Local code adoption of home fire sprinklers

Installing fire sprinklers in homes is quickly catching on in communities of every size. Justictions throughout the country are putting in place home fire sprinkler requirements by adopting local ordinances or model codes including NFPA 1, Fire Code®, NFPA 101, Life Safety Code®, NFPA 5000®, Building Construction & Safety Code® and the International Residential Code® (IRC).

Home fire sprinkler system design and installation

The Home Fire Sprinkler Coalition (HFSC) recommends selecting a sprinkler contractor with residential experience to install a home system. Contractors should follow national installation standards, which help ensure proper operation.

NFPA 13D, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes, is the national standard for home fire sprinkler systems. NFPA 13D is appropriate for one- and two-family structures and manufactured homes.

Local code authorities may have certain requirements that exceed or differ from NFPA 13D.

Home fire sprinklers save lives and protect property

Properly installed and maintained automatic fire sprinkler systems help save lives. Because fire sprinkler systems react so quickly, they can dramatically reduce the heat, flames and smoke produced in a fire, giving families valuable time to get out safely.

Fire sprinklers have been around for more than a century, protecting commercial and industrial properties and public buildings, such as hotels and hospitals and high-rises. What most people don’t realize is that the same life-saving technology that protects these buildings is also available for homes, where 84% of all U.S. fire deaths occur.

From federal agencies to national safety organizations, such as the National Fire Protection Association (NFPA), sprinklers are recommended as the most effective means to substantially reduce the home fire problem.

Home fire sprinkler systems protect residents; they also protect responding firefighters.

Installing home fire sprinkler systems helps the entire community and protects the homes where they are installed for generations to come.

Home fire sprinkler systems add value

According to a national Harris Poll, two-thirds (69%) of homeowners in the U.S. say having a fire sprinkler system increases a home’s value.

Increasing demand for home fire sprinklers is driving down the cost. A new study by the Fire Protection Research Foundation found that the cost of installing home fire sprinklers averages $1.61 per sprinklered square foot. Other national estimates show that, conservatively, sprinkler installation is 1% to 1.5% of the total building cost. In areas where installations are common the cost is well below $1 per square foot.

A copy of the Fire Protection Research Foundation study, Home Fire Sprinkler Cost Assessment, is included on this CD.

Most insurance companies provide financial incentives to encourage homeowners to protect their homes from fire. Research shows that fire sprinkler system discounts range from 5% to 30% off homeowner policy premiums. Shop around for the best discount.
Talking Points **CONT.**

**How home fire sprinklers work**

Fire sprinklers protect a home 24 hours a day, automatically. Each sprinkler system is unique to the home where it’s installed.

Most fire sprinkler systems operate off the household water main. Where a public water supply is inadequate or not available, the system is fed by a pressure pump and storage tank. An on-site well may also be designed to provide an adequate water supply.

Fire sprinklers are linked by a network of piping. Today, most home fire sprinkler systems primarily use a plastic pipe known as CPVC. Just like plumbing, the piping is typically hidden behind walls and ceilings. In unfinished basements, you may be able to see the piping in the ceiling.

There are several types of fire sprinklers made for homes: some are for installation on walls and others in ceilings; some are concealed by a plate. All home fire sprinklers are much smaller and lower-profile than the types of sprinklers used in commercial and industrial properties.

Sprinklers operate individually, in response to the high temperature of a fire.

Each fire sprinkler has a temperature-sensitive element. Sprinklers flow only when the temperature near the sprinkler reaches 135°F–165°F. The water supply is designed for at least a 10 minute duration — sufficient time to often extinguish a fire or keep it controlled until the fire department arrives.

Each sprinkler is designed to operate independently — the entire sprinkler system will not release water all at once when a fire starts.

Smoke, cooking vapors or steam cannot cause a sprinkler to activate — fire sprinklers activate in response to the high temperature of a fire.

**Fire sprinklers are part of a total system of safety**

Fire sprinklers have no equal, but the best protection from home fire is a total system of safety: early warning (smoke alarms), suppression (fire sprinklers) and prompt evacuation (practiced fire drills).

Only fire sprinklers can detect the fire and automatically control or extinguish it, paving the way for residents to make a safe escape — and also protecting property and valuables.

Smoke alarms are essential in every home. But they can only detect a fire; and to be effective residents must be willing and able to respond quickly to the alarm.

The best protection from fire is having both smoke alarms and a fire sprinkler system.

**Refuting stubborn myths about fire sprinklers**

Sprinkler mishaps are generally less likely and less severe than conventional home plumbing system problems.

An uncontrolled fire will cause far greater fire destruction and smoke/heat damage than water damage from an activated sprinkler.

From the time the fire starts and is discovered, it typically takes about 9-12 minutes for the fire department to arrive. In that time, an uncontrolled fire will have grown and spread through the home, causing tremendous smoke and fire damage before the fire department can get there.

The high heat, flames and smoke require a tremendous amount of water from fire department hoses. Fire Department hoses have more than 10 times the water flow per minute of sprinklers.

The property loss in a sprinklered home fire is typically only a fraction of the loss in an unsprinklered home fire. A home sprinkler flows 10-26 gallons of water per minute, for approximately 10 minutes (or less if the fire department turns the water off sooner). What will 10 minutes of a fire hose produce?

The national sprinkler installation standard provides guidance for proper installation in cold regions, including appropriate additional insulation and anti-freeze usage.

For more information about the life-saving benefits of home fire sprinklers, visit [www.HomeFireSprinkler.org](http://www.HomeFireSprinkler.org). NFPA is proud to be a founding sponsor of HFSC.