



## RESIDENTIAL SPRINKLER SYSTEMS Issue Brief

# Residential Sprinkler Systems: Consideration of Policy and Litigation Strategies for Reducing Residential Fire Injuries

## Introduction

Each year in the United States, thousands of people die needlessly in house fires. Many more suffer non-fatal injuries and need to contend with the financial and emotional recovery associated with fire-related property damage. Many of these deaths and injuries can be prevented by the use of sprinkler systems, a technology that is more than a century old. But in recent decades the home building industry, with a few exceptions, has generally opposed policy efforts to mandate the inclusion of sprinkler systems in new one- and two- family homes, asserting that such a mandate would make new homes too expensive for some potential buyers.

In 2009, 2,565 people died in house fires (excluding fire service deaths); 13,050 people were treated in emergency departments for house fire-related injuries; and residential fire-related property loss cost an estimated \$7.8 billion in the US.<sup>1</sup> These losses are preventable.

## Sprinkler Technology and Mandates for its Use

Sprinkler technology dates back to the 19th century. Early sprinkler systems were manually activated, but within decades the technology would evolve to make automatic sprinkler systems viable. The first patent for an automatic sprinkler system was issued in 1872.<sup>2</sup> These early sprinkler systems were used in commercial settings where insurers offered incentives to business owners that offset the costs of installation. While the benefits of sprinklers to protect goods and property were realized early, the application to homes and the potential to prevent fire deaths is a late 20th century contribution.<sup>3</sup> With the residential application of sprinkler technology, sprinkler systems have emerged as a very important strategy among fire prevention professionals for preventing fire-related death and injury and reducing fire loss. Modern sprinkler systems respond automatically and require minimal maintenance once installed. Unlike smoke alarms that alert occupants to the presence of smoke, sprinkler systems extinguish or control fires. Residential sprinkler systems have been field tested for decades and have a solid track record of providing a consistent, effective response to fire that results in dramatic reductions in property loss and the risk of fire-related death.<sup>4-7</sup>

In the United States, most states and/or municipalities have adopted codes that require fire sprinkler systems in new commercial structures, high rise buildings, hotels and multi-family residences. Some also require retrofit provisions in these types of buildings. However, one- and two-family homes -- where most residential fires occur<sup>8</sup> -- are currently subject to few or no sprinkler mandates. Without a national requirement to include sprinkler systems in new one- and two-



family home construction, uptake of this life saving technology has lagged. The Home Fire Sprinkler Coalition estimates that 2 percent of one- and two-family homes in the United States are sprinkler-equipped. Recently, some gains have been made to expand the current policies to include one- and two-family homes. At the local level, over 300 ordinances now require sprinklers to be included in one- and two-family homes.<sup>9</sup> The details of these ordinances vary, but most limit the mandate to new construction.<sup>9</sup>

In 2008, the International Code Council (ICC) bolstered these local level advocacy efforts with a vote to include a sprinkler requirement for new townhouses and one- and two-family homes in the 2009 edition of the International Residential Code (IRC), effective January 2011.<sup>10</sup> With this code change, all national model building codes require sprinklers in one- and two-family homes. (The National Fire Protection Association's 2006 editions of NFPA 1, Uniform Fire Code, NFPA 101, Life Safety Code and NFPA 5000, Building Construction & Safety Code require fire sprinkler systems in one- and two-family homes.) These codes offer a minimum standard for building safety, and provide a foundation for residential building codes nationwide. In some states, such as California, Maryland and South Carolina, policy-makers adopted the 2009 version of the IRC.<sup>9</sup>

Other states have not embraced the code changes, and instead have taken action to explicitly prohibit adoption of the sprinkler requirement as part of the building code. For example, Florida passed a law that prohibits incorporation of the residential sprinkler mandate into the Florida Building Code. A recent decision in Missouri requires builders to offer purchasers the option of including sprinklers as part of their new home. This "mandatory option" is also policy in some localities, but such an approach falls short of requiring the technology in new homes.

