

# **COLLEGE AND UNIVERSITY FIRE SAFETY**

## **“A MEETING OF THE MINDS”**

### **THE LESSON PLAN**

**A PROGRAM CONDUCTED BY  
STATE FIRE MARSHALS FOR  
COLLEGE AND UNIVERSITY ADMINISTRATORS**



**Produced by:**

**The National Association of State Fire Marshals**

**October 1998**

## Acknowledgments

The genesis for this project was a series of student deaths as a result of fires on college and university campuses across the nation. Often such deaths occur in ones or twos. But in May of 1996, on the morning of graduation day, which also happened to be Mother's Day, five students at the University of North Carolina at Chapel Hill died in a fraternity house fire that also injured several other students. In 1996, more than 12 students died in fires in both on-campus and off-campus housing, giving evidence of an increasing trend of such deaths over the past five years.

Mr. William Jacobs of the United States Fire Administration (USFA), seriously concerned by the wasteful and uncalled for loss of America's youth, brought the issue to the attention of United States Fire Administration staff and to the attention of U.S. Fire Administrator Ms. Carrye Brown. Responding quickly, the USFA requested the National Association of State Fire Marshals (NASFM) to develop a program of assistance for college and university administrators to improve the safety levels of student residences both on and off-campus. This program is the result of that request.

The NASFM extends its heartfelt gratitude to U. S. Fire Administrator Carrye Brown and her staff for the support provided to NASFM throughout the duration of the project, as well as, for the funding that made the development of this program possible.

In addition, NASFM extends its sincerest gratitude to Mr. Michael Ryan, Safety Administrator for University of Syracuse Risk Management-Safety Division, Syracuse, NY for providing the College & University Employee Training and Certification Materials. Through Mr. Ryan's assistance, State Fire Marshals across America have available material to support a training program that can be delivered to College and University employees to increase their effectiveness to raise the safety levels of their respective campuses.

Also, NASFM extends its appreciation to Ms. Laura Graham, Health and Safety Educator for the Ballston Spa, NY School District for her scholarly research and her invaluable contributions to the overall comprehensiveness this project.

Finally, the project staff extends its thanks to former President Thomas Brace and current President Rocco Gabriele, as well as the Association's Board of Directors for their confidence and support throughout the project duration.

Francis A. McGarry

Project Manager

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## INTRODUCTION

Fire safety prevention programs on college campuses vary widely in configuration and scope. The United States Fire Administration (USFA) has identified fire safety in colleges and universities as an area of significant concern. Responding to this concern, the USFA, together with the National Association of State Fire Marshals, has created this program of support for State Fire Marshals to assist college and university administrators as well as local officials in providing quality fire safety prevention and education programs at institutions of higher learning.

This program is designed to provide State Fire Marshals and their staff with materials needed to organize effective meetings with college and university administrators and their staff about the issues of fire safety prevention and education, both on and off-campus. Included in this program is a set of handouts that college and university employees may keep and use as a guide during initial presentations, and to support the subsequent education process to their staff and students.

## INTRODUCTION

Additionally, this package includes:

- overhead transparencies that highlight the topics being discussed;
- a lesson plan that will assist in maintaining meeting focus;
- a video that can be used in locally-based student and neighborhood programs;
- materials to assist administrators in establishing a fire and life safety training and certification program for employees; and
- informational materials to help administrators establish a fire & life safety education program for students.

We have divided the issue of college and university fire safety into a variety of topics including:

- the definition of the fire problem;
- a rationale for fire safety education;
- the role of the college or university & off-campus housing;
- a list of components for an effective fire safety education program;
- a sample educational safety program in video format designed for college and university students;
- a model certification program for college and university fire and life safety employees; and
- comments on the value and economy of sprinkler systems.

## **INTRODUCTION**

We believe this program can provide an effective environment in which to discuss the topic of college and university fire safety; that it can bridge polarities and focus diverse interests and perspectives. Further, this program can generate and sustain the level energy that an effective campus fire and life safety program requires.

Finally, this meeting will provide you with an opportunity to reaffirm to college and university administrators that the State Fire Marshal's Office is available to support and assist them in their efforts to keep their students and facilities safe and free from fire.

