SQ

MAR/APR 2009 / No. 153

Journal of the
National Fire Sprinkler
Association

Annual Seminar Preview Issue

INSIDE THIS ISSUE:

- Green Construction and Fire Protection
- ESFR Sprinklers and Obstructed Construction
- ICC Code Changes Affecting the Sprinkler Industry
- Sprinkler Contractor Online Training

ATTENTION

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12 sprs	12 sprs	12 sprs	2000 sq. ft.	15 sprs (1500 sq. ft)	**7 sprs** (min. of 1200 sq. ft.)
1200+ gpm	1200+ gpm	1200+ gpm-UL 1352+ gpm-FM	1600+ gpm	1200+ gpm	Sys. demand **966+ gpm**
250 gpm HS	250 gpm HS	250 gpm HS	500 gpm HS	500 gpm HS	**250 gpm HS**

Building Height: 35′ Storage Height: 30′ Coverage: up to 144 sq ft (12′x12′)

K-14.0 ESFR	K-16.8 ESFR	K-25.2 ESFR	N252 EC
100 sq. ft.	100 sq. ft.	100 sq. ft.	**144 sq. ft.**
75 psi	52 psi	20 psi-UL 30 psi-FM	**40 psi**
12 sprs	12 sprs	12 sprs	**9 sprs** (min. of 1200 sq. ft.)
1455+ gpm	1452+ gpm	1352+ gpm-UL 1656+ gpm-FM	Sys. demand **1435+ gpm**
250 gpm HS	250 gpm HS	250 gpm HS	**250 gpm HS**

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ON THE COVER:
With topics focused on business survival strategies, industry resources, technological advances and codes and standards updates, this year's Annual Seminar & Exhibition in Orlando at the Omni ChampionsGate is a must for fire sprinkler contractors looking to not only survive through difficult times, but thrive.

ADVERTISERS

IN THIS ISSUE

FEATURES

DEPARTMENTS

EDITOR
DAVID J. VANDEYAR

ADVERTISING COORDINATOR
JOANNE GENADIO

DESIGNER
JOHN L. SULLIVAN/SULLIVANDesign

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The Recession and the Fire Sprinkler Industry

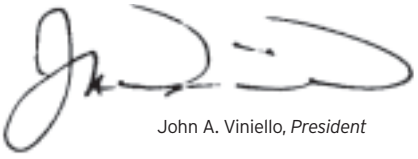
John Viniello

"The worst I've ever seen and I have been in the business since 1972," so commented an NFSA SAM member in a conversation we had in early January. Those of you who participated in our online seminar on January 29 are "up to speed" with our thinking regarding the next 12 to 18 months. The news is not good. Backlogs are shrinking, unemployment is growing, price levels have deteriorated to all time lows and there doesn't appear to be any relief in the foreseeable future.

In analyzing fire sprinkler shipments during the last two recessionary cycles (1990 and 2000) we see some interesting trends. In 1990 we had nine straight quarters of negative sprinkler shipments before we experienced an upturn. In 2000 (an equity recession) we had 12 quarters of negative or flat sprinkler shipments reported. The recession of 2007, which really started with the second quarter of 2006, has been fueled by an "economic perfect storm" which has collided with your businesses. We have a debt recession (the sub prime debacle) and a schizophrenic equity market which has resulted in a new economic acronym: the NINGA effect (No Income No Jobs No Assets.) By the time you read this article we will have matched the 2000 recession and will experience, in my view, three or four more quarters of negative returns... this will take us well into the fourth quarter of 2009 before any relief is realized. Residential construction will be the last to recover with an inventory of more than four million existing homes on the market. In the last issue of SQ, we outlined the NFSA game plan to deal with this crisis. We are utilizing our financial reserves to hire specialists in residential, retrofit and inspection testing and maintenance. By the time you read this article we may have announced some of these new appointments.

When the upturn occurs it will be dramatic. I believe the general economy will see some relief by July 1, 2009. Our industry, which lags about six to nine months behind the national average, will once again see moderate growth beginning in 2010. The model codes, the IBC and NFPA 5000, are very strong in recognizing fire sprinklers as the first line of defense against unfriendly fire. The model of International Residential Code requires fire sprinklers in one- and two-family dwellings beginning in 2011. When adopted at the local level, it will create more sprinkler work. Look for plumbers and others (firemen on off hours) to look at this as a business opportunity. NFSA will be launching the Fire Sprinkler Contractor Accreditation initiative to be sure that whoever installs these systems has been adequately trained. Look for details in NFSA publications.

Your Association will continue to "skate to where the puck is going to be." We need your continued support and commitment. My personal thanks to those of you who work at the local and national level to support our efforts without you we could not be effective as an instrument of change. Stay the course. There is some "light at the end of the tunnel."



John A. Viniello, *President*

calendar

Two-week Technician Training	Orlando, FL	March 2-13
Applying the Seismic Load Tables	*Online*	*March 10*
Developing a Local Residential Fire Sprinkler Coalition	*Online*	*March 19*
Two-week Technician Training	Cincinnati, OH	March 23-April 3
Inspection, Testing & Maintenance	Freeport, ME	March 24
Copper Tube for Sprinkler Systems	*Online*	*March 24*
NFPA 13	Bettendorf, IA	March 24-25
Dwellings	Freeport, ME	March 25
CPVC Update ½ day	Freeport, ME	March 26
Commissioning, Acceptance & Testing ½ day	Freeport, ME	March 26
Plain Review Procedures and Policies	Bettendorf, IA	March 26
Older Systems and Components	*Online*	*April 7*
Inspection and Testing for the Sprinkler Industry	Champaign, IL	April 7-9
Questions on Single Family Sprinkler Installations	*Online*	*April 21*
Inspection and Testing for the Sprinkler Industry	Nashville, TN	April 21-23
Dwellings	McFarland, WI	May 6
CPVC Update ½ day	McFarland, WI	May 7
Dry Foam Water ½ day	McFarland, WI	May 7
Inspection, Testing & Maintenance	McFarland, WI	May 8
Frequently Asked Questions Park IV	*Online*	*May 12*
CPVC Update	*Online*	*May 21*
Hydraulics for Non-Uniform Layouts	*Online*	*June 2*
Best Practices Update	*Online*	*June 16*
Sprinklers and the National Electrical Code	*Online*	*June 16*
Strategic Planning for Contractors	*Online*	*June 18*
Two-week Technician Training	Omaha, NE	August 10-21
Two-week Technician Training	Baltimore, MD	September 14-25
Two-week Technician Training	Phoenix, AZ	October 12-23

Editor's Note:

David J. Vandeyar
Director of Communications

Over the last few years there have been a number of transformations in NFSA's flagship publication. Most were fairly subtle, but by comparison one of the most obvious took place as a first step in a plan to increase frequency of publication. In the fall of 2006, when distribution increased from quarterly to bimonthly, the magazine's name was changed from Sprinkler Quarterly to SQ. The resulting redesigned masthead created a new look and identity for what is arguably the fire sprinkler industry's most respected magazine. As you open this issue you will see that SQ has taken on yet another transformation – one of updated design and improved readability. I hope you like what you see.

Florida in the Spring

Gregg Huennekens

We are all well aware of the fact that as goes the U.S. economy, so goes the fire sprinkler industry. And, like the economy, our industry is in a downward spiral. All indicators point to a long period of recovery before we begin to see even the slightest relief. At this point, none of us are surprised and are all ready to batten down the hatches and weather the storm, as I am sure we all will. Until then, NFSA has an answer to get you and your staff out of the winter doldrums while taking your mind off of the gloom and doom of the latest economic indicators.

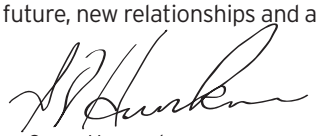
NFSA will be hosting its Annual Seminar & Exhibition at The Omni ChampionsGate Resort in Orlando, Florida from April 29 through May 2. And, talk about cost effective! Where can you go and find every single major manufacturer and supplier in the industry under one roof! The best and the brightest with the newest, most innovative products and services will all be in Orlando. The program that has been planned is spectacular.

Here are some of the highlights of what's in store and just a small sampling of the total experience of the NFSA 2009 Annual Seminar & Exhibition:

- Back by popular demand is the Top-Tech Competition. Who will be crowned the best in the land?
- "*Surviving During Tough Economic Times*" – a riveting panel discussion moderated by NFSA Director of Regional Operations and leading industry expert, Buddy Dewar.
- "*The Closer's Guide to Selling During Tough Economic Times*" – an informative session by one of Dale Carnegie's leading representatives.
- "*The Residential Focus: Fire Sprinklers in the IRC*" with NFSA Director of Public Fire Protection, Jim Dalton, NFSA Associate Director of Public Fire Protection, Shane Ray and a panel of guest speakers, you'll be on the cutting edge of the new code.
- Fire Sprinkler Industry Best Practices for efficient, cost-effective solutions to business operation challenges faced today by fire sprinkler contractors.
- Industry promotion success stories reported by Fire Sprinkler Advisory Boards from around the country.

There's fun in store for the whole family. Don't forget, the Omni ChampionsGate is only a stone's throw from all the popular Orlando attractions. NFSA has contracted for every room in the hotel on peak night so the only people you will meet will be from our industry. Where and when will you get another networking opportunity like this? Think long and hard before you pass up this invaluable chance to strengthen existing relationships and establish new ones. On Saturday, we have reserved both golf courses on the property. The International Course will host our Scramble and the National Course will host a Medal Play round. Both courses were designed by Greg Norman. Each first-class course will be the site of an exhilarating and challenging tournament.

My thanks to the NFSA staff and Dennis Coleman, chairman of the 2009 Seminar & Exhibition Committee, for assembling such an outstanding program. The committee worked tirelessly to bring this all together for our members. This is one you cannot afford to miss – trust me! You will come away with invaluable information, hope for the future, new relationships and a lifetime of memories.



Gregg Huennekens, *Chairman of the Board*

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2009 Seminar & Exhibition Committee

Dennis Coleman, *Chairman*
Engineered Fire Protection Inc.
1615 So. Kingshighway
St. Louis, MO 63110
Telephone: (314) 771-0033
Fax: (314) 664-1619
E-mail: dcoleman@efpstl.com

Jeffrey Bennett
The McKinstry Company
5005 3rd Avenue
Seattle, WA 98134
Telephone: (206) 762-3311
Fax: (206) 763-5407
E-mail: jbennett@mckinstry.com

Buck Buchanan
HD Supply
683 Wetherby Lane
Devon, PA 19333
Telephone: (610) 964-1196
Fax: (610) 964-9402
E-mail: buck.buchanan@hughessupply.com

Robert Bussiere
Allied Tube & Conduit Corp.
16100 South Lathrop Avenue
Harvey, IL 60426
Telephone: (708) 339-1610
Fax: (708) 339-1806
E-mail: bbussiere@alliedtube.com

Donald A. DeLuca, Sr.
SRI Fire Sprinkler Corporation
1060 Central Avenue
Albany, NY 12205
Telephone: (518) 459-2776
Fax: (518) 459-0068
E-mail: dad@srifiresprinkler.com

Harve Horowitz
Exhibition Promotions Plus
11620 Vixens Path
Ellicott City, MD 21043
Telephone: (410) 997-0763
Fax: (410) 997-0764
E-mail: harvehorowitz@epponline.com

Chuck Kitts
System Sensor, Fire Sprinkler Products
1243 Browning Court - PO Box 1424
Lansdale, PA 19446
Telephone: (610) 222-8081
Fax: (610) 222-8082
E-mail: chuck.kitts@systemsensor.com

Fred Kroll
Alliance Fire Protection
998 Forest Edge Drive
Vernon Hills, IL 60061
Telephone: (847) 573-1122
Fax: (847) 573-8243
E-mail: fred.kroll@alliancefirepro.us

Dean Taylor
Anvil International
110 Corporate Drive
Portsmouth, NH 03801
Telephone: (603) 422-8000
Fax: (603) 422-8035
E-mail: dtaylor@anvilintl.com

David Vandeyar
National Fire Sprinkler Association
40 Jon Barrett Road
Patterson, NY 12563-1000
Telephone: (845) 878-4200
Fax: (845) 878-4215
E-mail: vandeyar@nfsa.org

Al Gettler, *Secretary*
National Fire Sprinkler Association
40 Jon Barrett Road
Patterson, NY 12563-1000
Telephone: (845) 878-4200
Fax: (845) 878-4215
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New York	*New York*	**Dominick G. Kasmauskas, NFSA** 1436 Altamont Ave. Suite 147 Rotterdam, NY 12303 (914) 414-3337 FAX (518) 836-0210	
Mid Atlantic	*Delaware, Maryland, New Jersey, Pennsylvania, Virginia, Washington, D.C.*	**Raymond W. Lonabaugh, NFSA** P.O. Box 126 Ridley Park, Pennsylvania 19078 (610) 521-4768 FAX (610) 521-2030	**Kent Mezaros** Quick Response Fire Protection 77 Pension Road, Suite 5 Manalapan, New Jersey 07726 (732) 786-9440 FAX (732) 786-9443
Southeast	*Alabama, Georgia, Mississippi, North Carolina, South Carolina*	**Wayne Waggoner, NFSA** PO Box 9 Andersonville, Tennessee 27705 (865) 755-2956 FAX (865) 381-0597	**Ed Davis** Morristown Automatic Sprinkler Company, Inc. 1310 Karnes Avenue Knoxville, Tennessee 37917 (865) 689-4480 FAX (865) 687-8622
Tennessee	*Tennessee*		
Florida	*Florida, Puerto Rico*	**Dave Bowman, NFSA** Florida Fire Sprinkler Association 6572 SE 173rd. Court Ocklawaha, Florida 32179 (845) 519-7648 FAX (661) 455-3968	**Wayne H. Gey** Wayne Automatic Fire Sprinklers, Inc. 222 Capital Court Ocoee, Florida 34761 (407) 656-3030 FAX (407) 656-8026
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) 299-3889 FAX (317) 299-4078
Illinois	*Illinois*	**Bob Kleinheinz, NFSA** 509 Dawes Street Libertyville, Illinois 60048 (914) 671-1945	**Gregg Huennekens** United States Fire Protection, Illinois, Inc. 28427 North Ballard – Unit H Lake Forest, Illinois 60045 (847) 247-4755 FAX (847) 816-0098
North Central	*Minnesota, Wisconsin*	**Daniel J. Gengler, NFSA** P.O. Box 280 Williams Bay, Wisconsin 53191 (262) 245-5255 FAX (262) 245-5258	**Richard Ray** – Alternate Cybor Fire Protection Company 5123 Thatcher Road Downers Grove, Illinois 60515 (630) 810-1161 FAX (630) 810-0685
South Central	*Arkansas, Louisiana, Oklahoma, Texas*	**Steven E. Randall, NFSA** 7165 Lazy Meadow Lane Frisco, Texas 75034 (214) 206-6163 FAX (972) 668-4077	**John Kauffman III** Kauffman Company 13225 FM529 –Ste A Houston, Texas 77041 (713) 937-4144 FAX (713) 937-4149
Central	*Iowa, Kansas, Missouri*	**Chris Gaut, NFSA** 189 Eureka Town Center Dr. Suite 135 Eureka, Missouri 60325 (845) 803-6426 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
Great Plains	*Colorado, Montana, Nebraska, North Dakota, South Dakota, Wyoming*	**Terry Phillips, NFSA** 1829 Meadow Drive Cheyenne, Wyoming 82001 (914) 525-4396 FAX (307) 514-0406	**Gene Postma** Western States Fire Protection Company 7020 South Tucson Way, Unit A Centennial, Colorado 80112 (303) 792-0022 FAX (303) 790-3875
Southwest	*Arizona, Nevada, New Mexico, Utah*	**Doyle Sutton, NFSA** P.O. Box 50845 Sparks, NV 89434 (845) 803-3785	**Todd Little** RCI Systems, Inc. 252 South El Dorado Circle Mesa, Arizona 85202 (602) 894-8711 FAX (602) 894-8740
West	*California, Hawaii*	**Bruce Lecair, NFSA** 25417 West Hyacinth Street Corona, CA 92883 (951) 277-3517 FAX (951) 277-3199	**Jack Thacker** Allan Automatic Sprinkler Corporation 3233 Enterprise St. Brea, California 92821 (714) 993-9500 FAX (714) 993-5708
Pacific Northwest	*Alaska, Idaho, Oregon, Washington*	**Don Pamplin, NFSA** 1436 Harrison Avenue Blaine, Washington 98230 (360) 332-1948 FAX (360) 332-1962	**James Boulanger** Patriot Fire Protection, Inc. 2707 70th Avenue East Tacoma, Washington 98424 (253) 926-2290 FAX (253) 922-6150
		DIRECTOR OF REGIONAL OPERATIONS **Buddy Dewar, NFSA** 200 West College Avenue Tallahassee, Florida 32301 (850) 222-2070 FAX (850) 222-1752	DIRECTOR AT LARGE **Fred Kroll** Alliance Fire Protection, Inc. 998 Forest Edge Drive Vernon Hills, Illinois 60061 (847) 573-1122 FAX (847) 573-8243

When is the General Contractor required to release retainage?

