

SQ

Inspection, Testing and Maintenance



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SAVE THE DATE



September 9, 2015

Rough & Final Inspections of Fire Sprinkler Systems
IOWA CITY, IOWA

September 10, 2015

Rough & Final Inspections of Fire Sprinkler Systems
CONCORD, NEW HAMPSHIRE

September 15, 2015

NFPA 13, 13R, 13D & 14 Update 2013
EL CERRITO, CALIFORNIA

September 15, 2015

Obstructions to Residential Sprinklers
ONLINE

September 15-16, 2015

Pumps for Fire Protection
CRANSTON, RHODE ISLAND

September 16, 2015

Rough & Final Inspections of Fire Sprinkler Systems
EL CERRITO, CALIFORNIA

September 17, 2015

Advanced Hydraulics
EL CERRITO, CALIFORNIA

September 22-23, 2015

Sprinkler System Plan Review
READING, PENNSYLVANIA

September 24, 2015

Rough & Final Inspections of Fire Sprinkler Systems
READING, PENNSYLVANIA

September 23-24, 2015

ITM: Navigating through the Liability

Minefield

NASHUA, NEW HAMPSHIRE

September 30, 2015

Rough & Final Inspections of Fire Sprinkler Systems
WINDSOR LOCKS, CONNECTICUT

October 12-24, 2015

Two Week Layout Tech Training
ORLANDO, FLORIDA

October 13, 2015

Rough & Final Inspections of Fire Sprinkler Systems
WILLOUGHBY, OHIO

October 14, 2015

Fire Service Mains & Their Appurtenances
WILLOUGHBY, OHIO

October 20, 2015

Obstructions to ESFR and CMSA Sprinklers
ONLINE

October 20-21, 2015

Sprinkler System Plan Review
BREA, CALIFORNIA

October 22, 2015

Basic & Advanced Seismic Protection
BREA, CALIFORNIA

October 27, 2015

Rough & Final Inspections of Fire Sprinkler Systems
BILLERICA, MASSACHUSETTS

October 27, 2015

Rough & Final Inspections of Fire Sprinkler Systems
WISCONSIN DELLS, WISCONSIN

November 3, 2015

Understanding, Applying and Enforcing NFPA 25
FARMERS BRANCH, TEXAS

November 4, 2015

Pumps for Fire Protection
FARMERS BRANCH, TEXAS

November 5-6, 2015

Pumps for Fire Protection
NORWOOD, MASSACHUSETTS

November 17, 2015

Implementing New ITM Procedures from the 2014 Edition of NFPA 25
ONLINE

December 15, 2015

Updating ICC Codes
ONLINE

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ON THE HILL
November 4, 2015
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Planning to Plan

Shane Ray



Planning to plan is the first step in the Applied Strategic Planning model, by Nolan, Goodstein, and Pfeiffer. NFSA has been busy planning and in 2016 we will continue the process so that we may develop a shared vision to fulfill our mission through common values. I hope you don't stop reading because you heard the words strategic planning, if you do you will miss what we are planning for.

What are we planning for? Service! Improved service! Improved service to members! Why? We recognize that properly designed, installed, inspected and maintained fire sprinkler systems means lives saved and that's what you do, every day.

Fires in structures will increase. It is great to be planning as an inclusive industry with a united voice that can minimize the impact those increased fires have on lives and property, which is our mission, "to protect lives and property from fire through the widespread acceptance of the fire sprinkler concept."

You may have heard the saying that the only thing worse than no plan is two plans. Well, that is partially true if you are talking about a strategic plan, an incident action plan, or a command and control plan. However, in the business and government world, you know that plans such as a marketing plan, orientation plan, staffing plan, compensation plan, communications plan, transition plan, etc. are often included or accompany the budget or operational plan. These plans, regardless of how formal, are vital in carrying out the mission of the organization.

I am pleased to announce that the NFSA has completed its transition management plan. This was a four part process with the purpose of transitioning leadership within the NFSA as well as improving operational efficiencies and effectiveness. As a result of this plan, the organizational chart looked different on September 1st, 2014, January 1st, 2015, May 1st, 2015, and July 1st, 2015, but most importantly, the NFSA is strategically realigned to serve you better and I pledge that we will.

The transition management plan had moments of celebration, yet many tough decisions that left heavy hearts, including my

own. However, the outcome is key, and that is to continue to strive to fulfill our mission through service to you, our membership. I cannot express adequately enough my appreciation to the employees who have worked through this transition and to the members who have been understanding and supportive. The NFSA has always had great employees who have given a lot and employees who continue to give. I am grateful for them all.

As we transition and prepare for a brighter future of service to you, our members, the rate of change continues to increase. We will work hard to not only help keep up with that rate of change, but to do all we can do to help keep you ahead of it. You may ask, how could anyone do that? Well, "anyone" can't, but that's the value of an association, "many" can! When we say "Team NFSA" we mean it and that includes you as well! By networking, collaborating and communicating, we can stay ahead. We can all work together to make sure we are not just reacting, but that we are prepared and proactive, because that's what planning is all about.

Speaking of planning, I hope you are planning on joining us in pushing for the Fire Sprinkler Incentive Act. Our Board of Directors, Councils, and Committees will be in Washington, D.C. in November for meetings as well as promoting the Fire Sprinkler Incentive Act with all our fire service partners and allies on Capitol Hill. Help us save lives, property, and money through doing the right thing with incentives to American citizens and business owners.

I can't stress enough that my door is always open. If you have a thought or idea, or would like to share regarding our service to you, feel free to reach out. You may reach me at 845-745-2671 or via email at ray@nfsa.org -- I truly value your input. ①

In service,

Shane Ray, *President*

NFSA Regional Chart – August 1, 2015

Area	States	Regional Manager	Area Director
New England	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	Dave LaFond, NFSA 2 Burns Way Holyoke, Massachusetts 01040 (413) 244-7653	Donald A. DeLuca SRI Fire Sprinkler Corporation 1060 Central Avenue Albany, New York 12205 (518) 459-2776 FAX (518) 459-0068
New York	New York	Dominick G. Kasmauskas, NFSA 1436 Altamont Ave. Suite 147 Rotterdam, New York 12303 (518) 937-6589 FAX (518) 836-0210	
Mid Atlantic	Delaware, Maryland, New Jersey, Pennsylvania, Virginia, Washington, D.C.	Raymond W. Lonabaugh, NFSA P.O. Box 126 Ridley Park, Pennsylvania 19078 (610) 521-4768 FAX (610) 521-2030	Kent Mezaros Quick Response Fire Protection 77 Pension Road, Suite 5 Manalapan, New Jersey 07726 (732) 786-9440 FAX (732) 786-9443
Southeast	Alabama, Georgia, Mississippi, North Carolina, South Carolina	Associate Director of Regional Operations - East Wayne Waggoner, NFSA PO Box 9 Andersonville, Tennessee 37705 (865) 755-2956 FAX (865) 381-0597	Ken Brinkley Music City Fire Sprinkler 238 Molly Walton Drive Hendersonville, TN 37075 (615) 826-7450 FAX (615) 826-9680
Tennessee	Tennessee		
Florida	Florida, Puerto Rico	Lorrell Bush, NFSA 2025 Droylsden Lane, Eustis, Florida 32726 (352) 589-8402 FAX (561) 327-6366 Cell: (954) 275-8487	Alan Wiginton Wiginton Fire Systems 699 Aero Lane Sanford, FL 32771 (407) 585-3205 FAX (407) 585-3282
Great Lakes	Indiana, Michigan, Ohio, West Virginia, Kentucky	TBA	Richard A. Ackley Dalmatian Fire, Inc. P.O. Box 78068 Indianapolis, Indiana 46278 (317) 299-3889 FAX (317) 299-4078
North Central	Minnesota	Tom Brace, NFSA 1433 Idaho Ave West St. Paul, Minnesota 55108 (651) 644-7800 FAX (651) 603-8827	Gregg Huennekens United States Alliance Fire Protection 28427 North Ballard – Unit H Lake Forest, Illinois 60045 (847) 736-3496 FAX (847) 816-0098
	Wisconsin	Marty King 3317 South 113th Street West Allis, WI 53227 (414) 531-9542 king@nfsa.org	
Illinois	Illinois	Robert Tinucci, NFSA 6401 Richmond Ave Willowbrook, Illinois 60527 (630) 655-1875 FAX: (630) 655-1875	
Central	Iowa, Kansas, Missouri	TBA	Dennis C. Coleman Engineered Fire Protection, Inc. 1615 South Kings Highway St. Louis, Missouri 63110 (314) 771-0033 FAX (314) 664-1619
South Central	Arkansas, Louisiana, Oklahoma, Texas	Cynthia Giedraitis NFSA 2013 Oakwood Trail College Station, Texas 77845 (979) 324-8934	John Kauffman III Kauffman Company 13225 FM529 – Suite A Houston, Texas 77041 (713) 937-4144 FAX (713) 937-4149
Great Plains	Colorado, Nebraska, North Dakota, South Dakota, Utah, Wyoming	Eric Gleason, NFSA P.O. Box 62157 Littleton, Colorado 80162 (720) 470-4894	Harry Nothhaft II L. Nothhaft & Son 2520 West 62nd Court Denver, Colorado 80221 (303) 433-3329 FAX (303) 433-2432
Southwest	Arizona, Nevada, New Mexico,	Associate Director of Regional Operations - West Bruce Lecair, NFSA 25417 West Hyacinth Street Corona, California 92883 (951) 277-3517 FAX (951) 277-3199	Aaron Bennett RCI Systems, Inc. 1220 West Geneva Drive Tempe, Arizona 85282 (480) 894-8711 FAX (480) 894-8740
West	California, Hawaii		Jack Thacker Allan Automatic Sprinkler Corporation 3233 Enterprise St. Brea, California 92821 (714) 993-9500 FAX (714) 993-5708
Northwest	Alaska, Idaho, Montana, Oregon, Washington	Suzanne Mayr, NFSA P.O. Box 7328 Tacoma, WA 98417 (253) 208-8467	James Boulanger Patriot Fire Protection, Inc. 2707 70th Avenue East Tacoma, Washington 98424 (253) 926-2290 FAX (253) 922-6150
		Vice President Field Operations James Lake 12 Clearwater Drive Plymouth, MA 02360 (617) 372-6214 lake@nfsa.org	DIRECTOR AT LARGE Clark Gey Wayne Automatic Fire Sprinkler 222 Capitol Court Ocoee, Florida 34761 (407) 877-5564

Joint Check Agreements

*Stuart Zisholtz comments on
New York State Law*

Within the construction industry, there are various means available to subcontractors and suppliers to collect and receive payment. Many projects require lien waivers, certified payroll reports, signed change orders, etc. Sometimes, subcontractors and suppliers enter into a joint check agreement which allows for funds to flow directly from an owner to a General Contractor.

A joint check is a check issued by one party and made payable to two parties as co-payees. A joint check agreement involves an agreement between an owner and the prime contractor and its first tier subcontractor whereby the two parties agree that the owner will issue all or part of a payment as a joint check payable to the prime contractor and the subcontractor as co-payees.



A joint check agreement usually occurs when there is a certain distrust between the prime contractor and the subcontractor. The subcontractor may have a large account receivable with the prime contractor or was taken for a ride on a prior project with the prime contractor.

Without a formal joint check agreement, the owner cannot pay the subcontractor. If the owner pays the subcontractor, it could be in breach of its contract with the prime contractor. Therefore, it is essential that the joint check agreement be executed prior to payment.

With the proper language protection in the joint check agreement, a subcontractor can protect himself without having numerous sleepless nights.🕒

Never let your lien time run out!

For a free copy of a pamphlet pertaining to payment bond claims and mechanic's liens, please contact Stuart Zisholtz at Zisholtz & Zisholtz, LLP, 170 Old Country Rd. Suite 300, Mineola, NY 11501 tel: 516.741.2200 fax: 516.746.1024

Three Tax Saving Plans for Gold Investments

Financial Strategist Says Gold May Face Higher Taxation in Future

Adding to the confusion of extensive tax laws is the fact that they change, says gold financial strategist William A. Storum.

In 2013, for example, new tax laws moved the highest federal income tax rate from 35 percent to 39.6 percent. For 2014, if your taxable income topped \$406,750 – or \$457,600 if you're married and file a joint return – you are in that 39.6 percent.

"Whether you're in that percentile or not, inflation is an inevitable part of our future because the government is printing money it doesn't have, affecting every American," says Storum, author of "Going for the Gold" (www.goldandtax.com).

"Gold is the standard, and that's why it's a great investment for your portfolio assets – anywhere from 5 to 35 percent is a good range."

But gold investments may be highly taxed in the future, which is why you'll need a tax-planning strategy.

In trying to navigate stocks, mutual funds and various tax traps for gold, such a strategy likely requires a comprehensive and highly detailed plan, says Storum, who offers a few basic tips for gold coins and bars.

- **Trading with like-kind exchanges:** As many real estate investors know, like-kind exchanges mean that an owner can exchange one investment property for another and thus avoid paying tax on a sale. Like-kind exchanges are also possible for gold investors. You can exchange bullion – coins or bars – for another form, and as long as equal value changes hands, no income tax will be due. Why trade? One reason may be to obtain smaller, more liquid gold items. A one-ounce gold bullion coin worth \$1,400 or more may not be practical for purchases or gifts.
- **Privacy protection:** Unlike gold stocks, funds and other similar securities investments, the purchase of gold bullion often is not reported to the IRS. No government agency is able to keep track. For the most part, investors in gold coins and bars, and other precious metals, have a great deal of privacy – if you know the rules and understand when forms must be filed. It's important to work with a dealer who is in compliance with reporting regulations. The IRS may scrutinize dealers and their customers if their compliance is in question.
- **Helping loved ones:** Many people today are still not making what they used to, and finding a job right out of college is still challenging for many recent grads. Instead of giving cash to your child, consider giving an appreciated gold coin, which can be sold to pay the mortgage, pay property taxes, buy food, etc. In times of financial distress, your child may be in a low tax bracket – perhaps a 0% percent bracket – and thus would owe much less tax than you probably would pay if you sold the coin yourself. However, due to the so-called kiddie tax, this strategy won't work as well with children who are fulltime students younger than 24.🕒

ABOUT WILLIAM A. STORUM

William A. Storum, JD, is a member of the California Bar Association (inactive) and a licensee (inactive) of the California Board of Accountancy. He has extensive experience in individual, corporate, real estate and partnership taxation and has represented clients in tax audits and other tax matters with the IRS. As an investor, Storum came to understand the need to own gold in order to preserve wealth from the government's reach. He wrote "Going for the Gold" (www.goldandtax.com) in an effort to clarify widespread confusion about investment in and taxation on gold. Storum graduated cum laude from the University of Santa Clara with a bachelor's degree in accounting with a minor in economics, and from the University of Santa Clara School of Law, cum laude.



September 15, 2015

Obstructions to Residential Sprinklers

LOUIS GUERRAZZI, EIT

Residential sprinklers have been on the market for over three decades. These sprinklers are listed to a separate product standard by the laboratories than spray sprinklers and have unique installation criteria. The three different installation standards, NFPA 13, NFPA 13R and NFPA 13D all maintain position requirements for residential sprinklers. Fixtures, structural members, and more, may or may not be considered obstructions to sprinkler discharge. Different obstruction rules vary with the characteristics of the obstruction. This seminar will explore the rules governing clearance to residential sprinklers through all three installation standards and demonstrate the impact of the rules on residential sprinkler spacing.

October 20, 2015

Obstructions to ESFR and CMSA Sprinklers

VICTORIA B VALENTINE, PE

Early suppression fast response sprinklers (ESFR) and control mode specific application (CMSA) sprinklers are commonly used in protecting storage scenarios. These sprinklers undergo different product testing in order to achieve their listing. With the large volume of water that comes from each of these sprinklers, they are extremely sensitive to obstructions. Fixtures, structural members, and more, may or may not be considered obstructions to sprinkler discharge. This seminar will explore the rules for positioning ESFR and CMSA sprinklers when obstructions are present.

November 17, 2015

Implementing New ITM Procedures from the 2014 Edition of NFPA 25

JASON WEBB

The 2014 edition of NFPA 25 is currently only adopted by a handful of jurisdictions as the process of updating codes and standards can take a few years or more. With that in mind you can expect that many states and local AHJs will soon begin enforcing the requirements of the current edition of the standard. To comply with the 2014 edition of NFPA 25, changes in the process of inspecting and testing

will need to take place. Whether it is as simple as conducting a valve status test instead of a main drain test, or the totally new practice of testing diesel fuel quality for fire pumps, everything from contract terms and conditions to how long an inspector should plan to be onsite will be effected. In this seminar, we will discuss some of the more significant of those changes and how to prepare for them.



December 15, 2015

Updating ICC Codes – Moving from the 2009 to the 2015 Edition

JEFFREY M HUGO, CBO

National code development often outpaces the actual code adoption in many jurisdictions. It is not uncommon for a community to be two or three editions behind the latest published edition. When it comes time to update, many questions arise about the new requirements. This course is designed to provide answers to those questions on what is new in the code. This course will also address those communities that have the older editions of the ICC codes and what to expect in the 2015 edition. There are many updates on fire sprinkler requirements, fire pump installation, fire department connections, and much more. The 2009 and 2012 edition codes to the 2015 edition will be reviewed while providing many visual representations, handouts and discussion to assist the fire sprinkler contractor and code official on the updates.

