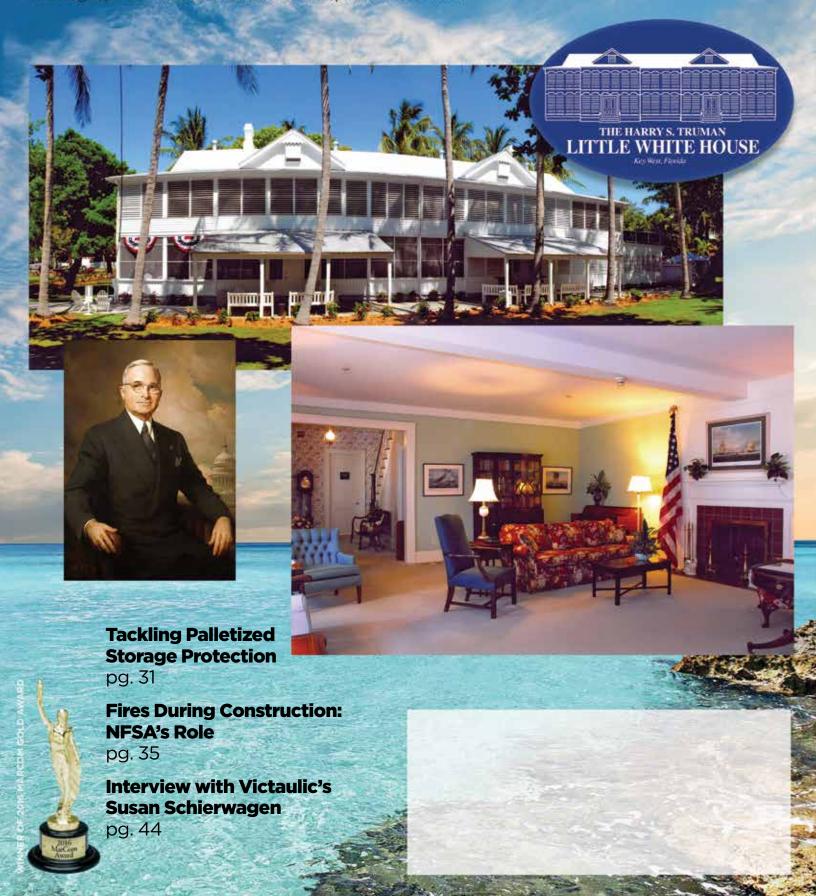
## National Fire Sprinkler Magazine

The Flagship Publication of The National Fire Sprinkler Association







#### ON THE COVER

Harry Truman's Little White House, Key West, Florida see story in HQ News.

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#### EDITOR

JOANNE GENADIO

DESIGNER

JOHN L. SULLIVAN/SULLIVANDesign

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September - October 2017 • No. 204

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October 25 - 27

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October 25 - 26

**Sprinkler System Installation Requirements and Rough** 

and Final Inspection Modesto, CA

October 30 - November 3

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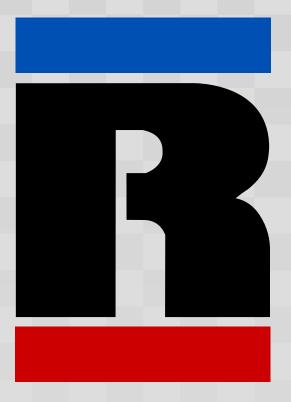




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#### From the President's Desk

Shane Ray

#### Industry Investment

often write in publications and speak to the media about "The Fire," imposing the question to all; citizens, public policy officials, fire service professionals, industry, media, etc., why does it take a tragedy to impact legislation, regulations, policy, and especially opinions and awareness of the issue?

I often answer my own question by stating that it is a failure. A failure of many components, which often come out in the blame game and, ultimately, litigation that follows the tragic event. Some of those components are those responsible to prevent or mitigate the tragic event, those who were responsible to enforce the preventing or mitigating measures, and/or those responsible for increasing awareness of what is available and educating those making decisions to ensure they are in place.



There have been several incidents of "The Fire" since our last issue and our last meeting. One such incident was the Grenfell Tower Fire on June 14, 2017 in London, that claimed an inaccurate count of lives, "approximately 80," when a fire started in the interior of the building and spread to the

exterior and back to the interior, which it repeated all the way to the top of this "Well, it's time to invest enough 24-story residential structure that was public housing. This was followed by the most recent high-rise fire in Honolulu, Hawaii, at the Marco Polo building, a in our industry to use the 36- story condominium that started on the 26th floor and spread to more than three more floors before claiming the lives of three and sending citizens and heightened awareness and the firefighters to the hospital.

These are just two of the most recent events that have captured the most media attention in the past few months. What about the average of 50 people who die and the hundreds who are injured from fires each week? "The Fire" is just as tragic as those that catch the media attention. Regardless, each life impacted is a totally separate impact, not a total event.

When we were presenting our Fire Team USA (a national program that was presented in all 50 states to focus on educating decision-makers to get involved in the codes and standards process), we used the motto, "It's Time." Well, it was time then, and not only were fire sprinklers included in the IRC, the most recent codes were adopted in many states and the numbers of those involved in the process improved. It's time again to reengage and reinvest.

It is my opinion that we are where we are because of codes and the obvious benefits of fire sprinklers to those involved in that process. However, I believe it is because of their noble calling to protect the occupants of buildings and firefighters that they make these decisions, not because of the inherent risk of the modern fire environment or the belief that it will ever happen to them. Your NFSA team

often attends many public hearings across the country promoting or defending fire sprinklers. In a recent public hearing to defend a town keeping the fire sprinkler requirements they have had in place since 2004, the proverbial question always arises, how many of those promoting fire sprinklers have them where they live? It is also sad when public debate following a tragic incident includes the misstatements that fire sprinklers are too expensive and that they can't be installed.

Well, it's time to invest enough in our industry to use the heightened awareness and the obvious need for fire sprinklers so that building owners want them, realtors promote them, citizens demand them, and the fire service depends on them to make the rescues they can't often make because of the modern fire environment.

In partnership with the National Fallen Firefighters Foundation, we have conducted workshops titled *Lead*ing Fire and Life Safety, Living Fire and Life Safety. We are sponsoring a program with Firehouse Magazine at their national conference and exposition focusing on Leading and Living Fire and Life Safety. It's time, and NFSA is going to lead and live fire and life safety. continued on page 9

obvious need for fire sprinklers so that building owners want them, realtors promote them, citizens demand them, and the fire service depends on them to make the rescues they can't often make because of the modern fire environment."



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# From the President's Desk

Shane Ray

continued from page 7

We have been making progress for years as a result of your dedication and commitment to the industry. As I write this, I know there are board members retrofitting their homes, there are fire stations in the country being retrofitted with federal Fire Act Grants and with our Chapters' dedication (thank you Florida), there are public policy debates occurring to include retrofit and new adoptions.

I truly believe we are at a "tipping point" (Malcolm Gladwell's book). We have a lot of work to do, but as you can tell from our responses to "The Fire," we have a team that can and will keep pushing and promoting the mission of NFSA, which is "to save lives and property from fire through the widespread acceptance of the fire sprinkler concept".

Shane Ray, President

Let's stay in touch! Are you aware that NFSA is very active on today's social networks? We believe that if you want to change public opinion, you've got to be a part of it. Join us, visit us, email us, facebook us and you'll get updates on what's going on in our industry, breaking news from across the country and , best of all, the chance to network with not only your industry peers, but the American public as well. E-mail us info@nfsa.org www.nfsa.org Linked in Join us search: National Fire Sprinkler Association in "Groups" Follow us http://twitter.com/NFSAorg Facebook us search: Nat Firesprinkler



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#### From the Chairman's Desk

Larry Thau

# What Exactly Does "Balance" Mean Within the Code Process and Why Should We Care?

e all become NFSA members for our own reasons. For some, momentum from the prior actions of others, some to improve their business outcomes, some to support a noble cause and some to contribute because of a personal tragedy. In the end however, we form a mosaic of many points of view and slightly different objectives. What we often fail to recognize is that setting aside our membership numbers, our diversity itself is a strong asset particularly as it relates to the code and standards development process.

The United States operates a system of consensus standards creation under ANSI (American National Standards Institute). The ANSI Federation's primary goal is to enhance the global competitiveness of U.S. business and the American quality of life by promoting and facilitating voluntary consensus standards and ensuring



their integrity. Directly below is my summary and explanation of the *essential requirements* for standards development by an industry association such as NFSA. Failing to maintain these key features prevents unstructured or unbalanced groups from participating.

"The ANSI Federation's primary goal is to enhance the global competitiveness of U.S. business and the American quality of life by promoting and facilitating voluntary consensus standards and ensuring

their integrity.

- Openness: Participation open to all those who are materially affected by the process.
- Lack of dominance: Operation such that no single interest dominates to the detriment of the process.
- Balance: In general, inclusion of producers, users and general interest members.
- Coordination and harmonization: Maintain a good faith effort to avoid conflict with existing standards.
- Notification of standards development: Allowing adequate time for reasonable collection of comments.
- Consideration of views and objections: An organized means of presenting, evaluating and prioritizing viewpoints.
- Consensus vote: One member, one vote, irrespective of perspective.
- Appeals: A means of reevaluating past decisions.
- Written Procedures: Documented policies.
- ANSI Compliance: Operation within the spirit and requirements of the American National Standards Institute.

So, when we gather for our Board, Committee, Council and E&S meetings, we're doing more than enjoying each other's company while we're engaged in often colorful industry debates. We're living and breathing the ANSI process. As a geographically and professionally diverse group of contractors, former fire officials, pipe manufacturers, distributors, sprinkler producers, plastics providers, producers of electrical products, owners, etc., we're displaying the "lack of dominance" and balance required for us to legally contribute as an association to the United States process of developing consensus standards.

As I look forward to some of the challenges we face, the thought of what constituencies we may need to add to better achieve our objective comes to mind. Our association has done an increasingly better job of identifying and encouraging participation of some of these groups (The fire services and medical first responders, to name two). But others, such as water purveyors, remediation contractors, insurance compa-

#### From the Chairman's Desk

Larry Thau

continued from page 11

nies and insulation contractors can help. If we look just at the insulation contractors alone, and the damage that gets attributed to system "freeze ups" every winter, it's shocking that there isn't a single standard or best practice document available for how insulation contractors should properly insulate our systems. With our recent focus on the role of material compatibility in the products and services we provide, it seems there should be some room for accepting and acting upon their input. Aside from the improvement in performance and reduced loss history, these adversaries may evolve into allies as they are better equipped to dispel the myths about our systems.



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# Why Employee Engagement Is in Decline and What to Do About It

By Gareth L Shackleton

Despite employee engagement being a theme in leadership and management for more than twenty years, engagement levels are at an all time low and falling further. Employee engagement as a term has been around since the early 90s. Before that it was employee satisfaction and then employee commitment in the 70s and 80s. The change in leadership and management circles to "engagement" followed a recognition that it wasn't just about the employee. Employee engagement requires a two-way commitment and inter-dependence. Employee engagement has various definitions but usually involves commitment to the goals of the company and a willingness to go the extra mile to achieve them.

Interest in employee engagement was fueled by studies in the 90s and early part of the 21st century, showing that improving employee engagement increased customer satisfaction and loyalty, impacting directly on bottom line results and return on capital. Around this time, Sears created an internal survey that correlated engagement with bottom line financial results to measure management effectiveness at improving engagement. Bonuses for executives were based on their success at improving engagement levels. From research and case studies in specific companies, it is clear that a focus on employee engagement is an important driver of

From research and case studies in specific companies, it is clear that a focus on employee engagement is an important driver of commercial success. It is also clear that it is possible to influence employee engagement levels positively with good leadership. Why then, is overall employee engagement declining even though it is not a new concept in leadership? Let's look at four reasons.

- 1. In some cases, employee engagement has become a means rather than an end. When employee engagement initiatives are introduced to improve corporate results, these initiatives often fail. Employee engagement initiatives have to be introduced with a genuine desire to improve the working environment and relationships of every employee first. It has to be about employee welfare, self-esteem and significance first and foremost. Better bottom line results make the business case for investing in engagement initiatives, but they must not be the goal. Otherwise, it is perceived as manipulation, even exploitation, and inevitably it fails.
- 2. Employee engagement initiatives often center around one of two things: (a) giving rewards (perks) to employees or (b) training. Neither of these work particularly well in isolation. Reward systems can offer a short-term boost to commitment. However, after a while they become normal. They can often be seen to be trivial in the scheme of things too offering a free

meal, theater tickets or Amazon gift certificates may not seem very fair when the company has increased its bottom line by several hundred thousands or millions. Training doesn't work either. Employee engagement requires consistent leadership behaviors to develop trust based on a mutual respect and a genuine concern for every employee's welfare and development. This can't be achieved by training. It requires creation of leadership habits based on a deep understanding of human psychology.

- 3. Large corporates have the leadership expertise and resources to go after and influence employee engagement. Almost two thirds of the workforce employed by private organizations is within small and medium sized businesses (SMEs). In most cases, SMEs have neither the expertise or the resources. However, having a dramatic impact on employee engagement is not complex. With an awareness of the value and a will to make changes, it is well within the ability of all employers to dramatically improve the commitment of employees to their company and their job.
- 4. There is often a disconnect between company results and employee reward for the effort they expend. The word "ownership" is used a lot in employee engagement. The aim is often to "create an attitude of ownership in employees" ownership of their role, of their team and of the results of the company. But a real ownership attitude will never be achieved when there is a perception that the benefit to the company is disproportionate to the effort and rewards of the individuals creating those results. In fact, this is one of the things that creates disengagement in the first place. If you need evidence that this is true, just talk to people who start their own business in competition with their previous employer. They often say they were fed up of working hard and lining the pockets of someone else. If they were going to work that hard, they may as well work for themselves and line their own pockets. The reality is often different, but that's another story. There has to be a more equitable distribution of the rewards. But even more than that, there has to be a program of education so that everyone knows what a more equitable distribution means in practice, otherwise misperceptions will remain of the way profits are distributed. •

Article Source: https://EzineArticles.com/expert/Gareth\_L\_Shackleton/1265381

#### **TECH TUESDAY**



#### September 19, 2017

#### Protected and Unprotected Concealed Spaces: Part 2

Presented by Roland Asp, Manager of Installation Standards

NFPA 13 requires sprinklers to be installed to protect all areas of a building unless an area is specifically permitted to allow omission of sprinklers by a section of the standard. Section 8.15, Special Situations, provides guidance on which of these areas are permitted to have sprinklers when meeting certain criteria. Arguably one of the most utilized areas of this section is 18.15.1.2 which provides 18 subsections of arrangements for concealed spaces in which sprinklers are not required to be installed. This seminar is part 2 of 2 which will tackle issues involved with omitting sprinklers from these spaces and how to properly protect these spaces when you cannot omit sprinklers.

#### October 17, 2017

#### **Vertical Shafts, Stairways and Elevators**

Presented by Jeff Hugo, Manager of Codes

Where are sprinklers required in vertical shafts, stairways, elevator equipment rooms and elevators shafts? The special situations included in NFPA 13 sections 8.15.2, 8.15.3, 8.15.4 and 8.15.5 will be reviewed. NFPA 13 requires sprinkler protection in vertical shafts having exposed combustible construction. The basic requirements for installation of sprinklers, considerations for inspection and conditions allowing omission of protection in vertical shafts will be identified. Sprinkler protection requirements for stairways of combustible, limited combustible and noncombustible construction will be identified. Situations involving vertical openings for escalators, staircases and atriums will be reviewed. Sprinkler protection requirements for elevator equipment rooms and shafts will be identified. These requirements have evolved over the last several cycles and reviewed to demonstrate when

sprinkler protection is required and when it can be omitted.

#### November 21, 2017

#### **Unusual Ceilings**

Presented by Mark Hopkins, P.E., Vice President of Engineering

The installation of complex and ornate ceilings has become the norm rather than the exception in many contemporary construction projects. Special situations involving spaces above ceilings, open grid ceilings, drop out ceilings, ceiling clouds and stepped ceilings will be reviewed. Architectural ceiling designs have continued to evolve beyond the limitations for cloud ceilings. The special ceiling situations included in the sub-sections of 8.15 will be reviewed. Sprinkler protection requirements and compliance options will be discussed for these unique and challenging ceiling configurations.