Almost every contract in the commercial arena contains a clause permitting the general contractor to withhold 10% retainage on behalf of the subcontractor.

The question becomes when is the general contractor required to release the retainage to the subcontractor.

From the general contractor's point of view, it holds the retainage as an offset in case the owner assesses back charges or liquidated damages upon closeout of the project that are due to the subcontractor's performance. From the subcontractor's point of view, retainage should be released upon successful completion of its work as opposed to completion of the entire project. Essentially, the contractor performing foundation work or demolition may have to wait for years on major project until the final retainage is released.

There are two determinative factors which will decide when retainage can be released. First, the party's contract must be reviewed to determine whether or not the general contractor may hold all of the retainage until the project is completed and its own retainage is released from the owner. Second, if the project is complete, has the owner alleged any defects in the work of the particular subcontractor who is seeking the release of the retainage from the general contractor?

Recently, two decisions from the Appellate Division have addressed these very issues. In the first case, the subcontractor sued for the balance due on its subcontract. The general contractor paid the full subcontract price less 10% retainage. As a defense, the general contractor claimed that since the owner had not accepted the project as complete, the contractor had no obligation to release the retainage. The contract between the general contractor and the subcontractor provided that the general contractor could withhold 10% retainage until such time as the entire construction project was completed and accepted by the owner of the project.

In response, the subcontractor argued that this clause was unenforceable and violated the prior decisions of the Court of Appeals which struck the pay if paid clauses. The Appellate Court disagreed and found that since the owner had not yet accepted the work, the general contractor rightfully could continue to hold the retainage.

In a second decision, a mechanical contractor sued to recover a balance due including retainage. The subcontractor was successful against the general contractor because it established that it had completed its work and that no back charges existed which pertained to its contract with the general contractor.

The key issue with respect to retainage is to review your contract to determine when it is appropriate for the retainage to be released. If the contract permits the release of the retainage only after the owner has accepted all of the work, then you are stuck. If, however, you negotiate the contract to permit the release of the retainage once the owner has paid for and accepted the subcontractor's work, then you should be able to receive your retainage upon completion of your work.

Never let your lien time run out!

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

The Best of "EOD"

We have selected the following questions as the most recent "Best Questions" answered by the engineering staff as part of the NFSA's EOD member assistance program.

Question 1

Sprinkler Temperature Rating and Orifice Variations

I have an existing warehouse protected with standard spray sprinklers at the roof deck only. There are adjacent sprinkler systems with different sprinkler temperature ratings (ordinary and high), different orifice sizes (K-5.6 and K-8.0) and different density/area requirements but all protecting the same hazard. Is it acceptable to have different temperature ratings on adjacent systems that are protecting the same hazard? Is the use of different orifice sizes on adjacent systems considered balancing?

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CONTRACTOR'S CUE

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Answer: It would be unusual to have sprinklers of different temperature ratings on adjacent systems protecting the same hazard, but it does not violate any of the rules in NFPA 13. Sections 5.6.1.2.4 and 12.3 of NFPA 13 specifically allow different commodities to be segregated (separated into different portions of the same building without physical barriers between the different commodities) as long as the sprinkler protection above each commodity is acceptable for that commodity and as long as the protection for the higher hazard commodity extends at least 15 ft into the perimeter of the lower hazard commodity. Frequently, higher hazard commodities are protected with high temperature sprinklers where lower hazards are not, so these same sections in NFPA 13 allow mixing of the different temperature rated sprinklers when the higher hazard commodity is present. Presumably, in a warehouse designed this way initially, if the higher hazard material were taken out and the whole building then used for the same lower hazard materials, it should be okay since the sprinkler system was designed for the higher hazard.

Due to the special sections in NFPA 13 that allow ordinary temperature sprinklers with a K-factor of 11.2 or greater to use the high temperature design criteria in NFPA 13, we are seeing fewer and fewer high temperature sprinklers in warehouse occupancies, so this will probably not be an issue in the long run. More and more warehouse facilities are going to be sprinklered with all ordinary temperature sprinklers.

There should be no issue with the mixing of different orifice sizes within a warehouse. The use of sprinklers with different orifice sizes for the protection of different storage commodities is not considered "balancing" a system and is therefore not a problem. The committee prohibited the concept of using smaller orifice sprinklers close to the water supply years ago because it made the evaluation of the hydraulic calculations so much more difficult. The AHJ could not be sure where the true "most demanding" area was going to be, and the committee did not want to require additional calculations to be necessary. So, the committee just said that it would be a bad idea to use smaller orifice sprinklers to cut down on the water discharged from sprinklers closer to the water supply, prohibiting such balancing. But the use of different orifice sprinklers on adjacent systems within a warehouse has nothing to do with balancing flows within a system to minimize water supply requirements. Instead, it has to do with using allowed design approaches for specific hazards, which is perfectly acceptable.

Question 2

Allowance of Single FDCs for Small Risers

It appears that the allowance for a single

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fire department connection for 3-inch and smaller risers that was referenced in section 8.16.2.3 of the 2002 edition of NFPA 13 was removed for the 2007 edition of the standard. Can you explain the reasoning behind this?

Answer: The good news is that this section was not eliminated, simply moved to Chapter 6, section 6.8.1.3 to be exact. The NFPA Committee on System Installation Criteria moved it because Chapter 6 is intended to describe what kind of equipment is acceptable to use while Chapter 8 is supposed to describe how to install the equipment.

Question 3

Piping Arrangements for Multiple Tanks

We installed four, 180 gallon water storage tanks to augment an existing 400 gallon tank feeding a residential fire pump for an existing NFPA 13R sprinkler system. The consulting engineer visited the site and sent us a letter stating: "Based upon our review, it is our feeling that the piping is not proper – there is no assurance that one tank will not be emptied more quickly than the others. If this happened, air would enter the pump suction, at which point flow to the discharging sprinkler heads would stop…This is an unsafe condition." We were advised to re-pipe the tanks in accordance with their design.

Is there a section of the code that describes the proper piping arrangement?

Answer: The laws of physics will dictate which of the tanks empties first, which will depend on the pressure of the water in the tanks, not the NFPA. If all of the tanks are the same size, elevation and pressure, then the tank closest to the pump will empty slightly ahead of the tanks farther from the pump due to the increased friction loss for the water traveling the extra distance. If the tanks are all the same and at the same elevation, and if the supply pipes are sized so that the friction loss is negligible, then they will empty at the same rate. If the tanks are not sized the same, or if the pipes have measurable friction loss, then the entire volume of the water remaining in the tanks after the first tank empties cannot be counted as providing fire protection unless some measure is put in place for isolating the empty tank(s). If the consulting engineer's design evens out the friction loss for the flow from each tank, then the water will come equally from each tank. In answer to your specific question as to whether there is a section in the code that describes proper piping arrangement, the answer is "no." NFPA 20 and NFPA 22 simply require that the tanks have sufficient water to meet the demands of the fire protection system and that air not be introduced to the piping system before that water demand is met.

Question 4

Inspector's Test and Bypass Test Valves for Wet Systems

Does NFPA 13 require a remote inspector's test connection on a wet pipe system, or is it allowed to simply have alarm check valve trim that simulates the opening of a single sprinkler?

Answer: NFPA 13 requires two different alarm test connections when you use an alarm check valve. Section 8.17.1.3.1 requires the bypass connection from the trim. Section 8.17.4.2.1 requires a separate 1-inch connection on the system. The connection required by 8.17.4.2.1 is NOT required to be on the remote portion of the system. This connection can be anywhere downstream of the water flow alarm. But this additional connection is required even when you have a bypass on the alarm valve trim that tests the water flow alarm.

Question 5

ESFR Sprinklers in Concrete Tee Construction

Can ESFR sprinklers be used in a warehouse with a ceiling of concrete tee construction? The tees measure 22 inches in depth and are 4 ft wide. We are hoping to use pendent ESFR sprinklers (K-22.4). Section 8.12.4.1 states the maximum depth from the ceiling is 18 inches. It seems that the ESFR sprinklers will need to be located dead center between the tees with deflectors raised 4 inches, however that does give us exactly the dimensions from the table when we measure from the inside edge of the beams.

Answer: This subject is covered in section 8.4.6.3 of NFPA 13, where ESFR sprinklers are only allowed with obstructed construction exceeding 12 inches in depth if the ESFR sprinklers are installed in every channel formed by the structural members while at the same time maintaining the minimum distance between sprinklers of 8 ft. This is extremely difficult to do if the structural members are less than 8 ft apart. It is possible to stagger the ESFR sprinklers by installing them 12 ft apart in the dimension parallel to the structural members and moving every other branch line so that the sprinklers on each branch line are directly across from the mid-point between sprinklers on the next branch line over. Such staggered spacing would keep the sprinklers 8 ft apart horizontally if the structural members were at least 5 ft 4 in. on center. Any closer spacing of structural members would not allow ESFR sprinklers to be installed and meet section 8.4.6.3 and the spacing rules of 8.12. Since it appears that your structural members are 4 ft on center, it is impossible to use ESFR sprinklers and meet NFPA 13.

Question 6

Spacing Sprinklers under Mezzanines

I have two questions in regard to spacing sprinklers off the edge of a mezzanine that is located in a fully sprinklered building. Along the perimeter of this mezzanine is a 24-inch wide x 24-inch deep concrete beam.

1) Do you have to space the sprinklers in accordance with the obstruction rules so that the sprinkler discharge will be able to throw under this perimeter concrete beam?

2) When calculating the area for sprinklers under the mezzanine, do you go to the edge of the mezzanine or to the center of the beam? What I am wondering is if section 8.6.5.1.2 (2) from NFPA 13 would

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apply here since the area above the mezzanine is protected with sprinklers.

Answer: The answer to the first question is no, sprinklers under the mezzanine do not need to reach under the beam assuming that the sprinklers at the ceiling protect the area beyond the beam. The answer to the second question is that the area of the sprinkler under the mezzanine needs to be calculated to the outer edge of the mezzanine. The sprinkler is there to protect under the mezzanine and needs to be calculated for that area. Section 8.6.5.1.2 can't be used to justify reducing this area by half the width of the beam.

Question 7

ESFR Obstructions

Do sprinklers need to be installed below an obstruction that is 19 inches wide, 3 ft long and located more than 6 ft below the ESFR sprinkler deflectors?

Answer: No. An object that is smaller than a pallet load, and more than 36 inches below the sprinkler, represents no more obstruction to an ESFR sprinkler than a pallet load. Since sprinklers are not required under pallet loads on racks, sprinklers should not be required under other objects similar to pallets as long as they are more than 36 inches below the sprinkler deflectors.

Question 8

QR Sprinklers under Walkway with ESFR Sprinklers Overhead

If ESFR sprinklers are located at the ceiling and the building has a grated walkway or platform, are quick response (QR) sprinklers permitted below the walkway or platform? If I can use quick response sprinklers under the walkway/platform, do I need to add additional sprinklers to the design area per section 22.4.4.6.4 of NFPA 13? If so, what are my discharge criteria for the quick response sprinklers?

Answer: Sections 8.12.5.2(1) and 8.12.5.3.1(1) talk about putting sprinklers below obstructions as a means of dealing with the obstructions. However, these sections do not specifically state what kind of sprinkler to use. Since these sections are in 8.12 of NFPA 13, the implication is that the sprinklers under the obstructions need to be ESFR sprinklers. However, FM Data Sheet 2-2 specifically allows quick response sprinklers (K-8 or larger) to be used in this situation under such walkways and many AHJ's will accept the FM standards as equivalent to the level of protection required by NFPA 13. This is permitted in NFPA 13 in sections 1.5 and 1.6. If quick response (control-mode) sprinklers are used under obstructions, two sprinklers are still required to be added to the design area. Assuming that the AHJ is allowing FM Data Sheet 2-2 as equivalent to NFPA 13, the FM Data Sheet would require that the two quick response sprinklers be capable of discharging 60 gpm (spaced no more than 10 ft apart). With such a high discharge required, you might want to consider using large orifice sprinklers to get the pressure demand down.

Question 9

Excessive Condensation in Dry Systems

We have a dry system in a building that is collecting an abnormal amount of condensation. One of the drum drips regularly collects anywhere from a quart to half a gallon of liquid. My question is how I can justify such excessive condensation?

Answer: In order for the water to be coming out of the system as condensate, it needs to be getting into the system somehow. Some considerations:

- There might be trapped sections of pipe that are not draining properly after a

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full-flow trip test. The water standing in this pipe would then evaporate into the air and condense out somewhere downstream. Check the pitch of the pipe and make sure that all water is drained from the system after trip tests to ensure that water does not remain after the system is put back in service.

- The air going into the system might be very humid. After the air is compressed, the moisture tends to drop out of the air as condensate. Since this is a function of temperature and pressure, it might not happen right at the compressor, but it might happen downstream at some point where the pipe gets colder. To solve this problem, you might need to install a regenerative air dryer on the compressor to take the moisture out of the air before it gets forced into the dry-pipe system. Most suppliers of compressors offer this feature.

- Although the air might not be excessively humid, the compressor might be running much too frequently, with this particular drum drip located in a spot where condensation is most likely to take place in the system. The 2008 edition of NFPA 25 includes a new requirement (section 13.4.4.2.9) for a pressure test of dry pipe systems every 3 years to ensure against excessive air leakage from the system.

Question 10

Dry Underground Piping

Are there are any guidelines or additional considerations for underground piping (one example – running to a small annex building) that is dry?

Answer: NFPA 13 and NFPA 24 have always tried to discourage dry systems underground. For example, section 8.2.4 of NFPA 13 only allows multiple buildings to be supplied by the same sprinkler system when they have some structural component in common (a wall, roof or breezeway). It is thought that the sprinkler pipe would be run in that common element and not underground. Then again, the very next section (8.2.5.2) allows unattached structures to be protected by the same system with approval from the AHJ.

That's when section 8.15.20 takes over and puts a few rules out there for when you have to install dry piping underground. It's not much, but it is all that's out there. If someone is going to try it, they need to understand that it is not the best solution. It would be better to run a separate wet supply out to the remote building under the frost line.

If for some reason a dry system was to be used underground, there would be a need to find a way to drain the water out of the pipe after a trip test. Even if the water is below the frost line so that it won't freeze, it will allow moisture to stay in the piping and there is a chance that this moisture will be picked up by the air in the system and deposited as condensate somewhere else where freezing might occur.

Question 11 –

PRV Valves and Fire Pumps

I have a situation on a large system that has the jockey pump piped to the suction side of a 10-inch pressure reducing valve (PRV). The fire pump churns at 210 psi and the PRV is set for 175 psi discharge. Because there is no volume of pipe prior to the PRV my jockey pump cycles on and off every 5 to 7 seconds, which will eventually damage the jockey controller contactor and cause failure. We tried moving the sensing line from the jockey line to the bulk main but that did not change the operation of the jockey pump. I contacted the manufacture of the PRV, who suggested piping the jockey pump to the discharge side of the PRV. They said the pressure is bleeding through a 1/8-inch orifice located on the trim of the PRV. NFPA 20 recommends setting on/off pressures at churn of fire pump, which in this case is 210 psi. If I pipe the jockey after the PRV and set off pressure at 175 psi on at 165 psi and on pressure of the fire pump at 160 psi this will produce a 50 psi hammer. In your opinion what would be the best way to correct this problem?