# LESSON PLAN

## ORGANIZING THE MEETING

*Send out a notice or letter of invitation to college and university administrators at least three weeks in advance of your meeting. Inviting individuals in the following positions would be appropriate: College or University President; Dean of Students; or Safety Administrator.*

*Appendix VIII contains a sample letter of invitation that you may use on your own letterhead to mail to participants.*

## CONDUCTING THE MEETING

***Total meeting time: 2-3 Hours***

### **EQUIPMENT NEEDED:**

***\*\*\*Your Copy Of This Program With Enclosed Materials\*\*\****

1 Overhead and/or Computer Projector                      1 Overhead/Slide Screen

1 Television    1 Video Cassette Player

Name Tags For Each Participant

Registration Forms/Mailing List/Sign-Up Sheets

1 Complete Folder or Packet of Handouts Per Participant

Writing Utensils for Each Participant (or expect that they have brought one)

### **THE LESSON PLAN**

*For each section you will find an approximate time allotted in parentheses and a listing of equipment, materials, and instructions for that section.*

***BE FAMILIAR WITH ALL NARRATIVE MATERIAL BEFORE BEGINNING THIS PROGRAM***

## LESSON PLAN

EQUIPMENT/MATERIALS	COURSE INSTRUCTIONS
<p style="text-align: center;">Name Tags Writing Utensils Registration Forms Mailing List Sign Up Sheets 1 Complete Folder Of Handouts Per Participant</p>	<p style="text-align: center;"><b>Registration:</b> 15-30 minutes.</p> <ul style="list-style-type: none"> <li>❖ Make certain you have arranged for enough staff to be available to accommodate the number of participants to be registered.</li> <li>❖ This is important contact time—a chance for people to possibly be making first contacts with your office. It needs to be easy and friendly for you and them!</li> </ul>
<p style="text-align: center;">N/A</p>	<p style="text-align: center;"><b>Welcome and Introductions:</b> Approx. 5-15 minutes.</p> <ul style="list-style-type: none"> <li>❖ It may be very useful for participants to know who is in attendance.</li> <li>❖ If the group is not so large that it would take an extraordinary amount of time, have participants introduce themselves by name, organization and title.</li> </ul>
<p style="text-align: center;">N/A</p>	<p style="text-align: center;"><b>Explanation Of The Meeting's Purpose:</b> Approx. 5-10 minutes.</p> <ul style="list-style-type: none"> <li>❖ See <b>Introduction</b> for purpose and background material – Use your own words.</li> </ul>

EQUIPMENT/MATERIALS	COURSE INSTRUCTIONS
<p align="center"><b>APPENDIX 1: TRANSPARENCIES 1 – 33</b></p>	<p align="center"><b>TOTAL TIME: APPROXIMATELY 45-60 MINUTES</b></p>
<p align="center">Transparency 1</p>	<p align="center">Program Title Page</p>
<p align="center">Transparencies 2 – 4</p>	<p align="center">The Fire Problem</p>
<p align="center">Transparencies 5 – 14</p>	<p align="center">A Rationale For Fire Safety Education At Higher Education Institutions</p>
<p align="center">Transparencies 15 – 19</p>	<p align="center">The Role of the College and University &amp; Off-Campus Housing</p>
<p align="center">Transparencies 20 – 22</p>	<p align="center">Fire Safety Education Components</p>
<p align="center">Transparency 23 Television and VCR Video copy of: “Get Out and Stay Alive”</p>	<p align="center">A Sample Video Educational Program: “Get Out And Stay Alive”</p> <ul style="list-style-type: none"> <li>❖ Prepare participants by saying that this video was developed by the Eau Claire, Wisconsin Fire Department in response to the death of a student and its creation was funded by the United States Fire Administration. It describes the issues surrounding three fires that caused the premature death of several college students.</li> <li>❖ Show Video: Approx. 16 minutes</li> <li>❖ Discussion: 10 minutes</li> <li>❖ Follow up the viewing of the video by gently reminding participants that these institutions did not think a fire would happen to them.</li> </ul> <p><i>Tell participants that this video is available from the USFA address found in Section D of this material.</i></p>