VIEW DEMO, SYSTEM REQUIREMENTS and REGISTER at: WWW.NFSA.ORG

SEMINARS WILL TAKE PLACE ON THE INTERNET ON TUESDAYS:
10:30AM Eastern / 9:30AM Central
8:30AM Mountain / 7:30AM Pacific / 2:30PM Greenwich

Inspection, Testing and Maintenance Related Training...

No One Does it Like NFSA!!!

By James D. Lake

NFSA has eight... count 'em, EIGHT, in-class seminars and a number of on-line seminars on NFSA.tv relating to NFPA 25 and Inspection, Testing and Maintenance.

Here they are...

INSPECTION AND TESTING FOR THE SPRINKLER INDUSTRY AND FIRE PREVENTION PROFESSIONAL.

This three-day seminar offers a complete walk-through of NFPA 25. Beginning with an introduction to the various types of water-based fire protection systems, the seminar continues with an in-depth exploration of the codes, standards and other documents that are used during the inspection and testing process. The seminar is designed for individuals that are involved in the inspection and testing of systems as well as fire prevention officials tasked with enforcement of the standard. It is a great seminar to take in preparation for certification testing.

ITM: NAVIGATING THROUGH THE LIABILITY MINEFIELD.

An effective inspection, testing and maintenance (ITM) program, conducted in accordance with NFPA 25, is critical to ensuring that water-based fire protection systems operate properly when needed. The program also acknowledges the liability exposure of ITM and prioritizes the need for clear communication in order to

protect the ITM contractor and technician. Communications with the building owner, the AHJ, and even internally, can have a dramatic impact on the success of a contractor's ITM program. This highly interactive seminar will walk participants through a process to develop a best practices approach to improve communications and reduce exposure to liability claims associated with an ITM program. This class is designed for Managers, Salespersons, Water-based Inspectors and Service Technicians.

UNDERSTANDING, APPLYING AND ENFORCING NFPA 25.

This highly interactive full day seminar describes the requirements for properly maintaining a water-based fire protection system in accordance with NFPA 25. The seminar clearly describes the responsibilities for compliance & record-keeping. It describes the specific scope of the standard and identifies the various ways in which information related to changes in the system are handled. It describes the various Tables used in the standard, their specific purposes, and when to use which Tables. It involves the attendees in a significant number of exercises to describe various problems encountered, identifying the proper section(s) of the standard that deals with it and discussing how to deal with issues not covered by the standard that may still be encountered.

WHO YOU GONNA CALL? COORDINATING NFPA 25 & 72 INSPECTION, TESTING, AND MAINTENANCE REQUIREMENTS.

Both NFPA 25 and NFPA 72 require coordination of the testing of the sprinkler systems and the fire alarm systems. That is easier said than done. With a variety of administrative code references, varying task frequencies, differences in scope and unique definitions used in the codes and standards overseeing fire protection system, ITM coordination of work becomes critical to ensure proper and complete building protection. This unique seminar will explore the issues and develop strategies to coordinate the work required by these two important standards.

This seminar is the result of a collaborative effort between the National Fire Sprinkler Association and the Automatic Fire Alarm Association

INSPECTION, TESTING AND MAINTENANCE FOR THE BUILDING OWNER/MANAGER.

The building owner is the single most important individual in the ITM of fire protec-



Vice President
of Field Operations

James D. Lake

tion systems. NFPA 25 contains numerous and detailed requirements that are the responsibility of the building owner. Yet, many building owners are not familiar with these requirements or with the systems in their building. This 1-day seminar provides an introduction to system type as well as the owners' requirements and limits related to ITM. Through discussion of the administrative chapters (1-4) and the systems chapters (5-12) of NFPA 25 and activities centering on system documentation, this seminar will provide the attendee with guidance on developing and continuing an effective ITM program.

We also have developed seminars for specific markets and regulations.

UNDERSTANDING, APPLYING AND ENFORCING NFPA 25 (CALIFORNIA EDITION).

This specialized seminar covers the requirements in the California Edition of NFPA 25 as well as the requirements in Title 19 of the California Code of Regulations. The seminar clearly describes the responsibilities for compliance & record-keeping. It describes the specific scope of the standard, and identifies the various ways in which information related to changes in the system are handled. It describes the various tables used in the standard, their specific purposes, and when to use which tables. It involves the attendees in a significant number of exercises to describe various problems encountered, identifying the proper section(s) of the standard that deals with it, and discussing how to deal with issues not covered by the standard that may still be encountered.

CALIFORNIA LIMITED LICENSE INSPECTION AND TESTING SEMINAR.

This interactive seminar will cover material addressed in the California Regulations governing limited licensure for inspection and testing of some components of wet-pipe sprinkler systems, standpipe systems and fire pumps. This seminar will use the NFPA 25, Standard on Inspection, Testing and Maintenance of Water-Based Fire Protection Systems (California Version) as a reference.

ALABAMA LIMITED LICENSE INSPECTION AND TESTING SEMINAR.

This seminar covers material addressed in NFPA 25 and the Alabama Regulations governing skilled worker exemption for inspection and testing of some components of wet-pipe sprinkler systems, storage tanks and fire pumps.

On-Line Seminar topics are found at www.nfsa.tv in either the Contractor Channel or the ITM Channel. Topics include the ITM Pulse series, ITM for Fire Pumps, ITM for Standpipes, as well as NFPA 25 Updates. These seminars are available on demand to fit your schedule.

A Primer for Attending an NFPA 25 Seminar

"Hey, I'm just the facilitator." meaning, I didn't write the code, I'm just the pretty face that presents it.

"That's what the code says." meaning... that is what the code says.

"There's no such thing as a stupid question." an oldie but a goodie.

Over the years, we NFSA instructors have heard and uttered statements that have become part of the experience of an ITM seminar. In order to get the most out of your training experience, it is important to know what these statements mean and how to respond.

"It Depends." The Number 1 Rule of all seminars is that this is the answer the facilitator will give to 90% of the questions that will be asked. Be ready though, because the follow up question will be "It Depends on What?"

"Tell me more about that." This is not a delay tactic. It is usually used because a response to a question has piqued the instructors interest (which is most of the time) so you may hear this quite a bit.

"What does the Standard Say?" This probably is a delay tactic. While it has a functional goal of having the attendees find the material in the standard, it is just

as likely to be used to provide the instructor with some time to find it as well.

"It's all about Chickens!!!"... This is a John Corso special. He uses this rather odd statement to explain the owners perspective on ITM. In other words, the owner only cares about one thing, and it is NOT ITM. But connecting ITM to the success of their business will take you far.

"Welcome to a committee meeting." This statement is typically used after a question to the attendees has resulted in half of them disagreeing with the other half.

"It's never about the money until it's about the money," followed quickly by *"and it is always about the money."* This is an obvious principle of business and one that needs to be emblazoned on your mind when conducting ITM contract negotiations.

"Words Matter!"... This is a favorite, especially in the ITM Liability seminar. There are specific terms and phrases that can convey different meanings to different people especially those that are uninitiated in the ITM process (the owners.) Choose your words wisely and make sure they describe exactly what you are doing.

"I'm just here to 'service' the system." This is a follow-on example of the fact that words matter. NFPA 25 only defines ITM. Service means different things to different people and does not describe what the inspection technician is actually doing. This could cloud the water in a liability lawsuit.

"There are only two kinds of contractors that conduct ITM... those that have been involved in a liability lawsuit and those that will be." This phrase is used as an attention-getter intended to focus the attendees on what the standard actually says and how it is applied

"If you can't cite it don't write it." Used again to focus attendees on what is required in the standard and what is not. What should go on a report and what should not. This is tricky as various states have various requirements... but in general, these are words to live by in ITM. ①

Inspection, Testing and Maintenance of Standpipe Systems

By Victoria B. Valentine, P.E.

All water-based fire protection systems need a check-up now and then to make sure that they are functioning properly. Standpipe systems are no exception. These systems are lifelines for the firefighting team in a building during an incident. Typically, standpipe systems are installed in accordance with NFPA 14, Standard for the Installation of Standpipe and Hose Systems. Chapter 13 in the 2013 Edition covers the inspection, testing and maintenance of systems installed per NFPA 14. Section 13.1 indicates that the system(s) need to be “inspected, tested and maintained by the property owner or authorized representative in accordance with NFPA 25, Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems, to provide at least the same level of performance and protection as designed.” Once in NFPA 25, the requirements for standpipe systems are covered in Chapter 6 of the 2014 Edition.

It is important to note that NFPA 25 provides the minimum requirements for inspection, testing and maintenance of water-based systems and there may be cases where an owner is seeking more than the standard inspection. Another key is that some components or products may have alternate recommendations for frequency of inspection or testing requirements as part of the manufacturer’s instructions. Yet, the majority of standpipe systems are comprised of standard components and products so this is not

often the case.

Inspecting the components is typically the simplest of the requirements in NFPA 25. An inspection is defined in Section 3.3.23 as “A visual examination of a system or portion thereof to verify that it appears to be in operating condition and is free of physical damage.” This means the component is only looked at to see if it appears normal and operational at the frequencies indicated.

Section 3.3.47 defines testing as “A procedure used to determine the operational status of a component or system by conducting periodic physical checks, such as waterflow test, fire pump tests, alarm tests, and trip tests of dry pipe, deluge or preaction valves.” Here an action is required beyond just examining the device. One example would be flow tests. Standpipe systems, like other water-based fire protection systems, have to be periodically flowed to ensure that the system is operating as it is intended.

Maintenance is key to making sure any equipment continues to work over time. Section 3.3.25 defines it as “...work performed to keep equipment operable or to make repairs.” The inspections and tests are what determine if the maintenance is necessary for most components. There are a few components that have scheduled maintenance periods for components even without the tests.

The first question typically asked related to inspections is: how often do components have to be inspected,

tested, or maintained? Table 1 shows the frequencies of typical standpipe system components. As noted, these range from weekly to every 5 years. In addition to the items shown in Table 1, the valves, alarm devices and other components that overlap many water-based systems are covered in Chapter 13 of NFPA 25. Table 2 (*page 14*) shows their frequency summary. There are also detailed items to look for during inspections so that items can be repaired or replaced as necessary. The overall guidance provided indicates that components should not be corroded, contain foreign material, or be damaged as any of these conditions could impact the performance of the system.

Although many of the inspections and tests can relate to other types of water-based fire protection systems, the application is not always clear cut. One of the first items to address is combined systems. A combined system is where the standpipe system and the fire sprinkler system share their riser piping in the building. In this case, the requirements in NFPA 25 for both standpipe systems and

>> CONTINUED ON PAGE 14



NFSA's Director
of Engineering

Victoria B. Valentine, P.E.

Table 1: Standpipe Components ITM Summary

TASK	COMPONENT	FREQUENCY
Inspection	Gauges	Weekly/Quarterly
	Piping	Annually
	Hydraulic Design Information Sign	Annually
Test	Hydrostatic Test	Every 5 years
	Flow Test	Every 5 years
Maintenance	Hose Connections	Annually

Table 2: Standpipe System Valves and Other Devices Summary

TASK	COMPONENT	FREQUENCY
Inspection	Control Valves	Sealed – Weekly Locked or electrically supervised – Monthly
	Pressure Regulating Devices	Annually
	Hose Connections	Annually
	Hose Valves	Annually
Test	Waterflow alarm devices	Mechanical – Quarterly Vane and pressure switch-type – Semiannually
	Valve supervisory devices	Quarterly
	Supervisory signal devices	Semiannually
	Pressure control valve	Every 5 years
	Pressure reducing valve	Every 5 years
	Main Drain Test	Annually per water supply Quarterly when sole water supply through backflow preventer and/or pressure reducing valves
	Hose Valves	Annually
	Hose Connections	Annually
Maintenance	Valves	Annually
	Hose valves	Annually

fire sprinkler systems would be applied. However, by completing the inspection at one point in time would allow for any redundancy to be eliminated. The remainder of this article will only be addressing standpipe system requirements.

There are three classes of standpipe systems: Class I, Class II, and Class III. Since a Class III system also supplies fire department demands with greater flows, Class I and Class III systems are required to have the same inspection, testing and maintenance schedule. As the components do not differ much from a Class I to a Class II system, most of the inspection schedule is the same. However, The flow test that is done every 5 years is only called out for Class I and Class III systems. In addition, the hose valves have different periods for testing. Class I and Class III standpipe systems test the hose valves annually to ensure that they open and close fully. In a Class II system this is only done every 3 years. The action is the same where if they are difficult to operate or are leaking, then they have to be fixed or new ones installed.

Flow Testing

A flow test for any water-based fire protection system shows that comparable water is traveling through the system as was during the initial testing upon installation of that system. It also ensures that all the appropriate valves are open and allowing the water to flow into the system. For standpipe systems, systems are flow tested every 5 years.

In the 2014 Edition of NFPA 25 the requirement for the 5-year standpipe flow test was modified to require 500 gpm at the most remote standpipe and then 250 gpm for each additional standpipe until the total system demand is simultaneously flowing. Previous editions only required the 500 gpm at the most remote standpipe to flow. This now shows that the system demand can be met by the water supply. That total demand is based off of the design criteria that were applied at the time the system was installed.

There is an allowance when permitted by the authority having jurisdiction (AHJ) that the flow may not have to be at the hydraulically most remote outlet. This is

done if it is not practical to flow the water from that location. The alternative location would have to be worked out with the AHJ. The flow(s) from additional standpipes is permitted to be from the most convenient hose valve location on that standpipe. The actual procedure used for the flow testing needs to be planned in advance with the AHJ. This can often reduce concerns of where and how the water will be drained based on flowing locations.

All Class I and Class III standpipe systems have to be flow tested. This includes manual systems. This typically means coordination with the fire department since they are the anticipated source of the water supply in a fire incident for a manual system. This is how the correct flow and pressure for the system would be achieved.

In addition, main drain testing is required for each standpipe in the system. This allows for comparison with the water supply from the system's acceptance tests. If the water supply values have been reduced by 10 percent or more additional investigation will be needed to determine the cause of the reduction and remedy the situation if needed.

Hydrostatic Testing


Making sure that the piping network can maintain a specified amount of pressure from within is extremely important for all systems. This is especially true of standpipe systems where the fire department connects to the piping network and pressurizes the pipe to the needed levels. Therefore, a hydrostatic test is required for manual standpipe systems and semi-automatic dry standpipe systems every 5 years. The purpose of this periodic test is to check for leaks in standpipe systems that are generally empty, such as manual standpipe systems, and semiautomatic dry standpipe systems. When a manual wet standpipe system is part of a combined system, the hydrostatic test is not required. The water pressure for the fire sprinkler system is deemed sufficient to demonstrate the integrity of the piping network.

This test is conducted at 200 psi. However, if the system working pressure is over 150 psi, then the test is done at 50

psi more than the maximum pressure. The pressure must be held for 2 hours and is measured at the low elevation point of the system. If the pressure cannot be maintained, then that is evidence of a leak in the system, which will have to be corrected.

The requirement for hydrostatic testing also includes the testing of the fire department connection (FDC) piping for those systems. This ensures that the feed to the rest of the system is performing as intended. FDCs on other standpipe systems are also required to undergo a hydrostatic test, but the pressure is 150 psi per Section 13.7.4. This is a new requirement that ensures that all FDCs are subject to at least some periodic pressure testing. This is especially important since the FDC piping is exposed to more potential damage than most other system components and not under pressure until an incident is in progress. The typical starting pressure supplied to the FDC by fire departments is 150 psi when they are in use, which relayed into the value for the testing.

Summary

Inspection, testing and maintenance cannot be emphasized enough. Without it systems may not function when they are needed. Standpipe systems are the water supply for fire fighters who are on the front lines of a fire incident. In order to protect their lives, the components of the standpipe system need to be reviewed to ensure they are free from damage and can perform as they were intended. When repairs or replacements of parts are necessary, the deficiency should be minimized by quickly completing the work. 



