

Journal of the National Fire Sprinkler

• Fall 2012 Codes and Standards Update

• Non-Uniform Hydraulic Calculation Areas: Protecting Canopies

Association Over the last 50 years, what employment is a second of the last so years, which is a second of the last so years, which is a second of the last so years, which is a second of the last so years, which is a second of the last so years, which is a second of the last so years, which is a second of the last so years. over the last 50 years, what employment Over the last over the most over the have exhibited the most sectors have exhibited growth? Secretary ted growth? How will the Fed respond in the face of the current economic climate? WHAT INDUSTRIES AND COMPANIES HAVE MONEY TO GROW IN SPITE OF THE ECONOMY? 2011 MarCom Gold Avered Winner **INSIDE THIS ISSUE:** Economic Expectations • Air Testing of Sprinkler Systems

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contents

September - October 2012 • no. 174

Like never before, the economy is in a state of constant flux, raising many questions and concerns. Find answers in an article entitled "Apparent recessionary bottom reached in 2011; Expectations for 2012 and 2013" by Greg Coggiano, Managing Director of CB Partners beginning on page 37.



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from the PRESIDENT'S DESK

We're Listening

Russell P. Fleming, P.E.

his issue of **SQ** contains an article by Tiffany Miller of R&J Public Relations that summarizes our recent membership survey. The survey was carried out by R&J Public Relations in follow-up to the "Think Tank" session that preceded the NFSA Annual Seminar in Los Cabos, Mexico in early May. You'll find more details about the think tank session in the Education article featured in this issue.

Both the think tank session and the survey results were gratifying to staff in terms of both the level of member participation and the level of enthusiasm evident in the organization. It seems that most of the services and programs offered through NFSA are genuinely appreciated by the membership.

Following the survey, two important meetings took place this summer. One was the annual mid-year meeting of our Regional Managers, which this year took place in conjunction with the NFPA Annual Meeting. In addition to opportunities for training and coordination of efforts, the meeting was used to complete some tasks necessary for the future growth of the organization. This included completion of a draft of a new Chapter Handbook. Successful local chapters are the key to a successful national organization.

In my own travels, I have been attempting to visit as many NFSA chapters as possible. I am happy to report that in these chapter meetings we have cleared a major historical hurdle by announcing that chapter meetings are open to all types of NFSA members. As the "Voice of the fire sprinkler industry," NFSA is a association that welcomes all types of members in support of the fire sprinkler concept, and NFSA chapter membership should be similarly broad. All types of contractors, suppliers, manufacturers, design professionals and AHJs that support fire sprinklers through membership in the NFSA are welcome.

The second important meeting of the summer with regard to future directions was the annual mid-year meeting of staff department heads that took place at headquarters in July. Efforts were made to think boldly in terms of possible new directions for the organization, responsive to what we are hearing from the membership. The staff leadership will bring its ideas to what will likely be the most important meeting of all - a strategic planning session scheduled for the NFSA's Long Range Planning Committee to be held in early September. New Board Chairman Dennis Coleman scheduled this meeting to ensure that the NFSA is headed in the right direction.

All of these efforts at re-examining the way NFSA conducts its business are taking place at the same time the NFSA Board of Directors itself is undergoing a re-examination. The appointment of a new Committee on Governance is taking a look at the structure and function of the Association, while at the same time a new Ad Hoc Committee on Contractor Dues is charged with recommending a dues system that is both fair and sustainable, and that will support the organization as it positions itself for growth and greater effectiveness.

In all of these meetings and efforts, the key consideration is what the members want. There is a widespread recognition that transparency in everything NFSA does is essential to gaining a broader base of support. NFSA is serious about making gains in that area. So we're listening. (1)

Editor's Note: As an incentive to participate in the survey referenced in this article, a drawing was held for an Apple IPad™. We are pleased to announce that member Philip Sconyo, P.E. of Phiscon Enterprises in Audubon, New Jersey was our winner. Congratulations to Philip and thank you to all who took the time to complete the survey.

Russell P. Fleming, President

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Contombor 1	Soviables System Installation Requirements	Dagasa Springs Colorado
September 4	Sprinkler System Installation Requirements	Pagosa Springs, Colorado
September 5	Fire Service Mains & Their Appurtenances	Pagosa Springs, Colorado
September 6	Inspection, Testing & Maintenance of Water-Based Fire Protection Systems	Pagosa Springs, Colorado
September 11	Residential Homes to High-Rise	Dayton, Ohio
September 11	Sprinkler System Installation Requirements	Keystone, Colorado
September 11	Piping and Valve Installation	ONLINE
September 11	Pumps for Fire Protection	Dayton, Ohio
September 12	Fire Service Mains & Their Appurtenances	Keystone, Colorado
September 13	Hydraulics for Fire Sprinkler Systems	Dayton, Ohio
September 13	Standpipe Systems for Fire Protection/Commissioning & Acceptance Testing	Keystone, Colorado
September 14	Inspection, Testing & Maintenance for the AHJ	Reading, Pennsylvania
September 14	Pumps for Fire Protection	Mashantucket, Connecticut
September 25	Plan Review Procedures & Policies	Hillsboro, Oregon
September 25	Inspection & Testing for the Fire Sprinkler Industry	Houston, Texas
September 25	Concealed Spaces	ONLINE
September 26	Commissioning & Acceptance Testing/Underground Piping	Hillsboro, Oregon
September 26	Protection of Flammable & Combustible Liquids/Fire Pump Layout & Sizing	Roseville, California
September 27	Sprinkler Protection for Rack Storage	Hillsboro, Oregon
September 27	Basic & Advanced Seismic Protection	Roseville, California
October 2	Sprinkler System Installation Requirements	Richmond, California
October 2	Fire Service Mains & Their Appurtenances	Glenwood Springs, Colorado
October 3	Sprinklers for Dwellings (NFPA13D)	Richmond, California
October 3	Sprinkler System Installation Requirements	Glenwood Springs, Colorado
October 4	Fire Service Mains & Their Appurtenances	Richmond, California
October 4	Designing with Fire Sprinklers	Glenwood Springs, Colorado
October 9	Storage Configuration and Classification	ONLINE
October 12	Plan Review Procedures & Policies	Brea, California
October 16	NFPA 13 Overview	Brea, California
October 23	Inspection & Testing for the Fire Sprinkler Industry	Las Vegas, Nevada
October 23	Walkways and Catwalks	ONLINE
November 6	In-Rack Sprinkler Spacing and Location	ONLINE
November 13	Inspection & Testing for the Fire Sprinkler Industry	Westbury, New York
November 20	Hydraulic Calculation of In-Rack Sprinklers	ONLINE
December 4	Hanging and Bracing of In-Rack Sprinkler Systems	ONLINE
December 11	Inspection & Testing for the Fire Sprinkler Industry	Atlanta, Georgia
December 18	Tips for Better Storage Protection	ONLINE

These seminars qualify for continuing education as required by NICET. Meet mandatory Continuing Education Requirements for Businesses and Authorities Having Jurisdiction. To register or for more information, contact:

Michael Repko at (845) 878-4207, E-Mail: seminars@nfsa.org. Or register ONLINE at www.nfsa.org.

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Our Legacy Of Leadership



Dennis C. Coleman

have been pondering some lately on what is it about some leaders that make others want to follow them and how some men and women create solidarity and enthusiasm in the business, country, or team that they lead. One of my favorites is Mike Krzyzewski who is the men's head basketball coach at Duke University. He has had so much success and seems to do it the right way. His players love him for the most part. Their parents support him and continue to send their sons to be coached by him. He uses former players to be his coaches and there seems to be a loyalty and camaraderie that is commendable. He has had tremendous success as a basketball coach at the college level.

We can also think of other great leaders from the past such as Vince Lombardi, George Washington, Abraham Lincoln, Golda Meir, and Winston Churchill. I also remember my Father and how he started and led a company through its beginning years of uncertain survival and growth. They all went through trying times, but they all were successful and stand as examples of leadership through adversity. We can also remember powerful leaders who failed miserably or lead their people into war, chaos, or destruction. Names such as Adolph Hitler, Joseph Stalin, and Jim Jones come to mind. How will we be remembered for the groups, companies, or people that we have led in our lives? Did we lead our group, whatever it is, to do better, to have success, or to hold on through difficult challenges? What is the key? How will we each be judged after our tenure is completed?

Perhaps the most important leadership role is that of father or mother. How are we doing in that most important aspect of our lives? A great leader once said: "The most important work that we will ever do will be within the walls of our own home." That is certainly an aspect of leadership that we should never forget about. No one else can do that job like we can. Do we provide the

leadership in our own homes that we can be proud of?

I believe there are several keys to being a great leader. Here are a few precepts to consider:

- 1. We need to have a good and just cause.
- 2. We need to care more about the group that we lead and the people that we lead than for our own glory or legacy.
- 3. We need to be the kind of person who people can respect, believe in, and want to follow.
- 4. We need to hold on to important principles in the face of adversity.
- We need to be outstanding in our preparation, dedication, and selflessness.

As I contemplate the future of the NFSA, I ask myself: "How will I be thought of after my term of service?" How will I be remember? What will they say about the current leadership of the NFSA? How are we doing as leaders in whatever leadership roles that we have taken on?

Let me suggest that we need to think about how we are doing as a leader. We need to consider the above principles of leadership and give ourselves a fair evaluation. We need to consider what our cause is and how to promote it. We need to lead by example as well as by precept. We need to be selfless in how we go about our business as leaders. We need to make certain that we are the type of people in word and in deed that others will want to follow and emulate. We may want to consider what our principles of leadership are before a crisis comes up or prior to any emergency. And finally, we need to demonstrate through our preparation and dedication how much we care about our group or organization and then do everything in our power to be the leader that is needed in our particular case.

As I consider my various roles as a leader in my life, I have to admit that I come up short in a number of ways. As I look

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Northeast	Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont	Associate Director of Regional Operations - North Dominick G. Kasmauskas, NFSA 1436 Altamont Ave. Suite 147 Rotterdam, NY 12303 (914) 414-3337 FAX (518) 836-0210	Donald A. DeLuca SRI Fire Sprinkler Corporation 1060 Central Avenue Albany, New York 12205 (518) 459-2776 FAX (518) 459-0068
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Southeast	Alabama, Georgia, Mississippi, North Carolina, South Carolina,	Associate Director of Regional Operations-South Wayne Waggoner, NFSA PO Box 9	Ken Brinkley Music City Fire Sprinkler 238 Molly Walton Drive
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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
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South Central	Arkansas, Iowa, Kansas, Louisiana, Missouri Oklahoma, Texas	Chris Gaut, NFSA 237 East Fifth St. # 135 Eureka, M0 63025 (636) 692-8206 FAX (636) 410-7700	John Kauffman III Kauffman Company 13225 FM529 — Suite A Houston, Texas 77041 (713) 937-4144 FAX (713) 937-4149
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			Stan Shiner - Alternate to the Chairman Fire Protection Systems 4316 Bridgeton Industrial Drive Bridgeton, Missouri 63044 (314) 739-1400 FAX (314) 739-6401
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Never Let Your Lien Time Run Out!

Editor's Note: Stuart Zisholtz comments on New York State Law

What happens when a mechanic's lien was filed, a foreclosure action was started, the action was settled and then the party files for bankruptcy? In these rare situations, if you were properly protected, you should not have a problem.

When there is the possibility that an owner or contractor will be filing for bankruptcy, the Settlement Agreement should not include a release of the mechanic's lien from the property until you receive full payment. This will protect your interests until full payment is received and it has cleared your account.

In addition, the Settlement Agreement should be structured so that payments that are made are deemed trust funds or the return of trust funds and not payment of an antecedent debt.

The Settlement Agreement should also be structured so that the potentially bankrupt debtor is no the payor, but, instead, a third party pays or guarantees payment. While this may be difficult to do in a construction project, many times, where there is a threat of bankruptcy, joint checks can be issued.

When executing the Settlement Agreement, any releases should be contingent on final payment clearing your account.

There is a 90-day preference period under the Bankruptcy Code. This means that if any payments were made to you for an antecedent debt within 90 days from the filling of the bankruptcy petition, the Bankruptcy Court can demand that the funds be returned to the bankruptcy estate.

In the event that you become aware of a possible filing of a bankruptcy petition by an owner or contractor, you must immediately protect your interests by filing a mechanic's lien and protecting your rights.

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 ©

from the BOARDROOM

>> CONTINUED FROM PAGE 7

at the NFSA organization, I realize how much good leadership is needed, and how much I am lacking in some ways. Let us pledge and commit ourselves to do a little better. Maybe we can be the leader that is needed in a crucial moment. Maybe we can inspire others to work a little harder and think a little more clearly.

May we all have the courage and stamina to be the best leaders that we can be. May we give our very best offering in the roles we have been called upon to do. Maybe we can make the difference in our role as leader and leave a legacy that will inspire others to do their best. Maybe we can make the NFSA a better organization through our leadership example. \odot







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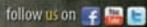
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I saw a sign that said

"Extreme Caution... Political Promises Onboard"

he sign was on three sides of a septic-tank sucker truck and the inference was pointedly obvious.

The sign expresses a growing sense of extreme frustration against politicians and the governments they represent, especially those who claim to be "democratic and free."

This is happening not only in North America, but in hundreds of nations around the world. The growing "occupy movement" around the world is a reflection of just how many people in many different cultures are showing their extreme distrust of politicians who promise many things and when elected, do the opposite and/or do nothing to fix a growing list of problems. Many political experts say that the occupy movement's purpose is to end or restrict world capitalism and free trade and to promote the growth of a new order of world socialism. Past history has clearly shown that a millionaire and a billionaire by any other names are still a millionaire and a billionaire.

Whether you agree with that or not, the most interesting fact is; that regardless of their political beliefs, people all over the world, especially since the global financial collapse in 2008, do not trust what politicians say. People feel betrayed and are looking for leaders in government to be truly accountable and productive problem solvers. It's no longer acceptable to be a "Nimtoo (Not in My Term of Office) Politician" which is exactly what these politicians have been doing for far

too many years. They support and pass "band-aid legislation" that looks good but doesn't solve growing financial problems, especially when it's dressed up with hype and septic-tank subterfuge. It also significantly helps those same incompetent politicians get re-elected, which unfortunately perpetuates the problem. Taxpayers deserve better than this. But don't hold your breath waiting for it to happen, it could be financially fatal!

David M. Walker, the former Controller General of the United States, has recently completed some interesting public policy studies at Stanford University under the "Comeback America Initiative" (CAI) which has produced a huge amount of information about how bad the economy really is in America. It's not the current yearly U.S. deficit of 1.65 trillion, it's the 63 trillion of total accumulated debt that is the real problem. Some experts estimate that it could be as high as 75 trillion dollars by the time everything is correctly factored in.

Using accurate quantitative and qualitative measures, the first CAI graph below identifies Sovereign Nation debt levels around the world. The criteria were:

- How much debt is too much:
- What are the projected levels of future debt of each country;
- Fiscal governance a score that identifies a country's fiscal rules, fiscal transparency and fiscal enforceability. All three of these criteria clearly identi-

fied that political NIMTOO attitudes and practices are very much a standard way of governing in the world today.

Sovereign Fiscal Responsibility Index

(AS OF APRIL 2012)

From the best to the worst...

1. Australia

2. Sweden 3. Estonia

4. New Zealand

5. China

6. Chile

7. Luxembourg

8. Denmark

9. Brazil

10. India

11. United Kingdom

12. Israel

13. Canada

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As an NFSA Leadership in Public Safety Award recipient, Don is recognized throughout North America as a fire sprinkler advocate.