#### December 19, 2017

#### **Other Special Situations**

This session rounds out the special situation topics of NFPA 13, section 8.15, which has often been referred to as the "junk drawer." A variety of miscellaneous and somewhat seemingly unrelated topics will be discussed including, library stack areas, glazing protection, revolving doors, and stages. Although these topics do not appear to be related, each has its own unique set of specialized sprinkler protection requirements and/or permitted omissions. Knowing how to provide protection for these conditions is important to ensure compliance. In addition, requirements for return bends, dry pipe underground and old-style sprinklers will be discussed.

#### ALL COURSES ARE AVAILABLE ONLINE ON NFSA.TV (www.nfsa.tv)

**NFSM** EDUCATION

# Ensure Training Availability to Members that Enhances and Promotes the Fire Sprinkler Industry (Goal #3 of the NFSA Operational Plan)

by James D. Lake



Availability of training is a big challenge these days. Training needs to continue to diversify and specialize. With the constant demand for on-time and available resources, NFSA has developed numerous initiatives to deliver training programs with an eye towards convenience, portability and affordability. Recently, this has been achieved through the promotion and expansion of online and blended learn-

ing offerings which have been detailed in previous issues of NFSM.

But in this issue, I want to focus on NFSA's ability to ensure training availability through in-class seminars. In-class seminars have been a mainstay of NFSA training for decades. The association has been able to keep pace with the demand for standard and specialized/tailored training through the work of collaboration between its Training, Regional Operations, and Engineering Teams. These teams, as well as the use of contract instructors, have been able to fan out over the country to ensure that high quality training is delivered to any corner of the country where a need is determined and a seminar is requested.

#### NFSA's list of in-class courses is quite extensive:

- Advanced Hydraulics
- Coordinating the Requirements of NFPA 25 & 72
- Fire Service Mains and Their Appurtenances
- Fire Sprinkler Design Options in the IBC
- Hydraulics for Fire Protection
- ITM: Navigating Through the Liability Minefield
- Introduction to Sprinkler Systems, Fire Pumps & Standpipes
- Inspection & Testing for the Sprinkler Industry
- Inspection, Testing & Maintenance for the Building Owner/Manager
- NFPA 13/13R/13D/14 Update 2013
- NFPA 13/13R/13D Update 2016
- Protection of Storage
- Pumps for Fire Protection
- Rough & Final Inspection of Sprinkler Systems
- Seismic Protection for Fire Sprinkler Systems
- Sprinkler System Installation Requirements

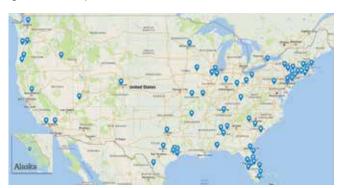
- Sprinkler System Plan Review
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- Understanding, Applying & Enforcing NFPA 13D
- Understanding, Applying & Enforcing NFPA 25

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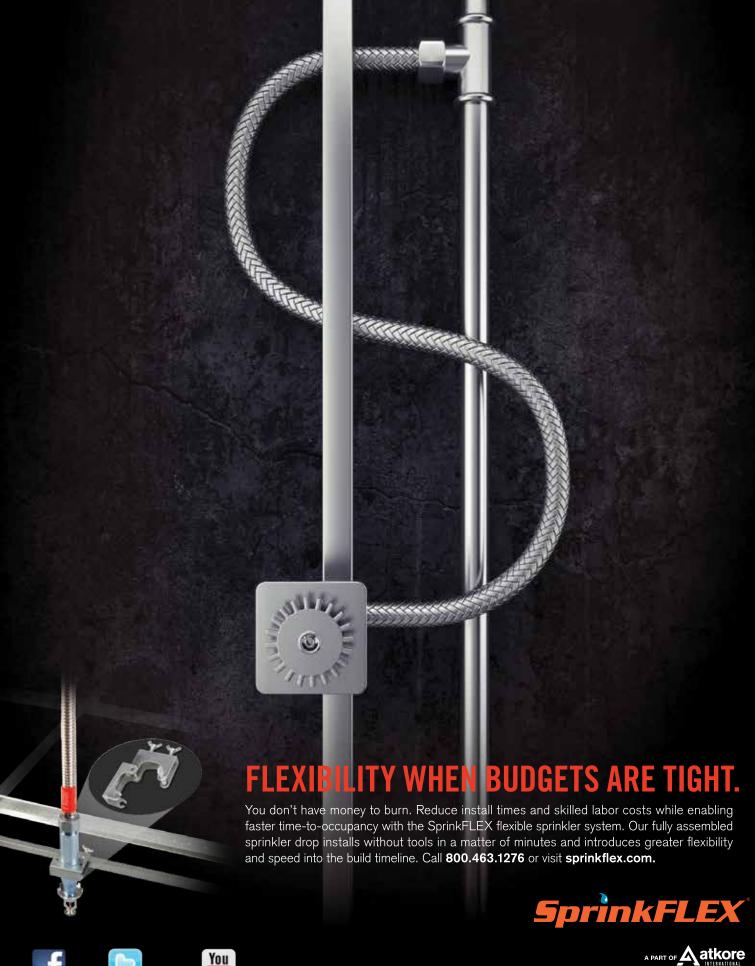
Visit the on-line training catalog at www.nfsa.org/training for more details.

Equally impressive is the training map that is used to track training. This shows all of the locations around the country where NFSA has conducted over 100 seminars in 26 states in just the first three quarters of the year!!!



#### NFSA's Contractors Council creates an ad-hoc Committee on Training

At the June meeting of the NFSA Contractors Council, Council Chair appointed an ad-hoc Training Committee to assist the NFSA Training Department in identifying training needs and priorities and develop a strategy to provide them. The committee has met and conducted a survey of NFSA members all with the intent of meeting NFSA's Goal #3. Look for more information on the activities of this group in future issues. •









[AtkoreInternational]



# High, Low, and Miscellaneous Storage

by Mark Hopkins P.E., NFSA's V.P. of Engineering



The determination of appropriate protection criteria for storage occupancies can be challenging, especially when determining criteria for miscellaneous and low-piled storage. Knowing the definitions and requirements for low-piled storage, miscellaneous storage and high-piled storage in NFPA 13, *Standard for Installation of Sprinkler Systems*, is key. However, sometimes the meaning of definitions

and the related requirements change over time. This article will highlight some of the changes of significance related to low-piled storage, miscellaneous storage and high-piled storage.

#### **High Piled Storage**

A definition for high-piled storage has been provided in NFPA 13 for a very long time. The 1960's and 1970's editions of NFPA 13 defined high-piled storage as solid piled storage in excess of 15 feet in height or palletized or rack storage in excess of 12 feet in height. This was different from what is currently found in NFPA 13 because there is a difference in the storage height thresholds for solid piled storage and other ways of storing materials.

The definition was changed in the 1983 edition of NFPA 13 to identify that high-piled storage is solid piled, palletized and rack storage in excess of 12 feet in height. The substation for the change provided in the first draft report for the 1983 edition stated that the NFPA 13 committee was seeking to provide correlation with NFPA 231, *Standard for Indoor General Storage*. This modified definition is essentially the same definition that is found in the 2016 edition of NFPA 13 in section 3.9.1.16 (shown below).

**3.9.1.16 High-Piled Storage**. Solid-piled, palletized, rack storage, bin box, and shelf storage in excess of 12 feet in height.

#### **Miscellaneous Storage**

The concept of miscellaneous storage wasn't added to NFPA 13 until the 1991 edition. So why was there a need for this new terminology? Ken Isman, P.E. provided a good historical perspective on this issue in his *Technically Speaking* article titled, Miscellaneous Storage, published in the Fall 2004 SQ. Isman identified three documents with different scopes that had some overlap, causing

confusion in the industry. The documents he was referring to included NFPA 13, NFPA 231 and NFPA 231C, *Standard for Rack Storage of Materials*.

The following definition for miscellaneous storage was introduced in section 1-4.2 of the 1991 edition of NFPA 13 in an effort to provided clarity on the issue. The 1991 edition of NFPA 13 did not have individual section numbers for each defined term, this predated the NFPA Manual of Style requirement. At that time, there were general section heading numbers with multiple definitions.

Miscellaneous Storage\* Storage that does not exceed 12 feet in height and is incidental to another occupancy use group as defined in 1-4.7 (see 5-2.3.1.1). Protection criteria for miscellaneous storage are within the scope of this standard.

In addition to the definition, protection criteria for miscellaneous storage were added in section 1-4.7.4, which was titled *Special Occupancy Hazards*. The actual protection criteria for miscellaneous storage were provided in a concise table (Table 1-4.7.2) summarized below.

Commodity Classification	Palletized and Bin Box	Rack
1	OH-1	OH-1
II	OH-1	OH-1
III	OH-2	OH-2
IV	OH-2	OH-2
Group A Plastic	EH-1	EH-2

Table 1-4.7.4.2 Occupancy Group Classification for Miscellaneous Storage 12 feet or Less in Height

The addition of this simple table was a worthy attempt by the NFPA 13 Committee at providing a concise, uniform and easily understood set of criteria. However, this table did not provide sufficient criteria for Group A plastics, tire storage, roll paper and

continued from page 17

pallet storage. As a result, a Tentative Interim Amendment (TIA) was later provided for the 1991 edition (TIA 91-1) to include this additional criteria, which was then reflected in the 1994 edition.

TIA 91-1 provided some other changes, including clarification that storage over 12 feet (3.66m) in height (high piled storage) was considered outside the scope of NFPA 13, with four cited exceptions (back when, NFPA 13 used exceptions). Later editions removed the exceptions and added separate code requirements for each exception, in order to comply with NFPA's Manual of Style requirements.

Section 1-4.7.4.1 of the 1991 edition noted that other NFPA standards contained sprinkler criteria for fire control and suppression. This section also included a list of the standards known to provide such protection criteria, including but not limited to NFPA 231 and NFPA 231C. There were a number of other standards referenced, and the interested reader is urged to refer to this section in the 1991 edition for the complete list. These requirements are now found in Chapter 22 of the 2016 edition of NFPA 13, which includes extracted text along with the NFPA standard number from which the text was extracted and the corresponding section reference.

The initial definition of miscellaneous storage did not last long. The definition changed in the subsequent 1994 edition to reflect some additional clarifications and limitations. The revised definition is provided below.

Miscellaneous Storage\* Storage that does not exceed 12 feet in height and is incidental to another occupancy use group as defined in 1-4.7 (see 5-2.3.1.1). Such storage shall not constitute more than 10 percent of the building area or 4,000 square feet of the sprinklered area, whichever is greater. Such storage shall not exceed 1,000 square feet in one pile area, and each such pile or area shall be separated from other storage areas by at least 25 feet. Protection criteria for miscellaneous storage are within the scope of this standard.

This modified definition provided in the 1994 edition has remained essentially the same, with the exception that the last sentence stating, "Protection criteria for miscellaneous storage are within the scope of this standard," was deleted as part of the 1999 edition consolidation.

#### Storage Changes Leading to the **Definition of Low Piled Storage**

The 1999 edition of NFPA 13 constituted a major overhaul, since it incorporated requirements for the protection of storage previously contained in NFPA 231, Standard for General Storage, NFPA 231C, Standard for Rack Storage of Materials, NFPA 231D, Standard for Storage of Rubber Tires, NFPA 231E, Recommended Practice for the Storage of Baled Cotton and NFPA 231F, Standard for Storage for Roll Paper as well as multiple other standards. Rather than a simple extraction of text, the requirements from these standards were added to NFPA 13, making these other standards obsolete. This simplified correlation issues, but chapters 5 and 7 of the 1999

edition expanded significantly, as did the entire standard.

The 2002 edition further changed the storage requirements as a new chapter 12 was added to separate storage criteria from other occupancies and a new Chapter 13 was added for Special Occupancy *Requirements.* This is where the extracted requirements from other NFPA standards were originally added to NFPA 13.

The 2007 edition moved the criteria for miscellaneous storage into a new separate Chapter 13, titled Miscellaneous Storage and relocated the Special Occupancy Requirements to Chapter 21. In addition, Chapters 14 through 19 were added to separate protection requirements for Class I-IV commodities, plastics, rubber tires and rolled paper. This edition also added a Chapter 20, Special Design of Storage Protection. The 2013 edition added a new Chapter 21, Alternative Sprinkler System Designs for Chapters 12 through 20. It wasn't until the 2016 edition that the definition for low-piled storage was added due to some additional changes of importance related to low-piled storage.

#### **Low-Piled Storage**

Since there was no definition for low-piled storage until the 2016 edition, there was an inherent assumption that if storage was not high-piled storage it was low-piled storage. Implicitly this meant that if the solid piled, palletized, bin box, rack or shelf storage less than or equal to 12 feet in height is was considered low-piled storage. However, the 2016 edition provided an explicit confirmation of this assumption since the following definition for low-piled storage was added in section 3.9.1.17.

Low-Piled Storage. Solid-piled, palletized, rack storage, bin box, and shelf storage up to 12 feet in height.

#### **Clarification of Miscellaneous** and Low-Piled Storage

The addition of the definition for low-piled storage was necessary as a result of the change to the title of Chapter 13 from Miscellaneous Storage to Protection of Miscellaneous and Low-Piled Storage. This change added clarification that the criteria provided in Chapter 13 was intended to apply to storage less than 12 feet in height for specific storage commodities and configurations as referenced in Chapters 14 through 17. In addition, the following new text was added in section 13.1.1 to provide clarification regarding the applicability of Chapter 13:

> 13.1.1 This chapter shall apply to any of the following situations:

- 1. Miscellaneous storage of Class I through Class IV commodities up to 12 feet in height
- 2. Miscellaneous storage of Group A plastics up to 12 feet in height
- 3. Miscellaneous storage of rubber tires up to 12 feet in height
- 4. Miscellaneous storage of rolled paper up to 12 feet in height
- 5. Storage of Class I through Class IV commodities

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up to 12 feet in height as directed by 14.2.3.1 and 16.2.1.2.1

6. Storage of Group A plastics up to 5 feet in height as directed by 15.2.1 and 17.2.1.1

The additional information summarized situations where the criteria of Chapter 13 would be applicable. This included situations involving miscellaneous storage as defined by section 3.9.1.18 for Class I through Class IV commodities, Group A plastics, rubber tires and roll paper commodities up to 12 feet in height as identified in conditions (1) through (4). It added clarification regarding the applicability for "low-piled storage" of Class I through Class IV commodities up to 12 feet in height as directed by 14.2.3.1 and 16.2.1.2.1. It also added clarification regarding the applicability for "low-piled storage" of Group A plastics up to 5 feet in height as directed by 15.2.1 and 17.2.1.1.

There is still some confusion regarding this issue since several changes were submitted to the NFPA 13 committee for consideration as part of the 2019 cycle. There are likely to be further changes made to provide additional clarification in future editions of NFPA 13, but there is no certainty of this since the NFPA 13 committee has been known to changes its opinion from time to time.  $^{\circ}$ 



#### References

- Ken Isman, P.E., Miscellaneous Storage, Technically Speaking Column, Sprinkler Quarterly, Fall 2004, National Fire Sprinkler Association, Patterson, NY.
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- NFPA 13 Report on Comments (ROC), 1982 Fall Meeting Technical Committee Documentation, Quincy, National Fire Protection Association, 1982, Quincy, MA.
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- 6. NFPA 231D, *Standard for Storage of Rubber Tires*, National Fire Protection Association multiple editions (1974 1998), Quincy, MA.
- NFPA 231E, Recommended Practice for the Storage of Baled Cotton, National Fire Protection Association multiple editions (1984 - 1996), Quincy, MA.
- 8. NFPA 231F, *Standard for Storage for Roll Paper*, National Fire Protection Association multiple editions (1984 1996), Quincy, MA.
- 9. *Tentative Interim Amendment (TIA) 91-1*, National Fire Protection Association, 1982, Quincy, MA.



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CODE CORNER

#### 2018 IFC Chapter 32 Changes

by Jeffrey M. Hugo, CBO, NFSA's Manager of Codes



In Chapter 32 of the 2018 International Fire Code (IFC) has significant changes to high-piled storage. This chapter, through the ICC Fire Code Action Committee (FCAC), was updated through a working group of several NFSA members, other industries, and code officials (See Nov/Dev 2015 issue of SQ). This article highlights the changes.

#### **Permits**

Operational permits in Section 105.6.23 was changed to require permits when the high-piled storage exceeds 500 sq. ft., not when the building exceeds 500 sq. ft.