EQUIPMENT/MATERIALS	COURSE INSTRUCTIONS
<p style="text-align: center;">Transparency 24</p>	<p style="text-align: center;"><b>A Fire and Life Safety Certification Program For College and University Employees</b></p> <ul style="list-style-type: none"> <li>❖ State Fire Marshals can also provide materials to design a training &amp; certification program for college and university employees who are responsible for the facility's fire and life safety program.</li> </ul>
<p style="text-align: center;">Transparencies 25 – 29</p>	<p style="text-align: center;"><b>Sprinkler Systems</b></p> <ul style="list-style-type: none"> <li>❖ Myths, Benefits, &amp; Costs</li> </ul>
<p style="text-align: center;">Transparencies 30 – 32</p>	<p style="text-align: center;"><b>Answer These 20 Questions Before You Sign A Rental Agreement!</b></p> <ul style="list-style-type: none"> <li>❖ This resource is a tool you are giving to participants.</li> <li>❖ Tell them to: <ol style="list-style-type: none"> <li>1. Use it;</li> <li>2. Pass it on to colleagues for their use when conducting college fairs at high schools; and</li> <li>3. To insert the sheet in the acceptance package sent to students who have been accepted to their institution.</li> </ol> </li> </ul>
	<ul style="list-style-type: none"> <li>❖</li> </ul>

## FINAL DISCUSSION:

**“THE NEXT STEPS TO IMPROVE FIRE SAFETY FOR OUR COLLEGE AND UNIVERSITY STUDENTS ARE . . . ?”**

(30-45 MINUTES)

### SUPPLEMENTS

EQUIPMENT/MATERIALS	COURSE INSTRUCTIONS
<b>APPENDIX II</b>	<b>News Clips and Photos</b>
<b>APPENDIX III</b>	<b>Program Pamphlet for “Get Out And Stay Alive”</b>
<b>APPENDIX IV</b>	<b>Handout: Answer these 20 Questions Before You Sign A Rental Agreement</b>
<b>APPENDIX V</b>	<b>Handout: A Resource List</b>

## THE FIRE PROBLEM AT COLLEGES AND UNIVERSITIES

### TRANSPARENCIES 2 - 4

In the last six years the number of fire incidents in college and university housing (on and off-campus) has increased dramatically. From 1992 to 1994 (the last years for which data are available), fires in these settings have steadily climbed from 628 per year to 681, an 8 percent increase. However, from 1993 to 1994, civilian injuries more than doubled. The dollar loss from structure damage caused by these fires increased by more than 60 percent from 1992 to 1994.<sup>1, 2, 3</sup> Anecdotal information indicates that this trend has continued.

To lose even one person in a fire is an incredibly devastating experience. A number of colleges and universities have experienced student deaths due to fires, including Wesley College (1 death, 1

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<sup>1</sup> National Fire Administration Reporting System (NFIRS), (1992). Tally Report: Listing Of All Fire Elements By Frequency Of Occurrence.

<sup>2</sup> National Fire Administration Reporting System (NFIRS), (1993). Tally Report: Listing Of All Fire Elements By Frequency Of Occurrence.

<sup>3</sup> National Fire Incident Reporting System, (1994). Tally Report: Listing Of All Fire Elements By Frequency Of Occurrence.

## THE FIRE PROBLEM AT COLLEGES AND UNIVERSITIES

injury), Providence College (10 deaths), the University of Wisconsin at Eau Claire (1 death), and the University of North Carolina at Chapel Hill (5 deaths, 3 injuries).<sup>4,5</sup>

It only makes the matter worse when the cause of the fire is preventable, as are most fires at college and university student residences. The causes of most fires in college and university residences, both on and off-campus, include such factors as inappropriately discarded smoking materials, falling asleep while smoking, ignited materials left unattended, inadequate control of an open flame, combustible material too close to a heated element, improper cooking elements burning food items, and overloaded electrical outlets.<sup>6</sup> All of these factors are under a person's control and are the result of behavior choices that are unsafe. These are not accidents: *they are preventable!*

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<sup>4</sup> University of North Carolina at Chapel Hill, (undated).

