis on 2004 statistics relating to causes, property types, and casualty characteristics.

Copies of the full report are available through the USFA Web site at www.usfa.dhs.gov or by calling the USFA Publications Center at 800-561-3356.



A Profile of Fire in the United States 1995-2004

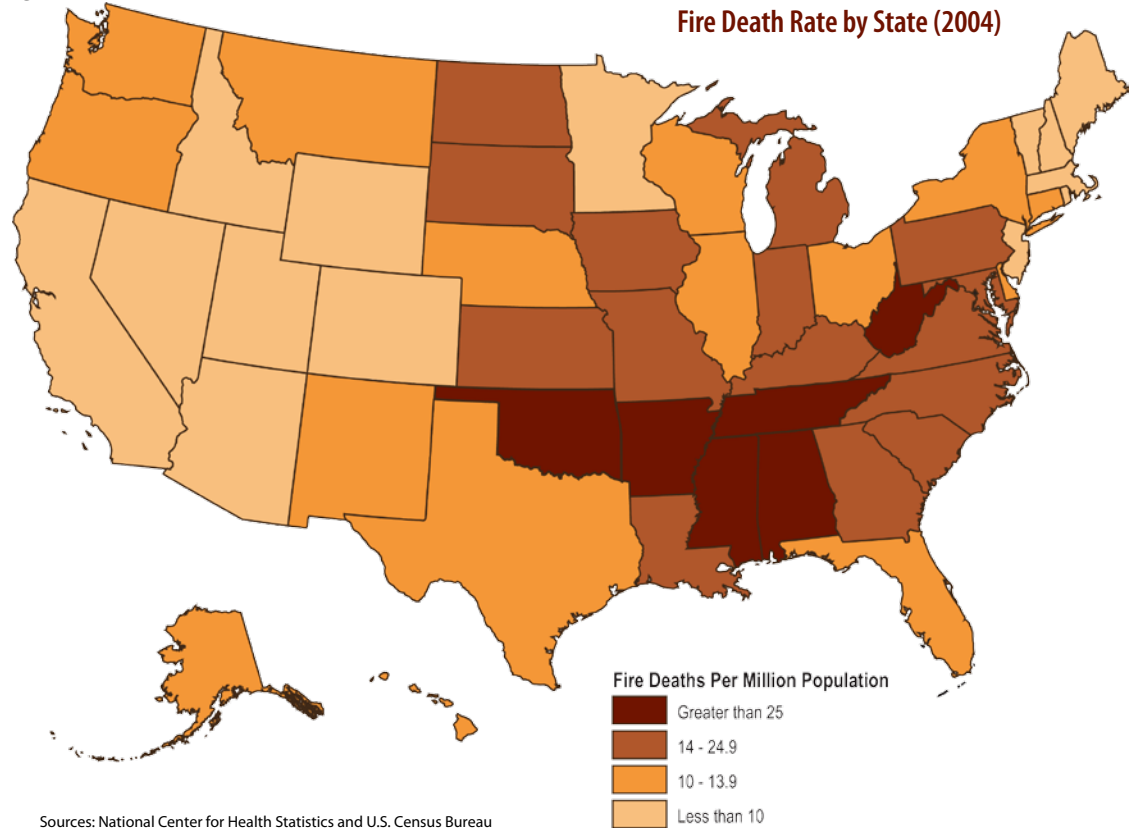
Anually, fire departments respond to approximately 1.8 million fires that result in thousands of deaths, tens of thousands of injuries, and billions of dollars in property loss. There are enormous indirect costs associated with fires as well—lost business, lost time from work, medical expenses, psychological damage, temporary lodging, and others. The indirect costs from fire may be as high as 8 to 10 times that of direct costs.

The U.S. fire problem is severe when compared to other industrialized nations. In fact, the U.S. is ranked as having the fourth highest fire death rate out of 25 industrialized nations examined by the World Fire Statistics Centre. This general status has been unchanged for the past 25 years.

Over the past decade, the numbers of fires and fire casualties have decreased steadily. Nevertheless, on an average day in 2004, fire departments responded to about 4,250 fires, 11 civilians perished, and 49 people were injured.

REGIONAL AND STATE PROFILES

The fire problem differs from region to region and State to State because of variations in climate, socioeconomic status, education, demographics, and other factors. Alabama, Arkansas, Mississippi, Oklahoma, Tennessee, West Virginia, and the District of Columbia have fire death rates greater than 25 deaths per million population; this rate is one of the worst among the world's nations. Fifteen States have fire death rates between 14 and 25 per million population. Twenty-eight States have death rates at or below the national rate of 13.6 fire deaths per million population. Although some death rates are still high, States have made great progress in lowering both the absolute number of deaths and the deaths per capita.