New in Section 105.7.11, are construction permits for high-piled storage where the installation or modifications exceed 500 sq. ft. This change that requires a construction permit in the IFC would now trigger the fire code officials to be involved in plan review and planning prior to the work being done.

#### **Construction Documents and Storage Layout**

The changes to Section 3201.3 for construction documents do not change what is required for review, but what is required after construction. New to 2018 is Section 3201.3.1, that requires a floor plan of the storage layout on the wall, in an approved location. The floor plan, which is a reference for all future inspectors, owners and users of the space, is required to have the following on the plan:

- Locations, dimensions and rack layout of high-piled storage areas.
- 2. Design storage height for each storage area.
- 3. Types of commodities.
- 4. Commodity clearance between top of storage and the sprinkler deflector for each storage arrangement.
- 5. Aisle dimensions between each storage array.
- 6. For palletized and solid-piled storage, the maximum pile volume for each storage array.
- 7. Location and classification of commodities in accordance with Section 3203.
- 8. Location of required fire department access doors.

9. Location of valves controlling the water supply of ceiling and in-rack sprinklers.

#### **Fire Safety and Evacuation Plan**

The fire safety and evacuation plan for high-piled storage is not necessarily new to the IFC. The new text correlates all the special requirements the IFC previously had and located it in one place, Section 403.11.5. This plan, if required by the following, is part of the construction permitting and plan review process:

- The high-piled storage area exceeds 500,000 square feet for Class I-IV commodities.
- 2. The high-piled storage area exceeds 300,000 square feet for high-hazard commodities.
- 3. The high-piled storage is in a Group H occupancy.
- 4. The high-piled storage is in a Group F occupancy with an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge.
- 5. The high-piled storage is in a Group M occupancy with an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge.
- 6. Where required by the fire code official for other high-piled storage areas.

#### **Commodities**

The current list of commodities in the IFC has had minimal revision since the 2000 IFC, while NFPA 13 has included, expanded and revised its commodity classification list every edition since 1996. The biggest visual change of the 2018 IFC is adding in the tables and figures to improve consistency with the 2016 NFPA 13. The individual lists for Class I through IV, high-hazard and plastic commodities have been replaced with Table 3203.8 as is contained in the 2016 NFPA 13. While, NFPA 13 does not use the term "high-hazard" for a commodity, the items which have been determined to be high-hazard in the IFC are noted, as well as a new item, under the category of "biomass."

The other change in this category addresses the figure for mixed commodities. Since the 2000 IFC, a mixed commodity with a Group A plastic was determined through Figure 3203.7.4. The

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2018 IFC moves this figure closer to correlation to NFPA 13 by breaking the figure into two figures. It is important to note there are differences between the IFC and NFPA 13 on this table and improvements are in store for the 2021 IFC to close some of the gaps between the two documents.

#### **General Fire Protection and Life Safety Requirements Table**

Many requirements of Chapter 32 revolve around Table 3206.2 (General Fire Protection and Life Safety Requirements Table). The user first classifies the commodity and the size of the high-piled storage area then scrolls across the row for fire protection requirements. The changes in the 2018 table are numerous and outlined in the following:

- For Class I-IV, the rows from 12,001-500,000 sq.ft. are combined as they have the same requirements.
- Maximum pile dimensions are adjusted to 120 feet for Class I-IV and 60 feet for High-hazard with no changes to height or pile volume. This was done to accommodate tilt up construction structural spacing.
- Footnote e, eliminates the reference to Section 503 for apparatus access and the old Footnote f, becomes new Footnote e.
- High-hazard in the high-piled area column is changed to greater than 300,000 with new Footnote f (old Footnote g).
- Old Footnote h is eliminated. Having a 2-hour fire wall conflicts with unlimited area buildings in the IBC.

#### **Fire Department Access Doors**

The Fire Department Access Doors Section is updated to work with varying building configurations. First, the door distribution has increased from 100 lineal feet between doors to 125 feet between doors, and the distance between doors for existing buildings is increased to 200 feet. Second, exterior walls that do not face a fire apparatus access road are permitted to exempt doors, where the building is fully sprinklered, the opposite exterior wall has exterior doors and all portions of the interior are less than 150 feet from a fire department access door. Third, fire department access doors shall be accessed without the use of a ladder. Finally, signage for all fire department access doors is included in this section of changes.

#### **High-piled Storage Area**

The changes to the high-piled storage areas clarify the size of the storage area by using the footprint of the racks, shelves, or piles, including all the interior aisles and a 15-foot perimeter around the racks, shelves, or piles. These areas are applied to their commodity classification in Table 3206.2. Further changes to this section divides the multiple high-piled and multiple class storage areas into separate sections for clarity.

#### **Flue Spaces**

The application of flue space requirements and the format of Table 3208.3 have created confusion, and changes to the 2018 table is intended to clarify the requirements. The most visible change is a new table that correlates exactly to the NFPA 13 flue space requirements. The text to the section also clarifies flue spaces are only required above the first tier or level.

#### Conclusion

The changes to the 2018 IFC Chapter 32 are a result of a multimember industry and code official working group. This method of code work has proven to be the most effective and collaborative way to make changes to codes. It is important to note, as a reader, this article was written prior to publishing the 2018 IFC code. Text and section numbers may be different from the published version. •

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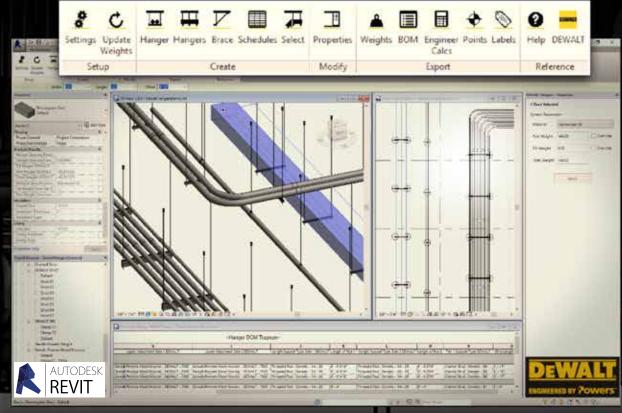


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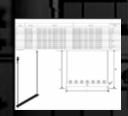


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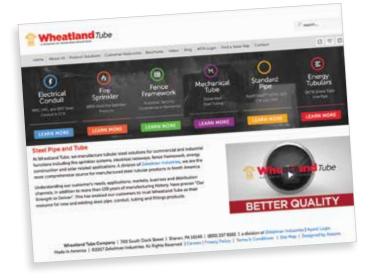
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ACCÉNT Fire Engineering International Ltd. was founded in Santa Fe, New Mexico in November of 1991. The founders of the firm were Walter Leyba, Sr., CFI and Jerry D. Watts, SFPE. Walter Leyba, Sr. served as Chief Executive Officer until his passing in September 2015. Walter started his career as a firefighter at Los Alamos National Laboratory/AEC in January of 1951, retired in 1983 as Deputy Chief/Fire Marshal and served in the New Mexico State Fire Marshal Office as Director of Code Enforcement for 12 years until his retirement from that organization. Jerry D. Watts serves as President of ACCÉNT and has run the daily operations since 1991.

Jerry started in the sprinkler industry as a "swamper" during summer school vacations at GRINNELL of the Pacific in Los Angeles in 1964 – at the age of 11, working for his father, "Chuck" Watts. Jerry served a five-year indentured (669) apprenticeship with GRINNELL Fire Protection Systems starting in 1974. In 1977, Jerry was accepted to the School of Fire Protection Engineering at the University of Maryland by its Founder, Dr. John L. Bryan.

Senior Vice President Daniel Archuleta serves as Senior Vice President of Accént. Daniel retired as a Senior Fire Inspector from Santa Fe Fire Department and is a former employee of the New Mexico State Fire Marshal Office.

James E. Trehern, CET serves as Vice President/Southwest U.S. Operations and is a retired Fire Chief from DOE/Los Alamos Fire Department and a former New Mexico State Fire Marshal.

Retired New Mexico State Fire Marshal George Chavez serves as Vice President of the International Training Division. Col. Nick Aranda, PE/FPE serves as Director of Engineering and Lenny Farello, PE/FPE is Senior Fire Protection Engineer (and graduated from The Program at the University of Maryland).

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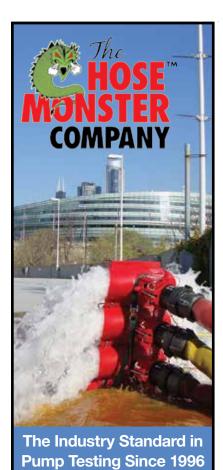
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Jerry D. Watts is a third-generation Fire Sprinkler Industry veteran. Jerry's father, Chuck Watts, worked in the fire sprinkler industry for 41 years (Viking/GRINNELL) and his grandfather worked for Rockwood Sprinkler for 36 years -starting in 1918. Jerry played football for the University of Washington from 1970 to 1973. A career in the NFL was dashed when a serious neck injury was detected prior to the 1974 NFL draft. Jerry started his training in Sales/Engineering in 1981 under the late Harold P. Eidson, then Vice President of ZURN/COSCO Fire Protection Div. in Gardena, California - Jerry was recruited by John P. Eidson, Executive Vice President of COSCO - when Jerry was attending the University of Maryland. Jerry also worked for "Automatic" Sprinkler Corporation/District 68 in Seattle, Washington. He briefly attained "celebrity" status at GRINNELL when a vacationing secretary from Providence, Rhode Island snapped a photo of him waving at her from the GRINNELL delivery truck near downtown Los Angeles. The secretary gave the color photo to her boss - Mr. James D. Fleming (President of GRINNELL Corp.) - who sent the photo to the L.A. office inquiring who this young man was. Jerry was 12 years old at the time.

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by Vickie Pritchett, Director of Outreach & Government Relations

ecent fires have provided your NFSA Outreach & Government Relations team the opportunity to engage in national and international events as they are unfolding. This outreach puts our mission, vision and essentially our message, right in the middle of these events.

When tragedies occur, there are a host of immediate needs that occur in the community. The fire department handles most of these needs, and the rest of the world, including us, tune in to "watch." Whether we are watching national news or picking up the news via Twitter, Facebook or other social media outlets, we all tune in to learn what is happening, and to see if there is anything we can do to help.

Our values drive us to reach out, to try to assist, to make a difference in some small way!

When the Grenfell Tower fire occurred in London, Team NFSA was immediately engaged and offered support to the International Fire Sprinkler Association (IFSA), which is chaired by a member of our NFSA Board, Bruce LaRue. Working with Bruce, and IFSA Managing Director Russ Fleming, we assisted with an international press release that was picked up by 217 news agencies. We have learned that when these "teachable moments" occur, we must be ready to execute in a timely manner and in a way that expresses our concern, compassion, and most importantly, the information that we have that can save lives in the future – simply stated we share about the technology (fire sprinklers) that is the essence of who we are and what we do.

Our next opportunity came when Governor Rick Scott of Florida vetoed a bill that would have removed the high-rise retrofit requirement for high-rise residential buildings in the sunshine state! He noted in his veto letter that the tragic London fire reminded him of the importance of fire sprinklers, and we responded with a press release that applauded his proactive policy decision.

If you missed any of our latest releases, they can be viewed at http://www.nfsa.org/PressRelease.

The next tragic story struck on United States soil, in Honolulu, Hawaii. Team NFSA again sprang into action to express our concern that another high-rise fire had claimed lives, all the while with technology being available that could have prevented it.

Being able to communicate with timely information is key as we work to fulfill NFSA's mission. Seeing our efforts make a difference is the reward. We know that future lives may be saved because our continued communication can educate as well as change public perception and expectations.

To our members, we vow to continue to engage in promoting the fire sprinkler industry. You have the solution that can prevent the tragic headlines.

We indeed have a "CAUSE" to believe in, and we are focused to create the movement that will allow others to join us.

The Honolulu fire occurred in a state that values "story" and we have a powerful one to share. When visiting with Chief Manny Neves at the National Association of State Fire Marshals conference, I applauded his response during the fire. I told him how proud we were to watch him share the stories of those who had died, and to say from the beginning that with fire sprinklers, this fire would have been stopped and no one would have died. Stories help people understand that fire is fast.

Our hope is that by sharing, the policy makers will see fit to pass high-rise retrofit laws. We hope that every metro city in America will take note that it can and does happen here. And, we hope they will hear our rallying cry of "Fire Sprinklers Buy Time and Time Buys Life."

Until next time, stay safe, and keep sharing our story of life safety!

Cheers, Vickie



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**NFSM** FEATURE



# **Tackling Palletized Storage Protection**

by Louis Guerazzi Manager of Product Standards

avigating the storage chapters of NFPA 13 is not always the most straightforward process. First you must get yourself into the appropriate chapter based on your commodity classification and, then again, based on your storage arrangement. While we have our rack storage Chapters 16 (Class I-IV) and 17 (Group A plastics), this article is going to highlight design considerations when dealing with palletized protection in Chapter 14 (Class I-IV) and Chapter 15 (Group A plastics), which deal with not only palletized, but solid-piled, bin-box, shelf, or back-to-back shelf storage as well. Just as with the rack storage chapters, palletized chapters are broken up into Class I-IV first in Chapter 14, and then Group A Plastics in Chapter 15.

A good place to start when approaching any design scheme is NFPA 13 **Chapter 3 Definitions**. Section 3.9.2.3 of the 2016 edition provides us the definition of Palletized Storage:

**Section 3.9.2.3 Palletized Storage.** Storage of commodities on pallets or other storage aids that form horizontal spaces between tiers of storage.

Unlike solid-piled storage, which consists of commodities stacked directly on top of one another, palletized storage provides horizontal space between the tiers of storage (empty space within a typical pallet) which has a serious effect on fire dynamics. This empty space impacts the classification, as it provides an ideal configuration to allow ventilation for the fire and space for the heat and flame to propagate while being shielded from above. Additionally, the material of the pallets need to be taken into account when determining our classification. While traditional pallets are wood and the basis for most of the design schemes, the use of plastic pallets will increase the design criteria for Class I-IV commodities (Group A Plastic Commodities will remain Group A Plastics).

As with any commodity classification, it is important to not only take into consideration the commodity itself, but also the packaging and storage pallet. Section 5.6.2 goes on to provide clarification to how we specifically treat plastic pallets based on whether they are reinforced. Unreinforced polypropylene or unreinforced high-density polyethylene plastic pallets increase the classification by one class, while reinforced plastic pallets will increase the classification by two classes. It is also noted that the assumption is to consider plastic pallets to be reinforced unless there are permanent markings

or manufacturer's certification of nonreinforcement.

#### **Palletized Class I-IV**

Looking at Class I-IV palletized commodities, we then break down our protection schemes based on the type of sprinkler technology we are using. Section 14.2 provides guidance on our Control Mode Density Area (CMDA) approach (utilizing spray sprinklers), Section 14.3 provides our Control Mode Specific Application (CMSA) sprinkler protection, and lastly, Section 14.4 provides protection for an Early Suppression Fast Response (ESFR) sprinkler design. This format is the same for all storage chapters, wherein once you get into the appropriate chapter based on the commodity classification and storage arrangements, the protection schemes are laid out with CMDA first, then CMSA, and lastly, ESFR.

Fortunately, both CMSA and ESFR sprinklers protection schemes are laid out in clear tabular formats which provides all the applicable criteria (maximum ceiling height, maximum storage height, etc.) in Table 14.3.1 and Table 14.4.1, respectively. When we come to dealing with CMDA design approach, we introduce some additional variables and modifiers.

CMDA sprinkler protection design for palletized protection provides two figures, Figure 14.2.4.1 and Figure 14.2.4.2, which provide a Density/Area curve for 20 feet of storage height based on the sprinklers' temperature rating. For example, we can see that when utilizing an ordinary temperature rated CMDA design approach for a Class II commodity, the lowest density provided is a 0.23 gpm/ft2 over 2,000 square feet. Comparing this to the high temperature-rated CMDA design approach for Class II in the second figure that would require only a 0.17 gpm/ft2 over 2,000 square feet. So why is there a difference in density between utilizing an ordinary temperature-rated sprinkler versus a high temperature-rated sprinkler?