FUTURE NFSA ANNUAL SEMINAR SCHEDULE

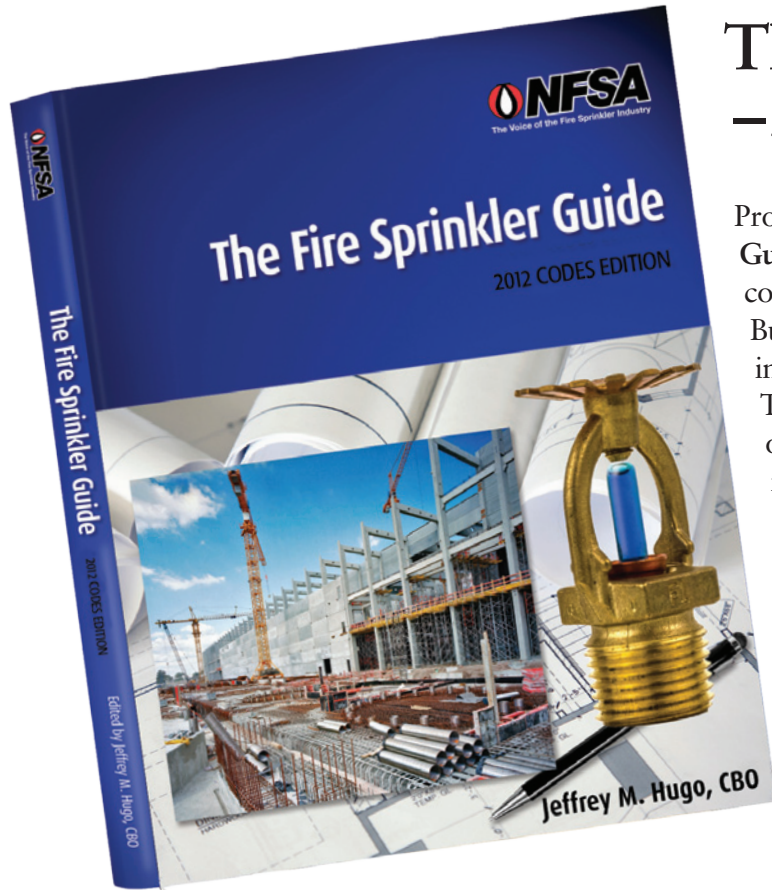
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The Fire Sprinkler Guide –2012 Codes Edition



Produced by NFSA, this second edition of **The Fire Sprinkler Guide** defines those sections of the three model building codes, the Life Safety Code (NFPA 101) and International Building Code where fire sprinkler systems are required, including partial requirements and construction incentives. The guide includes comparison tables to clarify many of the code requirements. The guide is a valuable tool for architects and engineers, plan reviewers, fire and building inspectors, as well as sprinkler contractors, and serves well as a workbook for students at the NFSA's Design Advantage Seminar. This book is a "must have" for anybody that performs hydraulic calculations of fire sprinkler systems or performs plan review and approval of hydraulic calculations.

Order your copy at www.nfsa.org at the Resource Center or fill out and return the order form below.

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Fire Sprinkler Signage Requirements of NFPA 25

By Jeff Hugo, CBO

Signs are important. Signs tell how a system was designed and the factors that affected the installation. This article will outline the requirements for new signage and maintaining signage for fire sprinkler systems according to NFPA 25. Signs advise ITM contractors, building personnel, code officials and responding fire departments that a specific device controls the water supply to another part of the system, or that the system has specific equipment installed, among many other details.

It is important to note that this article is only for fire sprinkler systems and is written from the perspective of existing sprinkler system signage and what the system should, at minimum, have installed. Depending on the edition of the installation standard (NFPA 13, NFPA 14, NFPA 20, etc.), each system might have a different amount of existing signs as compared to other newer or older systems. This article is not going to address all of the signs required by NFPA 13 or other standards at the time of acceptance. However, NFPA 25 requires that all signs installed by NFPA 13 and other installation standards be maintained as installed.

Signs on Valves

Each control valve shall have a sign, regardless of where the control valve is located. The sign on the control valve

shall indicate the system or portion of the system that it controls and any special instructions to opening and closing the valve, other valves that are required to be open or closed for system operation or maintenance and locations of wrenches to open or close the valve. An accompanying sign shall be installed on the riser or another location approved by the Authority Having Jurisdiction (AHJ), that clearly indicates where all of the control valves are in the system.

Signs on Risers

The riser is the gathering place for many signs, such as the information sign, the general information sign, the hydraulic design information sign and other important information that future inspectors and authorities will need to maintain the sprinkler system. All of those mentioned are described below.

A sign shall be installed on the riser or another location, approved by the AHJ, that clearly indicates where all of the control valves are in the system. This sign does not have to be a stand-alone sign, and is typically incorporated into the information sign, discussed next.

When an existing system has specific conditions as listed below, an information sign is required to be installed on the control riser. This sign is the only new sign for existing systems that is required by NFPA 25 to be installed if the appropriate conditions exist. This sign is only

required when supplying:

- An antifreeze loop
- A dry system
- A preaction system
- A system with additional control valves as discussed in the section above

When this sign is installed through one of the above bullet points, the sign covers four specific areas:

- The location of the area in the building or buildings that is served by the system.
- The location of auxiliary drains and other low point drains when installed on dry or preaction systems. Note, this is not required for wet systems.
- If installed, the area where the antifreeze portion is located.
- If installed, the area and locations of heat tape or heating cable.

Since the 2007 NFPA 13, a general information sign is required to be installed on the system riser, antifreeze loop or any auxiliary control valve locations. NFPA 25 is not going to require a new

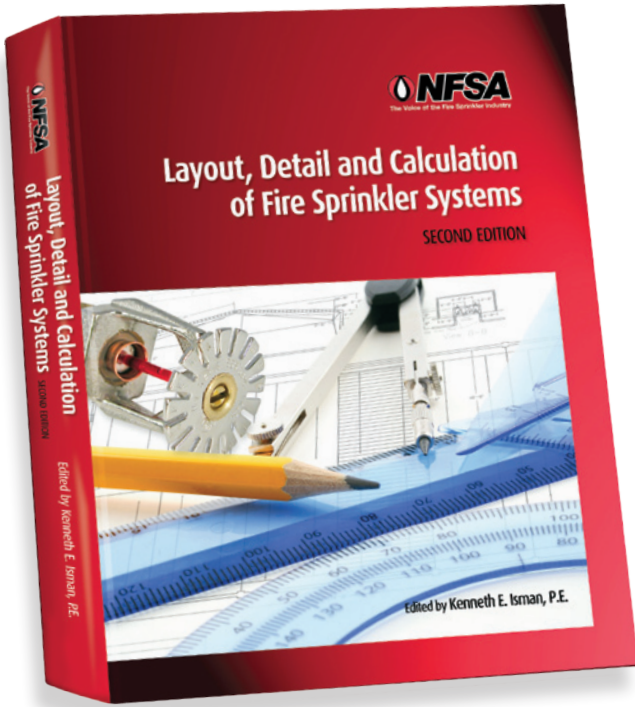
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NFSA's Manager
of Codes

Jeff Hugo, CBO

2nd Edition of Layout, Detail and Calculation of Fire Sprinkler Systems



The NFSA announces the publication of the 2nd Edition of its popular textbook, *Layout, Detail and Calculation of Fire Sprinkler Systems*. This newly revised hardcover textbook has been updated to reference the 2007 and 2010 editions of NFPA 13 with more examples and student exercises and new chapters on contract issues and stocklisting. This text remains the most complete book ever written for the fire sprinkler engineering technician and it's available now!

Written by the NFSA Engineering Department staff and edited by Kenneth E. Isman, P.E., Vice President of Engineering, this text covers every aspect of determining the necessary details for a fire sprinkler system including: hazard classifications, sprinkler spacing, hanger and brace requirements, hydraulic calculations, water supplies, pumps and tanks. The text also contains a review of basic math and physical science that is helpful in understanding the scientific principles behind the requirements that need to be followed.

This text makes an excellent self-study guide for the NICET Automatic Sprinkler Layout and Detail certification program and covers all of the work elements necessary to achieve Level 2 certification and many of the elements needed to achieve Level 3 and Level 4 certification. Even if you are not studying for a NICET exam, this text makes an excellent self-study guide for anyone wanting to know more about fire sprinkler systems.

The text retails for \$95 (plus S&H) to members of the NFSA and \$145 for non-members (plus S&H). To get your book, fill out the following form and return it with your payment.

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general information sign for systems installed under older standards. However, this sign is required to be maintained when installed through the 2007 edition and newer of NFPA 13. The information required on the general information sign is lengthy. Each edition of NFPA 13 has specific information on what the sign shall indicate. For example, the 2013 edition of NFPA 13 has a 17 item list that is required to be on the general information sign. This list includes: the original main drain test results, flow test results, specifics on what is being stored, height, etc.

A hydraulic design information sign is another sign that NFPA 13 requires to be installed and maintained. This sign provides the information that pertains to the criteria that was used to install and layout the system such as the density and area calculated for the remote area, the hose allowance, etc. This sign is installed on the system riser. If missing or illegible, it will need to be re-installed by the requirements of NFPA 25. If the sprinkler system was installed according to the pipe schedule method, then the hydraulic design information sign is still required to be installed. However, the

sign will state, "PIPE SCHEDULE SYSTEM".

Dry and preaction systems that have auxiliary drains on trapped piping shall have the number and locations listed on a sign that is installed at the dry or preaction valve. If this is a dry or preaction valve on a wet system that protects small isolated systems, a sign will be required at the isolated valve that indicates any auxiliary drains. Since this system has a control valve, this small system will also have a sign at the main riser.

ITM of Signs

NFPA 25 requires that the signs are legible. Some other codes and standards may require the letters to be of a certain height and contrasting color, but NFPA 25 is only concerned that the words and numbers on the signs are clear enough to read. Signs are installed in a variety of different environments. This should be considered when installing or replacing a sign. Conditions may warrant more care, thought or security of a sign if it is in a heavily travelled public place, or if the system is in a humid or corrosive atmosphere. Table 1-1 outlines the NFPA 25 requirements. As noted above, NFPA 13 and

the other water-based system installation standards may have additional signage requirements at the time of installation. NFPA 25 would require all signs deemed necessary by the installation standard to be maintained. The blank cells in the table indicate that NFPA 25 is silent on that specific requirement.

Summary

Sprinkler systems are installed for the life of a building that may see several decades of multiple owners. Signage for fire sprinkler systems cannot be overlooked at the acceptance testing of a new system. Signs that are missing may never be installed and any specifics of the system, such as trapped piping or other control valves may never be known to the owner or future inspectors. NFPA 25 requires that the signs installed per the installation standard be maintained. In only one case does NFPA 25 require a new sign installed, an information sign. Careful attention should be used for signage, as it tells everyone, especially those who don't know what a sprinkler system is or the control valve functions, the importance of the components of the system. ①

TABLE 1-1

	Valves	Information Sign	General Information Sign	Hydraulic Design Information Sign	Other FDC, Etc.
Sign Material		Metal or Rigid Plastic			
Location	At Component	Riser		Riser	At Component
Method of Attachment		Corrosion-Resistant Wire, Chain or Equivalent	Wire, Chain or Equivalent	Durable Wire, Chain or Equivalent	
Marking		Permanently Marked and Legible	Legible	Legible	
Inspection	With Component Frequency	Annually	Annually	Quarterly	With Component Frequency

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Suppliers' Showcase

RELIABLE AUTOMATIC SPRINKLER

Kevin Fee New President of Reliable Automatic Sprinkler

The Reliable Automatic Sprinkler Co., Inc. announced that **Kevin T. Fee** has been elected as the fourth President of the Company, succeeding Frank J. Fee III. As President, Kevin assumes the dual roles of CEO and COO with all aspects of Reliable's business operations and decision-making reporting to him.

Kevin Fee brings strong academic credentials and extensive experience to his new position. He is a proud graduate of Boston College and holds an MBA degree from Columbia University. He has served as Reliable's Executive Vice President for 28 years, having been responsible for significant segments of the Company's operations.

Kevin Fee is a dedicated contributor to the enhancement of the fire sprinkler concept through his long standing role as a Director of the National Fire Sprinkler Association, former Chairman and recipient of the Association's Golden Sprinkler Award. Also he was a founding member and first Chairman of the International Fire Sprinkler Association and continues to serve on the Board of Directors.

Since the Company's founding in 1920, Reliable has always been managed by the Fee Family. With Kevin Fee as its new President, Reliable continues the 95 year-old tradition of family management and personal involvement in the Company that is a proud leader in the global fire sprinkler industry.



Frank J. Fee III has been elected Chairman of the Board of Directors, overseeing Board related governance matters and the Board's support to Reliable's new management team. He had served as President since 1976.

NFSA wishes Kevin much success in his new role and looks forward to continuing our long and fruitful relationship. He has been an invaluable part of the Association's goal of fulfilling its mission statement; To protect lives and property from fire through the widespread acceptance of the fire sprinkler concept.

Thank you and congratulations. 🎉



The Suppliers' Showcase feature is available to any NFSA Supplier and/or Manufacturer member in good standing. If you are interested in having your company featured here, please contact Joanne Genadio at genadio@nfsa.org or 845.878.4200 x118. Features will be published on a first come, first serve basis.

Protecting Your Community with Home Fire Sprinklers

New homes have many advantages. But they also present unique fire hazards that result from lightweight construction, popular open-design concepts and certain energy-efficiency features. Combine these with typical modern contents, such as electronics and synthetic furnishings, and you have the makings of fast and deadly flashover fires.



Visit our website to view the video and request a free copy: HomeFireSprinkler.org.

The Home Fire Sprinkler Coalition has a new free video to help building officials understand the important role fire sprinklers play in new construction. The video includes interviews with experts from the National Institute of Standards and Technology (NIST) and Underwriters Laboratories (UL). They've conducted fire tests and research showing why fires in new single-family homes are more dangerous and how fire sprinklers protect occupants and firefighters.



©2014, Home Fire Sprinkler Coalition

FREE RESOURCES To Help You Protect Your Community

The nonprofit Home Fire Sprinkler Coalition (HFSC) is the leading resource for independent information about home fire sprinklers. HFSC develops a wide range of fire safety educational materials that are provided at no charge and can be downloaded or ordered on HFSC's website, HomeFireSprinkler.org.

The Fire Sprinkler Installer's Construction Outlook for 2015 and 2016

Total construction put in place in 2014 was estimated to be 5% greater than 2013. When one considers that the margin of error in those numbers is +/- 5%, the estimated change by the US Census Bureau could have been as much as 10% or as little as 0%. Regardless of the change, a meaningful \$961 billion of new construction was estimated to have been completed in 2014, an amount that is 18% below the annual peak in 2006 but 22% above the bottom in 2011, measured in whole years. Looking closer at the numbers, \$687 billion, up 7%, was private sector construction and \$273 billion was government, up 2%.

Approximately \$426 billion of the \$961 billion in 2014 or approximately 44% of the total represented construction put in place in which fire sprinkler installation is either required or installed electively in a high percentage of the structures. 2014 was also the second year in a row that new construction completions with fire sprinkler installations grew significantly. 42% of privately owned and 49% of all publically owned new construction put in place in 2014 were structures in which fire sprinklers were either required or installed electively in a high percentage of the structures. Table 1 lays out the individual construction break down for the totals for each segment.

Of note, 52% of the total volume or \$221 billion composing five industry segments had double digit growth in 2014. More over Tables 2 and 3 below further distinguish the fiber of these segments. Privately owned construction continued its trend of outpacing publicly owned construction in terms of growth.

The balance of this summary discusses the status and outlook for US construction in general as well as and the public and private combined new construction segments that were experiencing double digit growth in which fire sprinkler installation is either required or installed electively in a high percentage of the structures.

[\(SEE TABLE 1 - PAGE 24\)](#)

[\(SEE TABLE 2 - PAGE 25\)](#)

[\(SEE TABLE 3 - PAGE 26\)](#)

US Construction Status and Outlook:

Like many other industries, the US construction industry is tied to changes in demographics and the performance of the underlying US economy as a whole. Therefore, if one is going to try to predict what may happen with construction, one of the first steps is to examine what is happening with the underlying US economy.

During the first quarter of 2015, the metrics for the US economy looked rocky. Employment was showing anemic growth,

GDP contracted 0.7% (the second year in a row that Q1 GDP contracted to start the calendar year) with the main contributing factors being the harsh winter and the labor unrest at West Coast ports} and construction activity slowed. All of this was very similar to 2013's start. Following the first quarter, employment numbers improved significantly adding 280,000 jobs in May, up from 221,000 in April.

Non-residential building construction¹¹ employment grew 9% to 715 thousand since this latest upward trend began in mid-2012 as can be appreciated in Graph 1. Employment growth for total building construction rose 14% to 1,411 thousand over the same period. The major contributing factor toward the disparity in the two building type statistics appears to be the extremely rapid growth in multi-family. Total construction employment increased 13% over the same period to 6,387 thousand.

[\(SEE GRAPH 1 - PAGE 27\)](#)

[\(SEE TABLE 4 - PAGE 28\)](#)

Consumer spending, while flat from March to April 2015, increased 2.8% compared with April 2014. Representing 70%

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Footnote: F1 – CB Partners recast of Non-residential Building Construction dollars put in place and/or employment includes statistics from only the following non-residential construction segments: Lodging, Commercial, Office, Healthcare, Educational, Communication, Religious, Amusement & Recreation, Public Safety, Transportation and Manufacturing. These are the segments in which fire sprinkler installation is either required or installed electively in a high percentage of the structures.



Managing Director,
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Greg Coggiano

Table 1: Public & Private Annual Construction Put-in Place Occupancy Types in which fire sprinkler installation is either required or installed electively in a high percentage of the structures.

Source: US Census Bureau

Occupancy Type	Total \$ Millions 2014 ^r	% of Total \$	Cumulative % of Total \$	% Δ in \$ 2013 to 2014 ^r
Total	\$426,035	100%		9%
Educational	\$78,428	18%	18%	1%
Commercial	\$57,276	13%	32%	12%
Manufacturing	\$54,985	13%	45%	16%
Multi-family	\$48,808	11%	56%	27%
Office	\$44,630	10%	67%	19%
Transportation	\$41,865	10%	77%	5%
Health Care	\$38,979	9%	86%	-6%
Amusement and Recreation	\$16,672	4%	90%	7%
Communication	\$15,897	4%	93%	-7%
Lodging	\$15,604	4%	97%	19%
Public Safety	\$9,334	2%	99%	-3%
Religious	\$3,557	1%	100%	-3%

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of GDP, consumer spending rose in 65 of the last 72 months ending April 2015.

