JAN/FEB 2015 / No. 188

Journal of the National Fire Sprinkler Association

SQ

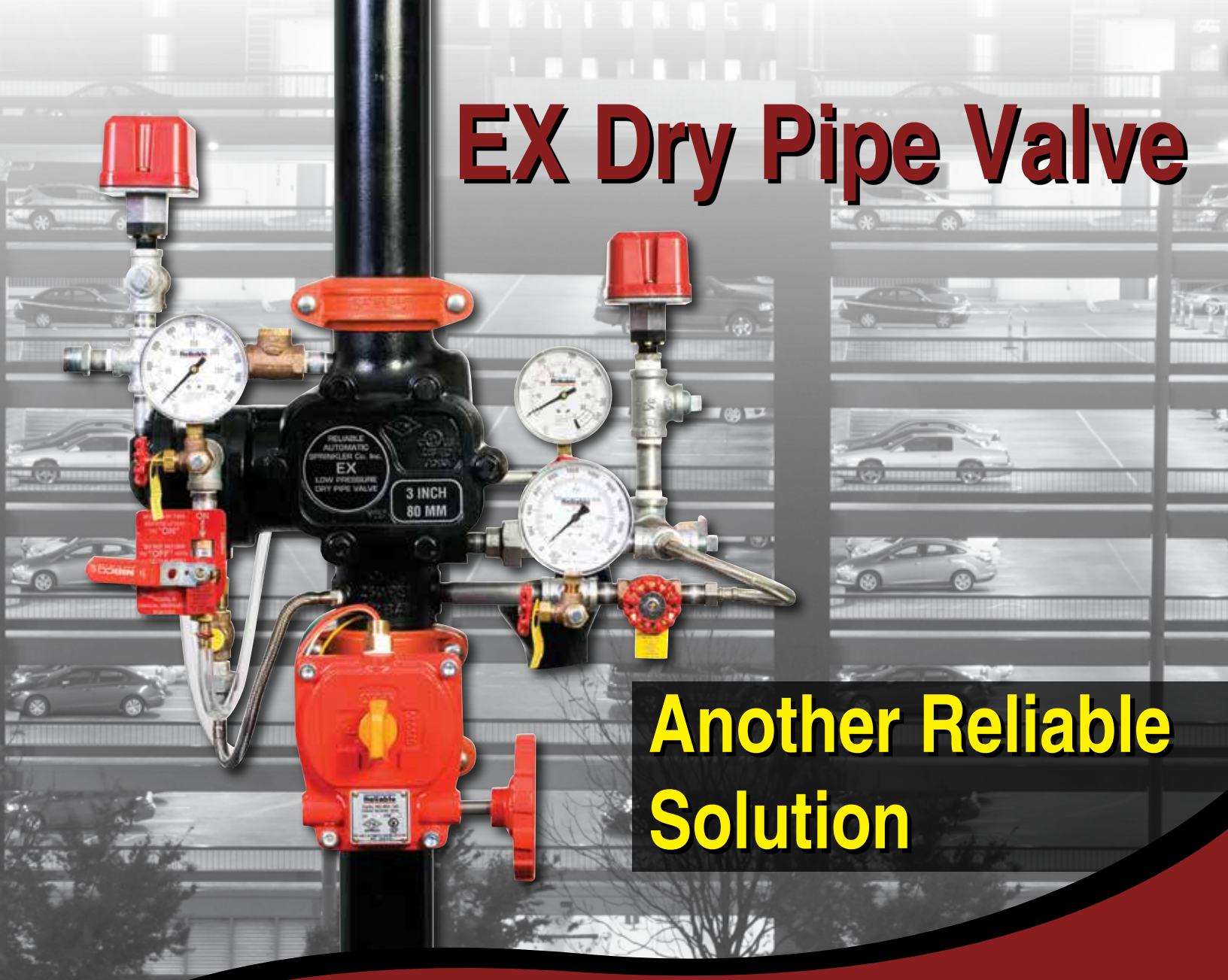
PUMPS for FIRE PROTECTION

INSIDE THIS ISSUE:

- Pump Drivers: Electric and Diesel
- Pumps for Fire Protection: A Training Perspective
- Fire Pump Room Construction
- The 5 "W's" of Fire Pump ITM

2014 MarCom Gold Award Winner

EX Dry Pipe Valve



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January – February 2015 • no. 188

ON THE COVER

With the theme being *"Pumps for Fire Protection,"* technical articles in this issue address a myriad of fire pump related issues from driver selection to inspection, testing and maintenance.

Special thanks to SAM members Clarke and Peerless/GRUNDFOS for providing cover photos.

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IN THIS ISSUE

FEATURES

DEPARTMENTS

EDITOR
DAVID J. VANDEYAR

ADVERTISING COORDINATOR
JOANNE GENADIO

DESIGNER
JOHN L. SULLIVAN/SULLIVANDesign

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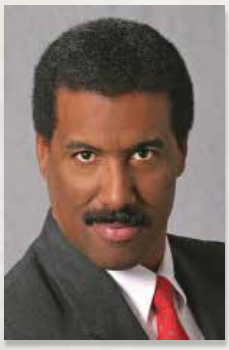
LETTER FROM THE EDITOR



Happy New Year!

Here we are, barely a month into the new year and the northeast is absolutely buried in snow – nearly two feet at last count here at headquarters – and we're enduring through frigid cold temperatures and wind chills that would make a polar bear think twice about taking a dip. While the season's icy grip would not have come as much of a surprise to Robert B. Thomas, founder of the original Farmer's Almanac, which predicted a cold, snowy winter in northeastern climes for the year 2015, we just aren't used to it, at least not at the level of severity experienced over the last month. It's been brutal, and frankly, I'm about over it and ready to "*tap out.*" Spring please!

Just this morning, while commiserating with a contractor in the upper Midwest, where apparently the weather has been equally harsh this winter, we were discussing the merits of NFSA membership. He isn't an NFSA member, yet, but had recently attended one of our chapter meetings in the area and was so impressed he came away with a sense that he too wanted to be a part of it. He was saying with the recent flurry of bidding activity and work already in progress, he really hadn't had the time to keep up with the continuing education requirements he needed to renew his license, which was about to expire within the next 30 or so days. I told him that his was not a unique situation, that I hear similar stories from fire sprinkler contractors all over the country.

To address his concern, I began to explain how NFSA had developed the widest range of fire sprinkler industry-specific training programs and the most flexible delivery methods designed specifically for the fire sprinkler contractor on the go. I could tell from the tone of his voice he was impressed with the depth and breadth of our offerings and just how easy NFSA has made it for him to get the CEUs he as a fire sprinkler contractor needs.

As a result of being able to provide a solution to his most immediate challenge, he will likely become an NFSA member, continue to find value in his membership through NFSA's training, stay engaged with the association by participating in his local chapter, and hopefully remain a member for life. The perfect outcome, for a less than perfect situation.

David J. Vandeyar, *Editor*

EVENTS OF INTEREST TO NFSA MEMBERS

calendar

February 23, 2015	NFPA 13, 13R & 13D Update 2010	Bayfield, Colorado
February 24-25, 2015	Sprinkler System Plan Review	Bayfield, Colorado
March 9-20, 2015	Two Week Layout Tech Training	Oak Brook, Illinois
March 10, 2015	Rough & Final Inspections of Fire Sprinkler Systems	Pataskala, Ohio
March 11, 2015	Pumps for Fire Protection	Pataskala, Ohio
March 12, 2015	Understanding, Applying and Enforcing NFPA 25	Concord, New Hampshire
March 12, 2015	Understanding, Applying and Enforcing NFPA 25	Pataskala, Ohio
March 17, 2015	*Alarms and Initiating Devices*	*ON-LINE*
March 17-18, 2015	Sprinkler Plan Review Hydraulics & Acceptance Testing	Neenah, Wisconsin
March 19, 2015	Understanding, Applying and Enforcing NFPA 25	Neenah, Wisconsin
March 24, 2015	Coordinating NFPA 25 & 72 Inspection, Testing and Maintenance Requirements	Houston, Texas
March 26, 2015	Coordinating NFPA 25 & 72 Inspection, Testing and Maintenance Requirements	Baton Rouge, Louisiana
April 14-15, 2015	Sprinkler System Plan Review	Bettendorf, Iowa
April 16, 2015	Rough & Final Inspections of Fire Sprinkler Systems	Bettendorf, Iowa
April 21, 2015	*Installation of CPVC*	*ON-LINE*
April 21, 2015	Sprinkler System Plan Review	Woodland, California
April 23, 2015	Understanding, Applying & Enforcing NFPA 25 (California Edition)	Woodland, California
May 6, 2015	Rough & Final Inspections of Fire Sprinkler Systems	Brockton, Massachusetts
May 7, 2015	Rough & Final Inspections of Fire Sprinkler Systems	Holyoke, Massachusetts
May 14-15, 2015	Sprinkler System Plan Review	Concord, New Hampshire
May 19, 2015	*Fire Sprinklers in the ICC*	*ON-LINE*
June 1-12, 2015	Two Week Layout Tech Training	Fife, Washington
June 16, 2015	*Planning the System for its Lifespan*	*ON-LINE*
August 3-14, 2015	Two Week Layout Tech Training	Patterson, New York
October 12-23, 2015	Two Week Layout Tech Training	Orlando, Florida

These seminars qualify for continuing education as required by NICET. Meet mandatory Continuing Education Requirements for Businesses and Authorities Having Jurisdiction. To register or for more information, contact: Michael Repko at (845) 878-4207, E-Mail: seminars@nfsa.org. Or register ONLINE at www.nfsa.org.

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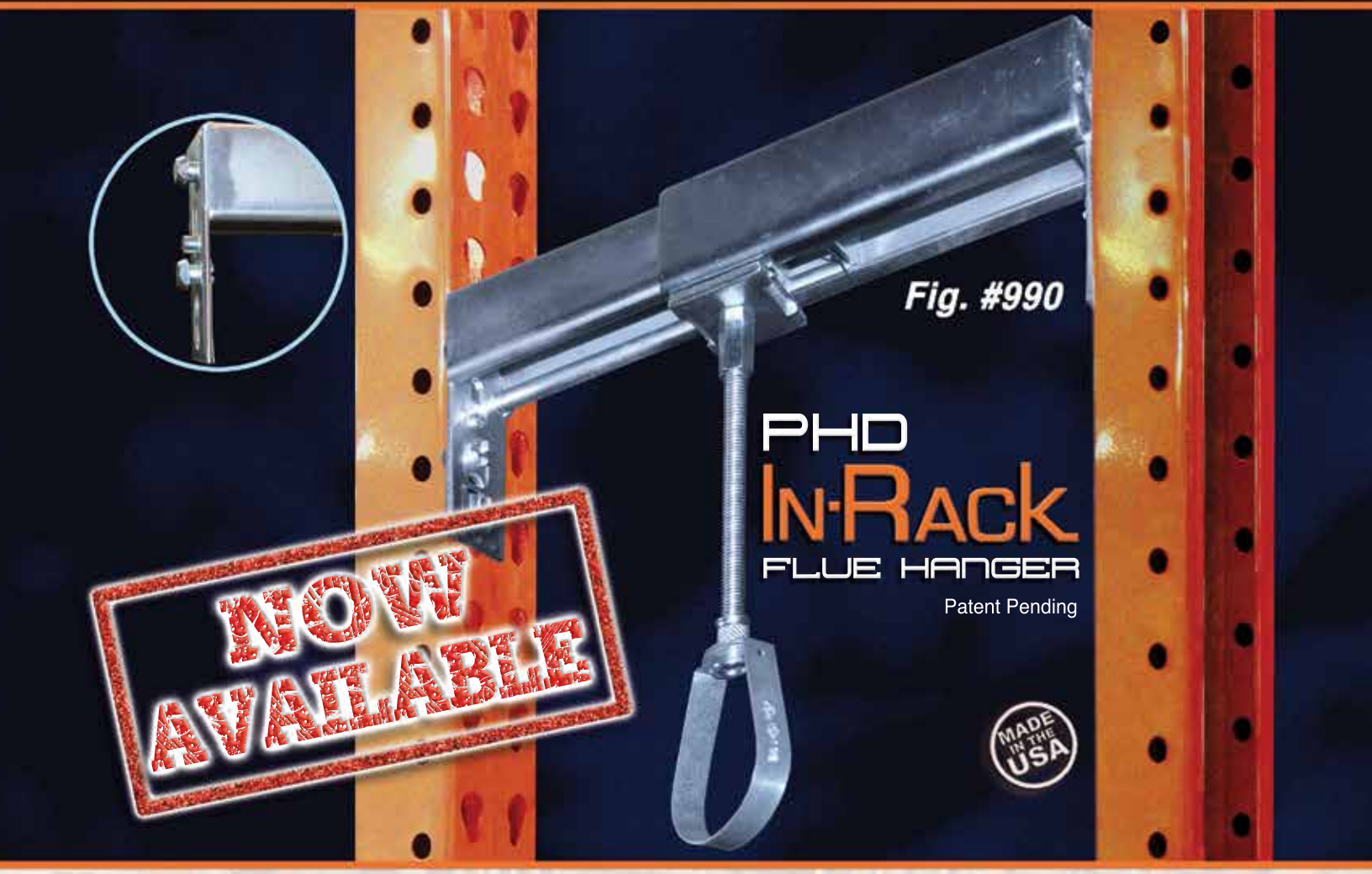

