

# National Fire Sprinkler Magazine

The Flagship Publication of The National Fire Sprinkler Association

September-October 2024  
No. 247



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page 33

***The Dangers of Backflow***  
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***Advancing Cold Storage Fire Suppression Using Performance-Based Design***  
page 39

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September-October 2024  
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 NFSA

# National Fire Sprinkler Magazine

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Team NFSA is excited to present our most anticipated issue of the year, the 2024 Member Takeover issue. Our thanks to our many members that took the time to submit articles to this most noteworthy issue! It's always a good thing when you get to know and connect with your fellow NFSA members! This issue is a great way to do it.

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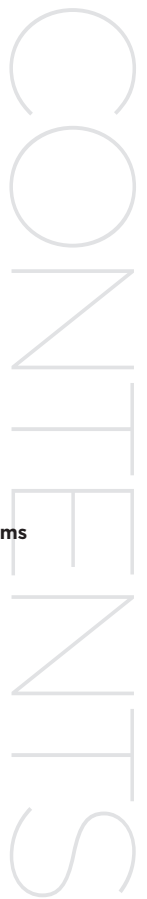
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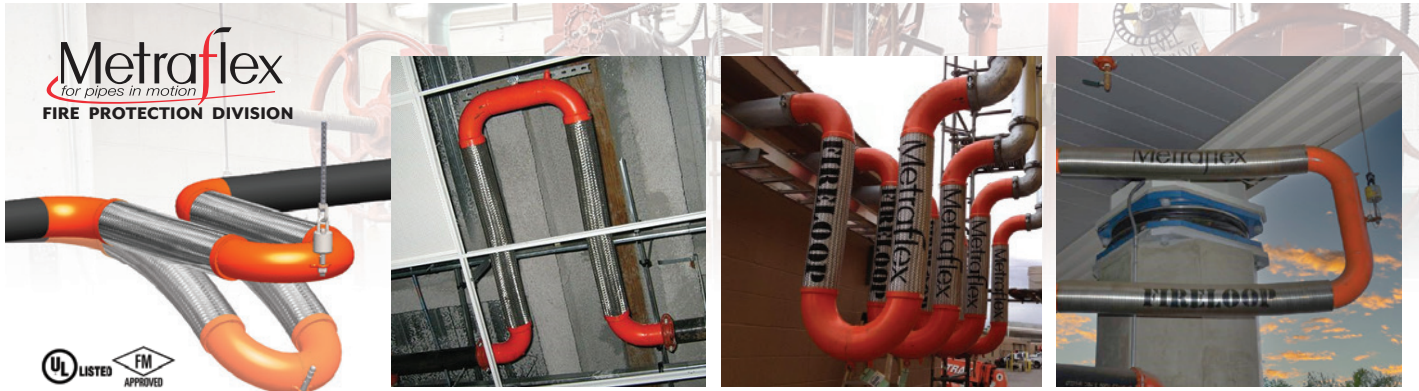
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# From the President's Desk

Bill Webb

Executive Director, Congressional Fire Services Institute

## To Serve and Support

*From Shane Ray:*

*Dear NFSA Members,*

*Let me introduce you to Bill Webb, the Executive Director of the Congressional Fire Services Institute. I first went to the CFSI Annual Symposium and Dinner when I became fire chief in Pleasant View, Tennessee in 1998. Bill Webb was there leading the way, and he is still doing that today. I have been a supporter of CFSI and Bill ever since. Knowing the impact of involvement with all the national fire service and fire protection organizations was crucial then, as it is now, Bill's leadership and facilitation of all groups has been an honor to observe and support.*

*I'm happy to have Bill write my column and it's also an honor to have an article from Chief Jim Estep (ret.). Chief Estep was the leader of the first county in our country to require residential fire sprinklers in new homes. Chief Estep currently serves as the Chair of the Congressional Fire Services Institutes Board of Directors. Bill always refers to us as "his bosses", but we all know Bill is the boss and the team at CFSI, including Michaela Campbell and Emily Griffin, do a whole lot with a little.*

*It is an honor to serve with the CFSI team and it is an honor to serve NFSA. Let me say thank you to our Board of Directors and all NFSA members for supporting CFSI and all the amazing work they do in Washington D.C. and across the country to save lives and protect property.*



Serving and supporting the fire service and fire protection industry has been an honor of mine for 30 years. Hello, my name is Bill Webb, and I am honored to serve as Executive Director of the Congressional Fire Services Institute (CFSI). Since the founding of CFSI in 1989 and the Congressional Fire Services Caucus in 1987, the federal government has elevated its role and responsibility in improving fire and life safety in America, most recently through the reauthorization of the United States Fire Administration and the Assistance to Firefighters and Staffing for Adequate Fire and Emergency Response grant programs.

CFSI's primary mission is to build consensus among the major fire service organizations – including organizations representing the fire service industry, such as the National Fire Sprinkler Association – on a broad range of public safety issues. The reauthorization of USFA and the two grant programs illustrate the impact of our work. Another illustration is the passage of the Fire Sprinkler Incentive Act.

The date was February 20, 2003, when a fire caused by an illegal pyrotechnics display killed 100 victims at the Station Club, a small concert venue in West Warwick, RI. The club lacked a fire sprinkler system, which would have extinguished the fire within seconds of ignition. Shortly after the tragedy, a group of fire service leaders, including Jim Dalton and me, met with Congressman Jim Langevin, who represented West Warwick. Our goal was to develop legislation that could prevent another deadly disaster. After a series of meetings in which we discussed ideas for a federal solution, Congressman Langevin introduced the Fire Sprinkler Incentive Act.

Passage of the measure was a monumental task that took 15 years for Congress to achieve. Most organizations and members of Congress lack the staying power to advocate for the passage of a bill for 15 years, let alone two or three years. However, CFSI and NFSA refused to quit. The issue was too important for public safety. The bill was introduced and reintroduced in eight different Congresses until it was finally approved as part of the 2017 Tax Cuts and Jobs Act.

One of my proudest moments at CFSI was standing beside Shane Ray, US Fire Administrator Keith Bryant, and other fire service leaders at the Station Club Memorial on February 20, 2018. We gathered as a united fire service to let the survivors know we had not forgotten about their losses and achieved something positive to honor their loved ones' memories.

*continued on page 6*

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## From the President's Desk

Bill Webb

*continued from page 5*

CFSI has always valued the support we receive from the National Fire Sprinkler Association. Even though our friend, Jim, has long since retired from the organization, I still consider him a mentor and contact him frequently for some sage advice. I also never hesitate to pick up the phone and call Shane Ray, who serves on CFSI's Board of Directors. We've all heard the saying, "knowing a little about a lot." In Shane's case, he knows a lot about a lot. Fortunately for the fire service, he is always willing to share his knowledge with others, whether in group discussions or at state and national conferences.

And then there is my dear friend Vickie Pritchett, NFSA's Vice President of Advocacy and Outreach. Last April, Vickie was selected to serve as Vice Chair of CFSI's National Advisory Committee, a committee of 37 fire organizations that develop consensus positions on the issues CFSI addresses on Capitol Hill. She is currently working closely with CFSI's Director of Government Relations, Michaela Campbell, and your lobbyist, Andy Quinn, on the High-Rise Fire Sprinkler Incentive Act

and the Public Housing Fire Safety Act. Like the Fire Sprinkler Incentive Act, these two measures would provide economic incentives for the installation of fire sprinklers in certain types of residential structures.

Benjamin Franklin once said, "An ounce of prevention is worth a pound of cure." Your industry is that ounce of prevention that continues to save lives – the lives of the citizens in communities across the nation and the lives of firefighters. Your work is not just important to the fire service; it's lifesaving.

I would like to thank Shane Ray for giving me this opportunity to express my gratitude for your support and briefly describe how our two organizations have worked together to reduce the threat of fire in our nation. Thank you for your service and keep up the great job! •

*With thanks and appreciation,  
Bill Webb*



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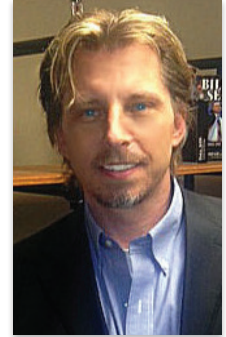




## A Call to get Involved

*From Jim Boulanger: It is that time, for our annual readers' takeover of NFSM. My favorite issue of the year, reading ideas and opinions from a whole different group of voices. This year, I asked James Lewis, CEO of American Fire Sprinkler in Kansas City to do me the honor of writing the article.*

*It is time to add a little youth to this page. James is a "Gen Xer." Although having already served 12 years, he is still one of our younger Board members, as well as Chairman of our Contractors Council, multiple years serving on the Engineering and Standards Committee, and a member of the Executive and Finance Committee, I know James will provide you a whole new perspective. You have all read more than enough of my stories from the "We used to walk ten miles up hill to go to school crowd." It's time, James... the floor is yours!*



It hit me like a tidal wave. In March 2007, a beautiful Sunday evening took an unexpected turn. As I sat down to dinner with my wife and our kids, a call from my mom delivered the devastating news: "James, your dad's been in an accident on his motorcycle. They're life-fighting him to KU Med." The following days were a blur of hospital visits and prayer, but just three days later, he was gone.

There was no time to grieve. My dad's death left a huge void. Both my family and his employees expected me to step into my dad's role immediately and run the company. While it's true that I spent my early years working at American Fire Sprinkler, I had been out of the industry for over a decade before returning just two years prior. To make matters worse, the early effects of the Great Recession began to take hold. Within months, seven projects were canceled, revenue plummeted, and the company's future looked uncertain.

At this critical point, another call came through, this time offering a lifeline. Three of my dad's closest friends in the industry reached out with an offer of support. They each planned to fly to Kansas City two weeks apart and spend a week reviewing everything and making recommendations to help us succeed. I initially tried to decline their offer, assuming they were just being polite, but they came anyway. And man, am I glad they did.