Don Pamplin

>> CONTINUED FROM PAGE 11

With 27 other nations being more financially responsible than the United States, the next CAI graph shows the ranking of each individual state within America in terms of how much each individual taxpayer owes for their state's debt and unfunded obligations. Six States have a surplus and 44 states have crippling individual taxpayer debt. (see chart right)

When you focus that same NIMTOO criticism of how politicians operate in the world of fire protection, you find that same level of distrust from taxpayers at all levels of government, and it is just as vocal and condemning. Since 2008, the North American Fire Service has undergone one of the worst historic periods of budget and staff cuts ever! Some say it's even worse than the "Great Depression" of the 1930's. Remember, fully-paid fire departments back then were not as big as they are today due to huge population growth.

Look at what's happening today:

- Thousands of full-time firefighters have lost their jobs;
- Thousands have lost their pension and other benefits or have had them seriously reduced. (politicians haven't reduced their pensions accordingly);
- The daily staffing of fire trucks has been severely reduced, drastically hindering emergency scene operations. Try fighting a fire effectively (before flashover occurs) when the first arriving fire truck has only 2-3 firefighters on board and the next arriving fire truck is still 5-10 minutes away and it's arriving with only 2-3 firefighters. Three firefighters at a fire scene are prohibited by recognized U.S. safety standards to enter buildings on fire to perform interior firefighting and/or rescue procedures. While the first fire crew is waiting, the fire increases in severity and the chance of successful occupant rescue or fire extinguishment has disappeared;
- "Brown-out Fire Truck Deployment Plans" have decimated the critical level of emergency response to citizens needing quick fire and medical intervention. This is "russian roulette" fire

TAXPAYER'S INDIVIDUAL BURDEN BY STATE (2010)

(IN THOUSANDS OF DOLLARS)

Note: Numbers in Black denotes a surplus per each state taxpayer; numbers in red denotes a burden per each state taxpayer.

\$ 21.2

1. Alaska

ı.	Alaska	\$ 21.2
2.	Wyoming	20.2
3.	North Dakota	9.5
4.	Utah	2.6
5.	Nebraska	2.4
6.	South Dakota	1.4
7.	Montana	0.3
8.	lowa	0.5
9.	Oregon	0.9
10.	Tennessee	1.1
11.	Arkansas	1.7
12.	Idaho	2.6
13.	Minnesota	2.6
	Colorado	2.9
15.	Florida	2.9
	Arizona	3.3
17.	Virginia	3.6
	Nevada	3.7
19.	Missouri	3.8
20.		3.9
21	Indiana	3.9
22.	Kansas	4.6
23.	Texas	5.5
24.	Wisconsin	5.7
25.	Ohio	6.0
26.	New Hampshire	8.2
27.	Vermont	9.1
28.	Washington	9.8
29.	Pennsylvania	10.3
30.	South Carolina	10.5
31.	New Mexico	11.8
32.		12.6
	Alabama	14.3
	Louisiana	14.7
	North Carolina	14.8
	Maine	15.0
	Mississippi	15.7
	Delaware	16.3
39.	New York	17.2
40.	Maryland	17.3
41.	Rhode Island	18.8
42.	West Virginia	20.5
43.	Michigan	20.8
44.	California	21.4
45.	Massachusetts	23.2
46.	Kentucky	23.5
47.	Illinois	31.6
48.	Hawaii	32.7
40. 49.	New Jersey	35.8
49. 50.	Connecticut	49.0
50.	Connecticut	+ 3. 0

Is it any wonder why taxpayers around the world are angry and disillusioned? protection at best. When a fire or medical emergency happens in a brownedout area, the fire trucks that arrive from other neighbourhoods will be fighting a spreading fire that has probably passed the critical point of "flashover" or the heart attack or stroke victim has passed the critical point of successful medical intervention and recovery;

- Fire stations have been 'temporarily closed" but history has clearly shown that the "temporary closure" quite easily slides over to a "permanent closure" when there is no money to reopen the station:
- Monies needed for replacement of fire truck and firefighting equipment have been severely reduced and in some jurisdictions, totally discontinued. Older equipment that may not perform to accepted public safety standards could have a significant effect on the level of firefighting and rescue success;
- Budgets for firefighter training have been significantly cut and that has a serious detrimental effect on the critical efficiencies of how those firefighters perform at your fire or your medical emergency;
- Budgets for community fire prevention programs have been substantially cut, impacting not only the level of public awareness of the dangers of uncontrolled fire, but also the number of annual fire inspections that are needed to be done to ensure compliance with local fire bylaws and ordinances.

And now this... in addition to all of the above happening, there is an increasing and terrifying trend where local city and county governments are filing for bankruptcy under Chapter 9 of the U.S. Bankruptcy Code because they don't have the revenue to pay their operational costs, infrastructure expenditures, contractual salaries and pension/health benefits. It's terrifying because individuals who are caught in the filing process just don't know exactly how bad they will be financially hurt.

The City of Stockton, California, at over 300,000 people, is the largest city in the U.S. to date to file under Chapter 9. It happened on June 27, 2012, following

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the bankruptcy filing of Vallejo, California in 2008 and Orange County, California in 1994. Stockton tried to avoid the filing by slashing more than 90 million dollars from its budget, laying off city workers including one guarter of the police department and one half of the fire department. pushing its unemployment level to about 15%. And it's happening in other parts of the U.S. as well! Pennsylvania's capital city. Harrisburg, filed for this protection in October 2011. Other cities that have serious financial problems and accumulated debt that may push them into a Chapter 9 filing are Washington, D.C., Detroit, Michigan, Honolulu, Hawaii, New York, New York, Chicago, Illinois, Cincinnati, Ohio, Camden. New Jersey and the cities of San Diego, San Jose, San Francisco and Los Angeles, all in the state of California. The

new benchmark in all of this has been the biggest-ever U.S. municipal bankruptcy filing which occurred in 2011–Jefferson County in Alabama at \$ 4.23 billion dollars! Are state filings of Chapter 9 coming somewhere down this painful road?

What are the NIMTOO politicians saying to their citizens about all of the public safety (fire & police) equipment cuts and layoffs? You won't believe this because it's too hard to believe, but they are saying what they have always said when these kind of service cuts take place, "While the level of public safety response will be somewhat reduced, we have great confidence in the professionalism of our fire departments in that they will still be able to deliver a reasonable level of fire and medical response to our communities!"

What's reasonable? And to make it

even more convincing, these politicians get their local Fire Chief to say similar words to reinforce what the politicians want you to believe, although some Fire Chiefs have refused to do that and quite often they pay the ultimate price for their honesty.

To make matters even worse, many of these politicians, including State Governors and other high-ranking appointees, are the same ones who say automatic and quick-response fire sprinklers in your homes are not necessary because we have excellent fire departments who will be there to protect your home and your family when a fire and/or a medical emergency happens. And they usually finish off with, "Besides, all you need are smoke detectors to save your life" and therein lies the continuing NIMTOO activity and killer deception!





TECHNICAL TUESDAY 2012 ONLINE





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

Seminars will take place on the Internet on Tuesdays:

10:30AM Eastern/ 9:30AM Central/ 8:30AM Mountain/ 7:30AM Pacific/ 2:30PM Greenwich

SEPTEMBER 11. 2012

Piping and Valve Installation - Basic

Kevin J. Kelly, P.E.

Pipe and valves are key components of any sprinkler system. They need to be installed correctly and with consideration of how they will be used over the life of the system, which includes the ability to perform maintenance. The detailed locations and trim for valves, including control valves, check valves, and pressure-reducing valves, will be discussed in this seminar. The protection of system piping will also be reviewed.

SEPTEMBER 25, 2012

Concealed Spaces - Intermediate

James D. Lake

NFPA 13 requires sprinklers to be installed throughout the entire building...except...where they are specifically permitted to be omitted. One of the locations where sprinklers can be omitted is in concealed spaces. With very specific language, Section 8.15.1.2 of NFPA 13 (2010 Edition) provides the requirements that concealed spaces must meet in order omit sprinklers. Some of these are straight forward, others are more detailed. This seminar will explore the details and provide insight into the background of the requirements that permit sprinklers to be omitted from these special spaces.

OCTOBER 9, 2012

Storage Configuration and Classification - Basic Kevin Kelly, P.E.

Before the proper criteria in NFPA 13 can be applied to a storage occupancy, the correct storage configuration and commodity classification need to be identified. If the storage is on a structure, is the structure a rack, shelf, back-to-back shelf, or bin-box arrangement? If the storage is not on a structure, is it solid-piled or palletized? What are the commodity classifications and what effect does an exposed, or expanded, or free-flowing plastic have on that classification? These questions will be answered with lots of hands-on examples, pictures and video.

OCTOBER 23, 2012

Walkways and Catwalks - Intermediate

Karl Wiegand, E.I.T.

Storage facilities can have walkways or catwalks at different elevations throughout the arrangement. There are variations in the field as to the configuration of the walkways and their construction. Sprinkler location around these walkways will be discussed. Also, the hydraulic information for the sprinklers protecting catwalks and walkways will be reviewed.

NOVEMBER 6. 2012

In-Rack Sprinkler Spacing and Location - Intermediate John Corso and Victoria B. Valentine, P.E.

Rack structures in storage facilities often require sprinkler protection in the racks. However, there are many variations in the style and configuration of the racks as well as a range of commodities that can be stored on the racks. The type of sprinkler used to protect the space at the ceiling level will also impact where the in-rack sprinklers should be placed. This lesson will explore many variations for in-rack sprinkler locations and spacing.

NOVEMBER 20, 2012

Hydraulic Calculation of In-Rack Sprinklers

- Intermediate

Kenneth E. Isman, P.E.

The hydraulic calculation procedures for in-rack sprinklers are very different from the procedures for ceiling sprinklers. Determination of the number of sprinklers that might open if there is a fire as well as the location of the most demanding sprinklers can be a challenge. Next, the user needs to determine if the in-rack sprinkler demand needs to be added to (and balanced with) the ceiling sprinkler demand. Procedures will be provided for all of these steps in the calculation process as well as a discussion of decisions that can be made (sprinkler selection, pipe sizing and pipe location) to make the system as efficient as possible.

DECEMBER 4, 2012

Hanging and Bracing of In-Rack Sprinkler Systems - Intermediate/Advanced

In-rack sprinkler systems must be supported by the rack they are protecting. This support requirement applies to both gravitational and seismic loads. As the purpose of the racks is to store product, the physical space remaining inrack flue and face sprinklers to fit is limited. This can affect the type and location of hangers for the in-rack systems. The seismic protection, in addition to the limited physical space, also faces the challenge of the rack movement during a seismic event. The application of the seismic guidelines will also be examined.

DECEMBER 18. 2012

Tips for Better Storage Protection - Basic Karl Wiegand, E.I.T.

Most people understand that the rules for proper protection of storage occupancies depend on the commodity being stored and the storage arrangement (palletized, shelf or rack) and that different chapters of NFPA 13 apply to different combinations of commodity and arrangement. But what many people fail to appreciate in NFPA 13 is that Chapter 12 is full of important criteria that apply to all storage occupancies. This seminar will focus on the little known portions of Chapter 12 that need to be followed for all storage situations. In many cases, these sections can help the user protect a storage occupancy with a lesser demand, which provides the customer with better fire protection at a lower cost.

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Think Tank Session Provides an Opportunity for Discussion

By James D. Lake

arlier this year I was privileged to facilitate a new type of session at our NFSA Annual Seminar; a member "Think Tank" session. In this time of transition in our Association, one of our top priorities is to keep

sociation, one of our top priorities is to keep in touch with member needs and tap into member ideas for how we, as an association, can improve and move into the future.

During the 90 minute session, there was a free-flow of thoughts, ideas, concerns and critiques. It was fascinating to hear all of the things that NFSA members think of in relation to the Association as a whole. While the think tank was designed as a free-flowing idea session, we did use some questions to spark conversation.

There was a fantastic turnout of over 20 members representing contractors, both large and small, manufacturers and SAM members, including NFSA Chairman Dennis Coleman and Vice Chairman Larry Thau.

The format consisted of asking a question, having the participants write an answer, then share their answer with the group. The answers provided were used as guidance on developing a subsequent member survey.

Here are some examples of the questions and some answers that were presented during the session:

What is the number one reason you belong to NFSA?

- To better myself professionally by interacting with experienced leaders
- Very strong organization
- The key players in the industry are here
- Desire to learn
- E&S Committee
- Support education
- To give back to the industry and be a voice
- Be around those that know
- Promote the industry in order to thrive
- I need others in order to learn
- Network with all influences in the industry
- Labor Relations
- Remain connected to our customers
- Build relationships with the others in the industry and to collaborate with them
- Give back time and resources to the industry

What does NFSA do well in service to you?

- Labor Relations
- Training and Information sharing
- Promotion of sprinkler concept
- Provides a knowledge base of current and future issues
- Direct link to contractors in an open forum
- Engineering (Codes and Standards)
- Education and industry specific knowledge

- Engineering (Advice, Interpretation, Solutions)
- Provide a voice and drives legislation and codes

How can NFSA improve service to members?

- Improve the flow of information from the upper levels down
- Industry Promotion (lobbying)
- Promotion of residential sprinklers and helping small contractors
- Resolve quality issues between contractors, manufacturers and suppliers
- Train building owners
- Transparent reporting of funds and
- Access to information using technology
- Local training
- Grassroots organizing
- Increase members and improve participation
- Outreach to contractors

>> CONTINUED ON PAGE 16



Vice President of Training and Communications

James D. Lake



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What new program(s) would you like to see NFSA implement?

- Public education and lobbying to keep the IRC in states
- Outreach to small and mid-size contractors and show all of the benefits of NFSA
- Request feedback from members
- · Share information from E&S
- Establish a best practices video on NFSA.tv
- Free national training for AHJs
- Get more AHJ involvement with members
- Local training classes for members

- Access to solutions
- Membership Recruitment program
- Relationship building programs

It is important to remember that these are raw answers and that there was considerable discussion that went on to explore what individuals meant. I share them with you in the hope that they will spark some of your own questions, ideas and possibilities and solutions that you then discuss in your local groups and with your NFSA staff.

I want to thank all of the Think Tank participants for their time, efforts and willingness to share. This type of dialogic exercise can and will strengthen your association.



TECHNICALLY SPEAKING

Air Testing of Sprinkler Systems

By Kenneth E. Isman. P.E.

here are two reasons that a contractor might want to conduct an air test of a fire sprinkler system. The first reason is to make sure that the pipes and fittings have been joined properly so that they will hold water. It is much better to discover a potential leak with air than it is with water so that the test does not create water damage. This type of test could be performed on any sprinkler system: wet pipe, dry pipe, or preaction. This test could even be run on a deluge system to make sure the pipe and fittings were tight if the outlets for the sprinklers were plugged. Generally, this test is only run when the system is new or when new pipe or fittings have been added to the system.

The second reason for conducting an air test is just for dry pipe and preaction systems. In this case, the general test method is the same, but the test is conducted at various times during the life of the system to make sure that air is not escaping from the system rather than just when the pipe or fittings are new. This article will explore both reasons for conducting the test and discuss good practices to follow when conducting these tests

This article will refer to section numbers in NFPA 13 and NFPA 25. The section numbers correspond to the 2010 edition of NFPA 13 and the 2011 edition of NFPA 25. The concepts are the same in recent previous editions of these standards, but the section numbers may be slightly different due to slight changes in organization of those previous editions.