<sup>5</sup> Federal Emergency Management Agency, (1987). United States Fire Administration Technical Series: College Dormitory Fires In Dover, Delaware and Farmville, Virginia. United States Fire Administration: Emmitsburg, Maryland, National Data Center, p.1.

<sup>6</sup> National Fire Incident Reporting System, (1994). Tally Report: Listing Of All Fire Elements By Frequency Of Occurrence.

## THE FIRE PROBLEM AT COLLEGES AND UNIVERSITIES

In addition, research indicates that, in the United States, the risk of fire injury among the various age levels peaks between the ages of 20 and 24 years. “Young adults have a 40 percent greater risk than average. They tend to be involved in the more dangerous activities, especially involving flammable liquid and demonstrating a higher degree of bravado.”<sup>7</sup> Males are at double the risk of being killed in a fire as compared to females. This is true of all age groups, including college age males. The rationale behind this statistic cites males as being more likely to be highly intoxicated, more likely to attempt to fight a fire, and more likely to go back in an attempt to rescue someone who is trapped in a fire.<sup>8</sup>

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<sup>7</sup> Federal Emergency Management Agency (FEMA), (1997). Fire In The United States 1985-1994, Ninth Edition. United States Fire Administration, National Fire Data Center: Emmitsburg, MD, p.6-7.

<sup>8</sup> Federal Emergency Management Agency (FEMA), (1997). Fire In The United States 1985-1994, Ninth Edition. United States Fire Administration, National Fire Data Center: Emmitsburg, MD, p.6.

## **THE FIRE PROBLEM AT COLLEGES AND UNIVERSITIES**

Fires are preventable! Fire related deaths and injuries are preventable!  
This meeting will discuss what we can do to prevent fires in our colleges  
and universities so that our state and our students do not become an  
additional statistic.

## **A. A RATIONALE FOR FIRE SAFETY EDUCATION**

### **TRANSPARENCIES 5 - 14**

The rationale for implementing a fire safety education program is simple: You are responsible for saving lives and protecting facilities. In addition, it is really your only ethical choice over doing nothing. It is essential for administrators to avoid what likely would become a major crisis for you, your staff, and the institution. An alternative perspective is to look at the consequences that occur when a fire happens and losses are incurred. From experience, we can guarantee you that a fire loss or trauma will cause you countless hours of labor and many weeks of personal discomfort. A fire safety education program that is in place and regularly implemented will prevent fires. Without it, fire avoidance is pure chance. If a fire safety education program is not regularly implemented, your job could be overwhelmed with tasks that are at best difficult and at worst heartbreaking.

Your job is already full and possibly overwhelming. It makes complete sense for you to implement a fire safety prevention program that is effective and cost-free to prevent the nightmare of a fire from happening to your students, your college or university, and you.

## **A. A RATIONALE FOR FIRE SAFETY EDUCATION**

For a practical look at a fire's results, we recreated a list of tasks that are added to the responsibilities of a college administrator. These tasks are the practical and real results of a fire emergency that will be placed on any administrator, most especially those who are directly responsible for student life, structural facilities, and legal affairs.

### **ADDED RESPONSIBILITIES IN THE EVENT OF A FIRE**

#### **STRUCTURAL**

- IMPLEMENT BUILDING SHUT DOWN PROCEDURES.
- MEET WITH FIRE INVESTIGATORS AND OTHER INVOLVED COMMUNITY PERSONNEL.
- MAKE ALTERNATIVE CLASSROOM ARRANGEMENTS.
- ADDRESS REBUILDING OR RENOVATION AND REPAIR PLANS.
- DEVELOP PLANS TO DEMONSTRATE CHANGES THAT INCREASE SAFETY.

#### **HUMAN NEEDS**

- CREATE/ACTIVATE A CRISIS INTERVENTION TEAM TO ADDRESS HUMAN REACTION AND EMOTION.
- CREATE A CENTRAL PLACE FOR AFFECTED INDIVIDUALS TO RECEIVE SUPPORT SERVICES FROM THE CRISIS INTERVENTION TEAM.