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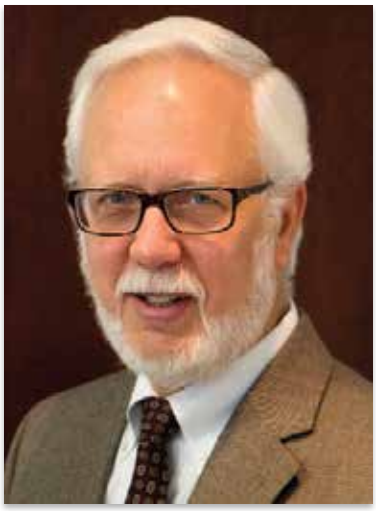
NFSA Regional Chart – March 1, 2015

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) 936-0210	
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) 589-9402 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*	Ron Brown, NFSA 1615 Cypress Spring Drive Fort Wayne, Indiana 46814 (845) 661-6534 FAX (260) 625-4478	Richard A. Ackley Dalmatian Fire, Inc. P.O. Box 78068 Indianapolis, Indiana 46278 (317) 299-3869 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) 247-4755 FAX (847) 816-0098
	Wisconsin	Dan Gengler, NFSA P.O. Box 286 Waupaca, Wisconsin 54981 (262) 325-1958	
Illinois	*Illinois*	Robert Tinucci, NFSA 6401 Richmond Ave Willowbrook, Illinois 60527 (630) 655-1875 FAX: (630) 655-1875	
Central	*Iowa, Kansas, Missouri*	Chris Gaut, NFSA 207 Van Buren Rd. Branson, MO 65616 (636) 692-8206 FAX (636) 410-7700	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 Gledhills 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 of Regional Operations Buddy Dewar, NFSA 200 West College Avenue Tallahassee, Florida 32301 (850) 222-2070 FAX (850) 222-1752	Director at Large Clark Gey Wayne Automatic Fire Sprinkler 222 Capitol Court Ocoee, Florida 34761 (407) 877-5564

Communicating with Building Owners and Managers



Russell P. Fleming, P.E.

Jason Webb, NFSA's Director of Inspection, Testing and Maintenance, recently published a column on the importance of communicating the results of system inspections and tests to building owners. This is only part of the overall need to communicate with building owners and managers. Perhaps our most important goal should be to simply communicate the need for inspecting, testing and maintaining fire sprinkler systems.

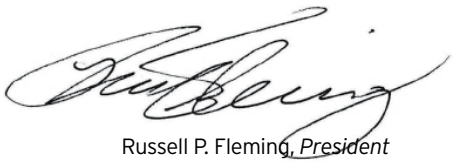
This past year the NFSA Board acknowledged that goal by authorizing a new program by which Jason has begun reaching out to the owner and manager community. The NFSA built a new specialized educational booth, and Jason has committed to a series of conferences that will give him the opportunity to talk with key decision-makers about the advantages of proper ITM programs. For example, in March he will be exhibiting at the National Facilities Management and Technology Conference in Baltimore.

In addition to the educational booth, we have also provided our Regional Managers with materials and training for delivery of a "lunch & learn" program for owners, focusing on the importance of ITM in accordance with NFPA 25. Some have already used it for presentations at Chamber of Commerce/Rotary Club type events.

I recently had the opportunity to participate in a meeting of the Facility Maintenance and Operations Committee of the National Institute of Building Sciences (NIBS). While the NFSA has been a participant in NIBS' National Earthquake Hazard Reduction Program (NEHRP) since near its inception in 1979, there are many other programs in which we have not been involved, including those related to building maintenance. One of this committee's current efforts is the development of the operations and maintenance section of the Whole Building Design Guide (WBDG). Originally created to serve Department of Defense building projects, the guide is now described as "a complete internet resource to a wide range of building-related design guidance, criteria and technology," and is based on the premise that to create a successful high-performance building, one must apply an integrated design and team approach in all phases of a project, including planning, design, construction, operations and maintenance. The guide (www.wbdg.org) has been seeing increased use in the private sector as well, and at some points has exceeded seven million downloads per month.

Accessing the operations and maintenance section of the guide, more specifically the material on developing a comprehensive facility operation and maintenance manual, I was pleased to see the inclusion of the need to address inspection and maintenance of fire protection systems, and specifically sprinkler systems. However, I was surprised to see no mention at all of NFPA 25 in the section on relevant codes and standards or the section listing major resources.

Obviously we've got a lot of work to do. But I'm happy to report that Jason Webb and NFSA have begun that effort.



Russell P. Fleming, *President*

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Rethink Employee Retention

7 Guidelines for Engaging and Accommodating Your Older Staff

by Ruth Crocker

Mary loved her job as a recreational therapist in a skilled nursing facility. Her co-workers marveled at her ability to assess the needs of residents and propose exactly the right activity for a patient recovering from a brain injury, stroke or other trauma. Her thirty plus years of experience in all manner of expressive arts therapies helped her serve her patients well. She worked efficiently and effectively with quiet compassion.

And then came the inevitable hours of paperwork. For Mary, writing long detailed notes in medical charts was a normal part of her day. But, she wasn't as speedy as she had been in the past and documentation requirements were increasing. While a physician's notes are usually transcribed from a dictated recording, medical support staff still struggle through pages of writing by hand in many facilities. Her immediate supervisor, fifteen years her junior, pushed her to speed up. Mary felt stressed and unable to cope with the continuing pressure. After starting to dread her job and feeling like she was getting worse instead of better, she applied for and received a medical leave of absence. Was this the best solution for Mary and her employer? Probably not.

Mary is one of many valuable older workers who could have stayed productive on the job with some modifications in her work environment. Employers today are facing the fact that we need to keep our older workforce in place longer and we need to help them stay healthy. Baby boomers make up about one-third of the U.S. workforce and for the first time in several generations, there are not enough younger workers to replace them. Key industries, especially those that rely on workers with proven performance, knowledge, skills and self-confidence, will be forced by labor shortages to rethink employee retention and how best to ensure health and safety by adjusting equipment and the work environment.

There are many fears and myths about "getting old" in our culture, but the reality is that people are living longer and healthier and can remain robust contributors to the workforce much longer than any previous generation. While age does not determine fitness, there are predictable changes that occur with age and can be accommodated. The following are guidelines for employers who want to maximize the working environment for their most valuable asset: the reliable, responsible, loyal, conscientious, cooperative, collaborative, wise older worker.

- Maintaining an unmoving position for a long time is very tiring, especially standing which puts pressure on blood vessels. Repeated and prolonged static work can be harder on the body than dynamic work. Provide opportunities to change posture or position during the workday. Adjust work surfaces to encourage position changes.

- Sitting is generally good if chairs are well designed and adjustable. To avoid the dangers of prolonged sitting (weakened abdominal muscles, digestion and breathing problems and damage to spinal discs), provide training and information on sitting properly and permit opportunities to walk about and stretch.

- Provide appropriate equipment for assisting in any type of lifting. Workers of all ages are vulnerable to injury by improper lifting technique and lifting objects that are too heavy. Teach them to decrease the need to twist the trunk of the body during lifting, using leg strength rather than leaning over and placing the load as close to the body as possible.

- Because hand grip strength gradually decreases as we get older, the right grip or handle becomes important. Smaller handles become more difficult to use. Provide tools and controls with user friendly handles.

- Light reaching the retina of the eye declines by as much as 75 percent from age 20 to 50. Improved lighting helps all workers. Problems with adjusting to lighting contrasts can be improved by ensuring that the level of lighting in the room is similar to the light level on computer screens in the environment. Reduce glare by using low or non-glare computer screens.

- Gradual, age-related hearing loss and decreased ability to hear high-pitched sounds can be addressed by installing sound-absorbing material (to neutralize sound) and minimizing air-conditioning noise.

- Offer incentives to encourage people to take part in fitness classes and quit-smoking campaigns. Older workers are more vulnerable to the possibility of sudden-onset and lasting health problems especially if they are unfit and overweight.

The previous tradition of older supervisors and younger workers has changed especially where workers are opting to stay on the job longer. It is important that younger supervisors be aware of different generational values and attitudes and avoid adopting a "child to parent" attitude towards an older worker. At the same time, treat older workers with the same requirements for performance and safety issues. Whether older or younger, each individual is different. In Mary's case, her facility eventually adopted a voice-activated recording system which helped

>> CONTINUED ON PAGE 10

>> CONTINUED FROM PAGE 9

staff at all levels of the organization to get their notes written in a timely manner.

Businesses can improve their employee practices by having supervisors attend workshops on aging and the workforce. Talk to other employers who have successful experiences with hiring older employees and encourage employee feedback on aging issues by surveying your employees and listening to their concerns and suggestions. Hiring and retaining older workers can help your business grow.

ABOUT THE AUTHOR

Ruth W. Crocker, Ph.D is an author, writing consultant and expert on recovery from trauma and personal tragedy. Her book, Those Who Remain: Remembrance and Reunion After War describes her experience following her husband's death in Vietnam and how she found resources for healing. An excerpt has been nominated for a Pushcart Prize in 2014. She is Writer-In-Residence at Riverlight Wellness Center in Stonington, CT where she teaches the art of writing memoir and personal stories. She is available for workshops, readings and public speaking. Contact her at www.ruthwcrocker.com.

NEVER LET YOUR LIEN TIME RUN OUT!

By Stuart S. Zisholtz

I hate repeating some of my previous topics, but unfortunately there has been some confusion about the time frames associated with filing a mechanic's liens and commencing a payment bond claim. Some members believe they have time to file a mechanic's lien on a project when, in fact, their time expired. Some members believe the lien lasts for two years and can continuously be renewed. Finally, some members are completely lost on the time frames for filing the lien.

As a result, I was requested to once again publish the time frames associated with filing a mechanic's lien or bringing a claim under a payment bond.

Below are the various time frames associated with each procedure. Do not, however, wait for the last day to file your lien. The longer you wait to file the lien, the more likely payment was made to the general contractor. Once the general contractor has been paid by the owner, your lien is worthless.

Furthermore, many payment bonds contain strict requirements that notices be served on various parties within a specific frame. Once that time frame expires, your right to recover may be jeopardized.

PRIVATE IMPROVEMENT PROJECTS:	
One Family (also two-family suggested)	4 months from date of last item of labor or materials
Commercial and more than one-family	8 months from last item of labor and materials
Duration of Lien	1-year
RENEWAL:	
One-family dwelling	Court order
More than one-family and commercial, first year renewal	Notice of renewal
After one-year of more than one dwelling and commercial	Notice of renewal
PUBLIC IMPROVEMENT PROJECTS:	
Lien	30 days after completion and acceptance of job
Duration	1-year
Renewal	Notice of renewal
PAYMENT BOND NOTICE:	
Notice directed to any two of Owner, Bonding Company or Contractor	Usually 90 days from completion of your work
Time for Commencement of Action	Usually 1 year
If you have a Direct Contact with the Principal	Usually no notice required
Time for Commencement of Action	Usually 1 sometimes 2 years

Never Let Your Lien Time Run Out!

Zisholtz & Zisholtz, LLP, Attorneys at Law, 170 Old Country Road, Suite 300, Mineola, New York 11501. Phone: 516.741.2200.

NFSA SEMINAR:

Fire Pumps for Fire Protection

Featuring a 2nd day Hands-on Training Session

By James D. Lake

NFSA has always been a leader in training on NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection* and fire pumps. In 2015 we are expanding the seminar to two days and have added a hands-on component.

So, the new format consists of a full day delving into the requirements of NFPA 20 working through the basic operating principles of fire pumps; the requirements for the various components that make up a fire pump package and addresses the requirements for acceptance testing for the pump to ensure proper operation. The second day then takes the participant into a fire pump lab to experience how the systems work and how the standard is applied to the actual operation of the pump.