Their support was invaluable. It wasn't just a professional lifeline; it was a testament to the strong bonds formed within NFSA and the genuine respect and love they had for my dad. Their willingness to sacrifice their time and resources to help me navigate this challenging period was extraordinary. Without their help, American Fire Sprinkler might not be here today.

Three years later, my friend Dennis Coleman from Engineered Fire in St. Louis called and asked if I would be willing to serve as his alternate on the NFSA Board of Directors when he assumed the chairmanship. I was honored, but concerned about the commitment. Just as I was prepared to decline, I thought about my dad's friends and the gratitude and respect I had for them. The support and compassion they bestowed on me became a pivotal moment, underscoring the profound impact NFSA had on my life. The deep connections built through shared passions and commitment to our industry were something I admired. I wanted to be like them! So, I accepted his offer. Oh man, am I glad I did.

A few years later, during a Board meeting, Dennis abruptly announced his plan to retire effective immediately and nominated me to the Board to take his place as the Area 7 Director. Being unaware of his plans, I didn't have time to object before the motion was approved. Before I knew what happened, people were patting me on the back in congratulations.

This is how my journey into serving as a representative at NFSA started. It wasn't deliberate. I was just drawn to it and accepted every opportunity that came my way. The more I got involved, the more admiration and respect I had for those in leadership roles who sacrificed their time and energy to make our industry what it is today.

*continued on page 7*

## From the Chair's Desk

James Lewis

*continued from page 7*

Whether it be the brilliant innovators who make the products we use, the methodical artists who write the codes and standards, or the statesmen who promote our great industry, I just wanted to be near them, to learn from them, but most of all, I wanted to be more like them.

I've had the pleasure of serving on the Board of Directors now for more than ten years. Those giants in our industry that I respected and esteemed so much are now some of my closest friends. There is nothing I wouldn't do for them, and the feeling is mutual. Now I understand why my dad's friends were so eager to help. There was a time I felt a burden, like I owed a debt to these men that I couldn't repay. Now I know, all they wanted in return was to see me succeed. So now, I look for opportunities to emulate them whenever I can.

One of the most important principles I've learned through my involvement with NFSA is this: no matter how much you sacrifice or contribute, you always get back more in return. Whether it's learning the codes and standards through participation in the Engineering & Standards Committee, learning how to mitigate your risk by contributing to the Q&A or ITM committees, or making your business more efficient by involvement in the Contractor Council, every single person who participates in NFSA is not only improving our industry, but they are also benefiting every other participant in some way.

It doesn't matter where you are in your career or what role you fill, NFSA can benefit from your perspective. I'm just a small contractor from Kansas, but I bring a unique perspective that represents many members of NFSA. You don't need to be the smartest guy in the room, run a huge company, or sell the most widgets. You can even be a hayseed like me. All that matters is that you love this industry and want to promote it. So, start your journey and get involved. Not only will you be contributing to our great industry and association, but I guarantee it will change your life for the better. •

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# Water Supply Challenges in High-Rise Buildings

by Michael Lantaigne, P.E., [Fire Protection Design Manager, Cannistraro, LLC](#)



*From Mike Joanis, PE: I chose Mike to provide this edition of the Technically Speaking article after a recent high-spirited conversation at a Boston Chapter meeting. The discussion was focused on how to calculate pressure regulating valves in high-rise buildings and document proper hydraulic performance for review by the engineer and AHJ. Mike was clearly very passionate and knowledgeable on this topic. As*

*the design manager at JC Cannistraro, he has seen many high-rise building projects in Boston, MA. I asked Mike to put “pen to paper” so to speak, he agreed, and the result is a great technical article for our members, from our members.*

High-rise buildings create water supply challenges for sprinkler and standpipe systems. Fire pumps sized to overcome pressure loss due to elevation and provide the 100 PSI necessary at the most demanding fire department valve typically produce static pressures in excess of the 175 PSI pressure for which sprinkler system components are rated. Pressure reducing valves (PRVs) are utilized on these systems to reduce downstream water pressure under both flowing (residual) and nonflowing (static) conditions. Because these valves affect the water supply, careful consideration must be given to how we perform the hydraulic calculations in order to ensure that the sprinkler system performs as intended.

When we hydraulically calculate a sprinkler system, a demand calculation is performed to determine the flow and pressure required at the supply point based on each sprinkler in the design area discharging the minimum amount of water required for the hazard being protected. It is critical that the water supply available be accurately represented in the hydraulic calculations to ensure that the systems will perform as designed. For this article, we will consider a sprinkler system with a PRV on a floor in a high-rise building connected to a combination sprinkler/standpipe riser supplied by the city’s municipal water system that is supplemented by a fire pump. There are effectively (3) distinct supply points on this system - the PRV discharge, the fire pump discharge, and the point at which the fire service is attached to the city water main.

Measurement of the city water supply is crucial to the correct determination of the water supply at the fire pump and PRV discharge points. Since the fire pump and PRV(s) are downstream of the city supply, the basis for their value is the pressure and flow available at the connection point. A hydrant flow test performed

in accordance with NFPA 291 is used to determine the static pressure as well as the residual pressure available while flowing water. From this information, a water supply curve is created that allows us to estimate the pressure available at a given flow rate. Another key piece of information gathered during the hydrant flow test is elevation which allows for the calculation of pressure gained or lost at different levels of the building.

## Calculations

Once we have gathered the flow test information and plotted a water supply curve, we can calculate the city water supply available at the fire pump suction. Static pressure at the pump suction is determined based on the elevation relationship between the pump and the flow test. Residual pressure at the rated fire pump flow rate is calculated to account for pressure lost due to friction through pipe, fittings, and valves along the supply route to the fire pump. We can then use the specific fire pump curve to generate a combined city/fire pump supply curve available at the pump discharge.

Determining the water supply at the PRV outlet is a bit more complicated and the purpose of this article. Before any calculations can be performed, some information specific to the valve is required. The manufacturer’s literature including the datasheet as well as the installation and operating instructions for the specific make and model of the valve contains the maximum rated flow for each given size and a friction loss chart showing pressure drop versus flow for the various sizes and valve types. The datasheet or installation instructions should also provide the minimum inlet pressure above the intended setpoint and the minimum flow required to set the valve.

To establish the setpoint of the valve, the listed pressure of all system components must be verified. Typically, the lowest listed pressure for these components is 175 PSI and NFPA 13 requires that pressure reducing valves be set to limit discharge pressure to 165 PSI, however the manufacturer’s minimum delta between the setpoint and the residual pressure available at the flowrate required to set the valve must be verified. A supply calculation at the flow necessary to set the valve from the fire pump discharge to the PRV inlet is used to confirm this differential. By design, the setpoint of the pressure reducing valve must be static outlet pressure.

With the PRV setpoint confirmed, another supply calculation is needed to confirm the residual pressure at the PRV inlet at

*continued on page 12*

continued from page 11

a minimum flowrate equal the sprinkler system demand and a maximum of the flow for which the PRV is listed. Note that the most conservative approach would be to use the maximum flow for which the PRV is listed.

Finally, the residual PRV inlet pressure is used along with the pressure loss through the valve and the setpoint to determine the outlet residual pressure. One scenario occurs when the inlet residual pressure exceeds the PRV setpoint plus the friction loss through the valve. This typically happens at lower elevations in the building where there is less pressure lost to friction and elevation between the pump and the PRV. In this case, the supply curve at the PRV outlet is a flat line at the pressure reducing valve setpoint. Other possible results are the inlet residual pressure exceeds the setpoint but is less than the setpoint plus the friction loss through the valve or the inlet residual pressure is less than the setpoint. Both of these situations result in an outlet residual pressure equal to the inlet residual pressure minus the friction loss through the valve. This typically happens at higher elevations in the building where the inlet residual pressure becomes closer to the PRV setpoint.

The supply available at the outlet of the pressure reducing valve

is dependent upon the PRV setpoint, inlet residual pressure at the intended flowrate and friction loss through the valve. It is important to recognize that we cannot account for this supply change simply by adding a fixed loss or an equivalent length of pipe to the system demand hydraulic calculations. By verifying the inlet residual pressure at the PRV and determining the water supply available at the PRV outlet, we can ensure that the sprinkler system will operate as designed. •

*Michael Lantaigne, PE is the Fire Protection Design Manager at Cannistraro, LLC in Boston, MA. He has a Bachelor of Science in Chemical Engineering from the University of Massachusetts – Amherst and is a licensed fire protection engineer in multiple states. At Cannistraro, he leads a team of engineers and designers by overseeing the design and implementation of code compliant fire protection solutions. His role as Design Manager involves coordinating with various internal and external stakeholders and ensuring that projects are delivered on time and within budget while maintaining the highest level of quality.*

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# Navigating Codes and Standards Variabilities: What Edition am I Inspecting to?

by Jack Coffelt, [Director of Fire Life Safety Partnerships, ServiceTrade](#)



*From Jeff Hugo: Jack Coffelt, Director of Fire Life Safety Partnerships at ServiceTrade, is taking over the Code Corner. With 30 years of experience in the fire and life safety industry, Jack possesses extensive practical knowledge across various fire inspection disciplines. He spent over 20 years as a Fire Life Safety contractor following a 10-year career in the U.S. Navy, where he honed his skills as a fire and security technician.*

*He can be reached at [jack.coffelt@servicetrade.com](mailto:jack.coffelt@servicetrade.com).*

We are all aware of the critical role compliance plays in protecting lives and property. However, the landscape of fire codes and standards can be rather complex. Different jurisdictions and possibly multiple municipalities in a jurisdiction can adopt various editions of a fire code. Whether it is the *International Fire Code* (IFC) or NFPA 1's *Fire Code*, these fire codes are often updated on a 3-year cycle, which can be confusing or challenging at times. Not all jurisdictions automatically update to the latest editions. Many jurisdictions are regulated by their legislative processes and sometimes these processes can take several years or more to migrate to newer editions.

One of the built-in features of the fire codes is that fire code's themselves have guidance on what edition of NFPA 25, *The Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems* the adopted fire code references. In the IFC, Chapter 80 provides the listing of Referenced Standards. In NFPA 1, Chapter 2 provides the listing of what edition year of NFPA 25 is referenced. This variability requires a proactive approach to ensure your inspection program and forms align with the specific editions in effect where you operate.