The market consensus of construction economists estimate 7.7% growth in non-residential construction in 2015 and over 8% in 2016. In support of that, Kermit Baker, the economist for AIA, forecast that employment growth for the construction industry would average 25,000 jobs a month for 2015. In other words, 2015 is expected to be another good year. Others agree. More specifically from the review of fire sprinkler company contract installation backlogs from various parts of the country, in the author's opinion, 2015

construction completions are expected to be greater than 2014.

What major contributing factors might hinder a continuing increase in construction activity particularly as it relates to the fire sprinkler industry?

- **Falling oil and gas prices** - This might have a particularly negative effect on construction in areas of Texas, Oklahoma, Louisiana, Colorado, North Dakota, South Dakota, Pennsylvania, West Virginia and Ohio as new oil and gas fracking activity might suffer from reduced activity. But, in other parts of the coun-

try, low oil & gas prices might spur increases, especially with regard to consumer spending on vacations and other activities. Therefore, the falling oil and gas prices might have a positive effect on construction in some parts of the country.

- **A reversal of Obamacare** - One can appreciate that healthcare construction at approximately \$40 billion in 2014, and with an indicated 6% decline from 2013, might suffer even more if the healthcare system abruptly changes in a way that is indicative of insuring less

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Table 2: Public Annual Construction Put-in Place Occupancy Types in which fire sprinkler installation is either required or installed electively in a high percentage of the structures.

Source: US Census Bureau

Occupancy Type	Total \$ Millions 2014^r	% of Total \$	Cumulative % of Total \$	% Δ in \$ 2013 to 2014^r
Total	\$134,787	100%		0%
Educational	\$61,966	46%	46%	1%
Transportation	\$29,922	22%	68%	4%
Health Care	\$10,037	7%	76%	-10%
Public Safety	\$9,125	7%	82%	-4%
Amusement and Recreation	\$8,969	7%	89%	8%
Office	\$7,710	6%	95%	-2%
Multi-family	\$5,206	4%	99%	-13%
Commercial	\$1,852	1%	100%	-18%

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people than it does now through Obamacare.

- **Rising interest rates** - On June 17, the Federal Reserve indicated that it may begin to increase interest rates as early as September 2015 signaling an end to the near zero interest rate level established in 2008. This one event may slow overall economic and construction growth as cost of financing construction and other investments may rise.
- **A continued labor shortage** - construction employment dropped 2.2 million workers from the peak to the trough (200k in the case of Non-Residential building employment.) Given the duration of the decline, the trough and the slow growth prior to recent times, a trained bench no-longer exists to rehire as construction grows. Recruiting and training new workers holds back growth.
- **A continued strong dollar that negatively impacts the export and pur-**

chase of US goods & services by international consumers.

- **Peaking of demand for certain structure types.**

According to leading construction economists, the recovery is gaining steam and may be here to stay for a while. "[2014] marks the first year where the institutional sector is no longer pulling down the other construction sectors," said Robert Murray, chief economist and vice president, Dodge Data & Analytics (DDA) [formerly McGraw-Hill Construction (MHC)]. "In fact, the recovery in non-residential is now established. It's clear we are in broad-based and recognized recovery that is cyclical and reminiscent of 1990s, which led to a 20-year period of stability and growth."

Multi-family Construction Status and Outlook:

With \$48 billion in total multi-family (MF) construction put in place, as at year-end

2014, MF represented the fourth largest new construction segment in terms of annual dollar volume into which fire sprinkler installation is either required or installed electively in a high percentage of the structures as part of the construction installation. At 23% year-to-year growth from year-end 2013 to 2014 for combined private and public MF, MF continues to demonstrate the highest post great recession growth rate of all of the construction segments.

(SEE TABLE 5 - PAGE 29)

As one can appreciate from Table 5, while MF continues to have exceptional growth in completions, its growth rate is slowing.

2015 is expected to be another great year for MF. May 2015 starts on an annualized basis are estimated by the US Census Bureau to be 2.6% greater than May of last year. More significantly, the units under construction were 20% greater

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Table 3: Private Annual Construction Put-in Place Occupancy Types in which fire sprinkler installation is either required or installed electively in a high percentage of the structures.

Source: US Census Bureau

Occupancy Type	Total \$ Millions 2014 ^r	% of Total \$	Cumulative % of Total \$	% Δ in \$ 2013 to 2014 ^r
Total	\$291,248	100%		13%
Commercial	\$55,424	19%	19%	14%
Manufacturing	\$54,985	19%	38%	16%
Multi-family	\$43,602	15%	53%	35%
Office	\$36,920	13%	66%	24%
Health Care	\$28,942	10%	75%	-5%
Educational	\$16,462	6%	81%	-2%
Communication	\$15,897	5%	87%	-7%
Lodging	\$15,604	5%	92%	19%
Transportation	\$11,943	4%	96%	8%
Amusement and Recreation	\$7,703	3%	99%	7%
Religious	\$3,557	1%	100%	-3%
Public Safety	\$209	0%	100%	70%

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nationwide than they were at the end of May 2014. Completions were almost 50% greater in May 2015 than 2014 and 28% greater in May 2015 vs. April 2015. The drivers behind this growth remain unchanged:

- A continued lower percentage of homeownership by millennials at young adult ages compared with previous generations.
- Regional population growth whose key influences are jobs, affordability of housing and Millennials preference for urban rather than rural and suburban living.

- Baby boomer migration to climates of choice for retirement.

According to Jones Lang LaSalle (JLL) most regions and urban centers around the country are peaking in terms of high occupancy and high rental rates. As of near the end of 2014, year-to-year rent growth and other characteristics are quoted by JLL as follows:

- Rent growth averaged over 3 % across the nation.
- San Francisco area increased the most at over 6%, followed by Seattle, Nashville, Denver and Houston respectively, with Houston increased over 4.5%.
- Inland Empire, Orange County, San Di-

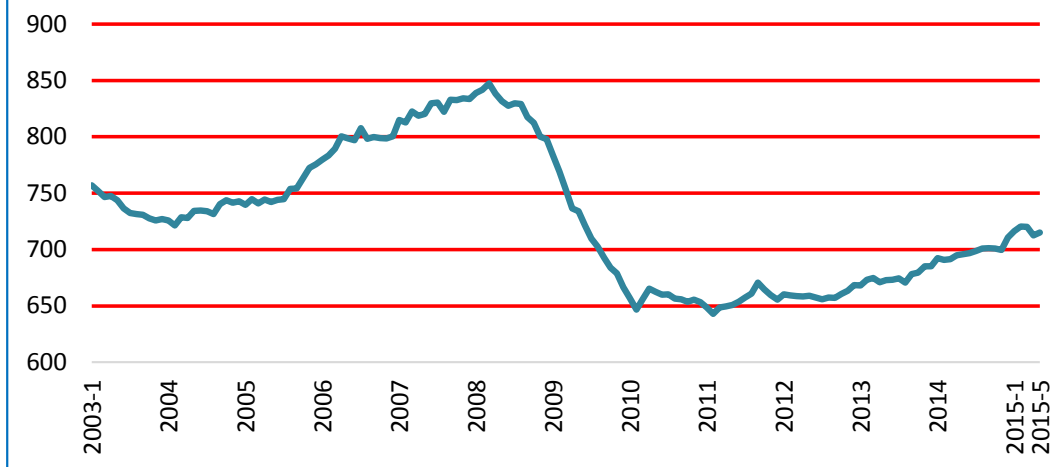
ego, San Francisco (San Francisco, Silicon Valley & Bay area) and New York City are the nation's tightest markets in terms of occupancy with MF occupancy rates at 97% or greater.

- Occupancy rates of 96 to 97%: Boston, Philly, Baltimore, Northern New Jersey, Chicago, Denver, Los Angeles and Portland.
- Occupancy rates of 94% to 96%: Washington DC, Richmond/Tidewater, Raleigh, Charlotte, Nashville, Atlanta, Orlando, Tampa, South Florida, San Antonio, Austin, Dallas/Fort Worth, Houston, Phoenix, Vegas, Denver and Seattle.

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Graph 1: Non-residential Building Construction^{f1} Employment in Thousands

Source: Base Data, US Bureau of Labor Statistics; Segment Data Recast, CB Partners



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- Jacksonville 94% to 93% and Memphis greater than 93% occupancy rates.
- Austin, Raleigh, Seattle, New York City, Charlotte and Jacksonville have seen the largest growth of inventory over the last 12 months.
- Markets that demonstrated the strongest growth fundamentals from 2013 to the end of 2014 were: the Sunbelt as a whole, but more specifically within that – Raleigh, Jacksonville, San Antonio, Charlotte and Houston.

Given the rapid but slowing annual growth rate in MF, some industry experts are writing with more frequency that developers need to begin to temper starts if the balance between supply and demand is to remain healthy beyond the 2015/16 time period. Still others cite: *Freddie Mac economists estimate apartment demand will average 440,000 units per year over the next decade (Paraphrased from January 2015 Electrical Contractor Magazine article by Jeff Gavin entitled, 2015 Construction Outlook: An Economic Recovery Finds Its Footing)*. The Census Bureau estimates that there were more than 450k multi-family units under construction in 2014 with 260k completions nationally.

It is conceivable that the Freddie Mac economists are conservative in their es-

timates of new multi-family unit demand of 440,000 per year moving forward for the next decade. Looking back at history of private multi-family units put in place from the beginning of 1969 until the end of 1988 (see *Graph 2*), the period when Baby Boomers (BB) and retirees from the pre BB generations spurred demand for multi-family units, there were an estimated 10.8 million newly constructed multi-family units put in place, an average of 570,000 per year. From 2015 through the 20 years that follow, multi-family building construction is expected to have to accommodate the needs of the millennial generation, which is larger than the Baby Boomer generation, the retiring Baby Boomer generation, and replace/retrofit older multi-family housing.

(SEE GRAPH 2 - PAGE 29)

That being said, matching multi-family construction put in place with demand can be a delicate balancing act, especially if developers build without regard to the fundamentals of demand.

Expect continued growth in MF in 2015 and 2016, but perhaps a tempering of that growth as we move forward through 2016.

Commercial Construction Status and Outlook:

With a total of \$57 billion of total commercial construction put in place as at

year-end 2014, commercial construction represented the second largest new construction segment in terms of annual dollar construction volume into which fire sprinkler installation is either required or installed electively in a high percentage of the structures as part of the construction installation. Commercial construction grew by 12% year-to-year from year-end 2013 to 2014. Led by growth in private commercial construction, the segment has been a solid performer in terms of growth since the great recession. Commercial construction consists of a wide variety of private retail, wholesale, service, storage and distribution structures categorized within the following six private industry classifications: automotive (sales, service, parking); food and beverage (food, dining/drinking, fast-food); multi-retail (gen merchandise, shopping centers, shopping malls); other commercial (drug stores, building supply, other stores); warehouse and distribution (general, mini-storage); farm. The remaining category is public, one all-inclusive classification for the entire segment.

(SEE TABLE 6 - PAGE 30)







Generally speaking, commercial construction lags demographic movements somewhat. In other words, in very over simplified terms, in this economic cycle,

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Table 4: Summarized New Construction Metrics for new structures

in which fire sprinkler installation is either required or installed electively in a high percentage of the structures

Source: Base data, US Bureau of Labor Statistics and US Census Bureau; Data Recast, CB Partners

	(000's) of Jobs Lost from Peak ³ to Trough ^{4, 5}	(000's) Jobs Gained Trough ⁴ to end of May 2015 ⁵	(000's) Jobs Gained as a percentage of Jobs Lost ⁵	\$ MM Construction PIP lost from Peak ³ to Trough ^{4, 5}	\$ MM Construction PIP Gained from Trough ⁴ to the end of May 2015 ⁵	\$ MM Construction PIP Gained as a percentage of \$MM Lost ⁵	\$MM Construction Rate of $\Delta^5, 6$: Accel. =  Flat =  Decel. = 
Total Construction	2,294	955	42%	\$458,300	\$251,090	55%	
Total Building Construction ¹	620	208	34%	\$494,790	\$219,553	44%	
Non- residential Building Construction ²	204	72	35%	\$192,829	\$106,632	55%	

1. Total residential (sf + multi-family) construction plus non-residential building construction.
2. Non-residential building construction includes only the following non-residential construction segments: Lodging, Commercial, Office, Healthcare, Educational, Communication, Religious, Amusement & Recreation, Public Safety, Transportation and Manufacturing. These are the segments in which fire sprinkler installation is either required or installed electively in a high percentage of the structures.
3. Peak is the highest volume month prior to the Great Recession
4. Trough is the lowest volume month either during or after the Great Recession
5. All statistics used for analysis are seasonally adjusted and on an annualized basis
6. Time Period of change: 6/30/12 (when the upward growth of construction took hold after Great Recession) to 5/31/15

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millennials moved to urban areas attractive to them, retirees to areas attractive to them and job growth attracted millennials and others. As such, single-family, multi-family, lodging, office and manufacturing are the lead construction segments. Commercial, educational, amusement and recreation, transportation, healthcare and other construction follow the afore-

mentioned with a slight lag.

To wit, the growth numbers for commercial construction were increasing in rate. Commercial construction is being put in place in support of areas with increased and increasing populations, jobs and increasing job activity, and rebuilding to replace old structures. Leading the way in terms of growth, in structures with fire sprinklers in this segment, is ware-

housing and distribution, which topped off its fourth consecutive year of growth with 50% from year-end 2013 to 2014 to a volume of \$13 billion nationwide. Hand in hand with warehousing were shopping centers (as opposed to shopping malls which were in decline) which topped off its third consecutive year of growth with 29% to a volume of \$12 billion at year-end

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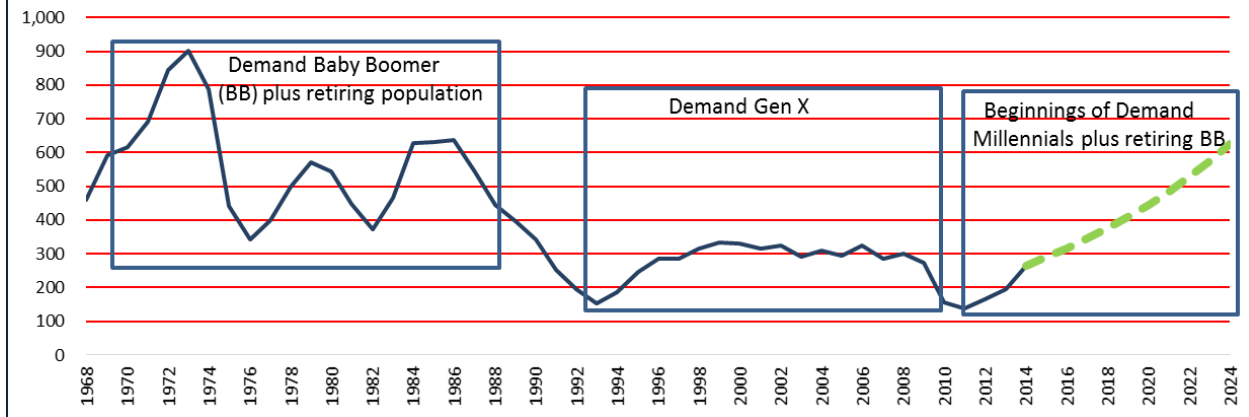
Table 5: Multi-family Annual Construction Put in place from Peak to end of 2014

Source: US Census Bureau

	2006	2007	2008	2009	2010	2011	2012	2013	2014r
Total \$ mm	\$58,886	\$56,181	\$51,827	\$36,553	\$24,980	\$23,561	\$28,498	\$38,324	\$48,808
Private \$ mm	\$52,803	\$48,959	\$44,338	\$28,538	\$14,686	\$15,037	\$22,231	\$32,330	\$43,602
Public \$ mm	\$6,083	\$7,222	\$7,489	\$8,015	\$10,294	\$8,524	\$6,267	\$5,994	\$5,206
YoY % Δ: Total		-5%	-8%	-29%	-32%	-6%	21%	34%	27%
Private		-7%	-9%	-36%	-49%	2%	48%	45%	35%
Public		19%	4%	7%	28%	-17%	-26%	-4%	-13%

Graph 2: Private Multi-family units put in place in thousands by year through 12/31/14 plus Forecast^{f2}

Source: Historic Data, US Census Bureau; Forecast, Freddie Mac & CB Partners



Graph 2 and Footnote: f2 – The solid blue line on graph is actual historic data. The dotted green line on graph is a straight-line simulation of 440,000 average units added per year for each year of the next decade which is in line with the average annual incremental unit demand estimate by Freddie Mac economists.

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2014. Interestingly, to complement shopping centers and other new structures constructed, parking structures resurged in 2014 with growth of 94% to volume of \$700 million after retracting the year before by 36%. In all, there was increasing year to year growth in all but five sub-segments of commercial construction. Declines in activity occurred in: 1. dining and drinking (declined in each of the last two years), 2. auto parts and service, 3. other stores, 4. farm 5. shopping malls.

