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**Testimony in Support of Residential Sprinkler Provisions for One and Two Family
Dwellings in Connecticut (HB 6378) - AN ACT REQUIRING AN AUTOMATIC FIRE
EXTINGUISHING SYSTEM IN ALL ONE AND TWO-FAMILY HOMES.**

Given Before the Committee on Public Safety and Security on March 3, 2011

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Good Afternoon. My name is Robert Duval, and I am the New England Regional Manager and Senior Fire Investigator for the National Fire Protection Association (NFPA) (as well as a state resident and a Deputy Chief in my town's volunteer fire company). I am here on behalf of the NFPA to go on record with our support for residential fire sprinkler requirements in 1 and 2 family dwellings as part of State Residential Building Code in Connecticut. A Building Code without such provisions would be in direct contrast to all model building and life safety codes, which have been developed through open and voluntary consensus processes by the leading code development organizations in this country. A code without such sprinkler protection would withhold the life-saving benefits of home fire sprinklers to those building or buying 1 and 2 family dwellings in Connecticut.

Each year, approximately 3,000 people die in home fires. The risk of dying in a home fire decreases by approximately 80% when sprinklers are present. Those residents especially at risk are children and older adults who can most benefit from the additional escape time provided by sprinkler protection. Home fires, which number over 400,000 result in billions of dollars of direct property damage each year. Sprinkler protection has long been mandated in many types of buildings. The presence of sprinklers plays a significant role in limiting life and property loss when a fire occurs, reducing property damage by approximately 71%. In fact, the National Fire Protection Association (NFPA) has no record of a multiple fatality in a fully sprinklered building when the system operates. The approximately 400 communities nationwide that have enacted some type of home fire sprinkler requirement share similar achievement in reducing destruction from fire when compared to communities with no sprinkler requirements.

In 2006 three major NFPA codes were revised to include the requirement for home fire sprinklers in new construction of one and two family dwellings. In 2008, the International Code Council (ICC) voted to add a similar provision to the 2009 edition of International Residential Code.

You will hear testimony claiming that the cost to install such protection is excessive especially in a depressed housing market. A recent study conducted by the Fire Protection Research Foundation revealed that the cost of installing home fire sprinklers averages \$1.61 per square foot for new construction. Would you consider this cost excessive for equipment that provides around the clock protection for the residents and serves to reduce property losses in the event of a fire? Another recent study has shown no impact on housing starts in counties with residential sprinkler ordinances when compared to those counties without such ordinances.

Residential fire sprinklers respond quickly to a fire, giving residents valuable time to escape, while also suppressing and in many cases extinguishing the fire. Up to 90% of the time, fires are contained by the

operation of just one sprinkler. (Contrary to what Hollywood and television would have you believe, every sprinkler head does not go off at once or when a fire alarm is activated.)

An additional benefit of the protection provided by residential sprinklers is fire fighter safety. If a fire is not suppressed or controlled upon the arrival of fire department and fire fighters enter the building to search for unaccounted for residents and/or the seat of the fire, they run the risk of being injured or killed in a building collapse or rapid fire development. Contrary to the popular belief "New homes do burn," and when they burn they burn hotter and collapse more rapidly than older construction. Research has shown this. Modern building construction has become lightweight and the contents of today's households are more combustible than in the past. As a result, research and field experience has shown that residential sprinklers give fire fighters an extra measure of protection and allow extra time to locate victims within the building and fully extinguish any remaining fire.

You will also hear the arguments that smoke detectors provide enough protection without sprinklers. An NFPA report titled U.S Home Structure Fires, by Marty Ahrens, published in January 2009 concludes that 63% of reported fire deaths from 2003-2006 resulted from fires in homes with no smoke alarm or no working smoke alarms. Residential fire sprinkler opponents are certain that this proves their case that smoke alarms are enough to eliminate the fire problem in North America. What opponents won't tell you is that the other 37% of people who died in homes, did so in homes equipped with smoke alarms, both battery operated and hardwired.

Persons dying in these fires were more likely to have been in the area of origin, were trying to fight the fire themselves, or were at least 65 years old. Children under 5 and older adults face the highest risk of home fire death. Alcohol or other drugs, disabilities, and age-related limitations are all factors contributing to risk. Persons in these high risk groups are especially likely to have difficulty escaping a fire. What about these lives? Maybe this question should be posed to the families of the victims. Not one more needless death should be the mantra that drives this policy decision.