Acceptance Testing

NFPA 13 requires that for new systems, and for modifications to existing systems that affect more than 20 sprinklers, a pressure test with water in the piping (hydrostatic test) be performed at a minimum pressure of 200 psi (or more depending on the water supply pressure). This requirement can be found in sections 24.2.1.1 and 24.2.1.5. However, NFPA 13 also recognizes that there are times when a system is ready to be put into service in the winter during cold weather, or that a system might be installed in a freezer where water cannot be introduced into the pipe for the test. In these cases, section 24.2.1.3 permits the use of an air test until a water test can be conducted at a later time.

Although NFPA 13 does not require the pre-test of a system with air, many contractors will conduct the air test on all types of sprinkler systems even if freezing temperatures are not a concern. As described earlier, it is better to make sure that a system is not going to leak with air before putting water into the system.

What Pressure for the Air Test?

Sections 24.2.1.3 and 24.2.2.1 of NFPA 13 specifically call out the pressure for the air test at 40 psi, even though the hydrostatic test is done at a much higher pressure (200 psi or more). For safety reasons, the air test must be done at a significantly lower pressure. Many people question the lower pressure for the air

test saying that "pressure is pressure" and want to conduct the air pressure test at 200 psi, but that may cause a safety hazard while conducting the test.

While it is true that "pressure is pressure", the results of a failure during the test are going to be different depending on the fluid that is in the pipes during the test. Water and air are both fluids, but they have very different fluid properties. Water is incompressible while air is very compressible. This creates different conditions when a failure occurs in the pipes during a test.

During a hydrostatic test, with water in the pipes, the reactionary force that occurs when water starts to exit the system is distributed through the fluid and dissipated against all of the surfaces inside the system where the water is touching the pipe. This distribution occurs because the water cannot be compressed at the point of the failure. But in a system filled with air, the reactionary force that occurs when air starts to exit the system compresses the air at the point of the failure. Typically the failure occurs at a weak point in the system. The combination of the reactionary force compressing air and

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

Kenneth E. Isman, P.E.

>> CONTINUED FROM PAGE 17

creating energy at the weak point in the system creates the possibility of the failure growing larger by breaking off small pieces of the pipe and/or fittings at the failure point and the excess air pressure behind the broken pieces could turn the small pieces into flying shrapnel at the point of failure.

In order to minimize the amount of energy that could cause such a problem, the air pressure test should not be run at any pressure in excess of 40 psi. This is why NFPA 13 limits the air pressure test to 40 psi in the sections referenced above. At 40 psi, it should be fairly easy to determine if there are any significant leaks in the system. A system that holds 40 psi of air should also be able to hold 200 psi of water. There is no need to run the air pressure test at 200 psi.

Periodic Testing of Dry and Preaction Systems

Ever since the first edition of NFPA 25 (1992) there has been a concern about

excessive leakage in dry and preaction systems. However, for many editions the amount of acceptable leakage was a matter of judgment. Starting with the 2008 edition, the committee put a requirement in the standard for a specific test of the dry or preaction system to be conducted every three years (see sections 13.4.3.2.6 for preaction systems and 13.4.4.2.9 for dry systems). NFPA 25 gives the user two methods to perform the periodic test and lets the user decide which of these they want to do.

The first method for conducting the periodic air test is to put the air pressure in the system at 40 psi (for the same reasons discussed above). This pressure is sufficient for finding leaks and is safe for the people running the test. The idea is to see if the system stays at 40 psi for two hours without having the air supply called on for additional air. The air pressure in the system is allowed to drop to 37 psi during the test, but if it drops lower than that, the leaks need to be found and addressed.

The second method is to just leave the

system at its normal pressure and shut off the compressor or other air source. If the system continues for four hours without the low air pressure supervisory signal being actuated, then the system is acceptable. Since NFPA 72 requires the low pressure supervisory switch to be set at 10 psi below the normal pressure setting of the air in the system (see section 17.16.2.2.2(2) of NFPA 72), this test basically allows the dry or preaction system to lose 9.9 psi during the four hour test.

Neither of these tests is particularly stringent. Each one allows a significant amount of leakage while still allowing the system to "pass" the test. Building owners might want to find and address air leaks, even if they are considered acceptable to NFPA 25. This might help conserve electricity and the running of compressors. The reason that NFPA 25 allows such leakage is that air leaks can be difficult to find and the committee did not want to burden owners with a mandatory requirement to address the leaks unless they were really serious.



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CODE COR

By Jeff Hugo, CBO and Bernie Arends

Bernie Arends is the former NFSA Inspection and Testing Specialist



Jeff is NFSA's Manager of Codes

Jeff Hugo, CBO

he Fall 2012 Codes and Standards update is to inform you, our valuable members, what is going on in each and every state. This list is current as of July 2012. However, a complete matrix is available on our website under the "Members Only Area" tab, which includes contractor licensing information, annual fees, PE requirements, web links, codes, standards (NFPA 13, NFPA 25, etc.) and much more. This online resource is constantly updated. If you have something to add, please email me at: hugo@nfsa.org

STATE	STATE CODE ADOPTION	NFPA 13 EDITION ADOPTED	NFPA 25 ADOPTED	ITM INSPECTIONS NICET REQ'D	HOW ADOPTED	COMMENTS ON NFPA 25
Alabama	2009 IBC & IFC	2007	Yes	No	Stand Alone	
Alaska	2006 IBC, IFC & IRC	2007	Yes	Level II & Above	Through Building Code. AK does not follow NFPA 25 inspection schedule due to size of state & difficulty to maintain schedules	IIA - Maintenance & Testing of fire sprinklers/standpipes IIB - ITM of fire sprinklers Inspector must work for a licensed contractor
Arizona	2006 IBC & IFC	2002	No	No state, some local jurisdictions		
Arkansas	2006 IBC, IFC & IRC	2002	Yes	No state, some local jurisdictions	Through fire code	
California	Statewide Published Codes: 2010 CBC, CFC, CRC - based on 2009 IBC, IFC, & IRC	2007	Yes	No, must be C-16 or A-Licensed per California State License Board	California Title 24	2006 w/ California amendments
Colorado	2009 IBC - 2006 IFC & IRC	2007	No	No	The school program requires a formal ITM program to be in place upon issuance of the CO with said inspection reports retained for a minimum of two years. These reports are checked during annual maintenance inspections by certified school inspectors.	NFPA is officially adopted in the Fire Suppression Program, however it is not formally enforced. It's the owner's responsibility to maintain any and all installed life safety systems as per the 2006 IFC-901.6. Records of this maintenance and/or testing shall be kepi by the building owner for a minimum of three(3) years and be available to the agency (Division of Public Safety or AHJ) upon request.
Connecticut	Statewide Published Codes: 2005 CTBC & CTRC (based on 2003 IBC & IRC) 2005 CTFC (based on 2003 IFC, 2003 NFPA 101 & NFPA 1)	2002	Yes	No	CT Amendment to NFPA 101 2003 ed	CT Reference to 2002 ed
Delaware	2000 NFPA 101 & Local Codes	2002	Yes	No	Through building code:	NFPA 25 adopted statewide
Florida	Statewide Published Codes: 2010 based on 2009 ICC Codes	2007	Yes	Level II	Stand alone	NICET II req'd

The Voice of the Fire Sprinkler Industry



The Fire Sprinkler Guide -2009 Codes Edition is Now Available!

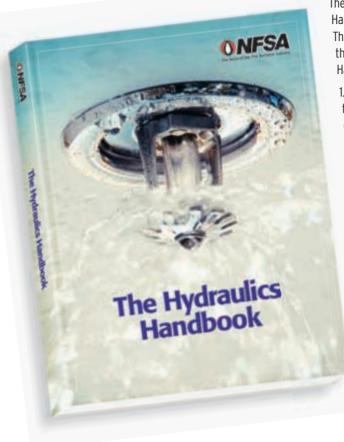
Produced by NFSA, this second edition of The Fire Sprinkler Guide defines those sections of the three model building codes, the Life Safety Code (NFPA 101) and International Building Code where fire sprinkler systems are required, including partial requirements and construction incentives. The guide includes comparison tables to clarify many of the code requirements. The guide is a valuable tool for architects and engineers, plan reviewers, fire and building inspectors, as well as sprinkler contractors, and serves well as a workbook for students at the NFSA's Design Advantage Seminar. With almost 400 pages of text, this book is a "must have" for anybody that performs hydraulic calculations of fire sprinkler systems or performs plan review and approval of hydraulic calculations.

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

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NAME AND ADDRESS OF CARDHOLD	ER IF DIFFERENT FROM ABOVE		
SIGNATURE OF CARDHOLDER			

STATE	STATE CODE ADOPTION	NFPA 13 EDITION ADOPTED	NFPA 25 ADOPTED	ITM INSPECTIONS NICET REQ'D	HOW ADOPTED	COMMENTS ON NFPA 25
Georgia	2006 IBC, IFC, & IRC	2002	Yes	Level III	Through fire code	
Hawaii	2006 IBC - 2006 NFPA 1	2002	No	Special Inspections		Working toward amended version
Idaho	2009 IBC & IRC - State Published Fire Code based on 2009 IFC	2007	Yes	Work for licensed Contractor		Through building code
Illinois	Local Codes and 2009 IFC	2007	Yes	ITM has to be supervised by a licensed fire sprinkler contractor	Uniform Fire Code- annual test required per NFPA 25	Inspector must work for a licensed contractor
Indiana	2008 Indiana Building Code based on 2006 IBC - 2005 Indiana Residential Code based on 2003 IRC - 2008 Indiana Fire Code based on 2006 IFC	1999	Yes	No	Through fire code	
Iowa Must Have Fire Protection Systems License	2009 IBC & IRC	2007	Yes	No	Through 2006 IFC	
Kansas	2006 NFPA 101 - 2006 IBC & IFC	2002	No	No		
Kentucky	2007 KBC based on 2006 IBC - 2007 KRC based on 2006 IRC - 2006 IFC	2002	Yes	Yes (Limited)	Through fire code	Use ICC Certification which is for KY
Kentucky						
Louisiana	2009 NFPA 101 - 2009 IBC	2007	Yes	Unknown	Through fire code	
Maine	2009 IBC & IRC - 2006 NFPA 1 - 2009 NFPA 101	2007	2008	Or test equiv.	State Fire Marshal's Office	2002 edition
Maryland	2012 IBC & IRC - 2009 NFPA 101	2010	Yes	Level II	Through building code	NFPA 25 adopted statewide
Massachusetts	Mass. 8th Edition Code: 2009 IBC & IFC	2007	2008	Through MA Bldg Code 8th edition	Through MA Bldg Code 7th edition	2002 edition
Michigan	2009 MBC based on 2006 IBC - 2006 MRC based on 2006 IRC	2007	Yes	Partial	Through fire code	ITM for state/state license bldgs
Minnesota	2007 MSBC based on 2006 IBC, IRC & IFC	2002	Yes	No	NFPA 25 adopted in June, 2012	
Mississippi	2006 IFC & Local Codes	2002	Yes	No	Through fire code	
Missouri	Local Codes	None	No	No	Specific state MO laws that apply to specific types of facilities such as skilled nursing/long term care, day cares etc that do have language that reflects compliance w/ NFPA 25	

RESOURCE CENTER



NFSA's New Hydraulics Handbook is Here!

The National Fire Sprinkler Association is proud to announce the release of The Hydraulics Handbook, an overhaul and update of a publication originally put out in the early 1990's. This new updated edition is a comprehensive discussion of everything having to do with the hydraulic calculation of sprinkler systems. There are three distinct parts to the new Handbook:

- Excerpts from the NFSA textbook Layout, Detail, and Calculation of Fire Sprinkler Systems that deal with hydraulics. These comprehensive chapters cover the methods and concepts involved with calculating a fire sprinkler system by hand or with a computer program. Each chapter ends with a series of questions to make sure that the user understood the concepts in the chapter.
 - 2. A brief discussion of conducting hydraulic calculations from the perspective of a code enforcement official. This discussion is helpful for the plan review of calculations that have been submitted. A sprinkler technician can also use this information in spot checking the output from a computer program.
 - 3. Friction loss tables. There are many different types of pipe and tube used in sprinkler systems. For each type of pipe, this book has a page with the friction loss per foot of pipe at a variety of different flows. Each page also contains the equivalent length of the fittings (tees, elbows, control valves, and check valves). These pages substitute for performing the Hazen-Williams friction loss calculation on a calculator and save time for people performing hydraulic calculations by hand or for people wanting to spot check calculations performed by a computer.

With almost 400 pages of text, this book is a <u>"must have"</u> for anybody that performs hydraulic calculations of fire sprinkler systems or performs plan review and approval of hydraulic calculations. **Order your copy at www.nfsa.org at the Resource Center or fill out and return the order form below.**

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CARD NUMBER		EXPIRATION DATE	
NAME AND ADDRESS OF CARDHOLDER IF DIFFER	EENT FROM ABOVE		
SIGNATURE OF CARDHOLDER			

STATE	STATE CODE ADOPTION	NFPA 13 EDITION ADOPTED	NFPA 25 ADOPTED	ITM INSPECTIONS NICET REQ'D	HOW ADOPTED	COMMENTS ON NFPA 25
Montana	2009 IBC - 2006 IRC	2007	Yes	NICET II verification sent to licensing program	NFPA 25 not officially adopted. Enforced by reference to IFC. License from Dept of Commerce required	
Nebraska	2006 IBC & IRC - 2000 NFPA 101	2002	Yes	No	Officially adopted by the legislative process	NFPA is enforced and the company conducting ITM is required to be licensed. Inspection reports are required to be submitted to the AHJ.
Nevada	2006 IBC & IFC	2002	Yes	No	Through ICC codes	
New Hampshire	2009 IBC & IRC - 2009 NFPA 1 & NFPA 101	2010	Yes	Voluntary- under development	NFPA 1, 101 2009 eds	
New Jersey	2009 IBC & IRC - New Jersey Uniform Fire Code based on 2006 IFC	2007	Yes	Level II	Stand alone	NFPA 25 adopted statewide
New Mexico	2009 New Mexico Commercial Building Code based on 2009 IBC - 2009 New Mexico Residential Code based on 2009 IRC - 2003 IFC & NFPA 1	2007	No	No		City of Albuquerque proposing adoption of NFPA 25
New York	2010 NYSBC (including residential and fire) based on 2006 IBC, IFC & IRC	2007	Yes	No	Fire Code of the State of NY	NY state uses amended version of 2003 IFC ref. NFPA 25 1998 edition
New York City	NYC Code Adoption based on 2003 IBC and 2003 IFC	2002	2002	No	NYC Fire Code	January 1, 2012 - Full NYC enforcement of NFPA 25, 2002 ed. w/amendments . As of May 2012, working on adopting 2007 NFPA 13 and 2008 NFPA 25.
North Carolina	2012 North Carolina State Building, Residential and Fire Prevention Codes based on 2009 IBC, IRC & IFC	2007	Yes	NICET II	Through fire code	
Ohio	2011 Ohio Building, Residential and Fire Codes based on 2009 IBC, IRC & IFC	2007	Yes	State certified	Through fire code	Use own testing program
Oklahoma	2009 IBC & IFC (Effective Nov 1, 2012) 2009 IRC	2007	Yes	Level II	Through fire code	
Oklahoma						
Oregon	2011 Oregon Residential Specialty Code based on 2009 IRC - 2009 Oregon Fire Code is based on 2009 IFC	2010	Yes	NICET ITM inspections not required statewide; some local jurisdictions require "Certificate of Fitness"	NFPA 25 adopted in 2009 Fire Code.	Adoption of 2009 IFC with Oregon Amendments
Pennsylvania	Uniform Construction Codes based on 2009 IBC, IRC & IFC	2007	Yes	Unknown	Commonwealth of PA adopts ITM reqmts for fire protection & suppression in the IFC (see IFC table 901.6.1)by ref in par (F)903.5 of IBC	Local municipalities may adopt & amend IFC independently along with NFPA 25