Preemption has also emerged as a strategy for rejecting the sprinkler mandate. Recently, homebuilders and others who oppose residential sprinkler mandates have supported the introduction of preemption bills at the state level to prevent localities from adopting laws or regulations that would require sprinklers in homes.<sup>11, 12</sup> As noted previously, hundreds of communities have used local authority to require sprinklers in new home construction. Several states have adopted into law preemptive language, and additional bills are pending.<sup>9</sup> These policies do not impact an individual's voluntary choice to install sprinklers. They would, however, make it impossible for localities to ensure that all residents of new single family homes benefit from sprinklers.

Research to understand public opinion on residential sprinkler policy, and how to effectively mobilize support for residential sprinkler mandates in light of these new strategies, is needed. The decades of advocacy work on this issue hold valuable lessons for future public health policy advocacy. There is a need to better understand past successes in order to inform future strategies that address the new challenges posed by preemption and policies that exempt jurisdictions from the residential sprinkler requirement of current code. In the absence of new approaches to legislating and regulating residential sprinklers, litigation is a promising option.

## **Litigation as a Strategy for Change**

Trial law has a history of intervening to protect the public, especially when legislation and regulation, on their own, have been ineffective.<sup>13</sup> In fact, Prosser mentions the use of tort law as a tool for preventing and not just compensating injury.<sup>14</sup> In the matter of house fire deaths and injuries, litigation can be an effective tool to foster the widespread use of sprinklers in one- and two-family, newly constructed homes.

A home designer's and builder's failure to provide sprinklers or to offer a sprinkler system as an option in the construction of a new home arguably could create liability, given the foreseeability of house fires and the effectiveness of sprinklers as a lifesaving intervention. If a lawsuit is brought against a one- or two-family home designer or builder who did not provide or offer a sprinkler system in a newly constructed home, resulting in fire-related injuries to the occupants, the cause of action could be negligence per se if it is in a jurisdiction requiring the inclusion or an offer to include sprinklers. Negligence per se refers to situations in which liability arises through the violation of a law. In jurisdictions that have not legally required the offering or inclusion of sprinklers in newly constructed homes, ordinary negligence or strict liability likely would be the theory on which an action is based. In these instances, negligence would be established by demonstrating that the home designer or builder had failed to exercise the standard of care that a reasonable person would have used in similar circumstances. A strict liability theory would argue that the home designer or builder had an absolute duty to use sprinklers to make the residence safe.

One might expect that a defense in such a negligence action would be that few, if any, designers and builders in that jurisdiction provide sprinkler systems in newly constructed one- or two- family homes. Such a defense could be countered with the holding in the famous *T.J. Hooper* case in which Judge Learned Hand wrote:

**Indeed in most cases reasonable prudence is in fact common prudence, but strictly it is never its measure. A whole calling may have unduly lagged in the adoption of new and available devices....Courts must in the end say what is required. There are precautions so imperative that even their universal disregard will not excuse their omission.**<sup>15</sup>

Another defense that could be anticipated is an aspect of preemption, in which a defendant argues that the state's or locality's decision not to mandate sprinkler systems in newly constructed homes is dispositive of policy-making on the subject and therefore prevents a court's imposition of liability. But the Supreme Court ruled in 2002 that lawsuits are not preempted simply because government has considered an issue and chosen not to take regulatory action in a particular area.<sup>16</sup>

Media sources indicate that lawsuits against home builders and managers of residences, which allege that the lack of a sprinkler system contributed to injuries or deaths, have been filed. We could not, however, identify any reported cases in this area as of 2010. However, in a number of other product injury areas, litigation against manufacturers has led to changes in products to make them safer.<sup>17</sup>

The wisdom of residential sprinklers is clear. Unfortunately, the policy landscape on this issue has become increasingly polarized, leaving many communities powerless to mandate sprinklers as a strategy to protect their residents against the harms associated with residential fires. The courthouse offers an alternate path within states where localities are prohibited from making policy on this issue. The courthouse can also serve as a venue for assuring that residential sprinkler mandates are realized. Where state and local governments require residential sprinkler systems, litigation can provide an incentive for compliance as well as a mechanism for punishing non-compliance. Where such systems are not required by law, designers and builders who omit a safety feature that is mandated by nationally recognized codes and standards may also provide an avenue for action. In this way, litigation can offer a new strategy for realizing the tremendous lifesaving potential of a technology that has for too long remained outside of the residential codes that set the standards for safety in the buildings that millions will call home.

## SUPPORTERS



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