Sources: National Center for Health Statistics and U.S. Census Bureau

5-Year Fire Death Rates by State Compared to National Average



Sources:
National Center
for Health
Statistics and
U.S. Census
Bureau

RESIDENCES AND OTHER PROPERTIES

Over the years, there has been little change in the proportion of fires, deaths, injuries, and dollar loss by the type of property involved. In terms of numbers of fires, the largest category continues to be outside fires (38 percent)—in fields, vacant lots, trash, etc. Many of these fires are intentionally set, but do not cause much damage. Residential and non-residential structure fires together now comprise as many fires as outside fires (also 38 percent), with residential structure fires outnumbering non-residential structure fires by more than three to one. What may surprise some is the large number of vehicle fires. In fact, nearly one out of every five fires to which fire departments respond involves a vehicle.

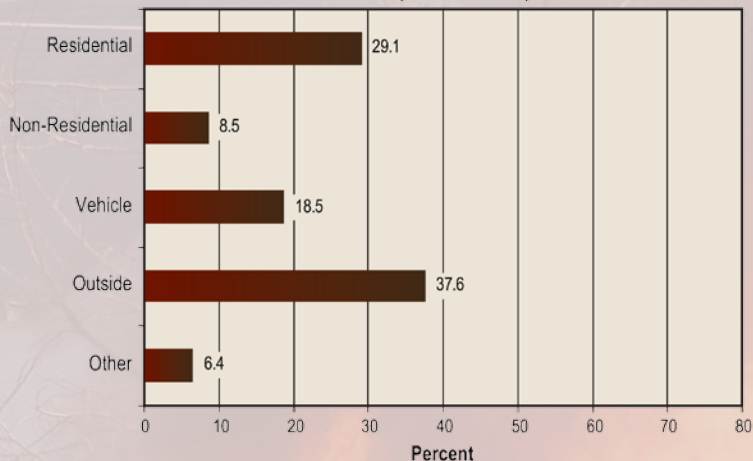
The largest percentage of deaths, 76 percent in 2004, occurs in residences, with the majority of these in one- and two-family dwellings. Vehicles account for the second largest percentage of fire deaths at 18 percent.

Seventy-four percent of all injuries occur in residences. The remaining 26 percent of fire injuries are distributed across the other property types—non-residential structures, 10 percent; vehicles, 9 percent; and outside and other fires, 7 percent.

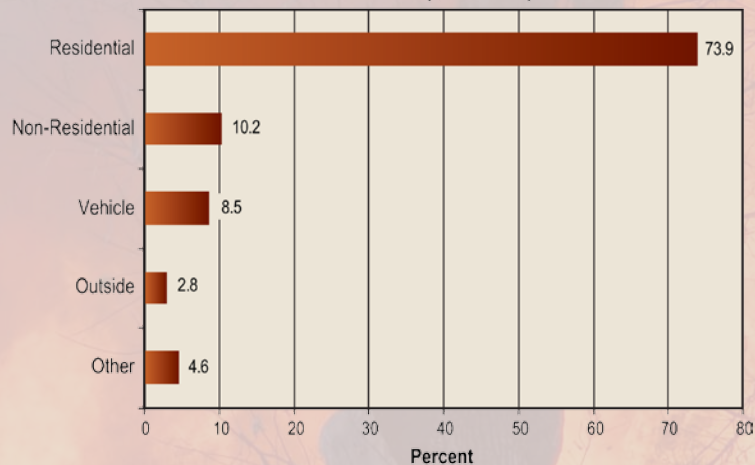
While residential structures are the leading property in dollar loss, non-residential structures play a considerable role. These two property types account for 86 percent of all dollar loss. The proportion of dollar loss from outside fires may be understated because the destruction of trees, grass, etc., often is given zero value in fire reports if it is not commercial cropland or timber.