## The Necessity of Multiple NFPA Form Editions

**Ensuring Code Compliance:** Different jurisdictions may enforce different editions of NFPA standards. Utilizing the correct edition-specific forms is essential to meet local code requirements and avoid compliance issues. An example of the importance of the appropriate edition is utilized may be that a jurisdiction has been operating under the 2014 edition of NFPA 25, however if said jurisdiction moves to a 2017 or newer edition, fire pump pass/fail criteria has had a significant change from the 2014 edition to the 2017 edition to be on the lookout for.

**Mitigating Liability:** Non-compliance is not just a procedural hiccup—it is a significant liability. Incorrect usage of the appropriate Inspection forms can lead to possible legal challenges, and damage to your professional reputation. Ensuring you have the correct edition of forms is a straightforward step to safeguard against these risks.

## Staying Up to Date

Staying updated with the codes adopted in various jurisdictions is paramount. Here are some practical ways to ensure you have the correct information:

**State and Local Resources:** Many state fire marshal offices and local building departments provide updates on the codes in use in their jurisdictions. Regularly check these sources for the latest information. There are several examples of jurisdictions utilizing multiple editions of either the fire code, or NFPA 25 standard. New Jersey, as an example, has both the *State Fire Prevention Code* 2018 edition and the *New Jersey Fire Code* 2021 edition. These two documents reference different editions of NFPA 25!

**Online Databases:** Utilize resources such as state or local fire prevention websites, which often offer searchable databases to determine which codes are applicable in different areas. Of recent popularity, the website UpCodes is now a great crowd sourced resource with frequent updates across its platform.

**Professional Associations:** Membership in organizations such as the National Fire Sprinkler Association (NFSA) or the National Association of State Fire Marshals (NASFM) can provide valuable updates and resources.

## Benefits of a Comprehensive NFPA Inspection Forms Suite

**Operational Efficiency:** Using the correct forms for each jurisdiction ensures your inspections are thorough and correctly documented, reducing the risk of errors and compliance issues.

**Professionalism and Trust:** Being prepared with the appropriate forms demonstrates professionalism and instills confidence in

*continued on page 16*

continued from page 15

your clients. It shows a commitment to excellence and adherence to the highest standards.

**Client Assurance:** Clients trust inspectors and Fire Protection Companies who demonstrate a deep understanding of local codes and standards. Using the correct forms reassures them that their

facilities' life safety is in capable hands.

Maintaining multiple editions of NFPA inspection forms and staying up to date on code and standards adoption, ensure you are equipped with the necessary NFPA forms to comply with varying local codes and minimize liability risks, enhancing both service quality and professional integrity. •

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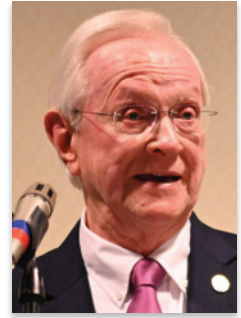


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by M. H. Jim Estep, Fire Chief  
Chief of Department, Prince George's County, Maryland (Retired)



## The Solution Was Right Before Our Eyes: The Birth of The Nation's First County-wide Residential Sprinkler Ordinance

*From Vickie Pritchett: Prince George's County, Maryland has long been a lighthouse to so many who have come after.... we are honored to have Retired Fire Chief Estep take over this issue's "From the Fire Scene." A big thank you to Chief Estep and a long line of leaders from Prince George's County...you have led the way, and we are grateful!*

Residential fire deaths were continuing to climb in our county and the department was anxious to find a comprehensive way to save more lives.

The solution was there all along, but we needed the help of a study group, our public section, and our elected officials to navigate the minefields that led to the adoption of CB-145-1987, Residential Fire Sprinkler Systems.

Prince George's County, Maryland is a sprawling area with nearly a million residents, located adjacent to Washington, D.C. In 1987, I was head of the County's Fire and EMS Department, one of the largest combination systems (career/volunteer) in the country. We prided ourselves on youthful leadership and innovation. It would take all our talents to reduce fire deaths by gaining public acceptance of bold recommendations.

Throughout my career in PGFD I had to face a multitude of challenges. None the least of which was commanding a large group of career firefighters, EMS personnel and hundreds of volunteers; a combination that left me without any dull workdays. However, when it came to reducing fire deaths in our community, all hands were readily on deck for action.

During the early 80s I was excited by the buzz surrounding the capabilities of quick activating residential sprinklers. At the behest of Sonny Scarff, the pioneering hotel fire safety head at the Marriott Corporation, I was invited to be an observer, present during Project San Francisco. This project was part of broader research being conducted by various entities, including the United States Fire Prevention and Control Administration, Marriott and the San Francisco FD.

Test fires were set on floors of a vacant mid-rise building in San Francisco, outfitted with quick activating residential fire sprinklers. The tests demonstrated the potential of the sprinklers to dramatically reduce deaths and injuries in residential spaces.

Those tests left an impression on me and I continued to think about how we could get to the point of moving forward with solutions that would involve risky political actions. Powerful forces would certainly be opposed to any attempt on the county's part

to require sprinklers in homes.

About one year before the eventual adoption of CB-145-1987, I decided to establish a research group to study the feasibility of utilizing quick activating fire sprinkler systems in all residential dwellings in our county. I asked former PGFD Fire Chief Lawrence Woltz to chair the group and PGFD Chief Fire Protection Engineer, David Banwarth, FPE, to function as Deputy to the Chair. The group was comprised of representatives from disparate organizations such as the Building Industry Association (SMBIA), IAFF, Local 1619, and the Apartment and Office Building Association (AOBA). The study group worked in unison and compiled extensive data and trial results on the efficacy of home fire sprinklers and the feasibility of duplicating the S.F. Project results in the real world. The Study Group's results were presented to me and they showed that these devices could do the job and reduce fire deaths and injuries. I accepted the report and headed to see the county's chief executive, Parris N. Glendening, The County Executive (Mayor). Mr. Glendening was later elected Governor of Maryland where he served two terms.

After my briefing, Glendening was convinced that residential sprinklers offered us an excellent opportunity to solve a difficult problem. He insisted that we must use sprinklers in conjunction with a well-staffed and trained fire department for best results. The County Executive had an uncanny sense of what the public wanted and would accept. His instincts and mine were clearly aligned on the need for sprinkler legislation.

We were delighted to get the Executive's approval to move forward. The hardest part of our department wide efforts, however, had just begun:

1. We had to convince a majority of the nine-member County Council (our legislative body) to pass a residential sprinkler ordinance. The need had to be demonstrated to the members both visually and intellectually.
2. A county-wide public education campaign had to be launched.
3. Various opposition, including the building industry, had to be brought on board or at least agree to not engage in all out public disapproval.

Under the leadership of Nancy Estep, Our Public Fire Education Section did a deep dive to create information materials, make press contacts and implement a speaker's bureau program

*continued on page 18*



throughout our five hundred square mile county. Although many opponents of the sprinkler idea were reluctant to speak out in public, the pressure behind the scenes was relentless.

Council members were convinced to travel to our Fire Training Academy and observe a demonstration that would leave an Indelible mark on the lawmakers. One test room was outfitted with smoke detectors and another with quick activating residential sprinklers. Test fires were set in each room, demonstrating how quickly fire and smoke were diminished and extinguished in the sprinklered room. Smoke detectors activated but obviously could not extinguish the fire in the second room. The Council Members had now become “disciples” for residential sprinklers.

CB-145-1987 was introduced by the County Council at the request of County Executive Glendening on October 27th. Following introduction, the bill was sent to committee and ultimately to public hearing.

The legislation would require all new residential dwellings in the county, including single family homes, to be fully sprinklered using NFPA Standard’s 13 and 13-D. Implementation would take place over a four-year period. Deputy Fire Chief Ward Caddington and Chief FP Engineer, David Banwarth presented testimony to the council on the technical aspects of the bill. They also worked with the opposition to gain their support.

An active public outreach had been launched and all components of the fire department were engaged, informing the community of how, what, why, where and when the legislation would impact on them.

Although opposition to the legislation was strong from some quarters, I will never forget a Washington Post Editorial by the newspaper, which appeared on the eve of the County Council vote. In essence it indicated, and I am paraphrasing: If this bill

passes, you can picture yourself in the kitchen fixing breakfast, and the heat sets off sprinklers above, causing water damage to your home. Need I say more?

Finally, after incredible work by a talented team the legislation was enacted by the County Council on November 18, 1987, with some incentives for builders and a longer period for implementation. Ironically, much of the principal opposition to the bill changed their minds and supported CB-145. The first county wide mandated residential sprinkler ordinance in the nation came alive when County Executive Parris Glendening signed it into law on December 11, 1987 as a model for the over three thousand counties in the country.

Hundreds of lives have been saved by the sprinkler law. The ordinance is alive and well after all this time. Thirty-seven years later, no one has succeeded in dismantling the most inspiring and satisfying work of my life.

Along the way to achieving the solution which was right in front of us, many courageous and resolute individuals made this long journey possible. Some have been mentioned in this article, here are others:

Deputy County Attorney: **Barbara Holtz**, drafted CB-145.