For the year 2015 moving forward and

2016 based on what is known now, expect continued expansion of retail space led by the larger big box and e-commerce companies as well as top name retailers. According to JLL, most retail markets across the nation are experiencing compression of vacancies and increased rental rates. Increased construction is expected with activity tending toward a large majority of build-to-suit as opposed to structures that are speculative in nature. Areas that are expected to continue to lead the way are the areas of increasing population and areas with jobs. Few if any retail markets are

peaking. The large majority is experiencing rising rents and increasing demand for space, according to JLL.

The AIA consensus construction forecast is flat to moderating retail construction growth of 10% in 2015 and 9% in 2016. CB Partners believes, based on what was stated earlier, 2015 and 2016 growth may be greater than the 12% experienced in 2014. Perhaps as much as 15% for 2015.

The outlook for warehousing and distribution is expected to be good. Warehousing and distribution center construction

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Table 6: Commercial Annual Construction Put in place from Peak to end of 2014

Source: US Census Bureau

	2007	2008	2009	2010	2011	2012	2013	2014r
Total \$ mm	\$89,685	\$86,212	\$54,069	\$39,451	\$43,386	\$46,303	\$50,992	\$57,276
Private \$ mm	\$85,858	\$82,654	\$50,460	\$36,504	\$39,723	\$43,163	\$48,743	\$55,424
Public \$ mm	\$3,827	\$3,558	\$3,609	\$2,947	\$3,663	\$3,140	\$2,249	\$1,852
YoY % Δ: Total		-4%	-37%	-27%	10%	7%	10%	12%
Private		-4%	-39%	-28%	9%	9%	13%	14%
Public		-7%	1%	-18%	24%	-14%	-28%	-18%

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activity is expected to increase in 2015 and 2016 based on the current knowledge base. Much of the growth is expected to be located in the seven logistics corridors around Los Angeles, Inland Empire, Dallas/Fort Worth, Chicago, New Jersey, Philadelphia/Harrisburg, and Atlanta. These seven corridors currently account for 12.1 billion square feet or 40% of the warehousing/distribution and logistics volume in the nation, according to JLL. Contributing factors supportive of why construction growth should continue to be strong in these areas plus others are: the seven leading areas continue to show growth in leasing, strength in tenant requirements for large spaces (60% of which is for space over 500,000 square feet per structure), low speculative development and absorption greater than construction completions in 2014. Simply put, demand for new construction is exceeding current new completions and forthcoming supply, according to JLL. JLL holds that warehousing and manufacturing deliveries of constructed new space was approximately 142.1 million square feet in 2014. Forecast calls for an additional 171.0 million square feet in 2015. Cushman Wakefield (CW) stated in its North American Industrial Real Estate Forecast 2015-2017 published in 2015 that

companies leading the way in e-commerce and hence warehouse and distribution center construction are Amazon (the leader in e-commerce), Walmart, Home Depot and Target. CW published that it projects occupancy gains of 380 million square feet from 2014 to 2017 in warehouse/distribution. Demand is expected to remain strong. Most new building of new warehouse space should be where there is land availability "...including the Inland Empire, Chicago, Atlanta, Dallas, New Jersey, Phoenix and Houston. The PA I-81/I-78 Corridor will continue building to satisfy the changing requirements for warehouses due to e-commerce" states Cushman Wakefield.

Manufacturing Construction Status and Outlook:

With approximately \$55 billion of manufacturing construction put in place in 2014, manufacturing construction held the third largest position in terms of annual volume of new construction into which fire sprinkler installation is either required or installed electively in a high percentage of the structures as part of the construction installation. Manufacturing completions grew nicely in 2014 but since the great recession peak one can appreciate by a review of the construction

put in place estimates that year-to-year growth has been inconsistent.

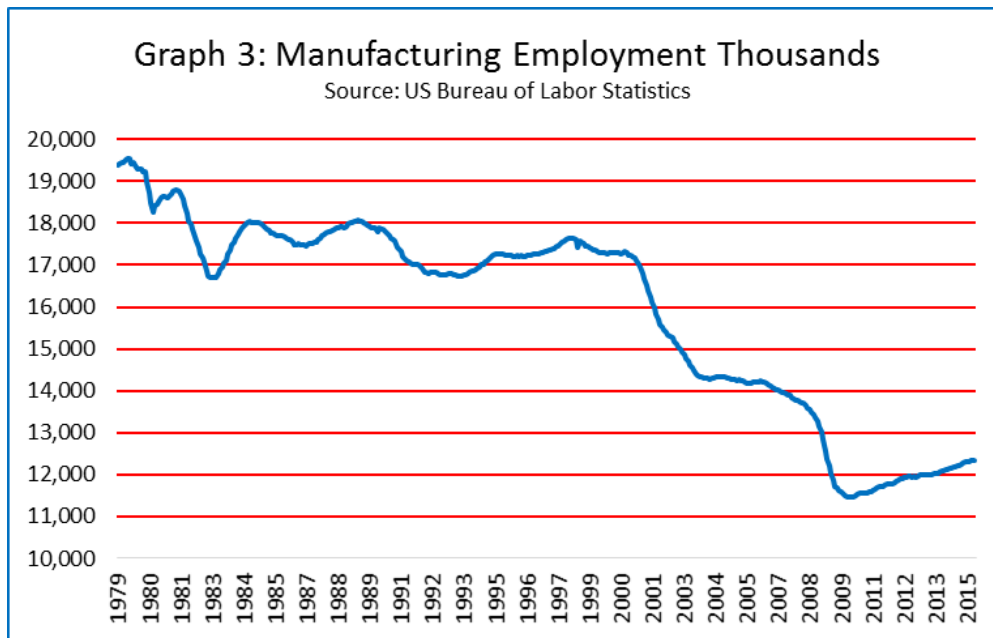
(SEE TABLE 7 - PAGE 31)

The inconsistency of year-to-year growth is also part of the fabric of 14 sub-segments that make up manufacturing construction. Other than rubber/plastic manufacturing construction, five consecutive years of construction ended with an increase of 45% to reach \$2 billion in completions in 2014. Chemicals manufacturing construction, with a three consecutive year history of solid increases, ended with an increase of 59% to reach \$24 billion in 2014. Other sub-segments were largely up and down each year in a roller coaster fashion.

Some of the components of the rise in manufacturing construction in 2014 were cited by Jeff Gavin in Electrical Contractor Magazine as: "In the first nine months of 2014, work began on 25 manufacturing plants valued at \$100 million or more. 15 of those were chemical and/or energy-related. Major projects in 2014 included several billion dollar chemical plants including the Chevron Phillips ethylene plant (\$3 billion), a semiconductor facility in Oregon (\$450 million) and an ore-processing plant in Texas (\$370 million). Manufacturing plants representing semi-

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Table 7: Manufacturing Annual Construction Put in place from Peak to end of 2014						
Source: US Census Bureau						
	2009	2010	2011	2012	2013	2014r
Total \$ mm	\$56,296	\$39,778	\$38,869	\$45,833	\$47,226	\$54,985
Private \$ mm	\$56,296	\$39,778	\$38,869	\$45,833	\$47,226	\$54,985
Public \$ mm						
YoY % Δ:						
Total		-29%	-2%	18%	3%	16%
Private		-29%	-2%	18%	3%	16%
Public						



conductors, automotive assembly and tire manufacturing all broke ground in 2014. In other good news, capacity utilization is relatively high. It reached 78.1% in September 2014, and that rate has been hovering at 77% for the first five months of 2015, significantly above the bottom rate of 63.9 in 2009.”

The outlook is expected to be positive for manufacturing (MFG) construction in the US moving forward. Since MFG employment peaked in 1979 at 19.6 mil-

lion. MFG employment fell in the sector until it reached bottom, 11.4 million, in the first quarter of 2010, according to the US Bureau of Labor Statistics. As of the May 2015 MFG employment stood at an estimated 12.3 million, up about 8% from the 2010 trough.

(SEE GRAPH 3 - PAGE 31)

Experts state that manufacturing is expected to continue to make a comeback in the US as a result of the:

1. Expectation of low energy costs.
2. Rise of labor costs overseas.
3. Need for faster response to local market demands than can be achieved with imports.
4. Expectation of greater exports from the USA.

Cushman Wakefield stated that “Baxter International, for instance, is constructing a new one-million square foot state-of-

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Table 8: Office Annual Construction Put in place from Peak to end of 2014

Source: US Census Bureau

	2008	2009	2010	2011	2012	2013	2014r
Total \$ mm	\$68,563	\$51,908	\$37,850	\$36,011	\$38,434	\$37,620	\$44,630
Private \$ mm	\$55,502	\$37,282	\$24,368	\$23,738	\$27,963	\$29,785	\$36,920
Public \$ mm	\$13,061	\$14,626	\$13,482	\$12,273	\$10,471	\$7,835	\$7,710
Year-to-year % Δ: Total		-24%	-27%	-5%	7%	-2%	19%
Private		-33%	-35%	-3%	18%	7%	24%
Public		12%	-8%	-9%	-15%	-25%	-2%

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the-art manufacturing facility in Atlanta to support the growth of its plasma-based treatments. The new facility is scheduled to be fully-operational in 2018. Other companies that are favoring U.S. facilities include General Electric, Whirlpool, Caterpillar and DuPont. All have reported expanding or building new U.S. facilities in the last few years..."

This is expected to bode well for new construction as Cushman Wakefield continues: "A lack of quality space remains one of the biggest challenges facing manufacturers in the U.S. Emerging technological advances, such as improved measuring/process control, advanced digital technologies and sustainable manufacturing, have made many older facilities functionally obsolete, opening the door for more speculative construction to take place within the next few years. Large build-to-suit projects are currently underway in Atlanta, Denver, and Chicago, with more facilities scheduled to break ground in the next few years."

The AIA consensus construction forecast is for manufacturing construction growth of 11% in 2015, and 10% in 2016. CB Partners expects MFG construction growth to be less than the 16% registered for 2014 but greater than the AIA forecast based on the fundamentals mentioned earlier.

Office Construction Status and Outlook:

With approximately \$45 billion of office construction put in place in 2014, office construction held the fifth position in terms of annual new construction volume into which fire sprinkler installation is either required or installed electively in a high percentage of the structures as part of the construction installation.

(SEE TABLE 8 - PAGE 32 ABOVE)

2014 was somewhat of a breakout year for office construction as a result of several factors:

- It is the first year in the last three that declines in public office construction did not counter the otherwise growing private market.
- Private construction is showing the strength of the more broad based recovery which is beginning to take hold in more urban and suburban areas of the country. While technology and energy are still the leaders other professions are entering with demand for office space.
- Vacancy Rates decreased in 2014 to 12.8% from 13.1% the year earlier. Vacancy rates increased in just 7 of 73 markets covered according to *Collier's International*.

- Square feet (sf) under construction at the end of 2014 was 116 million sf vs. 88 million sf at the beginning of 2014 according to *Collier's International*.
- 2014 was the first in the last five years where space constructed for financial companies showed an uptick and contributed to the whole.
- Concentrated employment in urban locations continued to increase, driven by millennials migration to urban areas to live and work.
- The obsolescence of existing space and construction of new to meet new efficiency and design requirements.

According to JLL, office construction activity under development in 48 major population areas in the US at the end of the first Q of 2015, 84 million square feet, is the highest it has been since 2007. With recovery underway and employment rising increasingly across the board, JLL expects rents to continue their increase and fundamentals to be good in most urban population centers of the country in 2015 and 2016, with the exception of perhaps Houston. JLL states that subleasing activity is on the rise in Houston, rents have peaked for now and the fall of energy prices may caution immediate new business development. Other specific markets that

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Table 9: Lodging Annual Construction Put in place from Peak to end of 2014

Source: US Census Bureau

	2008	2009	2010	2011	2012	2013	2014r
Total \$ mm	\$35,364	\$25,388	\$11,201	\$8,395	\$10,783	\$13,133	\$15,604
Private \$ mm	\$35,364	\$25,388	\$11,201	\$8,395	\$10,783	\$13,133	\$15,604
Public \$ mm							
Year-to-year % Δ: Total		-28%	-56%	-25%	28%	22%	19%
Private		-28%	-56%	-25%	28%	22%	19%
Public							

>> CONTINUED FROM PAGE 32

may see some softness in construction, according to Cushman Wakefield, are; Philadelphia, Los Angeles and Washington DC. Similar to the potential for softness in Houston, others see softness in other areas which are heavily dependent on energy production: Oklahoma, North Dakota and possibly the shale areas in Pennsylvania, Ohio and West Virginia.

If the economy continues to recover nicely as most economists expect, JLL and Cushman Wakefield expect tightening of office supply in most markets toward the end of 2015 and early 2016, which, if correct, should result in increases in office construction. The AIA consensus construction forecast is for a 13% increase in 2015 and a 12% increase in 2016.

Major contributing factors to the continued growth in office construction moving forward are expected to be:

- Tightening of supply.
- The tendency to build new that fits the required style and efficiency in demand by current employers as opposed to rehab existing.
- Job growth not only in the technology and creative sectors but also in life sciences, leisure, manufacturing, construction, logistics, trade, services now most recently the financial sector, ac-

cording to JLL.

- While some broadening of the market is expected to occur, according to Collier's International, most of the new construction is expected to be in markets with growing jobs in technology, energy, education and healthcare.

Lodging Construction Status and Outlook:

With approximately \$16 billion of lodging construction put in place in 2014, lodging construction held the tenth position in terms of annual new construction volume into which fire sprinkler installation is either required or installed electively in a high percentage of the structures as part of the construction installation.

(SEE TABLE 9 - PAGE 33 ABOVE)

Construction of new lodging growth should continue through 2016 in select markets, but at a more tepid pace in line with the trend shown in the lodging table above. The segments and locations that are expected to continue to add inventory are the upper-end price points and urban areas. Expected contributing factors behind the forecast increase:

- the recovering economy.
- job and business growth.

- increases in consumer confidence.
- increased tourism.
- revenue per available room increasing in select markets.
- high occupancy rates in most markets.
- more favorable debt financing terms.
- increased investor demand for properties in the US.
- current construction is lower than long term average.

The consensus lodging construction forecast from the AIA suggests that lodging construction is expected to increase in activity by 15% in 2015 and 12% in 2016. We agree with the AIA consensus. ①



FUTURE NFSA ANNUAL SEMINAR SCHEDULE

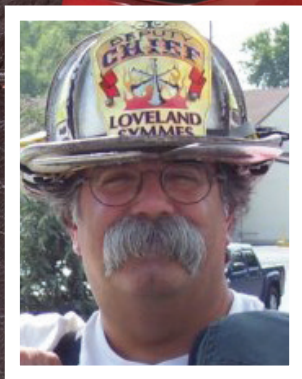
May 4-6, 2016
NFSA Annual Seminar
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MAY 3-6, 2017
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“Of my grandkids and their three families, one is in a fully sprinklered home, one is building a new home that will be, and we are going to do a retro on the third one. While it's not 100%, we are on the way. Even my 88-year-old mom is protected by residential fire sprinklers. It's kinda hard to be critical of non-sprinklered buildings when we aren't doing the best we can, even a little at a time.”

— Deputy Chief Billy Goldfeder,
Loveland-Symmes FD, Ohio

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Thank you Chief Goldfeder for leading by example.**

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We Support NFFF Life Safety Initiative #15: Advocacy must be strengthened for the enforcement of codes and the installation of home fire sprinklers.

For more info:
www.everyonegoeshome.com



The Voice of the Fire Sprinkler Industry
 Director of Public Fire Protection Vickie Pritchett
pritchett@nfsa.org 615-533-0305 @vickiep4

Visit nfsa.org for the latest information on fire service involvement in the codes process and how you can **GET INVOLVED!**

Notes from the Fire Scene

Momentum. Momentum is a great feeling to have when your work & passion are aligned and your organization and cause are moving forward. It's with a happy heart that I report to you that NFSA is working hard everyday to build on the momentum that we are feeling.

It takes partners to grow our momentum and we have some good ones on our team. Recent travels have provided opportunities for us to confirm and re-confirm many of those key partners and we believe it's worth sharing with you, our members. Whether your NFSA team is presenting at NFPA's annual conference or the National Association of State Fire Marshals' (NASFM) annual conference, we are engaged, involved and helping others understand our rallying cry for fire sprinklers. This builds our momentum.

The NASFM conference held the last week of July in Nashville, Tennessee provided lots of examples of why our support makes a difference. I shared with this group that we've come a long way and that we appreciate the proactive leaders who are moving forward with code adoptions that include fire sprinklers and help highlight the value of fire sprinklers with their outreach efforts. We emphasized our pledge that we are here to help and stand ready to assist as they work to pass codes that include fire sprinklers.

We encouraged this group, which included 36 state fire marshals, to join with us as we work to engage the fire service in the code process and let them know

that we need their respective voters to be involved in the IRC code votes that are upcoming in California. We can't rest on our past success, we must remain vigilant and make sure that we are proactive and out front with our messages that promote fire safety. Leading with the information that is available that underscores the important role fire sprinklers play in life safety is critical...for citizens and firefighters alike. Making those connections doesn't just happen. We are helping to shape and define those conversations...and it feels good to do so. It is about momentum and feeding that momentum with our energy, focus and presence.