Fire and Fire Losses by General Property Type (2004)

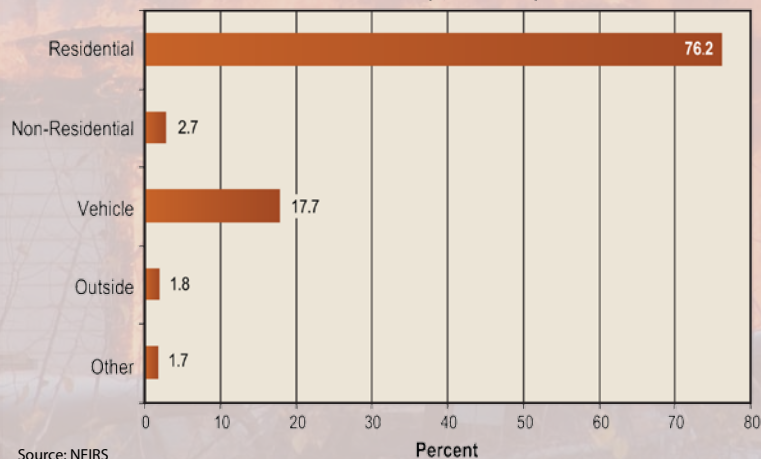
FIRES (700,840 cases)



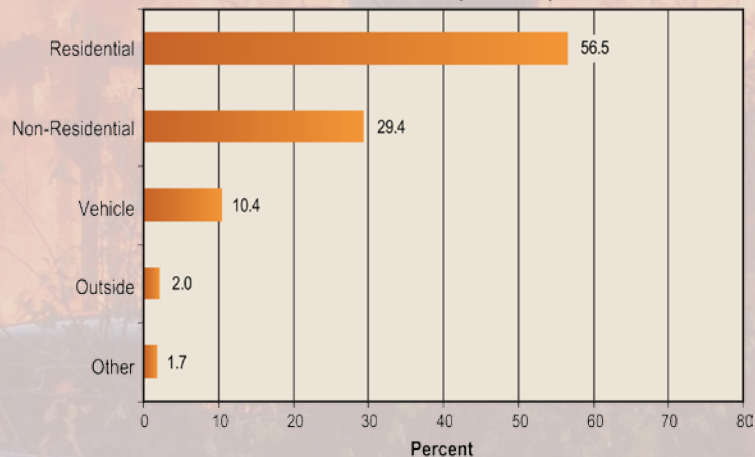
INJURIES (7,904 cases)



DEATHS (1,364 cases)



DOLLAR LOSS (3.9 billion)