## A. A RATIONALE FOR FIRE SAFETY EDUCATION

- MANAGE PARENT CONCERNS INCLUDING MAKING AND RECEIVING PARENT CALLS TO:
  1. NOTIFY PARENTS OF A FIRE AND OF THEIR CHILD'S LOCATION, INJURY OR DEATH.
  2. REASSURE PARENTS WHO ARE WORRIED.
- SPONSOR MEMORIAL SERVICES AND ATTEND FUNERALS.

## LEGAL/INSURANCE/ADMINISTRATIVE

- MEET WITH DIFFERENT INTERNAL DEPARTMENTS TO ADDRESS VARIOUS FIRE-RELATED ISSUES.
- MANAGE PUBLIC CONCERNS.
- MANAGE THE MEDIA.
- IMPLEMENT CHANGES TO PROVE TO THE PUBLIC AND STUDENTS THAT THE CAMPUS IS SAFE.
- MEET WITH STUDENT RESIDENCE AND GREEK ORGANIZATIONS.
- ANSWER LIABILITY QUESTIONS  
(WITH LEGAL COUNSEL)
- ADDRESS INSURANCE ISSUES.

***\*\*BE AVAILABLE EVENINGS AND WEEKENDS FOR A LENGTHY PERIOD OF TIME TO ACCOMPLISH THESE TASKS.***

## **B. THE ROLE OF THE COLLEGE OR UNIVERSITY OFF-CAMPUS HOUSING**

**&**

TRANSPARENCY 15 - 19

The issue of fire safety in student housing off a university or college campus is a difficult one. Many factors play a part in this issue, including the proximity of student housing or whether housing is owned privately, and/or is a fraternity or a sorority. Several decades ago, a doctrine known as “In Loco Parentis” existed among the higher institutions of learning. This philosophy literally means “in place of the parent,” and colleges and universities were considered the entity that looked after the welfare of all its students, who were someone’s children, when they were sent to the institution for an education.<sup>9,</sup>

10, 11

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<sup>9</sup>Source: “In Loco Parentis – Responsibility for Children and Young People.” 9/23/98  
Internet address: <http://www.eauk.org/eayas/erport03.htm>

<sup>10</sup> Source: “Article I. Relationship Between the University and Students.” 9/18/98. Internet address: <http://www.usu.edu:8080/Publications/SCode/article1.html>.

<sup>11</sup> Source: “The Relationship Between the School and the Student.” 9/23/98. Internet address: [http://www.casacolumbia.org/pubs/jun94/saac\\_rel.htm](http://www.casacolumbia.org/pubs/jun94/saac_rel.htm)

## **B. ROLE . . . OFF-CAMPUS HOUSING**

There was little distinction between on and off campus students.

During the 1960s and early 1970s this philosophy was challenged both, culturally and legally, forcing colleges and universities to change their role from one of enforcing responsible behavior among all to only educating. This limited the schools' powers to only situations that applied directly to the institution.<sup>12, 13</sup> The colleges and universities became responsible only for the academic aspects of a student's experience—the content of what was taught and grading—and not for the ethical behavior of any student; nor was the college held fully responsible for the protection of students.

The outcome of this philosophical change has been significant. Students have their privacy rights, and colleges and universities have a somewhat less defined role. This role has more recently (in the 1980s and 1990s) been further confused as states enact legal drinking ages of 21 years old and civil host laws related to alcohol use by individuals.

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<sup>12</sup> Source: "Article I. Relationship between the University and Students." 9/18/98. Internet address: <http://www.usu.edu:8080/Publications/SCode/article1.html>.

<sup>13</sup> Source: "The Relationship Between the School and the Student." 9/23/98. Internet address: [http://www.casacolumbia.org/pubs/jun94/saac\\_rel.htm](http://www.casacolumbia.org/pubs/jun94/saac_rel.htm)

## B. ROLE . . . OFF-CAMPUS HOUSING

Thus, the need clearly exists for college and university administrators and fire safety professionals to network, coming together to connect and communicate.