Our fire service research partners at Underwriters Laboratory (UL) and National Institute of Standards and Technology (NIST) have current test results that support the life-saving technology of fire sprinklers. Again, NFSA is a key player in bringing the respective information and messages together. We are mobilizing our key stakeholder groups with this information and are involved at the leadership level with our allies. That makes us proud of our involvement and our service with a focus on our mission. Promoting the fire sprinkler concept is natural for us and we are able to accomplish this goal with ease because we believe in our industry and what we add to quality of life across America and beyond.

To follow our outreach to our fire & code allies, keep an eye on the area created at www.nfsa.org that shares the latest code information. We are steadfast in our effort

to keep the latest information gathered for our AHJs and state & national fire service leaders. It's good for you to be up to speed with this information. Working together we are changing the conversation and expanding it in many cases. Join with us as we build on our momentum.

I would be remiss to not send out a special thank you to our Board of Directors. Their support of our efforts makes it possible for us to be innovative with our outreach. We are working hard to turn adversaries into allies. We are making a difference with our efforts in this regard. This success is due to our collaboration, from the NFSA Board room to our allies across the nation. It's an honor to serve and engage. Let us know if you have opportunities for us to expand our outreach efforts. We are more than happy to make new friends! 🙌

Until next time, Stay Safe,

Vickie

>> CONTINUED ON PAGE 37



Director of Public
Fire Protection

Vickie Pritchett

Fire Sprinkler Training.....Out of the Classroom, Into Your Home!

Lead Instructor



Roland Asp, C.E.T.
NFSA Manager of
Technical Services

Roland is a NICET Level III Fire Protection Engineering Technician working with the National Fire Sprinkler Association. He serves on numerous technical committees for both NFPA and AWWA. Roland has been involved in the layout and installation of thousands of fire sprinkler systems ranging from single family homes to large commercial projects and is experienced in the varied steps needed to successfully bring a fire sprinkler system from the design phase to completion.

■ Sprinkler Protection for Residential Occupancies Distance Learning



October 7-December 9, 2015

9 weeks, 9 sessions 60 - 90 minutes each
1 session per week

This program covers the use and application of residential fire sprinklers over a 9 lesson period. The history and development of residential sprinklers will be reviewed and the participants will learn how residential sprinklers differ from traditional sprinklers. NFPA has written three installation standards that could apply to residential sprinklers: NFPA 13, NFPA 13R and NFPA 13D. As the requirements pertaining to residential sprinklers differ from standard to standard, each of the standards will be discussed. The issues discussed in this program will provide attendees with vital information on how to properly choose the correct standard and apply the specific requirements for residential sprinklers. This skill is a fundamental aspect of sprinkler system layout and is a "must know" for all layout technicians dealing with residential occupancies.

**Cost: \$400 Early Bird for Members and AHJs
(\$450 Two Weeks Prior) \$650 for Non-Members**

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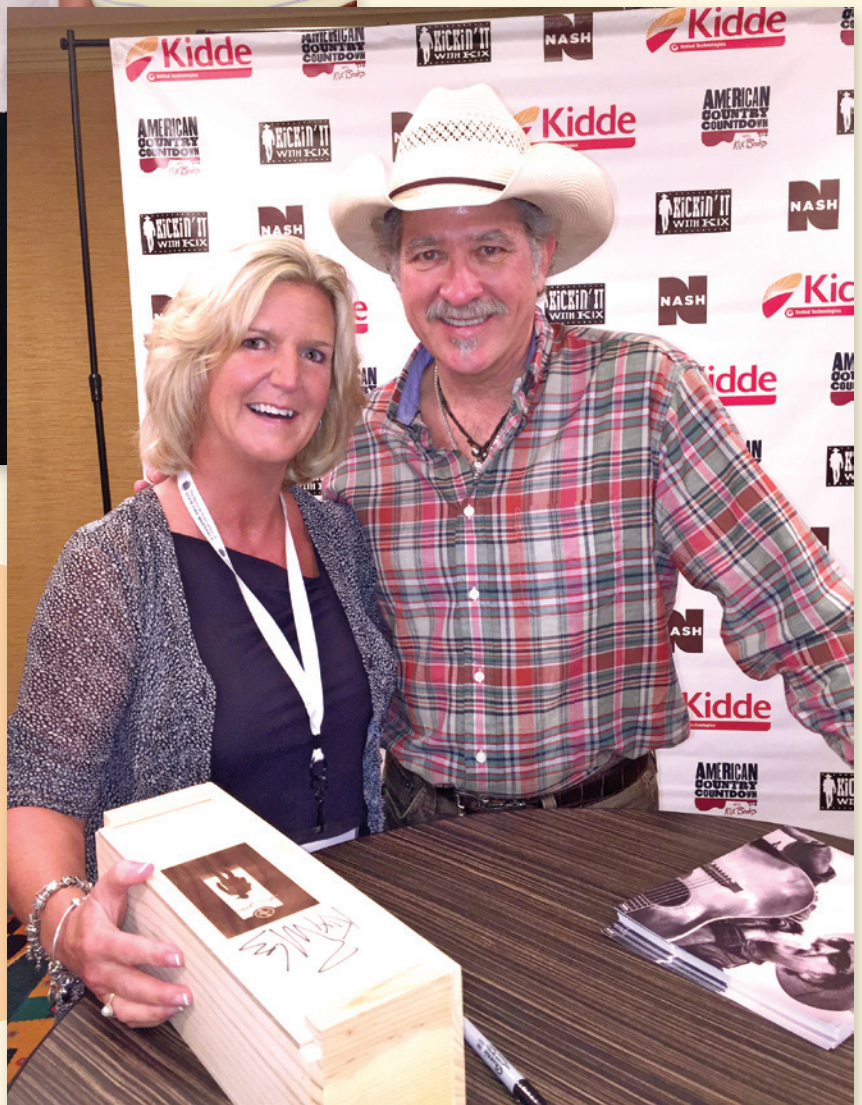
NOTES FROM THE FIRE SCENE

>> CONTINUED FROM PAGE 37



Vickie Pritchett pictured with Steve Kerber (left), Director of UL's Fire Service Research Institute spent some time with Chief John Buckman, former President of the International Association of Fire Chiefs at the National Association of State Fire Marshals conference – making connections between fire science research and fire sprinklers....Momentum!

Sometimes the momentum brings us to country music stars! Vickie Pritchett with Kix Brooks, of Brooks & Dunn... working together for life safety!





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Defining “Designated Representative”

By Jason Webb

When it comes to inspection, testing, and maintenance (ITM) of sprinkler systems, no one is more important than the owner.

All ITM tasks are ultimately the owners' responsibility, although they may choose to hire a contractor to perform some or all of them. In some jurisdictions, they have little choice in the matter. But when it comes to that ultimate responsibility, NFPA 25 doesn't just refer to the owner, the standard uses the term “owner or designated representative.” Defining who that designated representative is, and just as importantly who it isn't, is a critical part of the ITM process.

Prior to the 2011 edition of NFPA 25, ITM responsibilities were assigned to the “owner or occupant.” That phrase went back to the pre-NFPA 25 days and the same language was included in the ITM recommendations outlined in NFPA 13-A. In the 2011 edition, the designated representative term was introduced to clarify that, while the owner was responsible for ITM, some or all of those duties could be transferred to others when the owner wasn't the occupant.

Although NFPA 25 doesn't define designated representative, it does address the issue in annex A of the 2014 edition. Section A.4.1.1.3 reads “Examples of designated representatives can include the occupant, management firm, or managing individual through specific provisions in the lease, written use agreement, or management contract.” Similar language appeared in the standard in various places

in prior editions before being moved to the annex. Although not part of the requirements of the standard, this does give some guidance indicating who the committee had in mind when they used the term.

By taking a look at the responsibilities assigned to the owner or designated representative, it helps give context to who the designated representative truly is and isn't. We have dedicated a lot of information to this specific topic in the recent past, so let's just focus on four of the many requirements from section 4.1, titled “Responsibility of Property Owner or Designated Representative” for this article. Those four are:

- Properly maintaining the system(s)
- Maintaining the system in accordance with NFPA 25
- Protecting the system against freezing
- Making the necessary corrections or repairs

Just with this short list alone, it should become clear who can assume the role of designated representative. Simply put, that person (or management firm) must have the ability to authorize funds for not only inspections and testing, but also any needed corrections or repairs. They would have to be able to ensure that the heat is working in the building and that doors or windows aren't left open during cold weather. Most importantly, they are charged with maintaining the system in accordance with NFPA 25. That includes

many tasks that are not part of a typical ITM Service agreement.

Unless it is clearly spelled out in an agreement exactly what is being designated to someone other than the owner, anyone taking on any of those responsibilities runs the risk of exposing themselves to all sorts of costly issues. For example, if a contractor were to somehow give the impression that they were acting as the designated representative and testing revealed that a new fire pump was required, an owner could make the case that the cost of the new pump was part of the ITM Service agreement.

AHJs can sometimes confuse a contractor with the designated representative. Many times this is because the contractor was taking on some role assigned to the owner when it wasn't necessary.

As with most things, the question of who the designated representative is and isn't comes down to money. The person who pays for ITM, maintenance or repairs, or even who keeps the heat on is often the answer. As a stakeholder in the ITM process, if that isn't you, it's a good idea to ensure that your role is clearly defined. 🗣️



Director of
Inspection, Testing
& Maintenance

Jason Webb

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Inside the Pipe: Five Year Internal Assessments

While its nomenclature has varied over the years in NFPA 25 (Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems,) the intent of an internal pipe assessment has remained the same. The charging section of chapter 14 highlights the overall purpose of this requirement:

"14.1 General. This chapter shall provide the minimum requirements for conducting investigations of fire protection system piping for possible sources of materials that could cause pipe blockage."

Chapter 14 of NFPA 25 is organized into 4 sections: 14.1 General, 14.2 Assessment of Internal Condition of Pipe, 14.3 Obstruction Investigation and Prevention and 14.4. Ice Obstruction. Section 14.3, obstruction investigations- are only triggered when there is some indicator that the system may be, or may become, compromised internally. Section 14.4, ice obstructions-is a section that is only applicable to dry pipe and preaction systems that pass through freezers or cold storage rooms. Section 14.2, internal pipe assessments-applies to all system types and occurs on a periodic basis as a method of inspecting the health of the internal piping of a system.

It was determined by the NFPA 25 Committee and the NFPA membership that there is significant value to this periodic inspection of the pipes due to the "stuff" that is being found when sprinkler

systems are opened. Corrosion, rocks and all sorts of debris have been found during these internal inspections of fire sprinkler systems. There is concern that if this material is not found and properly removed, a sprinkler and/or piping will become clogged. Annex language in A.14.2.1 of NFPA 25 (2014) provides the intent of an internal assessment for water-based systems which is to "provide a reasonable assurance that corrosion and obstruction issues within fire protection systems are identified." While the body of the standard does not include the procedures for performing this internal assessment, the annex does shed some light on the recommended methods.

The most common of these methods is to drain and flush the system by opening flushing connections at the end of a main and removing the end fitting, or pieces of branch line, for the purpose of a visual inspection of the system. The benefits of this method is that it is simple to perform and it affords a firsthand view of what the inside of the pipe looks like. One drawback is that it is invasive because the system must be drained, which requires impairment procedure of Chapter 15 to come into effect. Also, these sections are only localized representations of a system and do not give a comprehensive look at the system. While we are not required to examine every section of pipe, in order to achieve a reasonable assurance that corrosion and obstruction issues are identified, the inspector should remove several pieces of pipe. Those sections

of pipe should be where an obstruction would be expected to be found. It is fairly easy to predict where corrosion may be. It will almost always occur at the water-air interfaces within the system. This means that for a wet pipe system, sections of pipe at the high point of branch lines and mains should be removed where air pockets can be trapped. For dry pipe systems, low points on branch lines and mains should be removed where water can collect and not drain completely. Essentially, any place where there will be trapped air or trapped water is where corrosion will commonly exist. When performing an internal assessment, samples of any foreign material found should be collected and photographs taken of the internal pipe condition for records.

Alternate methods are also mentioned in the annex under A.14.2.1 which lists video inspection equipment, ultrasonic imaging and laboratory analysis of water samples as acceptable options. Of these, the most thorough is likely to be the video inspection equipment which generally consists of a camera on a snake being fed

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Manager of
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down the mains and branch lines. This is similar to draining and visual inspection of pipe sections. However, this provides a more complete picture of the system's inside as the snaked camera is fed through more of the system. A new technology, ultrasonic imaging, is a non-invasive procedure which has the ability to determine wall thickness of the pipe through wave propagation, which requires the ultrasonic imaging device to be placed against each section of pipe. One benefit of ultrasonic imaging is that there is no requirement to drain or enter the piping of the system. Another benefit is that it is possible to cover entire systems or multiple systems relatively quickly. However, the drawback here is ultrasonic imaging may not pick up on obstructions or hyper-localized MIC. MIC, or microbial influenced corrosion, is corrosion which occurs due to microorganisms in the sprinkler system that generally cause hyper-localized pitting in steel pipe. The final method on the list of alternative examination methods in the annex is water sampling. This method is also non-invasive and can identify corrosion, MIC and other foreign materials, and consists of bringing a water sample from the pipe to a laboratory for testing. Regardless of which method used, if corrosion or an obstruction is found, an obstruction investigation is likely to be triggered.

An obstruction investigation is more involved and serves a different purpose than the periodic five-year internal pipe assessment. The obstruction investigation is triggered when one of 15 conditions occur which could indicate that the system may be or may become compromised due to some kind of physical obstruction. The 15 conditions which trigger an obstruction investigation are:

1. Defective intake of fire pumps taking suction from open bodies of water
2. Discharge of obtrusive material during routine water tests
3. Foreign materials in fire pumps, in dry pipe valves or in check valves
4. Foreign material in water during drain tests or plugging of inspector's test connection(s)
5. Unknown materials are heard in the system piping during draining, refilling,

- or otherwise flowing water through the system
6. Plugged sprinklers
7. The presence of sufficient foreign organic or inorganic material is found in the pipe
8. Failure to flush yard piping or surrounding public mains following new installations or repairs
9. A record of broken public mains in the vicinity
10. Abnormally frequent tripping of dry pipe valve(s)
11. A system that is returned to service after an extended shutdown (greater than 1 year)
12. There is reason to believe that the sprinkler system contains sodium silicate or highly corrosive fluxes in copper systems
13. A system has been supplied with raw water via the fire department connection
14. Pinhole leaks
15. A 50 percent increase in the time it takes water to travel to the inspector's test connection from the time the valve trips during a full flow trip test of a dry pipe sprinkler system when compared to the original acceptance test

Whenever any of these 15 conditions are observed, a full obstruction investigation is then required to be performed. Therefore if one of these 15 conditions are observed during an internal pipe assessment, an obstruction investigation would be required. One thing that an internal assessment will address that an obstruction investigation does not, is the creeping effect of corrosion over time. Periodic internal assessments allow the owners to locate and handle corrosion issues before they affect the system's performance. This concept is exemplified by the NFPA 25 exception for non-metallic pipe in NFPA 25 which is not required to have internal pipe assessments, since non-metallic pipes do not corrode while metallic pipes do.

The committee also understands that draining a system can be a time-consuming and costly event for a building owner. This interval for the 5-year internal assessment was decided on in

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order to correspond with other requirements in NFPA 25. Both alarm valves and check valves are required to be internally inspected on a 5-year interval as well, and therefore all of these inspections should be coordinated to occur at the same time. This allows building owners to only drain a system once for both the internal pipe assessment and the interior check valve inspections. Performing all internal inspections at the same time reduces the overall down time of the system and will leave more money in the owner's pocket.

Another technique to reduce the downtime and cost of these inspection is to perform them any time the system is drained, regardless of the time elapsed since the last inspection. If it is necessary to drain a system for a renovation, repair or some other maintenance reason, an internal assessment could then be performed along with internal valve inspections. This resets the clock and gives you another 5 years before you are required to perform an internal assessment again.

A change occurred in the 2013 edition of NFPA 13 to the definition of a sprinkler system that has had an effect on internal assessment of pipe. The definition of a Sprinkler System now includes "...a water supply source, a water control valve, a waterflow alarm, and a drain and is commonly activated by heat from a fire, discharging water over the fire area." Based on this new definition, all floor control valve assemblies in a multi-story building would represent a different sprinkler system. High-rise buildings would typically have at least as many systems as floors. In order to handle high-rise buildings and large facilities with multiple systems, it has been permitted to have an internal pipe assessment on every other system on a 5-year interval. For example, if you had a 20-story building with 20 systems, you could inspect all 20 systems every 5 years, or, based on this allowance of an internal assessment on every other system, inspect 10 systems one year, then 5-years later inspect the other 10 systems, returning to inspect the first 10 systems 5-years after that. This essentially allows every other system to be inspected on a 10-year interval, even though they are fed by the same water supply and would generally be subject to the same levels of


corrosion. This allows owners to stabilize costs over time rather than draining all systems and paying for the inspection on all 20 systems. However, if any of the 15 aforementioned obstruction investigation triggers are observed, then a complete obstruction investigation would be performed on all systems in that building.

Following the inspection, testing and maintenance procedures in NFPA 25 is essential to sustaining a properly func-


tioning fire sprinkler system. Through experience and research the technical committees have identified important periodic inspections and tests to ensure fire sprinkler systems activate effectively during fire situations. While the internal assessment of pipe is one of the more cumbersome inspections, the benefits outweigh the costs when done thoroughly and in combination with the other 5-year internal inspections of valves. 