STATE	STATE CODE ADOPTION	NFPA 13 EDITION ADOPTED	NFPA 25 ADOPTED	ITM INSPECTIONS NICET REQ'D	HOW ADOPTED	COMMENTS ON NFPA 25
Rhode Island	Rhode Island State Building Code and One & Two Family Dwelling Code is based on 2009 IBC & IRC - 2008 Rhode Island Fire Safety Code based on 2003 NFPA 1	2002	2002	State License required	NFPA 1 and 101 2003 ed	
South Carolina	2006 IBC, IRC, & IFC	2002	Yes	Call 803-896- 4686	Through fire code	
South Dakota	2012 IBC or Local Adoption - 2009 IFC	2010	Not officially adopted	Those conducting ITM are not required to be licensed, but are required to be NICET Certified	Indirectly enforced by reference with the adoption of NFPA 13	NFPA 25 is adopted by the legislative/ administrative rule process. Inspection reports are only required to be submitted to the AHJ in certain cases.
Tennessee	2006 IBC & IFC - 2009 IRC	2002	Yes	Level III	Through fire code	
Tennessee						
Texas						
Utah	2009 IBC & IRC	2007	Yes	NICET is required for ITM inspections or a State Certification	NFPA 25 adopted through fire code/SFMO	Reports are required to be submitted to SFMO or local AHJ's
Vermont	2006 Vermont Fire and Building Safety Code based on 2006 NFPA 1, NFPA 101 and IBC	2002	2002	State Certification requ'd	2003 NFPA 1	
Virginia	2009 Virgina Construction Code based on 2009 IBC & IRC - 2009 Virgina Fire Prevention Code based on 2009 IFC	2007	Yes	Yes, Level III	Through building code	NFPA 25 adopted statewide
Washington	Washington State Building Code based on 2009 IBC, IFC, & IRC	2007	Yes	Yes, Level II and III accepted or state cert	NFPA 25 adopted through IFC	ITM inspector must possess state certification RCW 18.160.040
West Virginia	2009 IBC & IRC - 2009 NFPA National Fire Codes Set (minus NFPA 5000, NFPA 900 and NFPA 101A	2007	Yes	Yes, Level II and III accepted	through fire code	Companies licensed through Dept of Labor Nothing to do with competency
Wisconsin	Wisconsin Commercial Building Code based on 2009 IBC and 2009 NFPA 1	2007	Yes	No NICET, exam required	Stand alone	
Wyoming	2006 IBC & IFC	2002	Not officially adopted	No licensing is required to conduct to conduct ITM inspections; NICET is not required and ITM inspection reports must be available during the site inspection	Enforced by adoption of the International Fire Code 2006 Edition by reference	

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NFSA Behind the Scenes -The Journey Continues

By Joanne Genadio

introduce you to some of the NFSA staff that works behind the scenes and out of the limelight to keep your Association running like a well-oiled machine. Of all the columns I have written over the years for SQ, this was, surprisingly, the one I received the most comments and compliments about.

ast issue it was my pleasure to

Writing a recurring column, even if it is only published bi-monthly is not always an easy task. Although writing is what I like most about my job (besides my daily chats with my boss, David J. Vandeyar), coming up with fresh ideas for each issue is tough. While pondering the "What am I gonna write about NOW?" question that pops into my head every other month, I thought; why not feature the people that come here five days a week, do a wonderful job but never get their pictures or stories in SQ, or on the website, or on our new and exciting media forum, NFSA.tv?

Although I got some resistance from my more demur co-workers, who shall remain nameless, the compliments I received from the previous Behind the Scenes article came from both the featured employees and our readers.

With that said, allow me to introduce you to the rest of our hard-working, dedicated staff whose contributions greatly influence what's unique and special about The National Fire Sprinkler Association.

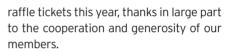
Diana Romano *Assistant to the President*

Diana's been with NFSA for 23 years. Diana first began working for IBM in

the early 80s. In 1989 she joined the NFSA family as a receptionist.

In 1991 when Robert "Mac" McLeod relocated to the Home Office in New York as Director, and then Vice President of Regional Operations, she served Mac and his Regional Operations staff. Diana worked on their Regional Reports, Weekly Activity Reports, monthly itineraries and general correspondence. When needed, she also served in other capacities of the Association.

When Mac retired and returned to Florida in 1999, she served the Engineering Department and Russell Fleming, then Executive Vice President. Diana continues to work with Russ in his recent appointment as NFSA President. With over 20 years of service at NFSA, Diana has witnessed much growth, diversity and challenging times. She is happy and proud to see more women joining the forces of this great industry. For the past three years, Diana has helped the Hudson Valley Cerebral Palsy Association "Swing for Opportunity" fund-raiser selling over 100



You can contact Diana at ext. 132 or romano@nfsa.org.



Nicole joined NFSA in October of 2004. Through the years she has proved



to be a reliable, diligent and conscientious employee. Anyone who has had the pleasure of talking to Nicole on the phone knows they can rest assured she will solve any problem and get back to them in record time. Nicole is truly an indispensible and integral part of the Engineering Department. She schedules

>> CONTINUED ON PAGE 26



NFSA's Advertising and Communications Coordinator

Joanne Genadio

>> CONTINUED FROM PAGE 25

classes & meetings, keeps the library categorized and organized, oversees homework from students that have taken NFSA classes, coordinates and attends Sprinklerman©™ minor league ballpark events, manages the annual NFSA coloring contest, logs & tracks Expert of the Day questions, maintains multiple databases and, most importantly, handles the very special and most interesting personalities of the engineers she works for with grace and fortitude.

Taking over the duties of coordinating Sprinklerman events just this year, Nicole is enjoying the experience and finds it to be one of the most rewarding parts of her job. She knows from firsthand experience the impression a visit from Sprinklerman leaves on every fan at the ballpark and challenges anyone who hasn't been to a game where he's showcased, to "go see for yourself."

Nicole is proud to have earned a degree in Computer Science from SUNY Cobleskill, and often finds what she's learned in college not only comes in handy to her, but to her co-workers as well. It is often times that I sit at my computer and can't figure something out in Word® or Excel® that I say to myself, "Should I waste time sitting here trying to figure this out, or should I just call Nicole and ask her how to do it?" And Nicole, like everyone else on this fantastic staff, is always happy to help and willing to share what she knows. And that is what sets the NFSA support staff apart from all others. We work as a team, meshing all our different parts together to make one fantabulous whole and a rock-solid foundation for an association that, in my opinion, has no equal.

You can contact Nicole at ext. 149 or sprague@nfsa.org.

Michael Repko

Membership and Training Coordinator

With NFSA for 16 years, Mike is a man of a many talents. While he started part-



time as a wee babe in the mailroom, Mike currently handles event registrations for our Training & Education Department, processes memberships for our Membership Department and maintains the membership database, as well as website design and updates.

Mike has become our "go-to" guy for many things and he truly enjoys that role. He appreciates being given the ability to learn new things and boy, does he love sharing what he learned! I'm sure all of you have gotten a chance to view and use our new website by now. What an improvement over the old one! We have Mike, largely in part, to thank for that. He did exhaustive research to find a company that specialized in association software and websites that would perfectly fit our needs. He worked tirelessly with them to create a website that is both user-friendly and attractive to visitors, many of whom are potential members. Mike now monitors the website to work out any glitches and takes pride in his ability to constantly better what we all thought was pretty darn good to begin with.

Now, if he could just get his desk put in a better location. Mike's only gripe is that he sits in a common area facing a blank wall. Although I've offered numerous times to decorate that wall with Sprinklerman^{©™}

posters and NFSA bumper stickers, Mike has oddly refused, preferring to stare at that blank wall and dream of the day he has a commanding view of a sweeping vista.

After graduating high school, Mike attended Westchester Community College for a semester and a half in pursuit of a degree in Film Production, but soon became disinterested and started to work at NFSA. In his spare time he enjoys TV as well as movies... movies, movies, movies. Since I share Mike's luxurious common space, one of our favorite things to do is throw out quotes to each other and guess who said it and in what movie.

Music became a big part of his life about 12 years ago when he started getting into the hobby of being a DJ. Mike still uses classic vinyl and currently does small gigs. He enjoys being with friends on the weekends. For Mike, nothing is more satisfying than an ice cold Corona on the beach!

On a more personal note (because inquiring minds want to know) Mike has been dating his girlfriend Kristen for just over four years and looks forward to "making it official" in the near future. I have already offered to give him away. I'll keep you posted!

Mike can be reached at ext. 120 or mrepko@nfsa.org.

And so, ladies and gentlemen, that completes the up-close and personal stories of the unsung heroes of the NFSA. Next time you have the opportunity to meet with or speak to one of these superstars, thank them for the great job they do and let them know that their dedication and drive is both needed and appreciated. Believe me, they all do one helluva job! Now, what the heck am I gonna write about next column? ①

SQ • sept - october 2012

NFSA Annual Seminar and North American Fire Sprinkler Expo

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Non-Uniform Hydraulic Calculation Areas: Sprinklers Protecting Canopies

Part 5 in the series

ydraulic calculations are relatively simple when faced with a rectangular building and simple pipe layout. Yet the field can offer an endless number of variations in shape, size, and configuration. This article is another segment in a series handling non-uniform arrangements and examining how the hydraulic calculations are impacted.

Canopies, overhangs and portecocheres are examples where sprinklers may need to be installed on the exterior of a building. See Section 8.15.7 in NFPA 13, 2010 Edition for the criteria to determine when the sprinklers are needed. There are a couple of configurations worth discussing for calculation purposes.

To begin, look at Figure 1(a). This shows a canopy on three sides of a building. The width of the canopy is small enough to be protected with a single row of sprinklers. The sprinklers outside have been piped to be a separate system and it is dry due to environmental conditions. How should the calculation area be laid out?

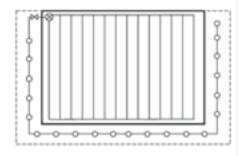


Figure 1(a): Sprinklered canopy on 3 sides of a building.

First, the calculation method needs to be selected. The room design method cannot be applied to this configuration as there is no "room." Canopies are open on the sides for smoke and hot gases to escape during a fire incident. Therefore, the concept of an enclosed space cannot be applied. Next, the type of sprinkler has not been called out. If standard spray sprinklers are used, the only option remaining for calculation would be the density/area method. To review the main concepts of the density/area calculation method refer to **SQ** No. 151 (Nov/Dec 2008), part 1 of this series.

Using the density/area method and a light hazard classification for the space under the canopy, a starting point of 0.1 gpm/ft2 (4.1 mm/min) over 1500 ft² (139 m²) can be selected. It was noted that the outside protection is run as a dry system. therefore, an additional 30 percent will be added to the area for a total of 1950 ft² (181 m²) accommodating the delay in water delivery. However, laying out a rectangular area, as described in NFPA 13, is not really feasible with a single line of sprinklers. This is where Section 11.2.3.4.2 would apply. It states, "Where an area is to be protected by a single line of sprinklers. the design area shall include all sprinklers on the line up to a maximum of seven." This section was specifically worded to note an "area" as it may not meet the definition of a compartment, especially in a case where the protection is outdoors like under a canopy. The annex language also clarifies that this applies to wet, dry and preaction type systems. This means that the shaded area, shown in Figure 1(b), would be the calculation area. The area actually covered by those seven (7) sprinklers would be less than the 1950 ft² (181 m²) from the density/area figure even if they covered the maximum area allowed under light hazard of 225 ft² (20.9 m²).

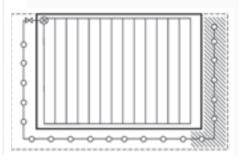


Figure 1(b): Remote area for a single row of sprinklers protecting an area.

Next, think about an exterior projection that is protected by multiple rows of sprinklers. An example is shown in Figure 2(a). Again the area under the projection is being protected by a separate dry system and the interior of the building is

>> CONTINUED ON PAGE 30



NFSA's Director of Product Standards

Victoria B. Valentine, P.E.

>> CONTINUED FROM PAGE 29

protected by a wet system. If the hazard remains light as in the previous scenario, the density/area selection could be the same 0.1 gpm/ft² (4.1 mm/min) over 1950 ft² (181 m²). As there is more than one row of sprinklers to protect the area, the area would be laid out in the traditional rectangular fashion using a length along the branch lines of 1.2 times the square root of the 1950 ft² (181 m²) area, which equals 53 ft (16.2 m) as required by Section 22.4.4.1.1.1.

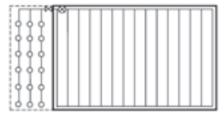


Figure 2(a): Exterior projection with multiple rows of sprinklers

For discussion purposes, the spacing of the sprinklers below the projection will be 15 ft (4.6 m) between the branch lines and 14 ft (4.3 m) along the branch line. In this example, each sprinkler covers 210 ft² (19.5 m²). Using 14 ft (4.3 m) between sprinklers will yield 4 sprinklers per branch line to be calculated. With 10 sprinklers needed to meet the area required for the calculation, sprinklers on three (3) branch lines should be used. This area is highlighted in Figure 2(b).

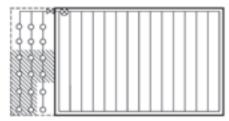


Figure 2(b): Remote area for light hazard exterior projection protected with a dry system.

However, what if the outside area was only large enough that two rows of sprinklers protected it? Well, the first approach would be to determine if the area could be met by the system by including more sprinklers possibly further along the branch lines as the length calculated according to Section 22.4.4.1.1.1 is a minimum length. Figure 3 shows a similar projection as the last one but with less branch lines. Using the same sprinkler spacing, five sprinklers each along the only two branch lines in the space cover

the minimum 1950 ft² (181 m²) needed for the remote area calculation.

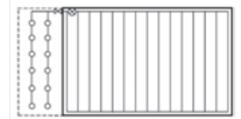


Figure 3: Exterior projection protected with two rows of sprinklers.

When the exterior area that is being protected is smaller than the remote area needed for the density/area method calculation, additional sprinklers from an adjacent system would be added. In Figure 4, the exterior system only covers 960 ft² (89.2 m²). Sprinklers need to be added to the calculation until the area is met. This may be counterintuitive as each system has its own remote area, but NFPA 13 requires a single point on the density/ area curve to be satisfied. This includes the area that coordinates with that point (or its adjusted value). With similar hazard characteristics, as in the other examples here, including being a dry pipe system, another 990 ft2 (92 m2) would need to be added from the adjacent, interior system. The additional sprinklers selected from the adjacent system should be physically next to the small system representing a single fire incident.

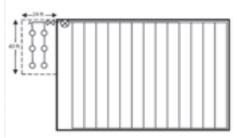


Figure 4: Small exterior projection protection by fire sprinklers.

