

## What is a Fire Department Recognized Life Saver Residence?

A Fire Department Recognized Life Saver Residence is a residence equipped with both:

- A residential fire sprinkler system, and
- A hardwired and interconnected smoke alarm system according to Oregon Residential Code requirements.

The smoke detection system is already mandated by Oregon Residential Code requirements in new homes. Adding a residential fire sprinkler system completes the equation to make a home the most interior fire safe residence in the community.

### A Possible Scenario?

You are asleep. A fire begins in your house. It continues to grow and spreads toxic smoke and gases. A smoke alarm sounds approximately one minute after the initial ignition. You



awake and investigate, realizing there is a fire in the house. In less than three minutes the ceiling temperatures reach 165° F and the smoke layer begins to drop. You awaken other family members and crawl through the house in darkness. To your surprise, the smoke alarms did not wake up your youngest children. After you have gathered everyone, you make your way outside and call 911. In less than 4 minutes the ceiling temperatures reach 1000° F and the visibility is reduced to zero. In less than 5 minutes the ceiling temperatures reach 1600° F and flashover occurs. At this time, all of the combustible contents in the room of origin spontaneously ignite spreading fire and smoke rapidly throughout the house. Because there was a delay from the initial ignition of the fire until you were able to evacuate and call 911, the fire engines pull out of the stations approximately 5-6 minutes after initial ignition. The fire engines arrive approximately 4-6 minutes later to find a fully involved structure fire. At this point, after flashover has occurred, there is very little chance that anyone in the residence could survive. You have also lost your valuable possessions.

In this typical scenario, you have a very small window of opportunity to escape. If you have a two story house and the fire starts downstairs with your bedrooms located upstairs, you have the additional challenge of crawling down the stairway while it is acting like a chimney where smoke and hot gases are rising. Just a few breaths of the very dense smoke will kill you.

While smoke alarms alone have saved lives, they cannot guarantee your survival. It has been estimated that at least 50% of smoke alarms are removed or disabled. It has been documented that two-thirds of smoke alarms are missing in fatal residential fires. If a fire occurs while you are sleeping and you have no warning, the carbon monoxide puts you into a deeper sleep until you die. If you awake to a working smoke detector during a fast growing fire, you might have a matter of seconds between when the detector sounds and when the atmosphere becomes unsurvivable. During the escape, the smoke is often so heavy that you cannot see your hand in front of you. You must crawl in darkness to safety. Recent studies have shown that young children may not wake up even if smoke alarms are sounding in their room. What if you cannot get to your children's bedrooms in time? In addition, smoke alarms have a design lifespan of 10-years. How many of us have houses with smoke alarms older than 10 years? Will they work when we need them to?

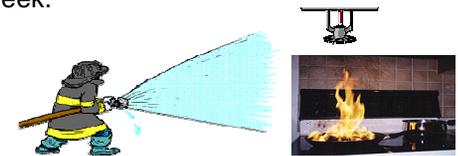


When buying a car, many people check safety ratings to ensure their family will be protected if they are in an automobile accident. Should we not do the same for our residence, where we spend the majority of our time? Would it not bring us peace of mind to know we have done everything possible to ensure safety in our home?

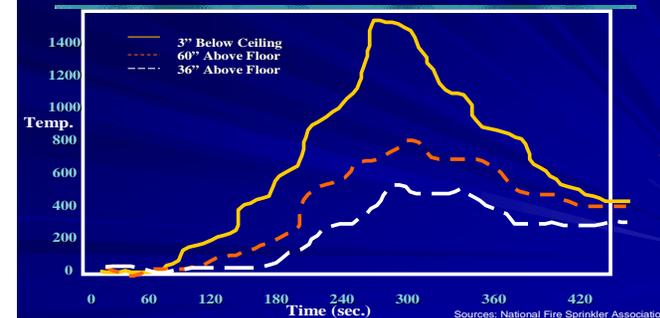
What is the real benefit to having residential fire sprinklers along with smoke alarms in your residence? In a smoldering fire that puts out a lot of smoke but little heat, the smoke alarms will alert you to evacuate. In a faster growing fire that puts out more heat, the fire sprinkler system will activate and control the fire before the atmosphere becomes lethal. Statistics show your chance of survival approaches 100% when you have a residential fire sprinkler system and smoke alarms in your house. The window of opportunity is no longer a factor for your survival.

