Fact Sheet on:
NFPA Position on Sprinklers

Office of the Illinois State Fire Marshal

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A summary of the National Fire Protection Association's position on the proposal that requires all new one- and two-family homes to be protected with fire sprinkler systems.

The mission of NFPA, is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training, and education.

Let Us Be Clear About the Home Fire Problem

Fire in the home poses one of the biggest threats to the people of your communities. NFPA statistics indicate that 83% of all fire deaths and 68% of all fire injuries occur in one- and two-family homes. Firefighter deaths in one- and two-family homes represent 75% as a percentage of all residential structure fires. Those at greatest risk are:

• Older adults – over age 65 • Children – under 5 years old • Persons with disabilities

These are groups that may not be able to exit on their own, even with working smoke alarms.

Smoke Alarms and Fire Sprinklers both Save Lives from Fire

Smoke alarms have done a good job providing early warning. The fire death rate decreased after they were mandated in new home construction, but people continue to die at unacceptable rates. NFPA statistics reveal that 37% of home fire victims were fatally injured in fires in which a smoke alarm operated.

When sprinklers are present, they save lives. Fire sprinkler systems provide additional benefits, on top of the benefits provided by smoke alarms.

- Working smoke alarms cut the risk of dying by 50 percent.
- The risk of dying decreases by about 80 percent when sprinklers are present!

Fire sprinklers are a proven way to protect lives against fires at home. These systems respond quickly and effectively to the presence of a nearby fire; keeping it from growing and reducing the amount of heat and toxic smoke and gases. Fire sprinklers also provide a safer environment for firefighters.

This is how fire sprinklers work:

- Sprinkler systems respond quickly to reduce heat, flames, & smoke, giving families time to get to safety.
- Roughly 90% of the time, fires are contained by the operation of just one sprinkler.
- Each individual sprinkler is designed and calibrated to go off when it senses a significant heat change.
- Only the sprinkler closest to the fire will activate, spraying water directly on the fire.

Smoke alarms and fire sprinklers work together to provide protection in the event of a fire in the home, the same way that seat belts and air bags do in cars to protect occupants in motor vehicle crashes.

Beware of Misleading Percentages on Survival and Death. Opponents of the state's efforts to update the code are misusing NFPA statistics.

- **Beware of Misleading Percentages on Effectiveness and Reliability -** It is important to recognize that home fire sprinkler systems are designed to activate to the heat of a fire that grows large enough for the temperature to reach 135°-160° F. They are not activated by smoke, nor should they be.

  Opponents have cited some low percentages for what they call fire sprinkler efficiency. Such statistics improperly include as failures fires that do not produce enough heat to activate the sprinkler system, possibly because they were extinguished before heat rises to the point of activating the sprinkler system. In home fires large enough to activate an operational sprinkler, wet-pipe sprinklers operated *and* were effective in 98% of reported fires.

- **Beware of False Claims Made for Newer Homes** - Age of the home is a poor predictor of fire death. A fire in a new home at 2:00 a.m. is just as deadly as the same fire in an older home.

  In 2008, Underwriters Laboratories® (UL) conducted a study and found that the synthetic construction of today's home furnishings add to the increased risk by providing a greater fuel load. Larger homes, open spaces, increased fuel loads, void spaces, and changing building materials contribute to faster fire propagation, shorter time to flashover, rapid changes in fire dynamics, shorter escape time, and shorter time to collapse. Fire sprinklers offset these dangers.

✓ **The National Consensus is in Favor of Sprinklers -** All model safety codes now require the use of home fire sprinklers in new one- and two-family homes. These codes represent minimum standards to provide a reasonable level of safety. <u>The consensus position of fire and life safety experts is clear: sprinklers save lives and should be installed in all new one- and two-family dwellings.</u> Failure to adopt the requirement or deleting it from the adopted code, in effect, allows substandard construction in your communities.

✓ **Home Fire Sprinklers are Cost Effective**
A report by the Fire Protection Research Foundation (FPRF) found that the average cost of home fire sprinklers in communities with a requirement was $1.61 per sprinklered square foot. With incentives, this price may be even lower by one-third. Insurance companies offer discounts for fire sprinklers.

✓ **Fire Sprinklers are Green**
The *Environmental Impact of Automatic Fire Sprinklers* study found that sprinklers:

- Reduce greenhouse gases by 98%
- Reduce fire damage by up to 97%
- Reduce water usage to fight a home fire by upwards of 90%
- Reduce the amount of water pollution released into the environment
- Reduce debris to landfills

★ Home Fire Sprinklers – the Right Answer for Illinois ★

Sprinkler systems already protect many lives throughout the Unites States. Reducing Illinois' fire death toll means reducing its home fire death toll. Support the proposal to update the state's life safety code.