



# Appendix P - Sprinkling for local adoption

(Relating to new construction of one and two family dwellings & rowhouses)

## FIRE FACTS

### Oregon One & Two Family Residential Fires 1986-2001\*

Fire death & injuries in one & two family dwellings:

Number of fires: 60,192

Deaths:

Civilians: 388  
Firefighters: 2

Fire injuries:

Civilians: 2,139  
Firefighters: 1,041

Fire property damage dollar loss: \$418.3  
(in millions)

\*Oregon Office of State Fire Marshal

### Scottsdale Report - 15 Year Update Model Home Sprinkler Community Jan. 1, 1986 - Jan. 1, 2001

Homes with sprinklers: 46,000

Fires in homes with sprinklers: 49

Deaths:

Homes with sprinklers: 0  
Homes without sprinklers: 13

Percentage of home fires controlled with two sprinklers or less: 92%

Gallons of water discharged per fire:  
By sprinkler system: 341  
By fire hoses: 2,935

Average fire loss\*\*

Home with sprinklers: \$ 2,166  
Home without sprinklers: \$45,019

\*\* per single fire incident

### Oregon Fire Safety Coalition

See attached for coalition members.

[www.oregon.gov/OSP/SFM/Oregon\\_Fire\\_Safety\\_COA.shtml](http://www.oregon.gov/OSP/SFM/Oregon_Fire_Safety_COA.shtml)

Oregon communities continue to experience growth. As communities grow, local fire agencies must grow to serve them. In a business where response time is critical, fire departments must keep pace with growth by building new stations, buying equipment, and adding staff. Local governments that provide fire protection are stretched by tax limitation measures and the failure of local levies and bond measures, preventing them from building the public infrastructure needed to protect growing communities with proper response capability.

In some communities, where the building of new subdivisions outstrips the community's resources to build new fire stations, sprinklers may well be the only means of providing adequate fire protection.

In other parts of the nation, sprinklers have been used to provide fire protection in areas of rapid growth and development; reducing the need for large expenditures in public fire protection. Scottsdale, Arizona is a community where adoption of residential fire sprinkler requirements through a local control option has provided a high degree of fire safety while reducing the expenditure of tax dollars.

Including Appendix P in the 2008 Residential Specialty Code gives local communities the option of adopting Appendix P to require fire sprinklers in new residential construction. The community benefits from additional fire protection and developers can reduce land development costs. Local control can increase fire safety, control municipal operating expenses and lower construction costs.

Adoption of Appendix P allows communities the flexibility to consider local trade-off benefit options such as:

**Street width reduction:** Traffic lanes may be narrowed.

**Longer dead-end streets:** Street length may be increased.

**Tee turnarounds:** Permitting use of tee turnarounds may allow for at least one additional lot per cul-de-sac.

**Increased street grades and building setbacks:** Steeper street grades and building locations further from fire vehicle access may be permitted.

**Additional living units permitted:** Increases up to 20% are not uncommon.

**Expanding the existing water supply may not be necessary:** Required fire flows for fully-sprinklered developments can be greatly reduced compared to non-sprinklered developments.

**Increased hydrant spacing:** Supply mains may be reduced and hydrant spacing can be increased.

# What is your home fire sprinkler I.Q.?

## 1. A smoke alarm is not all I need.

Smoke alarms are reactive where sprinklers are proactive. A smoke alarm alerts residents by providing an early warning. They cannot, however, do anything to extinguish a fire. Sprinklers activate at the fire location, providing time for residents to escape and reducing fire damage.

## 2. When one sprinkler goes off, not all the sprinklers activate.

Only the sprinkler over the fire will activate. The sprinkler head reacts to the temperature in each individual room. A fire in the living room will activate the sprinkler directly over the fire in that room. Only an uncontrolled fire can generate enough heat to activate more than one sprinkler head.

## 3. Sprinklers do not activate when no fire is present.

Studies over the past 50 years indicate the likelihood of accidental activation is approximately 1 in every 16 million. Sprinklers have been designed and tested to minimize accidents. Leakage is minimized because sprinkler systems are under the same pressure as the plumbing system but are tested at 2-3 times higher pressure during installation (U.S. Fire Administration).

## 4. Water damage from a sprinkler system is significantly less extensive than fire damage.

A sprinkler system will contain a fire and may extinguish it before the fire department arrives on scene. Resulting property damage from a fire in a home with a sprinkler system will be much less than the smoke and fire damage if the fire had gone unchecked or from the damage caused by water from firefighting hose lines.