There are administrators who feel unable to adequately reach students who live off-campus. As a result, administrators feel out of touch, with little control over the living and safety situations. It is important to remember that students who live off the institution's campus at times also feel disconnected from the university. As it relates to living quarters, it is fair to say that students want to be safe. We are certain their families want them to be safe. *If*, (a big if), students are thinking about their safety, it sometimes is the case that they feel little power to remedy a situation when housing is privately owned or some unsafe situation is occurring.

## **B. ROLE . . . OFF-CAMPUS HOUSING**

### STRATEGIES

There are several tactics that administrators can employ to create fire safety for all students attending their institution. Fire safety is not exclusively the responsibility of the college or university. It is however, important to be part of a solution to improve the safety of the living arrangements for students. College and university administrators can create a partnership with the student unions, Greek housing organizations, the local fire agency, the landlord tenant association, and other local organizations to create a concerted effort to implement a fire safety prevention program for off-campus housing. Indeed, many have done this very thing.

Another tactic that some colleges have instituted is to set up a hotline or a similar format for off-campus students to notify the institution when privately owned housing or other off-campus housing has a safety problem. This is important information for the college or university, since in many cases the institution recommends housing options to students at the beginning of the school year or the student housing is a fraternity or sorority associated with the institution.

## B. ROLE . . . OFF-CAMPUS HOUSING

University and college administrators must also recognize that there is power in discipline, in making housing recommendations, and in informing and reassuring parents. It is important for the college and university administrator to, within legal boundaries, *strongly* penalize individuals who violate behavior codes while attending the higher education institution-- especially when student safety is at issue.

College and university administrators are also able to exercise some control when they recommend housing. Administrators must ensure that the housing that is being recommended has been proven to have followed building codes and other legal mandates for fire and life safety. This action strengthens the college's or university's position when the institution must then approach an owner or a housing association on a student's behalf about housing safety issues.

Providing information about fire safety to students at an appropriate point before, during, and after orientation is imperative in initiating and maintaining a safe atmosphere among students. These actions and policies also reassure parents that the administrator is seeking to ensure their child's safety.

## B. ROLE . . . OFF-CAMPUS HOUSING

### BENEFITS

The advantage for the college and university administrator when he or she organizes this type of effort is twofold.

- First, the college or university is making every effort to ensure student safety. From a legal point of view, this is very valuable for the institution's position, in the event a fire were ever to occur.
- Secondly from an ethical perspective, the institution is doing everything in its power to protect its students—someone's children.

Finally, it is very important to communicate clearly with students and their parents. Students and parents need to understand the role of the institution as it relates to its own policies and the law. No matter how much a person works to ensure the safety of others, serious fires do happen. In the event that a fire does occur, the foundation of an ongoing fire and life safety program coupled with clear, consistent communication is the only manner in which an administrator can effectively manage this type of crisis.

## **C. COMPONENTS OF AN EFFECTIVE FIRE SAFETY EDUCATION PROGRAM**

TRANSPARENCY 20 - 22

A fire safety education program is the critical element in effective fire prevention. A program that is comprehensive has a strong and lasting impact on participants. A formal initial education session that is followed up with regular formal and informal continuing education provides consistency and creates a culture of fire safety. The continuing education may be timed with regular inspections of student living areas. A comprehensive fire safety education program requires coordination between departments and offices as well as networking with local fire safety agencies.

Individuals benefit from learning and remembering such details as fire safe actions, proper use of a fire extinguisher, and proximal exit paths. A comprehensive education program that targets fire safety and prevention must include certain basic elements. The following list details the basic elements of fire safety education for adults. These elements are drawn from a variety of sources including the National Fire Protection Association (NFPA), the New York State Office of Fire Prevention and Control, and Campus Safety, Health and Education Management Association (CSHEMA).

### COMPONENTS

- THE NATURE OF FIRE
- MOST COMMON CAUSES OF RESIDENTIAL FIRES AT COLLEGES/UNIVERSITIES
- MOST COMMON CAUSES OF FIRE INJURY AND DEATH AMONG COLLEGE/UNIVERSITY STUDENTS

## COMPONENTS OF AN EFFECTIVE FIRE SAFETY EDUCATION PROGRAM

### RESPONSIBILITY/LIABILITY ISSUES

-OF THE COLLEGE/UNIVERSITY

-OF OFF-CAMPUS HOUSING OWNERS

-OF STUDENTS—PEER PRESSURE—SAFETY IS IN THE HANDS OF YOUR FRIENDS, AND THEIR FRIENDS.