*Invaluable Contributions:*

**Anthony V. DeStefano**, PGFD

**Major John P. “Jack” Jarboe**, PGFD

**Mary Helen Naecker**, PGFD

**James Tauber**, PGFD

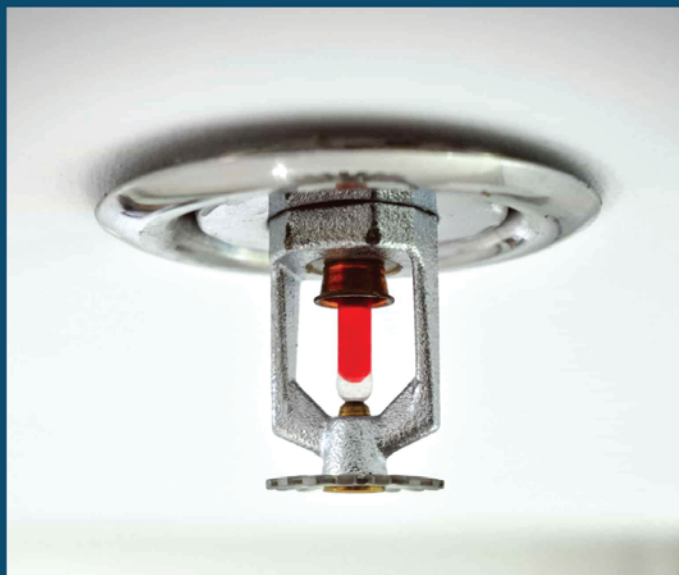
**Ronald Milor**, PGFD, Local 1619, IAFF

**Harry Shaw**

*All members of PGFD*

*And so many more!•*

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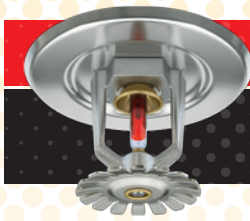


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# FIRE SPRINKLERS IN ACTION

*Editor's note: The following saves were submitted by our members. If you have a save you'd like to see featured, use this QR code or email me at [genadio@nfsa.org](mailto:genadio@nfsa.org). Please include photos if available!*



## DELAWARE

### Sprinklers Minimize Damage From Commercial Fires

*Thanks to Delaware Fire Sprinkler Coalition Chair Paul Eichler for alerting us to these sprinkler saves.*

Two commercial fires erupted this past weekend in Delaware. The first fire occurred at a battery warehouse on Friday at about 7:15 p.m. in Newark. Deputy fire marshals determined that an electrical malfunction with a lithium-ion battery ignited combustibles.

The fire was contained by the sprinkler system until the Fire Department arrived. No injuries were reported.

The second fire was reported on Saturday at around 12:30 p.m. at the Delaware Solid Waste Authority in New Castle. Deputy fire marshals determined the fire was caused by an undetermined heat source igniting combustibles inside of the building.

The fire was contained by the sprinkler system until firefighters arrived. No injuries were reported.

## MARYLAND

### Single Sprinkler Saves Long-Term Care Facility

*Thanks to Stephen M. Owens, CFI of the Maryland Department of Health for sending us this sprinkler save.*

On May 7th, the Howard County, Maryland Department of Fire & Rescue Services responded to a fire in a Long-Term Care facility for an electrical fire in a resident room HVAC unit during the overnight hours.

A single fire sprinkler in the room activated, successfully containing the fire and minimizing property damage. The resident escaped unharmed.



## MINNESOTA

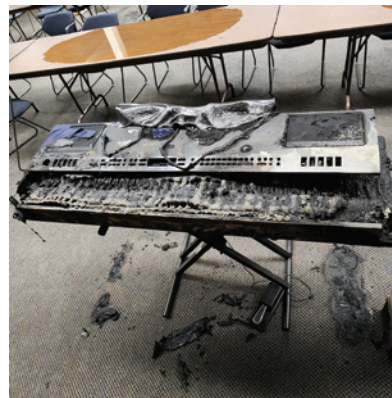
### Single Fire Sprinkler Saves Church from Arson Fire

*Our North Central Regional Manager Tim Butler experience a great sprinkler save that truly hit close to home. A single sprinkler saved his church from an arson fire! Here's Tim's account of the save:*

Shortly after midnight on Sunday, June 9th, an unidentified person or persons broke two windows in the basement of the St. Jerome Catholic Church in Maplewood, Minnesota and intentionally set at least two fires in the basement of the church, igniting an electronic keyboard, a plastic wastebasket, and an American flag. Intruder alarms alerted the alarm company and the building custodian, who arrived shortly before law enforcement and the fire department, and before smoke alarm activation.

Fire crews arrived to find a single fire sprinkler had contained the fire, and they quickly put out smoldering embers with a portable extinguisher. There were no injuries, flame damage was limited to the objects of origin, and soot and heat damage was limited to the room of origin. Sunday religious services were held on time at 9:30 AM without incident! The ATF agent on scene told me, "The sprinkler system worked just like it was supposed to."

The keyboard was the seat of the main body of fire, producing heat and very noxious soot and smoke. The keyboard was located between two standard response sprinklers located about six feet





apart. The right-hand sprinkler activated; the left-hand sprinkler was covered with a heavy coat of soot, but intact. There were two upholstered chairs located four and six feet to the right of the keyboard, and the upholstery was intact and not scorched. Choir robes were hanging on a rack 18 feet from the seat of the fire, hanging

inside dry-cleaning bags, and the flimsy plastic bags were not even deformed or melted from the heat. Archived records and sheet music in the cabinets to the right are intact.

The single fire sprinkler saved records, archives, religious items, and kept the building and religious services operating without interruption.



work and in doing so the cat's foot turned the burner on igniting the wooden cutting board on fire.

The fire sprinkler that saved this 24-unit apartment building was a Reliable SWC44 residential concealed sidewall.

*continued on page 22*

### Vacant Public School Saved by Sprinklers

*Thanks to Minnesota Deputy State Fire Marshal Tom Jensen for sending in this sprinkler save.*



On July 6th, Minneapolis firefighters responded to a report of a fire at a vacant public school slated for demolition. Crews found miscellaneous storage items that were ignited by intruders. Upon arrival, crews found the fire contained by two fire sprinklers.

### NEW JERSEY

### The Cat Started it... A Single Fire Sprinkler Stopped it.

*Thanks to Darrell McGee, Director of Operations for Quick Response Fire Protection for sending in this sprinkler save!*

On June 13th, a tenant of a Barnegat, NJ apartment left for work at 5:30 a.m. A water flow alarm was reported to central station at 7:30am. The tenant had a wood cutting board laying on top of the gas range top. The fire department thinks that the tenant's pet cat jumped up onto the stove sometime after the tenant left for

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# Fire Sprinklers in Action

continued from page 21

## TEXAS



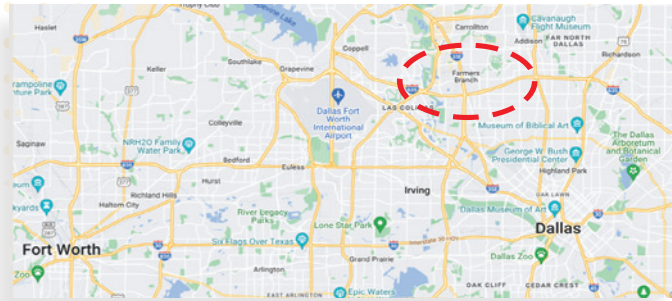
### Farmers Branch, TX-Three Saves Within 12 Days!

*Thanks to Farmers Branch, TX Division Chief/Asst Fire Marshal Scott Burke for sending in three sprinkler saves!*

**June 28th approximately 2230 hours**  
The Farmers Branch Fire Department responded to a commercial fire alarm at a 410-unit apartment building. On arrival, crews discovered a single fire sprinkler had extinguished a small fire in an apartment unit bathroom. The cause of the fire was a towel placed too close to a lit candle. The fire did not extend beyond the towel. While the bathroom did not exceed 55 sqft, local policy requires all bathrooms in Group R2 buildings 2 or more stories be protected.

**June 29th approximately 0130 hours**  
The Farmers Branch Fire Department responded to a commercial fire alarm at a 409-unit apartment building. On arrival, crews discovered damage from a small stove top cooking fire. Fire spread was limited to the combination vent hood and microwave, and cabinets directly above the stove before being extinguished by a single sprinkler activation.

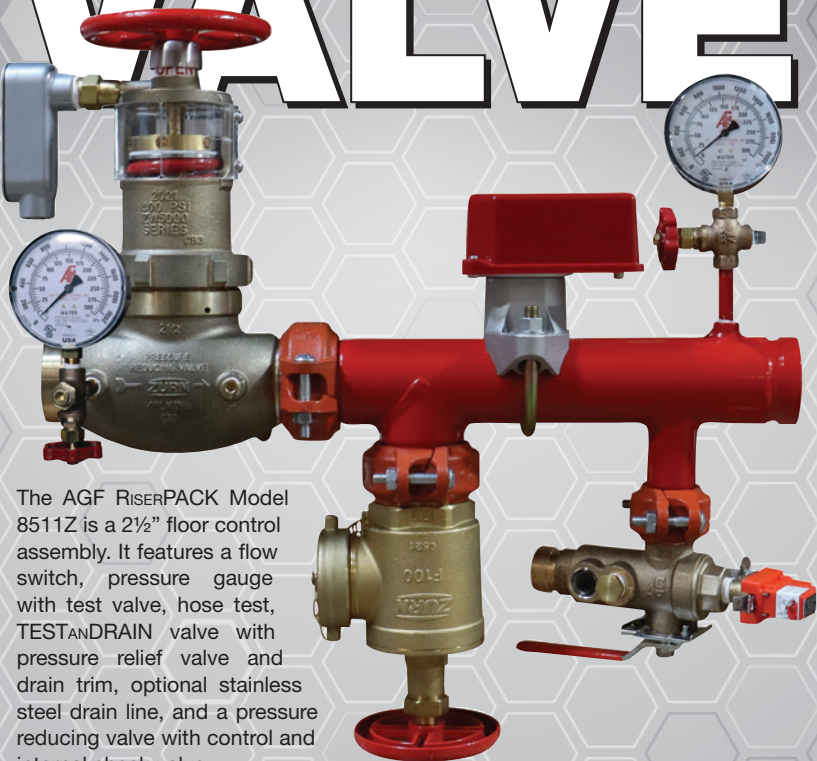
**July 9th approximately 0630 hours**  
The Farmers Branch Fire Department responded to a reported structure fire on a fifth-floor balcony of a five-story apartment building. On arrival, crews encountered an extinguished fire by a single sprinkler activation. Fire damage was confined to the balcony's outdoor carpet and furniture. •



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# An Experiment in Seaside Corrosion

by George Nicola, *Director of Technical Services for The Reliable Automatic Sprinkler Company*



*From Vince Powers: I was in the audience at a Florida Fire Sprinkler Association event when George presented on a topic regarding an experiment with corrosion of sprinklers in seaside environments. I was taken back a little with the results and thought this would be great information for anyone involved with sprinkler corrosion in these environments.*

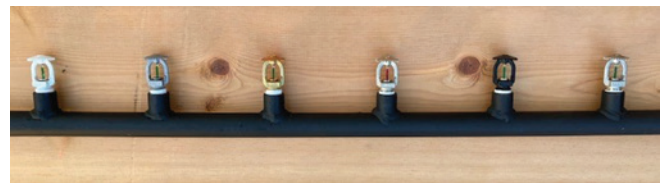
The Reliable Technical Services Department fields many questions regarding which sprinkler finish will perform best in various installation situations where corrosion of fire sprinklers is possible. As we dig a little deeper, we often find that contractors and building owners don't really want the sprinkler that will always perform the best in their given environment, but instead want the sprinkler that will continue to look good for an extended period at a predetermined price point. The challenge for a sprinkler manufacturer is twofold: The first is that the UL Solutions and FM Approval testing protocol for sprinklers is not about what the sprinkler looks like but is more specifically geared to how the sprinkler performs. The second is that every situation is different. A sprinkler finish that performs well in one situation may not perform well in what seems to be a very similar environment. Nowhere is this truer than seaside or beachfront installations.