At the conclusion of this seminar the participant is be able to:

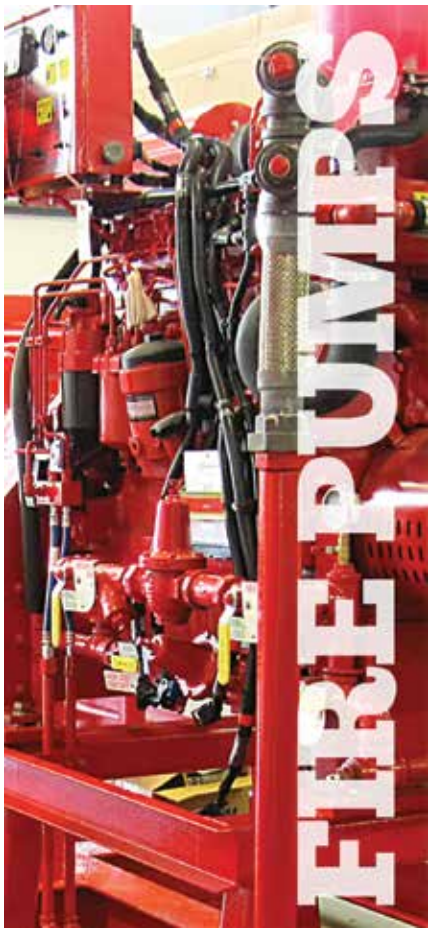
1. Describe the types of fire pumps and their applications
2. Identify fire pump components
3. Locate the requirements for fire pumps in NFPA 20
4. Discuss installation requirements of electric motor and engine driven fire pumps
5. Discuss the requirements for fire pumps in high-rise buildings
6. Apply a process for the accurate sizing of a fire pump
7. Apply acceptance testing requirements for fire pumps and related equipment

Due to the hands-on nature of this seminar and the specialized equipment involved, obviously special locations are required. As such, we are partnering with a number of NFSA members and sprinkler allies to locate these seminars around the country using fire pump labs and facilities that can support this kind of training event. So keep an eye out for seminar announcements and visit the NFSA Training Calendar to find out when we are conducting this seminar in your area.

Fire Pumps Training On-Line

Can't make it to a location for fire pump training? No problem. NFSA has produced a dozen Tech Tuesday webinars relating to fire pumps and NFPA 20 including titles like; Why Use Fire Pumps, How Pumps Work, Fire Pump Sizing and Fire Pump Controllers. These seminars and many others are available on the Contractors Channel at NFSA.tv... **www.nfsa.tv**.

If you are interested in discussing bringing an NFSA Fire Pump Seminar to your area, please contact either your NFSA Regional Manager or give me a call and let's talk. You can reach me by email at Lake@nfsa.org or simply call 617.372.6214. I look forward to hearing from you.



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Signals Needed for Systems Using Fire Pumps

By Victoria B. Valentine, P.E.

Fire pumps are essential to water-based fire protection systems where the water supply needs to boost its pressure in order to achieve the system demand. Installation of a fire pump will require alarm signals to be connected so that the appropriate parties are notified when the pump operates or has an issue. NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection*, contains the rules for proper installation of a fire pump, which includes the necessary signals a fire pump and its appurtenances must trigger. The 2013 Edition was referenced for this article.

There are three different types of signals used in the oversight of a fire pump – trouble signals, supervisory signals, and alarm signals. To begin, a signal is defined as an "indicator of status" in Section 3.3.47. The annex goes on to note that it is intended for a signal to have a response within a 2-hour window. In addition, a fire pump alarm is defined in Section 3.3.16 as "a supervisory signal indicating an abnormal condition requiring immediate attention." This identifies that when NFPA 20 refers to an alarm, it is really a supervisory signal.

Although there is not a direct reference to NFPA 72, *National Fire Alarm and Signaling Code*, from NFPA 20, this is where the definitions for the types of signals can be found. Trouble signals denote a condition where there is an abnormality detected such as a low temperature in a room. This is something that would need to be addressed but the system could still operate if a fire incident occurred. Supervisory signals indicate that there is an abnormal condition with the processes or equipment such as a high diesel engine temperature. This is also a condition that needs to be addressed, but if a fire incident occurs then the engine may overheat, which in turn could create a situation where the pump is not providing the amount of pressure that the fire protection system needs. Alarm signals identify an abnormal condition where there is a threat to life or property such as a water flow alarm. This condition has more urgency in that the system has indicated an operation of the system, most likely a fire incident.

NFPA 20 does not require a fire pump to be supervised remotely, if it is constantly attended as indicated in Section 10.4.7.1. However, this is rarely the case so supervision would be needed. The following tables indicate where signals are needed for fire pumps according to NFPA 20. Table 1 shows the alarm signals for a system with a fire pump. Table 2 shows the supervisory signals for a system with a fire pump. Table 3 shows the trouble signals for a fire pump system. Obviously, some of the signals in the tables are only applicable when the component is present in the fire pump arrangement selected for a system.

(SEE TABLES ON NEXT PAGE)

As can quickly be seen from Table 1, there is only one alarm signal needed for the fire protection system using a fire pump, which is the water flow alarm. This is needed for any water-based fire protection system whether the system uses a fire pump or not. The water flow alarm is an alarm signal because there is either a fire incident where the system has activated or an issue where water is leaving the system without a fire. Either scenario needs immediate attention as there is a risk to life and/or property as a result of the water flow.

All of the supervisory signals are mandatory as noted in Table 2. However, they are tied to how the fire pump is driven. Some apply to electric motor driven fire pumps while others are tied to diesel engine driven fire pumps. From the list, none of the signals indicate that the system is in operation. The items listed, though, are important for proper operation of the fire pump in an event that a fire does occur. For example, the low level on diesel fuel needs to be addressed to ensure that if the fire pump is needed for an incident that there is sufficient fuel for the fire pump to run the duration of the system demand.

Trouble signals, like supervisory signals, need to be handled so that there are no problems with the fire protection system.

>> CONTINUED ON PAGE 15

Victoria B. Valentine, P.E.
NFSA's Director of Engineering

Table 1: Alarm Signals for Systems with Fire Pumps		
MONITORED ITEM	REQUIRED	NOTES
Water Flow Alarm	Mandatory	Required regardless of pump presence.

Table 2: Supervisory Signals for Systems with Fire Pumps		
MONITORED ITEM	REQUIRED	NOTES
Electric Motor Driven Fire Pump		
Pump or motor running	Mandatory	
Loss of phase	Mandatory	
Phase reversal	Mandatory	
Controller connected to alternate source	Mandatory	Only where a transfer switch is installed
Power available in all phases	Mandatory	
Diesel Engine Driven Fire Pump		
Critically low oil pressure in lubrication system	Mandatory	
High engine temperature	Mandatory	
Low Engine Temperature	Mandatory	
Failure of engine to automatically start	Mandatory	
Shutdown from over speed	Mandatory	
Battery failure or missing battery	Mandatory	
Battery charger failure	Mandatory	Separate for each battery
Low air or hydraulic pressure	Mandatory	
System overpressure	Mandatory	For engines equipped with variable speed pressure limiting controls
ECM selector switch in alternate ECM position	Mandatory	Engines with ECM control only;
Visual indicator required		
Fuel injection malfunction	Mandatory	Engines with ECM control only
Low level fuel	Mandatory	Less than 2/3 full
Engine running	Mandatory	
Interstitial space liquid intrusion	Mandatory	
High water cooling temperature	Mandatory	
Controller turned to 'off'' or 'manual' position	Mandatory	

Table 3: Trouble Signals for Systems with Fire Pumps		
MONITORED ITEM	REQUIRED	NOTES
Tank low liquid level	Mandatory	Only when a tank is the primary source for water
Low pump room temperature	Recommended	See Annex A4.24
Relief valve discharge	Recommended	See Annex A4.24
Flowmeter left on, bypassing pump	Recommended	See Annex A4.24
Low suction supply (pressure) below normal	Recommended	See Annex A4.24
Low suction supply (pressure) near depletion	Recommended	See Annex A4.24
Diesel fuel supply below normal	Recommended	See Annex A4.24
Steam pressure below normal	Recommended	See Annex A4.24
Diesel engine - overspeed	Mandatory	

>> CONTINUED FROM PAGE 13

Yet, there is a little less urgency with these types of signals. These items are typically things that could develop into a problem if nothing is done. For example, the low temperature in the pump room could trigger at temperatures below 40°F (4°C). Notification at that level allows action to be taken before water in the pump and its appurtenances freezes.

NFPA 20 is the document referenced for fire pump installations, in most cases. This comes from the locally adopted building codes. It is important to remember the hierarchy of the building codes. If the adopted building code requires signals to be alarm or supervisory where NFPA 20 only refers to them as trouble, then the building code would have to be followed. These types of requirements could come from the adoption of the IBC (International Building Code), NFPA 101 (Life Safety Code), or even NFPA 72. For example, in the IBC Section 903.4, it states that sprinkler systems be provided with supervision and alarms, specifically "Valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and waterflow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit, and (Section 903.4.1) that alarm, supervisory, and trouble signals shall be distinctly different and shall be automatically transmitted to an approved supervising station or, where approved by the fire code official, shall sound an audible signal at a constantly attended location." This would alter some of the "recommended" items in Table 3 to become mandatory where the IBC applies.

Summary

A fire pump can be vital to proper performance of any water-based fire protection system. The signals from the fire protection system are thereby very important too. It is pertinent that system operation is communicated as the fire pump needs to be attended during an incident. However, it is just as important that supervisory and trouble signals are communicated so that issues can be addressed allowing the system, including the fire pump, to operate as intended.

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Checklist for Fire Pump Room Construction

By Jeff Hugo, CBO

The size of the fire pump room and providing adequate clearances for the equipment is not the architect's or the owner's first priority, but the codes are slowly changing this view. The fire pump room in any building becomes mission control during a fire. There are many areas to cover when designing a fire pump room, and below is a short checklist for the fire sprinkler industry to ensure that vital steps are not missed in the design, construction, or inspection process.

Figure 1-1 Checklist for Fire Pump Room Construction

1. Is the room sized to fit all of the components of the fire pump?
2. Is there sufficient working clearance between components and walls?
3. Does the clearance between and around electrical equipment comply with NFPA 70
4. Is the pump suction flange oriented correctly to the water supply?
5. Are the doors large enough to allow the removal of the largest piece of equipment?
6. Is there an unobstructed path to move the equipment?
7. Are the correct fire ratings applied to the floors, walls and ceilings?
8. Are all openings and penetrations protected?
9. Is there protected access to the room?
10. Can the temperature of the room be maintained to 40 degrees?

1. Is the room sized to fit all fire pump components?

The fire pump room is a dedicated room for the fire pump and other related fire protection equipment. All of the components of the fire pump shall be in the fire pump room and only items related to fire protection can be present in the fire pump room. Devices, panels, motors, and similar equipment, along with storage, that do not serve the fire pump are prohibited. The one exception is the domestic water piping and equipment; it is allowed to be in the fire pump room.

When laying out the fire pump room, arrange the devices, panels, and motors that serve the fire protection equipment as close as possible to the fire protection equipment they serve. This practice provides a user-friendly design of the room. Equipment shall also be mounted on non-combustible or other substantial support structures and be protected from the possibility of physical damage.

2. Is there sufficient working clearance between components and walls?

The building and fire codes require the fire pump room designed with adequate space around all of the equipment. The installation shall have the proper clearances and working spaces around the equipment. The minimum distance of the equipment from any wall should be 4 inches, but depending on the component, the minimum distance would increase accordingly. The future maintenance needs should also be considered when spacing equipment and generous spacing around the components should be a necessity instead of a luxury.

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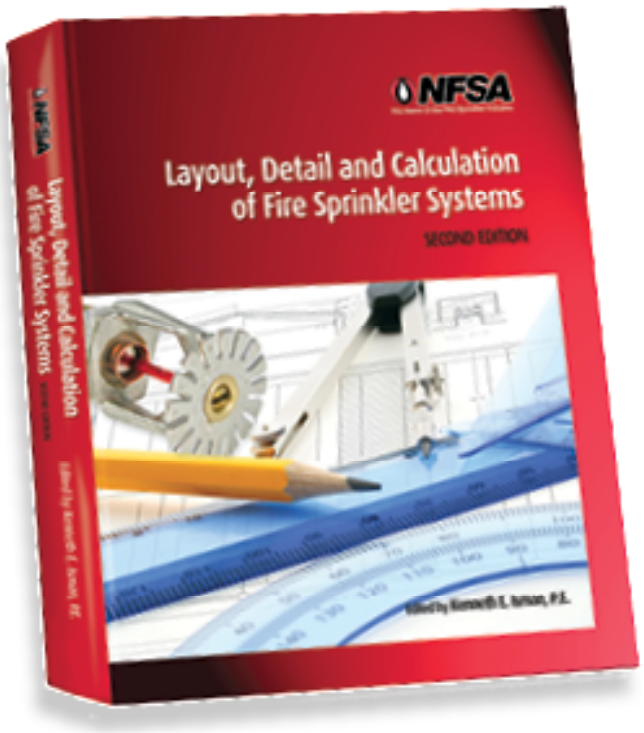
Jeff Hugo, CBO
NFSA's Manager of Codes

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!

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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.

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Table 2-1 Weight of Equipment	
Electric fire pump	2,800 - 4,000 lbs.
Diesel fire pump	3,000 - 4,100 lbs.
Fire pump casings and impellers	100 - 300 lbs.
6-inch backflow	105 - 120 lbs.
6-inch gate valves	80 - 120 lbs.
8-inch RPZ with gate valves	550 - 595 lbs.