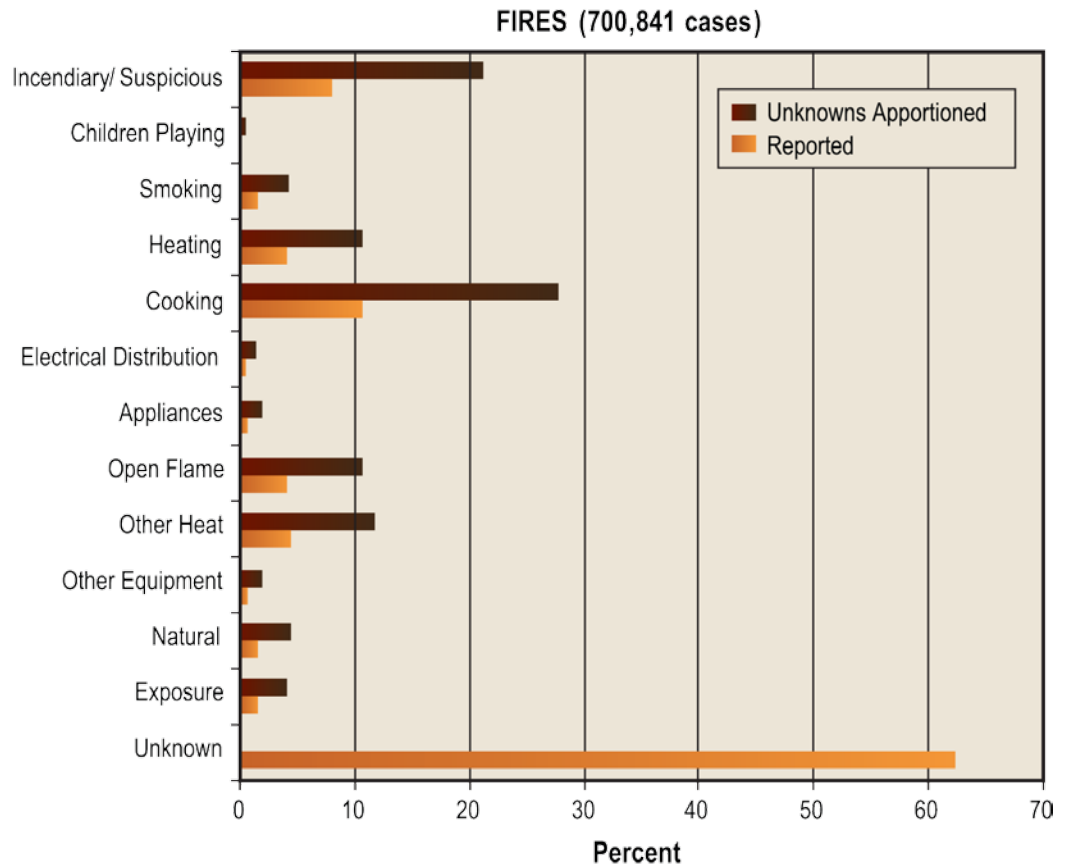
Source: NFIRS

CAUSES OF FIRES AND FIRE LOSSES

Cooking is the leading cause of fires, causing 28 percent of all fires, followed by incendiary or suspicious activity at 21 percent. These percentages are adjusted, which proportionally spreads the unknown causes over the other 12 cause categories.

In 2004, the two leading causes of civilian fire deaths were incendiary and suspicious fires, at 28 percent, and smoking, at 18 percent. The leading cause of injuries is cooking (24 percent), followed by open flame (18 percent) and incendiary suspicious activity (17 percent). Incendiary suspicious activity is, by far, the leading cause of property loss, at 26 percent.

Causes of Fire (2004)

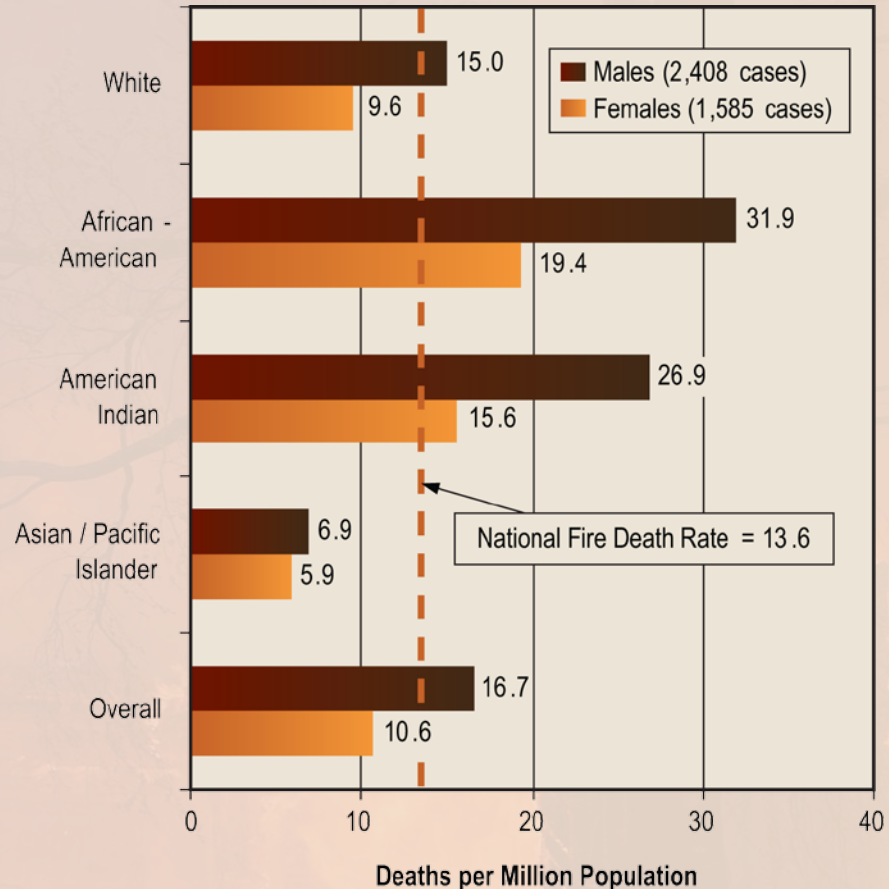


RACE, AGE, AND GENDER CHARACTERISTICS OF VICTIMS

Fire losses affect all geographic regions, groups and races, rich and poor, and urban and rural areas. However, the problem is greater for some groups than for others. African-Americans and Native American Indians have much higher death rates per capita than the national average. African-Americans comprise a large and disproportionate share of total fire deaths, accounting for 24 percent of fire deaths—nearly twice as high as their share of the overall population.

Approximately twice as many men die in fires as women. The reasons for this disparity are not known for certain. Suppositions include the greater likelihood of men being intoxicated, and the more dangerous occupations of men (most industrial fire fatalities are males). Female fire deaths increase at age 75, and the 75 and older age group accounts for 28 percent of female fire deaths. Male fire deaths, by contrast, are higher in the late midlife years (40 to 54). Also, men experience more injuries trying to extinguish the fire and rescue people than do women. Men aged 20 to 44 have the largest portion of fire injuries.