Before we look at the performance of specific finishes, it is important to understand that all sprinklers undergo some form of corrosion testing. In the US, both UL Solutions and FM Approvals subject every sprinkler to multiple tests. Those tests include salt spray, a moist hydrogen sulfide air mix and a moist CO<sub>2</sub> sulfur dioxide air mix. The main difference between a regular listed/approved sprinkler and a sprinkler that is listed/approved as "corrosion resistant" is the length of that test. While all sprinklers are subjected to these tests for ten days, listed/approved corrosion resistant sprinklers undergo a substantially longer 30-day test. Additionally, every sprinkler is subject to a corrosion stress cracking test and a 90-day moist air test by both approval agencies, while FM Approvals also requires some additional tests for copper and stainless-steel parts for a sprinkler to be approved as corrosion resistant.

To validate laboratory testing, sprinkler manufacturers sometimes perform field testing to substantiate results. This field testing can be targeted to evaluate a specific corrosive situation rather

than the generic performance in a laboratory environment. Such was the case in a recent experiment that Reliable performed along the beaches of Florida to answer the often-asked question "What sprinkler finish would you recommend when installing sprinklers in an oceanfront environment?"

The resulting experiment was structured to compare the performance of six different sprinkler finishes in a real-world environment. The comparison included 5.6k standard coverage quick response sprinklers with the following finishes: brass base material, white polyester, black polyester, electroless nickel PTFE, an experimental coating and Type 316 stainless-steel. All sprinklers were rated for a maximum working pressure of 175 psi. Two locations in different parts of Florida were chosen where contractors had tried multiple finishes from multiple manufacturers but remained unhappy with the performance of the corrosion resistance of the sprinkler. One location was chosen along the gulf coast while a second location was chosen in a remote area of the Florida Keys. Both installation locations were within 100 yards of the water. Separate test headers were built to accommodate both upright sprinklers and pendent sprinklers with associated escutcheons. Sprinklers were installed on those headers in 6" increments so that wind patterns, humidity and other environmental factors were consistent from sprinkler to sprinkler across the entire header. The headers were filled with water to mimic the actual field installation and subsequently monitored and photographed over an 18-month period. An example of the upright header prior to installation is pictured below:



*Figure 1. Upright sprinklers in various finishes on test header*

The final testing protocol involved a multiple step process. First, the visual appearance of every sprinkler was documented quarterly prior to removal from the header at the 18-month mark. Secondly, a microscope was used to evaluate the bulb and base metal. Then, each sprinkler was hydrostatically tested at pressures of 175 psi, 250 psi and 300 psi. Finally, an oven heat test ("plunge test") was

*continued on page 24*

continued from page 23

performed to compare the sensitivity of each of the sprinklers installed in the experiment to a new sprinkler right out of the box.

The outcome of this experiment was consistent with expectations, as certain sprinkler finishes showed more visible signs of corrosion than others. Surprisingly though, sprinklers in one geographical location looked substantially better at the conclusion of the test than the other. These results underscore the difficulty of predicting exactly how a sprinkler will look in an environment with fluctuating conditions. As a manufacturer, the bigger question however, was would the sprinklers perform in accordance with their original design? The answer to that question was a resounding “yes”, as every sprinkler included in the test, despite its overall appearance, passed the hydrostatic test at all three pressures and every sprinkler operated during the plunge test within 0.2 seconds of when it was new.

Pictures of the various finishes at the completion of the test are shown below. Visually, the brass, black polyester, white polyester and experimental finish sprinklers did not maintain their appearance as well as the Nickel Teflon and stainless-steel sprinklers did.

Figure 2. Sprinklers following exposure from left to right:

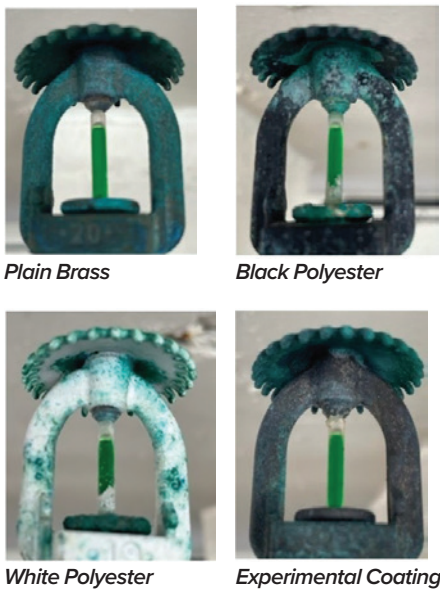
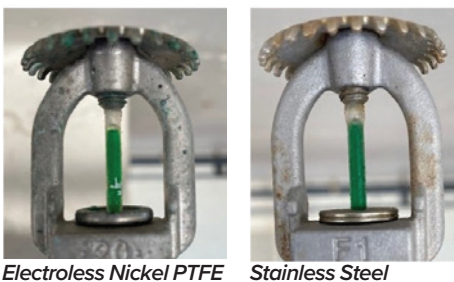


Figure 3. Sprinklers following exposure:



Beyond the appearance of the sprinklers themselves, consideration should also be given to the surrounding materials including the escutcheon. Mild steel escutcheons often corrode more quickly than a sprinkler with the same finish. For example, it is not unusual for a white polyester mild steel escutcheon to show signs of corrosion before a brass sprinkler with the same white polyester finish does. From a customer perspective, a heavily corroded escutcheon can be as much of an eyesore as a corroded sprinkler. Stainless-steel escutcheons are available, including added polyester finishes, that offer better corrosion resistance than mild steel escutcheons. Due to their common use outdoors, Reliable dry barrel sprinklers include a standard “can and escutcheon” made of Type 316 stainless steel. Likewise, for applications where a guard is required, Type 316 stainless-steel guards are available.

In conclusion, the decision regarding the “best” sprinkler finish in seaside environments comes down to visual aesthetics versus price point. Clearly, all corrosion resistant sprinklers offer some improvement in length of service but as the price increases so does the appearance of the sprinkler over time. It is also important to note that the finishes currently available on the market do not represent the limits of what corrosion resistant finishes might be available in the future. Manufacturers will continue to seek better, cost-effective alternatives until the industry is satisfied, and though the experimental finish used in the test did not perform as we had hoped, Reliable currently has additional finishes under development. In fact, there is one finish that has shown tremendous promise in corrosive testing that we are very excited about. Stay tuned!

**About the Author:**

George Nicola is the Director of Technical Services for The Reliable Automatic Sprinkler Company. He has been in the Fire protection industry for over thirty-seven years on both the contracting and manufacturing side of the business. While contracting, he spent time in multiple departments with extensive experience in design, sales, and management. George was previously licensed as a Fire Protection Contractor in the state of Florida and has been with Reliable since 2011. He has served as a Board of Director member for various Fire Protection organizations. George holds a Bachelor of Science in Business Administration from Youngstown State University and an MBA from the State University of New York at Buffalo. He is also an NFPA Certified Fire Protection Specialist (CFPS).

The advertisement features a dark background with white and blue text. On the left, it says 'You can fix wet.' and on the right, 'You can't fix burnt.' In the center is a blue water droplet shape containing the text 'FIRE SPRINKLERS BUY TIME' and 'TIME BUYS LIFE'. Below the droplet is the 'NATIONAL FIRE SPRINKLER ASSOCIATION' logo. At the bottom, it reads 'FIRE SPRINKLERS SAVE LIVES'.



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Installed home fire sprinklers support Community Risk Reduction. Our new virtual reality video is an effective resource to help you achieve your CRR goals.

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Scan this QR code with your smartphone to learn more.



# NFSA Membership and What It Means to Me

by Bob Knose, *Director of National Accounts Ferguson Fire & Fabrication*



*From Caleb Armbrust:  
I joined the NFSA staff in March of 2017, and my first day was a board meeting where I met Bob Knose. At the time I was young, new, and still trying to figure out how the whole trade association system worked. Since that time, Bob has become a dear friend as we have worked to draw attention to NFSA membership and grow this association and industry. There is nobody more passionate about the role of NFSA and the work we have done over the years to grow this wonderful industry than Bob Knose. I, for one, think his exhortation to give us a try is one worth acting upon.*

I have been involved in the fire protection industry for over 40 years, and I have seen the industry change. I am proud to support the NFSA, and I am VERY Proud of not only supporting this Association, but to be Chair of the Membership Committee,

and... our membership is strong. I serve on other councils, and committees as well, but I hold the membership committee near and dear to my heart.