We know that in non-storage applications we are permitted a reduction in our design area when we utilize high-temperature sprinklers in an extra hazard occupancy in accordance with 11.2.3.2.6. This is due to the higher challenge hazard and heat release rates associated with this occupancy, as the fire will grow rapidly. Using ordinary or intermediate temperature-rated sprinklers in this environment may lead to extra sprinklers not directly over the fire source operating. By increasing the temperature rating to high-

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temperature sprinklers, this would limit that concern for excessive sprinklers operating in this type of environment and allows us to reduce the design area for our system appropriately. While this allowance is not extended into the storage chapter, the principal is being applied here such that when we increase the temperature rating, we can reduce the design area. Again, looking at the example from above when considering a Class II Commodity, we can see in Figure 14.2.4.1 for ordinary temperature sprinklers, that the largest design area permitted to be used is 3,000 square feet when using approximately a 0.18 gpm/ft2. Looking back at Figure 14.2.4.2 for high-temperature sprinklers, we then have that 2,000 square foot design area at the 0.17 gpm/ft2. Noting again that the exception to simply apply the area reduction to the ordinary temperature rated density/area values does not apply here, this example shows the concept is still being applied, but through the use of different curves rather than a percent reduction.

Lastly, we need to take into consideration the modifier for storage heights other than 20 feet as those density area curves only apply to a 20-foot storage height. Figure 14.2.4.3 provides a modifier we can use that ranges from a 12-foot storage height, giving a modifier of 60% of the density up to 30 feet of storage, which requires 190% of the densities from either the ordinary or high temperature rated density area curves.

In addition to the storage height, we also need to address the

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clearance of the ceiling height to the top of storage. This is called out in section 12.1.3.4.3 of the General Requirements to Storage, such that where clearance exceeds 20 feet for Chapters 14 and 15, the protection shall be based on the storage height that would result in a clearance of 20 feet to the ceiling. Therefore, if you were to only have 15 feet of storage in a building with a 40-foot high ceiling, you would protect the commodities as if there was 20 feet of storage.

#### **Palletized Group A Plastics**

Things get a little more complicated when we get into palletized storage of Group A plastics, as we not only need to examine the commodity, storage height and ceiling height, but now we introduce pile stability and array type. Again, let us start by going back to the definitions of both pile stability and array.

**3.9.2.1.1 Closed Array.** A storage arrangement where air movement through the pile is restricted because of 6 in. or less vertical flues.

**3.9.2.1.2 Open Array.** A storage arrangement where air movement through the pile is enhanced because of vertical flues larger than 6 in.

**3.9.2.4\* Pile Stability, Stable Piles.** Those arrays where collapse, spillage of content, or leaning of stacks across flue spaces is not likely to occur soon after initial fire development.

3.9.2.5\* Pile Stability, Unstable Piles. Those arrays where collapse, spillage of contents, or leaning of stacks across flue spaces occurs soon after initial fire development.

The definition of array is mostly straightforward and is dependent on how close the stacks of palletized or solid-piled storage are in relations to one another; 6 inches or closer resulting in a closed array designation, and anything greater than 6 inches being considered an open array. The two areas where array type comes into play are first in Section 15.2.2.7, which allows closed arrays to be reduced to a minimum design area of 2,000 square feet, while open arrays are limited to a minimum design area of 2,500 square feet. The second area is in regards to the last design scheme for ESFR sprinkler protection in Table 15.4.1, where exposed expanded Group A plastics with 25 feet of storage and a maximum 40 foot ceiling height only applies to closed array storage. This it called out in a note under Table 15.4.1.

Defining pile stability is a much more difficult characteristic to determine. As the definition points out, we are looking at how the pallets or solid pile stacks will perform during the incipient stages of the fire growth. The annex language provides clarification on the subject indicting that this is a difficult attribute to define,

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however some empirical evidence has shown that compartmented cartons, pallets and certain plastics that do not deform readily under fire are examples of stable storage. However, under the annex note of unstable storage, it is also noted that an increase in pile height tends to increase instability. Ultimately this designation would be included in the responsible design professional's classification of the commodity and would take into consideration the material, storage type and storage arrangement, including the height of storage. As this article is discussing palletized protection specifically, we can typically assume palletized storage to fall under stable piles unless the pallet type or storage height proves to be considered unstable.

Stability comes into play when we are dealing with the CMDA design approach. While we had a few density/area curves and modifiers for Chapter 14, now that we are in Chapter 15 we are provided a decision tree in Figure 15.2.2.1 which we will use to determine appropriate densities found in Table 15.2.2.5(a).

The decision tree starts off by breaking down the plastics into Group A, Group B and Group C. We can ignore Group B and C, as they correspond to Class IV and Class III commodity protection, respectively, and would send us back to Chapter 14. The next tier is under Group A plastics on the decision tree, we then look at the type of plastic, whether it is expanded or nonexpanded. Expanded, being a type of plastic, which is similar to the generic "foam" coffee cup or unexpanded, which is similar to the generic "red" drinking cup. We have a third branch at this level which extends over to "free-flowing" plastics. Free-flowing plastic material is also defined in the standard under section 3.9.1.14 to be "those plastics that fall out of their container during a fire, fill flue spaces and create a smothering effect on the fire. Examples include powder, pellets,

flakes, or random-packed small objects [e.g., razor blade dispensers, 1 oz or 2 oz bottles]". If free-flowing plastics are the commodity being protected, then you are permitted to utilize Class IV criteria for the protection.

When we get into the third and fourth tier of the decision tree, it breaks down depending on being cartoned or exposed commodities and then based on pile stability. At this point, the decision tree will indicate which column in Table 15.2.2.5(a) or (b) to use to select our densities.

Let's assume for a second we had a stable, palletized, Group A, expanded, exposed plastic. Following the decision tree, we now see that we would end up selecting densities from Column B of Table 15.2.2.5(a). Since we know what column we will use based on the decision tree, we then need to select the specific density for our design based on the maximum storage height and maximum ceiling height. Therefore, for our example, if we had 20 feet of storage in a building with a maximum ceiling height of 27 feet, we would then be required to have a density of 0.9 gpm/ft2 from Column B. Now that we have our density, we need to know our design area for CMDA sprinkler criteria, which happens to be 2,500 square feet for any commodity, other than for closed arrays, which are permitted to be reduced to 2,000 square feet.

When we get to CMSA and ESFR sprinkler criteria, the design approaches are just as straightforward as they are for the Class I-IV palletized commodity, such that you select the appropriate criteria from Table 15.3.1 or Table 15.4.1, respectively, based on your storage height and ceiling height, which provides design criteria for different K-factor sprinklers and provides the minimum design sprinklers (always 12 sprinklers for ESFR) and minimum operating pressures.

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**NFSM** FEATURE

# Fires During Construction: NFSA's Role

by Rob Neale

Vice President, National Fire Service Activities
International Code Council

hen the 264-unit Edison on the Charles luxury condos in Waltham, Massachusetts burned July 23, it was just one of several in a long string of huge building project fires that have plagued the U.S. construction industry.

In 2017 alone, major construction fires ruined projects in Philadelphia, Pennsylvania, Lynwood, Washington, Maplewood, New Jersey, Overland Park, Kansas, College Park, Maryland and East Hollywood, California. Losses run into the millions of dollars and projects are delayed by a year or more.

What is causing all the fires? In some cases, the damage has been so severe no formal cause could be identified. In others, human carelessness from hot work, incorrect mechanical installations or smoking resulted in severe damage. In at least two of these events, the fires were determined to be intentionally set.

Regardless of their cause, these events put firefighters at risk, stretch fire, building and water departments to their limits, disrupt traffic and other infrastructure and compel people to ask if combustible construction is safe. When completed, these projects most often meet the requirements of the *International Building Code*® (*IBC*) including the water-based fire protection systems demanded by the code.

Fires during construction occur when the structure is most vulnerable: fire protection systems and equipment may not be in place, fire resistive construction and opening protectives may not be complete, and a huge variety of flammable and combustible material has accumulated on a job site.

#### **Action Plans**

To address the problem and bring public safety into focus, several global and national organizations have joined to create the Coalition for Construction Fire Safety. Founded by the American Wood Council (www.awc.org), current members include the National Fire Sprinkler Association, International Code Council (ICC), and the National Fire Protection Association. Other groups representing construction and building materials interests are expected to sign on soon. Membership is free and open to anyone or organization that is interested in addressing this challenge .

The Coalition collects information on these major events, analyzes their causes and consequences and is developing strategies to reduce the number and severity of fires. To address the immediate needs, on July 13, the Coalition delivered a webinar for more than

600 design professionals and code officials that highlighted recent significant fires and explain how fire codes and standards are intended to prevent them. The webinar and an accompanying print version can be obtained at the AWC Education site by selecting "BCD 235 – "Fire Protection During Construction."



Figure 1. Flow test results used for sprinkler calculations can be shared with the local fire services so they know what to expect in case of a fire during construction. (All photos by the author).

#### **How Can NFSA Members Help?**

Some professionals have the opinion that the solutions to these unwanted fires can be found in the existing IBC®, International Fire Code®(IFC®) and NFPA 241 "Standard for Safeguarding

Construction, Alteration, and Demolition Operations", but the gap is a result of inadequate awareness, training and enforcement. These documents provide detailed guidance on ways to prevent fires from starting and minimizing the consequences if they do. The Coalition for Construction Fire Safety hopes to close these gaps.

IBC Chapter 33 "Safeguards During Construction" gives the Building Code Official authority to require portable fire extinguishers, standpipes, sprinklers and a fire protection water supply for buildings under construction. The fire protection water supply - temporary or permanent - is required as soon as combustible materials arrive on the site.



Figure 2. Temporary standpipe connections should be clearly marked and remain unobstructed so the fire department can find and use them quickly.

IFC® Chapter 33 includes the IBC requirements, and expands on them with safety controls for combustible storage, hazardous materials, hot work, explosives and temporary heating equipment.

It is during these early phases of construction when NFSA members can share their experience and expertise with project owners and superintendents. Often, the fire protection contractor is on the site early to identify the incoming water service, its capacity and its distribution arrangement. Flow tests to determine volume and pressure provide important information that can be used by responding personnel in the event of an emergency.

The fire protection contractor can aid in the development of required pre-incident plans with the local fire service. At the very

least, the plan should identify site access points, fire protection water supplies, hydrants, fire department connection locations and any special considerations that might go into the system design and installation while it is under construction.

If there is time, the contractor can train site personnel in fire protection equipment use. The construction site should have a suitable number and type of portable fire extinguishers to control or suppress a fire. The extinguishers should be distributed throughout the site, and workers must be trained in how to use them. The sprinkler contractor can recruit other trades to look for potential hazards or impairments.

Although sprinkler-related hot work is less common these days, welding, cutting, grinding, roofing operations, tar kettles, torches, brazing and soldering are among the numerous heat sources that create potential dangers on the work site. Where possible the fire protection contractor should coordinate with these trades to assure adequate fire protection is available in the areas where the hot work is being done. Chapter 35 of the IFC® provides detailed guidance on hot work permitting and safety practices.

During construction, fire protection devices and equipment must be maintained and serviced to assure a high degree of reliability. Fire hydrants, temporary and permanent standpipes and sprinkler systems, fire detection systems and portable fire extinguishers need to be checked regularly to assure they are in place, unobstructed and in an operational condition.

In buildings where standpipes will eventually be required, at least one temporary standpipe must be provided during construction. The standpipe must be installed before construction reaches 40 feet above the lowest level fire department access, and be extended to within one floor of each building level that has secure decking or flooring. The fire department connection for supplying the standpipe must be clearly marked and accessible at all times.

In buildings undergoing demolition, any existing standpipe must remain usable for the fire department.

Although not spelled out in the fire code, a corollary responsibility for the property owner is monitoring fire protection system impairments. When fire protection systems are impaired - by accident or intent – an impairment coordinator and plan must be employed. IFC 907.1.1 (2015 Edition) outlines the duties, responsibilities and record-keeping requirements for the impairment coordinator. The fire protection contractor can explain the value of the plan and perhaps provide samples.

Sprinkler control valves should be operated only by properly authorized personnel, and only when the construction site managers have been notified. If sprinkler protection is being regularly turned off and on to enable newly completed segments, the control valves need to be checked at the end of each work period to assure they are in the "open" position.

#### **Additional Resources**

Clearly, safety codes alone cannot eliminate these significant fires. The solution may lie in increasing consumer awareness and education, as well as rigorous enforcement. A thorough follow-up



survey is needed to learn how code officials are using the tools available to them in the I-Codes and NFPA.

Meanwhile, the Coalition for Construction Fire Safety is working to address the problems and find workable solutions that support successful job site outcomes. Free construction safety resources are available at http://www.constructionfiresafetypractices. com/ where the user can find step-by-step safety guides, fire safety manuals, site-specific fire safety plan templates and other education materials. OSHA, in the U.S. Department of Labor website, offers model safety and fire prevention plans. Finally, a World Wide Web search on construction fire safety template returns a variety of model plans that can be downloaded and adapted at no cost.

#### **Summary**

Fires in buildings under construction create a severe threat to adjacent property, endanger lives, create temporary unemployment and delay development of critically needed housing. The I-Codes and the Coalition for Construction Fire Safety offer the tools to address and mitigate the problem. Will you use them? •

#### About the Author

Rob currently serves as the International Code Council Vice President for Government Relations: National Fire Service Activities. He is responsible for strategic guidance to help local fire organizations adopt and enforce the most recent version of the model codes based on technical merit and build relationships among code enforcement entities.

In 2015, Rob retired as Deputy Superintendent for the United States Fire Administration National Fire Academy in Emmitsburg, Maryland. Prior to that, he managed the National Fire Academy's Technical Fire Prevention curriculum for six years, including fire inspection techniques, prescriptive and performance-based fire and building code interpretation and application, fire protection systems function, design, installation and standards, and plan review for fire inspection personnel.





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**NFSM** FEATURE

# Why a unified message is critical in the fight against home sprinkler opponents

by Lorraine Carli

NFPA's Vice President for Outreach and Advocacy

**SPRINKLERS HAVE BEEN AROUND FOR MORE THAN 100 YEARS.** They are effective and affordable and have been included in all model building codes since 2009. They have been the focus of the Home Fire Sprinkler Coalition's education work for 20 years.

So why are we still not seeing the widespread use of this proven technology?

Perhaps the biggest reason is the clout of the homebuilding industry, the same industry that fought smoke alarms and other safety devices in homes by saying they would thwart housing sales and deter people from buying new homes. There have been more than 40 million single-family homes built in the United States since 1977, and more than four million built since the sprinkler requirement was included in model building codes. Imagine how many lives would be better protected from fire if all of those homes had been built with sprinklers.

Although there has been a great deal of progress, it continues to be an enormous challenge to reach the masses with this level of safety. That effort has been going on since 1973, when the National Commission on Fire Prevention and Control delivered its final report to the President of the United States on the country's fire problem. The report, "America Burning," was viewed as a seminal moment in addressing fires in the modern era. It contained far-ranging recommendations for local, state, and national efforts to reduce loss of life and property. From the report came the creation of the U.S. Fire Administration, the National Fire Academy, federal grant programs, and the endorsement of sustained efforts to prevent fires through codes and standards, research, fire prevention, and smoke alarms. This was also the time that smoke alarms were beginning to enter the market for homes, and we know they have proved to be a major contributor to saving lives ever since.

Included in "America Burning" was a discussion on fire sprinklers. The authors touted the benefits of automatic extinguishing systems, noting that sprinklers combined with detection offered a much greater level of protection for lives and property. For use in homes, they noted, sprinklers had to be cheap and aesthetically acceptable.

All of that has happened. Home fire sprinklers are affordable; studies have found the average intallation cost is \$1.35 per sprinklered square foot. In areas where they're required, the cost can be even lower. They are aesthetically pleasing and can be flush-

mounted, matching the ceiling or décor colors. You hardly know they're there.

A recent series of news stories by ProPublica, an public-interest investigative journalism organization, chronicled the housing industry's campaign to prohibit sprinkler requirements in at least 25 states – an unprecedented move to bypass the code process that has served the public good for decades. The approach was simple: go directly to legislative action, in many instances, and spend money to ensure sprinklers aren't allowed. ProPublica's reporting cited information from the National Institute on Money in State Politics

"The fire service, for instance, has always been the leading champion of fire safety and a consistent, respected voice for prevention. But that voice has been less consistent regarding home sprinklers, and at a time when aggressive advocacy and education are needed most."

that said the housing industry spent more than \$517 million in state politics over the last decade. It's hard to compete with that.