Consider the amount of space it takes to test and maintain any device. Testing and maintenance of some equipment in the fire pump room may require two people, along with an arrangement of hoses, tools, parts, hoists and additional lighting.

Consider the weight of the equipment installed and need to potentially move or replace this equipment in the future. Table 2-1 shows approximate weights of some common components found in the fire pump room. Some of these components may need a fork truck, chain fall, duct lift, pulleys, and/or carts in the fire pump room, along with additional personnel to assist in moving the device for repair or replacement.

Building owners should know that the size of the fire pump room will dictate the maintenance costs of the future.

3. Does the clearance between and around electrical equipment comply with NFPA 70?

The fire pump room contains many pieces of electrical equipment. When arranging the electrical panels and controllers, consider the operation of the fire pump in regards to water that may be released during the operation. The only visible water in a fire pump room, normally, is the water used to cool the packing glands of the fire pump. This water is accounted for with a dedicated drain, however, when laying out the electrical equipment it is prudent to consider keeping all of the electrical equipment in an area that is less than likely to get wet.

Energized electrical equipment must be a minimum of 12 inches above the floor of the fire pump room. NFPA 70 requires dedicated work space for all electrical equipment. Figures 3-1, 3-2, and 3-3 show the requirements for the height, width and depth of the dedicated space for electrical equipment. These minimum work spaces are devoted to the electrical worker and the layout of the room needs to be adjusted to follow these clearances mandated by the electrical code.

Figure 3-1 Electrical Equipment Rooms – Work Space

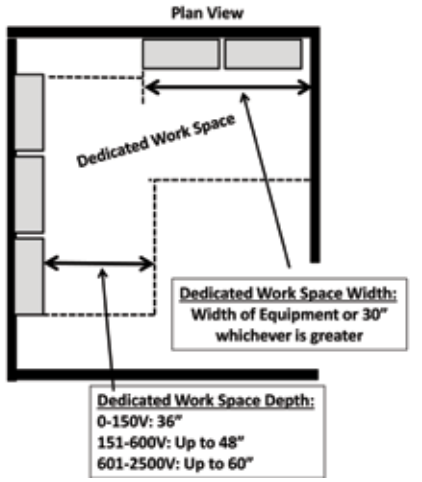


Figure 3-2 Electrical Equipment Rooms – Work Space

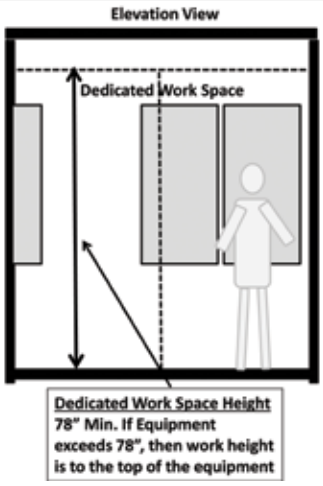
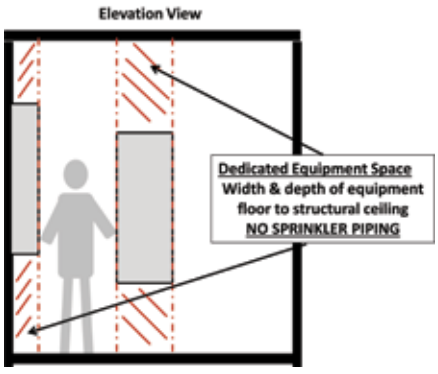


Figure 3-3 Electrical Equipment Rooms Equipment Space



4. Is the pump suction flange oriented correctly to the water supply?

The fire pump room size needs to consider the actual piping that is associated with the fire pump. Suction, discharge and bypass piping is installed in a manner that is hydraulically and economically efficient with the valves accessible and the gauges in a position that are readable.

Important consideration must be used when laying out the piping in the fire pump room in regards to the suction flange of the fire pump and the suction piping. In NFPA 20, Figure A.4.14.6 shows many different positions of the elbows and tees in relation to the suction flange. When tees and elbows are installed improperly, they can introduce turbulence into the fire pump, which causes costly fire pump problems and interruptions.

5. Are the doors large enough to allow the removal of the largest piece of equipment?

The building and fire codes require that the equipment installed in the fire pump room must be able to go through the door or doors. The largest piece of equipment must fit through the door opening. This requirement is no different from the requirements in the mechanical or electrical codes for those trades. Building codes do not want the fire rated wall removed or disassembled in an event that the largest piece of equipment, such as the fire pump or controller, has to be removed. The repair of the wall may never occur or be reassembled correctly. The integrity of the fire rated walls, floor, and ceiling of a fire pump room is critical not only to protect the fire protection system but the personnel in the fire pump room. As described in Step #9 below, NFPA 20 requires someone to be in the fire pump room while it is running. By sizing the doors to the largest piece of equipment, it dramatically decreases the cost of maintenance for the system(s) in the future.

6. Is there an unobstructed path to move the equipment?

The building and fire codes not only require the door sized for the largest

>> CONTINUED FROM PAGE 19

piece of equipment, but also a path to move the equipment through the building. Fire pump rooms are usually located at the back of the building or by the loading dock. This provides an easy way to move parts and equipment that may need to be replaced without causing damage to floor and wall coverings. Dripping sprinkler water and scale or leaving greasy tracks on upscale carpeting is not good for convincing the building owner the importance of maintaining the fire protection systems. When possible, eliminate or shorten the path or consider installing a door directly to the outside. Just as in Step #5 above, removing portions of walls is not an option.

7. Are the correct fire ratings applied to the floors, walls and ceilings?

The building and fire codes require the floors, walls and ceilings to have a fire resistance rating of 2-hours for fire pump rooms in high rises and 1-hour floors, walls, and ceilings for fire pump rooms located in buildings not considered a high rise. In the event of a fire, this room must remain in operation. In many cases the fire pump room and the building surrounding the fire pump room have fire sprinklers, but not always. Fire pump rooms are first protected by passive construction. It is very important to not forget the floors and ceilings are required to have a fire rating. This would also include the structural elements supporting the fire pump room. For example, if the fire pump room is on the third floor, the floor of the third floor along with the walls or columns that support the third floor shall have the same fire rating as the fire pump room.

8. Are all openings and penetrations protected?

As mentioned in Step #7 above, fire pump rooms are first protected by passive fire protection construction and methods. The openings through all the floors, walls and ceilings are required to be protected by approved opening protection. Every penetration is a breach in the integrity of the fire rated assembly, and every penetration has several methods of protection and is addressed by the building and fire codes.

Doors are fire rated with fire rated frames, hardware and self-closers. Steel or copper piping (including diesel exhaust pipe), when 6-inches or less in diameter, may pass through masonry or concrete walls with the annular space filled in with mortar. All other penetrations such as conduit, plastic piping, electrical boxes, and ductwork are required to be protected by an approved firestop system such as intumescent caulking, collars, wraps and pillows, fire dampers, and other approved methods. The building code has specific requirements for each penetration and every penetration adds cost and the potential for an infringement in the fire rated assembly. Consolidate or limit the number of times the floors, walls, and ceilings are penetrated, where possible.

9. Is there protected access to the room?

NFPA 20 requires that qualified personnel occupy the fire pump room during a fire. When everyone else needs to exit the building during a fire, someone needs to go the opposite way and monitor the fire pump. NFPA 20 is emphatic that the fire pump room construction is preplanned with the fire department. It is very important to get the fire department involved in the design of the fire pump room to ensure that the room is located and constructed properly.

> *"It is very important to get the fire department involved in the design of the fire pump room to ensure that the room is located and constructed properly."*

The building and fire codes are designed to get people out of the building. The means-of-egress chapters have robust requirements for the exiting of a building. Very little, if none of these codes contain requirements for accessing the fire pump room during its operation using the existing exiting components.

NFPA 20 requires the fire pump room to be directly accessible from the outside (see Step #6 above) or from an enclosed passageway or enclosed stairway. Not all fire pump rooms are on the first floor. In the case of tall buildings, the fire pump room(s) could be located several stories from the first floor. NFPA 20 would require the accessible path to the fire pump room to have the same fire resistance rating as the fire pump room. For high rise buildings, the 2-hour fire pump room would be accessed by the 2-hour stair enclosure.

Here are a couple items for consideration. One, the building codes do not permit access into any room from inside the stair enclosure. Two, if the fire pump room is not accessed from the stair enclosure, then it would be from a corridor or exit passageway. The corridor and exit passageway, in the building code, is only required to be of 1-hour construction. Both of these exiting components would need to be upgraded to serve as the access route for the fire pump room. The preplanning meeting with the fire department is imperative to resolve some of the current building and fire code requirements that are not coordinated with NFPA 20.

10. Can the temperature of the room be maintained to 40 degrees?

When it comes to fire protection, the temperature of space or room is required to be above 40 degrees Fahrenheit. A reliable source of heat is required to maintain the minimum temperatures. When the fire pump room contains diesel fire pumps, the manufacturer's literature may require the minimum temperature to be increased.

Summary

Checklists are aids. They trigger important points that need to be addressed and remembered. This checklist is by far not all inclusive, but it does address some of the lesser known and commonly missed items in design, plan review, inspection and construction of fire pump rooms. These rooms house equipment that supplies life and property saving systems and the construction of the room warrants careful consideration to ensure operation of the fire pumps to supply sprinklers, standpipes, and water mist systems.

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Social Statistics

By Joanne Genadio

Way back when in my sophomore year at Utica College of Syracuse University, I was required to take a math class. I could already feel my stomach start to churn. Ask me to spell *antidisestablishmentarianism*, but don't *ever* ask me to find the square root of an Isosceles Triangle *(extra credit if anyone gets that reference)*. So, perusing the myriad of choices that would satisfy my requirement and trying to coincide my preference with the shortest registration line, I chose Statistics.

Professor Helmut Echtermann had a thick German accent and a way with statistics that actually made me pay attention during class *(a rare feat back in the day)*. I thought, "Gee, this isn't really like math," and was extremely proud of myself for my excellent choice, although I'd often wonder just how useful statistics would be in my post-college years.

Fast forward more years than I'd care to count and I'm often asked if NFSA is doing a sufficient job of getting the fire sprinkler message out there. I'm asked to compare what we do to other fire safety associations. Those of you that take part in our social networks already know the answer to that question. However, whether you participate in our social media or not, this will be of interest to you. So, let's take a little walk through our wonderful, thriving, social networks and learn just who we are reaching with our posts, tweets and discussions. The analytics now available at the click of a mouse would fill Professor Echtermann's heart with joy!

Facebook

As of the writing of this article, 5,593 people "like" our Nat Firesprinkler Facebook Page. According to Facebook Insights, the analytics that Facebook provides to Page Managers, that number grows an average of 6 "likes" per week. Our posts reach an average of 1,400 followers per post and we engage approximately 60 people per post. Engagement is when a reader takes a further action, i.e. clicking a link in the article or sharing it on their page. In the past week, 20 followers shared our posts. Growing our reach on Facebook even farther.

QUICK FACTS:

- Our Facebook audience is approximately 80% male, 20% female
- While 4,459 followers are from the U.S., Nat Firesprinkler boasts fans from Jordan, Sweden, Bangladesh, Italy and the U.K., among many others
- The average age of Nat's followers is 35-44 *(See! You're not too old!)*

Twitter

@NFSAorg has 1,960 followers Our tweets made 32,500 impressions over a 28 day period, with an average of 1,200 impressions per day. Of those impressions, 585 followers interacted with the tweet. Interaction is described as clicking on a link or hashtag in the tweet or retweeting. On average, our tweets are retweeted seven times a day. We also receive, on average seven clicks per day. In the past week, 50 followers clicked on our links and 44 retweeted our tweets!

QUICK FACTS:

- Our Twitter followers are 88% male, 12% female
- The top four states, in order, for most followers are California, New York, Kansas and Illinois.
- Top interests of our followers are, in order, construction, weather, U.S. military, insurance and remodeling

Still with me? Hang in there. We're gettin' to the part where Mama takes it home.

LinkedIn

On LinkedIn I administer both a group page and a company page. The group page is where discussions take place between members. The company page is for posting news, events and information to our page followers. In, addition I belong to other groups that reach specific target audiences. Among these groups are BOMA, ICC, Fire Chief Network, Fire Educators, and the U.S. Green Building Council.

>> CONTINUED ON PAGE 24

Joanne Genadio

NFSA's Marketing Manager

>> CONTINUED FROM PAGE 23

NFSA Group

There are 5,887 members of our LinkedIn Group. It's here we reach our future leaders. 23% of group members seniority is entry level, 21% manager and 21% senior. We gained 27 new members in the past week and our week after week growth rate is 80%!