## Do Residential Fire Sprinklers Really Save Lives?

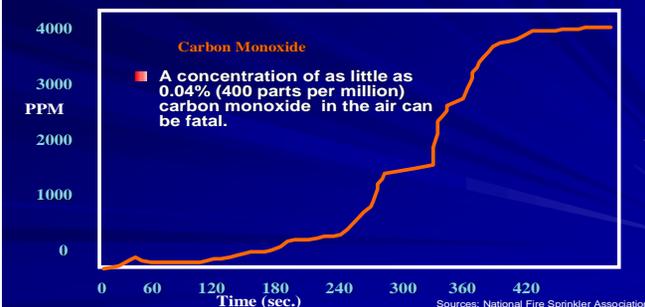
The evidence on this point is overwhelming. There has not been a single residential fire fatality in a residence with a fire sprinkler system in either Napa, California or Cobb County, Georgia since the inception of those programs. There has not been a single fire fatality in Prince George's County, Maryland in a building with a fire sprinkler system, and 154 lives have been saved because of the fire sprinkler systems. Scottsdale, Arizona credits fire sprinkler systems with saving up to 13 lives since the ordinance passed in 1985. Having a fire sprinkler system in your home is like having a firefighter ready to protect you from fire 24 hours a day, 7 days a week.



### Test Fire-Without Sprinklers



### Test Fire-Without Sprinklers



## Aren't there inherent built-in features that make newer houses safer?

Whether or not a house is new ignores the fact that the contents are the fuel load that drives the fire. Modern furniture presents a huge fuel load, loaded with materials such as polyurethane foam which burns like gasoline. While some features make newer structures safer, other features do not. Smoke detectors can be disabled. Drywall has some fire resistant features, however, modern truss and composite I-joint construction, when exposed to fire, can actually lead to structural failure faster than conventional lumber.

## Aren't Fire Sprinkler Systems Expensive to Install?

Are residential fire sprinkler systems expensive? The average cost in a new home is approximately \$1.00-\$1.50 per square foot (or 1-1 1/2% of total building cost). If you compare the cost, a residential fire sprinkler system is about the price of upgrading carpet. It may be many times less than landscape sprinklers. A recent study in Northern California showed a fire sprinkler system amortized over 30 years would cost approximately \$3-4 per month, or about the price of one Happy Meal per month. The cost actually goes down when fire sprinklers are mandated.

## Aren't fire sprinkler systems expensive to maintain?

No. There is virtually no maintenance. The owner should visually inspect all sprinklers to insure against obstruction of spray and inspect all valves to ensure they are open\*.

*\*Not required for multipurpose systems*

## Aren't sprinkler heads ugly?

There are now a variety of residential sprinkler heads including concealed heads, which are hidden until they drop down upon activation. Also, all residential sprinklers can be factory painted to match ceiling and wall colors.



## What about flooding my house?

The scenes in Hollywood showing all the sprinkler heads activating at the same time throughout, flooding an entire occupancy, are misleading. It takes heat to set a sprinkler head off, 155-200 degrees F. 93% of all fires that occur in homes are quickly controlled by a single sprinkler head<sup>12</sup> flowing 13-25 gallons per minute. Without fire sprinklers, the fire continues to grow exponentially. The fire department arrives 5-10 minutes later and puts hundreds to thousands of gallons on the out-of-control fire. A fire which escapes early detection and suppression takes far more water to extinguish, and the uncontrolled fire destroys much of the contents of the house. Tests conducted by the Los Angeles Fire Department and the U.S. Fire Administration showed that damage caused by water in a sprinklered fire is substantially less than damage caused by a fire department hose streams in an identical unsprinklered fire. In a residence equipped with fire sprinklers, almost all the items can be saved. Loss records of Factory Mutual Research show that the probability of a sprinkler discharging accidentally due to a manufacturing defect is only 1 in 16 million sprinklers per year in service. Fire sprinkler systems are under the same pressure as residential plumbing system but are tested at 2-3 times higher pressure during installation.

## The Choice is Yours!

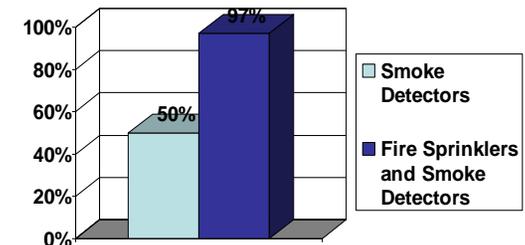


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## Fire Department Recognized Life Saver Home



### Chance of Survival



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