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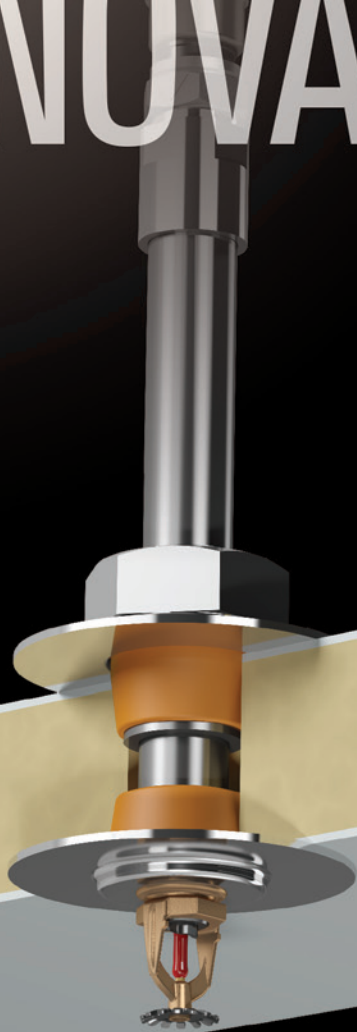
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Meet The PROs



Jan Bednarz
MJ Insurance

9225 Priority Way West Drive
Suite 100
Indianapolis, IN 46240

MJ Insurance joined NFSA as a Friend of the Industry approximately 5 years ago. Recently, MJ became a professional member of the Association. To introduce our new “Meet the PROs” feature, we thought we’d start with one of our newest Professional members. Jan Bednarz, Principal at MJ Insurance took the time to supply us with some great information for our inaugural feature.

MJ Insurance exists to inspire the success, fulfillment and wellbeing of each person it serves: associates and their families, business partners, clients and the community. MJ Insurance is a leading risk management and benefits consulting agency specializing in various commercial sectors: construction, manufacturing, sororities, mining/energy, transportation as well as a complete suite of comprehensive employee benefit programs and services. Fifty years after its founding, MJ Insurance continues to expand through growth, service and leadership

Of special interest to NFSA members, MJ offers Property and Casualty Insurance, Surety Bonds, Risk Management Consulting and Employee Benefit Consulting.

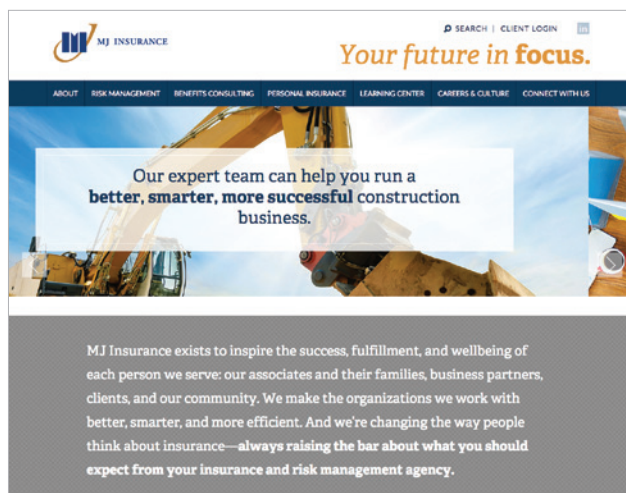
MJ was started in 1964 with 2 owners and a secretary /bookkeeper. Today, the company is comprised of 130 associates with offices in Indianapolis and Phoenix. MJ Insurance is in the top 80 insurance brokers in the US and are an Assurex

Global Partner, a worldwide organization of large insurance brokers.

When asked what value MJ realized from membership in NFSA, Jan Bednarz stated, “Rich Ackley, Chairman, of Dalmatian Fire, Inc has been a client since 1991. He and his brother Jon have helped me better understand the complexities of the design, installation and service of a fire sprinkler system. That knowledge has helped me to better explain to underwriters that fire sprinkler contractors are much safer than the insurance industry might think.”

Jan has a broad base of marketing and underwriting experience which has allowed him to specialize in a range of industries and disciplines. His specialties include: high value properties, high risk products and operations, specialty contractors, agriculture, food processing, restaurants, transportation, global programs for businesses in multiple countries and captive insurance alternatives. He invites his fellow NFSA members to contact him with questions and looks forward to doing business “member to member.”

Jan has two daughters and a 2007



Harley Softtail Custom motorcycle with 31k+ miles and counting. He’s ridden his motorcycle or ones he has rented in 24 states and Switzerland.🏍️

For more information go to:
www.mjinsurance.com

The Meet the PROs feature is available to any NFSA Professional member in good standing. If you are interested in having your company featured here, please contact Joanne Genadio at genadio@nfsa.org or 845.878.4200 x118. Features will be published on a first come, first serve basis.

NFSA Social Scene – What we're talking about on our social media networks and who's listening

We are getting the word out. Our social media networks are active seven days a week, pushing out industry related news, promoting sprinkler saves and educating the public as to the life- and property-saving attributes of fire sprinkler systems. The social networks have done much to fulfill our mission statement; *"To protect lives and property from fire through the wide-spread acceptance of the fire sprinkler concept."*

Twitter®

In the last 28 days of "tweeting," we've reached 34,100 people. Out of those visits, 1189 people viewed our NFSA profile, 116 mentioned the Association in their tweets and we gained 88 followers, bringing our total followers to 2,542.

We have been putting out tweets 3 times weekly to promote our Residential Sprinkler Campaign videos that are posted on YouTube. If you haven't watched them yet, please go to YouTube and search NFSAorg to view. Our message is reaching thousands of people each time we tweet, and not just any people! 78% of our followers are homeowners, 39% are in professional/technical fields and 28% are homemakers.

Facebook®

Like our other social networks, the statistics of our Facebook page change every month. We see month to month growth in every area, followers, likes, and sharing of our posts are all growing at a steady pace. In August, an ad produced by NFSA's marketing department featuring a wet dog and promoting residential fire sprinklers was placed on Nat Firesprinkler's Facebook page. Within one hour, the ad was shared on ten group and personal pages including Indiana Firefighter, Fire Training Toolbox, Fire Deaths and Parksville Volunteer Fire Department, among others. In the past week (*of this writing*), our Nat Firesprinkler Facebook page has

5,185 "likes," reached 2,110 people, posts were shared 54 times and our links were clicked on 381 times.

LinkedIn®

NFSA maintains both a group and company page on LinkedIn. The group page is the site of often lively debates on discussions that are posted there. The new hot topic is retrofitting. We've had a wide range of opinions, albeit some that might infuriate our industry, but most importantly, people are talking! I must take a moment to thank NFSA member and Board member Alan Wiginton, who has taken the time to post on this highly debated discussion. As I've often said, the only way to change public opinion is to be part of it. Commenting on these discussions helps to educate those that may post untrue or misleading statements and, by education, prevents those who are reading those statements from joining the naysayer bandwagon. As of this writing, 6,928 members are part of the National Fire Sprinkler Association LinkedIn Group. There is always room for more and definitely room for those who, like Alan, would like to be involved in setting right some wrongs and educating the masses about the benefits of fire sprinklers.

Our LinkedIn company page is used for posting Association and Industry news. 3,501 people follow our company page. 31.6% of those followers are entry level employees. Ahhh... a good place to reach some future leaders? 25.8% are senior management. Yes, the decision makers. These demographics are just what we are looking for to promote our Association and Industry news. Our LinkedIn company pages manages that quite effectively. Post to this page that promote our Residential Sprinkler videos garnered 28,879 views!

Print and Digital Advertising

Print and digital advertising costs have skyrocketed. One full page, full color ad in a national magazine averages \$150,000 per issue. Our social networks are reaching a vast audience for little or no cost. The audience we reach through our networks is targeted. Specifically interested in fire safety, members of the fire service, homeowners, educators, families... all the groups that we need with us to achieve our goals. The importance of NFSA's social media outreach should not be overlooked. We are doing a great job...but we could do better! How? By increasing member involvement. Join one or all of the social networks mentioned in this article. If you can play Words with Friends or watch YouTube videos, you are already an expert! Follow us and share our posts. Every extra person that shares our posts helps us spread our message faster and more efficiently. You might even come to like it! I have to admit, even after 6 years of doing this, I still get a kick out of the notifications I get every time NFSA's posts are shared or retweeted. It's easy to see the effectiveness of our efforts on each of the social networks. I'd love to see those analytics go through the roof. So come on, join in. And remember, you can't beat the price! 🐕

NFSA's Wisconsin Chapter Burn Survivor PSA Receives Top Honors for Message on Home Fire Sprinklers


The Wisconsin Broadcasters Association recently announced that a public service announcement featuring a 22-year-old burn survivor championing for home fire sprinklers has received the accolade *"Best PSA for Large Market Radio."*

Created by the National Fire Sprinkler Association's Wisconsin Chapter, the PSA features Jeff Jordan, one of the newest members of Common Voices and a participant with the Phoenix Society for Burn Survivors. Jordan was only six-weeks old when he was burned in a house fire resulting from his brothers playing with a lighter. Sustaining third- and fourth-degree burns



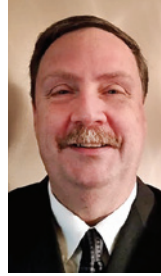
on his body, he has undergone more than 80 reconstructive surgeries that have surpassed \$10 million.

Jordan makes a strong pitch for sprinklers in the PSA, which aired on a Milwaukee radio station and honored as part of the Wisconsin Broadcasters Association's 2014 Awards for Excellence. "My burn injuries have been a part of nearly my entire life, but they do not have to be a part of other people's futures," says Jordan. "There is tremendous value in home fire sprinklers and the lives that can be saved by them. I am glad my story can have an impact on others--whether helping someone through a burn injury of their own or helping others be smarter about fire safety and avoiding preventable fires."

A volunteer at Wisconsin's Summer Camp for Burn-Injured Youth, Jordan has also participated in national speaking engagements in support of home fire sprinklers. 

Marty King Joins NFSA Field Operations Team


The National Fire Sprinkler Association (NFSA) is pleased to announce Marty King has recently joined the team as a State Coordinator for Wisconsin. King has been in the fire service since 1979, most recently serving as Assistant Chief of the West Allis Fire Department. He has always been a fire prevention champion and this passion will serve him well in his new role with NFSA.



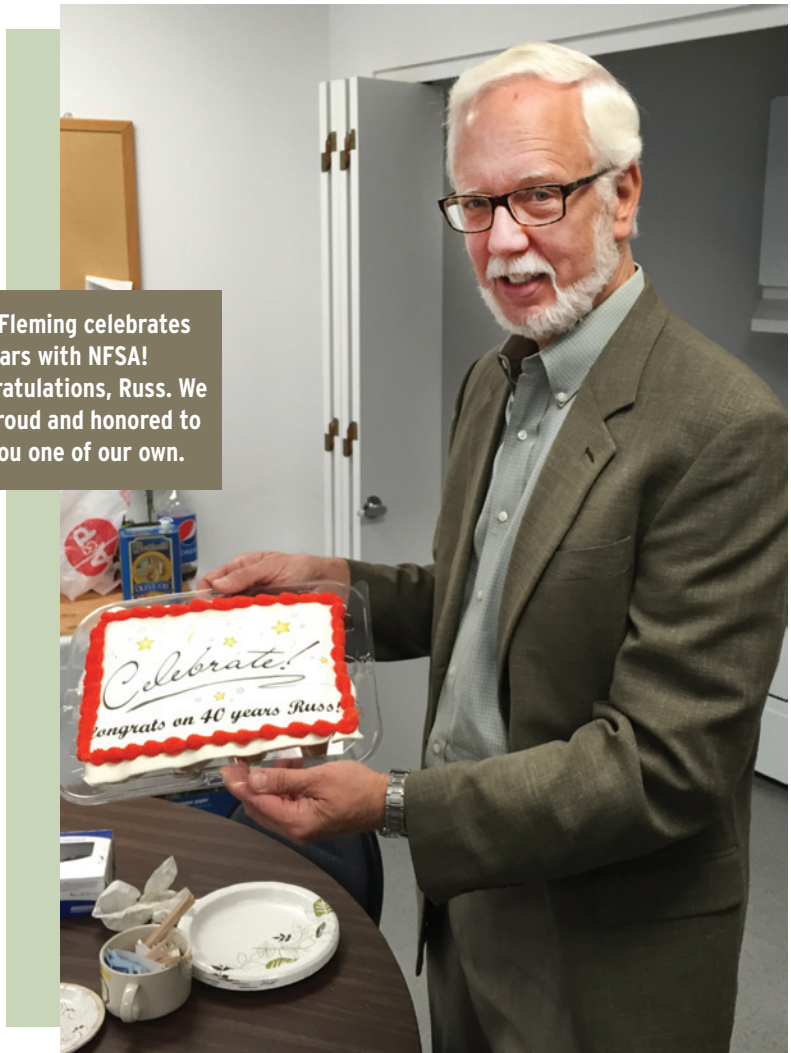
"We are excited about adding Chief King to our NFSA team," says NFSA President Shane Ray. "We look forward to

seeing the ways that his energy will help stakeholders in Wisconsin as they work to ensure that fire sprinklers are part of a community's fire protection planning."

King joins other Field Operations team members across the nation that focus on serving members and nonmembers alike with grassroots resources and information.

"Marty is well qualified to fill this role, especially with his background as a National Fire Academy instructor and Executive Fire Officer Graduate," adds Vice President of Field Operations Jim Lake, "We look forward to seeing him incorporate his fire prevention background into his state coordinator role. We believe he is uniquely qualified to assist fire service leaders and their communities." 

Russ Fleming celebrates 40 years with NFSA! Congratulations, Russ. We are proud and honored to call you one of our own.



REGIONAL ROUNDUP

NEW ENGLAND REGION



DAVE LAFOND
Regional Manager

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

NFSA's Dave LaFond Organizes Side-by-Side Demo for Massachusetts Legislatures

Massachusetts Representative Ruth Balsler, co sponsor of HB 2089, which would allow municipalities to locally adopt residential sprinklers for newly constructed one-two family dwellings recently addressed members of the Massachusetts Joint Committee on Public Safety.

Shortly following this public hearing, NFSA New England organized a side-by-side burn event for the legislators. The event was co-sponsored by the Boston Fire Department and Boston firefighters Local 718. It was held at Boston Fire's training facility located at Moon Island.

Habitat for Humanity Homes Built with Fire Sprinklers

The South Shore Habitat for Humanity (HFH) held a home dedication ceremony on June 27, 2015 and provided two newly built homes to two families. These are the first two South Shore HFH homes built with home fire sprinklers. Special gratitude is given to Ronnette Taylor, from Fire Code Design who provided design and installation. Atlantic American Fire Equipment, Ron Lemire from Victaulic who provided materials and with Watts Water who provided the back flow preventers. ①

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NEW YORK REGION



DOMINICK KASMAUSKAS
Regional Manager

NEW YORK

New York Seminar Topics

The NFSA New York Regional office is seeking ideas regarding the placement of specific seminar topics in specific locations across New York this autumn. Regional Manager Dom Kasmauskas is getting input from all levels of fire sprinkler professionals and code enforcement, but is still accepting additional input. Areas of special interest are the Albany area and western New York. Other locations will also be accommodated, so get those ideas in!

A master plan has already been laid out that will span the state, starting in 2016. Kasmauskas is looking to expand the plan to include the last quarter of 2015. From western New York to the Hudson Valley to Long Island, we are looking to schedule what is needed, where it's needed.

Seminars are approved for New York State certified Code Enforcement in-service hours. One-day seminars are seven hours, two-days are 14 hours. The NFSA three-day Inspection and Testing seminar is also approved for 21 hours.

Please contact Dom Kasmauskas with locations and pick of seminars. ①

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MID-ATLANTIC REGION



RAYMOND W. LONABAUGH
Regional Manager

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

Great News Out Of Delaware

House Bill 133, "An Act to Amend Title 6 of the Delaware Code Relating to Home Construction" Introduced by Representative Edward Osineski.

House Bill 133 was introduced on May 6, 2015 by Representative Edward Osineski. This bill requires builders of new, one- or two-family residential dwellings that are three stories or less to provide purchasers a cost estimate from the builder for an automatic sprinkler system, as well as information from the State Fire Marshal's Office about the benefits of a residential fire sprinkler system.

The bill passed the House Public Safety & Homeland Security Committee on May 13th, the Full House on June 11th and the Full Senate on July 1st. The Bill was signed into law by Governor Markell on August 6, 2015 at 1:00 p.m. at a ceremony in the Aetna Fire House on Oglestown Road in Newark Delaware. ①



From left to right: Tim Travers, NFPA; Grover Ingel, Delaware State Fire Marshal, Delaware Representative and Bill Sponsor Edward Osineski; Alisha Wayman Bryson, Wayman Fire Protection; Ray Lonabaugh, NFSA Regional Manager.

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NFSA LEGISLATIVE DAY ON THE HILL
November 4, 2015 - Washington, DC

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SOUTHEAST REGION



WAYNE WAGGONER
Associate Director of Regional Operations - East

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

Congratulations to Brentwood, Tennessee

The City of Brentwood, Tennessee adopted an ordinance requiring fire sprinklers in Townhomes on July 27th, 2015. Brentwood is the first city in Tennessee to pass an ordinance to require townhomes to be equipped with fire sprinklers after the State of Tennessee Legislature took fire sprinkler requirements out of the building code.