While it's true that we're being outspent, we should not be out-motivated. The fire service, for instance, has always been the leading champion of fire safety and a consistent, respected voice for prevention. But that voice has been less consistent regarding home sprinklers, and at a time when aggressive advocacy and education are needed most. I'm not sure if it's a lack of understanding about the value of home fire sprinklers, a bit of fatigue in a long fight, or something else. But it surfaces in places where you don't expect it. A city fire marshal recently expressed support for removing the fire sprinkler requirement from the next edition of the model residential code, saying the fire service doesn't support home sprinklers. As evidence, he offered the fact that many in the fire service, as well

as other public officials, don't have sprinklers in their own homes. That is misguided logic. It's like saying the automotive industry should not have added seatbelts to cars because Henry Ford didn't have them in his Model T. This isn't about everyone who supports sprinklers retrofitting their homes; it's about building safer homes for generations to come.

That same fire marshal also said the number of residential fires has not risen to an unacceptable risk. Over the 40 years that those 40 million single-family homes were built, there were 120,905 civilian deaths and 495,610 civilian injuries in fires in one- and two-family homes. Over that period, 678 firefighters were killed in fires in one- and two-family homes. Today, the majority of firerelated civilian and firefighter deaths and injuries occur in home fires. This is happening at a time when fires in new homes – a result of building materials, home design, and the fuel load inside

homes – are reaching flashover and leading to structural collapse faster than ever before. It is happening as we learn more about the cancer toll on firefighters exposed to toxins in fires. Is this acceptable risk? No, it is not.

Since 2009, model codes have identified sprinklers as the minimum level of safety in new one- and two-family homes. It is time to recommit to the notion that civilians and firefighters need not die in home fires. An affordable, reliable solution exists that will have an impact for generations to come. With a unified voice we can make home fire sprinklers as common as smoke alarms, and we can save lives.

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#### Questions?

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### Making the Impossible Possible -

### An Interview with Victaulic's Susan Schierwagen

Susan Schierwagen serves as the Vice President of Coupling & Suppression Systems for Victaulic. When asked if she faced any specific challenges being a woman in a male-dominated industry,

Susan's answer kicked off what was to be a lively and informative interview of this well-respected industry leader.

Although Susan has faced some obstacles throughout her career, she was quick to point out that everyone does, both men and women. "As an engineer, a problem-solver and innovator, having challenges is about solving problems and how you get around, over and through them," said Susan. She views her gender as a benefit in the industry. "I've had a great advantage being a woman because I am different. My perspective, my communication skills, the fact that I have a technical degree and love to bring people together has served me well," she stated.



Susan credits being "hands-on" as helping her overcome hurdles. She enjoys being out in the field where she regularly meets with sprinkler fitters, contractors, specifiers, end-users, AHJs, engineers and owners, which helps her understand their needs, as well as their challenges. Susan uses the knowledge she gains on job site visits to help Victaulic bring innovative solutions to the field. To her, nothing is more important than the voice of the customer. "Understanding their world and being able to deliver technology and innovation that provides a better solution is really key," she says. "It's not the challenges that you're faced with, but how you envision greater possibilities. What's key is the ability to really make the impossible possible."

Susan has been fortunate to work on many large-scale projects that are shaping our horizon. By listening, engaging and understanding customer challenges, Susan has worked collaboratively to develop solutions that are being used in Hudson Yards New York City. Hudson Yards is the largest private real estate development in the history of the United States and the largest development in New York City since Rockerfeller Center. When complete, the site will include more than 18 million square feet of commercial and residential space, state-of-the-art office towers and more than 100 shops. Hudson Yards is constructed on 28+ acres over a working rail yard, including 30 active train tracks and three rail tunnels. 300 caissons support the platforms and buildings. The caissons, which are approximately five feet in diameter and 20-80' in depth, are drilled into the bedrock between existing tracks. Six high-rise buildings are being built on the site. "Imagine building a platform over a railway yard where diesel trains are coming in and out on a regular basis, and then create a ready-made neighborhood on top of that!" added Susan.

The problem that Victaulic was asked to help solve is best described in Susan's own words: "In this particular application, the contractor struggled with his project schedule and all of the sprinkler piping in that area was specified to be welded, which was going to add a lot of time to the construction timeline," explained Susan. The contractor turned to Victaulic to provide a grooved mechanical coupling that would be appropriate for the unique application. Under her leadership, Susan and her team engineered a solution that incorporated a heavier ceramic coated coupling that would withstand the uniquely high temperatures generated by the exhaust from the diesel trains. "Through this innovative approach, we were able to substantially cut the project schedule, offer greater construction productivity, engineer confidence with a new innovation and provide a cleaner, safer jobsite," commented Susan.

Susan's views on attracting more women to the fire protection industry are clear. "It's really important for women who are leaders in their company to help mentor other women within their organization. Having support systems within companies that promote strong female leaders and mentors can help encourage and retain women to pursue engineering careers," noted Susan. She has mentored many young women throughout her career, and encourages others to do the same. Additionally, she is very active in the Society of Women Engineers.

Throughout Susan's tenure at Victaulic, NFSA has played an important part in her success within the fire protection industry. She is especially grateful for the interactions with fellow industry members that she is afforded at NFSA meetings. "I am fortunate to have attended many NFSA meetings, but was truly inspired by our most recent, as the dialogue and debate garnered a plethora of perspectives on the state of the fire suppression industry. Being able to both share ideas and discuss issues in a constructive environment makes all the difference.".









# TRUST THE ORIGINAL!

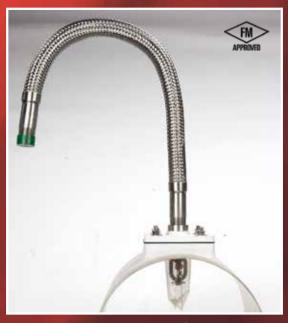




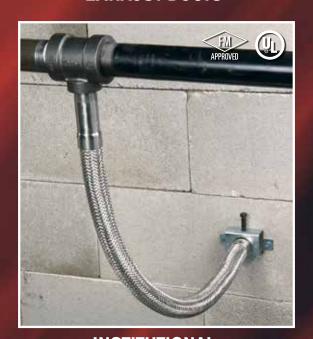
**SUSPENDED CEILING** 



FREEZER / COLD STORAGE



**EXHAUST DUCTS** 



INSTITUTIONAL

When it comes to your reputation there can only be one flexible fire sprinkler connection.

The first you used is still the one you trust. *FlexHead - Accept Nothing Less!* 







# **CHAPTERS in ACTION**





Boston Chapter July 2017 meeting. Susan Berkowitz from the Boston Shriner's Burn Care Hospital presents to Chapter members. The Chapter is donating proceeds from their golf tournament, to be held on October 12th, 2017, at the Plymouth, Massachusetts Country Club to the hospital.





NFSA's Connecticut Chapter mobile side-by-side trailer in action with sprinkler advocates taking sprinkler challenge for #fastestwater.



#### **FFSA Fire Prevention Month Activities**

Florida Fire Sprinkler Association is excited to participate in several events throughout Fire Prevention Month! Fire Sprinkler Demonstrations have been planned at the following events:

- October 7, North Palm Beach Fire Safety Fair
- October 7, Lake Mary Home Depot
- October 8, Fire Safety Day at Deltona Fire Department
- October 14, Fire Safety Day at Delray Beach Fire Rescue
- October 14, St. Petersburg Fire Safety Day
- October 14, Lake Mary Open House
- November 4, Coral Springs Open House
- November 7, Lake Mary Open House





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# Please join our Advocates' Coalition as we work to create Fire Safe Homes

Working together, we can create resources to educate those who make the decisions regarding community fire protection. Our goal is to be a go-to resource for community leaders who need a first-person account of the devastating impact fire can have on a community and a family. We can prevent future tragedies, and we believe that our stories help everyone understand in a way that makes a difference. Visit our website for additional resources and information. Order our Media Kit for a complete package of PSAs, media information, talking points, statistics and actual examples of resources used in communities. Your support is greatly appreciated, and as a non-profit 501(c)3 we are now ready to grow our mission and expand our efforts. We hope you will join our team as an Advocate, Supporter or Corporate member (details are on our website).





www.fireadvocates.org

Fire Sprinklers Save Lives



These events are great opportunities to educate the public about how fire sprinklers work! Many of these events have over 500 people, most of which have never been exposed to information about fire sprinklers. Florida has access to eight side-by-side trailers across the state and the support of several contractors throughout the state that attend the events to spread the truth about fire sprinklers. FFSA will typically perform 25-30 side-by-side events throughout the year. These demonstrations are the number one thing that allows people to see and feel the effects of fire and how it can be stopped.

For more information, contact Lorrell Bush at bush@nfsa.org or 443.863.4277.

#### NFSA Minnesota Chapter **Upcoming Activities**

Minnesota NFSA members and national guests will cruise the wonderful blue waters of Lake Minnetonka on September 10, 2017. This three-hour cruise includes a fine dinner on a boat rides exclusively for NFSA members and their guests. This dinner cruise is sponsored by the Minnesota NFSA Chapter and will serve as a prelude to the Burn Aid Golf Classic the following day.

The 21st Annual Burn Aid Golf Classic will be held at Dellwood Country Club on September 11, 2017. This event has raised over \$800,000 in its history for the Regions Burn Center in St. Paul. This wonderful event will start out with a piper saluting 911 and the loss of life of both civilians and first responders in New York on that tragic day.

For more information, contact State Coordinator Tom Brace at brace@nfsa.org or 443.863.4424.

#### **Southwest Chapter News**

#### **Arizona**

The Arizona State Chapter met on May 23rd, 2017 at the Phoenix Fire Department Headquarters for a lunch time meeting sponsored by NFSA and hosted by Chapter President Fred Graves and Area Director Aaron Bennett. The meeting centered on local fire protection issues affecting fire sprinkler contractors and AHJs in Arizona. The discussion was helpful in that it gave members a chance to express concerns related to their local communities and for contractors to voice similar concerns related to fire protection issues affecting their companies. Regional Manager Bruce Lecair gave an area update and a report on the NFSA Conference and North American Fire Sprinkler Expo in Las Vegas in April.

#### San Francisco

The San Francisco Bay Area and Los Angeles Area Chapters both met in June. The San Francisco Chapter rescheduled their May meeting to June 8th at Barones's in Pleasanton, CA. The evening meeting was for signatory contractors only.

#### Los Angeles

The Los Angeles Area Chapter met at the Rio Hondo Golf and Community Center in Downey, CA. on June 15th for a dinner meeting sponsored by the U.A. Local 709 Sprinkler Fitters Industry Promotions. Local 709 contractors received a presentation from Deputy State Fire Marshal Jeffrey Schwartz on management of the new AES Fitter Certification Program going into regulation on July 1st. This meeting was open to all U.A. Local 709.



Deputy State Fire Marshal Jeffrey Schwartz addresses the NFSA Los Angeles Chapter.

#### CONNECTICUT CHAPTER NEWS



On May 3rd and 4th, 2017 the Connecticut Construction Rodeo Career Day took place in Wallingford, Connecticut NFSA New England Chapter, along with the Connecticut Fire Sprinkler Coalition, conducted side-byside educational burn events on each day to a crowd of approximately 1,400 students.



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# THINK YUU CAN EXIT YOUR BURNING HOME IN 60 SECONDS? CAN YOU RUN BLINDFOLDED WITHOUT BREATHING?

Every second counts during a fire. But thick smoke can blind your eyes and burn your lungs, which will slow you down. By giving you more time, fire sprinklers increase your chances of survival. To help save more lives, join NFSA today.



Learn more at nfsa.ora



#### Fire Team USA in West Haven, Connecticut

Fire Team USA came to West Haven, Connecticut on May 16, 2017. Fire Team USA is a special day of informational / training conference on fire protection and your community.

Fire Team USA is about bringing resources to help enhance the fire protection that your community offers. Creating partnerships in the community and working with all stakeholders is important to improving the public policy on fire protection.

This was the most diverse class attendance to date. NFSA New England Chapter, along with the Connecticut Fire Sprinkler Coalition offered this full day informative class to not only building and fire officials, but also to water purveyors, property managers, State officials, sprinkler industry representatives, insurance claim representatives and a host of people from State Farm Insurance. 90 people registered.

Connecticut now is in possession of one of the NFSA mobile side-by-side burn trailers that was used for the educational burn demonstration at the end of the class.

## NFSA Illinois Chapter to host In-Class portion of Layout Technician Training.

The second portion of a two-part blended learning course will be held October 30th to November 3, 2017 in the Chicago metro area. This course is designed to take a person with basic knowledge of math, physical science and drafting skills and teach them to be productive basic sprinkler layout and detailing technicians. All skills necessary for NICET Level II Certification will be covered by the course. The blended learning format allows for a combination of self-paced learning and intense in-person applications of the knowledge. The online portion can be completed at your own pace, but an NFSA facilitator is available, if needed, for assistance and answering questions you may have on the topics covered. This phase contains a wide variety of presentations which requires your participation. The online portion also requires successful completion of online unit quizzes and activities before progressing to the next module.

The in-person portion brings participants together for intense layout and design work under the guidance of an NFSA Instructor. While the in-class portion of the Layout Technician Training - Blended Learning seminar is not required, this seminar was designed for the online and in-person portions to compliment each other and enhance the learning process. A Certificate of Completion will only be issued upon completion of the entire Layout Technician Blended Learning Program, including both the online and in-class sections.

Thank you to David Vandeyar of NFSA member Newburgh Windustrial for submitting this news from the NFSA Empire Chapter:

Chris Cirvello, this year's Top Tech champion, made a presentation at this year's NFSA Empire Chapter, SPFE and ASPE New York Chapters summer outing at Marriott Courtyard Harborside in Schenectady, NY.



He entered the room to excerpts from his Top Tech competition win playing to the tune "We Are The Champions" by Queen, with trophy held high above his head. A good laugh was had by all in attendance.

## NFSA Empire and Connecticut Chapters Golf Outing a Great Success

Thank you to Scott Enides, Treasurer of NFSA's Empire Chapter, for submitting this synopsis of a very successful joint event between our Empire and Connecticut Chapters.

NFSA's Empire and Connecticut Chapters held their 3rd annual golf outing on June 23. The outing took place at the Casperkill Country Club located in Poughkeepsie, N.Y. This is the second time the event was held at this location. The weather was excellent and the course's staff was extremely accommodating. The facility enjoyed our group so much, that they donated four rounds of golf to our prize raffle!

The event featured 65 golfers, comprised of suppliers, contractors, manufacturers, and guests. The Empire Chapters own Billy Phair Jr. was on the winning foursome! The Chapters would like to thank the sponsors and attendees for their generous support. The purpose of the outing was to raise money for the Phoenix Society for Burn Survivors. As a result of everyone's donations, \$10,000.00 will be donated to the Phoenix Society. I spoke to Amy Acton, the Society's Executive Director, and she was extremely appreciative to our organization for its continued support.

Finally, the Empire and Connecticut Chapters would like to acknowledge of all of our members and supporters for this event as well as their participation throughout our entire year of meetings and events.•



The "ceremonial check" presentation, which took place at the Empire Chapter's 1st annual Summer Outing.



#### **High-Rise Fire & Life Safety Summit**

Over a decade ago, Jim Dalton, then NFSA Director of Public Fire Protection and now Senior Policy Advisor to the President, had a vision of a High-Rise Retrofit Summit. His vision was to have the Congressional Fire Service Institute (CFS) host the event with partnerships from NFPA, IAFC, IAFF, ICC, and others. The meeting would focus on the challenges faced with fires in high-rise building, the high-risk occupants within these buildings and the risk to firefighters.

We are pleased to report that on August 16-18, 2017, a High-Rise Fire & Life Safety Summit was held in Minneapolis, MN and hosted by Firehouse magazine, with partnerships from Underwriters Laboratory Firefighter Safety Research Institute (UL FSRI), the National Fallen Firefighters Foundation (NFFF), the International Association of Fire Chiefs (IAFC), National Fire Protection Association (NFPA), International Code Council (ICC), and Res-



cueAir. Major metropolitan fire chiefs and fire marshals from 33 Cities/Counties, as well as State Fire Marshals from eight states, and industry experts, discussed the high-rise fire problem and the actions to help prevent/mitigate fire in these buildings.

While not exactly the location or partners JD envisioned, the outcome was exactly on target and everyone left with a lot of ideas and resources available to assist. A special thanks to Chief Tim Butler of the St. Paul Fire Department and his entire team as well as Chief John Fruetel of the Minneapolis Fire Department and his entire team. These departments were great hosts and assisted their colleagues from around the country. Also, a big thanks to State Fire Marshal Bruce West for welcoming our group and supporting the event.