Death Rate by Race and Gender (2004)



Sources: National Center for Health Statistics and U.S. Census Bureau

People with limited physical and cognitive abilities, especially children and older adults, are at a higher risk of death and injury from fire than other groups. These two age groups accounted for 46 percent of the 2004 fire deaths and 22 percent of estimated fire injuries.

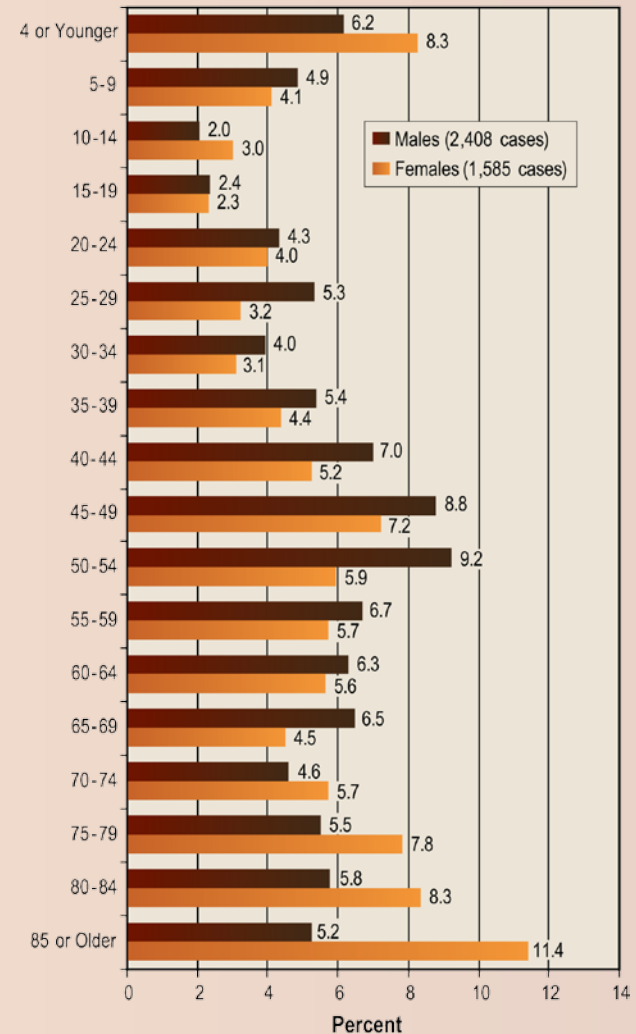
As baby boomers enter retirement age, the U.S. demographic profile is expected to change dramatically. Over the coming decades the older population will increase, and a corresponding increase in fire deaths and injuries among older adults is likely.

CONCLUSIONS

The 14th edition of *Fire in the United States* shows that the fire problem in the U.S. continues to improve. Ten-year per capita rates are down. It is likely that several factors have contributed to these trends:

- smoke alarms, whose usage has become nearly universal over the past two decades;
- sprinklers, which quickly combat incipient fires, especially in non-residential structures and recently in apartments;
- fire codes, which have been strengthened;
- construction techniques and materials, which have been targeted specifically to fire prevention;

**Fire Deaths
by Age and
Gender (2004)**



Source: National Center for Health Statistics

- public education at the community, county, State, and Federal levels, which seems to be increasing; and
- firefighter equipment and training, which have improved.

Even considering these positive trends, the U.S. still has a major fire problem compared to other industrialized nations. The study and implementation of international fire prevention programs that have proved effective in reducing the number of fires and deaths should be considered.

Other areas of concern:

- The very young and very old continue to be at high risk.
- Certain ethnic groups are at enormous risk for fire injuries and death.
- Arson is an enormous problem in the United States, especially to outside and non-residential structure properties.
- Contiguous States often have similar fire profiles. A study to determine reasons for this could uncover severe problem areas or, conversely, reveal best practices.
- Many NFIRS records submitted by participating fire departments provide either incomplete or no information in some of the data fields. It is assumed that participating fire departments have reported 100 percent of their fire incidents; however, this is not always the case. The completeness of all the information in the NFIRS modules will contribute to the refinement and confidence level of future analyses.

If we could understand the relative importance of these factors to lessening the fire problem, resources could be better targeted to have the most impact.





For more information or copies of this publication, please contact:
Department of Homeland Security / U.S. Fire Administration
16825 South Seton Avenue / Emmitsburg, Maryland 21727
800-561-3356 / www.usfa.dhs.gov

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