QUICK FACTS:

- 34% of our members are in the construction industry. 15% of our members are considered to be in the military or protective services industries. 10% are in sales.
- Cities with the most members are (in order), New York, Chicago, Boston, Philadelphia, Atlanta and St. Louis

NFSA Company Page

2,415 people follow our NFSA company page. 29.5% are entry level, 26.1% senior level and 24.7% manager. In the past 30 days, we gained 117 new followers. Our stories on our company page have an average of 2,000 impressions, 15 clicks and 13 interactions.

QUICK FACTS:

- 24.6% of followers are in the construction industry, 19.8 in public safety, 7.8% government, 4.7% mechanical or industrial engineering and 3.5% facilities services.
- NFSA employees comprise only 1.1% of company page followers
- 20.7% of followers work for a company of more than 10,000 employees, 11.8% work for a company with under 50 employees

The reach we attain on LinkedIn, due to our involvement in the aforementioned "other" groups, is well over 350,000. What does this mean? Whenever a news story is posted on LinkedIn and is shared with all groups and on the NFSA company page, it is shared with an audience of 350,000 people.

While our social networks continue to grow, so does our outreach. Our message is being spread faster and more efficiently than ever before. By using the statistics provided by the networks, I am able to target specific messages to specific audiences. Fire Sprinkler news and information are consistently shared on a daily basis. When all audiences across our social network are combined, our messages supporting the fire sprinkler concept are delivered to almost 360,000 (and growing) people every day!

So, Professor Echtermann would be very proud of the girl that reluctantly took his class, sat in the back of the room and missed more classes than she should have because, in the winter, it's too cold to walk to class in Utica. Do you know once I was caught in a ice storm and not only did my hair freeze, it broke off! But I guess that's a story for another day. I've always got a story! Join our social networks and don't miss one of them!

Get involved! For easy access to NFSA social networks, go to the NFSA homepage and click on the social network links at the top left of the page. Remember, to change public opinion, you've got to be a part of it.

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By Louis Guerrazzi

Selecting Electric or Diesel

When a fire pump is required for a sprinkler system, there is a choice of which type of driver to select. As of 1974 there are three types of drivers acceptable by NFPA 20 for use with a fire pump, which are an electric motor, a diesel engine or a steam turbine. So the question is; which one should you use with your system?

Since the electric motor and diesel engine are more commonly installed, with steam turbines rarely seen in use today, this article will discuss the first two types that are widely used. Both electric and diesel drivers have associated reliability, costs and characteristics that may make one more desirable than the other depending on the application. It should also be noted that every project is different, and that the numbers in this article are based on average installations.

Reliability of Electric vs. Diesel

Reliability is at the forefront of factors that come into consideration when installing any fire protection system. Diesel engine driven pumps have been cited as high as 99.880% reliability, which is increased when a redundant dual diesel engine driven pump system is installed. Electric motor driven pumps from a single utility connection have been shown to have up to a 98.970% reliability, while an electric motor driven pump with an emergency generator or an electric motor driven pump with two separate utility connections are even more reliable. However, an electric motor's reliability is also strongly dependent on how reliable its power supply is. While NFPA 20 does not define what a reliable power supply is, it does offer some guidance on deciding whether a power supply may be considered 'reliable' in its annex. Section A.9.3.2 of NFPA 20 (2013) summarizes their suggestion by the four following characteristics; to be considered a reliable power supply it should:

1. Have less than 4 hours of planned outages in a year,
2. Not experience routine power outages,
3. Not be supplied by overhead conductors from outside the protected facility, and
4. Have no more than the allowed number of disconnects permitted by 9.2.3

While this helps us in determining the reliability of an electric power supply, ultimately the decision is up to the authority having jurisdiction (AHJ). Where a power supply is not deemed reliable, a back-up power supply is required, which is going to increase the costs significantly for electric motor driven fire pumps. A second substation could be connected, an emergency generator could be installed or a secondary diesel engine driven fire pump could be used. That being said, when it comes to protection of life and property, thousandths of a percent could become of significant relevance. In high-rise buildings, hospitals, and buildings where there are non-ambulatory residents, the arrangements with an increased reliability would be appropriate because of the life safety associated with those applications. Secondly, in buildings of high value, either intrinsically or through storage, the arrangements with increased reliability would also be appropriate in reducing the expected loss from a fire.

Costs of Electric vs. Diesel

After considering reliability, we are going to highlight some differences in average cost between electric and diesel drivers. After taking a census of some single fire pump arrangements, it appears that the overall installation cost available (not including an auxiliary power source or maintenance costs) for a single diesel engine driven fire pump is about 25% more, on average, than a single electric motor driven fire pump of similar specifications. This price difference could range from a few thousand to tens of thousands of dollars on installation, depending on the size of the pump.

One factor that could increase the cost of installation for electric motor driven fire pumps is the length of the dedicated feeder from the transformer to the fire

>> CONTINUED ON PAGE 28

Louis Guerrazzi
Manager of Product Standards

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pump. Ranging $20 to $80 per foot for installation, a remote building with a fire pump room/house could increase the installation cost substantially. This could make diesel engine driven fire pumps more desirable for remote locations.

An additional cost for diesel engine driven fire pumps, not included in the analysis above, is the ventilation for the diesel engine, which could range from $500-$2,500.

Next, regular testing and maintenance are also factors to consider when looking at the cost of diesel drivers versus electric drivers. Both drivers will be tested regularly under no-flow conditions, as per NFPA 25 (2014), which requires a diesel engine to run for 30 minutes weekly and an electric motor to run for 10 minutes, weekly or monthly, depending on the application of the electric motor driven fire pump. Both require an annual flow test. These tests are going to require energy, and as we know, energy is never free. It seems that maintenance costs for electric motors are about double that of diesel engines, but several factors are going to decide on exactly how much testing and maintenance will cost. Some factors will be the current cost of fuel/electricity in the area, the size of your pump, the efficiency of the driver, part replacement and the frequency of tests. There are four situations that will require an electric motor driven fire pump to be tested weekly as opposed to monthly:

1. High rise applications beyond the capacity of the fire department
2. Where limited service controllers are used
3. Vertical turbine fire pump is used
4. Fire pumps suction from a ground level tank or water supply that does not provide pressure of material value without a pump.

Scenarios not listed above, or where a redundant pump is used, would only be required to have no-flow tests monthly. This less frequent testing could lower your annual testing costs by up to 25%. Based on the range of variables, testing and maintenance could have a yearly cost up to several thousands of dollars for larger applications. Location is also a factor in determining the cost of yearly maintenance. For example, in Hawaii, the average electricity and diesel costs are $0.34/kwh and $4.60/gal respectively, while in Wyoming electricity and diesel costs are $0.08/kwh and $3.50/gal, respectively. While these are the extremes for the country, Hawaii's electricity costs 300% as much as that in Wyoming compared to diesel costs, which is only 30% more. Long term maintenance and testing costs may make a diesel engine more appealing in Hawaii while electric may be preferred in Wyoming.

Characteristics of Electric vs. Diesel

Electric motor driven fire pumps are smaller and therefore require a smaller pump room/pump house. Space is one commodity that is not cheap or easily replaced, especially in metropolitan areas, and thus smaller dedicated space associated with an electric motor driven fire pump may be worthwhile. Also, electric motor driven fire pumps are quieter than a diesel engine. As we stated before, a diesel engine is required to be run a 30 minute no-flow test weekly, and the diesel engine can get quite loud. For residential and office buildings, a diesel engine may be irritating to the tenants, even, for example, if it is just for 30 minutes every Wednesday at 1:00 p.m. in an apartment or, say, at 5:00 p.m. Friday for an office building. If the owner constantly gets noise complaints from running the weekly no-flow tests, it may cause the owner to stop exercising the pump. Consequently, an electric motor may be preferred in these applications.

The diesel engine may be considered the more robust of the two drivers as it does not depend on an outside power source and therefore does not require a backup. The diesel engine is extremely dependable as long as it has an adequate fuel supply, which is required to be in accordance with NFPA 20 (2013) section 11.4.2.1 and states that a diesel tank's capacity shall have at least 1 gallon per horsepower of the engine, with an added 5% volume for expansion and another 5% volume for sump. Not requiring a backup for a diesel engine in most situations also helps keep the costs lower, however the diesel fuel does require more maintenance and also requires venting, which as stated before, has its own associated cost.

Conclusion

The fact that both diesel and electric pumps are extremely reliable is at the forefront of making the decision on which type to use, but there are situations where one driver may be more appropriate than the other. Diesel engines and electric motors both have pros and cons for different building applications. In a situation where an electric pump might require a secondary power supply, the diesel engine may seem like a better choice financially, but for office or apartment space, the additional cost for a secondary power supply may be offset by the added bonus of less space and less noise. In rural areas where the length of a feeder may be abnormally long and where there is room for a pump house, a diesel engine may be more appealing because of the smaller costs. In high value storage or other high value buildings, a diesel engine's reliability advantage might minimize expected losses, and might therefore be preferred. Whichever type is selected, good fire protection can be achieved with either type of pump by following the requirements of NFPA 20.

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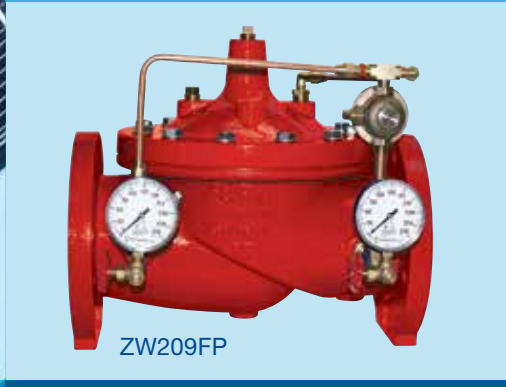

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By Vickie Pritchett

Notes from the Fire Scene

What does it mean to be an advocate? Have you ever stopped to ask yourself if you are an advocate for fire sprinklers? How about for NFSA, sharing the benefits of membership in our Association? How about for the business of life safety?

Working with other national fire service organizations, we are reminded often of the powerful role that advocates can and do play in helping us educate everyone about fire sprinklers. Stories resonate to make key points and bring the fire problem to life. We must do this more!

Recently, several members of our NFSA team joined with advocates and fire service leaders at the NFPA Fire Sprinkler Initiative Summit, Bringing Safety Home in Raleigh, North Carolina, and listened and learned together about the resources available.

Common Voices Advocate Pam Elliott did an amazing job of sharing her story and highlighting the importance of fire sprinklers. She received a standing ovation. NFPA President Jim Pauley applauded Pam for her efforts and also shared with the group future plans for the Residential Fire Sprinkler Initiative and ways for others to get involved. Working together, we are able to expand our reach. Let's look at an excerpt from the joint press release from NFPA, NFFF, Phoenix Society and Common Voices – partnering together to save lives. This release highlights the mission of Public Fire Protection very well. We are very grateful to our partners in support of fire sprinklers.

Elliott, a member of Common Voices and the Phoenix Society, was severely burned in a house fire when she was five years old. In her op-ed, Elliott underscores the frequency of these tragedies in homes, where children are at the greatest risk of dying from fire. The solution, she notes, is home fire sprinklers, which are a requirement in all model building codes for new, one- and two-family dwellings in the U.S.

"Pam's heartfelt plea to the fire service and everyone who supports fire safety highlights the importance of advocates," adds Vickie Pritchett, director of Public Fire Protection with the National Fire Sprinkler Association and Common Voices facilitator. "Many times the unexpected messenger is the one who can issue a wakeup call and unite a nation. Pam is right: we all need to become more proactive in our efforts."

NFPA's statistics confirm the life-saving aspects of home fire sprinklers; for instance, a person's risk of dying from a house fire decreases by about 80 percent when sprinklers are present. Despite the effectiveness of these systems in reducing fire-initiated tragedies, sprinkler opponents nationwide continue to aggressively combat the necessity of these systems. "The technology to prevent fire deaths and injuries exists," states Elliott in her op-ed. "We need to stand united in the message that fire sprinklers save the lives of both citizens and firefighters."

Using op-eds like Elliott's to promote residential sprinklers is at the heart of

Pictured left to right: NFSA's Dave Kurasz, Cindy Giedraitis, Vickie Pritchett and Ray Lonabaugh at NFPA's Summit in Raleigh, NC.

sprinkler advocacy organizations and NFPA's Fire Sprinkler Initiative, which offers tools to promote local and statewide sprinkler requirements in new one- and two-family homes. "We commend Pam for her courage to share her story and opinions with the public in the hopes of bolstering sprinkler requirements across the U.S.," says Lorraine Carli, NFPA's vice

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Director of Public Fire Protection

Vickie Pritchett

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president of Outreach and Advocacy. "Her voice is important in the debate to show how lives can be saved and losses reduced by the increased use of home fire sprinklers."

Pam's op-ed is worth sharing again and again, and hopefully it will inspire us all to find ways to also find our advocates voice.