More than 95% of homes currently have smoke alarms yet there are still people who die in home fires. That is because smoke alarms provide an early warning of danger giving occupants time to get out. But do nothing to control the fire or to reduce the amount of toxic smoke and gases. Those that perish are often those at greatest risk because they cannot get out by themselves – young children, older adults, people with disabilities. If we are to further reduce the fire death problem and better protect families and their property from fire we have to do more. They keep the atmosphere tenable to allow the additional escape time required for escape, or for firefighters to arrive and rescue those occupants that have been unable to escape.

Smoke alarms are an important component in a home's fire protection system. They have worked well and have saved thousands of lives. NFPA will continue its public education efforts to make sure that smoke alarms are installed and properly maintained in new and existing properties. The addition of fire sprinklers as a safety feature in new homes will save thousands more lives.

Beware of misleading percentages on survival and death involving smoke alarms vs. residential sprinklers:

Fire sprinkler opponents have been using a statistic of 99.45 percent to illustrate the effectiveness of smoke alarms in reducing home fire deaths. This NFPA statistic estimates the likelihood of surviving a home fire when a working smoke alarm is present. Taken completely out of context a number like 99.45% sounds very high. But consider this:

- The total home fire death toll of roughly 3,000 deaths a year occurs in roughly 400,000 reported home fires a year. Therefore, the likelihood of surviving a home fire is over 99% without regard to the presence of smoke alarms or any other fire safety provisions. Does that mean 3,000 deaths are acceptable? Most people would say no.
- Each year, there are an estimated 41,000 deaths due to motor vehicle accidents and an estimated 6 million reported motor vehicle accidents. The likelihood of surviving a motor vehicle accident is 99.4%. Does that mean 41,000 deaths are acceptable? Most people would say no.
- Each year, 2.4 million people die of any cause in the country compared to a total U.S. resident population of 300 million. The likelihood of surviving every hazard, threat and illness for a year is 99.2%. Does that mean 2.4 million deaths are acceptable— that nothing at all should be done to protect Americans from anything, especially when technology exists that could save lives? Most people would say no.

Keep in mind that this current discussion is not a unique one. In June, 1976 the National Association Homebuilders went on record in opposition of several “new” building code and zoning requirements that added up to \$ 4,000 to the price of a new home. These regulations included; wider streets, outdoor electrical outlets and...smoke detectors.

The US Fire Administration also supports residential fire sprinklers. From a message from the USFA dated June 1, 2009 – “The time has come to use this affordable, simple, and effective technology to save lives and property where it matters most – in our homes”

Residential sprinklers continue to be considered and required in several municipalities and communities across the country (in 34 states). One of the most recent is Baltimore County, MD, which in last July approved to update their residential building code (2009 IRC) WITH the residential sprinkler provision intact. More recently Portland, ME adopted use of NFPA 101 (2009 LSC) as their fire code (WITH the residential sprinkler provisions included.) This code took effect on September 15, 2010.

On the national level, The Pennsylvania Independent Regulatory Review Commission voted unanimously to adopt the 2009 IRC and will require the installation of automatic sprinkler systems in all newly constructed townhouses effective January 1, 2010, and in all new one- and two family homes effective January 1, 2011. A lawsuit filed by the Pennsylvania Builders Association attempting to stop the residential sprinkler provision in the state building code was dismissed in mid-August.

In addition, the California Building Standards Commission voted to adopt the 2009 International Residential Code, including its requirements for automatic fire sprinkler systems in new one- and two-family dwellings, effective date January 1, 2011.

The South Carolina Building Code Council voted to adopt the 2009 IRC with an effective date of January 1, 2011. The requirement is delayed until 2014 by legislative action.

Please consider your committee's actions and work to increase home fire sprinkler protection in all of the state's communities through the adoption of these important fire and life safety requirements included in the model codes.

NFPA is committed to working with this board and the fire and building stakeholders within the State of Connecticut on establishing residential sprinkler requirements in the State Building Code in this code cycle and in the future.

Thank you for the opportunity to speak to you and submit this testimony today.

The mission of the international nonprofit NFPA, established in 1896, 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.