- FIRE SAFETY PROCEDURES

1. FIRE EXITS

2. FIRE ALARMS

3. CALLS TO FIRE DEPT.

4. FIRE EXTINGUISHER USE

5. FIRE DRILLS

- FIRE SAFE ACTIONS AND TOOLS

**USE:**

1. SMOKE DETECTORS

2. SPRINKLER SYSTEMS

3. F. R.\* MATTRESSES

4. COOKING SAFETY

5. F. R.\* FURNITURE (CALIF. TECHNICAL BULLETIN 133)

\*F.R.= FLAME RETARDANT

**AVOID:**

1. CANDLES

2. ALCOHOL/ DRUGS

3. SMOKING

4. HALOGEN LIGHTS

5. ELECTRICAL SAFETY

### PENALTIES FOR CRIMINAL ACTIONS

- VANDALISM

- TAMPERING

- ARSON

- CAUSING FIRE-RELATED INJURIES

## **D. A SAMPLE EDUCATIONAL VIDEO PROGRAM**

### **“GET OUT AND STAY ALIVE”**

#### **A FIRE SAFETY AND PREVENTION PROGRAM FOR COLLEGE & UNIVERSITY STUDENTS**

##### **TRANSPARENCY 23**

The Eau Claire, Wisconsin Fire Department has created a video and fire safety education program that is available to any college, university, student union, association or other organization that concerns itself with fire safety for students or any other groups of individuals.

The video and fire safety education program are designed to show the important factors to remember when there is a fire. The video, which is approximately 16 minutes in length, uses the stories and details of three recent, actual fires which resulted in the death of *several* young people: deaths that could easily have been prevented.

This fire safety education program and video may be obtained by telephone, fax, email or written request to the following address:

Federal Emergency Management Agency  
United States Fire Administration  
16825 South Seton Avenue  
Emmitsburg, MD 21727  
(800) 238-3358 Fax: (301) 447-1213  
Internet: <http://www.usfa.fema.gov>

## **E. FIRE AND LIFE SAFETY TRAINING MATERIALS FOR COLLEGE AND UNIVERSITY EMPLOYEES**

### **TRANSPARENCY 24**

*Note to the State Fire Marshal:*

*Appendix VI contains a copy of the employee training & certification materials. This is an element of support that the State Fire Marshal can provide to college and university personnel in their effort to establish a fire and life safety program both on and off their campus.*

Fire and life safety personnel at Syracuse University in Syracuse, New York have developed educational materials for college and university employees. These materials can be used to design a program for those employees who are responsible for fire and life safety, security, and the physical plant of a college or university.

The purpose of the materials is to contribute to the establishment of a fire safe workplace and to a better understanding of fire codes by college and university personnel. These materials will support a program that:

- Educates participants in the essential elements of a fire and life safety program;
- Provides guidance on how to identify fire hazards and provide remedial correction programs; and
- Demonstrates how to develop emergency evacuation plans.

By training and certifying its employees, a college or university can demonstrate its concern for fire and life safety and that it has taken affirmative steps towards mitigating potential fire problems.

*For more information about this program and training times, please contact your State Fire Marshal's Office.*

## **F. SPRINKLER SYSTEMS**

### **TRANSPARENCY 25 - 29**

The answer for many of the fire problems that colleges and universities experience is a sprinkler system. Whether the system is retrofitted or installed in new construction, sprinklers have an amazing performance and reliability record.

The sprinkler has been in existence for over a century. Its ability to provide a level of life safety in residential settings went unrecognized for decades. Now its use in many cases has become required. The benefits of sprinkler protection in residences are compelling. The National Fire Protection Association and the National Fire Sprinkler Association have created literature that addresses this topic. Both of these organizations fully support and actively encourage the use of sprinklers for life safety as well as property safety. Following this page are two handouts, one authored by each of these associations, that succinctly explain the benefits and facts about sprinkler systems.