I have seen this Industry change in many ways in those 40 years, from the types of the materials used, design, and application. I have witnessed the changing of the guard, if you will, as this association has been supported by some long-term members whose fathers, and grandfathers have contributed so much to this association over the years. It is refreshing to see new faces in not only the long-time supporting companies but the new companies coming into our industry as well. I have been blessed to be able to make a decent living and support my family by this Industry for nearly 44 years now.

It is with that said that many people have heard me say before, if you are being supported by this industry, then please support it as well. Please support it by supporting NFSA! •

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# Boyer Fire Protection: Leading the Way in Comprehensive Fire Protection Solutions



by Logan Wertin, *Marketing Manager, Boyer Fire Protection*

**B**oyer Fire Protection is a first-generation family-owned fire protection contractor that started in 2006. The company started out in contracting and expanded to include Inspection, Testing, and Maintenance (ITM) services in Local 268 territory. Boyer made its mark in the industry with ITM services, installations, and design and quickly became a cornerstone in the



fire protection industry in the St. Louis Metro area. Richard Boyer and his sister Kathleen Balch, the owners of Boyer Fire Protection, have been instrumental in steering the company toward new heights. Their leadership and vision have fostered a culture of innovation, dedication, and excellence. Under their guidance, Boyer Fire Protection has grown from a fire sprinkler contractor into a comprehensive fire protection company, committed to safeguarding lives and property through reliable fire protection systems.

Recognizing the need for expansion to meet growing demands, Richard and Kathleen carefully planned and executed the move from its first location in Belleville, Illinois to its current headquarters in St. Louis, Missouri. A few years later, they expanded into Southern Illinois and Wisconsin to enter Local 669 territory, aiming to better serve its customers and provide employees with opportunities to grow. In 2023 Boyer expanded its list of services to include fire extinguishers and emergency lights. Today, Boyer Fire Protection has approximately 75 employees, including five of Richard and Kathleen's children. Its projects range from industrial facilities to large multifamily residential complexes, educational institutions, retrofits, retail spaces, wastewater facilities, and more, consistently proving their expertise in the industry. Boyer Fire Protection's team of highly skilled employees is equipped to

handle all types of projects, ensuring the safety and satisfaction of their clients.

Boyer's in-house design and sprinkler system installations, along with its expertise in inspecting, testing, and maintaining these systems set them apart from competitors. Boyer's ITM Department was awarded the 2023 St. Louis Fire Sprinkler Alliance Platinum Sprinkler Service Award by the St. Louis Metropolitan Fire Marshal's Association. This award is a true testament to the hard work and dedication of Boyer's employees both in the office and field. Over the years, the construction group has also won multiple awards, including the Associated General Contractors of Missouri Specialty of the Year and the American Subcontractors Association Subcontractor of the Year.

As Boyer Fire Protection continues to establish itself as a leader in the fire protection industry, it remains committed to its founding principles of integrity, quality, and client satisfaction. Its dedication to continuous improvement and innovation drives them to explore new technologies and methodologies that enhance the safety and reliability of their services. Boyer Fire Protection's journey from a basement startup to a multi-location enterprise demonstrates its resilience and vision. As we look to the future, we are excited to continue our mission of protecting lives and property with the same passion and excellence that has defined us since 2006, ensuring safety and peace of mind for our clients for years to come. •



# Cannistraro Hosts 3rd Annual Heavy Metal Summer Experience

by Amy Cannistraro, *Diversity and Community Outreach Manager, J.C. Cannistraro, LLC*

In May 2022, a colleague of mine came back from an industry conference with a business card. It was for a woman named Angie Simon and her organization, Heavy Metal Summer Experience. Angie's career as the president of a mechanical firm led her to see the desperate need for future generations of tradespeople. She also saw that students were hungry for alternatives to college. Heavy Metal Summer Experience was her answer: trade contractors would open their fabrication shops to high school students and recent grads for hands-on learning. A summer camp for the trades.

That summer, Cannistraro jumped to host a Heavy Metal camp at our multi-trade shop in Boston. We had 14 students from in and around the city spend five days in our shop, getting their hands dirty in each of our four trades – Sprinkler, Plumbing, HVAC Pipe, and Duct – and learning about apprenticeship programs.

Fast forward to June 2024, and we have just celebrated the close of our third annual Heavy Metal Summer Experience. For 18 students, we designed five days packed to the brim with projects, speakers, tours of our signatory unions' training centers, and capped it all off with a graduation event for the students and their family and friends. Since we've started the program, six students (and counting!) have come back to work at our shop.

Cannistraro was one of 11 shops to host a Heavy Metal camp in 2022. In 2024, over 60 shops across the country hosted a camp. Hopefully, this wonderful program will continue to grow. We encourage our peers in the industry to join the movement! You can learn more at: [www.hmse.org](http://www.hmse.org).



# Piping Innovation and Tradition in Fire Protection Solutions

by Scott Smith, *National Sales Manager, Fayette Pipe*

Founded in 2018 as a division of Specialty Conduit and Manufacturing, Fayette Pipe, a veteran-owned and family-operated company, has quickly established itself as a key player in providing high-quality, American-made and melted pipe for the fire protection industry.

## A Strong Foundation

Fayette Pipe was born with a vision of adding value to the offerings of its parent company, Specialty Conduit and Manufacturing, which provides threading services for the plumbing, HVAC, and electrical conduit industries. Recognizing a market need, Dan Gearing, the owner, and his son Chris set out to manufacture the pipes that were sent for threading. Their extensive background in the PVF industry, combined with strong industry relationships, facilitated a swift transition from concept to production.

## Comprehensive Product Line

Fayette Pipe offers a wide range of products designed to meet the stringent demands of fire protection systems. Among their offerings are the Schedule 7, 10, and 40 black steel pipes, all USA-made and produced from high-quality coils. The pipes are seam welded using Fayette Pipe's high-frequency electric resistance weld (ERW) pipe mill and are 100% hydrotested to ensure durability and reliability.

The recent addition to their product line, the Schedule 7 EZ-Flow Fire Protection Pipe, is specifically engineered for fire protection applications. It is available in 21-foot lengths with diameters of 1-1/4", 1-1/2", 2", and 2-1/2" and is suitable for welding and roll grooving.

The lightweight design and high-flow efficiency make it an ideal choice for modern fire sprinkler systems.

Fayette Nipple, a sister company, also manufactures black and galvanized pipe nipples, ensuring the same high standards of quality control and availability. The company's ability to produce and deliver these products on the same day if needed sets them apart in the industry, providing unmatched customer service. We also offer 60- and 66-piece packs, with installation kits, to meet all job site needs.

## Advanced Coating Solutions

To address the issue of microbial-induced corrosion (MIC), Fayette Pipe developed the MIC Defense coating. This clear corrosion

inhibitor protects the interior of pipes in wet, dry, and pre-action fire sprinkler systems, and other standard pipe closed-loop systems from MIC. Applied during production, MIC Defense ensures the long-term reliability of the pipes.

In June 2024, Fayette Pipe introduced FayetteGuard™, an LED UV-cured paint system for black steel pipe exteriors. This innovative coating process uses high-intensity electronic ultraviolet (UV) light to solidify photo-reactive substances instantly, providing enhanced protection, energy efficiency, and durability. FayetteGuard coating also offers an attractive black sheen, improving the aesthetic appeal of installations.

## Commitment to Quality and Customer Service

The company's commitment to quality is evident in its meticulous production processes and rigorous testing standards. The company's dedication to customer service is equally strong, focusing on providing timely solutions and support for their clients' unique needs.

Fayette Pipe blends innovation with tradition, offering a comprehensive range of high-quality, American-made fire protection solutions. As a veteran-owned, family-operated business, Fayette Pipe continues to set the standard in the industry, ensuring safety and quality in every product they deliver.

*continued on page 29*



*Chris Gearing, left, vice president of Fayette Pipe, and Dan Gearing, owners of Fayette Pipe.*

continued from page 29



*All Fayette Pipe products are produced from USA-made, high-quality coil. The pipes are ERW seam welded and 100% hydrotested to ensure durability and reliability.*

**RELIABLE. AFFORDABLE. AVAILABLE.**



## In Stock and Ready to Ship

Sch 7 EZ-Flow Fire Protection Pipe,  
Sch 10 and 40



*Fayette Pipe's EZ-Flow Schedule 7's lightweight design and high-flow efficiency make it an ideal choice for modern fire sprinkler systems.*

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Clear Corrosion Inhibitor



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Ask about our Carbon Welded and Galvanized Pipe Nipples and Nipple Kits



*Fayette Nipple, a sister company of Fayette Pipe, manufactures a complete line of American-made and melted carbon-welded and galvanized nipples to industry standards.*



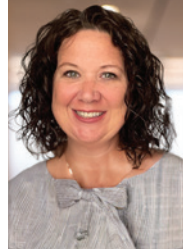
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# Exciting New Certification from Academy Certification Exams: ACE Level III Inspector



by Holly Garvey, *Director of Certification, ACE Academy*

As the industry evolves, staying ahead with advanced certifications is essential. Academy Certification Exams (ACE) is launching its new Level III Inspector Certification this year, an advanced credential designed for professionals looking to enhance their expertise in the inspection, testing, and maintenance (ITM) of water-based fire protection systems.

## Why Choose ACE Certification?

ACE offers a suite of certifications that are essential for technicians working in the inspection and testing of water-based fire protection systems. These certifications ensure compliance with industry standards while enhancing professional credibility and career growth opportunities.

**\*\*Comprehensive Certification Levels\*\*:** ACE provides certifications at multiple levels, catering to both new and experienced professionals:

- **Level I Certification:** For entry-level ITM technicians working under supervision, requiring at least 16 hours of relevant education.
- **Level II Certification:** For independent ITM technicians with a minimum of 2,000 hours of field experience and 32 hours of relevant education.
- **Level III Certification:** For senior inspectors with at least 8,000 hours of specialized work experience and 32 hours of recent training, launching at the end of 2024.