Looking forward to the 2013 Edition of NFPA 13 there is a change coming to the approach with more than a single row of sprinklers. A comment (13-312) was accepted in principle to add new language dealing with density/area criteria when there is insufficient floor area available to comply with the area requirement as was the case with the example tied to Figure 4. It will no longer be necessary to add area from an adjacent system, but flow may need to be added if the minimum discharge (found by multiplying the

design area by the design density) is not achieved when calculating the available area of the system.

Annex language is also being added to the above mentioned section in hopes of clarifying what the Committee thinks the calculation process should look like for these small areas. The first step is to calculate the sprinklers that are available for the given hazard area. Next determine the minimum flow by multiplying the design density time the design area. In the previous example this would be 0.1 gpm/ft2 (4.1 mm/min) times 1950 ft2 (181 m^2), which is equal to 195 gpm (738 lpm). So, if the first step produced a demand of 100 gpm (379 lpm) at 30 psi (2.1 bar), then the third step is to determine the flow difference. In this case the difference is 95 gpm (360 lpm). Since the design flow is higher, the 95 gpm (360 lpm) would need to be added into the calculation. This flow is added where the branch line furthest from the water supply meets the cross main, labeled "A" in Figure 4. If the demand calculated in the first step is more than the design flow, then that is the demand used for sizing the water supply. In situations where the hazard of an adjacent system is higher than the small area being calculated, this is a lower flow added into the calculation when compared with adding sprinklers that protect a more challenging hazard classification.

Summary

Exterior protection of a building, such as protecting under projections like portecocheres or canopies, is one of those field examples where applying the rules can be a little gray. The challenge is to apply the rules of NFPA 13 to reach the appropriate design area with each system installed in the field. Once the correct area is determined that needs to be used for hydraulic calculations, the calculations are done using the same formulas used in the sprinkler industry for decades.

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NFPA 13, Standard for the Installation of Sprinkler Systems, 2010 Edition, National Fire Protection Association, Quincy, MA, 2009.



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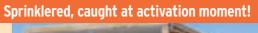






NOTES FROM THE FIRE SCENE









Pictured are **Chief Adolf Zubia**, **Vickie Pritchett**, and **Chief Shane Ray** at the 2012 South Carolina Fire Rescue Conference in Myrtle Beach, SC.







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Notes from the Fire Scene...

t's always great to spend time on the road and it's a big part of Public Fire Protection's service to NFSA members. I almost laugh to myself each time I program the GPS or head to the airport, as I hear Willie Nelson's song playing in the back of my head. I have to admit, I love the adventure that awaits with each new assignment and destination.

This summer has found us crisscrossing the nation with lots of opportunities to educate regarding the difference that fire sprinklers can and do make in a community's fire protection plan. It was great to spend some time in Cheyenne, Wyoming at their annual "Super Day." A special thanks to the Cheyenne Fire Department and Terry Phillips, NFSA Great Plains Regional Manager for the invitation and organization of the fire sprinkler information area.

Side-by-side burns have become a very effective method for us to "make it real", demonstrating exactly how fire sprinklers work. I always enjoy hearing the comments from those in the crowd. They are always amazed at how fast the fire grows and how fast flashover occurs in the nonsprinklered room. They are also always impressed by how quickly and efficiently the fire sprinkler puts the fire out.

Jim Dalton, longtime fire sprinkler advocate and former Director of Public Fire Protection always shares, "It's about putting the wet stuff on the red stuff!" He is so right in this simple assessment and the crowds love it! The pictures are worth a thousand words, so I will let the photos

speak for themselves.

Another initiative that has taken a lot of our time is support for the National Fire Protection Association (NFPA) State Coalitions. We have had increased activity in Washington, Tennessee and South Carolina. With focused Fire Team USA workshops and live side-by-side burn demonstrations, we are steadfast with our efforts in these target areas. The South Carolina Fire Rescue conference hosted three deliveries of Fire Team USA/ South Carolina Faces of Fire and also provided the opportunity for one of the most viewed side-by-side burn demonstrations that I know of, with an estimated 700+ people in attendance. Again, I will let the pictures tell the story. A special thanks to our members, Western States Fire Protection and Wayne Automatic Fire Sprinklers, for their assistance with fire sprinkler installations in these two demonstrations.

Collaboration is the common theme that runs through these areas that are being proactive with their efforts to educate citizens, policy makers and firefighters about the important role that fire sprinklers play. Partnering together, we are able to deliver and provide resources in a way that makes a difference. Having the fire service actively engaged and involved is proving to be key as we work to educate and provide information necessary for those who are making policy decisions.

On an ending note, we would like to wish Chief Adolf Zubia well as he leaves the office of South Carolina State Fire Marshal. Chief Zubia has been a key

supporter in our efforts with the South Carolina Fire Sprinkler Coalition, and he has truly been a great example of "service above self" in his efforts to make South Carolina a safer place. Big congratulations go to Chief Shane Ray who will be assuming the role of South Carolina State Fire Marshal on August 1, 2012. Chief Ray, who previously served as NFSA Director of Public Fire Protection, will be proactive as he continues the work started by Chief Zubia, focusing on improving quality of life for South Carolina citizens, firefighters, and visitors.

The opportunities ahead are significant, and the good news to report is that we are involved and participating in a proactive manner to raise awareness and educate regarding the benefits of fire sprinklers. Remember, Public Fire Protection is here to help assist as efforts to tell our story move forward.

The best quote of all came from a youngster who looked up at his Mom and matter of factly stated, "Mom, I think we need those firefighters in every room of our house don't you?" I smiled as I heard Mom's reply..."Yes, and we are going to find out how to make that happen!" ①



Director, Public Fire Protection

Vickie Pritchett



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Survey Says...

few months ago, I sat down with NFSA's newly elected President, Russ Fleming, and other members of NFSA's executive communication team. including Jim Lake, David Vandeyar, and Joanne Genadio. After exchanging the normal pleasantries, I was anxious to hear Russ' thoughts on the current state of the Association and his plans for growing NFSA's voice within the industry. As our meeting continued, it was obvious that NFSA's members remained the heart of the Association, but it was also apparent that both sides were feeling slightly disconnected. We agreed that now was our opportunity to reach out to members and get their perspectives on the Association and find out what they value the most, as well as the least. That's when the membership survey concept was introduced.

We knew we had to seize this rare opportunity to gauge what members felt were the most beneficial aspects of belonging to NFSA and to provide an opportunity for members to voice their own concerns or needs. The year 2012 has been and will continue to be a year of transition for the National Fire Sprinkler Association. Because of that, I've worked closely with leadership to undertake a series of communication initiatives to gauge the perceptions and attitudes of members, with an eve toward focusing the organization on the identified service and program areas where membership sees the greatest value and identifying any potentially unmet or under-served needs. The cornerstone of these initiatives was the 2012 NFSA Membership Survey.

Invitations were sent out encouraging members to participate in the survey,

reaching 2,357 NFSA members via email. A total of 352 responses were received, which reflects a participation rate of 15% – generally, a very favorable and statistically valid response rate. Several themes emerged from the survey that I'd like to share with you:

- The 15% return rate paired with the overall positive character of the responses indicates a high level of engagement and an interest in providing forward-looking direction to the Association.
- Overwhelmingly, respondents felt that membership in NFSA offers good value and is essential for those whose livelihoods depend on the sprinkler industry. Membership in NFSA was generally viewed as being superior in value to alternative groups.
- That said, economics both internal (including dues, fees, and particularly, the cost of annual seminar) and external (overall economic conditions) remained an underlying tone throughout the survey.
- Internal economics were marked by a desire to ensure that NFSA continues to be a good steward of contributed monies. Respondents expressed a desire for greater "transparency" as to how and where their money was being spent.
- Externally, there was a good deal of consternation over current economic conditions and how they impact the industry.
- As expected, Regional Operations, Engineering Services, and Training are valued the most by the respondents. It also appears that Regional Operations

- and Training are the areas members believe hold the most opportunities for NFSA to expand its value to members.
- Many members realize they are not using the NFSA resources as effectively as they potentially could, indicating a need for leadership to present pathways that will make it easier for members to take advantage of various services and programs offered by NFSA.
- There was a strong undercurrent that NFSA needs to attract new, younger members to ensure the continuing vitality of the Association.

It is clear that NFSA membership serves as a valuable and appreciated resource for long-term success in the sprinkler industry. Thank you to everyone who participated in the membership survey. Your insight as a member is invaluable and will help the Association assess and prioritize needs and opportunities as it moves forward in growing the industry and public support. ①

Tiffany Miller is an Account Supervisor with R&J Public Relations and has helped drive NFSA's communication initiatives, including IRC adoption, The Fire Sprinkler Incentive Act, and public and industry awareness campaigns for more than 5 years. She specializes in B2B and non-profit communication.



Tiffany Miller is an Account Supervisor with R&J Public Relations

Tiffany Miller

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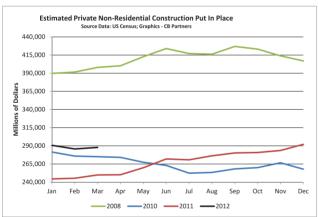
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Apparent Recessionary Bottom Reached in 2011; Expectations for 2012 and 2013

he new construction building numbers for private non-residential construction depicted below suggest that new private non-residential construction reached bottom in early 2011. Construction completions are moving upward. Not as fast as many would like, but the numbers suggest that indeed, completions reached bottom and are moving in the right direction.



The average growth rate for the entire year of 2011 for private non-residential construction was 2.8%. Total new private non-residential construction amounted to \$269 million for the year ending 12/31/11. The first quarter of 2012 is doing quite a bit better in terms of new private non-residential construction (1st revision numbers). Completed construction put in place is up 18.6% over the same period of 2011. Some reasons for this: The unusually warm winter for 2011/2012 compared with the unusually harsh winter of 2010/2011, and an improving economy.

Annual Private Non-Residential Construction Spending					
Period	Volume in \$ Thousands	% Change			
2010	\$261,796				
2011	269,049				
2010 to 2011		2.8%			
1 st Q 2011	56,085				
1 st Q 2012	66,544				
1 st Q 2011 to 1 st Q 2012		18.6%			

The public sector did not fare as well over the same period. For year ending 12/31/11, the public sector produced \$275 million in new non-residential structures, -6.1% less than 2010. Year over year first quarter results show the public non-residential construction down by 1.9%.

Annual Public Non-Residential Construction Spending						
Period	Volume in \$ Thousands	% Change				
2010	\$293,119					
2011	275,248					
2010 to 2011		-6.1%				
1 st Q 2011	55,049					
1 st Q 2012	54,000					
1 st Q 2011 to 1 st Q 2012		-1.9%				

As seen below each of the segments tracked showed reasonably healthy year over year increases in volume for the year ending 2011 except communication and religious completions.

Private Put in Place	US Millions 2012			% Δ in 2012 from same period 2011				
	Jan	Feb	Mar	Apr	Jan	Feb	Mar	Apr
Nonresidential	\$21,597	\$21,828	\$23,119	\$23,699	19.4%	19.6%	17.1%	16.7%
Manufacturing	3,204	3,161	3,456	3,485	46.7%	41.9%	37.8%	29.0%
Educational	1,088	1,205	1,362	1,430	24.3%	35.1%	33.1%	27.8%
Power	6,489	6,438	6,659	6,564	27.8%	27.2%	25.2%	22.3%
Office	1,742	1,832	2,003	2,115	3.9%	10.6%	13.3%	17.7%
Transportation	858	758	821	966	5.1%	-1.7%	4.6%	16.7%
Lodging	679	707	762	737	0.3%	5.5%	11.2%	14.6%
Amuse and rec	521	504	516	521	14.0%	14.3%	11.9%	11.6%
Commercial	3,058	3,122	3,265	3,490	15.8%	15.1%	12.5%	11.4%
Health care	2,374	2,429	2,472	2,631	12.8%	14.3%	6.5%	10.7%
Communication	1,160	1,259	1,385	1,335	2.7%	-1.6%	-7.5%	-5.9%
Religious	304	321	310	300	-17.2%	-3.9%	-10.4%	-10.7%

>> CONTINUED ON PAGE 38



Managing Director, CB Partners LLC

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As a whole, nonresidential public sector new construction completions in 2012 did not fare as well comparatively speaking compared with 2011 or with the private sector.

Public Put in Place	US Millions 2012			$\%~\Delta$ in 2012 from same period 2011				
	Jan	Feb	Mar	Apr	Jan	Feb	Mar	Apr
Nonresidential	\$17,536	\$17,643	\$18,821	\$20,421	-1.6%	-0.1%	-3.8%	-2.6%
Highway and street	3,682	3,840	4,337	5,337	-1.8%	0.9%	-1.9%	3.9%
Public safety	794	814	819	802	10.7%	14.6%	6.9%	2.3%
Amusement and recreation	661	648	693	723	0.5%	-5.8%	-8.0%	2.0%
Health care	825	847	856	907	0.1%	3.3%	-3.8%	1.6%
Sewage and waste disposal	1,665	1,687	1,752	1,729	2.0%	6.2%	0.8%	-1.3%
	951	950	998	1,050	-7.9%	-6.1%	-7.2%	-1.7%
Educational	4,838	4,728	5,034	5,281	1.3%	1.0%	-3.4%	-4.0%
	1,671	1,736	1,825	1,967	-8.7%	-2.7%	-8.3%	-6.1%
Commercial	246	241	253	248	5.1%	3.0%	-1.9%	-7.5%
	878	829	885	910	-1.7%	-7.7%	-7.6%	-9.2%
Power	761	748	750	901	-9.4%	-5.8%	-8.4%	-17.0%
Conservation and development	434	427	446	443	-19.2%	-23.6%	-23.1%	-23.4%

While the above return to growth bodes well for all in the Fire Protection Contracting and other construction trades, it is noteworthy to mention that construction completions are markedly lower than experienced at the peak. Tabled below are seasonally adjusted put in place completion levels for non-residential construction and each of the segments that involves building construction (hence completions that would necessarily involve fire sprinkler, suppression or alarm installation) as of the end of April 2012 compared with the peak.

Construction Put in place	Private Non- Residential			Public Non- Residential				
	Peak 9/30/08	4/30/12	Increase to reach Peak	Increase to reach 50% of Peak	Peak 9/30/10	4/30/12	Increase to reach Peak	Increase to reach 50% of Peak
Nonresidential Lodging	426,860 38,624	293,584 8.843	45% 337%	23% 168%	317,317	264,750	20%	10%
Office	59,684	25,341	136%	68%	13,328	10,908	22%	11%
Commercial	78,408	42,270	85%	43%	3,081	3,206	-4%	-2%
Health care	39,466	31,773	24%	12%	10,076	10,669	-6%	-3%
Educational	19,791	16,995	16%	8%	75,811	68,334	11%	5%
Manufacturing	71,580	40,993	75%	37%				

While completions continue at peak levels in some categories in public sector construction, it seems unlikely from the current US economic growth vantage point that construction completions will reach some of the historic peak levels highlighted in green above any time soon.

What to expect for the rest of 2012 and 2013?

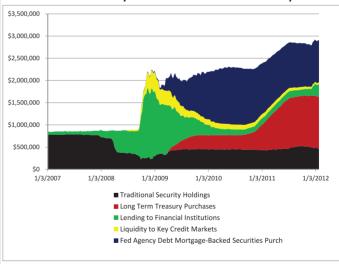
The expectation is that it will be choppy and with the growth having already occurred for the most part in 2012. Do not expect much from 2013. The reasoning is the following:

- Some if not much of the bounce in the year over year spring numbers is probably due to seasonality factors. This past winter was very mild comparatively speaking to last winter. Last winter was harsh comparatively speaking as it began in November and lasted long into spring. Last year's completion's in spring were low as a result. This year's completions were much greater than many other years due to the ability to work through winter at a high velocity.
- 2. Not much economic growth can happen at 2% GDP growth.