This event would not have been possible without the support of NFSA's Labor Relations Advisory Committee, RescueAir, UL FSRI and Firehouse magazine. A special thanks to the NFFF for their support and commitment. The opening by Common Voices advocate and NFFF Board Member Vina Drennan got us started with inspiration. Their Board Member, Chief Charles Hood shared how retrofitting of high-rises can be successful. The event was a great success and the hope is to continue the dialogue and

To see pictures from the Summit, visit www.nfsa.org & click on the High-Rise Fire & Life Safety Summit button.

#### Little White House Graces Our Cover

When Harry Truman arrived at the Little White House for his first visit on November 17, 1946, he declared that "this place is what I hoped it would be and what I was certain it would not be" shares Bob Wolz in his book, Presidents in Paradise.

Bob, who serves as Executive Director of the Harry S. Truman Little White House, works tirelessly to maintain this national historic treasure. In recent months, NFSA was presented a unique opportunity to ensure that one of America's "gems" maintained protection that met code.

As a result of holding our October 2016 Board of Directors meeting in Key West, and our Board dinner at the Little White House, we fortified relationships there with the staff and Director Wolz. When the Little White House, and home of the Harry S. Truman Foundation, fell short in an inspection by the Florida State Fire Marshal's office, it was an easy "yes we will help!"

NFSA members from Florida rose to the challenge and work was completed in August of 2017. "It's not preserved until it's protected" has never rung more true -- fire sprinklers save lives and protect our nation's history on a daily basis!

NFSA President Shane Ray is a member of the Little White House Historical Society and Harry S. Truman Foundation, and shared the following quote with their staff:

"There are many foundations, associations, and societies, many of which I am a member of and contributor to, but none are more near and dear to my heart than the Harry S. Truman Foundation and the Little White House! Our partnerships will ensure the legacy, property and lives of those who follow will be preserved. The importance that the Little White House played in decisions made by Harry S. Truman may not be fully understood, but with our partnership, it will be preserved for future generations to continue the study. Thank you for your servant leadership, caring hearts, and committed dedication. Your efforts preserve the perishable and will be supported by the NFSA and our members."

#### **Team NFSA - Spreads the Fire Sprinkler** Concept Around the U.S.

Team NFSA has been busy traveling around the country for a variety of events & opportunities! A sampling of those include:

National Association of State Fire Marshals - Director of Outreach & Government Relations Vickie Pritchett presented to state fire marshals at their annual conference. "It's always great to see so many friends and colleagues who are advocating for fire sprinklers," explains Vickie. "This year our topics were high-rise retrofit and NFSA side-by-side burn trailers."

**Designing Spaces** – NFSA and our Florida Chapter were honored to be part of the Designing Spaces fire station makeover of Light-





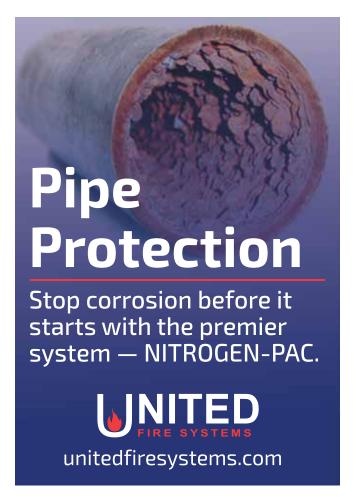


NFSA and our Florida Chapter were honored to be part of the Designing Spaces Fire Station makeover of Lighthouse Point Fire in Florida. The show aired on August 4th and 11th on the Lifetime Channel. NFSA participated in a bronze plaque dedication on Monday, August 7, 2017 to celebrate the inclusion of fire sprinklers in the station makeover

house Point Fire Department in Florida. The show aired on August 4th and 11th on the Lifetime Channel. NFSA participated in a bronze plaque dedication on Monday, August 7, 2017 to celebrate the inclusion of fire sprinklers in the station makeover.

International Association of Fire Chiefs Fire Rescue Conference- NFSA President Shane Ray and Director of Outreach & Government Relations Vickie Pritchett co-presented at this national conference which brings over 10,000 fire service leaders together annually. "We were honored to be a part, and to make the connections between firefighters & fire sprinklers, as Partners in Progress proved to be another positive outreach for us," said Ray.

**EKU Interns-** HQ was busy this summer with a quartet of college students; Philip Gilman, Noah Hall, Brent Carver, and Michael Bosley. The intern team worked on a variety of projects including: residential fire sprinkler evaluations in Pleasant View, Tennesee, high-rise retrofit data collection, assisting with national television live demonstration burn, working with Underwriters Laboratory Firefighter Safety Research (UL FSRI) to compile data and video from live burn tests conducted during Future Leadership Committee visit to UL in February of 2015, participating in the International Society of Fire Service Instructors research at DELCO, assisting in the Carroll Valley, Pennsylvania fire sprinkler ordinance presentation to prevent repeal, touring General Air Products and visiting Oliver Fire Protection & Security on their 60th Anniversary, which included a live side-by-side burn.







Honolulu Fire Chief Manny Neves visits with NFSA's Vickie Pritchett at the National Association of State Fire Marshals conference in Charleston, South Carolina. Chief Neves also joined NFSA for its High-Rise Fire & Life Safety Summit in Minneapolis, Minnesota in August.



Pictured above I to r John Price, Emmaus PA Fire Chief Steve Bair, State College Code Officer Tom Savage, PFESI Don Konkle PFESI Tim Solobay, PA Fire Commissioner Frank Zangari, Chair PFESI Advisory Board Brian Enterline, Chief Harrisburg FD and Dominick Kasmauskas. Representing NFSA, Dom presented a sprinkler head to the fire officials to use when presenting fire safety programs to the public and media.

#### NFSA Welcomes Mollie Rvan. **Executive Assistant**

Mollie started at NFSA on June 15, 2017 as Executive Assistant to NFSA President Shane Ray, Senior Vice President of Industrial Relations & General Counsel Fred Barrall and Director of Community Outreach & Government Relations Vickie Pritchett.

Prior to joining NFSA, Mollie worked in the Food & Beverage Industry in professional sports since 2005. She started her career as a junior in college as Executive Suites Supervisor at Soldier Field. After graduation, she continued her work at Soldier Field part-time, while working as a Meeting Coordinator at the American Society of Neuroradiology. In January 2012, she relocated to Baltimore, Maryland as Suites Manager at Oriole Park at Camden

Yards, overseeing 75 private suites. In July 2014, Mollie became the Suites Manager at M&T Bank Stadium, overseeing 123 private luxury suites.

Mollie was born and raised in Chicago, Illinois. She graduated from Saint Xavier University in 2006 with a major in Organizational Communications and minor in Hospitality Management. She resides in Annapolis, Maryland with fiancé David. They are getting married in September



Mollie can be contacted at 410.525.6137 or ryan@nfsa.org.

#### **Mohamed Kamara Joins Team NFSA** as Financial Planning Manager

Mohamed Kamara currently works at National Fire Sprinkler Association as a Manager, Financial Planning & Analysis with P&L responsibilities, financial statement preparation, board presenta-

tion, and finance process re-engineering. He joined the company in June to be part of the solution of saving lives or mitigating the risk of fire by supporting the initiative to have fire sprinklers in every building. As a firm believer in the mission and vision of the National Fire Sprinkler Association, he hopes to support the foundation's efforts to increase awareness and support NFSA members. Outside of work, he additionally



works with the Sierra Leonean Empowerment Network (SLEN), a non-profit professional organization focused on engaging Sierra Leonean millennials in the Diaspora. He currently holds an MBA from Mount Vernon Nazarene and is a proud Buckeye, having received his Bachelor's degree from the Ohio State University. Mohamed may be reached at 443.844.3142 or kamara@nfsa.org

#### Tor Christensen - Associate Counsel and Labor Relations Manager

Tor Christensen is NFSA's new Associate Counsel and Labor Relations Manager. He has represented and counseled employers since graduating from the NYU School of Law in 2000. He is admitted to the bar in Maryland, New York and Washington



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## **People who know the facts** want to live in a home with fire sprinklers





**According to a Harris** Poll, after learning the facts, 74% of U.S. homeowners said they would be more likely to buy a home with fire sprinklers than one without.

Education is the key to make sure more homes are protected. Share this **FREE** information with your fire department and community.

Living With Sprinklers Kit: Important information for people living in a sprinklered home.

**Selling A Home Protected by** Fire Sprinklers DVD: Helps real estate agents market and sell sprinklered homes.

**Understanding Water Supply For** Home Fire Sprinkler Systems Guide: Information for water purveyors. utilities and local officials.

**Protecting Your Community with** Home Fire Sprinklers DVD: Helps building officials understand why sprinklers are needed to protect occupants and firefighters.

A Quick and Easy Guide to Home Fire Sprinklers DVD: Easy-tounderstand information for consumers.

Fire and Sprinkler Burn **Demonstration Kit**: Everything a fire departments needs to build and conduct a side-by-side demonstration.

All HFSC material is free and can be viewed, downloaded and ordered from the HFSC website:

www.homefiresprinkler.org

or call toll-free: 1.888.635.7222







DC and admitted to practice before the US Supreme Court and several US District Courts. Over his career, he has negotiated over 300 collective bargaining agreements; represented employers and employer associations in a variety of industries before the NLRB and Federal and State Courts and in arbitrations; and counseled employers in all areas of labor and employment law. He most recently worked at the American Red Cross (Biomed) where he was part of a team that negotiated and implemented a historic first national CBA covering 11 different international unions and over 75 local unions across the US. This national CBA implemented concessionary terms across all of the unions to help return the Red Cross to financial stability. Tor is excited about joining the NFSA and continuing to help the public interest through supporting the expansion of the use of fire sprinklers in homes and businesses across the country.

Tor can be reached at 443.844.3142 or Christensen@nfsa.org.

#### Kirsten Cerbone, NFSA's Member **Relations Coordinator**

Kirsten Cerbone came to NFSA on February, 15, 2017. She brings extensive experience in customer service to her administrative work with NFSA as a productive member of the Outreach and Government Relations Department team. Kirsten graduated from Towson University with majors in bot Human Resources Management and



Business Management. Her current responsibilities include acting as liaison of membership services, providing customer service to members, along with support to all staff.

Kirsten may be reached at 443.743.2206 or cerbone@nfsa.org.•





#### Reliable Automatic Sprinkler Co., Inc. **Announces New Sales Team Members**

Vince Molina is Reliable's new outside sales representative in Southern California. He is helping to serve customers in a region that stretches from Los Angeles to Fresno. With over 20 years of experience in sales and management in the fire protection industry Vince has established countless professional relationships and an outstanding reputation. At Reliable, Vince will continue to practice



a high degree of dedication to his profession and an unrivaled commitment to customer service.

Ryan Schulz is Reliable's new Regional Sales Representative responsible for the Northern California and Northern Nevada Markets, Based out of Reliable's San Leandro (San Francisco) Distribution Center, Ryan will report to Ed LaCoste, Western Regional Manager.



Ryan, a graduate of The University of Wisconsin. recently relocated to Northern

California from Milwaukee. where he was previously with a global audit/financial services firm as a Senior Auditor.

#### **Viking SupplyNet Announces New Territory Sales Managers** in Southeast Region

Viking SupplyNet is pleased to welcome both Wes Letson and Phillip Skillern as new Territory Sales Managers in the Southeast Region. Letson is responsible for developing and enhancing the company's relationships with fire protection contractors in Alabama, the Florida Panhandle and the Central & Southeastern portions of Tennessee. Skillern is responsible for further developing Viking SupplyNet's business in Arkansas, Louisiana and Mississippi.

Wes Letson comes to Viking SupplyNet from the steel fabrication industry where he most recently served in a Business Development, Sales and Estimating role with Garrison Steel. Prior to working in the steel industry, Letson spent four years as a professional baseball player in both the Florida Marlins and Atlanta Braves organizations. Letson received his Bachelor of Arts degree from Birmingham Southern College.

Phillip Skillern joins Viking SupplyNet from Grainger Industrial Supply where he served as a Territory Sales Representative and a Public Sector Account Manager. Skillern's prior sales, marketing and customer service experience strongly positions him to transition into his new role with Viking SupplyNet. Skillern received his Bachelor of Science degree in Sports Administration from Louisiana State University.

For a complete listing of all Viking SupplyNet locations and territory managers visit www.vikinggroupinc.com/locations

# SPRINKLING OF NEWS

#### Viking Products Featured in PCBC Expo Right-Sized Living "Flex House"

Viking's Freedom® Residential Sprinkler System was chosen to protect a new flexible, intelligent, and "right-sized" model home, which was on display at this year's PCBC Expo. The Flex House, presented by Green Builder Media and Shelter Dynamics, is a model home that features a flexible living space that is completely connected, intelligent, resilient, and sustainable. The Flex House showcases a variety of eco-friendly features such as a fully integrated smart solar system, water conserving products and fixtures, energy-efficient HVAC and appliances and water-saving plumbing fixtures, and high-performance, net-zero energy ready materials.

Along with high craftsmanship and a customizable design, the Flex House also comes loaded with standard safety features. A Viking Freedom® residential fire sprinkler system is included as standard equipment. The Flex House floor plan includes four sprinklers; two ceiling pendents for the kitchen and dining room, and two horizontal sidewall models for the living room and bedroom.

Viking partnered with Green Builder Media and Shelter Dynamics to provide fire protection for this new living space. The Flex House delivers flexibility for owners to adapt their lifestyles into the home's design and functionality, while consuming only the natural resources needed.

For more information about Viking's variety of fire protection products visit www.vikinggroupinc.com.

# NFSA Member, Interstate Fire & Safety Donates Time and Material to NYSAFC Sprinkler Awareness Project Materials

The New York State Association of Fire Chiefs (NYSAFC) will be conducting live fire demonstrations during Fire Prevention Week 2017 to highlight the effectiveness of home fire sprinklers. These demonstrations will be held in communities statewide and will feature a side-by-side burn of two "pods" – one with a sprinkler system and one without.

The pods are being built by construction technology students in local Board of Cooperative Educational Services (BOCES) programs. The task gives students practical construction experience; it also educates them about the importance of home fire sprinklers and shows them how a home fire sprinkler system is installed and works. Students in the BOCES programs learned about home fire sprinklers in April and May, at the end of the 2016-2017 school year. Pods will be constructed as part of a classroom activity in September, when students return to school for the 2017-2018 academic year.

The side-by-side demonstrations will be held in cooperation with local fire departments that will be on hand to provide fire suppression. In some communities, the live fire demonstration will be held at the fire department. In other communities, the

burn will take place at the BOCES site. Pod construction will be completed at the demonstration site due to the large size of the pods and difficulty transporting them once assembled. NYSAFC staff and local fire department educators will narrate the activity to explain the importance of the sprinkler system in controlling a fire.

Local media will cover the demonstrations, which will expand the impact of the initiative. NYSAFC will also integrate the demonstrations and coverage with its own social media activities to further enhance the reach of the activity.

This activity is supported by a grant award from the National Fire Protection Association (NFPA), which paid for the construction materials.

Thank you to NFSA Contractor Member William Barnes and Interstate Fire & Safety Equipment of Harrison, New York for constructing the nine 13D risers that will be distributed to the participating BOCES sites. Each riser is patterned from one constructed a few years ago by SRI Fire Sprinkler of Albany, New York that have been used by NFSA Regional Manager Kasmauskas throughout the Hudson and Mohawk Valleys for dozens of side-by-side fire sprinkler demonstrations in the last seven years.

The 13D risers are built for a sidewall fire sprinkler and are easily mounted and dismounted to one of the live burn panels. Components are a few feet of CPVC, a few u-clamps, a 1-1/2" FDC with quarter-turn ball valve and gage. Kasmauskas related his thanks to NYSAFC, particularly Executive Director Jerry Deluca, for conceptualizing and arranging this program with BOCES, along with D.J. Deluca and his team at SRI for the original 13D riser build and continual warehousing of the NFSA side-by-side demonstration pods over these past years. Thanks also goes to Bill Barnes and his team at Interstate for the new risers in the works now. Mr. Barnes is a longstanding presence and officer with the Westchester County Fire Chiefs Association.

## AGF Manufacturing Inc. Announces Launch OF New Product Line

PURGENVENT<sup>TM</sup> Air Venting Valves are designed to remove excess air from sprinkler pipes to meet and/or exceed the new venting requirements established in NFPA 13 (2016).