**\*\*Quick Certification Process\*\*:** ACE is dedicated to providing exceptional customer service, ensuring candidates receive their certifications quickly, typically within days of passing the exam. ACE works with candidates to ensure all requirements are met prior to the exam, facilitating a swift certification process.

**\*\*Supportive Staff\*\*:** The ACE team is available and accessible to assist candidates with any queries. They go above and beyond to help upload documentation, validate training hours, and provide information on state-required license/permit processes.

ACE holds the status of a NICET equivalent in the states of Florida and Georgia. Additionally, ACE certification is accepted

by NASA contractors in Florida. ACE is actively pursuing acceptance in additional states throughout the nation.

For those seeking a credible and recognized certification in the fire protection industry, ACE provides a clear pathway to career advancement. To learn more about the certifications and training requirements, visit [accertifications.org](http://accertifications.org).





# VAPOR Pipe Shield

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Full system protection.

With Purge:

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Days

Without Purge:

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Days

Tested and proven.



To Learn More

# Advancements in Corrosion Mitigation for Dry and Pre-Action Fire Sprinkler Systems

by Ray Fremont Jr., *President, General Air Products, Inc.*



As the fire protection industry continues to understand the best ways to effectively address corrosion issues in dry and pre-action systems, it's clear that effective mitigation is essential for longevity, operation and cost effectiveness of these systems. Two primary technologies have emerged to address this issue: Vapor Corrosion Inhibitors (VCI or VpCI®) and Nitrogen Generators. While both methods aim to protect fire sprinkler systems from corrosion, recent advancements and comparative studies reveal significant differences in their effectiveness, ease of use, and long-term costs that favor the use of VCIs.

## Understanding Vapor Corrosion Inhibitors (VCI)

VCI or VCI technology is not new to the industrial world. It has been used for decades to protect metal parts during shipping and storage, such as military munitions & high-value metallic parts, high-tension steel bridge cables, and oil & gas pipelines. VCI works by emitting a rust-inhibiting gas or vapor that forms a molecular barrier on the metal substrate, preventing corrosion even in the presence of moisture, oxygen or existing corrosion.

General Air Products' Vapor Pipe Shield® is a patented VpCI® (VpCI® being a type of VCI) delivery system specifically designed for dry and pre-action fire sprinkler systems. This system uses the airflow provided by the dry or pre-action system's supervisory air compressor to carry VCI molecules throughout the piping network. The fully mechanical process requires no electrical components, making installation straightforward and maintenance minimal.

## Nitrogen Generators: An Alternative Approach

Nitrogen Generators offer another method for corrosion mitigation by displacing oxygen within the sprinkler system with high-purity nitrogen gas. The rationale is that by reducing the oxygen content, a primary driver of corrosion is removed. However, achieving and maintaining the required 98% nitrogen purity throughout the entire system has proven challenging. A recent independent study has shown that branch lines often do not reach the desired purity levels, leading to insufficient corrosion protection.

## Comparative Study: Migration and Effectiveness

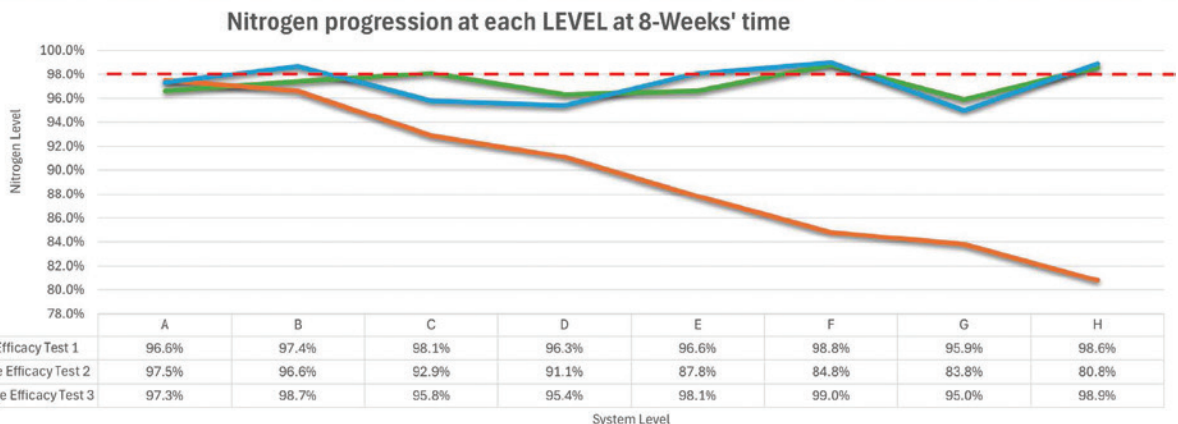
A study conducted by Summit Consulting and Terp Engineering revealed that nitrogen gas did not propagate effectively through the entire sprinkler system. Branch lines failed to achieve the high purity levels required for the corrosion protection that is required. In contrast, extensive testing during the development of Vapor Pipe Shield™ demonstrated that VCI molecules effectively migrated throughout the entire system within the industry-standard two-week timeframe, ensuring comprehensive protection well within acceptable industry timeframes.

The test findings, published in the May/June 2024 issue of Sprinkler Age, revealed that nitrogen generators often fail to achieve the necessary 98% purity throughout the entire system, particularly in branch lines. The 8-month study involved testing

*continued on page 34*

**Figure 2:**  
Comparison of Nitrogen purity levels in a sprinkler system after 8 weeks via different purge methods.

Source: Mark Hopkins  
– Summit Consulting,  
Sprinkler Age



continued from page 33

various nitrogen purge methods and concluded that none consistently achieved 98% nitrogen purity across the system within the expected timeframe. This highlights a significant limitation of nitrogen generators in providing adequate corrosion protection throughout the sprinkler network.

Additionally, research conducted with an independent lab compared the efficacy of 98% purity nitrogen gas and VCI in preventing corrosion. Over six months, VCI proved to be more effective in inhibiting corrosion than nitrogen gas, even with assuming full system coverage by appropriate levels of nitrogen.

### Installation and Maintenance: Simplifying the Process

Installing and maintaining a corrosion mitigation system can be a significant concern for fire protection professionals. Vapor Pipe Shield™ offers a simpler and more cost-effective solution compared to Nitrogen Generators. The installation of Vapor Pipe Shield® is akin to installing an air maintenance device, requiring only basic mechanical connections and no electrical hookups. Annual maintenance involves a quick cartridge and filter replacement, taking no more than 10-20 minutes.

In contrast, Nitrogen Generators are complex pieces of equipment that require significant installation effort, including electrical work, and regular maintenance that can be intimidating for sprinkler fitters and field technicians. Frequent nitrogen purity checks of the generator unit and the purity throughout the system should be regularly performed.

### Cost Comparison: Upfront and Long-Term

Cost is a crucial factor in selecting a corrosion mitigation system. Vapor Pipe Shield™ stands out for its affordability. The upfront cost of Vapor Pipe Shield™ is approximately 1/3 to 1/2 the upfront equipment cost compared to an equivalent Nitrogen Generator. For instance, the cost comparison for a sample system with a total capacity of 400 gallons shows that Vapor Pipe Shield™ costs about 46% of the price of a nitrogen generator system.

When evaluating long-term costs over a 10-year period, including maintenance, Vapor Pipe Shield™ continues to offer significant savings. The 10-year all-in cost of ownership for Vapor Pipe Shield™ is about 65% of the cost of a Nitrogen Generator system. Ease of installation compounds the cost savings and makes Vapor Pipe Shield® a much more attractive option for fire protection professionals & building owners alike.

### Hazen-Williams C-Factor Adjustment in NFPA 13 (2025)

A notable development in the 2025 edition of the NFPA 13 is the allowance for an increased Hazen-Williams C-factor of 120 for systems utilizing listed Vapor Corrosion Inhibitor delivery systems like Vapor Pipe Shield™. Historically, nitrogen generators were the only technology permitted to use this increased C-factor in dry and pre-action sprinkler systems due to their perceived effectiveness in reducing corrosion. However, recent findings have recognized the equivalent protection offered by Vapor Corrosion Inhibitors.

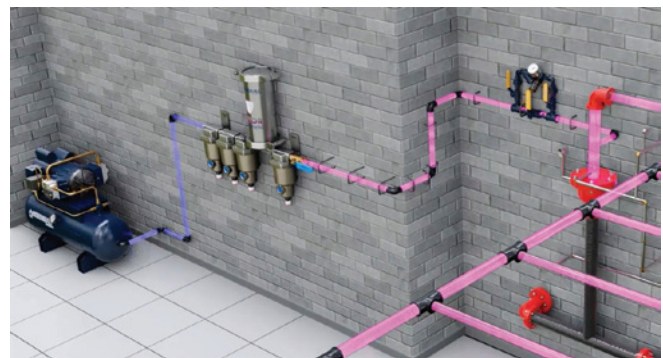
This change not only validates the effectiveness of Vapor Corro-

sion Inhibitors but also provides a substantial cost saving benefit in system design in many systems.

### Conclusion

The advancements in Vapor Pipe Shield™ and VCI technology offer a highly effective and economical solution for corrosion mitigation in dry and pre-action fire sprinkler systems. With proven efficacy and safety, ease of installation, minimal maintenance requirements, and substantial cost savings, VCI are a significantly enhanced alternative to traditional Nitrogen Generators. As the industry continues to seek reliable and efficient ways to combat corrosion, VCI and Vapor Pipe Shield™ are now available to play a crucial role in enhancing the longevity and reliability of fire sprinkler systems.

By embracing these advancements and the updated NFPA 13 Code provisions, the Fire Protection Industry can achieve more effective corrosion mitigation, leading to longer lasting and more efficient fire sprinkler systems. This progression not only ensures better protection for lives and property but also delivers significant cost savings and operational benefits. •



# The Dangers of Backflow: Solutions for Public Safety

by Thomas Hartel, President, *Valley Fire Protection Systems, LLC*



## Introduction

If the proper precautionary measures are not taken, backflow can pose a serious threat to public health. There are numerous documented cases of contaminants invading the public drinking water through cross connection/backflow problems, causing illness, diseases, and even death.