Although we recognize that NFPA 20 does not want us to use a PRV to handle the pressure problem, the PRV does not

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CONTRACTOR'S CUE

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violate NFPA 20 because it is located after the last control valve required by NFPA 20. It therefore falls under NFPA 13 which allows the use of PRV'S.

Answer: Putting the PRV immediately after the discharge control valve for the pump changes the letter of the law, but not the physics. As you have seen, the situation does not work very well.

If you put the discharge from the jockey pump on the sprinkler system side of the PRV, it will solve the cycling problem for the jockey pump, but it will cause at least two other problems. The first, as you mentioned, is the fact that the sprinkler system will see a shock of approximately 50 psi when the fire pump kicks on. This is not terrible and may be okay for the sprinkler system. Damage can be minimized by closing the discharge control valve for the fire pump during weekly and annual testing. Then, the only time the fire pump should start is if there is a fire and at least one sprinkler is open. A system flowing water is less likely to be susceptible to damage from an increase in pressure when the pump starts. A 50 psi increase is only about a 30% increase. The second problem is that when you move the jockey pump discharge, a case could be made that the pipe between the jockey pump connection and the fire pump (including the PRV) fall into the jurisdiction of NFPA 20, thus putting you in violation of the standard with the PRV. You may need approval from an AHJ to get out of the paradox.

Another suggestion would be to move the PRV as far from the pump as possible. We know that high rise buildings with PRV's on the floor control valves (on the lower floors) don't have significant problems with jockey pumps. So we know that in many cases, with a significant distance between the pump and the PRV, the system works. We just don't know how far the PRV needs to be from the pump to make everything okay. It's probably a function of jockey pump size, bulk main size and pressure. If you take this option, you'd need to make sure the pipe, fittings and all equipment between the pump and the PRV can take the extra pressure.

The best suggestion, but the most expensive, is to arrange the system so that you don't need the PRV. There are a variety of options including using a variable speed driver, a different pump, or a break tank for the suction to decrease the total pressure in the system.

By Don Pamplin

I saw a sign that said

"You are never a complete failure when you can be used as a bad example"

The sign was hanging in a lawyer's office that specialized in government risk management. The intent of the sign was to motivate you into not being a bad example. For first-time visitors to the office, it was always a conversation starter. The ensuing conversation always dealt with the issues of good risk management by leaders in civic government so that their corporate policies and decisions, which eventually got implemented into the delivery of public service, always practiced "defensible risk management." In our present-day culture, people are forever suing somebody, not only in the private and business world but also those who work for various levels of government.

During that enlightening conversation, the underlying principle of defensible risk management was always revealed, and that was: "Never promise something you can't deliver – unless you have everything you own in your wife's name and you can trust her!" And then the following words were always expressed to emphasize the point being made: "Because there is a whole army of lawyers out there who will work their butts off on behalf of their clients to take away possibly everything you own (and more) to pay for the risk management mistakes you made."

In the world of fire protection, risk management is the same way!

A number of years ago, a fire department was sued for promising something it didn't deliver. In response to a fire call that was being requested at its 24-hour dispatch center, one of their dispatchers said: "We'll be right there!" Unfortunately, for a variety of reasons, the responding fire engine did not get "right there," within their established response-time criteria and within an acceptable amount of time as viewed from the receiving taxpayer's point of view. The resulting fire damage was more than it should have been and they were seeking compensation for that unnecessary loss. After a review of the case by that city's risk management department, the fire department implemented several policy and procedural changes including having its dispatchers stop saying "we'll be right there" and simply saying that the fire department is responding. While it is small and picky, it's a classic example of perceptions concerning the delivery of a promised service.

On a much larger scale, what is believed to be the largest personal injury settlement in King County, Washington history, the family of several fire victims was awarded a $29 million dollar settlement. In July, 2008, a fire destroyed nine apartment units on East Hazelwood Drive in Lamoore, Washington. Five people died in one of those apartments. There were two adults, Derik Faubion and his fiancée Michele Mattison, both age 19, their two-year-old daughter Hayden Allison Faubion and two other Mattison siblings, Lexus May Bisnar, age 4 and Ariel Nel Bisnar, age 2, also perished in the fire. There was no evidence that a smoke detector existed in the victims' apartment. While the absence of fire sprinklers were not a factor in reaching this huge judgment, the upsetting fact is that if these apartments had quick-response sprinkler protection, these unfortunate victims would still be alive today, even if the smoke detector was not functioning or missing. All the victims died of smoke inhalation and thermal burns. The judgment was jointly against the absentee owners of the apartment complex and the property management company responsible for maintaining the rental units to applicable codes and regulations.

Every year for the last five years, fire protection litigation in North America has exceeded one billion dollars.

Unfortunately, a considerable amount of that litigation is directed at volunteer fire departments who are trying, to the best of their ability, with very limited resources to provide fire protection to the citizens in their community. Full-time staffed fire departments are experiencing a considerable level of increased litigation, based on a long-established community perception that if those in need called 9-1-1, then the fire department would be there instantly,

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Don Pamplin
NFSA's Regional Manager for the Pacific Northwest

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the firefighters would "walk-on-water" and solve whatever problem the occupants were facing. This perception has long been recognized as a major flaw in successful risk management for the fire service. The perception is promising something that

> "That is why fire sprinklers are so effective. Most of the time they start fighting the fire before the fire department is even notified that a fire is happening."

cannot be consistently delivered. When it isn't delivered, litigation is often the result. Part of the problem is having fire departments properly practicing "Duty of Care." That means being honest with the people they serve and telling them the factual truth about what they can and can't deliver. Unfortunately, some elected politicians don't want that to happen because they don't want to spend more money on fire protection in their communities. They effectively muzzle the fire department and that contributes to the false level of delivery perception. If the Fire Chief says things that don't please those in political power, he or she often finds themselves not being the Chief any longer. And if the Firefighters Union makes those comments, they are accused of fear mongering and empire building.

Is it the fire department's fault?

Consider the fact that today, across North America, over 70% of all structure fires are fought on a "defensive basis." That means the fire department, whether it is volunteer, combined or fully-staffed, is not able to successfully make an interior "offensive" attack on the fire and control or extinguish it in the room or area of fire origin before "flashover" occurs. Is that the fire departments fault? Absolutely not! The average Total Intervention Time (TIT) of fire departments across the country exceeds 10 minutes which is way beyond "flashover." That is why fire sprinklers are so effective. Most of the time they start fighting the fire before the fire department is even notified that a fire is happening. And it's the same reason why more and more fire departments are being honest with the citizens they protect by telling them what they can and can't deliver and that they need fire sprinkler help. And shamefully so, it is many times the same politicians who don't want to spend more money on fire protection resources that also oppose building or fire code requirements for fire sprinklers because they are heavily influenced by the propaganda spread by the homebuilder associations across the country.

That propaganda creates an illusion that deceives the homeowner. There are many myths that the homebuilders have perpetuated over the years. We could fill page after page of that documentation but one of the most deceptive of all is their claim that new homes don't burn! The North American fire service knows that is a huge lie because they recognize two major concerns with residential home fires:

1. Whether the home is old or new, the first stages of any residential fire involve room contents. This is the primary fuel load and with the current level of fabric exposure and composition (drapes, upholstery and carpeting), together with wood and plastic furniture, the ignition temperature of many of these products is well under 1000 degrees fahrenheit which is the approximate temperature when some flashovers would start to occur. When flashover happens, the majority of combustible materials in the home will start to rapidly burn and this fire phenomenon can occur as quickly as three minutes after primary ignition. This is long before the fire department arrives and it usually means that the occupants' chance of survival and escape is not very good and may not exist at all.

2. If the home is new or if the home is older but has had some current major renovations, the use of engineered lightweight wood roof trusses and "I" flooring joists is now a major concern for firefighters who are entering the home to fight a fire that usually has reached a flashover ignition. Wood trusses have been common components of residential and light commercial buildings since the 1970's. The fire service has known about these hidden dangers for a long, long time. On December 26, 1992 the United States Fire Administration (USFA) issued a report entitled "Wood Truss Roof Collapse Claims Two Firefighters." In addition, the National Institute for Occupational Safety & Health (NIOSH) did a report in April, 2005 entitled "Preventing Injuries and Death of Firefighters Due to Truss System Failures" and the National Institute of Technology (NIST) did a report in January, 2007 entitled "A Study of Metal Truss Plate Connectors When Exposed to Fire." All of this and a tragic series of firefighter deaths in these types of structures have brought the fire service to a justified "defensive-mode position." The defensive-mode position is that firefighters may be held back from entering a burning structure if there is any indication that a collapse is possible. That makes sense, especially when the average "total intervention time" (TIT) across North America exceeds 10 minutes and the fire department is arriving on-scene after flashover and after the lightweight construction has been exposed to fire for that amount of elapsed time.

Take some time to look at a news video that clearly shows how lightweight "I" joist flooring collapses when exposed to open flame, the same as what would be happening after flashover occurs in the home. Note the following:

- Just 20 seconds into the experiment, charring on the manufactured "I" beam was much more noticeable than that of the solid wood board;
- Within five minutes a hole had burned through the center of the composite wood and glue "I" beam webbing;
- At 13 minutes into the blaze, the webbing area in the middle of the "I" beam had burned away leaving just the bottom piece of the beam to support the weight above.

- Within 15 minutes and 21 seconds, the floor collapsed because the composite "I" beam had totally failed while the solid wood board was still strong enough to step on.

The video can be seen by connecting to http://www.wisn.com/video/17971947/index.html

This is what happened on January 26, 2007 when a 24-year-old volunteer Tennessee firefighter died at a residential structure fire after falling through the floor which was supported by engineered wooden "I" beams. And it was the same on August 13, 2006 when a 55 year-year-old career firefighter died and another was seriously injured after falling through the engineered floor of a six year-old "new" residential structure fire in Green Bay, Wisconsin where the weight on the engineered "I" floor joists was heavier due to the installation of floor heating elements with gypcrete. The gypcrete gives the false sense that the floor is solid, yet adds weight to the "I" beams. Before the two firefighters fell through the collapsed floor, an engine crew of three walked on top of the same floor which gave away just minutes later, sending the two firefighters into the burning basement.

What really upsets me is the attitude of the majority of homebuilders. I remember specifically making presentations to several homebuilding contractors over the years and while they expressed some degree of sympathy for the deceased firefighters, they also expressed insulting comments that "firefighters are paid to take risks" and here it comes again... "new homes don't burn!" That's different than what the Metropolitan Builders Association of Milwaukee are saying in that they are aware of the danger that "I" beams can pose in a fire and that they are currently investing in research to develop new "fire-resistant products" and working to educate firefighting agencies on how best to fight fires involving the most common building materials used today. Imagine, a national industry that knows nothing about the hazards of fire or refuses to admit that those hazards even exist, is now going to tell us how to best to fight those fires! What an insult! The homebuilders will do lots of cosmetic activity to justify their position but will stubbornly refuse to recognize that the answer to all the home fire problems is quick response residential fire sprinklers.

If the homebuilders don't recognize that fact, then they will eventually have to face hundreds of millions of dollars in annual litigation claims for failing to practice "duty of care" and "defensible risk management." They keep promising something to the unsuspecting consumer that is impossible to deliver. But then look on the bright side, as you remember what the sign in the lawyers' office said –You are never a complete failure when you can be used as a bad example – and lawyers and plaintiffs love bad examples!

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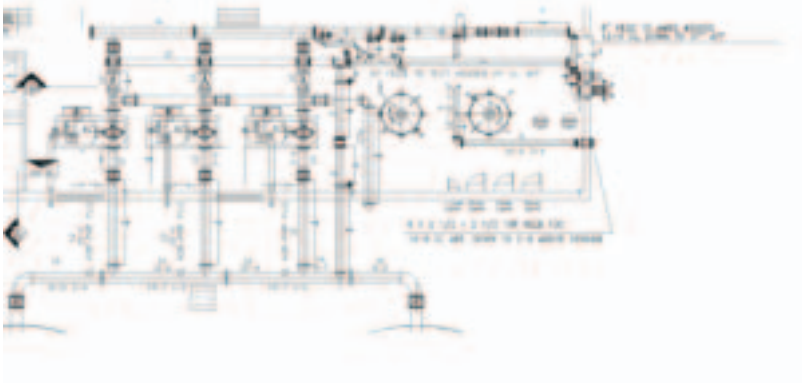

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"Business Thursdays" Online Seminar Update

By Bob Treiber

Following are descriptions of upcoming NFSA live on-line business seminars. Log on to www.nfsa.org and click the "seminars" tab to sign up. Live web based seminars scheduled on various Thursdays. The topics for the "Business Thursdays" seminars have been specially selected to help the fire sprinkler contractor deal with current problem areas in the business environment. Participants will be able to ask the instructors pertinent questions, and receive answers live during the seminar, just as if they were on-site.

Starting a State of Local Residential Fire Sprinkler Coalition

MARCH 19, 2009

The adoption of residential sprinkler language in the 2009 International Residential Code requires a formula and plan for understanding. With a January 1, 2011 effective date, educating the public on the benefits of residential fire sprinklers and indoctrinating state and local policy makers will be necessary to pass legislation requiring total IRC adoption and compliance. Partnerships with the fire service, building officials and the sprinkler industry to name a few will be needed for success. Participating in this session will help set a course of coalition development to outreach stakeholders like the general public, developers, home builders, elected officials and new home buyers.

Best Practices Update

APRIL 16, 2009

Brian Cullen is a seasoned professional who effectively uses his skills in leadership, development and coaching to help clients achieve their most favorable business results. His presentation will include an overview of best practices and what is being done to help the fire sprinkler industry achieve its goals.

CPVC Update

May 21, 2009

With the large quantity of CPVC pipe being used throughout the country and with the increased need for plastic pipe installation because of future residential sprinkler usage, issues regarding CPVC pipe arise. This presentation will discuss how the industry has taken a proactive step, involving contractors, suppliers and manufacturers and other stakeholders to address the issues.

Strategic Planning for Contractors

June 18, 2009

The majority of public and private sector organizations do not perform effective strategic planning. They think they do and in many situations, they even call it "strategic planning" but the planning model that they use is not really strategic. In the business world, the bottom line is to make profit and the more profit you consistently make, the better insulated you are from the disastrous effects of economic and/or social change. By practicing effective and efficient strategic planning, you can be better prepared to change direction to meet new market demands and technology shifts. All business organizations within the Fire Sprinkler Industry need to use effective strategic planning to create a realistic and achievable road-map to lead them to where they want to be in the next three to five years.

For more information about any NFSA training seminar, visit online at www.nfsa.org

Bob Treiber

Based in Centerville, Ohio, Bob is NFSA's Director of Training & Education

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ESFR Sprinklers and Obstructed Construction

By Kenneth E. Isman, P.E.

The NFSA Expert of the Day (EOD) question and answer service has received a number of similar questions recently regarding the use of Early Suppression Fast Response (ESFR) sprinklers with obstructed types of construction, most notably concrete tee construction. We are not sure why the sudden interest in such construction. It is possible that this is just a normal cycle of architects trying new ideas. Or it is also possible that the trend is due to the price of steel and the desire to find an alternative to the bar joist construction that has been more common in warehouse type facilities.

NFPA 13 does not prohibit the use of ESFR sprinklers with obstructed construction, but it does lay out a series of rules that make it difficult to install ESFR sprinklers where the structural members are solid, or sufficiently blocked to be considered "obstructed construction" in accordance with the definition in section 3.7.1 of NFPA 13.

The concern about the use of ESFR sprinklers with obstructed construction is that the structural members will channel heat away from the fire and cause ESFR sprinklers remote from the fire to open. Sprinklers remote from the fire do not tend to contribute to fire suppression or control, however they do take water away from the sprinklers that have activated over a fire and they cause more friction loss in the supply piping, which may hamper the effectiveness of the sprinkler system. ESFR sprinklers have such large orifices, that even a single extra sprinkler being open can cause significant extra flow in a system. At a modest pressure of 25 psi, a k-25.2 ESFR sprinkler discharges more than 127 gpm of water, which might be enough to overrun a sprinkler system.