OP-ED: BACKUP CAMERAS, BUT NO FIRE SPRINKLERS

Life-saving fire sprinklers should be more prevalent

BY PAMELA ELLIOTT

While on my flight to speak at a fire safety event, an article caught my attention. It was titled "U.S Requires New Cars to Have Backup Cameras." My first thought was there must be a huge problem if the National Highway Traffic Safety Administration is requiring new cars to have backup cameras. Then I was somewhat surprised to read that there are nearly 210 back-over deaths each year. About a third of those deaths are children, and many of these accidents are caused by parents. The article stated that rear-facing cameras would save between 59 and 69 deaths a year.

By contrast, the United States Fire Administration reports that fire kills 3,400 and injures 17,500 people each year. I was burned as a young child in a house fire. As such, I am acutely aware of the number of people who needlessly die or are injured in fires.

I sat on that flight with many mixed feelings. As a fire safety advocate, I'm excited any time a safety measure that will save even just one life is enacted. However, as a burn survivor, I felt frustrated and angry that similar safety measures haven't been implemented in homes to prevent fires. What makes me even angrier is that the technology to prevent these deaths and injuries exists—they're called fire sprinklers. It's taken quite a few decades to install them in new homes at a very slow rate.

The NHTSA is to be highly commended and applauded for their public safety efforts. Since its inception, seatbelts have saved 280,000 lives and air bags have saved 28,000 lives. Now another safety device will be added to cars to prevent even more deaths.

Because of my past, I investigated how many children die in fires. I looked at the FEMA report "Fire Risk to Children 2010." In 2010, 357 children died in fires. That's about five times more children than those killed in back-over deaths annually. The children most likely to die or be injured are newborns through age four—those who can't escape by themselves. If those statistics don't grab at your heartstrings, I don't know what would.

Anthony Foxx, United States Secretary of Transportation, said in the article, "Safety is our highest priority, and we are committed to protecting the most vulnerable victims of back-over accidents—our children and seniors. As a father, I can only imagine how heart-wrenching these types of accidents can be for families, but we hope that today's rule will serve as a significant step toward reducing these tragic accidents."

Sometimes when children die in fires, no body is found. I can't imagine having to bury a child, but I certainly can't comprehend not having a body to bury.

According to the FEMA report, 87% of fire-related casualties to children occurred in homes. That's 87% of 357 children—310 children who die in their own homes. We have the capability of saving 310 children a year. The technology exists—it's a scientific fact that fire sprinklers save lives, reduce property loss and decrease injuries.

There's no way to comprehend the devastating effects of burn trauma unless it happens to you or a family member. Why do we wait for a horrific event that warrants litigation before we're compelled to change? Unless prevention becomes the highest priority of the fire service and its advocates, we can expect to continue to see these horrific statistics; this makes me very sad and irate at the same time.

I can only hope that comparing these statistics will somehow motivate fellow safety advocates and the fire service to take action. We need to stand united in the message that fire sprinklers save the lives of both citizens and firefighters.

So, as we begin 2015, let us challenge ourselves to be involved, engaged, and to share the information that has been created to tell our story! Fire Sprinklers Save Lives, and whether you are a supplier, manufacturer, contractor or friend of our industry... you're in the life safety business. The work we do today helps us save lives in the future. Cheers to 2015! May it be full of advocacy and differences made!

Stay Safe,
Vickie

Pictured left to right: NFPA President Jim Pauley, Vickie Pritchett, and NFPA Vice President Lorraine Carli.

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James Lake

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Jason Webb

Director of Inspection, Testing and Maintenance

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The 5 "W's" of Fire Pump ITM

By Jason Webb

Inspection, testing and maintenance (ITM) of fire pumps is perhaps one of the most important ITM tasks that happen on a water-based fire protection system. After all, if the pump wasn't needed for the system to operate effectively, it probably wouldn't be there in the first place. Understanding the "5 W's" of fire pump ITM (who, what, when, why, and where) can help in the process.

Who?

ITM of fire pumps is certainly a specialty field, but just who can perform these functions? The answer to that question, like many others in the world of codes and standards is that it depends. NFPA 25 requires that anyone who performs ITM must be "qualified." Qualified is defined in the standard as "a competent and capable person or company that has met the requirements and training for a given field acceptable to the AHJ."

That definition ultimately leaves it up to the authority having jurisdiction to decide who can do the work. In some cases, a state licensing agency has decided for them, but many times, it is up to the local fire marshal or building inspector to make the call. Because of the value of the fire pump in fire protection, and the sometimes technically challenging process of inspecting and testing them, having properly trained people performing the work is especially important.

What?

This may seem like a simple answer but when it comes to fire pump ITM, it's not just a matter of inspecting and testing the pump itself. Pump house conditions, temperature and ventilation in particular, are extremely important to the overall functionality of the system supplied by the fire pump. Things like poor battery condition or diesel fuel quantity (as well as quality) can render a pump useless in a fire. It is important to ensure the entire pump assembly will function properly as a unit.

When?

When, or more appropriately, how often fire pumps should be tested is an issue that generates a lot of debate. When would you want to know if your fire pump isn't going to work? I suspect your answer is as soon as possible so you could get it repaired before it's needed in a fire. That's the question that really drives when fire pumps should be tested. Increasing the time elapsed between tests (frequency) adds to the time that a pump problem could exist before it is discovered. That has to be weighed against the potential for more frequent tests causing wear and tear contributing to failure. All of these are taken into account by the technical committee when establishing required ITM frequencies.

Why?

This is the easy question to answer. As a key component in the overall fire protection system, building owners, building occupants, and responding fire crews have an expectation that the fire pump will work properly when it's needed. ITM in accordance with NFPA 25 provides them with a reasonable degree of assurance that it will.

Where?

Where the fire pump is used can have a major impact on another question we have already touched on which is when, or how often, it needs to be tested. For many years, NFPA 25 required a weekly test without flowing water (churn test) and an annual flow test for all fire pumps. However in the 2011 edition, the churn test frequency was extended to monthly for electric fire pumps. In the subsequent 2014 edition, the NFPA 25 technical committee modified that slightly by only permitting the monthly test frequency for certain fire pump applications.

For the 2014 edition, those fire pumps

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Director of Inspection, Testing & Maintenance

Jason Webb

REGIONAL ROUNDUP

NEW ENGLAND REGION

DAVE LAFOND
Regional Manager

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

Maine Forms Fire Sprinkler Coalition

The State of Maine is the newest fire sprinkler coalition in the United States. December 11, 2014 was the first official meeting which was held at the Fallen Hero's room at the State's Public Safety complex in Augusta, Maine.

After a brief discussion, State Fire Marshal Joe Thomas was selected as the coalition's first Chair. John Martell, President of the Professional Fire Fighters of Maine was selected as Vice Chair.

The coalition is made up of participating members from Maine's fire service organizations, NFSA, NFPA, ICC, Southern Maine Community College (Maine Fire Service Institute) and fire sprinkler contractors. Representatives from the State Fire Marshal's Office and State Farm Insurance are also members. It bears noting that State Farm Insurance is a participating partner with the Home Fire Sprinkler Coalition, but Maine is the first state in the U.S. where State Farm wants to get actively involved.

The coalition is focused on educating and advocating for public fire protection. In a recent three-week period, Maine residents suffered 11 fire fatalities. All of whom were in their homes where they felt the safest. The count includes 6 lost in a November 1, 2014 fire in Portland. This has been Maine's deadliest year for fires since 1993, which is the catalyst for the coalition and public safety officials to raise safety concerns.

Future activities of the coalition feature an event on February 3, 2015 at the State House Hall of Flags from 8:00 a.m. until noon. Also, the Maine Fire Services Legislative breakfast will be held February 5, 2015 from 7:00 a.m. – 9:00 a.m. at the Senator Inn, Augusta, Maine.

The next coalition meeting is being held January 20, 2015 at 1:30 p.m. in the Fallen Hero's room, Public Safety Complex, Augusta, Maine.

If you have an interest in participating with the coalition please contact me directly. All are welcome.

Dave LaFond is NFSA's New England Regional Manager. He can be reached at Lafond@nfsa.org or at 2 Burns Way, Holyoke, Massachusetts 01040, Phone: 413.244.7653.

NEW YORK REGION

DOMINICK KASMAUSKAS
Regional Manager

NEW YORK

NFSA Seminars in New York

The NFSA held two very successful seminars on Long Island in late November and early December. One was in Suffolk County and the latter in Nassau County. The subject focus was NFPA 13, Chapter 8 and the discussion with contractors and code officials in the same room was very enlightening and educational for all. At this time Regional Manager, Dominick Kasmauskas is scheduling specific seminars on Long Island due to the discussions that took place, such as the two-day Plan Review, NFPA 25 and at least one more.

Seminars are being scheduled across New York for 2015. If you have a specific topic you need delivered in a certain area, please contact Dominick this month.

The NFSA Two-Week Layout Technician Course is being scheduled at NFSA headquarters for 2015 again as well. Dates will be announced very soon.

Attention New York Code Enforcement Officials, NYSBOC, and NYSFM&IA

Most NFSA seminars are approved for In-service hours and we need to lock in dates early in 2015 if you would like to ensure hours are available for your fellow code officials.

Dominick Kasmauskas is NFSA's New York Regional Manager. He can be reached at Kasmauskas@nfsa.org or 1436 Altamont Ave. Suite 147 Rotterdam, New York 12303, Phone 518.937.6589, Fax 518.836.0210.

MID-ATLANTIC REGION

RAYMOND W. LONABAUGH
Regional Manager

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

Adoption of the 2015 International Building Codes:

The State of Maryland has reviewed and adopted the 2015 Edition of the International Building Codes with an effective date of January 1, 2015. The individual counties and incorporated municipalities have 180 days from January 1, 2015 to review and amend, either by strengthening

>> CONTINUED ON PAGE 37

THE 5 "W's" OF FIRE PUMP ITM – CONTINUED FROM PAGE 35

requiring weekly no-flow tests are:

- All diesel engine driven fire pumps.
- Electric fire pumps serving systems in high rise buildings beyond the pumping capacity of the fire department.
- Electric fire pumps with limited service controllers.
- Electric vertical turbine pumps.
- Electric fire pumps taking suction from ground level tanks or a water source that does not provide sufficient pressure to be of material value without the pump.

Also new in the 2014 edition is the ability to establish the test frequency based on an approved risk analysis. Details on that analysis are provided in the annex of NFPA 25.

REGIONAL ROUNDUP

>> CONTINUED FROM PAGE 36

or weakening, their adoption of the 2015 I-Codes. The requirement for fire sprinklers in the International Residential Code can't be amended out of their adoption of the IRC as per HB-366 and SB-602. HB-366 and SB-602 were signed into law by then Governor Martin O'Malley on May 2, 2012 with an effective date of October 1, 2012. The law amended the Maryland Building Performance Standards by disallowing the weakening of the state adopted international residential code by removing the residential fire sprinkler requirement by counties and local incorporated municipalities.

Raymond W. Lonabaugh is the NFSA Regional Manager for the Mid Atlantic Region. He can be reached at: lonabaugh@nfsa.org or P.O. Box 126, Ridley Park, Pennsylvania, 19078. Phone: 610.521.4768.

SOUTHEAST REGION

WAYNE WAGGONER
Associate Director of Regional Operations - East

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

Kingsport, Tennessee Organization Shows Off One Of Its Two New Supportive Living Homes

The house is going to work out great for three Kingsport women and be much better than the homes they currently live in. It's one story, three bedrooms with a huge kitchen and living room area. The two bathrooms are earth-tone tiled.

The women, two younger and one older, have intellectual or development disabilities and rely on Frontier Health – the region's largest provider of behavioral and mental health services – for support, such as with the cooking of meals and transportation needs.

Now, through a partnership with local, state and federal housing agencies, the women are in a much better situation.

The Greater Kingsport Alliance for Development (GKAD) – the non-profit arm of the Kingsport Housing and Redevelopment Authority - held a ribbon-cutting ceremony on Monday to showcase one of its two new supportive living homes.

The new homes, located on Tennessee and Roberton streets, were funded primarily through a $500,000 grant from the Tennessee Housing Development Agency (THDA). GKAD purchased the land where the homes are located with nearly $120,000 in U.S. Housing and Urban Development funds.

"This is exactly the type of project the redevelopment trust fund is for," said Ralph Perrey, executive director of THDA. "(The partnerships) make it a lot easier to put our funds to work."

Joe Page, senior vice president of Tennessee Adult Services at Frontier Health, said the new homes are going to work out great for the women.

"It's much improved over the homes they lease now," Page said.

Frontier Health currently assists 22 people in Kingsport with intellectual or development disabilities and provides other services to 40 to 50 more, said Linda Henry, division director for Frontier Health.

"We provide the services, they live here and lease the home themselves. (The three women) rent now from landlords and it's hard to find one level, accessible housing that's affordable," Henry said. "This house is going to work out great and be much better."

The new houses are among the first in Kingsport to include complete fire sprinkler systems.

"Home fire sprinklers are like having a firefighter in every room of your home," said Barry Brickley, public information officer with the Kingsport Fire Department. "The quick response of the home fire sprinkler will normally put out a fire before firefighters arrive."