## 5. Home fire sprinkler systems are inexpensive when compared with other home features.

Cost estimates for the installation of a home fire sprinkler system installed during the course of construction is between 1 and 1.5% of the total building price. For a home priced at \$300,000, sprinklers would add an additional \$3,000 to \$4,500.

## 6. Home fire sprinklers are unobtrusive.

The traditional, commercial-type sprinklers as well as sprinklers for home use are now being designed to fit in with most any decor. Modern home fire sprinklers are inconspicuous and can be concealed or flush mounted and like regular plumbing, pipes can be hidden behind ceilings or walls.

## 7. Home fire sprinklers combined with working smoke alarms reduce the risk of dying in a home fire by 82%.

Sprinklers typically reduce the chances of dying in a home fire by 50-75% in any kind of property where they are used. The combination of sprinklers and smoke alarms cut the risk of dying in a home fire by 82%, compared with fires where neither are present (Home Fire Sprinkler Coalition). A 2004 study conducted by the National Institute of Standards and Technology (NIST) indicated fire in modern homes smolder longer, then burn hotter and faster than what was typical when smoke alarms were first introduced. The NIST study also concluded that because fires could grow more rapidly, the time needed to escape some types of fires has been reduced from approximately 17 minutes to as little as 3 minutes in certain situations.

### ***As a result of the installation of residential sprinklers in the City of Scottsdale, Arizona:***

*The average fire loss per fire incident is 90% less in sprinklered homes than those not sprinklered: Civilian fire fatalities have dropped 50%.*

Scottsdale taxpayers pay less than 47% of the national average for fire protection.

Scottsdale's current fire loss rate is 235% better than the national average.

The incidence of structure fires in Scottsdale is more than 300% lower than the national average.

Scottsdale staffs fewer full-time firefighters per capita than fire departments in non-sprinklered communities.

Sprinkler installations are less expensive than in non-sprinklered communities.

# OREGON Fire Safety Coalition

*The Time is Now!*

As of September 2007, the following have joined in support of Adoption of Appendix P

## **Fire Service Associations, Councils**

Governor's Fire Service Policy Council  
Oregon Fire Chiefs Association  
Oregon Fire Marshals Association  
Oregon Fire District Directors' Association  
National Fire Protection Association  
Western Fire Chiefs Association

## **Oregon Fire Departments/Districts/Boards**

Albany Fire & Rescue  
Boardman RFPD  
Boring Fire District Board of Directors  
Cannon Beach RFPD Board of Directors  
Central Oregon Coast Fire & Rescue District  
Chiloquin-Agency Lake RFPD  
Clackamas Fire District #1 Board of Directors  
Columbia River Fire & Rescue  
Douglas County Fire District No. 2  
Forest Grove RFPD Board of Directors  
Gresham Fire Department  
Harriman Rural Fire District  
Hoodland Fire District No. 74  
Jackson County Fire District No. 3  
Junction City RFPD  
Klamath County Fire District No. 1  
Lake Oswego Fire Department  
Lane County Fire District #1  
Lebanon Fire District  
Medford Fire Department  
Mid-Columbia Fire and Rescue  
Moro Fire District  
Nestucca RFPD  
Newberg Fire Department  
North Lincoln Fire & Rescue District #1 Board of Directors  
Portland Fire & Rescue  
Roseburg Fire Department  
Sheridan Fire District  
Sisters Camp Sherman RFPD  
Sweet Home Fire & Ambulance District  
Tillamook Fire District  
West Side Fire District  
Woodburn Fire District  
Yachats RFPD

## **Oregon Cities**

City of Albany  
City of Corvallis  
City of Damascus  
City of Forest Grove  
City of Gresham  
City of Lake Oswego  
City of Roseburg  
City of Seneca  
City of Sutherlin  
City of Woodburn

## **Associations and Organizations, etc.**

American Fire Sprinkler Association  
League of Oregon Cities  
National Fire Sprinkler Association  
Residential Fire Safety Institute

## **Oregon State Agencies/Departments**

Oregon Department of State Police  
Oregon Department of Energy

## **Public Citizens**

George Warren  
Robert L. Garrison, Oregon State Fire Marshal-Retired  
Robert Panuccio, Oregon State Fire Marshal-Retired  
Peter Sorenson, Lane County Commissioner 1997-  
Present and Oregon State Senator 1993-1997