Corrosion occurs when the oxygen trapped within fire sprinkler systems interacts with water or moisture and the metal pipes. Left unchecked, corrosion can develop into major failures costing millions in damages. With corrosion related failures in fire sprinkler systems on the rise, and after much review on corrosion and corrosion reduction by NFPA 13 technical committees, the NFPA has added air venting requirements to the NFPA 13 (2016) standard. PURGENVENT<sup>TM</sup> Air Venting Valves are designed to remove the oxygen trapped in the system to reduce corrosion activity.

PURGENVENT<sup>TM</sup> valves come in three different models. Each model allows for the simple purging and venting of trapped air -



reducing the potential for corrosion in wet fire sprinkler systems.

The PURGENVENT<sup>TM</sup> Air Venting Valve product line includes both manual and automatic models - Model 7910MAV (Manual Air Venting Valve), Model 7900AAV (Automatic Air Venting Valve), and Model 7950ILV (Inline Air Venting Valve).

PURGENVENT<sup>TM</sup> Model 7910MAV (Manual Air Venting Valve) is a ½" ball valve with integral strainer and ball check. This manual valve is designed to allow for the venting of air while the system is filling.

PURGENVENT<sup>TM</sup> Model 7900AAV (Automatic Air Venting Valve) is a 1" ball valve with integral isolation valve, strainer, purge valve and automatic air vent. This single body valve with hose threads on the purge valve is designed to allow for the rapid purging of air from the pipes as the system is filling, and the automatic venting of air once the system is operational.

The PURGENVENT<sup>TM</sup> M7950ILV (Inline Air Venting Valve) was developed for use in systems with location restrictions. The M7950ILV utilizes an inline specially designed air/water separation chamber with an air scoop to aid in the separation of air from water during system filling and testing. The separation chamber's larger diameter allows water entering the chamber to expand momentarily and separate from the air, which is then scooped into the venting assembly to be released by the M7900AAV.

PURGENVENT<sup>TM</sup> Air Venting Valves are the smallest air venting valves in the market. Their compact size allows for easier installation and greater flexibility in placement.

For more information: www.purgenvent.com or 610-240-4900.

#### Viking Blazemaster® CPVC Expands **Listing for Unfinished Basements**

Viking Plastics has updated their UL Listing for BlazeMaster CPVC piping for use in unfinished basements in accordance with NFPA 13D. Viking BlazeMaster CPVC is now listed for exposed composite I-Joists and solid wood joists up to 16" in depth. Additionally, blocking requirements have been expanded to 40 ft., and sprinkler spacing has been expanded to 16 x 16 ft.

By allowing deeper joist heights, and relaxing the blocking requirements, more of today's homes can be protected by CPVC sprinkler systems. "This new listing reflects changing standards in residential basement joists," said Lubrizol spokesperson Forest Hampton. "Now, builders will be able to offer superior fire protection in an even greater number of residences."

Important details in this new CPVC listing include:

Viking Blazemaster CPVC may be installed without protection (exposed) in unfinished basements in accordance with NFPA 13D

- · Viking Blazemaster CPVC may be installed without protection (exposed) in unfinished basements in accordance with NFPA 13D
- Blocking requirements are increased from 32' to 40' along joists
- Allowable joist depth is increased from 12" to 16" for both composite I-joists and solid wood joists
- Requirement for blocking areas into compartments 1,000 sq. ft. or less has been removed
- The UL Listing no longer calls for an asymmetrical sprinkler head layout – layouts can now be in even 2-foot increments up to 16' x 16'
- Listed residential sprinklers with 155°F (68°C) maximum temperature ratings and minimum 4.9 K-factor must be used.



Check out NFSA's Fire Sprinkler Retrofit Guide at

http://bit.ly/NFSAretrofit











We are proud to partner with the National Fallen Firefighters Foundation, and encourage all fire departments to embrace the 16 Firefighter Life Safety Initiatives. Pay special attention to Initiative #15 "Advocacy must be strengthened for the enforcement of codes and the installation of home fire sprinklers." For more information on NFFF visit firehero.org and join with us!

www.nfsa.org #fastestwater The National Fire Sprinkler Association is proud to partner with our nation's fire service. We continue to extend our special offer to the fire service – 6 months FREE membership (Subscriber membership category). We believe that partnerships that understand how we can help each other helps us make our communities safer and keep firefighters & citizens safe too! We want you to have the latest resources. Sign up today at nfsa.org.

Look for the Firehouse Ad icon in the bottom left hand corner on the home page.



Director of Outreach &
Government Relations
Vickie Pritchett pritchett@nfsa.org
615-533-0305 @vickiep4



#### From Maine to California, and every place in between, NFSA Regional Managers bring the best of the Association right to your doorstep. Helping our members is Job #1.



#### **New England Region**

DAVE LAFOND Regional Manager

CONNECTICUT, MAINE, MASSACHUSETTS, NEW HAMPSHIRE, RHODE ISLAND, VERMONT

#### \$45 Million Apartment Building Gutted by Six-Alarm Fire in Boston

As Boston has pushed to add more and denser housing, developers have turned to wood-frame construction, usually five stories built above a concrete podium. It is cheaper than building with steel.

Boston based developer Trinity Financial built the six-story Treadmark, which recently sustained massive damage from a midafternoon fire that had a local fire station within relatively short response time. Within nine minutes of the fire department's arrival, the roof collapsed from the weight of the roof top air conditioner units.

Boston Fire Commissioner, Joseph Finn, has stated that the sprinkler system was installed but not yet active. He stated as part of the Department's investigation they would look at whether or not the system was turned on and operational. The building was nearly finished with residents' ready to move in within a month.

As this type of wood frame development is becoming more prevalent, concerns are being expressed about fires during the construction phase before fire sprinklers and other safety systems are fully operational. NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations is the governing Standard for projects like these. However, the Boston Fire Department has its own home-grown fire code unique to Boston. So, it is unclear what requirements BFD has for buildings under construction and at what point the sprinkler system is turned on and operational when floors are competed and further when standpipes are installed and deemed operational.

Commissioner Finn has stated that because of the lightweight construction materials, the building started to collapse early and termed it a very dangerous building for firefighters. He compared the building materials to kindle wood.

It bears noting, had the building's fire sprinkler system been fully operational, this fire would not have made major news outlets. It also bears noting that this building was still in the construction phase and subject to the dynamics of construction site activities. The building also had an NFPA 13 system.

Automatic sprinklers are highly effective and reliable when they have been installed, maintained and inspected properly. In this case, the building was not yet completed. However, in speaking with the extremely qualified professional sprinkler contractor, he assured me the system was designed and installed properly. At the time of this writing, there has been nothing conclusive as to what happened to the building sprinkler system.

When sprinklers operate they are 96% effective. This is a phe-

nomenal statistic. When they fail to operate, the reason most often given was shutoff of the system before the fire began. Other leading reasons include manual intervention that defeated the system, lack of maintenance and inappropriate system for the type of fire.

Dozens of similar buildings have burned down over the last several years. Including an enormous apartment complex in the downtown area of Los Angeles in 2014 and a Raleigh, North Carolina project that is one of the largest fires in its history.

According to the Boston Globe news, NFPA's Allen Fraser said "the problem isn't so much wood as it is human error. Developers and contractors are pushing to build housing fast and at the lowest possible cost. That can lead to mistakes, he said. But in a nearly built building, a small mistake can cause a big fire".

Further, according to the *Globe*, the blaze appears to have started on the top floor, Commissioner Finn said, but it is too early to pinpoint a cause. It moved fast through the building and heavy air conditioner units on the roof buckled, making the building unstable and making firefighting efforts outside of the building. The Department resorted to using large quantities of firefighting foam to extinguish the difficult fire. At times, the streets looked like they were covered in snow banks.

> Dave LaFond NFSA's Regional Manager / New England email: lafond@nfsa.org 2 Burns Way, Holyoke, MA 01040 phone: 413.244.7653



#### **New York Region**

DOMINICK KASMAUSKAS Regional Manager

**NEW YORK** 

#### **New York State Legislation Proposes Freezing More Restrictive Local Standards**

Assembly Bill 6361 and Senate Bill 4284 have passed in their respective houses and are on the way to Governor Cuomo's desk. The bills will change the existing Executive Law section 379 that allows a municipality to enact a "More Restrictive Local Standard" (MRLS) when adopting a local law that is more stringent than the "uniform" state codes.

New York State law presently allows a municipality passing and immediately enforcing a local law that affects any one of the building or energy code set. as long as the municipality files the local law within 90 days with the NY State Codes Council through the Department of State, Division of Building Codes & Standards. The local law must exceed the state code section affected and not be less restrictive.



Traditionally, and as a courtesy to the various industries affected, most municipalities that have done this have not enforced their new law until they have heard back with an approval from the state codes council. These bills, if signed by the Governor, will ensure that no municipality can immediately enforce an MRLS.

New York Regional Manager Dom Kasmauskas adds, "since the year 2000 there have been several fire sprinkler local laws that kick in the MRLS process and have appeared before the state codes council, but all have been denied by the council as they cite that the municipalities in every case have not proven a 'special circumstance' as required by the Executive Law".

> Dominick Kasmauskas NFSA's Regional Manager / New York email: kasmauskas@nfsa.org 1436 Altamont Avenue Suite 147 Rotterdam, NY 12303, Phone: 518.937.6589, Fax 518.836.0210

#### **Mid-Atlantic Region**

DELAWARE, NEW JERSEY, PENNSYLVANIA, VIRGINIA, WASHINGTON D.C.

#### **Educating the Public**

As the temperatures heated up for summer, so did efforts to educate the public about the effectiveness and importance of fire sprinklers for saving lives and property.

The New Jersey Fire Sprinkler Advisory Board (NJFSAB) focused on reaching out to young people in June with two demonstrations for participants of the Bergen County Youth Police Academy. On June 29, the NJFSAB team hosted a burn trailer demonstration with the assistance of the Hackensack Township Fire Department for more than 100 teenagers. The students were actively engaged in the discussion about the importance of fire sprinklers, especially since a major fire destroyed two-thirds of a Maplewood apartment complex in their county several months ago. On June 30, the NJFSAB team took the burn trailer to the Fairview Township Fire Department to give a presentation to middle school students involved in the same Police Academy. The students watched the burn demonstration with awe and then talked about what they knew about the topic of fire safety. It is always a pleasure to have the opportunity to work with young people and see first-hand how interested they are in learning about the difference a fire sprinkler can make in their lives.

The NFSA PenJerDel Chapter also took fire sprinkler safety on the road this summer. On July 20, they took their newly acquired mobile side-by-side trailer to King of Prussia, Pennsylvania, to conduct a burn demonstration for the Oliver Fire Protection and Security company picnic. The demonstration was one of the highlights of the afternoon.

Hosting side-by-side and burn trailer demonstrations for contractors and manufacturers is something that we look forward to, as it gives companies the opportunity to see their products and services in action. We hope these members of the fire sprinkler industry know that they are doing fantastic work for their communities.



#### **Maryland Region**

CALEB ARMBRUST Regional Manager

#### **Motivation from Defeat**

On July 11th, Maryland Regional Manager Caleb Armbrust accompanied NFSA's three summer interns, all fire protection students at Eastern Kentucky University, to Carroll Valley, Pennsylvania to defend a residential sprinkler ordinance. The group had spent much time preparing and reviewing the strategy, remarks, and visual aids. All the right people were in place to make the most compelling case possible and were armed with the most recent pricing from a contractor and designer that performed much of the work in the area.

The time began with compelling testimony from Common Voices Advocate Sher Grogg, who told the story of the devastating Annapolis Mansion Fire that claimed the lives of six people, including four children.

Armbrust spoke on behalf of our industry and the amazing work we do to protect the lives of those we serve. He highlighted much of the work we do in donating our time and systems to protect the most vulnerable, including our nations wounded warriors. He also shared the story of his two-year old daughter's reaction to seeing fastest water protect teddy bears.

Despite the nineteen speeches given in favor of maintaining the sprinkler ordinance, it was repealed. As is the case with all political decisions, it had been made long before the evening began. The experience was both upsetting and highly motivating for all involved. Armbrust states, "I am itching to get back in the fight in the areas where local and limited government has been preserved to advance our cause."

Caleb Armbrust NFSA'S Regional Manager / Maryland email: armbrust@nfsa.org Phone: 443.863.4391





#### **Southeast Region**

WAYNE WAGGONER Regional Manager

ALABAMA, GEORGIA, MISSISSIPPI, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE

#### Side by Side Demo at Signal Mountain, Tennessee **Fire Department Open House**

Wayne Waggoner, Southeast Regional Manager and Tennessee Fire Sprinkler Contractors Association Executive Director, along with the Pleasant View Fire Department, presented a side-by-side demo to show the effectiveness of residential fire sprinkler systems.

Fire Chief Eric Mitchell of the Signal Fire Department stated, "that residential fire sprinklers would give you a lot better chance of surviving a fire in your home". The Chief made several comments in favor of residential fire sprinklers.

There were over 200 people in attendance to witness the demonstration. The Fire Sprinkler operated in 34 seconds to extinguish the fire. On the free burn side, the fire went to flashover in 3 minutes and 34 seconds.

> Wayne Waggoner NFSA'S Regional Manager / Southeast email: w.waggoner@comcast.net PO Box 9, Andersonville, TN 37705 Phone: 865.755.2956, Fax: 865.381.0597

to law. This law provides for water utility restriction on residential fire sprinklers. This is a big step in the right direction. A special thanks to Phillip Green, a residential fire sprinkler system owner from Estero, for his efforts on this critical issue.

#### **Area Interest Meetings**

FFSA held Area Interest Meetings (AIM) across the state of Florida throughout the month of July. The topic "A Day in the Life of the EOD (Expert of the Day)" was taught by Mark Hopkins, V.P. of Engineering, and Bob Upson, Manager of Engineering Services. The meetings were very beneficial and well received by all in attendance. The newest AIM location in Miami kicked off with great attendance and participation. While in town, Mark Hopkins also joined Florida Fire Sprinkler Association at their Board of Director Meeting held in Daytona Beach on July 13 - 14, 2017. FFSA would like to thank both Mark and Bob for giving up their valuable time to help educate our Florida contractors and AHJs.

#### Hawk's Cay 2017

Hawk's Cay 2017 is coming soon. We have four days of intensive training being taught by some of the top professionals in our industry. The conference is being held October 22-26, 2017 and starts with the Fire Product Challenge on Sunday night! The Fire Product Challenge is an interactive vendor challenge that allows attendees to learn more about the vendor, roadblock events to learn more about Florida specific code and requirements and the chance to win prizes! Monday morning opens with NFSA President Shane Ray followed by Matt Klaus, Wes Baker, James Golinveaux, Buddy Dewar, Mark Fessenden and more. Sign up for this amazing conference by going to our website www.floridafiresprinkler.com.

#### Florida & Puerto Rico

LORRELL BUSH FLORIDA, PUERTO RICO

#### Florida's Governor Vetoes Bill That Allows Opt-Out of Fire Codes

Florida's Governor, Rick Scott, had until midnight on the 29th of June to veto the High-Rise Retrofit Bill. On the evening of June 26, 2017, he exercised his right as Governor and vetoed HB653. HB653 would have allowed condominium associations to completely opt out of the fire and life safety codes. He cited in his veto that he has always fought to make Florida the safest place to live. Also, he referenced the recent tragedy in London, which took 79 lives, as a reason for his veto of this bill. As a result, citizens will be safer in the State of Florida. We congratulate Governor Scott and the fire services in Florida who worked tirelessly to make sure our citizens' and our firefighters' lives are first priority.

Also, this legislative session, the Governor signed HB 1021 in

Lorrell Bush NFSA's Regional Manager / Florida & Puerto Rico email: bush@nfsa.org 2025 Droylsden Lane, Eustis, FL 32726 Phone: 352.589.8402 Cell: 954.275.8487, Fax: 561.327.6366



#### **Great Lakes Region**

**RON RITCHEY** Field Service Coordinator

INDIANA, MICHIGAN, OHIO, WEST VIRGINIA, KENTUCKY

The State of Indiana's Fire Prevention & Building Safety Commission recently approved a resolution to appoint a committee review of the 2015 International Residential Code (IRC), to update the currently adopted, outdated 2003 Edition of the IRC.

A 17-member committee was formed with five members from



the Homebuilders Association, five members from the Indiana Building Officials, three members from the Architects Association, two members from the fire service, one engineer, and one appointed member from the Commission.