The first issue that needs to be discussed is the location of the sprinkler's deflector. For regular spray sprinklers being used in a building where the structural members are considered "obstructed", the sprinkler is usually installed below the bottom of the structural members, but not more than 22 inches below the ceiling deck. A special exception exists for concrete tees that allows the sprinkler to be 1 inch below the bottom of the tees regardless of how far below the deck the sprinkler deflector ends up.

However, the special concrete tee exception cannot be used for ESFR sprinklers. This exception is in section 8.6.4.1.2(5) of NFPA 13, which only applies to upright and pendent spray sprinklers. ESFR sprinklers cannot use the concrete tee exception because ESFR sprinklers need to be installed in accordance with the sprinkler location rules of section 8.12, which does not have a concrete tee exception. So, the requirements for where the ESFR deflector needs to end up can be summarized with the following bullet points:

- Pendent k-14 and pendent k-16.8 ESFR sprinklers need to be positioned so that the deflectors are between 6 and 14 inches from the ceiling deck.
- Pendent k-22.4 and pendent k-25.2 ESFR sprinklers need to be positioned so that the deflectors are between 6 and 18 inches from the ceiling deck.
- Upright ESFR sprinklers (k-14 and k-16.8) need to be positioned so that the deflectors are between 3 and 12 inches from the ceiling deck.

The second issue that needs to be addressed is the spacing of the ESFR sprinklers. Most of the ESFR spacing rules are found in section 8.12 of NFPA 13. However, there are a few ESFR spacing rules that are found in section 8.4.6 of NFPA 13. Many people miss these rules because they don't think to go to the front portion of Chapter 8 for ESFR rules. Yet these rules are just as important to the success of ESFR sprinkler systems.

Section 8.4.6.3 sets up the rules for using ESFR sprinklers with obstructed construction. There are two different rules in this section: one for ESFR sprinklers where the structural members are up to (and including) 12 inches deep and the other for ESFR sprinklers where the structural members are more than 12 inches deep. Where the structural members are

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Kenneth E. Isman, P.E.

Vice President, Engineering for NFSA. Ken represents NFSA on the NFPA Technical Committee on Sprinkler Installation Criteria

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up to 12 inches deep, the basic rules of section 8.12 of NFPA 13 apply (the same as with unobstructed construction) and the assumption is that the sprinklers will be installed with the deflectors at (or below) the elevation of the bottom of the structural members. If the sprinkler deflectors are above the bottom of the structural members, the beam rule (8.12.5.1) will need to be met.

The more interesting set of rules applies where ESFR sprinklers are being used with obstructed construction members that exceed 12 inches in depth. In this case, section 8.4.6.3 requires that ESFR sprinklers be installed in every channel formed by structural members while maintaining the minimum spacing rules of section 8.12. Since ESFR sprinklers cannot be installed closer than 8 ft from each other (section 8.12.3.4), this is difficult to do when the structural members are less than 8 ft on center. See *Figure 1*, which shows the structural members 4 ft on center and the installation of sprinklers that does not meet NFPA 13 because the sprinklers (7'-9" apart) are too close together even taking into account the advantage of staggering the branch lines. Note that in all of these discussions, the sprinkler is assumed to be in the center of the channel created by the structural members.

Staggering the Installation?

It is possible to stagger the installation of the ESFR sprinklers so that they are at least 8 ft apart horizontally, even when the structural members are less than 8 ft on center. The closest that structural members can be is 5'-3" on center in order to maintain the minimum 8 ft horizontal distance between sprinklers *(see Figure 2)*. Of course, this assumes that the storage is not greater than 25 ft and that the ceiling is not greater than 30 ft, so that the 12 ft maximum spacing is permitted. Note that this sprinkler spacing also produces an area of coverage for each sprinkler that is 64 sq ft, the minimum allowed by NFPA 13 for ESFR sprinklers (section 8.12.2.3).

If the storage height or the ceiling height exceeds the limits discussed above, then the structural members will need to be farther apart to accommodate the closer spacing of the sprinklers parallel to the structural members *(see Figure 3)*. Note that the spacing of structural members in Figure 3 could have been 6'-3" on center to achieve a distance between sprinklers of 8 ft; but, that would have violated the minimum coverage area rule because the sprinklers would only be covering 62.5 sq ft each. The structural members need to be spread out to 6'-5" in order for each sprinkler to cover at least 64 sq ft.

When sprinklers are installed in every channel formed by structural members, it is frequently more efficient to run the branch lines parallel to the structural members rather than perpendicular to the members. As long as the hanger rules of Chapter 9 of NFPA 13 are met, there is no problem with running the branch lines parallel to the structural members. In most cases, this would mean hanging the

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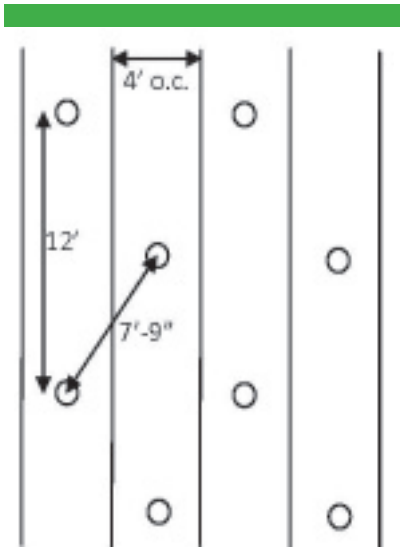

Figure 1 – *With obstructed construction having structural members 4 ft on center and more than 12 inches deep, ESFR sprinklers cannot be properly spaced, even when staggered, because of the minimum distance requirement.*

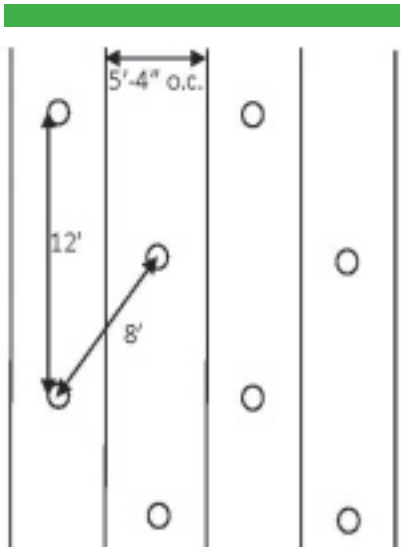

Figure 2 – *In order to space ESFR sprinklers properly with obstructed construction having structural members more than 12 inches deep, the structural members need to be at least 5'-4" on center so that, when staggered, the minimum distance requirement is met.*

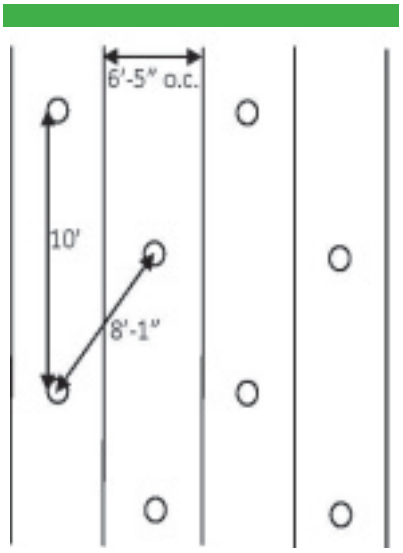

Figure 3 – *Where ESFR sprinklers are limited to 10 ft maximum distance between sprinklers, the structural members need to be at least 6'-5" on center in order to meet the minimum distance rule (8 ft) and the minimum area of coverage rule (64 sq ft).*

>> CONTINUED FROM PAGE 22

branch lines from the deck or the beams that run perpendicular to the structural members. Section 8.12.4.1.6 of NFPA 13 allows the sprinklers to be run with branch lines parallel to the structural members (perpendicular to the beams) as long as the sprinklers end up in the channel formed by the members and not under the beams.

Special Consideration

The last special consideration that someone needs to be concerned with when trying to put ESFR sprinklers into a building with obstructed construction members that exceed 12 inches in depth is the number of sprinklers in the design area. Section 22.4.4.3.1 of NFPA 13 requires that the system have a minimum design area of 960 sq ft with ESFR sprinklers. If you were to use the layouts of Figure 2 or Figure 3 in this article, with each sprinkler covering only 64 sq ft, you would end up with 15 sprinklers in your design area (960 ÷ 64 = 15) rather than the 12 normally required for ESFR sprinklers. The addition of three ESFR sprinklers might make it difficult to get the water supply to work with the system considering the additional flow needed to satisfy three more ESFR sprinklers.

The minimum 960 sq ft design area rule has been in NFPA 13 for many years (since at least the 1994 edition) and is one of the rare situations where NFPA 13 is more stringent than the Factory Mutual standards. There is a possibility that this rule will be eliminated from the 2010 edition of NFPA 13, but that document will not be final until much later this year, so we would hate to speculate on the outcome at this time.

In conclusion, NFPA 13 does not prohibit the use of ESFR sprinklers when a building has obstructed construction, but it does make it more difficult to install the system. If you can't meet the rules discussed here, then you can't use the ESFR sprinklers unless the building owner is willing to put in a drop ceiling under the structural members to create a flat, smooth unobstructed ceiling situation. ESFR sprinklers are just not flexible enough to be used with every ceiling configuration, so you must understand all of the rules if you are going to try and make an ESFR sprinkler system fit into a building.

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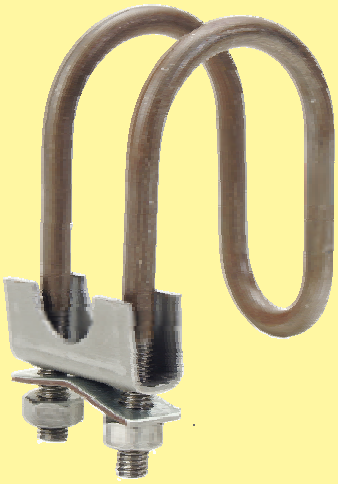

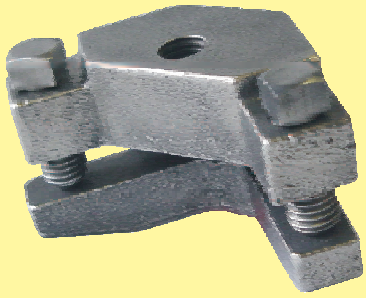

2007
Sway Brace Program

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CPVC SWAY BRACING

SPECIFIC GRAVITY

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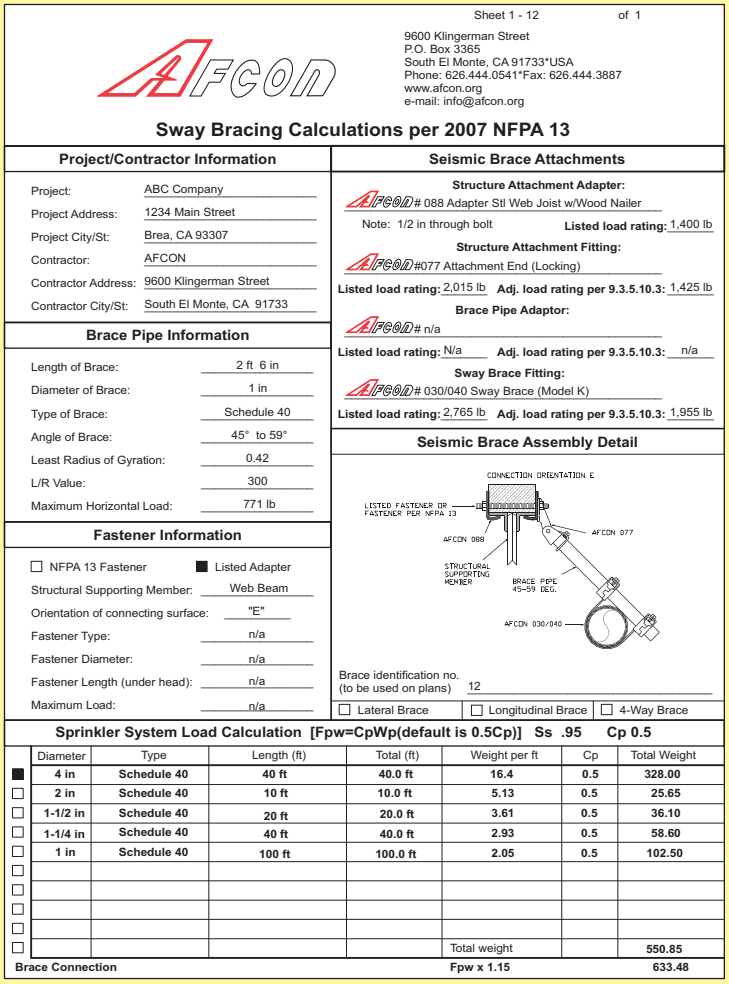

Sheet 1 - 12 of 1

AFCON
9600 Klingerman Street
P.O. Box 3365
South El Monte, CA 91733*USA
Phone: 626.444.0541*Fax: 626.444.3887
www.afcon.org
e-mail: info@afcon.org

Sway Bracing Calculations per 2007 NFPA 13

Project/Contractor Information

Project:	ABC Company
Project Address:	1234 Main Street
Project City/St:	Brea, CA 93307
Contractor:	AFCON
Contractor Address:	9600 Klingerman Street
Contractor City/St:	South El Monte, CA 91733

Brace Pipe Information

Length of Brace:	2 ft 6 in
Diameter of Brace:	1 in
Type of Brace:	Schedule 40
Angle of Brace:	45° to 59°
Least Radius of Gyration:	0.42
L/R Value:	300
Maximum Horizontal Load:	771 lb

Fastener Information

☐ NFPA 13 Fastener ■ Listed Adapter

Structural Supporting Member:	Web Beam
Orientation of connecting surface:	"E"
Fastener Type:	n/a
Fastener Diameter:	n/a
Fastener Length (under head):	n/a
Maximum Load:	n/a

Seismic Brace Attachments

Structure Attachment Adapter:
AFCON # 088 Adapter Stl Web Joist w/Wood Nailer
Note: 1/2 in through bolt **Listed load rating:** 1,400 lb

Structure Attachment Fitting:
AFCON #077 Attachment End (Locking)
Listed load rating: 2,015 lb **Adj. load rating per 9.3.5.10.3:** 1,425 lb

Brace Pipe Adaptor:
AFCON # n/a
Listed load rating: N/a **Adj. load rating per 9.3.5.10.3:** n/a

Sway Brace Fitting:
AFCON # 030/040 Sway Brace (Model K)
Listed load rating: 2,765 lb **Adj. load rating per 9.3.5.10.3:** 1,955 lb

Seismic Brace Assembly Detail

Brace identification no. (to be used on plans) 12

☐ Lateral Brace ☐ Longitudinal Brace ☐ 4-Way Brace

Sprinkler System Load Calculation [Fpw=CpWp(default is 0.5Cp)] Ss .95 Cp 0.5

	Diameter	Type	Length (ft)	Total (ft)	Weight per ft	Cp	Total Weight
■	4 in	Schedule 40	40 ft	40.0 ft	16.4	0.5	328.00
☐	2 in	Schedule 40	10 ft	10.0 ft	5.13	0.5	25.65
☐	1-1/2 in	Schedule 40	20 ft	20.0 ft	3.61	0.5	36.10
☐	1-1/4 in	Schedule 40	40 ft	40.0 ft	2.93	0.5	58.60
☐	1 in	Schedule 40	100 ft	100.0 ft	2.05	0.5	102.50
☐							
☐							
☐							
☐							
☐					Total weight		550.85
Brace Connection					Fpw x 1.15		633.48

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Are You Registered for NFSA's 2009 Annual Seminar & Exhibition in Orlando? We need you! And you need us!

By Karyn Hudgens

Vendors are a very important part of an exhibition. Attendees come to an exhibition expecting to see vendors presenting their wares. In these times of economic uncertainty, there might be a question on whether or not to participate. But when you exhibit with a positive attitude, these events have proven to be a valuable source of income and information when the economy is at its worst. Attendees at the exhibition are looking to vendors for new and exciting products. Your attendance at an exhibition is a powerful way to say "we are here, we plan to be here in the future and we are very excited about our products."