Wayne Waggoner is the NFSA Associate Director of Regional Operations–South. He can be reached at Waggoner@nfsa.org or PO Box 9, Andersonville, Tennessee 27705, Phone 865.755.2956, Fax 865.381.0597.

FLORIDA & PUERTO RICO

LORELL BUSH
Regional Manager

FLORIDA, PUERTO RICO

The year 2014 was a very active and successful year for the Florida Fire Sprinkler Association – a Chapter of NFSA. Below are just a few of the highlights from 2014:

BY THE NUMBERS:

- 542 Contractors, AHJ's and Industry Professionals participated in the 16 technical training classes offered throughout the state!
- 2014 Spring Conference was a huge success with over 110 participants!
- The Buddy Dewar Golf Classic made FFSA history, earning over $40,000 which resulted in the FREE training of over 325 AHJ's throughout the state.
- Over 300 individuals participated in the Area Interest Meetings each quarter.
- 32 different Area Interest Meetings were offered across the state with new and engaging topics and for the first time a two hour AIM was offered resulting in record attendance at each of the eight meetings.
- 24 Side-by-Side Fire Sprinkler Demonstrations were held throughout the state, for more than 3,500 spectators.
- FFSA added 22 new members this year, 14 new contractor members and 8 new professional, supplier and manufacturer, and/or subscriber members.

FLORIDA WAS FIRST

- FFSA partnered with the Condominium Associations Managers and Owners to offer FREE training on NFPA 25 for the Property Owner.
- FFSA, at the request of the members, worked with NFSA training to develop and offer "Navigating the Liability

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The Florida Fire Sprinkler Association Chapter of the NFSA is proud of Golden Sprinkler Award Winner Buddy Dewar.

Buddy Dewar

FFSA

Florida Fire Sprinkler Association, Inc.

A Chapter of NFSA

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Minefield" seminar on NFPA 25. This class was developed at the request of one Florida member and is now offered nationwide.

- FFSA partnered with Alarm Association of Florida to offer Fire Sprinkler 101 and Fire Alarm 101 to over 75 Firefighters. Due to the success, the course will be offered throughout the state in 2015.
- FFSA and AFSA partnered with Common Voices to educate new audiences on residential fire sprinklers while supporting local charities and nonprofit organizations.

STATEWIDE ACTIVITIES:

- ITM Committee meetings were held with the State Fire Marshal's office, FFMIA representatives, Alarm Association, Condominium Managers and contractors to discuss third party companies in Florida and develop a partnership among the different organizations.
- Regional Manager Lorrell Bush participated in a panel discussion regarding off campus housing at the Campus for Fire Safety conference. This opportunity helped advance the initiative to ensure fire safety in off campus housing at Florida Colleges and Universities.

LEGISLATIVE:

- The issue of workers compensation attorney fee caps is a developing issue which received a lot of focus during 2014. Efforts continue to be put towards the issue currently being heard by the Florida Supreme Court regarding Medical Malpractice attorney's fees being considered unconstitutional. This will be a prime issue during the 2015 Florida Legislative Session.
- Issues identified in the high-rise retrofit law were corrected. The current deadline language set the final day for compliance the same as the first day for AHJ enforcement powers. The AHJ empowerment date was moved one day later. The final date for compliance is 12/31/2019 and now the date of AHJ enforcement for non-compliance begins on January 1, 2020.
- A bill was introduced to address the State Fire Marshal's Declaratory Statement and Informal Interpretation process. The substance of the bill was to clarify binding and non-binding interpretations of how a rule or statute should be applied to a particular set of facts. Amendments were filed to change the informal, formal and declaratory statements process and after discussion the bill was withdrawn and the issue was sent to committee staff for resolve and re-filing during the 2015 Legislative session.

It was a record year for the Florida Fire Sprinkler Association – a chapter of NFSA and 2015 will be even better!

Lorrell Bush is the NFSA Regional Manager for the Florida Region. She can be reached at bush@nfsa.org or 2025 Droylsden Lane, Eustis, FL 32726. Phone: 352.589.8402 Cell: 954.275.8487 Fax: 561.327.6366.

GREAT LAKES REGION

RON BROWN
Regional Manager

INDIANA, MICHIGAN, OHIO, WEST VIRGINIA, KENTUCKY

Indianapolis to begin electronic reporting requirement for ITM reports

The City of Indianapolis Fire Department has been working for over three years on an electronic method of insuring NFPA 25 compliant fire sprinkler inspections are taking place on an annual basis and that there is proper monitoring and prioritization of the results of fire sprinkler system inspections. The idea of electronic monitoring was first introduced to Chief Fred Pervine by Dave Crocker a Tegris representative in the fall of 2010. After learning of the Tegris system Chief Pervine began working with area fire sprinkler contractors to introduce the Tegris system in hopes that the contractors and the City would adopt the third party ITM management system. The effort resulted in insurmountable opposition from contractors as well as city officials. The main points of opposition seemed to be security of contractor customer lists, the additional cost associated with data entry and inspection service to the property owner and the change of the inspection form format for many contractors. Chief Pervine did not give up with the rejection of the Tegis model he chose to move in the direction of working with a vendor to develop an Indianapolis specific reporting system. After several months of working with contractors and city officials the system is ready to be initiated January 2, 2015.

Ron Brown is the NFSA Regional Manager for the Great Lakes Region. He can be reached at Brown@nfsa.org or 1615 Cypress Spring Drive, Fort Wayne, Indiana 46814, Phone 845.661.6534; Fax 260.625.4478.

ILLINOIS REGION

BOB TINUCCI
Regional Manager

ILLINOIS

NFSA's Illinois Chapter Elects Officers

During elections held in November 2014, the following individuals where elected to office in the Illinois Chapter:

CHAIR – **Edward Kadlec, Jr.**, *C.L. Doucette, Inc.*

VICE-CHAIR – **Allen Metcalfe, Jr.**, *F.E. Moran Fire Protection*

SECRETARY – **David Rosso**, *Reliable Automatic Sprinkler Company, Inc.*

TREASURER – **Todd Fink**, *Shamaugh & Sons, L.P.*

Congratulations to all!

Bob Tinucci is the Regional Manager for

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REGIONAL ROUNDUP

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the state of Illinois. Bob may be reached at 6401 Richmond Avenue, Willowbrook, Illinois 60527, phone/fax: 630.655.1875, cell: 630.514.1601, email: tinucci@nfsa.org.

WISCONSIN REGION

DAN GENGLER
Regional Manager

WISCONSIN

Wisconsin Alliance for Fire Safety to Dissolve

The Wisconsin Alliance for Fire Safety (WAFS) has announced the organization will be dissolved from business operations effective January 1, 2015. Assumption of all programming will be conducted by the Professional Fire Fighters of Wisconsin Charities Foundation, Inc. The lone exception is the WAFS Burn Center Golf Invitational (BCGI) that will have its event and its proceeds handled by the non-profit National Fire Sprinkler Association – Wisconsin Chapter. The roots and growth for the WAFS is rooted to the early days of the BCGI. The outing returns to the sprinkler industry looking forward to continued success. One benefit for the industry is to establish a training fund from BCGI proceeds to help educate fire service personnel on the value and operation of fire sprinkler systems.

The WAFS held its inaugural meeting February 22, 1991. The concept for fire and burn safety education and outreach was the result of fires in the city of Milwaukee dating to late 1989 when fires killed 17 children and three adults in a span of 15 days. A task force in the city spent nearly a year in the aftermath of those fires to recommend that fire safety educational outreach needed to be enhanced. At the charter meeting, recruitment of some of the task force members and other fire safety minded people were pursued. That June, it was decided to move forward with a statewide organization to promote fire safety.

In September, the Charter Board of Directors and principal officers were in place. On March 1, 1992, the organization was awarded 501©3 non-profit status. Programming developed slowly as funding was virtually nonexistent until Wisconsin Bell gave the first grant of $500 and provided the identity logo used since. The Fire Safety 2000 Program projected the course of action that became the WAFS core purpose.

WAFS programming has been widely accepted in the state and beyond as quality and reliable resources in the promotion of the organizational mission, "To promote, encourage and foster fire safety, burn prevention and public fire safety education. We support burn survivors of all ages as well as sponsorship of the "Summer Camp for Burn Injured Youth." The WAFS is proud of its public awareness to fire and burn safety agenda and its positive history with the state's fire service. It is strongly felt that the organization has made a difference.

After much thought and deliberation, the WAFS Executive Committee had evaluated the 2014 status of the organization. Several issues were brought to light as an indicator of organizational strengths. Albeit a solvent organization, the WAFS looked to the business future for continued leadership and enhancement of its successful programs. As with any successful organization, change is inevitable...that time has come for WAFS.

An alternative option was made available. The non-profit Professional Fire Fighters of Wisconsin Charities Foundation, Inc. (PFFW) made an offer to assume all WAFS programming and take over all financial responsibilities for continued support without interruption.

The PFFW Charities Foundation, Inc. has their own Charities Board of Directors that has a history of success and is motivated to continue and enhance WAFS's present programming.

Both the WAFS Board of Directors and membership met on December 11, 2014. At both meetings, more than two thirds majority of voting board and members (needed by Wisconsin state statute) approved to move the activities of WAFS to the PFFW Charities Foundation, Inc. A dissolution form has been filed with the state completing the process.

Outgoing WAFS Chairperson and NFSA Wisconsin Regional Manager Dan Gengler stated, "The Wisconsin Alliance for Fire Safety is proud of its history of fire and burn safety programs along with burn survivor attention all touching state, national and international forums. Our apprecia-

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tion goes out to those who contributed to our programs since 1991. The dedicated efforts of our valuable volunteers helped put smiles on camper's faces or expanded projects that resulted in a reduction in untold deaths and injuries. We are confident that the PFFW Charities Foundation, Inc. will not only keep pace, but will enhance what the WAFS has accomplished. This comforts us to pass our passion onto the PFFW. We extend our appreciation to all and wish our supporters the best in their individual personal and professional endeavors."

Dan Gengler is NFSA's Regional Manager for the state of Wisconsin. He can be reached at Gengler@nfsa.org or P.O. Box 286, Waupaca, Wisconsin 54981, Phone: 262.325.1958.

MINNESOTA REGION

TOM BRACE
Regional Manager

MINNESOTA

On December 3, 2014 NFSA Manager of Codes **Jeff Hugo** gave an outstanding class on Rough and Final Inspections for 42 attendees in Minneapolis, Minnesota. Paul Harvey a famous radio commentator, had a program that he called "The rest of the story."

Education is a vital part of NFSA and a strong personal goal of Sean Flaherty, Minnesota Chapter President. The Minnesota Chapter bought lunch for the group as well as other refreshments.

The class was held in the Firefighters Hall and Museum that was opened just for the class. During breaks and lunch, students had the opportunity to view the exhibits and remain onsite. The vast majority of the attendees were AHJs with a fire department background.

This museum in northeast Minneapolis has a hall that can be adapted for up to 80 students in a classroom setting. NFSA Regional Manager Tom Brace is also the Vice Chair of the Museum and was able to negotiate a reduced rate.

NFSA was of great help sending materials so that the morning of the class, all was ready. Jeff Hugo did a terrific job as stated in the class evaluations. There is significant interest in offering more classes in Minnesota that came forth from the evaluations.

Tom Brace is NFSA's Regional Manager for the state of Minnesota. He can be reached at Brace@nfsa.org or 1433 Idaho Ave West, St. Paul, Minnesota 55108, Phone: 651.644.7800.

CENTRAL REGION

CHRIS GAUT
Regional Manager

IOWA, KANSAS, MISSOURI

Fire Sprinkler Save in a Eureka, MO House!

On January 1, 2015 it was reported that a space heater started a fire in the basement of a home in my home town of Eureka, MO. The house belonged to the family of the late Dan Koziol. I had the pleasure of knowing Dan and when he purchased the home back in 1999 he had a residential fire sprinkler system installed when the home was built. He was proud of that system and told me all of the details about the system after he installed it. His house is the only house I know of that had a residential fire sprinkler system in that subdivision. Dan worked for Viking SupplyNet but unfortunately passed away at a young age a couple of years ago due to health issues. His former wife and kids still lived in the house when the fire occurred and as it should have, the fire sprinkler worked just like it was supposed to. It saved the home and the lives of the Koziol family.

If you knew Dan, you knew what a great person he was! Dan was very active in the fire sprinkler industry and loved to help out in promoting sprinklers.

Currently there is a website to help the Koziol family in this down time of not being in the home as it is being repaired. If you are interested in how you can help Dan's family, visit **http://www.gofundme.com/jmywes**.

Chris Gaut is the NFSA Regional Manager for the Central Region. He can be reached at gaut@nfsa.org or NFSA Central Region Office, 207 Van Buren Rd. Branson, MO 65616, Phone 845.803.6426, Fax 636.410.7700.