Indiana has a unique and outdated "fiscal impact" state law that has been in effect since 2001, which essentially kills any attempt to update the state code if the combined and accumulative "construction costs" (which include materials and labor) exceed \$500,000 dollars. This is a huge obstacle to overcome, considering that last year alone, Indiana issued 14,600 single family building permits, which means if any new safety provisions that have been included to improve the code surpass a mere \$34 dollars per home, the code update will not pass.

The State of Indiana hired an outside code consultant who conducted a review of the circumstances which led to the Indiana State Fair Stage collapse that received nationwide attention several years ago, when a tornado swept through and killed seven people and injured 40 others during a concert in 2011. The event was not regulated by any codes adopted by the State because they were removed from the model codes. This cost the state over \$50 million in settlements. One of the findings included in the report stated that one cause of the disaster was that "the sections of the IBC and IFC pertaining to temporary structures were exempted from the code at the time of adoption." The report included a recommendation that Indiana adopt "model national building and fire codes and standards with minimal amendments." I fail to see how the findings or recommendations included in this report to prevent and/or reduce future tragedies can be accomplished under the current restrictions in Indiana's "fiscal impact" rules.

On June 21, 2017, the Indiana Residential Committee met for the first time this session to begin deliberations on Chapters 1-3 of the IRC, which contains the residential sprinkler provisions for one- and two-family homes and townhouses. NFSA requested copies of the proposed changes to the model code from the secretary and legal appointee of the Residential Committee on several occasions leading up to the first meeting. An initial response stated that we would have to submit an official "public records request" to the Indiana Public Records Division. We were denied access.

In addition, our official request for permission to make public comments at the Indiana Residential Committee hearing was deferred to the Chairman of the Committee, who would make that decision on the day of the Committee meeting. Fortunately, the initial decisions to not provide access was overruled. We receive the proposals just two days before the meeting.

There was a proposal from the homebuilders to delete all residential sprinkler requirements from the code. We attended the hearing and were granted permission to address the 17 members of the Indiana Residential Committee. We requested the sprinkler deletion proposal be tabled until the July meeting so we could bring in additional NFSA staff to testify.

After a lengthy and heated debate, the motion to table was approved by all non-homebuilder committee members. We will continue to engage and educate all stakeholders until we are able to convince them that the benefits of fire sprinklers are self-evident.

Ron Ritchey Regional Manager, Great Lakes Region 3311 Dover Court, Lafayette, IN 47909 Phone: 765.412.6707 email: ritchey@nfsa.org



**Illinois Region** 

BOB TINUCCI State Coordinator

#### **Chicago Reviewing Building Codes**

NFSA Illinois State Coordinator Bob Tinucci has been in communication with the City of Chicago Building Department Commissioner Judy Frydland in recent months. The City of Chicago is currently in review of their building codes for updates. The department is continuing to study the best process for modernizing the Chicago Building Code, including changes to the city's sprinkler requirements. As of this writing, they plan to announce that process in late summer. A recent memorandum from Commissioner Frydland now requires all residential construction of cold-formed steel-framed buildings, regardless of height shall be protected throughout by an automatic fire sprinkler system. In addition, Commissioner Frydland will be our featured guest speaker at our September NFSA Illinois Chapter meeting.

Bob Tinucci NFSA's Regional Manager / Illinois email: tinucci@nfsa.org. 6401 Richmond Avenue, Willowbrook, IL 60527 phone/fax: 630.655.1875 / cell: 630.514.1601



Wisconsin Region

MARTY KING
State Coordinator
WISCONSIN

#### Fire Sprinkler Saves

#### Madison, Wisconsin

Damage from a cooking fire at the downtown Lucky Apartments led to the displacement of one person, but nobody was injured. Firefighters were sent to 777 University Avenue when a fire broke out in a sixth-floor apartment. Residents were evacuating and



alarms were sounding when firefighters arrived. The crews accessed the apartment, where an automatic sprinkler had already activated and put out the fire. Firefighters proceeded to ventilate the apartment to clear out the smoke. Nobody was home at the time of the fire, but crews found the stove turned on with a few pans on the burners. The occupant later told firefighters she left some food cooking while she stepped out of the apartment for about 20 minutes.

#### Glendale, Wisconsin

North Shore Fire Department reports that an early morning fire at the Holiday Inn was controlled by a single fire sprinkler head. The fire started in a storage room and lead to minimal damage to the room and contents. The building was immediately reoccupied.

> Marty King NFSA's State Coordinator email: king@nfsa.org 3317 South 113th Street, West Allis, WI 53227 Phone: 414.531.9542



#### Minnesota Region

TOM BRACE State Coordinator

MINNESOTA

#### Sprinkler Save in Elk River

Damage from a kitchen fire at an Elk River, Minnesota restaurant was held to a minimum and disaster averted after the fire set off the sprinkler system and was extinguished.

Elk River Fire was dispatched on July 5, to a reported fire sprinkler system water flow alarm at the 18100 block of Carson Court Northwest. While en route, dispatch advised that there had been a small fire at the New China Dragon restaurant and the sprinkler system activated.

Elk River Police evacuated the adjacent businesses while firefighters verified that there was no active fire. Upon further investigation, it was determined that there was a grease fire in the kitchen. The fire activated two nearby sprinklers, which extinguished the fire. Firefighters shut down the sprinkler system and ventilated the structure.

"Without the activation of the sprinkler system and immediate fire suppression, the damage to the building would have been significant," Elk River Fire Chief John Cunningham reported. "The sprinkler system was able to completely suppress the fire and there was no extension."

Adjacent businesses returned to normal operations within a short time and the restaurant where the fire occurred opened the next day.

Tom Brace NFSA's Regional Manager / Minnesota email: brace@nfsa.org 1433 Idaho Ave West, St. Paul, MN 55108, Phone: 651.644.7800

#### **Missouri Region**

MISSOURI

#### Historic Missouri State University Building to be **Upgraded with Improved Fire Sprinklers System**

One of the three original buildings on Missouri State University's historic quadrangle — the oldest part of campus — is slated for a major overhaul.

Hill Hall, completed in 1924, houses the College of Education and the Department of Psychology.

A significant portion of the work will be behind the scenes with the installation of new heating, ventilation, air conditioning and electrical distribution systems. The fire alarm and fire suppression systems will also be improved.

The old pool, dormant for decades, will be torn out and the area will be renovated into a student lounge, meeting rooms and an open computer lab.

#### Central Region

IOWA, KANSAS

#### Fire Sprinklers Extinguish Fire at Adult **Entertainment Club in Cedar Rapids, Iowa**

Fire crews were called to the Lumberyard, an adult entertainment club in Cedar Rapids, for a report of a fire alarm with water flow at the business. As firefighters arrived, they noticed water flowing from the club's door and smoke inside the building. Upon entry, firefighters noticed that the fire sprinkler system had contained the blaze. They were able to easily extinguish the small fire that remained.

Officials said in a news release that the fire alarm and sprinkler system worked as designed and helped save the structure, as the sprinklers kept the fire under control until firefighters entered and finished extinguishing a small fire in the center of the building.

No one was in the building when the fire broke out. No injuries were reported.





**South Central Region** 

CYNTHIA GIEDRAITIS
Regional Manager

ARKANSAS, LOUISIANA, OKLAHOMA, TEXAS

#### Four Sprinkler Saves in Texas Within a Week!

#### McKinney, TX

On June 24th, McKinney Fire Department responded to a structure fire at the Century Lake Forest Apartments located at 5201 Collin McKinney Parkway. Responding units discovered the fire sprinkler system had activated and had controlled and extinguished a grease fire in the apartment kitchen. A single sprinkler is credited for the minimal damage, resulting in saving over an estimated \$1,000,000 in property loss, and reinforcing the value of fire sprinkler systems. No injuries were reported.

"This successful save by the sprinkler system demonstrates the effectiveness of an automatic fire sprinkler systems in an apartment complex environment. Had the sprinkler system not been present, the outcome could have been very different," said Deputy Fire Marshal Andrew Barr. "This incident further demonstrates the importance of not leaving the kitchen unattended while cooking".

#### Farmers Branch, TX

On June 25th, a fire occurred at a warehouse in Farmers Branch. The business occupying the warehouse is Friesing Investments. Fire originated at an overheated motor for an exhaust fan in the shop off the warehouse. A single sprinkler activated and kept the fire from extending into the walls.

#### Richmond, TX

On June 27th, Fort Bend County Fire Marshal's Office was requested to respond to an apartment fire. The Richmond Fire Department was on scene.

Upon arrival, they found one sprinkler had activated in an apartment and had extinguished a kitchen fire on the stove. He also said there was no damage to the kitchen except for water damage. This fire occurred on the second floor.

The resident stated that he was cooking chicken with some cooking oil in a pan. He stated that he went to the bathroom while the chicken was cooking. He stated that while he was in the bathroom, he saw and smelled smoke. The sprinkler system went off and extinguished the fire.

#### Houston, TX

On June 30th, a spokesman for Bush Intercontinental Airport says a sprinkler system was activated when charging batteries began to overheat and sent smoke into a terminal. Police told the Houston Chronicle that flights could be disrupted, however, the incident did not result in any delays.

Cindy Giedraitis NFSA's Regional Manager / South Central email: giedraitis@nfsa.org PO Box 10403, College Station, Texas 77842. Phone: 979.324.8934

#### **Great Plains Region**

COLORADO, NEBRASKA, NORTH DAKOTA, SOUTH DAKOTA, UTAH, WYOMING

#### Side-by-Side Demos

In 2017, 13 side-by- side burn demonstrations have taken place in the Great Plains Region, including three to insurance and real estate sales professionals. More than 1,200 people have witnessed the demonstrations. Special thanks to NFSA Member, Western States Fire Protection, Inc., for their rehabbing and housing the trailer on location.

#### HOT, HOT, HOT

Regionally, most states are seeing significant upticks in business in not just water-based, but special hazard as well. Colorado may see pre-recession numbers in some categories. Labor (fitters, designers, PEs) continues to be in strong demand and limited supply with some contractors offering signing bonuses and longevity incentives. General Contractors are sharing similar sentiments with suppression contractors about plan review and inspection turn times.



#### **Southwest Region**

BRUCE LECAIR
Associate Director of Regional
Operations - WEST

CALIFORNIA, HAWAII, NEW MEXICO, NEVADA, ARIZONA

#### Bruce Lecair Talks NFPA 25 to the San Diego SFPE

Bruce Lecair was the featured presenter at the June 8th San Diego SFPE lunch meeting in San Diego, California. The Presentation on "Significant Changes to the 2017 edition of NFPA 25," was the topic for his presentation.

California is expected to reconvene the Office of the State Fire Marshal NFPA 25 Work Group this fall and the presentation consisted of some of the significant challenges and changes in the standard since California's last adoption of the 2013 California edition of NFPA 25.



Bruce Lecair NFSA's Associate Director of Regional Operations — West email: lecair@nfsa.org 25417 West Hyacinth Street, Corona, CA 92883 Phone: 951.277.3517, Fax: 951.277.3199



#### **Northwest Region**

SUZANNE MAYR Regional Manager

ALASKA, IDAHO, MONTANA, OREGON, WASHINGTON

#### Fire Sprinklers Promoted via Billboards in Washington State

The Fire Sprinkler Advisory Board of Puget Sound launched a digital and static billboard ad campaign in June. The ads, running in highly visible locations from Seattle to Tacoma, featured a bright Seattle city skyline with the tag line "Fire Sprinklers save..." along with a list featuring "lives - property - homes - businesses - pets." Response to the campaign has been favorable!





#### Sprinklerman Shootout and More!

Seattle area members joined U.A. Sprinkler Fitters Local 699 for the highly anticipated annual Sprinklerman Shootout in August.

#### Also...

NFSA will have a presence at several code official events this fall, including the Washington Fire Marshal Association's annual education institute and the Oregon Building Official's Association conference. In addition, two days of training will be presented at the Alaska Fire Conference in Sitka in September.

> Suzanne Mayr NFSA's Regional Manager / Northwest email: mayr@nfsa.org P.O. Box 7328, Tacoma, WA 98417 phone: 253.208.8467



# **LETTERS**

#### KUDOS TO MARK HOPKINS, BOB UPSON AND LORRELL BUSH

#### Mark,

On our way there this morning I explained to the guys what I thought we would get out of the Expert of the Day (EOD) presentation and you nailed it.

I was looking for information that would help us present better questions when we utilize the EOD service. As well as getting an understanding for the process in which the EOD takes to answer the questions, you took it another level and ran through examples of the top ten questions and that really brought the presentation full circle.

We are a small design firm with five guys and we run into different design challenges each day. When we get those "headscratchers" it's nice to be able to lean on other industry rich folks like yourself and the EOD team.

I'd like to thank you again for sharing your time and experience to educate us.

#### Lorrell,

Thank you for pulling this together, I always find these FFSA gatherings to be great for our industry and it never hurts to walk away with a little more knowledge then when you walked in.

You asked about how the location worked for us, I found it easy enough. I also liked the St. Johns location so for me it's not so much the location as making the time in our busy schedule. With that in mind the morning time slot and presentation duration worked well for us. I look forward to the next one.

Thank you, Jimmy Duke Florida Fire Protection Consultants, Inc

#### Dear Mark,

Grateful to your commitment and super positive and skilled attitude. Our guys enjoyed meeting you also.

Please stop in anytime. See you soon.

Alan D. Wiginton Wiginton Corp.

#### Mark.

Thank you for giving us some insight into your world and the challenges that we throw at you at times. We appreciate what you do.

And thank you Lorrell, for another successful round of meetings and the addition of the Miami market. We are blessed to have you doing such a great job in leading our association.

Thanks,

Joey Hatfield www.triservefire.com

#### Mark,

I really want to thank you for supporting Bob Upson in his recent visit to Florida. He shared the NFSA EOD program with our group and many AHJ's. He was great!!

Please send my appreciation through your ranks, especially Bob!

FFSA and NFSA have made a HUGE difference in the entire Florida Panhandle! Keep it up!

Mike Brown

Advanced Fire Protection Services Inc.

#### **Future NFSA Annual Seminar Schedule**

2018 Marriott Harbor Beach Resort

Ft. Lauderdale, FL/May 2-6, 2018

2019 Omni Downtown

Nashville, TN / May 15-18, 2019

2020 JW Marriott Desert Ridge

Phoenix, AZ/April 29-May 3

2021 Cosmopolitan

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# National Fire Sprinkler Magazine

he Flagship Publication of The National Fire Sprinklar Association

#### **NFSM Article Submission Guidelines**

National Fire Sprinkler Magazine (**NFSM**), a members-only publication of the National Fire Sprinkler Association, is published six times a year. It offers Fire Sprinkler Industry news and articles of interest to Association members.

#### Query

Send an e-mail or letter briefly describing your article proposal, why the topic is important, and how it is relevant to our audience. Say something about the sources of your information (personal involvement? interviews?) and about your present position and background. Tell us what types of photographs and graphics are available to illustrate your story. Be sure to include an email address and a daytime phone number. **NFSM** runs full-length feature articles of approximately 800-1200 words.

#### **Feature Articles**

Articles for **NFSM** should be on a topic of significant interest to the industry. Articles promoting a specific product or service will not be published. We have advertising opportunities available to boost your sales.

#### **Writing Guidelines**

**NFSM** tries to maintain a straightforward style. Accuracy is vital. All facts should be double-checked before a manuscript is submitted. All manuscripts must be submitted as Word docs, single-spacing between sentences. <u>Images must be submitted as separate hi-rez ipegs</u>. Charts and tables must be submitted as separate pdfs.

Each manuscript should be accompanied by a list of resources on the topic at hand: relevant books and reports, conferences, and/or contact people and their phone numbers. To settle points of style, use *The Chicago Manual of Style* (University of Chicago Press).

#### Illustrations

**NFSM** uses a variety of photographs, line art, charts, and maps. We prefer to receive artwork electronically, and all illustrations should include credit and caption information.

#### Copyrights

Articles must be exclusive to **NFSM** magazine and not submitted to any other industry publication, unless prior agreement has been reached. Author is responsible for the accuracy of article and that it does not infringe on any other copyright. All published submissions become the property of NFSA.

#### **Payment**

**NFSM** does not pay for articles; we do recognize an author with a byline and credit. NFSA reserves the right to reject any submission at its own discretion.

#### NFSM EDITOR:

Joanne Genadio genadio@nfsa.org 443.863.4399



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