Networking opportunities are in abundance at the NFSA Annual Seminar & Exhibition. If you are having a hard time, chances are your customers are too. Information obtained at the exhibition can help your organization make effective strategic decisions to ride out the economic downturn with educated decisions.

Contractors and others that are joining us at the seminar are people looking for information. There are many benefits that you will acquire by attending. Our plenary sessions will provide positive viewpoints. They will excite, drive and set the tone for the year to come! Our educational sessions will pinpoint the challenges you are facing. They will inform and teach you key elements to help you survive these economically hard times and look towards the prosperous times that promise to follow. Networking will give you the opportunity to hear what ideas are working for other companies, saving you time and money.

Whether you are a SAM, Contractor, Professional or Subscriber member, there are many benefits to attending this year's seminar and exhibition benefits that aren't always clear until you're there, at the exhibition, in the hallways, or at dinner talking with people who are doing exactly what you are doing.

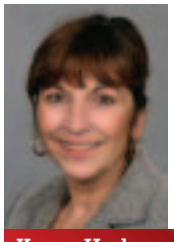
This year we will be hosting the second "Top-Tech" Competition. This is NFSA's search for best Sprinkler Design Technicians in the land. The teams will face each other in an elimination tournament in a game show format competition right on the exhibition floor, until there is only one team left standing. That team will be declared the Top-Tech Champions for 2009 and will win some awesome prizes and fantastic recognition. It has proven to be an exciting time during the show.

So contact Mike Repko for your reservation, pack up your family and take that well deserved vacation! Join us at the Omni ChampionsGate, April 29 – May 2, 2009 for another successful NFSA Seminar and Exhibition!

Hope to see you there!

Operations Manager/President Randy Nikunen and Designer/Assistant Project Manager Adam Young accept an NFSA Five Year Anniversary Recognition plaque for Absolute Fire Protection, Hermantown, MN.

NFSA Regional Manager, Dave Bowman (R), presents Don Robertson, of Robertson Fire Protection of Miami, Florida with his 15 year plaque at a recent Area Interest Meeting in Miami.



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Summary of Major 2009 ICC Code Changes Affecting the Sprinkler Industry

By Jeff Hugo

I'm sure by now everyone has realized that the 2009 editions of the "I" Codes are complete with all the coverage on residential sprinklers in the IRC. Our opponents still say the jury in out on that verdict, but with the Dec.19, 2008 unanimous decision of the ICC Board of Directors to keep residential sprinklers in the IRC, we can expect opposition at the local level adoption, but with piece of mind that the code makers approve of the decision. However, aside from the one and two family market, the commercial end of sprinklers is where our industry derives the majority of their income. NFSA is committed and is established to make sure sprinklers stay in the codes. The following is a summary of what to expect when the 2009 ICC Family is available in the spring of 2009.

International Fire Code

RESIDENTIAL CODE

This change will enable jurisdictions who have adopted the fire code to be able to be legally involved in the site plan review process on residential homes governed by the IRC. The fire AHJ can apply the fire code provisions for water supplies, grade, access, identification, etc. to the structures built under the IRC.

102.5 – Application to Residential Code.

Where structures are designed and constructed in accordance with the International Residential Code, the provisions of this code shall apply as follows:

1. Construction and design provisions: Provisions of this code pertaining to the exterior of the structure shall apply including, but not limited to, premises identification, fire apparatus access, and water supplies. Where interior or exterior systems or devices are installed, construction permits required by Section 105.7 of this code shall also apply.

2. Administrative, operational, and maintenance provisions: All such provisions of this code shall apply.

International Building Code

MERCANTILE BUILDINGS

This new provision (#4) requires any Group M (mercantile) displaying and/or selling upholstered furniture to be sprinklered regardless of size of the display area or quantity of furniture.

903.2.6 (Applicable in IFC and IBC) - Group M.

An automatic sprinkler system shall be provided throughout buildings containing Group M occupancy where one of the following conditions exists:

1. Where a Group M fire area exceeds 12,000 square feet (1115 m2);
2. Where a Group M fire area is located more than three stories above grade plane;
3. Where the combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m2); or
4. Where a Group M occupancy is used for the display and sale of upholstered furniture.

EXHIBITION HALLS, ARENAS, ETC.

Use groups A-3 and A-4 cover many assembly occupancies, such as expo halls and arenas. The strike on the language below removes the sprinkler exception for the floor areas of where the sporting event actually takes place. The 2009 code will require these areas to now be sprinklered.

903.2.1.3 (Applicable in IFC and IBC) - Group A-3.

An automatic sprinkler system shall be provided for Group A-3 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m2);
2. The fire area has an occupant load of 300 or more; or
3. The fire area is located on a floor other than the level of exit discharge.

Exception: Areas used exclusively as participant sports areas where the main

>>CONTINUED ON PAGE 30

Jeff Hugo

Jeff is NFSA's Manager of Codes

>> CONTINUED FROM PAGE 29

floor area is located at the same level as the level of exit discharge of the main entrance and exit.

903.2.1.4 (Applicable in IFC and IBC) - Group A-4.

An automatic sprinkler system shall be provided for Group A-4 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m2);
2. The fire area has an occupant load of 300 or more; or
3. The fire area is located on a floor other than the level of exit discharge.

Exception: Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.

SCHOOLS

This change will lower the square footage of the fire area threshold on K-12 schools. While the majority of other use groups have a 12,000 sq. ft. threshold, schools have been at 20,000 sq. ft. for many years in the "I" Codes and the legacy codes. This NFSA proposed change will result in more schools being sprinklered.

903.2.2 (Applicable in IFC and IBC) - Group E.

An automatic sprinkler system shall be provided for Group E occupancies as follows:

1. Throughout all Group E fire areas greater than 12,000 square feet in area.
2. Throughout every portion of educational buildings below the lowest level of exit discharge that serves that portion of the building.

Exception: An automatic sprinkler system is not required in any fire area or area below the level of exit discharge where every classroom throughout the building has at least one exterior exit door at ground level.

RESIDENTIAL CARE/ ASSISTED LIVING

This change affects the R-4 use group that houses people for the purpose of residential care and/or assisted living up to 16 occupants. Previously, the R-4 had an exception that it could be built under the IRC, which exempted them from sprinklers. This change still gives the option to be built under the IRC, if sprinklered per NFPA 13 or 13R. All R use groups are required to be sprinklered under the IBC.

310.1 (Applicable to IFC and IBC) Residential Group R.

R-4 Residential occupancies shall include buildings arranged for occupancy as residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff.

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code or shall comply with the International Residential Code provided the building is protected by an automatic extinguishing system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

EGRESS WIDTH

The IBC has many sprinkler trade-offs (or trade-ups) that allow a designer to economically design a building. One of these trade-ups, egress width, that allowed stairs, corridors, doors and ramps to be of smaller width in a sprinklered building has been removed and increased to the non-sprinklered width of .3 inches per occupant for stairs and .2 inches for doors, corridors and ramps. While NFSA and many other sprinkler advocates opposed this change, the membership felt that other emergency situations warranted the increased width in sprinklered buildings.

AMBULATORY HEALTH CARE FACILITIES

This change gave a name and a place in the code for these small surgical centers off campus of a hospital. While the change doesn't require the entire B use group to be sprinklered in areas not involving the ambulatory health care facility, it is a start for uniform enforcement of these processes and may lead the designer to sprinkler the entire building after seeing the economical benefits of fire sprinkler systems.

903.2.2 (Applicable to IFC and IBC) - Group B ambulatory health care facilities.

An automatic sprinkler system shall be provided for Group B Ambulatory Health Care Facility occupancies when either of the following conditions are met:

1. Four or more care recipients are incapable of self preservation at any given time
2. One or more care recipients that are incapable of self preservation are located at other than the level of exit discharge.

Other sections of the change omitted.

International Property Maintenance Code

NFPA 25

This NFSA change puts a direct reference into the IPMC for NFPA 25 and dictates that all existing sprinkler systems follow that standard. This code text and reference does not require that property maintenance officials enforcing the IPMC to perform the actual inspections, but it gives them more guidance than previous language on what they need to look for on their annual inspections or complaints, i.e. monthly, quarterly, annual inspection documents, make the owner aware that NFPA 25 is now enforced, etc.

704.1.1 - Automatic sprinkler systems.

Inspection, testing, and maintenance of automatic sprinkler systems shall be in accordance with NFPA 25.

>> CONTINUED ON PAGE 31

Table 1005.1 (Ifc [B] Table 1005.1) Egress Width Per Occupant Served

Occupancy	Stairways (Inches Per Occupant)	Other Egress Components (Inches Per Occupant)
All Occupancies	**0.3**	**0.2**

>> CONTINUED FROM PAGE 30

Add standard to reference chapter (8) as follows:
NFPA 25–07 Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems

International Existing Building Code

RESIDENTIAL BUILDINGS

This NFSA change removed R use buildings being remodeled or renovated three stories and under being exempt from sprinklers. Work performed in the R use group under the IEBC will now require sprinklers in all R use occurrences. The text that is struck will not appear in the 2009 edition.

704.2.2 - Groups A, B, E, F-1, H, I, M, R-1, R-2, R-4, S-1 and S-2.

In buildings with occupancies in Groups A, B, E, F-1, H, I, M, R-1, R-2, R-4, S-1, and S-2, work areas that have exits or corridors shared by more than one tenant or that have exits or corridors serving an occupant load greater than 30 shall be provided with automatic sprinkler protection where all of the following conditions occur:

1. The work area is required to be provided with automatic sprinkler protection in accordance with the International Building Code as applicable to new construction;
2. The work area exceeds 50 percent of the floor area; and
3. The building has sufficient municipal water supply for design of a fire sprinkler system available to the floor without installation of a new fire pump.

Exception: Work areas in Group R occupancies three stories or less in height.

NFSA is constantly involved in the code change process and yet another edition of the "I" Codes proves that. While this story waits for print, the next code change cycle of the ICC Family of Codes is underway along with NFSA proposals.

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By Dominick G. Kasmauskas, CFPS

Green Construction and Fire Protection

Most everyone in the construction trades by this time has heard of "green" construction and the LEED (Leadership in Energy and Environmental Design) rating system, sometimes called the "check list." Many in the fire sprinkler industry have taken part in "green" projects, such as new and rebuild projects of airport terminals, residential, high rises, businesses, storage – every occupancy type. It is almost impossible to open a newspaper or construction trade magazine and not see an article regarding green construction or environmental and energy efficiency articles. Surprisingly, the push to build "green" and help save our planet continues despite recent construction cost increases. Some "green" technology and products can have an increased cost over similar non-green materials. The architectural firm, which is often also the LEED AP® – "Accredited Professional," – covered later in this article, will have an idea of the return on investment (R.O.I.) due to the buildings sustainability and energy conservation components, plus the healthier environment for occupants, which is where the real pay back is.

In this article we should have a better understanding of the impact of buildings and unwanted fires, the United States Green Building Council (USGBC) and their mission, the LEED Checklists for a series of construction concerns, the possible impacts to the fire sprinkler industry thus far, and where and how do we want to lead our industry into the green concept further to obtain more recognition.

What is LEED?

According to the USGBC web site, "the Leadership in Energy and Environmental Design (LEED) Green Building Rating System is a voluntary, consensus-based national rating system for developing high-performance, sustainable buildings. LEED addresses all building types and emphasizes state-of-the-art strategies in five areas: sustainable site development, water savings, energy efficiency, materials and resources selection, and indoor environmental quality."

There is a choice of ratings (Green, Gold, Silver or Platinum) to be obtained through the documentation of "points" being taken during the design process of the building. The concept and design of a new commercial buildings, for example, will be judged by certain percentages of Recycled Content of the materials used, Water Use Reduction devices installed, Light Pollution reduction for interior or exterior lighting, reduction of Heat Islands ("the thermal gradient differences between developed and undeveloped areas.")

The Built Environment Impact and the Need for "Green"

According to the USGBC's website, the built environment is impacting a major part of our future. In past building designs and construction practices, before "green," could we rightfully and seriously expect a healthy future if we did nothing to adjust?

In the United States alone, buildings account for:

- 72% of electricity consumption,
- 39% of energy use,
- 38% of all carbon dioxide (CO_2) emissions,
- 40% of raw materials use,
- 30% of waste output (136 million tons annually), and
- 14% of potable water consumption.

Anyone that understands fire sprinkler systems also understands that the fire sprinkler industry has been having a positive impact on our environment for over 130 years without much credit. Which one or two items do you think the fire sprinkler industry positively impacts the most? CO_2 emissions and potable water consumption are two obvious choices. Traditional firefighting suppression forces are probably not calculated in the water consumption. The "Potable Water Consumption" percentage would be significantly higher if it was. How about waste from buildings without the benefit of having automatic

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NFSA's New York Regional Manager

Dominick G. Kasmauskas

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fire sprinkler protection? How many tons of burned or non-recyclable building material and interior furnishings as the result of fires are being thrown into the landfills?

Now, continue to think laterally... how much new product is produced to replace the burnt structural material, replacement of lost commercial operation machinery, process materials, and furnishings? What is the energy consumed to manufacture the needed replacements? How much energy is needed to ship and install? What amount of energy is being used to transport workers and tools to rebuild or replace fire damaged structures? Burnt building materials should be evaluated for recycling but most likely will end up in a landfill as most material will be beyond recycling or reuse capabilities. Not just the burnt material is discarded from a structure involved in a fire. The peripheral materials will also need replacement either by code or design of the new part of the structure or by insurance and liability driven issues for the contractor in order to guarantee the new work.

For example, if a roof is damaged by the fire and firefighting operations, the roofer is not just going to patch a hole. The roofer is going to replace a significant area or possibly the entire roof to be able to warranty the work. In many cases involving a single- or two-family home, the whole roof of a home may be replaced due to age or condition after a fire. Many times exposed neighboring structures have radiant heat damage and will also produce tons of discarded building materials to our landfills.

At a Fire Scene

How much fuel and energy is consumed by fire apparatus operating at a fire scene? (For "pumpers," figure approximately 4-6 gallons of diesel per hour, aerial devices about 3-4 gallons of diesel, and heavy rescue trucks idling about 2-3 gallons per hour). Next time you see a fire scene on television or pass by one in your travels, take a quick count of how many vehicles are operating there. According to OSHA, 25% of all hazardous particulate air pollution is from fuel combustion coming from diesel engines. Diesel exhaust not only contributes global warming gases, but toxins such as sulfur dioxide, arsenic, acetaldehyde, formaldehyde, benzene, lead, phenols, mercury and manganese.

If the fire department arrives and dumps two or three million gallons of water into a burning building... does it all just disappear? Obviously, a large number of gallons will turn into steam, but most of the firefighting water and water used during overhaul to hit spot fires and cool the remains will settle into the aquifer or run off into streams and lakes. This run-off will carry large amounts of toxic substances with it. Ah, excuse me here, but, where do we get our potable water from? If you are in a rural or sparse suburban area this may not be a concern, but in the shadows of New York City, water quality and water supply amount is quite a concern.

As a former volunteer firefighter in northern New Jersey, I remember a case in a neighboring community where well over four million gallons of water was used to put out a fire at a paint manufacturer. There was a gully located approximately 50 feet from the building. The gully fed into a stream about a ¼ mile away and the fish were jumping OUT of the stream onto the bank because of the toxic, irritating material that was mixed in the water run-off from the firefighting operations.

How many less fire injuries and fire deaths would there be in a fully fire sprinklered United States? We know that we are all going to die someday and the environmental impact of a fire death is probably not much more than that of a death of other types. What about fire injuries? Initially after the injury, there will be quite a bit of medical waste in the caring for each of the new 16,000 or so reported burn patients in the US annually. Medical waste does not go to a landfill, but is incinerated due to it being classified as a bio-hazard. Incineration takes energy, precious energy that could be conserved or used elsewhere. The materials produced to treat burn patients, the energy used for incineration of the medical waste produced, and the energy and fuel used to transport burn patients for years or possibly a lifetime of care and rehabilitation could nearly be circumvented with the universal acceptance of fire sprinklers in all new construction.