Most economists predict that the economy will grow in the 2% range for 2012. That is half the 4% to 6% rate that we are used to when recovering from a recession. In fact it is just above the 1.7% growth rate that the US Fed has stated that is needed to absorb the demand for jobs of new graduate entrants to the workforce.

- 3. It is unlikely that Congress will deal with tax reform in a meaningful way or a decision will be made with regard to the fiscal cliff that we are facing if the tax hikes and spending cuts are not addressed on time as they are scheduled to take effect if nothing is done by January 1, 2013. Mr. Bernanke stated in a recent presentation that unless Congress acts to avoid the fiscal cliff a shallow recession in the US could result.
- 4. The US economy, while growing, is in some respects teetering as the Fed reluctantly extended another monetary stimulus measure on 6/20/12 to assist. Mr. Bernanke just extended Operation Twist, a monetary easing program that puts liquidity into the system by retiring long term debt with debt of a much shorter maturity. The FOMC made this decision to stimulate the lagging economy and to hold down interest rates. Not a particularly good sign the need to do something more after having already injected close to \$2 trillion incremental funds into the system for liquidity stimulus.

Fed Monetary Intervention into US Economy



- 5. Issues in the Eurozone and the global slowing are giving investors pause and are concerning to US and other large country regulators as until there is a turning point upward, another recession is not out of the question.
- 6. Credit tightness is not supportive of greater construction activity. The banking system while now increasing its lending to commercial real estate, it is only doing so under the most cautious of scenarios. In order to stimulate broad based construction, credit conditions must loosen much more than they are



now. Indeed, Mr. Bernanke stated in his 6/20/12 speech that tight credit may be muting the impact of Fed actions.

- 7. Residential real estate is still a drag on the economy after 6 years from the peak in March 2006. It is not getting much traction moving forward. Residential real estate construction is still on life support according to the numbers and the opinions written by large building supply companies like USG. If the pundits are correct, there will be more foreclosures this year than in any previous year. This may occur in part as a result of the 2/8/12 \$26 billion settlement with the five largest US banks. 1.4 million homes may be foreclosed in 2012; 300,000 more than occurred in 2010, the largest year on record. According to Moody's, 5,000,000 more homes will be foreclosed between 2012 and 2015. Residential construction, home prices and the US economy may therefore continue to be affected negatively until the foreclosure situation regularizes.
- 8. Demand for a more broad based expansion of non-residential structures may not now exist due in part to a large existing unused stock and because of pricing pressure on values.
 - a. There is still such a large dollar backlog of underwater properties, that it will take several more years to overcome their impact. In 2010 and 2011, distressed property sales were estimated to be \$20.6 billion and \$21 billion respectively or 30% and 21% of total transaction value. This is up from 3% of total transaction value in 2008. The backlog of distressed non-residential properties unsold on the books of banks and other institutions in 2012 is estimated to be over 168,000, estimated by some to be worth more than a \$100 billion.
 - b. There is \$2 to \$2.5 trillion in non-residential mortgages outstanding according to the Fed. About 36% or \$800 billion in maturities are coming due between now and 2015. These borrowings were closed at the peak of the market in 2007

- and 2008. Valuations are reduced; many pundits speculate that large dollar CRE foreclosures are going to rock the market in the Non-Residential real estate market.
- Employment gains have not recovered the jobs lost by the recession. Until we get closer to recovery of all of the jobs lost, the shadow space created as a result of the layoffs will continue to depress the demand for new structures.
- 10. The nation's largest companies have reduced spending and hiring plans for the next quarter of 2012 as a result of concern for a weakening as opposed to a strengthening economic outlook. "....The Business Roundtable says 36 percent of its CEO members plan to add workers over the next six months. That's down from 42 percent when the survey was last taken three months ago.....Only 43 percent say they plan to step up spending on machinery, computers and other large goods, down from 48 percent. Most CEOs still expect sales to increase in the next six months.The Business Roundtable represents the CEOs of the 200 largest U.S. corporations. The survey is based on 164 responses received between May 17 and June 8."
- 11. Deterioration in the Middle East situation, an escalation of other tension or terrorist actions around the globe could negatively impact fuel prices. A sustained price increase, while unexpected at this point, combined with any of the other factors detailed could slow the US economy further.

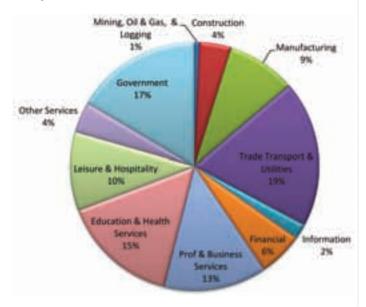
Note: it is likely that many of the above factors will have a multiyear impact. Therefore, one does not believe that 2013 will be much different in its tone than what may be experienced for the balance of 2012.

Where the growth in construction activity might be.

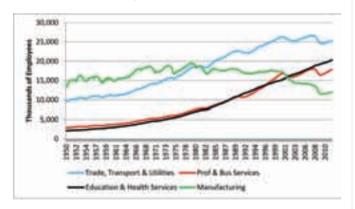
1. Areas of the country where employment is most numerous, is

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growing, and moreover where it is growing faster than the US economy as a whole. In terms of employment, the breakdown of US Nonfarm employment is as follows as of May 31, 2012. All categories in the pie chart below are private industry except the category entitled Government. Government includes all people employed by Federal, State and Local authorities and agencies thereof.



In most states, the largest sectors of employment are Trade, Transport & Utilities; Education and Health Services followed by Professional & Business Services. These sectors are those that have exhibited the most uninterrupted growth since 1960. In fact Education and Health Services exhibits the least pause in growth compared with the other two. See graph below representing 61% of non-farm employment as of 5/31/12.



Manufacturing (in green above) while presently growing in employees (adding 500k new employees since 1/31/10) and infrastructure spending, has reduced its employee size since the year May 1998 by 32% from 17.3 mm to 11.9 mm employees May 31, 2012 in the USA. Government is shrinking and is likely to con-

tinue to shrink in the near term due to budget issues.

- 2. Industries and companies within those industries that have the money to grow, which are likely to grow rather than reduce in size; and industries that may grow in this economy in spite of the economic situation. Some of the industries and situation where focus should be heeded, for example:
 - a. The largest companies in the US and the World that operate in the US. Many of these companies are flush with cash and may grow and change and therefore build new/remodel and/or retrofit structures in spite of the economy. Why? Because they have the cash to do it and they want it their way or no way.
 - b. Healthcare and social services. This should continue to grow and change for the next several decades. The demographics of the baby boomer generation will dictate this.
 - c. Big pharmaceutical
 - d. Data rooms. Cloud computing and storage is a growing part of this economy. As a result for the near term, next five to ten years there will be a continuing need for the construction of buildings that house the computers and storage devices that will house the data.
 - e. Technology & Software
 - f. Manufacturing. Due to the balance sheet of the USA, the US currency may continue its weakness against other strong currencies around the world. There may be a continuing resurgence and investment in manufacturing in the US as a result. An example of this is the movement of manufacturing and assembly to the US from Japan of more automobiles than in the past. The reason, diversification of supply chain and lower cost of manufacture in the US than in Japan, due to the strengthening of the yen against the US dollar. Another example is 3D printing manufacturing.
 - g. Energy
 - h. Retrofit, remodeling and tenant build-out
 - i. Regional and niche growth areas
 - j. Multifamily housing
 - k. Senior housing

NOTE:

With the exception of the quotation highlighted above, all data represented in this summary was obtained from US Government sources. \bullet

NORTHEAST REGION

DOMINICK KASMAUSKAS

Associate Director of Regional Operations - North



Rhode Island Governor Signs Comprehensive Fire Safety Act

The Governor of

Rhode Island signed into law the "Comprehensive Fire Safety Act." The act brings NFPA1 and NFPA 101 to the 2012 editions and NFPA 72 up to the 2010 edition. Following is excerpts of the Act:

"...The Fire Safety Code Board of Appeal & Review is hereby granted the authority to adopt and implement any or all of the above National Fire Protection Association codes, with amendments, prior to January 1,2013, pursuant to its rulemaking authority. If one or more of the above-referenced NFPA codes is so adopted by the board, prior to January 1, 2013, the state fire marshal shall have the above enforcement power on the effective date of the rules and regulations adopted by the fire safety board..."

"...Effective January 1, 2013, the Fire Code (NFPA 1) and the Life Safety Code (NFPA 101) 2012 editions, and the National Fire Alarm & Signaling Code (NFPA 72), 2010 edition of the National Fire Protection Association, Inc., with annexes, except as updated, amended, altered or deleted and by the addition of certain provisions, as indicated in the rules and regulations adopted by the fire safety code board, is hereby adopted as the "Rhode Island Fire Safety Code." The Fire Safety Code Board of Appeal & Review is hereby granted the authority to adopt and implement any or all of the above National Fire Protection Association codes, with amendments, prior to the January 1, 2013, pursuant to its rulemaking authority. The Fire Safety Code Board of Appeal and Review shall consider the following when promulgating the aforementioned rules and regulations:

(1) For business, storage, mercantile and industrial occupancies, the board shall consider alternative methods of code

compliance, including, but not limited to, the use of vertical and horizontal fire separation when determining the square footage for fire alarm and sprinkler requirements; allowing non-monitored fire alarm systems to be installed in accordance with the methods outlined in NFPA 72, 2010 edition, and shall further consider alternative methods to ensure the consistent enforcement of the code.

(2) For occupancy groups previously granted relief including, but not limited to, existing apartments, places of worship, marinas and the marine trade industry, funeral homes, restaurants and non-residential barns, the board shall consider the appropriateness of the reincorporation of this relief into the 2012 codes".

Northeast Regional Manager Dom Kasmauskas is seeking clarification regarding NFPA 101 (2012) which includes the provision for one- & two-family homes to see if that section is left intact.

Dominick Kasmauskas is the NFSA's Associate Director of Regional Operations-North and Regional Manager for the Northeast Region. He can be reached at Kasmauskas@nfsa.org or1436 Altamont Ave. Suite 147 Rotterdam, New York 12303, Phone 518.937.6589, Fax 518.836.0210.

MID-ATLANTIC

RAY LONABAUGH

Regional Manager



Non-Opt-Out IRC Residential Fire Sprinkler Requirement in Maryland

The Maryland State Firemen's Residential Fire Sprinkler Initiative Committee was successful in having HB-377/SB-602 signed into law, prohibiting local code adoption opt-out of the residential fire requirement in the International Residential Code after October 1, 2012.

Allegheny County Commissioners in Western Maryland have voiced their opinion against the new law during a June



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workshop meeting. The commissioners claim the new law will divert future home construction and residents to neighboring states due to costs. The Allegheny County Commissioners are looking for ways to reduce the impact for those planning to build in the county.

As reported in last month's Mid-Atlantic Regional Report, the City of Frostburg in Allegheny County, Maryland took a proactive approach to the new law when they voted 5-0 in favor of the residential fire sprinkler mandate. The Mayor and Council intend to offer incentives that include a \$1,000.00 reimbursement of the water main tap fee and a three-year real estate tax reduction, whereas, the city would receive taxes for the value of the land and 20% of the new construction.

Garrett County has reviewed the new non-opt-out residential sprinkler law and has commented on the costs. The county will follow the state with their adoption of the 2012 Residential and Building Codes after October 1, 2012. Garrett County had been one of the counties that had opted-out of the residential fire sprinkler requirement in the past

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

SOUTHEAST REGION

WAYNE WAGGONER

Associate Director of Regional Operations - South



North Carolina Firefighters Installing Sprinklers in Habitat Homes

Volunteers in a group run by Wilmington Captain Kenneth Bogan made it their mission to equip houses built by Habitat

for Humanity with fire sprinkler systems.

The sprinkler system proved its worth when a fire broke out in a Habitat for Humanity home. Damage to the house, built by a local Habitat for Humanity chapter in a north Wilmington neighborhood, was confined to one bedroom. Although they were inside when the fire began, the residents were unharmed.

For firefighters, the limited toll inflicted by that fire brought into sharp relief the benefits afforded by residential fire sprinkler systems.

"Had we not had a sprinkler in it, we'd be looking at an empty shell of a house," said Esmond Anderson, Cape Fear Habitat for Humanity's construction manager.

Volunteers in a group run by Captain Bogan made it their mission to equip houses built by Habitat with fire sprinkler systems. To date, volunteers installed fire sprinklers in 32 houses around the city constructed by the nonprofit organization. Bogan said the goal is to prove fire sprinklers are easily installed, cost little for upkeep and are effective at saving lives

Volunteers are drawn mostly from the fire department but also including their family members and people from the general community. Except for a brief stint where a meter issue resulted in a brief suspension of the program, the group has hooked up fire sprinklers in every Habitat house built in the past four years. Firefighters work on their days off, at no cost to the city. While firefighters pursue sprinklers in all new construction, state officials said it remains unclear when the issue might come before the building council again.

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

FLORIDA & PUERTO RICO

LORRELL BUSH

Regional Manager



Florida State Fire Marshal Accepts NICET Alternative

It has been signed

and posted and, pending no objection, as of July 11, 2012 the Florida State Fire Marshal will accept NICET alternative as approved by the State Fire Marshal's (SFM) office. The Academy of Fire Sprinkler Technology has a program in place that has been approved by the SFM and ready to go. They will be offering a three-day training program in the last week of August in Boca Raton, FL with the Academy exam being offered on day four. Watch the



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Florida Fire Sprinkler Association website to be the first to take advantage of this opportunity. If you have any employees who are not yet certified or have obtained a NICET level I, they can take advantage of this class with test on day four.

"We are very excited that we now can offer our contractors in the state of Florida an alternative to the NICET program for their inspectors," said NFSA Florida Regional Manager Lorell Bush.

For more information, contact Florida Regional Manager Lorrell Bush.

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

GREAT LAKES REGION

RON BROWN
Regional Manager



Kentucky Housing, Building and Construction Commission Adopts 2012 IBC

In June, the Kentucky Housing, Building and Construction Commission unanimously adopted the 2012 International Building Code (IBC) with several amendments. The proposed code will go to the Kentucky legislature for consideration. The code as adopted and fully implemented will expand the fire sprinkler requirement in multi-family residential structures newly constructed in the state. Full implementation will likely occur the first quarter of 2013.

NFSA Great Lakes Regional Manager Ron Brown and NFPA Regional Manager Russ Sanders have been working on Chapter 9 modifications to the code for the last 6 months and are very pleased with the progress that was made. As a result of the changes in the current code more Kentucky citizens will be living in fire safe housing in the future.

West Virginia Fire Commission Adopts 2012 IBC

In June, the West Virginia Fire Commission voted to adopt the 2012 International Building Code (IBC) and to re-adopt the 2009 International Residential Code in full. The action means the single-family and townhouse fire sprinkler requirement would now be back in the code after being removed by the Legislature in 2010. It is assumed the Home Builders of West Virginia will take the removal guestion back to the Legislature as the code moves forward to full implementation. The West Virginia Fire Marshal and Fire Commission are taking residential fire sprinklers very seriously in light of 64 West Virginia civilian fire deaths that have occurred in the past year. They have also helped to have fire sprinklers installed in some Habitat for Humanity homes in the Charleston area in cooperation with the Charleston Fire Department.

