



# Fire Protection Training

Procedures Handbook 4300

FIRE PROTECTION SYSTEMS

**TOPIC:** Introduction To Residential Fire Sprinkler Systems

**LEVEL OF INSTRUCTION:** I

**TIME FRAME:** 1 Hour

**BEHAVIORAL OBJECTIVE:**

*Condition:* A written quiz

*Behavior:* The student will demonstrate knowledge of the benefits of residential home fire sprinkler systems.

*Standard:* With a minimum of 70% accuracy, according to the information contained in this lesson plan

**MATERIALS NEEDED:**

- Appropriate visual aids and supplies
- Available local handout

**REFERENCES:**

- Fire Protection Handbook, NFPA
- Residential "Quick - Response" Sprinklers; Learn Not To Burn Curriculum
- NFPA; Pamphlet 13D
- NFPA Annual CFIRS Report

**PREPARATION:** As a firefighter on many occasions you will be asked questions by the public regarding the benefits of home fire sprinkler systems. As a professional, you need to have information that will help you encourage and support the installation of home fire sprinklers in your community.



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INTRODUCTION TO RESIDENTIAL  
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PRESENTATION	APPLICATION
<p><b>I. FIRE DATA NATIONALLY</b></p> <ul style="list-style-type: none"> <li>A. 79.2% Of All Fire Fatalities From 1989 To 1993 In The United States Occurred In Residential Buildings</li> <li>B. From 1989 - 1993 An Average Of 482,800 Residential Fires Occurred In The United States</li> <li>C. From 1989 - 1993 An Average Of \$4,462,300 In Fire Loss Occurred In Residential Buildings</li> <li>D. 68% Of All Fires In The Home Take Place Between The Hours Of 8 P.M. And 8 A.M. <ul style="list-style-type: none"> <li>1. Most people are home during these hours</li> <li>2. Most people are asleep or incapacitated during these hours</li> </ul> </li> <li>E. The Majority Of Homes Do Not Have Fire Extinguishers Within The Home To Extinguish Fires That Do Start</li> </ul> <p><b>II. FIRE DATA - CALIFORNIA STATE FIRE MARSHAL</b></p> <ul style="list-style-type: none"> <li>A. Computerized Statistical Reporting Systems for California Fire Departments <ul style="list-style-type: none"> <li>1. CFIRS - California Incident Reporting System</li> <li>2. EARS - CDF Emergency Activity Reporting System</li> </ul> </li> </ul> <p><b>III. BENEFITS</b></p>	<p>Between what hours do the majority of fires start?</p> <p><b>INSTRUCTOR NOTE:</b> Current data available from CSFM <b>ANNUAL CFIRS REPORT</b></p>



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<ul style="list-style-type: none"><li>A. Life Safety<ul style="list-style-type: none"><li>1. Provides highest degree of protection currently available</li><li>2. Sprinkler system provides almost immediate water application</li></ul></li><li>B. Reduction In Government Spending<ul style="list-style-type: none"><li>1. Smaller fires</li><li>2. Less use of firefighting equipment</li></ul></li><li>C. Insurance Savings<ul style="list-style-type: none"><li>1. Lower property value loss</li><li>2. Lower insurance claim payments</li><li>3. Lower insurance premiums</li></ul></li><li>D. Real Estate Tax Reduction<ul style="list-style-type: none"><li>1. Some states allow lowered real estate assessments for buildings with sprinkler systems</li></ul></li><li>E. Buyer's Attitude<ul style="list-style-type: none"><li>1. Current surveys indicate that 14-20% of home buyers would only select a home with fire sprinkler systems</li></ul></li><li>F. Zoning</li></ul>	<p>What are the benefits to the homeowner to have residential sprinkler systems built into their residence?</p>



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<ul style="list-style-type: none"> <li>1. Greater land use may be possible from zoning changes which permit fully sprinklered residences to be built on smaller land parcels</li> <li>G. Building Trade Offs               <ul style="list-style-type: none"> <li>1. Many jurisdictions have used building code trade offs as incentive to the installation of residential sprinkler systems</li> </ul> </li> <li>H. Costs               <ul style="list-style-type: none"> <li>1. Costs of a sprinkler system are reduced in residential applications because of lessened piping and valve requirements</li> </ul> </li> <li>I. Sprinkler Legislation               <ul style="list-style-type: none"> <li>1. Many jurisdictions, including Orange County and Los Angeles County, have passed legislation requiring residential sprinkler systems in all new residential construction</li> </ul> </li> <li>J. Mobile Homes               <ul style="list-style-type: none"> <li>1. Installing residential sprinkler systems in mobile homes at the factory is becoming more common</li> </ul> </li> </ul>	<p>Have residential sprinkler ordinances been enacted?</p>
<p><b>IV. NFPA 13D</b></p> <ul style="list-style-type: none"> <li>A. Standard for the installation of sprinkler systems in one and two family dwellings and mobile homes</li> </ul>	<p>What is the purpose of a "13D" designed system?</p>



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<ul style="list-style-type: none"><li>1. Purpose of this design system is to prevent flashover in room of fire origin<ul style="list-style-type: none"><li>a. Provide occupants escape time\</li></ul></li><li>B. How NFPA 13 D System Differs From Traditional NFPA 13 Systems<ul style="list-style-type: none"><li>1. Use of domestic water supply</li><li>2. Not always necessary to sprinkler attic, closet, small bathroom or garage</li><li>3. Unobtrusive heads do not spoil aesthetics</li><li>4. Can use approved plastic pipe</li></ul></li></ul>	



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## ***APPLICATION:***

With this knowledge on residential sprinkler systems, you will be much better prepared to address the subject when asked for information by the public. Remember, it is better to research a topic if you do not feel you have all of the current information that has been asked for and then get back to the individual.

## ***EVALUATION:***

A written quiz.

## ***ASSIGNMENT:***

To be determined by the Instructor(s).