Greenhouse gases, most notably CO_2, are significantly reduced when unwanted fires are addressed by fire sprinklers. Dr. James Marsden analyzed the fire problem of the County of Greater Manchester, UK. His estimates were based on 1.86 ounces of CO_2 released per 1.2 yd^2 per second of burning material. Plus the assumption of a radiant feedback of 66 kW/m^2 and an estimated arrival and extinguishment time of 15 minutes for the fire department. Estimates of burn areas were 24 yd^2 for dwellings, 7.2 yd^2 for cars, 4.8 yd^2 for rubbish fires, and 120 yd^2 for industrial or commercial fires. Calculations showed 3 million metric tons (3,306,930 US tons) of CO_2 released just in that one region from unwanted fires in 2006-07. Fire sprinklers will not guard against automobile fires or most outdoor rubbish fires (yet), but just taking into account the structure fires and the possibility of significantly reduced CO_2 output from one metropolitan region in one year. Now, imagine this globally.

Our industry has positive impacts on all the items listed above regarding the built environment. It is not simply the impact of fire sprinkler systems and their cost during construction and the anticipated lifetime of the structure, which is what the AP® or contractors may be concerned with, but the positive impact they have, just by their very nature. It is what they DON'T allow to happen. It is a multitude of environmental and energy saving benefits for which these lifesaving (and lifestyle saving) systems do not presently get credit (with one small exception noted later.)

Just as fire sprinklers can downsize the ripple effect to local economies after a large unwanted fire in a community, fire sprinklers also down size the ripples that impact our environment and assist in energy conservation. The application of early fire suppression has tentacles that reach far beyond the structure and the unwanted fire. Positive impacts are realized on several energy and environmental issues. Lives are less disrupted or changed in a negative fashion.

It simply comes down to this, "the greenest thing we can do is put the fire out" as stated in a recent discussion of this subject by Michael Klemenz, P.E. of Davis-Ulmer.

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USGBC

The United States Green Building Council (www.USGBC.org) "is a 501(c)(3) nonprofit membership organization with a vision of a sustainable built environment within a generation. Its membership includes corporations, builders, universities, government agencies, and other nonprofit organizations. USGBC is dedicated to expanding green building practices and education, and its LEED® (Leadership in Energy and Environmental Design) Green Building Rating System™".

To give you an idea of the involvement in green and LEED projects, the following is from a USGBC document released November 2008:

LEED	New Construction	Commercial Interiors	Existing Buildings	Core & Shell	Neighborhood Development	Schools	Retail	Total
Registered Projects	9,555	1,757	2,063	2,147	230	534	107	16,393

Membership

- 17,846 member organizations including corporations, governmental agencies, nonprofits and others from throughout the industry.
- Since 2000, USGBC's membership has more than tripled.

LEED® Green Building Certification System

- LEED for New Construction rating system was first released in 2000,
- LEED for Commercial Interiors and Existing Buildings became available in 2004,
- LEED for Core & Shell became available in July 2006 for spec developments,
- LEED for Homes was launched in December 2007,
- LEED for Neighborhood Development, Retail and Healthcare are currently in pilot test.
- Over 4.2 billion square feet of commercial building space is involved with the LEED green building certification system.
- By 2010, approximately 10% of commercial construction starts are expected to be green, according to McGraw Hill Green Building Smart Market Report 2006.
- Every business day, $464 million worth of construction registers with LEED.
- There are LEED projects in all 50 states and 69 countries.

Education & Accreditation

- LEED workshop attendance: 91,163
- LEED Accredited Professionals: 69,151
- Greenbuild Expo Attendees 2008: 28,224
- Greenbuild Expo Attendees 2007:..... 22,835

The LEED AP®

The USGBC notes that "LEED Accredited Professionals (LEED AP) have demonstrated a thorough understanding of green building techniques, the LEED Green Building Rating System, and the certification process. The LEED AP program is administered by the Green Building Certification Institute (GBCI), which was established with the support of USGBC (in 2008) to allow for objective, balanced management of the credentialing program". The GBCI created from the USGBC assists in the ANSI process.

The LEED AP process began in 2001 by developing an exam process. Critical "green" issues are identified to develop test questions which reflect the roles and responsibilities expected of the LEED AP in the field. Presently the exam fee is $300 for USGBC members. The exam is 2 hours with additional expectations that the candidate will arrive at least ½ hour early, plus 10 minutes for orientation and instructions, and 10 minutes more for a voluntary exit review.

Having a LEED AP in your organization may be appealing to the Project Management Team. It shows interest and understanding of the detailed process involved in being "green".

A detailed LEED AP Candidate Handbook containing complete information on what is needed and expected of the candidate as well as studying tips and areas of experience one should hold can be found at www.gbci.org. The handbook lists several web sites to expand one's studies, how to find exam sites, and very detailed instructions for identification at the exam site and "dos-n-don'ts" during the exam.

LEED Version 3 in 2009

In reviewing draft statements, there are not any anticipated changes that would significantly impact the sub-contractor in the next edition of LEED rating system that they are not familiar with in LEED v 2.2.

The largest improvements affect energy conservation and greenhouse gas emissions.

LEED for Homes and ICC-700 (2008)

The "National Green Building Standard" for Homes was released in December 2007 and the National Association of Home Builders (NAHB) has a large stake in this concept. The NAHB started the original 2005 NAHB Model Green Home Building Guidelines and is supporting the ICC-700 document.

Beyond the Codes, ICC-700 addresses construction considerations in new dwellings from a completely different scope. Environmental criteria and energy conservation are foremost and go beyond the requirements of the International Energy Conservation Code now used in many areas.

As noted in an ICC article in their Building Safety Journal, June 2008 issue, it is "choice vs. mandatory requirements" and more can be found about ICC-700 for those doing fire sprinklers in dwellings at www.iccsafe.org/news/green .

If the NAHB is supporting the ICC-700 document along with other LEED checklists such as "LEED for Homes" and "LEED for Neighborhood Development" and if it is a near possibility to have a point interjected into these two documents also for fire sprinklers, is it possible that the NAHB will be in support of residential fire sprinklers someday? That day may be closer than opponents to fire sprinklers in new home construction may realize.

In NAHB's own numbers, a regularly constructed $300,000 home will cost

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about $308,500. However, they show an ROI within a few years, mostly based on energy and water savings. Considering this and all the other "glitz" that go into new homes, how is it when we crunch the numbers for fire sprinklers in new homes, we're biased?

The NAHB promotes the fact that the increase in the sale price of a new home has other beneficial effects including increased profits to the builder and realtor. So why not include fire sprinklers in all new homes too? Think of the environmental advantages plus the increase in profit? I just can't seem to grasp their logic.

This may all be moot as the 2009 International Residential Code (as with the 2006 and 2009 NFPA 101 Life Safety Code and NFPA 5000 Building Code) contains 13D fire sprinkler requirements for all new dwelling construction now in the body of the code, not just an annex item. The 2009 IRC passed the vote in September, 2008 and recently was upheld unanimously on appeal in December, 2008 by an ICC panel, which was upheld by the Board. Also, recent articles in the news note that builders have not seen the clamoring by home buyers for green homes, the cost of green homes, and the contractors have had difficulties in doing estimates based on availability of green products needed to construct the homes.

Impact on NFSA Subscriber Members

Presently, code enforcement's official main duty is just that... meant to officially enforce the code. Should there be adoption of "green" documents and codes above and beyond the adopted codes through local laws or state statutes and referenced standards, a careful analysis should be done to see if there are any conflicts in construction techniques or with existing codes.

A recent article I read noted that code officials, in their duties to research compliance of materials used in construction, should be able to evaluate items for green prescriptions as well.

I wanted to toss this into the article so as to solicit and invite input from code officials and learn of any impact the code enforcement officials, insurance representatives, and like professionals are seeing in their day to day duties regarding green projects.

Working On a Green Site

Green projects need the same involvement by the fire sprinkler contractor in the planning process as any other, maybe more so. Several issues may impact subcontractors operating on site and each should make sure that they have received all needed instructions for operations.

Vehicles – Are special vehicles needed to operate on site? Vehicles using veggie-fuel, fuel cell, or electrically powered forklifts? How are these vehicles refueled or recharged? What is the expected reenergizing source? Who is responsible?

Site Trailers – Are any special trailers required? Are trailers to be operated on the grid or is energy derived from tying into an independent energy source? Has any fire sprinkler contractor been required to supply solar panels to power any equipment or lighting as of yet?

Recycling – Shipping materials, pallets, and dunnage in particular. How about office waste; paper, cans, bottles? Make sure the requirements and processes are clear to all employees operating on site. Speak with your suppliers and see what processes they are taking part in to be sensitive to the green job sites.

Paperwork – Requirements for documentation should be done electronically; shop drawings, memos, letters, job books, job logs. Will this require software appropriations? There are other project management systems tools to coordinate documents, generate reports, check for compliance, as well as direct web-based collaboration.

Volatile Organic Compounds (VOCs) – There are requirements for low-emitting materials in adhesives and sealants, plus paints and coatings. If you haven't already, you may want to research your materials in your inventory now to see if they are compliant. It may be economically beneficial to review your inventory now if you haven't already.

What are our requirements to meet the LEED check list presently?

Other than those mentioned above – not much. The "Material & Resources" credit sections three through seven in the USGBC's New Construction & Major Renovation Reference Guide for LEED 2.2 specifically note, "Mechanical, Electrical, and Plumbing components and specialty items shall not be included in this calculation," meaning the fire sprinkler system components are exempt from point calculations for materials being used in the project. I have this backed up with a short e-mail to me from the USGBC and a letter from another party that inquired about fire sprinklers being considered a "specialty." This may or may not be an advantage to the LEED AP®. Probably a disadvantage, as in my research, once again our industry is already in the lead. In conversations or research with fire sprinkler manufacturers and other allied manufacturers, most materials produced for our industry (pipe, hangers, fire sprinklers, valves, etc.) are coming from recycled materials. CPVC is recyclable according to the Plastic Pipe and Fittings Association. California Department of Housing and Community Development noted in a report in 2006 that due to the inexpensive aspect of obtaining CPVC (as compared to copper), voluntary recycling of post-consumer CPVC scrap needs to be encouraged. Meeting the LEED requirements may be that avenue.

There is reported use of the "Innovation in Design" section of the LEED checklist to obtain one credit by using fire sprinklers (code driven or a voluntary installment). This section can gain one point more toward their desired level of LEED Certification for exceptional performance above the LEED requirements. The LEED AP® will need to document and apply the strategies and measures of the fire sprinkler concept to obtain that one credit. The AP® must spell out the environmental and health benefits.

So, yes, Virginia, there just may be a Santa Claus. This is a "gift" to industries such as ours.

A Door Not Yet Opened...and if opened can we close it if need be?

Many fire sprinkler contractors and some code officials have asked about the fire sprinkler credits in the LEED checklist and

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reference guides. There are some future possibilities, but as an industry what are we prepared to handle?

Having our product recognized may not come without some trade-offs. If a future LEED checklist was to recognize fire sprinklers with a credit or two, what would the impact be if all water used during flow tests of any size must be captured in gray water? What are the impacts if all testing water must come from gray water – a gray water tank if lucky? What if the gray water is a retention pond (which opens up an entire different area of a technician's imagination)? Who will be responsible to coordinate the size of and construct the holding tanks or ponds? What will the challenges be associated with circulating water with enough velocity to perform a proper flow test? Is anyone facing this now or have experience in capturing and using gray water?

A plus may be more electric fire pumps and less diesel fire pumps? What are the advantages in this case? No diesel exhaust, no fuel tanks, much less maintenance. If the building is producing some or all of its own power you now have an extremely reliable power source.

Where Do We Go From Here?

My opinion is to proceed cautiously. Here are areas I think we can explore. One is to obtain a point or two for fire sprinklers for any project in future editions of LEED checklists. The second is to obtain at least one point for having a voluntary fire sprinkler system not required by code or local ordinance. Lastly, some recognition for the "green" homes with a minimum of 13D systems installed.

Our inherent environmental advantages are obvious to anyone and it is time to explore what our just dues could be and should be.

It may be worthwhile to develop an NFSA Green Committee to explore experiences and what the future may hold, or should hold for the industry. Maybe this could include an annual update meeting of NFSA "green" fire sprinkler contractors to identify issues and answers to challenges which our membership needs to be aware. Let me know your thoughts. I expect to be writing update articles for SQ on green issues and what we discuss in this proposed committee could be the basis of these updates.

In Conclusion

Whether involved in green projects or not, I sincerely hope that all fire sprinkler contractors are operating in an environmentally friendly way.

Whether you are a contractor, manufacturer, registered professional, or other fire protection professional, I look forward to hearing from you about your project involvements, any positive or negative impacts you may have in these projects, and any areas of voluntary compliance.

Great appreciation goes to the many folks I spoke with at Davis-Ulmer, SRI Fire Sprinkler, ABCO Peerless (all in NY) and Allan Automatic in California. Plus the several NFSA supplier and manufacturer members, whether we spoke directly, supplied letters, or through the excellent "green" documentation provided on their web sites.

Fire Sprinklers are green. Save your building, save our environment.

Dominick G. Kasmauskas is the NFSA New York Regional Manager and a member of the USGBC, taking part in activities within the USGBC New York Chapter. Dominick can be reached at 914.414.3337 or Kasmauskas@NFSA.org with comments, suggestions or ideas for future articles regarding the fire sprinkler industry and impacts in Green Construction.

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Prescience

(noun) Middle English, from Late Latin praescientia, from Latin praescient-, praesciens, present participle of praescire to know beforehand, from prae- + scire to know

By Barry Waterman

While I have not yet heard from the big committee that awards Pulitzer Prizes for journalism and other forms of good writing, I would like to point out *(while I'm waiting)* that a while back I wrote a column about the corrupt governor's office in my beloved home state of Illinois *(high temperature for the day four below zero one day last week.)*

Now I'm sure everybody knows our current governor — the one who replaced the previous governor, now in the federal penitentiary — is in big trouble. I believe the record will show I predicted this, and I pointed out that we maintain special facilities in the prisons for our governors.

I did make a boo-boo, however, for which I now apologize. Our governors are or will be in Federal Prison. I had reported that the special "Governor's Suite" was in the State Pen.

Excuse me again, "Correctional Facility," not prison or penitentiary. I don't know what I was thinking of.

So what is up with this?

We've had four governors since the early sixties who served time in federal "Correctional Facilities" for assorted breaches of the public faith. I'm sure this record would be even worse except we had two honest governors *(both Republicans)* who served fourteen and eight years respectively during this period *(served as governor, not served time behind bars,)* who never wore the orange jump suit. Some jaded citizens believe these two fellows were merely a little brighter than their locked-up brethren, and that they committed THEIR crimes more cleverly and therefore avoided prosecution and conviction. I have no evidence to dispute the claims of these jaded folk.

However our current governor simply takes the cake. I need here to make a typical Bear Tracks diversion off the subject at hand. Mentioning "cake" in the context of prisons and criminals has reminded me of the scene in Woody Allen's movie "Take the Money and Run."

A tough looking convict behind bars gets a telephone brought to him to make a call to his mother. "Ma, I want you to bake me a cake; a cake with a gun in it. Then I want a dozen chocolate chip cookies with a bullet in each one," makes me laugh every time I think of it.

Silly as this is, it is no sillier than our current governor's behavior. He goes jogging down icy streets with reporters chasing him with microphones. This is because he was recorded on FBI wiretaps making amazing profanity-laced offers to sell President-elect Obama's Illinois Senate seat to the highest bidder. See, as governor, he gets to make the appointment of a replacement. He has been the opening skit on Saturday Night Live for several weeks. His wife *(real name Patty)* is referred to as "Potty" in the Chicago press thanks to her contributions to the vulgar wiretap recordings.

If you made this stuff up, nobody would believe it. The sorry punch line, though, is that in 2006, we "The People" of Illinois re-elected this guy to a second term. Not I, mind you. I voted for the Republican who got slaughtered in this bluest of blue states. But we put him where he is, and there was a lot of evidence of what might be coming down the pike. Now we get to be the punch line of a lot of jokes all over the country.