SOUTH CENTRAL REGION

CYNTHIA GIEDRAITIS
Regional Manager

ARKANSAS, LOUISIANA, OKLAHOMA, TEXAS

NFSA's Response to Tragic Fires in Texas

On Sunday morning, December 28, 2014; fire took the lives of five senior citizens living in the San Antonio/Castle Hills Wedgwood Senior Independent Living apartment complex. A sixth senior has since died. On December 10, 2014; another fire killed two seniors and injured several others at the Gatewood Senior Living Apartment Complex in Dallas, Texas. Surprisingly, the vulnerable residents who lived in these independent living homes thought they had fire sprinklers - but did not! Several early news reports falsely blamed non-working sprinklers.

NFSA Regional and National staff were on top of these media reports and immediately launched a "quick media response action plan." Additionally, NFSA coordinated meetings with the San Antonio Fire Chief, the Texas State Fire Marshal and "key" Texas Fire Service Leaders to strategize possible solutions to statewide Senior Independent Living Homes that literally have fallen "between the cracks" when it comes to fire sprinkler protection. The San Antonio and Dallas area fire departments are to be commended for their well-prepared responses to these deadly fires. The leaders of these fire depart-

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REGIONAL ROUNDUP

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ments reported that they were very lucky the death toll was not much higher.

Providing a safe living environment for elder care is long overdue. The Center for Medicare & Medicaid Services (CMS) has required all nursing homes to have fire sprinklers as a condition to receive Medicare/Medicaid funding. Sprinkler advocates across North America are underscoring this tragedy to demand sprinkler requirements in all settings, including one- and two-family homes. "Our hope is that this event will help Texas policymakers understand the important role that codes play in keeping citizens safe," says Vickie Pritchett, NFSA's director of Public Fire Protection and facilitator for Common Voices, an advocacy coalition whose members have all been directly impacted by fire. "It's time for local communities to be able to adopt code requirements that include fire sprinklers. The lives of Texans are depending on it."

Cindy Giedraitis is the NFSA Regional Manager for the South Central Region. She can be contacted at giedraitis@nfsa.org or PO Box 10403, College Station, Texas 77842. Phone: 979.324.8934.

GREAT PLAINS REGION

ERIC GLEASON
Regional Manager

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

Lone Tree, Colorado

At a recent meeting, Chief Building Official Matt Archer demonstrated the differences between dimensional lumber and lightweight construction joists to the Lone Tree City Council. In a collaboration between South Metro Fire Rescue Authority, The Metro Denver Home Builders Association, NFSA and Lone Tree Building Department, beginning January 1, 2015 new homes in Lone Tree will require floor protection or sprinklers in the basement and all homebuyers will be presented with the option of fire suppression in their home. Special thanks go out to Lone Tree City Council, CBO Matt Archer, Deputy Chief Dell'Orfano, Assistant Chief Milan and the HBA for working together.

Eric Gleason is the NFSA Regional Manager for the Great Plains Region. He can be contacted at gleason@nfsa.org or P.O. Box 62157, Littleton, CO. 80162. Tel: 720.470.4894.

SOUTHWEST REGION

BRUCE LECAIR
Associate Director of Regional Operations – WEST

CALIFORNIA, HAWAII, NEW MEXICO, NEVADA, ARIZONA

New Seminar Planned in Woodland, California

The year closed out strong in Tucson with a very good two-day seminar. Now it's on to 2015 with a new three-day seminar in Woodland, California. It's going to be held at the Woodland Fire Department Fire Training Center located at 1556 Springlake Court on April 21 – 23. The classes will feature the two-day Plan Review seminar and the Understanding, Applying and Enforcing NFPA 25 *(the new California edition)* seminar.

To sign up, visit the NFSA website at: **www.nfsa.org**.

Bruce Lecair is NFSA's Associate Director of Regional Operations – West. He can be reached at lecair@nfsa.org or Phone: 951.277.3517, Fax: 951.277.3199.

NORTHWEST REGION

SUZANNE MAYR
Regional Manager

ALASKA, IDAHO, MONTANA, OREGON, WASHINGTON

Changes Proposed to Washington State Contractor Licensing

Although the details are still being hammered out, Bellingham-area State Rep. Vincent Buys with collaboration from the Washington State Association of Fire Marshals, the Washington State Fire Marshal's Office, and International Code Council will be proposing changes to the current state fire sprinkler contractor licensing laws during the 2015 Washington State legislative session. The draft language seeks to clarify contractor licensing requirements for the design and installation of multi-purpose residential fire sprinkler systems, remove certain administrative elements, broaden contractor licensing levels and certification rulemaking scope.

Suzanne Mayr is the NFSA Regional Manager for the Northwest Region. She can be contacted at mayr@nfsa.org or P.O. Box 7328, Tacoma, WA 98417, phone: 253.208.8467.

Ragone Joins Aalberts Industries

Aalberts Industries North American Division welcomes **Brian Ragone** to their family in the newly created role of Senior Vice President of Sales & Marketing for Conbraco and Elkhart Products. Ragone will lead sales management for Conbraco Industrial Sales, Apollo Valves and EPC Commercial sales while overseeing the brand and technical synergy of the two companies.

Brian's 18 years in the industry started in West Virginia with Ferguson Enterprises as a management trainee on the industrial side. Brian moved on to join Victaulic for 6 years and Tyco for 10 years where he re-established the Grinnell product line. Brian's global experience includes a two-year period living abroad as the Director of Asia Pacific and most recently as the Director of Americas for Tyco Mechanical Products.

IN MEMORIAM

Edward Reilly

Ed served as President of NFSA from 1977 – 1984. His career in fire protection spanned over 3 decades and his work on behalf of the fire sprinkler industry promoting the construction "trade-off" concept in model building codes and standards-making arenas earned him the nickname *"Mr. Sprinkler."* In the early 1970's he was the industry's principal advocate before the Federal Trade Commission and witness before President Nixon's Bland Commission leading to the congressional enactment of the National Fire Prevention and Control Act. In 1985 his outstanding contributions to fire protection engineering and technology were recognized by Manhattan College's Fire Engineering Institute when they named him recipient of the *"Award for Outstanding Contribution to Fire Engineers."* Ed was particularly proud of the fact that between he and his two sons Tim and Dennis, the family had a combined 100 years of experience in the fire sprinkler industry. In recognition of his many years of dedicated service to the fire sprinkler industry, during NFSA's 2013 Annual Seminar, Ed was inducted into the Fire Sprinkler Hall of Fame.

Prior to his career in the fire sprinkler industry, Ed was a high school social studies teacher for both Ray Casey's son and for John Viniello, former NFSA President, who were friends and classmates. Ed was later hired by Ray Casey, who was NFSA President at the time, to handle NFSA's public relations and publications. It was Ed who hired Russ Fleming, now NFSA President, right out of college onto the NFSA staff in 1975, an opportunity for which Russ said he would always be grateful.

At the time of his passing, Ed lived in Pine Plains, New York with his wife of over 60 years, Marge. •

Viking Group Announces New Leadership Team Responsibilities

The Viking Group, a global leader in the manufacture and distribution of fire protection products and services, is pleased to announce the following executive leadership appointments, all of which are effective immediately.

KEVIN ORTYL has been named "Chairman and CEO" of Viking Group. In this capacity, he will be responsible for all Viking Group companies and subsidiaries in the Americas. Ortyl was previously President and CEO of the company.

TOM O'CONNOR has been appointed to the position of "President, Viking Manufacturing." Effective immediately, O'Connor will be directly responsible for all domestic manufacturing facilities and personnel for Viking Corporation.

MIKE BOSMA has been announced as "Executive Vice President, Sales" for the Viking SupplyNet business unit. With his new role, Bosma will oversee all sales efforts for the company in the Americas region.

CARY NICOL, "Vice President, Sales," along with the other duties of this title, is responsible for all third-party products and relationships in North America for Viking SupplyNet.

JEFF NORTON has been appointed "Vice President, Marketing" for Viking Group. In this capacity, Norton will continue to direct all marketing activities for the company. He will also maintain responsibility for Viking's specification sales efforts, as well as other functions of Viking's technical services department.

SCOTT FRANSON, "Vice President, Research and Development," will be directly responsible for all research and development efforts and personnel in North America.

These moves help to enhance Viking Group's leadership structure and further strengthen the company's ability to serve the fire protection industry and achieve positive long-term growth.

SPRINKLING OF NEWS

Globe Fire Sprinkler Corporation Receives Conformité Européenne (CE) Approval for H-Series Alarm Check Valves

Globe Fire Sprinkler Corporation has announced Conformité Européenne (CE) Approval for its H-Series line of Alarm Check Valves.

Globe H-Series Alarm Check Valves are used in wet pipe fire sprinkler systems, serving the dual purpose of preventing the reverse flow of water from the sprinkler system into the potable water supply while providing for the use of a hydraulic or electrical alarm.

The Globe H-Series is available in 3" (80mm), 4" (100mm), 6" (150mm), and 8" (200mm) sizes. Flange x Flange and Flange x Groove configurations are available with pressure ratings of 175psi (12 bars). H-2 Groove x Groove valves are available with pressure ratings of 175psi (12 bars) or 300psi (20.7 bars).

Each Globe Alarm Valve is produced and tested at Globe's USA facility in Standish, Michigan. H-Series Alarm Valves are available factory-trimmed.

Featuring a removable cover-mounted clapper, all internal components of the Globe H-Series valves can be easily inspected and serviced. With its high-tensile strength body and corrosive-resistant internal parts, H-Series valves provide dependable service in challenging environments. In addition to CE Approval, Globe Alarm Valves are cULus Listed and FM Approved per the requirements of NFPA13. Models H1 and H3 are LPCB Approved in 4" and 6".

Enhanced "Sprinkler Saves" Blog Promotes Fire Sprinkler Successes

Every day, fire sprinkler systems are working to save lives and property from the devastating effects of fire. Launched in late 2011, the *"Sprinkler Saves"* blog, which Viking supports, is an ongoing effort to highlight successful sprinkler activations that receive media coverage, as well as those reported by local fire departments. The blog is intended to demonstrate how fire sprinklers are working to help address society's fire problem, and also to encourage positive media coverage whenever an automatic sprinkler system works to successfully control or extinguish a fire.

To facilitate more interaction and to increase awareness, a new version of the Sprinkler Saves blog has been introduced. The new blog, www.sprinklersaves.com, serves the same purpose as the previous site, but with several advantages including:

- Updated appearance with easier navigation
- Innovative mapping function showing sprinkler saves by state
- Categorization of sprinkler saves by building/construction type
- Automatic, real-time emailing of sprinkler saves to blog followers (if desired)
- Ability to view blog posts by the "time of save" (i.e. morning, day, evening, night)

Interested individuals may follow the blog by clicking on the blue "follow" button at www.sprinklersaves.com. There is no cost and only a name and email address is required. All sprinkler saves posted to the blog are also tweeted from Viking's Twitter account, @vikinggroup, with the hashtag #SprinklerSaves.

For more information, please email firesprinklersaves@gmail.com.

Wayne Automatic Fire Sprinklers Achieves Fire International Accreditation

The Center for Public Safety Excellence has announced that Wayne Automatic Fire Sprinklers, Inc., of Ocoee, Florida, has successfully completed the requirements of the Residential Fire Sprinkler Contractor Accreditation Program. Wayne Automatic Fire Sprinklers, Inc. is the first company in Florida to achieve this distinction. The accreditation program is a self-assessment accreditation based on the model used by CPSE's Commission on Fire Accreditation International (CFAI) for evaluating the performance of local emergency services agencies.

Wayne Automatic Fire Sprinklers, Inc. will be formally recognized as a Residential Fire Sprinkler Contractor Accredited Company during the opening ceremonies of CPSE's annual Excellence Conference in Lake Buena Vista, Florida in March, 2015.

Accredited companies are evaluated in several operational categories:

- Governance and Administration
- Assessment, Planning, Goals
- Services Provided
- Physical Resources
- Human Resources
- Occupational Health and Safety/Risk Management
- Employee Training
- External Relationships

The Residential Fire Sprinkler Contractor Accreditation Program was developed as a joint venture of the National Fire Sprinkler Association, the American Fire Sprinkler Association, the International Code Council and the Center for Public Safety Excellence. The program assures homeowners, state and local regulators and advocates for fire sprinklers in single-family dwelling structures that installations are completed by competent, professional companies which provide adequate training for installers and ensure the quality of their work.

New England Fire Protection Systems Designers Product Show

The New England Association of Fire Protection Systems Designers has announced their 12th New England Fire Systems Product Show. The show will feature over fifty product booths exhibiting the latest in cutting-edge technology and providing information to over 2,000 invited guests. The show will be held on Thursday, March 19, 2015 at Lantana's in Randolph, Massachusetts. In addition, the show will feature concurrent fire protection seminars free of charge. *For information on booth space or other information contact the New England Association of Fire Protection Systems Designers (NEAFPSD), P.O. 149, Wrentham, MA 02093-0149 or visit their website at www.neafpsd.com.*

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