Mark Foulks Named New Chief of Murfreesboro Tennessee Fire & Rescue Department

Mark Foulks comes to Murfreesboro from Greeneville, Tennessee, where he has served as the fire chief of the Greeneville Fire Department for nine years. Prior to his appointment as fire chief in Greeneville, Foulks was the assistant chief for the Knoxville Fire Department from 1990 to 2006. He began his career as a firefighter in Knoxville. ☎

Wayne Waggoner

NFSA's Associate Director of Regional Operations – East
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FLORIDA & PUERTO RICO



LORRELL BUSH
Regional Manager

FLORIDA, PUERTO RICO

Record Attendance Expected at Hawk's Cay 2015

Registration is open and record attendance is expected at Hawk's Cay-October

25-29, 2015..

The official kick off to the week will begin with the "Fire Product Challenge." Attendees will earn four CEUs while working their way through vendor stations, technical challenges and more. The event includes prizes, drinks and hors d'oeuvres. Monday morning will start with opening remarks from NFSA President Shane Ray. The agenda includes all new topics, new speakers and exciting activities. A bus is available for pre-registered attendees to go to Key West on Wednesday night. Classes and activities will wrap up by noon on Thursday.

All FFSA Members attending the conference are also encouraged to attend the FFSA Board of Directors meeting being held on Sunday, October 25, 2015 at 12:00 p.m.

Spouse and guest registration includes breakfast each day, lunch vouchers, a gift bag and spa coupons. Spouses and guests are free to ride the bus to Key West as long as they are registered! Hawks Cay 2015 will provide an opportunity to learn, network and relax all while earning 32 CEUs, including all mandatory requirements. Please plan to attend and join us for what we are hoping to be a new and exciting twist on an ordinary conference. See full agenda and register at www.floridafiresprinkler.com. ☎

Lorrell Bush

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GREAT LAKES REGION

TBA

Regional Manager

INDIANA, MICHIGAN, OHIO,
WEST VIRGINIA, KENTUCKY

Sprinkler Save at Power Plant in Cheshire, Ohio

On July 29th, a fire was reported at the General James M. Gavin Power Plant in Cheshire, Ohio. The fire started in the generator step-up transformer, which is what takes the generator voltage and increases

it to match the transmission line voltage so that power can leave the plant.

The plant is connected to the grid by 765 kilovolt transmission lines – the highest rated voltage in the U.S.

Meigs County fire stations were called to the scene, but the flames were contained before they arrived. The fire was extinguished by the plant's fire sprinkler system.

There were no injuries reported. ☎

ILLINOIS REGION



BOB TINUCCI
Regional Manager

ILLINOIS

Managing Corrosion Risk in Water-Based Fire Sprinkler Systems

A presentation and discussion (open forum) on **Managing Corrosion Risk in Water-Based Fire Sprinkler Systems**, including 5-year Internal Inspection in compliance with NFPA 25, conducted by Engineered Corrosion Solutions.

PRESENTER: Mat Seydel, Director of Sales

DATE: Thursday, October 1, 2015

TIME: 10:00 AM to 1:00 PM

LOCATION: Papa Passero's Restaurant 6326 S. Cass Ave., Westmont, IL

REGISTRATION/COST: \$10.00 per person / Includes lunch buffet.

*Registration collected at the event.

Cash or check payable to NFSA.

Please register by e-mail or fax for purpose of room set / attendance. (E-mail or fax name(s) & organization attending)

3-contact hours / CE approved by Illinois OSFM (presentation outline attached Pages 8 & 9)

QUESTIONS?

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REGIONAL ROUNDUP

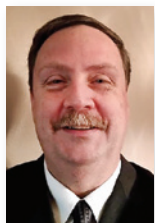
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This event is co-sponsored by:
Engineered Corrosion Solutions
"The De Facto Standard in Fire Sprinkler Corrosion Control"

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WISCONSIN REGION



MARTY KING
State Coordinator

WISCONSIN

Wisconsin Regional Roundup

On June 9th, the Fitchburg, Wisconsin Fire Department responded to a fire alarm at an apartment complex. Upon arrival, it was discovered that there had been a grease fire in one of the apartments, but the engine company confirmed there was no active fire at the time of their arrival. The sprinkler system was shut off, the fire alarm reset, and additional crews assisted in the removal of water from the apartment.

The occupant had been cooking on the stove and left a pan unattended, which resulted in a grease fire. After noticing the fire, the occupant threw water on the pan. When the water reached the grease fire it reacted violently causing the fire to travel across the ceiling and activate the one sprinkler located in the kitchen. This one sprinkler extinguished the fire and prevented it from spreading to the kitchen cabinets and other parts of the apartment.

At the time of the fire, there were four people in the apartment, including at least one minor. All the occupants were able to safely exit the building. No injuries, to either firefighters or civilians, were reported. Damage was contained to the apartment where the fire occurred and the apartment directly below. The apartment building where this fire occurred installed a new fire alarm system in 2007

and sprinkler system in 2008. Both of these systems worked as designed and because of them, a potentially disastrous outcome was prevented. ①

Marty King

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MINNESOTA REGION



TOM BRACE
Regional Manager

MINNESOTA

Sprinkler Save at Hibbing, Minnesota Senior High-Rise

A fire at Hibbing, Minnesota's Androy Building drew a full response from the Hibbing and neighboring fire departments. When crews arrived, they found the fire had already been contained by a single fire sprinkler.

The Androy Building houses senior high-rise apartments, an Elks Club banquet center and an orthodontics clinic.

The firefighters found smoke coming from a vent near the kitchen of the Elks Club and tenants starting to evacuate the building.

Inside, crews found smoke in the Elks side of the building but the fire was down to a smolder. Crews put out the remaining smoldering material and ventilated the smoke from the banquet room.

By 7:10 a.m., it was deemed safe enough to allow tenants back in. No injuries were reported.

Hibbing Fire Marshal Bryan Fagerstrom stressed the importance of having a properly maintained sprinkler system. "The sprinkler system in this fire was serviced and maintained per code and did exactly as it should by containing the fire and keeping it from spreading," he said. ①

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CENTRAL REGION

TBA

Regional Manager

IOWA, KANSAS, MISSOURI

Four Children Die in Unsprinklered Condo Fire in Osage Beach, Missouri

Four children died in a condominium fire on August 4th, 2015.

Two children were 2 years old; one was 4 years old and one was 5 years old. Firefighters say the children lived in the lake area and were cousins of each other; police say they were celebrating a birthday.

The fire department says the call came in just before 11:30 p.m. Tuesday. When firefighters arrived, they found a fourth floor unit at the Compass Pointe condominiums engulfed in flames.

Six people were trapped in the burning building when crews arrived on the scene. Firefighters were able to rescue two adults as they were hanging out of a window of a unit on the third floor, but the four young children in a unit on the fourth floor perished; ambulances took them to a hospital but doctors were not able to revive them.

Fire Chief Jeff Dorhauer says the building did not have a sprinkler system. It was built in the late 1970s or early 1980s; building codes at the time did not require a sprinkler system and building code updates since then did not require older buildings to add a sprinkler system. ①

SOUTH CENTRAL REGION



CYNTHIA GIEDRAITIS
Regional Manager

ARKANSAS, LOUISIANA,
OKLAHOMA, TEXAS

Fire Protection and Department Of Justice Vs. City Of Beaumont, Texas

The U.S. Department of Justice filed a lawsuit on May 26, 2015 against the City of Beaumont Texas for enforcing Fire Code and Zoning Ordinances on Group

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Homes. The lawsuit specifically says that Beaumont is discriminating against people with disabilities by requiring them to live in homes that are more limiting than other single family homes.

City of Beaumont Attorney Tyrone Cooper responds to the lawsuit by documenting the 2002 fire deaths of two older and disabled adults who lived in an unprotected group home. To read the response, visit <http://bit.ly/1J2nB6x>.

Cindy Giedraitis

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GREAT PLAINS REGION



ERIC GLEASON
Regional Manager

Colorado, Nebraska, North Dakota,
South Dakota, Utah, Wyoming

Sprinkler Save at Manufacturing Plant in LaVerkin, Utah

When responders arrived at the plant, there was smoke pouring out of the windows. It was necessary to send a team in to track down the location of the actual fire.

The team discovered the fire had originated in the area of one of the processing machines in the back corner of the building.

The building has a sprinkler system in place, which came on during the fire, and firefighters backed up the sprinklers with hoses to control the blaze. The fire was contained to the inside of the building.

The cause of the fire is still under investigation. No injuries resulted from the incident.

Eric Gleason

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SOUTHWEST REGION



BRUCE LECAIR
Associate Director of Regional
Operations - WEST

CALIFORNIA, HAWAII, NEW MEXICO, NEVADA,
ARIZONA

California Office of the State Fire Marshal Releases Water Discharge Bulletin

The California State Fire Marshal has released informational Bulletin 15-002. This bulletin is titled; Best Practices in Water Management during Required Testing of Fire Protection Systems and is in response to California's most severe drought on record.

As Californians throughout the state know, Governor Brown has declared a State of Emergency and directed state officials to take all necessary actions to prepare for water shortages. He is also requesting significant cut backs in water usage. The Office of the State Fire Marshal has issued the information bulletin to address concerns regarding the growing need to manage water release during the required inspection, testing and maintenance of water-based fire protection systems.

This bulletin is intended to be used by the fire sprinkler industry and the fire protection community as best practices of water management for water-based fire protection systems in order to efficiently and effectively maintain these important fire safety systems during the extreme drought conditions.

The bulletin provides a set of options (tools) from which dischargers and local agencies may select and customize for their particular needs while meeting the intent of state regulations and local codes. To assist those involved in the inspection, testing and maintenance of water-based fire protection systems, the bulletin may serve as a best practices guideline for the discharge of water during the inspection, maintenance and testing of fire protection systems.

The management of water might include the redirecting and/or collecting of discharged water. The types of water discharge covered in this bulletin are associated with most common discharges including:

- Water-based fire protection system acceptance testing
- Periodic water-based fire protection system testing and maintenance
- Fire hydrant testing
- Water-based fire protection system leaks and emergency repairs.

A copy of the Office of the State Fire Marshal Bulletin has been placed on NFSA west website at: www.nfsawest.org.

Bruce Lecair

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NORTHWEST REGION



SUZANNE MAYR
Regional Manager

ALASKA, IDAHO, MONTANA, OREGON,
WASHINGTON

Sprinklerman Shootout Brings Together Puget Sound Fire Sprinkler Industry

Sponsored by the Fire Sprinkler Advisory Board of Puget Sound and Sprinkler Fitters Local 699, the Aug. 1, 2015 Sprinklerman Shootout at Willows Run in Redmond, Washington brought together fitters, contractors and suppliers.

More than 124 golfers participated in the 18-hole tournament. The Patriot Fire Protection team bested Reliable Automatic Fire Sprinkler Co. in a shootout after they both posted a score of 62.

Many generous sponsors contributed to the event: Globe Fire Sprinkler Corp. and RJB Wholesale sponsored the beverages, Smith Fire Systems sponsored the breakfast. Hole sponsors included RJB Wholesale and Globe Fire Sprinkler Corp., along with Spears FlameGuard, Easyflex, Apollo Valves, Viking Fire Protection, Patriot Fire Protection, Fire Systems West, Reliable Automatic Fire Sprinkler Co. and Victaulic. Thanks to everyone who made the day a success! 🏆

Suzanne Mayr

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SPRINKLING OF NEWS

■ Reliable Automatic Sprinkler Announces New Flat Plate Concealed, Quick Response Sidewall Sprinkler

With a K-Factor of 5.6 (80 metric), the G6-56 HSW QR is intended for installation in accordance with NFPA 13. It is UL Listed as a Quick Response Standard Spray HSW for Light and Ordinary Hazard Applications. The sprinkler's flat cover plates (either solid or perforated) are designed for a concealed, flush to the wall look and are available in a wide variety of colors and finishes. The sprinkler uses a push-on/pull-off flat cover plate assembly with 1/4" (6.3mm) adjustment. A plastic protective cap is factory installed on the sprinkler and remains in place during the installa-

tion process. The sprinkler is installed using Reliable's Model G6 Sprinkler Wrench.

The Model G6-56 HSW QR adds even more depth to Reliable's product line.

For more information, please refer to Bulletin 050 on Reliable's website - www.reliablesprinkler.com - or call your local Reliable sales office.

■ Tyco Fire Protection Products Introduces Mobile App for One-Stop Portables Selection


iPAD and Android app offers customizable selection of entire ANSUL RED LINE catalog


Tyco Fire Protection Products has introduced a mobile app that streamlines

the process of selecting a portable fire extinguisher.

The easy-to-use Ansul Red Line app offers a customized experience for a wide range of markets, including aviation, marine, POG, metal processing, mining, industrial, transportation and utility. Users simply identify the market, application and hazard to suit the need, and the app scours a comprehensive catalog of extinguishers from 5 to 350 pounds in fire classes A through D, and recommends the appropriate extinguisher for maximum protection.

"The Ansul Red Line app accounts for NFPA codes and standards, so facility managers and safety directors can save time, eliminate guesswork and trust that the recommendations from the app are reliable," Tony Gryscavage, Director, Product and Agents, Tyco Fire Protection Products. "This one-of-a-kind app will revolutionize the way portable fire extinguishers are specified and help ensure businesses save money and downtime by having the right agent in case of a fire."

The Ansul Red Line app is free and easy to download for use on iPad through the Apple App Store or on Android phone or tablet through the Google Play Store. 



JUST BECAUSE THEY'RE BOTH ORANGE


DOESN'T MEAN THEY'RE BOTH THE SAME.

BlazeMaster

Non BlazeMaster

ONLY BLAZEMASTER® FIRE SPRINKLER SYSTEMS...


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- ✦ Are part of the FBC™ System Compatible Program, ensuring chemical compatibility and piping system success
- ✦ Are listed and approved for more applications than any other non-metallic fire sprinkler system
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Others may try to be like, or even look like, BlazeMaster Fire Sprinkler Systems. There is no substitute for BlazeMaster. Look a little closer and see the big difference.

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WE WANT YOU ON THE COVER OF SQ!



Members, send us your photos of installations, designs, work out in the field, any great action shots you can think of. We'll keep them on file for use as possible covers for SQ. If your photo is selected for use, you will be notified and given proper credit.

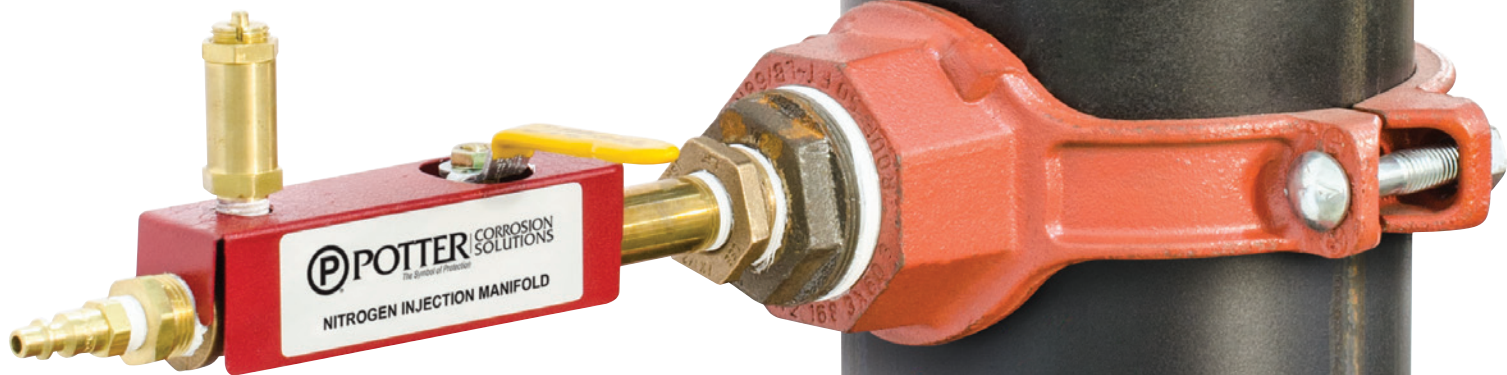
Send hi-res photos to Joanne Genadio at genadio@nfsa.org



any colour you like

Introducing the RAVEN Studio sprinkler; a uniquely discreet solution by Tyco Fire Protection Products. The revolutionary paint-in-place, removable escutcheon allows for superior fire protection without compromising building design aesthetics. The straight thread adapter allows for precise, final adjustment by hand for a perfect, flush fit. Call 800-558-5236 to contact your local Tyco representative to request additional product information.

The benefits of **Potter Nitrogen** now for **Wet Systems**



Reduce costly corrosion and extend the life of
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The Potter AquaN2 Kit is designed to quickly remove oxygen from your wet-pipe system while replacing it with high purity nitrogen in order to reduce corrosion. Using Potter Nitrogen products, you can expand your services to protect both dry *and wet systems* from harmful corrosion.

Learn more by visiting:

www.PotterNitrogen.com/AquaN2