So why are we writing about all this mess in SQ? Are we waiting for some kind of clever tie-in to our industry and its many issues? Nah. I just wanted to brag on the fact that my previous "governor" column was prescient. Besides, I've searched hard and I can't find anything good to report.

It is going to be a very tough year. I was hoping to provide a few chuckles and a momentary diversion from the realities of the current economy. This reminds me of the recession of 1982-83 when we had 15 percent interest rates and double digit inflation. A lot of us survived that period *(I don't remember exactly how)* and we enjoyed some great years when things recovered. Try to make those hard decisions that will allow you to survive and get to the coming recovery. Even with a lot of bad government *(and I didn't even mention bad banking and bad Wall Street behavior)* we're too good and resourceful of a nation to go down the tubes.

I'm hoping that big cold snap last week will turn into a lot of freeze-up work when things warm up a little. It helped us a ton in 1982.

Barry Waterman

Independent consultant to the Northern Illinois Fire Sprinkler Advisory Board.

NFSA Hires New Internet Services Manager

The National Fire Sprinkler Association is pleased to announce the hiring of James Archer, who will serve in the newly created position of Internet Services Manager. James will be working closely with Internet Services Director Jim Murphy to bring new internet capabilities and a revamped website to NFSA.

Jim Archer

James received his BA in Biology at Hartwick College in Oneonta, New York and his Masters at Western Connecticut State University. He has worked doing computer support and as a sales advisor for computer and AV equipment. James is looking forward to being a productive and innovative member of the NFSA team. He can be reached at 845.878.4200, ext. 145 or at archer@nfsa.org.

NFSA Area Director and SAM Council Election Results In

NFSA is pleased to announce that **John Kauffman III** of Kauffman Company has been elected by the members in the South Central region to serve on the Contractors Council and Board of Directors. The region is comprised of the states of Arkansas, Louisiana, Oklahoma and Texas. Mr. Kauffman will be seated at the February 2009 meetings of the Board and Councils. In the Great Lakes region, **Rich Ackley** of Dalmatian Fire ran unopposed for another term representing contractors in the states of Indiana, Michigan, Ohio, West Virginia and Kentucky. In the Pacific Northwest region, **Jim Boulanger** of Patriot Fire Protection was elected to represent contractors in the states of Alaska, Idaho, Oregon and Washington. He ran unopposed and succeeds **Jeff Bennett** of The McKinstry Company, who did not seek re-election. Each will serve 2-year terms. In the SAM Council election, the following individuals have been elected to 3-year terms; **Gary Johnson** – BlazeMaster/Lubrizol; **Cary Nicol**– Viking SupplyNet and **Donald J. Smith** – Chicago Backflow.

New York Regional Manager Dom Kasmauskas in the News

The following article appeared in the Albany Times Union on January 4, 2009:

A SPRINKLING OF FAILURES

Last weekend, the sprinkler system at the Boscov's department store in Clifton Park doused a good deal of the store's merchandise, though there was, apparently, no fire.

But Dominick Kasmauskas admonished area newspapers and television stations for calling the incident a "sprinkler malfunction."

Kasmauskas, a Rotterdam-based regional manager for the National Fire Sprinkler Association, said that only about one in 16 million sprinklers fails. Incidents like the one at Boscov's, he said, are almost always traced to human intervention.

Blaming sprinkler systems for unexpected dousings, he said, creates "undo fear and false impressions" that could keep some homeowners from installing sprinklers.

And that, he said, would be a big mistake.

National Fire Sprinkler Association & Common Voices Participate in Washington, D.C. Press Conference with National Fire Service Leadership

The National Fire Sprinkler Association participated with National Fire Service Leadership at historic Station 3 in a national media advisory on Wednesday, January 7, 2009. Associate Director of Public Fire Protection Vickie Pritchett, joined Philadelphia Fire Commissioner Lloyd Ayers, Baltimore Fire Chief James Clack and Washington, D.C. Fire Chief Dennis Rubin, United States Fire Administrator (USFA) Greg Cade, International Association of Fire Chiefs FLSS Representative Mike Love, and Dr. Burt Clark of the National Fire Academy to highlight recent tragic fires and offer solutions, which include having working smoke alarms, installing residential fire sprinkler systems, and having a fire escape plan. This national effort is a result of one of the deadliest holiday seasons in recent memory and several significant fires in the first days of 2009. Since Thanksgiving 2008, there have been more than 158 fatal fires in the United States resulting in over 200 fire fatalities.

Pritchett unveiled two new resources created by a partnership between the National Fire Sprinkler Association and the International Fire Chiefs Association. Look Up For Safety, a CD/DVD set, coupled with Residential Fire Sprinklers...a Step-by-Step Approach for Communities provides local leaders resources to help educate citizens and fire service members on the importance of planning for fire protection by including residential fire sprinklers in new home construction.

Ray Lonabaugh, Mid-Atlantic Regional Manager for the National Fire Sprinkler Association coordinated the Maryland Fire Rescue Institute live burn sprinkler demonstration trailer being at the event to provide a live demonstration for those in attendance.

NFSA Partners with International Association of Fire Chiefs on Fire Sprinkler Resources for Communities

The second edition of "Residential Fire Sprinklers... A Step-by-Step Approach for Communities" and the updated companion, "Look Up For Safety CD/DVD set is now available to fire service and community leaders. The updated resources build upon the original editions, which were released in 2001. The revised guide brings all of the latest information together for community leaders who wish to pass fire sprinkler legislation or adopt a national code that includes fire sprinklers. Success stories are shared from communities across the nation. The stories highlight specific steps and how-to advice from those who have gone before.

The International Association of Fire

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Chiefs (IAFC) fully supports this informative and resourceful edition. The IAFC believe strongly that it is critical that fire service leaders have the tools needed to succeed. The IAFC and NFSA are proud to partner in offering this updated resource package. By presenting this document jointly, the IAFC and NFSA hope to impress upon local leaders the criticality of working collaboratively to enhancing local firefighter and life safety efforts.

You may obtain a copy of the Guide and "Look Up For Safety" by visiting www.nfsa.org or www.iafc.org.

NFSA Top Technician Competition is Coming Again!

Get those fire sprinkler system layout skills honed because it's time again for **NFSA's Top Technician Competition**.

The 2009 format, finals for which will be held during the NFSA Annual Seminar & Exhibition at the **Omni Champions-Gate in Orlando, Florida**, will include 16 teams from across North America competing for bragging rights, great prizes and the title of "Top-Tech."

NFSA members can contact their Regional Manager for details.

Elkhart Brass Hires New Commissioning Engineer

Elkhart Brass has announced that **Curt McDowell** has accepted the position of Commissioning Engineer – Industrial Monitor Systems. This newly created position reports to Steve Bollinger, Industrial Systems Product Manager, as part of Elkhart's on-going efforts to increase availability of personnel for off-site industrial product installations.

Curt has engineering experience with a leading designer/manufacturer of rubber suspension systems and ride enhancement products; additionally, he has worked for one of the world's largest manufacturers of copper tube fittings.

FBC™ Building Solutions Expands Nationwide Sales Team

The Lubrizol Corporation has strengthened its FBC™ Building Solutions national sales team by adding **Chip Tieche** as territory manager in the Midwest Region. Tieche will be responsible for selling the entire package of FBC Building Solutions products, with special focus on industrial applications. He will be a resource for product and technical questions and as well as assist in code approvals. His territory ranges from western Pennsylvania to Idaho and from North Dakota to Arkansas.

Prior to joining Lubrizol, Tieche worked for Ferguson Enterprises as operations/store manager, as well as a manufacturers' representative for Canron Pipe, Spears Manufacturing and Eslon Thermoplastics. He is based in Chicago.

FBC™ is a trademark of The Lubrizol Corporation.

Reliable Announces New Addition to Sales Team

The Reliable Automatic Sprinkler Co. Inc. has announced that **Troy Gattshall** joined the company as a sales representative covering Ohio and Indiana.

Troy brings over 23 years experience in the sprinkler industry which spans from purchasing, fabrication, project management, sales and most recently as the Sprinkler Operations Manager in Columbus for Simplex Grinnell.

Richard J. Davis, PE, FSFPE, Takes Office as President of the Society of Fire Protection Engineers for 2009

Richard J. Davis takes office as President of the Society of Fire Protection Engineers (SFPE) for 2009. Davis is an Assistant Vice President and Senior Engineering Technical Specialist with FM Global.

A member of SFPE since 1982, Davis has served on the Society's Board of Directors for nine years and is a member of its engineering licensure committee. In 2000, he was made an SFPE Fellow. SFPE Fellows represent a distinguished group of members who have attained significant stature and accomplishment in engineering. He also served as President of the SFPE New England Chapter and was recognized by that chapter in 1991 with its Richard E. Stevens Award for distinguished service in the interest of fire protection engineering.

At FM Global, Davis writes or revises numerous FM Global data sheets and research reports on property loss prevention including those on safety during construction, combustibility of building materials, fire resistive assemblies and protection of openings within them, exterior fire exposure, designing buildings for deflagrations and heat and smoke venting.

Davis holds a Bachelor of Science degree in Civil Engineering from Lowell Technological Institute and a Master of Science degree in Civil/Structural w/emphasis in Fire Protection from Worcester Polytechnic Institute (WPI). He is a professional engineer (PE) in the State of Massachusetts and has served as an adjunct professor in fire protection engineering at WPI and Northeastern.

Davis also serves or served on numerous National Fire Protection Association Committees and has revised or written chapters in various handbooks .

Information about SFPE can be found at www.sfpe.org.

REGIONAL ROUNDUP

NEW ENGLAND REGION

Tim Travers, Regional Manager

Fire Sprinkler System Fights Warehouse Fire

A fire sprinkler system helped contain a two-alarm fire at a Uni-Cast production warehouse in Londonderry, New Hampshire early on December 27, 2009, allowing the business to open later that morning.

Firefighters responded to a commercial fire alarm at Uni-Cast, a producer of aluminum casings for electronics and lab equipment located at 11 Industrial Drive, at approximately 12:01 a.m.

Thanks to the work the building's sprinkler system, firefighters were able to contain the damage to the rear of the facility via an interior attack, said fire Capt. Doug Cardwell.

The fire was declared under control at 12:49 a.m., and Uni-Cast opened at its usual time.

Fire Marshal Mark Tetreault concluded his investigation later the same day and declared the fire accidental in nature. The fire was caused by improper use of a propane torch in the vicinity of combustible materials, Tetreault said.

Tim Travers is the NFSA Regional Manager for the New England region. He can be reached at travers.nfsa.org or 751 Washington Street, Whitman, MA 02382 Phone 845.661.5876 Fax 781.524.1026.

NEW YORK REGION

Dominick Kasmauskas, Regional Manager

Four Firefighters Hurt in Western New York

Four firefighters were hurt when part of a burning building collapsed on them in a town in western New York State in December.

Authorities say the fire was reported before dawn in the Allegany County town of Friendship at an unsprinklered building that included a pizza shop and upstairs apartments. As they rushed inside, the back of the restaurant crumbled, injuring one firefighter from Friendship and three from Cuba.

Officials say three were taken by ambulance to Erie County Medical Center. One was treated and released at Jones Memorial Hospital in Wellsville.

Dominick Kasmauskas is the NFSA Regional Manager for the New York Region. He can be reached at Kasmauskas@nfsa.org or1436 Altamont Ave. Suite 147 Rotterdam, New York 12303 Phone 914.414.3337, Fax 518.836.0210.

MID-ATLANTIC

Raymond W. Lonabaugh, Regional Manager

Delaware High-Rise Residential Building Fire

A non-sprinklered high-rise fire occurred in Wilmington Delaware on Sunday, November 30th. The fire occurred on the seventh floor of a 16 story high-rise condominium located at 1400

Pennsylvania Avenue. Emergency dispatchers received numerous calls reporting the fire, which went to two alarms activating the call back of off duty Wilmington firefighters.

Fire fighters contained the fire to the seventh floor condominium unit, which was heavily damaged by fire. The seventh floor corridor sustained heavy smoke damage. There were no fire fighter injuries; however, two civilians suffered minor injuries and were transported to area hospitals. Many residents were displaced.

News reports emphasized the building was not sprinklered and quoted the U.S. Fire Administration's reports on the effectiveness of automatic fire sprinklers in combination with working smoke alarms.

As a result of two disastrous high-rise fires in 2006, a proposed high-rise fire sprinkler ordinance was introduced in Wilmington at the request of then Fire Chief John Ford and then Fire Marshal, now Fire Chief, Willie J. Patrick. In a news release published on March 13, 2007, Mayor James M. Baker stated that an extensive search by the City for a fair and affordable way to achieve the costly fire sprinkler retrofitting of six residential high rise buildings had ended without success.

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, Regional Manager

Inspection and Testing Technician NICET Level II Study Review Seminar

- Murfreesboro, Tennessee
- April 21-23, 2009
- Hampton Inn

Please check the Calendar on the TFSCA Web site at www.tfsca.com

Purpose: This three-day seminar has been developed for individuals that inspect and test water-based fire protection systems. The purpose of the seminar is to assist individuals in advancing their careers by reviewing material necessary for Level II certification in the relatively new NICET Subfield of Inspection and Testing of Water-Based Fire Protection Systems. By the end of the seminar, the student will have an understanding of a sufficient number of Level I, Level II General, and Special work elements to be prepared for Level II.

Materials: Each attendee will receive an NFSA workbook and other prepared materials. Each attendee must bring his/her own copy of NFPA 13 and NFPA 25.

NFSA Member Cost Structure:
1 person ($400); 2 people ($800)
3 people ($1200); 4 people ($1600)

NON-NFSA Member Cost Structure:
1 person ($600); 2 people ($1200)
3 people ($1800); 4 people ($2400)

Each paid attendee will receive a certificate upon completion.

No Injuries in Pulaski, Tennessee School Fire

An early morning fire in a school damaged

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at least one classroom in mid-December, 2008. According to Pulaski Fire Chief and Fire Marshal Jimmy Thompson, the fire was contained to one classroom in Pulaski Elementary School. Thompson stated that the overhead sprinkler system kicked on and contained the blaze to the one classroom. He went on to say that the sprinklers set off the alarm that summoned the fire department. No injuries were reported and damages were kept to a minimum.

Wayne Waggoner is the NFSA Regional Manager for the Southeast Region. He can be reached at: Waggoner@nfsa.org or PO Box 9, Andersonville, Tennessee 27705, Phone 865.755.2956, Fax 865.381.0597.

FLORIDA REGION

David Bowman, Regional Manager

FFSA 2009 Board of Directors

Florida Fire Sprinkler Association – Chapter of NFSA, announced the 2009 Slate of Board of Directors. Elections were held in November, 2008 and the results announced at the Annual Meeting in December. The newly elected Board will assume their positions at the March FFSA Board Meeting. The 2009 Board consists of the following members:

CONTRACTOR MEMBERS
Ron Benke
Mike Brown
Mike Crain
John Duffin
Randy Evans
Wayne Gey
Dave Haney
Lenny Hollis
Dave Huysman
Jay Larson
Terry Mohr
Terry Noonan
Don Robertson
Wendy Brasecker Rothenberg
Alan Wiginton
SAM Members
Tracey Kapusciarz
Dennis Marra

This was a very competitive election and we congratulate not only the new Board members, but all those who got involved and ran for a position. We look forward to your continued support in 2009.

David Bowman is the NFSA Regional Manager for the Florida Region. He can be reached at Bowman@nfsa.org or 6572 SE 173rd, Court Ocklawaha, Florida 32179

Phone 845.519.7648, Fax 661.455.3968.

GREAT LAKES

Ron Brown, Regional Manager

Sprinkler Save at Kentucky Grocery Store

Crews responded to a call about the sprinklers going off at the Kroger grocery store in Madisonville, Kentucky on December 24, 2008.

When firefighters arrived, the store was full of smoke. The store had just closed for Christmas Eve. No one was inside at the time and no one was hurt.

Investigators believe the fire started in the produce section, and was likely caused by an electrical malfunction. The fire sprinkler system extinguished the blaze before firefighters arrived. The official cause hasn't been determined.