# ECONOMIES OF SPRINKLER SYSTEM INSTALLATION

A number of devastating fires have been investigated by the NFPA over the years. In most of these fires, the lack of automatic sprinklers has been a key factor in explaining the accelerated growth and spread of many of these fires.

On a smaller scale, sprinklers are estimated to reduce the average loss per fire by one-half to two thirds. These losses are tangible and can be measured in real dollars. Shortly after these losses are determined, the more challenging task of establishing the business interruption losses, the economic impact on the employees, and even an attempt to determine if the business can withstand a major fire must be completed.

Another element, i.e., pending lawsuits, is also a measurable value that often exceeds the other combined direct and indirect losses, especially when there has been a loss of life. These items, while typically not a consideration to most building owners or business owners, can devastate a company, the employees, and ultimately the community if the business cannot recover.

Automatic sprinkler systems have the capability to intercede at an early stage in the fire and minimize the impact of a fire. In addition, many systems are provided with a water-flow alarm, which will automatically notify the fire department about the operation of the sprinkler system. This will allow for final extinguishment and overhaul by the fire department.

Unlike the TV portrayal of sprinkler systems where all sprinklers in the building may appear to operate at once, only those installed near the source of the fire will operate. As previously shown in Table 6-10A, a relatively small number of sprinklers tend to operate in most fire scenarios. In reality, there is considerably less water damage associated with sprinkler system activation than when sprinklers are not present.

Anxiety about water damage and inadvertent system discharge are real concerns of building owners. In reality, neither of these concerns have ever been a true problem. Reports in some media accounts of fires have focused on this element, thus reinforcing the public misperception. For instance, some news accounts have been selectively prepared, indicating that the fire damage was limited to, say \$1000 while the collateral water damage from sprinklers was perhaps, \$1500. No mention is made of the total value of the contents and the building; no mention is made about no one being injured; and no mention is made of the fatalities that did not occur.

Inadvertent discharge of water from system piping, valves, or from sprinkler is rare but not unheard of. System components are carefully

controlled by NFPA 13 to help ensure the integrity of the system. In addition, NFPA 13 also governs a number of methods and techniques that will help to protect against such problems. Quality control of installation practices and procedures is also an important matter. Special materials and methods are specified for use in corrosive atmospheres, areas subject to freezing and for all systems installed in areas requiring seismic protection.

There are those rare occasions when everything is done in accordance with NFPA 13, but some malfunction (resulting in an inadvertent discharge of water) still takes place. Factory Mutual Research Corporation (FMRC) has estimated that 1 in 16,000,000 installed sprinklers will fail to operate for no apparent reason. In addition, FMRC estimates that 1 in 2,500,000 installed systems will fault for no apparent reason and result in unwanted discharge of water. These items are the exception, and clearly not the rule, thus there are no extensive studies available on this topic.

## INCENTIVES FOR SPRINKLERS

Just as investing in real estate can provide one with economic return, installing a sprinkler system will have additional benefits beyond what has been described. Property owners and managers begin to realize a savings on insurance costs as soon as a system is complete. Sprinkler system costs can be amortized over the life of the building, as can the actual savings associated with a reduced insurance premium.

Mandatory laws for installing sprinklers on a retroactive basis are frequently allowed to be done in phases over some specified time period. This permits building owners to coordinate the installation with some other building upgrade.

In addition, most building codes will permit certain construction modifications when systems are installed in new construction. Installing sprinklers in existing buildings can also offset other fire protection deficiencies. Increases to building heights and areas are permitted, reductions to hourly partitions may be permitted, and reductions in physical separation between adjacent structures may be permitted. All of these changes can be quickly add up to offset the cost of the sprinkler system. Finally, there is the value of the life safety protection afforded by sprinklers and the security that sprinklers will provide to the building occupants. While difficult to put into dollar terms, this is the greatest tangible benefit of all.

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**APPENDIX II**

**HANDOUT**

***NEWS CLIPS  
AND PHOTOS***

**PAMPHLET**

***“GET OUT AND STAY ALIVE”***