The State Fire Marshal, the WV State Fire Commission and the Fire Marshal's staff are to be complimented for the work they are doing to educate and inform all stakeholders and citizens of the state regarding the life safety value of fire sprinklers.

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.

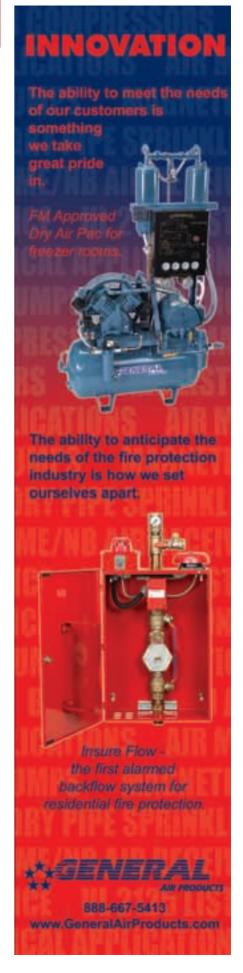
NORTH CENTRAL REGION

BOB KLEINHEINZ Regional Manager



Gurnee, Illinois Passes IRC Fire Sprinkler Requirement

The Village of Gurnee, Illinois passed the fire sprinkler portion of the IRC. This was a difficult journey as non-factual statements that the real estate association brought before the board had to be addressed. These same



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myths and issues are brought before every board that the real estate association addresses. Board Trustees want to do the right thing for their town, making this decision a difficult one. We are proud of the Mayor and the trustees from Gurnee for making the right call and thankful to all who worked so hard to educate the officials and get this requirement passed.

Minnesota Legislative Update

Bad news, as the Minnesota Senate amended SF1717 (DOL department bill) with the anti-sprinkler language that the governor vetoed. The Commissioner quickly let the House author know that the language was unacceptable and the bill coming out of the House and any bill to the Governor would have to be clean of this amendment.

The House author will not accept this amendment on the House floor when the bill comes up for final passage. The bill will have to go to conference committee and have the provision removed.

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

SOUTH CENTRAL REGION

CHRIS GAUT Regional Manager



Reconstruction of Texas Governor's Mansion Includes Fire Sprinkler System

In mid-July the completion of the restoration of the Texas Governor's Mansion in Austin, an156-year-old building, was announced.

The restoration took more than four years to complete. Texas lawmakers appropriated \$21.5 million for the project, and the first lady raised \$3.5 million from private donors. Crews replaced the roof, made repairs to the mansion's exterior and renovated the kitchen, adding 1,700 square feet to the mansion's west side.

They installed rooftop solar panels and a geothermal heat pump to reduce energy costs.

The Texas first family moved out in October 2007 for a \$10 million project to upgrade mechanical systems, including fire alarms, fire sprinkler systems, plumbing and wiring. The mansion was partially destroyed by a four-alarm fire during the early morning of June 8, 2008. The historic furniture and artifacts that normally decorate the mansion's rooms were not harmed because they had already been removed.

The fire charred the columns that stand outside the mansion. The estimated 2 million gallons of water used to extinguish the fire caused parts of the roof to collapse.

The governor described being back in the mansion as "eerie," saying it looked exactly the way it did when he left in 2007. He likened the fire to a near-death experience for the building, which he said was minutes away from total destruction.

The two-story Greek Revival house has been the official home of every Texas governor, including Sam Houston and George W. Bush, since it was completed in 1856.

Chris Gaut is the NFSA Regional Manager for the South Central Region. He can be reached at gaut@nfsa.org or NFSA Central Region Office, 237 E. Fifth St. #135, Eureka, MO 63025, Phone 636.692.8206, Fax 636.410.7700.

GREAT PLAINS REGION

TBA



Cheyenne Fire & Rescue Goes Digital with Digital Billboard Message

Chevenne Fire

and Rescue in Cheyenne, Wyoming has gone digital! Cheyenne Fire and Rescue's digital billboard was used in advance of an all-day event in conjunction with Cheyenne Superday held in Lion's Park in Cheyenne on June 23, 2012. The all-day demonstration and education on the value of residential fire sprinklers

was highlighted with a side-by-side fire demonstration. NFSA's Fire Team USA was present for the event and Director of Public Fire Protection Vickie Prichett attended the events of the day. Several thousand people passed through Cheyenne Fire's booth to learn about the value of residential fire sprinklers and how they save lives, property and the environment.

Fire Sprinkler Save in the South Metro Colorado Fire Service Area

Andy Lyon of South Metro Fire Rescue Authority reported that a residential fire sprinkler controlled a fire at a Douglas County, Colorado apartment building on May 31. This is the third sprinkler save this year for South Metro Fire.

South Metro firefighters were called to the blaze shortly before 9 p.m. They forced entry into a fourth floor apartment and found a fire in the bathroom, which had been mostly extinguished by a single fire sprinkler.

"We've seen several examples lately where fire sprinklers have been very effective at limiting property damage and preventing injury or the loss of a life. From apartments to single-family homes, their track record is impressive," said Assistant Chief Mike Dell'Orfano.

Investigators say the occupants of the apartment had left home earlier in the day, believing they had put out a candle burning in the bathroom. The candle eventually melted and ignited other items around it. Units below the affected apartment were damaged by water but fire damage to the apartment was minimal.

SOUTHWEST REGION

BRUCE LECAIR Regional Manager



Ex-Honolulu
Fire Captain
Rebuilds Fire
Ravaged House
with Residential
Fire Sprinklers

On Aug. 2nd of 2011, Richard Soo, a 28-year veteran with the Honolulu Fire

>> CONTINUED FROM PAGE 44

Department was away from home when he received a phone call from his son that their home was on fire. The fire was caused by a pot of mashed potatoes left on the stove ravaging the second and third floors of Soo's 10-year-old duplex in the Kalawahine subdivision near Punch Bowl. The first floor sustained water damage, for a total loss of nearly \$300,000 to the structure and contents.

With assistance from National Fire Sprinkler Association Regional Manager Bruce Lecair and Ray Bizal from the National Fire Protection Association and donations from the fire sprinkler industry, Mr. Soo's home is being rebuilt with a residential fire sprinkler system designed by Sam Dannaway and Associates. The fire sprinkler system will add a higher degree of life-safety protecting not just the home, but more importantly the Soo family.

The donations from the fire sprinkler industry included fire sprinklers from Reliable Automatic Sprinkler Company, Inc., sprinkler pipe and fittings from Lubrizol-Blazemaster, hangers and bracing from Tolco-Cooper Industries, system plans and design from Sam Dannaway and Associates. The system was installed by Action Fire Sprinkler. All the materials were shipped to Oahu free by Pace Supply.

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

NORTHWEST REGION

SUZANNE MAYR

Regional Manager



Puget Sound Chapter Holds Elections

Thanks to **David Chaltry**, Western

States Fire Protection, for his service as Puget Sound Chapter Chair and past Vice-Chair.

Congratulations to the newly-elected Chapter officers for a term of June 2012 to June 2014:

- Clark Potter, Northwest Fire Systems, Chapter Chair
- Steve Hobart, Cosco Fire Protection, Chapter Vice-Chair (re-elected)
- Brad Bull, McKinstry, Chapter Treasurer
- Evan Boulanger, Patriot Fire Protection (re-elected)

Pencil in these Puget Sound Chapter Meeting dates – more details to follow:

Oct. 11, 2012	Lunch meeting
Dec. 13, 2012	Lunch meeting
Feb. 14, 2013	Lunch meeting
April 11, 2013	Lunch meeting
June 13, 2013	Lunch meeting
Aug. 8, 2013	Details to be
	determined

September or October Regional Conference Oct. 10, 2013 Lunch meeting

Dec. 12, 2013 Lunch meeting

Suzanne Mayr is the NFSA Regional Manager for the Northwest Region. She can be contacted at mayr@nfsa.org or 3411 North 19th St. Tacoma, Washington 98466, phone: 253.208.8467. ①

FUTURE NFSA ANNUAL SEMINAR SCHEDULE

NFSA Annual Seminar and North American Fire Sprinkler Expo™

Caesar's Palace Las Vegas, Nevada April 4 - 6, 2013 NFSA Annual Seminar Atlantis, Bahamas May 8 - 10, 2014 NFSA Annual Seminar & Exhibition

Hilton Bonnet Creek Resort Orlando, Florida April 30 -May 2, 2015



HO NEWS

Steve Hart Finally Retires! Sort of...

After some 47 years of work in around the fire protection industry and attempting retirement several times, **Steve Hart** former Director of Industry Promotion, NFSA Consultant, retired as of June 30th.

Steve was an Apprentice to Journeymen Electricians, a Building Inspector, Fire Inspector, Fire Investigator, Fire Marshal, Building Official, Director of the Fire Sprinkler Advisory Board of Southern California, Published Author and Fire Service Consultant who conducted special investigations on numerous fire incidents, including the fatal fire in Truckee, California involv-



ing antifreeze in a home fire sprinkler system. Steve received the Cal Fire Director's Partnership Award in January for his work on the adoption of the 2010 Califor-

nia Residential Code with the regulation requiring residential fire sprinklers in all new one- and two- family dwellings and townhomes.

In addition, Steve served as Deputy Director of the State Fire Marshal (an appointed position) and held several key positions at the Office of the State Fire Marshal while serving in that capacity. He is still a standing member of several State Fire Marshal Advisory Committees and Task Forces. Steve has conducted special investigations on numerous fire incidents, the latest being the fatal fire in Truckee involving antifreeze in a home fire sprinkler system.

In his "retirement" Steve will be publishing a series of monthly articles entitled, "Yesterday... Today... and Tomorrow" on the Los Angeles Area Fire Marshals Association Discussion List, with the goals of developing articles and research papers intended to provide information directed to the "Fire Prevention Professional" from Steve's and his guest writers experiences as Fire Marshals to the newly beginning Fire Inspector/Fire Prevention Officer/Specialist.



Ken Isman and Jim Lake Members of Winning Project Committee

NFSA's Vice President of Engineering **Ken Isman** and Vice President of Communications and Training **Jim Lake** (who missed the photo opportunity) were members of a committee that worked on a project that received the 2012 Fire Protection Research Foundation Medal.

The project was titled High Volume/Low Speed Fans and Sprinkler Operation. The Fire Protection Research Foundation Medal recognizes a Foundation project completed in 2011 that best exemplifies the Foundation's fire safety mission and the collaborative approach to execution that is the hallmark of all Foundation projects. The winner is recommended to the chair of the Foundation's Board by an awards committee made up of members of the Board, Research Advisory Committee and NFPA technical staff members.

The project focused on informing spacing and other installation requirements in NFPA 13 Standard for the Installation of Sprinkler Systems by initiating a comprehensive research program with two phases. The Phase II research activities involved the evaluation of the effect of the high volume low speed (HVLS) fans upon the performance of both ESFR (early suppression, fast response) and CMDA (control mode density area) sprinklers protecting both rack storage and palletized commodities. The fans provided a significant energy savings for industrial facilities and were quickly introduced into the market without an assessment of their impact on sprinkler effectiveness and no guidance in NFPA 13. The timeliness of this research provided direct input into NFPA 13, removing this barrier to the further use of the fans.

NFSA Personnel Announcements

NFSA has announced that as part of a reorganization of the Training and Communications department, **Deborah Somers**' title has been changed to Events Manager, a title more closely aligned to the meeting planning activities she performs for the Association such as those for annual seminars and exhibitions, Board of Directors and committee meetings and all in-class training seminars. In her role, she will report directly to Jim Lake, NFSA's Vice President of Training and Communications and will be working with all departments to increase the visibility and promotion of NFSA events.

She will also provide administrative assistance to the International Fire Sprinkler Association

NFSA is also pleased to announce that it has appointed **Sandra Danzi** to the position of Labor Relations Assistant. Effective July 30, 2012, Sandra will be working with Senior Vice President of Industrial Relations, Fred Barall and Vice President of Industrial Relations, Jim Lynch, in the Association's Labor Department. Sandra was formerly with the United Federation of Teachers, New York City's teachers union. She works out of NFSA's headquarters in Patterson, New York and can be reached at 845.878.4200 ext. 130 or danzi@nfsa.org.

EBL Names Kleponis as Principal

EBL Engineers, a Baltimore-based consulting engineering firm, is pleased to announce the promotion of **Anthony J.** Kleponis, P.E., LEED AP to Principal.

As a graduate of the University of Maryland in Mechanical Engineering, Mr. Kleponis has over 24 years of experience as a registered mechanical engineer. His experience as a project manager, estimator and engineer with a mechanical systems contractor enhances his analysis and design capabilities. In his 14-year tenure with EBL he has been responsible for complex project designs for a wide variety of new buildings, renovations and infrastructure upgrades. In addition to designing HVAC, boiler and chiller plants, plumbing and piping systems, he has completed initial building and system condition reports including field inspection and testing, developed detailed operation and maintenance manuals for a wide variety of mechanical systems, and performed engineering construction administration services inclusive of shop drawing review. His experience as a project manager, estimator and engineer with a mechanical systems contractor enhances his analysis and design capabilities.

New Regional Sales Manager Added to Viking SupplyNet's **South Region Sales Team**

Viking SupplyNet announces that Jeff Graham has joined the company as a new Regional Sales Manager effective June 11th, 2012. In this role, Graham will be responsible for leading the company's total sales efforts throughout the Texas and Oklahoma markets.

Graham comes to Viking SupplyNet from Ameripipe Supply, where he served as a Division Manager, and then Regional Sales Manager for the fire sprinkler contractor community in south Texas. His previous experience also includes roles as a District Manager for Mc Nichols Company, a nationwide specialty metals manufacturer, and as a Vice President for Superior Grating, Inc., a regional fabricator in Houston, Texas.

Jeff Graham's new contact information, as well as contact information for the entire Viking SupplyNet sales team, can be found online at www.vikinggroupinc.com/ en/worldwide.

Wavne Automatic's David Leon awarded 1st Place in Associated Builders and Contractor's **National Craft Championship**

Wayne Automatic Sprinkler's David **Leon** of Wayne's Tampa office was awarded the first place in the Associated Builders and Contractor's (ABC) National Craft Championship competition in the Fire Sprinkler category. David represented the ABC Florida Gulf Coast Chapter at the competition held in San Antonio, Texas on April 24th - 27th 2012.

A field of 127 craft trainees competed for top honors in 12 competitions representing 10 crafts. Competitors first took an intense, twohour written exam and then competed in daylong hands-on practical performance tests in: residential/commercial carpentry; residential/commercial electrical; commercial/industrial electrical; fire sprinkler; HVAC; insulation; millwright/industrial maintenance mechanic; pipefitting; plumbing; sheet metal; pipe welding; and structural welding.

For more information visit www. waynefire.com 🛈

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Anvil: the importance of integrity

At Anvil International, we believe in our products because we work as a team toward a common goal; excellence. People with pride build our products to surpass customer expectations. Their integrity nurtures trust with our customers - a trust we take very seriously. We believe in delivering great products, accurate information, and timely shipping so you can get on with your job. It's the best way



we know to build connections that last - product to application, people to people.

Photographed at our Columbia, PA foundry — U.S.A.



