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 Kleinheinz, Regional Manager

Illinois Sprinkler Save

40 residents of the Azzarelli high-rise apartment building on Broadview Drive in Kankakee, Illinois were evacuated due to fire in December. Kankakee Fire Chief Ron Young said a fire in a second-story apartment was apparently triggered by smoking near oxygen equipment. Those evacuated were allowed to return to their homes within an hour. No injuries were reported. Young credited a fire sprinkler system for keeping the fire under control until firefighters arrived. No damage estimate was available.

Two Injured in Wheeling Apartment Fire

On October 29th, 2008 the Wheeling, Illinois Fire Department responded to an apartment fire at the Mallard Lake Apartment Complex. Arriving firefighters found two seriously injured residents lying in the grass outside of their burning building. Chief Keith Macisaac stated that he found remnants of a fire alarm in the apartment but he added that it is too soon to tell if it was functioning. The chief stated that if the building had sprinklers the damage would have been dramatically less and the injuries could have been avoided.

Bob Kleinheinz is the NFSA Regional Manager for Illinois. He can be reached at Kleinheinz@nfsa.org or 509 Dawes Street, Libertyville, Illinois 60048. Phone 914.671.1975.

NORTH CENTRAL

Dan Gengler, Regional Manager

Woman dies in Wisconsin House Fire

A woman died and her husband was injured in a house fire in the southwestern Wisconsin town of Muscoda. The Grant County sheriff's office said the 71-year-old died in the fire, which was reported around 12:30 p.m. on December 28, 2008. Her husband was taken to the University of Wisconsin hospital for treatment of his injuries. The cause of the fire is under investigation.

42 Horses Die in Minnesota Barn Fire

42 horses were trapped inside a barn at the R & J Arena in Verndale, Minnesota when a deadly fire broke out on Sunday, December 28, 2009. The unsprinklered facility was fully ablaze by the time firefighters arrived. The horses were at the R & J Arena for a team penning and ranch sorting event. Because of the cold weath-

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REGIONAL ROUNDUP

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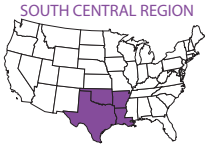
er, fewer horses than normal attended, and all of the horses at the show were in one barn. Wadena County Sheriff Michael Carr reported that the cause of the fire is still under investigation, but said foul play is not suspected.

Dan Gengler is the NFSA Regional Manager for the North Central Region. He can be reached at Gengler@nfsa.org or PO Box 280, Williams Bay, Wisconsin 53191. Phone 262.245.5255, Fax 262.245.5258.

SOUTH CENTRAL

Steven Randall, Regional Manager

Several Texas Day Care Centers Scrutinized by Fire Marshal's Office



Several Houston-area day care operators are now facing felony charges involving the safety of hundreds of children.

The centers' administrators are accused of forging government paperwork concerning state-required fire and safety inspections, which authorities say they did not pass. Harris County fire inspectors are worried this may be the tip of the iceberg.

Captain Laurie Christensen with the Fire Marshal's Office said individuals associated with the facilities are accused of filing fraudulent paperwork, claiming the centers had passed fire and safety inspections, when inspectors say they did not.

The operators of four area foster homes are facing the same charges. Christensen says, in each case, the operator is charged with Tampering with a Government Document, a second-degree felony carrying a maximum prison sentence of 20 years.

The state requires that every day care center and foster home in Texas pass a fire and safety inspection before getting licensed. Inspectors check to see that fire alarms are working properly, that sprinkler systems have been checked, and that exits are unimpeded, among other concerns which would affect the safety of occupants in case of fire. But the Harris County Fire Marshal's Office says it is discovering more and more day cares and foster homes that appear to have submitted fraudulent documents, claiming to have passed inspections when inspectors say they have not.

Investigators have filed eight separate charges so far, but several more cases are now under investigation. Authorities expect more charges to follow.

Steven Randall is the NFSA Regional Manager for the South Central Region. He can be reached at: Randall@nfsa.org or 7165 Lazy Meadow Lane, Frisco, Texas 75034, Phone 972.668.4022, Fax 972.668.4077.

CENTRAL REGION

Chris Gaut, Regional Manager

Emergency Crews Respond to International Paper Fire

Firefighters responded early on December 3, 2008 to a report of a fire in a flue at International Paper Company in Kansas City, Missouri. The fire was reported about 7:25 a.m. at the plant at 4343 Clary Blvd. When crews arrived, they found smoke coming from the building. The fire had been contained by the fire sprinkler system and crews worked to ventilate the building and shut off and reset the fire sprinkler system, said Fire Department spokesman Joe Vitale. No injuries were reported. No further details were immediately available.

Fire Strikes Kansas Assisted Living Facility Twice in One Day

Fire broke out at The Providence Living Center, an assisted living facility, in Topeka, Kansas twice on Saturday, November 29, 2008. Topeka firefighters responded to the first fire just before 9:00 a.m. The fire was small and damage was estimated at $500. Around 2:30 p.m., a second fire broke out. This one was located in the common area in the south basement of the facility. The fire activated the fire sprinkler system. According to the center's Chief Operating Officer, the staff swiftly evacuated the residents. Blowing fans were used to get the smoke out of the building. The fire caused $7,000 in damage. No one was displaced by either fire and both remain under investigation to determine the causes.

Chris Gaut is the NFSA Regional Manager for the Central Region. He can be reached at gaut@nfsa.org or 189 Eureka Town Center Dr. Suite 135, Eureka, Missouri 60325 Phone 845.803.6426, Fax 636.410.7700.

GREAT PLAINS

Terry Phillips, Regional Manager

CFPA Donates $23,000 to the Denver Children's Hospital Burn Camp

Colorado Fire Protection Association (CFPA) President Marvin Heath presented a check for $23,000 to the Children's Hospital Burn Camp at the CFPA Christmas Dinner, Saturday, December 13, 2008. The dinner was held at the Denver Botanical Gardens.

Fire Sprinkler Save in Colorado

A residential fire sprinkler extinguished a fire in a one-bedroom apartment in the Belmar area of Lakewood, Colorado. The apartment was unoccupied at the time of the fire. Upon arrival, fire crews found smoke/steam/water mist but no fire. Damage was minor. No injuries were reported.

Terry Phillips is the NFSA Regional Manager for the Great Plains Region. He can be reached at: Phillips@nfsa.org or Phone 914.525.4396, Fax 307.514.0406.

SOUTHWEST

Doyle Sutton, Regional Manager

Fire Sprinklers Saves Arizona Hotel

A blaze at the Hotel Arizona in Tucson, Arizona on Monday, October 20 was arson, but thanks to the lessons of a hotel fire nearly 30 years ago, no lives were lost. There was an orderly evacuation, and thanks to the fire sprinkler system, the fire was out by the time firefighters arrived.

The fire broke out on the hotel's ninth

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floor. A small ficus tree somehow caught fire, according to the hotel's general manager. The blaze triggered a nearby sprinkler, and the alarm evacuated more than 250 people. There were no injuries reported. The damage was minimal because the sprinkler activated quickly and controlled the fire.

This hotel was properly protected against fire in large part due to the Pioneer Hotel fire on December 20, 1970. For Tucson, it was the one single event that prompted the pursuit of retrofitting sprinklers, said Northwest Fire Division Chief Jim Grasham. When that fire happened, Grasham was working for the Tucson Fire Department. He reported that 29 people died in that fire and it prompted rule changes requiring any building four stories high or greater than 50 feet to have sprinkler systems. Those regulations kept the fire at the Hotel Arizona from becoming much worse.

Fire investigators have officially ruled that the Hotel Arizona fire was arson. Now the investigation is underway into who started the blaze.

Doyle Sutton is the NFSA Regional Manager for the Southwest Region. He can be reached at: Sutton@nfsa.org or Phone 303.854.8677, Fax 303.496.7501.

WEST REGION

Bruce Lecair, Regional Manager

Southern California NFSA Chapter Meets in Long Beach

The NFSA Southern California Chapter met at the Long Beach Pier and for a dinner meeting that featured an update from Regional Manager Bruce Lecair on the State Fire Marshal Plan for adoption of the IRC Residential Fire Sprinkler Code in 2011. The meeting also provided the members to participate in a roundtable discussion of current events and an exchange of ideas regarding the fire sprinkler industry.

Northern California FPO's Meet in Sacramento

Northern California Fire Prevention Officers Association met on November 14, 2008 in Sacramento, California at the Croatian American Cultural Center. The meeting was a joint meeting with the California Automatic Fire Alarm Association (CAFAA) and was the site of a great presentation by Bill Hopple, President of CAFAA entitled, "It's a bird.... no, it's a plane.... no, it's a sprinkler system control monitoring unit." Mr. Hopple led a discussion on the comparison of fire alarm systems and fire sprinkler monitoring systems, which explained the distinctions between the two systems in terms of code comparisons between the California Fire and Building Codes and NFPA 72.

Interim City of Benicia Fire Chief and long time Fire Marshal, Gene Gantt, was honored at the meeting for over 35-years of service in honor of his retirement and awarded a proclamation for his years of service and active participation in the Northern California FPO's. Chief Gantt has served Nor Cal FPO as a legislative analyst and in many other capacities throughout the years.

Bruce Lecair is the NFSA Regional Manager for the West Region. He can be reached at: Lecair@nfsa.org or Phone: 951.277.3517, Fax: 951.277.3199.

PACIFIC NORTHWEST

Don Pamplin, Regional Manager

Jeff Bennett Steps Down, Jim Boulanger Elected

After 12 years of service as the NFSA Area Director for the Pacific Northwest, Jeff Bennett has stepped down from that position. During those 12 years on the NFSA Board of Directors, Jeff has seen and participated in a vast array of changes and improvements involving the sprinkler industry, both locally and at the national level, including:

- Developing the most comprehensive body of training programs for the sprinkler industry that also includes "Technical Tuesday" and "Business Thursday" on-line seminars that have been a spectacular success;
- Establishment of a recruitment committee to ensure that high-quality people are motivated to join our industry;
- Assisting local jurisdictions to establish contractor licensing laws across the nation.
- The establishment of the "Best Practices" program that is designed to help sprinkler contractors improve their business operations and bottom-line profit;
- Outreach strategies for the Industry Promotion Funds that enables a stronger industry voice on all fire sprinkler issues and advocacy;
- Continuing technical results through the concerted efforts of the NFSA Engineering & Standards Committee;
- On-going management by the NFSA Labor Relations Department which also includes retirement and medical funds trustee oversight;
- The ability to participate in one of the greatest sprinkler code achievements in the history of fire protection and that is the IRC requirements for all new homes built in the United States after January 1, 2011 to be protected with residential fire sprinklers.

Jim Boulanger, President of Patriot Fire Protection, has now been elected (by acclaimation) to the position of NFSA Area Director for the Pacific Northwest. To Jim Boulanger, a sincere thank-you for taking on this important position and making your busy professional life even more demanding. Jim's father, Richard J. (Dick) Boulanger was a former Director for the NFSA Board, serving as Chairman in 1984 – 1985. In 1993 Dick Boulanger was the recipient of the Golden Sprinkler Award, NFSA's highest recognition award. Impressive footprints for Jim to follow.

Don Pamplin is the NFSA Regional Manager for the Pacific Northwest Region. He can be reached at Pamplin@nfsa.org or 1436 Harrison Avenue Blaine, Washington 98230 Phone 380.332.1948, Fax 380.422.1752.

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No overhead sprinkler system is easier to install than a BlazeMaster CPVC system. From the inventors of CPVC, it's made from a lightweight, semi-flexible material that needs no pre-fabrication and alterations can be handled on-site.

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Changes to NFPA Health Facilities Standard

NFPA 99, the National Fire Protection Association's standard addressing fire safety and health care facilities, is being extensively revised for its 2010 edition, which will be up for adoption at the June 8-11 NFPA Conference & Expo at Chicago's McCormick Place. The standard has not been given a major overhaul since being adopted in 1983.

How health care is delivered in the United States has changed greatly since the early 1980s, with procedures once done in large health facilities now taking place in doctor's offices, clinics, and ambulatory surgery centers. That's why the standard is being changed to a risk-based model, one intended to minimize the risk to a patient regardless of where the care is administered. Heating, plumbing, security, and IT and communication systems are areas that will be addressed in the 2010 version that weren't addressed previously.

The standard's name will change to "The Health Care Facilities Code." This indicates it is no longer an installation document, but something much more comprehensive: a code that determines the performance criteria for health care facilities.

NFPA Documents To Be Considered at Chicago Conference

The Motions Committee of the NFPA Standards Council has determined that the following documents in the 2008 Fall Revision Cycle have at least one certified amending motion that may be presented at the 2009 Association Technical Meeting in Chicago, June 8-11:

- NFPA 52, Vehicular Fuel Systems Code
- NFPA 55, Standard for the Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks
- NFPA 501, Standard on Manufactured Housing
- NFPA 909, Code for the Protection of Cultural Resources Properties – Museums, Libraries, and Places of Worship

SPRINKLING OF NEWS

PHD Launches New "WINGSERT™" Pipe Hanger for Sprinkler Systems

PHD Manufacturing, Inc. is introducing the new "WINGSERT™" Pipe Hanger. The patent pending "wing-tipped" design allows the insert to remain installed until the pipe fitter desires to release it – it's simple and effective.

The factory-installed WINGSERT™ saves installers the time of searching through the box for loose cumbersome parts. Engineered with 'going green' in mind, there are no disposable plastic washers or other loose parts. Designed for ½" through 2 inch pipe, the WINGSERT™ hangers have UL & FM/Factory Mutual and cUL approvals and are available in metric.

For more information call 1-800-321-2736 or visit www.phd-mfg.com.

Hydro Flow Introduces New Little Hose Monster®

The Little Hose Monster and Pitotless Nozzle™ combined weigh only 6 pounds and measure 12" x 13". Made from injection molded polycarbonate, it is half the size and 1/10th the weight of the old Hose Monster. There is no pitot in the system so small rocks and debris pass right through without causing damage to the Pitotless Nozzle or the Little Hose Monster. Polycarbonate is tough. It's the same material used in bulletproof windows. The Pitotless Nozzles (2", 1 ¾", 1 ⅛" and 1") are FM Approved for accurate flow rate measurement from 1607 GPM to 48 GPM.

For further information, visit www.hosemonster.com or call 888.202.9987.

Flexhead Industries Launches New Web Site

FlexHead Industries has launched its new website, www.flexhead.com. This new site provides online visitors with dramatic improvements in navigation, uniformity, appearance, and accessibility to users of Flexhead products.

The new landing page offers clarity to its users regarding offerings in commercial, industrial, cleanroom and institutional applications. The online visitor has immediate access to product literature, customer support, submittals, specifications, CAD drawings, installation instruction and more. In addition to these enhancements to the web site, a new cost comparison calculator, not previously offered, is available to facilitate cost comparisons.

For additional information, please contact Flexhead Industries at (800) 829-6975 or by email at sales1@flexhead.com. Visit Flexhead Industries new Home Page on the World Wide Web at http://www.flexhead.com.

AnvilStar™ Offers New Line of CVPC Pipe Hangers

AnvilStar™, a division of Anvil International, has introduced a new product line for use in fire protection sprinkler systems: CPVC pipe hangers. AnvilStar's CPVC pipe hangers consist of one and two-hole pipe straps, a two-hole 90º side mount strap, and a two-hole standoff strap for use with CVPC pipe sizes ¾" thru 2". All are UL listed. Finished with galvanized steel, CVPC pipe hangers come with beveled edges to help protect CVPC pipe from rough surfaces. They attach easily to wood structures using a self-threading #10 x 1" hex washer head that comes with the product. No pre-drilling is required, which speeds installation. For more information on AnvilStar's complete line of fire protection products, visit www.anvilintl.com – click on Products & Services and then on AnvilStar Fire Products.

The new Tyco® RAVEN™ 5.6K Pendent & Horizontal Sidewall sprinklers are ideal for correctional, detention, and health institutions where both sprinkler tampering and resident safety is the primary concern.

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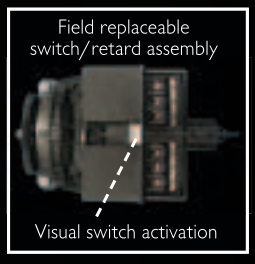

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