Online www.anvilintl.com/SQ

SPRINKLING OF NEWS

Viking's New Flat Plate Concealed Sidewall Sprinkler for Ordinary Hazard Occupancies

Viking Corporation announces a new "flat plate concealed" horizontal sidewall sprinkler for light and ordinary hazard occupancies (Group 1 and 2). The new model VK481uses the same innovative design platform as the VK480 concealed sidewall for residential applications and VK680 extended coverage concealed sidewall sprinkler for commercial properties.

The 5.6 (81) K factor VK481 has a $\frac{1}{2^{n}}$ in (15 mm) NPT thread size and is available in 165°F (74°C) and 220°F (104°C) temperature ratings. The cULus Listed, quick response sprinkler can be installed with the deflector between 4 and 12 in (102-305 mm) below the ceiling to better accommodate potential installation obstructions, such as light fixtures and crown moldings. With a total length of only 2 in (51 mm), the VK481 sprinkler's compact design also allows for easier installation in tight wall spaces.

The sprinkler's flat concealed cover plate provides an enhanced aesthetic solution for any area with an ordinary hazard classification. This may include applications such as hospitals, casinos, residence halls, automotive showrooms, libraries, mercantile, and exhibition areas. The VK481 cover plate, which is the same cover plate used for the VK480 and VK680 sprinklers, is offered in a standard white finish and is available in temperature ratings of 135°F (57°C) and 165°F (74°C). Additionally, through Viking's UL Listed custom paint program, Viking can apply virtually any brand and type of paint to the cover plate for a clean, seamless installed appearance.

For more information, visit www.vikinggroupinc.com or call 800-968-9501.

■ System Sensor InnovairFlex[™] Adds Supply and Return: D4120 and D4S

The System Sensor InnovairFlex D4120 4-wire photoelectric duct smoke detec-

tor features a pivoting housing that fits both square and rectangular footprints and mounts to round or rectangular ductwork. This unit senses smoke in the most challenging conditions, operating in airflow speeds of 100 to 4,000 feet per minute, temperatures of -4°F to 158°F, and a humidity range of 0 to 95 percent (noncondensing).

For applications that require supply and return detection, InnovairFlex has a 2-to-1 sensor to power board capability using the D4120 and the D4S. This capability eliminates the need to run power to a second power board for these applications, significantly reducing installation time and costs. It also reduces maintenance and testing costs by enabling the testing of two sensors from a single location. For more information, visit www.systemsensor.com/flex.

To learn more, contact System Sensor at 800/736-7672 or visit systemsensor. com.



SPRINKLING OF NEWS

■ Uponor Academy Now Offers CEUs for Continuing Education

Professionals looking to expand their knowledge in radiant heating and cooling, plumbing and fire sprinkler systems can now receive continuing education units (CEUs) when attending the following Uponor Academy training courses:

- Radiant Hydronics and Design with Controls
- Advanced Radiant Hydronics with Advanced Design Suite™ (ADS)
- Climate Control[™] Network System
- Geothermal Design and Application (receive IGSHPA accreditation)
- AquaSAFETM Multipurpose Fire Sprinkler System Levels I and II
- Commercial PEX Plumbing Systems To learn more about the course offerings and to register, visit www.uponorpro. com/training.

■ Uponor PEX, EP Fittings up to 2" Listed for Use in Multipurpose Fire Sprinkler Systems

Uponor announces that the vast majority of its ProPEX® engineered polymer (EP) fittings, lead-free (LF) brass sweat and threaded adapters, and larger-diameter Uponor AquaPEX® tubing (all up to 2") are now listed to UL 1821 and ULC/ORD-C199P for use in AquaSAFE™ Residential Multipurpose Fire Sprinkler Systems. This new listing allows more design options and material cost savings for AquaSAFE systems and also provides the most comprehensive offering of fittings and crosslinked polyethylene (PEX-a) tubing for multipurpose fire sprinkler systems from a single manufacturer.

The new listing also allows designers to use $\sqrt[3]{4}$ " tubing and fittings for a majority of their systems now that they can upsize the supply pipes. The $\sqrt[3]{4}$ " systems will be much easier for contractors to install compared to 1" systems.

Using EP instead of brass, can reduce the overall list price on an average system by as much as 10 percent.

For more information, visit www.up-onorpro.com, www.uponor-usa.com or call (800) 321-4739.

■ Society's World Burn Congress in Milwaukee September 12 - 15

From September 12-15, 2012, more than 800 burn survivors, their families, caregivers, burn care professionals and firefighters will attend the Phoenix Society's World Burn Congress at the Frontier Airlines Center in Milwaukee, WI to share experiences with other survivors, increase their knowledge about recovery and learn about support networks.

Speakers include:

- J. R. Martinez, an Iraq War Veteran and TV actor and winner of last season's Dancing with the Stars (ABC), who was injured in Iraq when his Humvee hit a landmine.
- Kyle Maynard, a motivational speaker, author, entrepreneur and athlete born in 1986 with arms that end at the elbows and legs near the knees. Despite these challenges Kyle has wrestled for one of the best teams in the Southeast, set records in weightlifting, fought in mixed martial arts, and most recently became the first man to crawl on his own to the summit of Mt. Kilimanjaro, the highest mountain in Africa.

For more information, or to view a copy of the convention program brochure including the workshops, bios and schedule of events, visit www.phoenix-society.org.

Maryland State Fire Marshal Receives National Bringing Safety Home Award

The Home Fire Sprinkler Coalition (HFSC) and the National Fire Protection Association's (NFPA) Fire Sprinkler Initiative announced that William Barnard, Maryland State Fire Marshal, is the recipient of the 2012 Bringing Safety Home Award. The two nonprofits join forces to recognize the efforts of fire chiefs who use HFSC's educational materials and the resources of the Fire Sprinkler Initiative to ensure that decision makers have accurate information as new or updated residential fire sprinkler codes are considered.

Representatives of HFSC and NFPA presented the award to Chief Barnard at Fire-Rescue International 2012 in Denver,

Colorado. The presentation took place during the International Association of Fire Chiefs (IAFC) Fire and Life Safety Section meeting on August 2nd.

■ Victaulic Introduces AB1 Bracket

Victaulic introduces the new Style AB1 Bracket, an extension to the existing AquaFlex® sprinkler fitting line of products. This new AquaFlex bracket eliminates the need for sprinkler installers to handle ceiling tiles, cut holes in ceiling tiles and coordinate with the ceiling trade on the jobsite, reducing hands-on installation time by as much as 39 percent.

The Style AB1 Bracket benefits from all the great qualities of the AquaFlex onepiece bracket system, including:

- Patented 1-Bee2 open-gate technology
- Superior quality braided hose offering with mechanical unions
- Optional pre-assembled sprinkler systems

The Style AB1 Bracket can be used with Series AQB Braided Systems (FM Approved) for suspended or hard commercial ceilings and is available in 24" and 48" lengths.

The AquaFlex product line offers fast and dependable installation, durable performance and is cost effective for maintenance and retrofit applications.

For more information, visit www.victau-lic.com.

■ New PSAs from Home Fire Sprinkler Coalition

The Home Fire Sprinkler Coalition (HFSC) introduces three new public service announcements (PSAs) and corresponding print advertisements for use by the fire service to help dispel fire sprinkler myths fueled by movies. Each comical PSA spoofs a movie set where a burglar tries to clear a room full of people by setting off the sprinkler system. His antics fail, but the humor succeeds at entertaining and educating.

HFSC also announced a new \$1,000 stipend program to help fire departments customize the PSAs with logos

SPRINKLING OF NEWS

>> CONTINUED FROM PAGE 49

and contact information and place them in their local media such as TV stations, movie theaters, and websites, while offering similar print advertisements for local newspapers. Fifty \$1,000 stipends will be awarded. Only fire departments signed up for the free BUILT FOR LIFE Fire Department Program can apply at: www.homefiresprinkler.org/psa-stipend-application. Customization will also be provided for free to an additional 100 BFLFDs.

■ Viking Introduces New "Corridor Sprinkler"

Viking Corporation announces the availability of a new quick response, extended coverage, horizontal sidewall sprinkler designed specifically to protect corridors, hallways, decks, walkways, and any other application where a wide spray pattern is optimal. The new model VK638, which is cULus Listed for Light Hazard occupancies and has a K Factor of 8.0 (115), is available in both recessed and domed

concealed models.

The new "Corridor Sprinkler" uses Viking's patented flow-shaper technology to provide larger coverage areas at lower flow and pressure requirements. The VK638 is cULus Listed for 28 x 12 ft (8,5 x 3,7 m) and 28 x 14 ft (8,5 x 4,3 m) coverage areas, with the deflector installed up to 12 in (305 mm) below the ceiling. The 28 x 12 ft (8,5 x 3,7 m) coverage area is unique in the industry, providing a significant flow and pressure advantage for fire sprinkler systems where this area of coverage can be applied.

Both the recessed and domed concealed models are available in 135°F (57°C), 155°F (68°C), 175°F (79°C), and 200°F (93°C) temperature ratings. The VK638 has a K Factor of 8.0 (115) and a 3/4" inch (20 mm) thread size. The new sprinkler is available standard finishes that include brass, white, chrome, and black as well as a nearly unlimited variety of custom colors.

For more information visit www.viking-groupinc.com or call 800-968-9501.

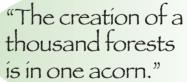
■ Tyco Fire Protection Products Introduces Design Services Group

Tyco Fire Protection Products introduces fire protection design solutions offered by the Design Services Group. The Design Services Group has the ability to prepare a residential sprinkler system design based on customer-supplied construction plans and an easy-to-complete online request form. The residential design package includes a cost-effective, code-compliant sprinkler and piping plan, hydraulic calculations, fluid delivery time (FDT) calculations for dry systems, material takeoff quantity list, technical data sheets for all components, and an installation guide for Blazemaster® CPVC pipe and fittings; bringing the residential construction industry a one-stop resource for fire protection design services. The Design Services Group is available via telephone, during and after installation to provide ongoing technical assistance for your system.

Additionally, the Design Services Group offers hydraulic calculations, solution water transit time calculations for foam systems, dry system fluid delivery time (FDT) calculations, and conversion of AutoCAD drawings to BIM 3D models for contractors, installers, and consulting engineers for fire protection projects.

Visit www.tyco-fire.com, for more information and to request a design proposal.





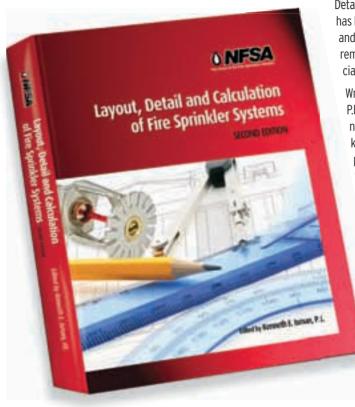


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RESOURCE CENTER

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



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

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

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

The text retails for \$95 (plus S&H) to members of the NFSA and \$145 for non-members (plus S&H). However, as an extra added bonus, to reward the people that purchased the first edition of the book, if you clip Ken Isman's picture out of the 1st Edition back cover flap and send it back to us with your order (mail orders only, no fax orders for this offer), then you can take another \$10 off the price of a single book (\$70 + S&H for members and \$120 for non-members). To get your book, fill out the following form and return it with your payment.

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COUNTRY	PHONE	E-MAIL	
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MEMBERS1 x \$8	80 = \$	NON-MEMBERS1 x \$130 = \$	
+S&H: (\$10 book)	+ Sales Tax: (NY only based	d on destination) = Total: \$	
☐ Enclosed is a check	or money order, or \square Please ch	narge my: AMEX MASTERCARD VISA	
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Return to: NFSA Resource Center, 40 Jon Barrett Road, Patterson, NY 12563 or Fax to (845) 878-4215





TO DON PAMPLIN:

Don,

I just wanted to drop you a line and say THANKS for writing the column on the ridiculous situation we are experiencing in the City of Chicago (**SQ** magazine May/June 2012). You hit the proverbial nail right on the head - what the City fathers & building owners have cooked up is a real travesty.

Thanks for helping to get out the word about fire safety (or the lack there-of) in Chicago!!

Richard M. Ray, PE President Cybor Fire Protection Co. Downers Grove, IL

TO RUSS FLEMING:

Dear Russ:

Thank you, and NFSA, for the award you presented to me on June 1, 2012. It was most pleasant to have a chance to talk with you even if only briefly and that applies to Ken Isman as well. I was glad that he is still with NFSA in spite of this era of high mobility. Thank you again and keep up the good work of NFSA.

Respectfully, Charlie Barnett

P.S. Congratulations on election to President.

TO NFSA:

Good morning,

This correspondence is in regards to the July/August 2012 issue of your magazine #173.I wanted to thank Mr. Kenneth E. Isman for his article in regards to the top 10 technical trends. I found this article very informative and very insightful. As a past sprinkler system designer and now an AHJ, I find it invaluable to stay current with the trends in the sprinkler industry as it helps us to be proactive with our duties of conducting fire inspections for new and existing buildings, especially since I see a trend in some fire protection contractors not staying current on new and innovative industry trends and changes, for instance, anti-freeze systems. Keep up the good work and I greatly appreciate your magazines and E-Tech Notes I receive by email. Being a member of NFSA has greatly helped me in my career

and has opened the doors for us to coordinate with building officials for new construction. NFSA member # SU1709

Cheers! Jean-Francois Goupil Fire Safety Codes Officer II Fire Inspector/Fire Investigator

TO LORRELL BUSH:

Re: Acceptance Test Procedure and Hydraulic Calculation Seminar Ms. Lorrell Bush, Florida Fire Sprinkler Association

Dear Ms. Bush,

We at Miami Dade Fire Rescue want to thank you for organizing an extremely informative seminar for the fire protection contractors and fire code officials of the Miami-Dade and surrounding municipalities. Also, please accept our special appreciation for arranging the participation of Mr. Ken Isman, who is considered one of the best professionals in the Fire Protection Industry.

The topic of the seminar was excellent, since the interaction between fire protection contractors and fire protection officials occurs when the shop drawings are submitted for review and field inspections. In the seminar, we had the opportunity for discussion between the two groups, comparing our interpretation of the standards. Ken Isman helped clear up some of our differences of opinions regarding the interpretation of the standards.

I want to take this opportunity to thank all the staff of the National Fire Sprinkler Association and especially the members of the engineering department; Ken Isman, Victoria Valentine, Kevin Kelly, Jeff Hugo, Russell Fleming and the rest of the staff for all the help they provided me through the year in interpreting the standards so I can provide better service to this community.

Again our special thanks to Ms. Bush for a job well done and I hope we can repeat this opportunity again in the near future.

Sincerely, Miguel A. Lopez Fire Plan Processor Fire Engineering & Water Supply Bureau Miami, Florida

Complete Box-in-Box Protection

All the confidence of ESFR protection in cold storage uncompromised by antifreeze.

The Model ESFR-17 Dry-Type Pendent Sprinkler, another cost-effective solution from the Tyco family of storage protection products.







Once all of the students are safe, they need a school to return to.

Fire sprinkler systems are designed to minimize fire damage and protect places and people where they live, work, and learn, but only if they operate as expected.

System Sensor supervisory switches send a trouble signal to the fire alarm control panel if any valve that can render the sprinkler system inoperable has been closed — for maintenance, by human error, or through purposeful tampering. This helps ensure that the sprinkler system is always supplied with the water it needs to control fires and reduce damage.



For over 25 years, System Sensor has provided innovative products that save lives and protect property. To learn more about our supervisory switches or our complete line of sprinkler monitoring products, visit systemsensor.com/wf.