Mechanical backflow prevention devices and assemblies offer the best protection against cross connection hazards and are now required by law. Standards have been established regarding the function, manufacturing, installation, testing, and maintenance of backflow prevention devices and assemblies.

## Part One: Definitions

Backflow is the undesirable reversal of the flow of water or a mixture of water and other liquids, gases, or other substances into the distribution pipes of the potable water supply. There are two ways for backflow to occur. The first way that backflow can occur is back siphonage. Back siphonage is the reversal of water flow due to a drop in the water pressure on the supply side. The most common cause of back siphonage is a water main break. Other back siphonage conditions exist when there is a negative pressure in the supply piping, allowing downstream substances to be siphoned into the potable water supply. Undersized pipes and high withdrawal rates can create vacuums, which contribute to the occurrence of back siphonage.

The second cause of backflow is backpressure. What is backpressure? It is when the pressure in the downstream piping rises above the supply pressure of the system, allowing downstream substances to be pushed into the potable water supply. Some common causes of backpressure include thermal expansion, pump systems and elevated tanks. The type of occupancy of the premises, the design and construction of the system, and the manner in which it is used are major influences on the possible incidence of backflow. Consequently, the degree of the hazard to which persons may be exposed varies from discomfort and minor illness to fatal if the backflow of contaminants into the potable water system is not completely prevented. Due to the many variables in systems, devices of different performance characteristics are needed, each tailored to the system and its protection needs.

## Understanding Cross Connections

Prior to listing which industries are most affected by backflow

or examining in detail specific legendary cases of backflow, we must first understand thoroughly the concept of what a cross connection is.

By-pass arrangements, jumper connections, removable sections, swivel, or changeover devices and other temporary or permanent devices through which or because of which backflow can occur, are cross connections. There is a risk to public health if there is a cross connection between your water supply and a contaminated source. Cross connections can occur in several situations. A few examples of cross connections where a backflow incident could occur are:

- Metal processing or chemical plants, where metals in solution or chemicals used for production can come into contact with the water supply.
- Commercial or residential gardening, where chemical injectors, irrigation systems and garden hoses are connected to the water supply.
- When a hose is left running in a planter or a container with mixed chemicals such as fertilizers or pesticides.
- Car wash facilities, where a connection between the scrubber and rinse cycle pipe allows recycled water into the public drinking water supply.

By far, the most common cross connection arrangement involves the use of a garden hose. Cross connections occur at home just as much as they do in industry. Through increased public awareness programs and education, all of us need to be more careful about how we use our garden hoses. Never submerge garden hoses in swimming pools, chemicals, and car radiators and do not connect them to aspirators. Many industries pose a potential risk to public health through a cross-connection. Examples of some of these industries include:

- Chemical Plants
- Insect/Pest Control Businesses
- Floral/Garden Nurseries
- Golf Courses
- RV Parks
- Metal Processing Plants
- Paint Manufacturers
- Laundromats

*continued on page 36*

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- Naval Bases and Shipyards
- Car Washes
- Mortuaries/ Healthcare Facilities
- Agricultural/Fertilizer/Pesticide Facilities
- Petrochemical Plants
- Dairy and Food Processing Plants

## Part Two: Case Histories

Definite proof of the potential menace to public health caused by backflow is borne out by case histories of actual occurrences. Some of the more prevalent diseases, illnesses and outbreaks that have been caused over the years by the incidence of backflow include:

- 1800-1940 – Typhoid, dysentery and amoebiasis
- 1900 – Infectious hepatitis
- 1976 – Legionnaire’s disease (Philadelphia)
- 1985 – Salmonella outbreak affecting 100,000 people in the Chicago area.

Public health officials have long been aware of the impact that cross connections and accidental backflows play as a threat to the public health. Because plumbing defects are so frequent and the opportunity for contaminants to invade the public drinking water through cross connections are so general, enteric infections caused by drinking water may occur at most any location and at any time.

The following documented cases of cross connection/backflow problems illustrate and emphasize how actual cross connections have compromised the water quality and the public health in the United States.

### Case #1: Burned in the Shower

A resident of a small town in Alabama jumped in the shower at 5 a.m. one morning in October 1986, and when he got out his body was covered with tiny blisters. “The more I rubbed it, the worse it got,” the 60-year-old resident said. “It looked like someone took a blow torch and singed me.”

He and several other residents received medical treatment at the emergency room of the local hospital after the water system was contaminated with sodium hydroxide, a strong caustic solution.

Other residents claimed that “It (the water) bubbled up and looked like Alka Seltzer. I stuck my hand under the faucet and some blisters came up.” One neighbor’s head was covered with blisters after she washed her hair and others complained of burned throats or mouths after drinking the water.

The incident began after an 8-inch water main that fed the town broke and was repaired. While repairing the water main, one worker suffered leg burns from a chemical in the water and required medical treatment. Measurements of the pH of the water were as high as 13 in some sections of the pipe.

Investigation into the cause of the problem led to a possible source of the contamination from a nearby chemical company that distributes chemicals such as sodium hydroxide. The sodium hydroxide is brought to the plant in liquid form in bulk tanker trucks and is transferred to a holding tank and then pumped into

55-gallon drums.

When the water main broke, a truck driver was adding the water from the bottom of the tank truck instead of the top, and sodium hydroxide back siphoned into the water main.

### Case #2: Human Blood in the Water System

Health Department officials cut off the water supply to a funeral home located in a large southern city after it was determined that human blood had contaminated the fresh water supply. The chief plumbing inspector had received a telephone call advising that blood was coming from drinking fountains within the building.

Plumbing and county health department inspectors went to the scene and found evidence that the blood had been circulating in the water system within the building. They immediately ordered the building cut off from the water system at the meter. City water and plumbing officials said that they did not think that the blood contamination had spread beyond the building. However, inspectors were sent into the neighborhood to check for possible contamination.

An investigation revealed that the funeral home had been using a hydraulic aspirator to drain fluids from the bodies of human “remains” as part of the embalming process. The aspirator directly connected to the water supply system at a faucet outlet located on a sink in the “preparation” (embalming) room. Water flow through the aspirator created suction that was utilized to draw body fluids through a hose and needle attached to the suction side of the aspirator.

The contamination of the funeral home potable water supply was caused by a combination of low water pressure in conjunction with the simultaneous use of the aspirator. Instead of the body fluids flowing into the sanitary drain, they were drawn in the opposite direction-into the potable water supply of the funeral home!

### Case #3: Propane Gas in the Water Mains

Hundreds of people were evacuated from their homes and businesses on an August afternoon in a town in Connecticut in 1982 because of propane entering the city water supply system. Fires were reported in two homes and the town water supply was contaminated. One five-room residence was gutted by a blaze resulting from propane gas “bubbling and hissing” from a bathroom toilet. In another home, a washing machine explosion blew a woman against a wall. Residents throughout the area reported hissing and bubbling noises coming from washing machines, sinks and toilets. Faucets sputtered out small streams of water mixed with gas and residents in the area were told to evacuate their homes.

This near disaster occurred when the gas company initiated immediate repair procedures in one, 30,000-gallon capacity liquid propane tank. To start the repair, the tank was “purged” of residual propane by using water from one of two private fire hydrants located on the property. Water purging is the preferred method of purging over the use of carbon dioxide since it is more positive and will float out any sludge as well as any gas vapors. The “purging” consisted of hooking up a hose to one of the private fire hydrants located on the property and initiating flushing procedures.

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Since the vapor pressure of the propane residual in the tank was 85 to 90 psi, and the water pressure was only 65 to 70 psi, propane gas backpressure back flowed into the water main. It was estimated that the gas flowed into the water mains for about 20 minutes and that about 2,000 cubic feet of gas was involved. This was approximately enough gas to fill one mile of an 8-inch water main.

#### **Case #4: Chlordane and Heptachlor at the Housing Authority**

The services to seventy-five apartments, housing approximately three hundred people, were contaminated with chlordane and heptachlor in a city in Pennsylvania in December 1980. The insecticides entered the water supply system while an exterminating company was applying them as a preventative measure against termites.

While the pesticide contractor was mixing the chemicals in a tank truck with water from a garden hose coming from one of the apartments, a worker was cutting into a 6-inch main line to install a gate valve. The end of the garden hose was submerged in the tank containing the pesticides, and at the same time, the water to the area was shut off and the lines were being drained prior to the installation of the gate valve. When the worker cut the 6-inch line, water started to drain out of the cut, thereby setting up a back siphonage condition. As a result, the chemicals were siphoned out of the truck, through the garden hose, and into the system, contaminating the seventy-five apartments.

Repeated efforts to clean and flush the lines were not satisfactory and it was finally decided to replace the water line and all the plumbing that was affected. There were no reports of illness, but residents of the housing authority were told not to use any tap water for any purpose and they were given water that was trucked into the area by volunteer fire department personnel. They were without their normal water supply for 27 days.

#### **Case #5: Heating System Anti-Freeze into Potable Water**

Bangor Maine Water Department employees discovered poisonous anti-freeze in a homeowner's heating system and water supply in November 1981. The incident occurred when they shut off the service line to the home to make repairs. With the flow of water to the house cut off, pressure in the lines in the house dropped and the antifreeze, placed in the heating system to prevent freeze-up of an unused hot water heating system, drained out of the heating system into house water lines, and flowed out to the street. If it had not been noticed, it would have entered the homeowner's drinking water when the water pressure was restored.

#### **Case #6: 129-Year-Old Water Supply System at a Veterans Home**

During 2015, thirteen residents of a Quincy, Illinois, Veterans home perished and dozens more were sickened by an obsolete water supply system at a 129-year-old facility that lacked State mandated safeguards. The Centers for Disease Control (CDC)

report concluded that Legionella bacteria caused a severe form of pneumonia in those that were affected. Additional cases have been reported at this facility in subsequent years. Piping systems should be checked by an expert at least annually, and quarterly in the case of senior living facilities. Piping systems and components should be upgraded and modernized every few decades. No piping system was designed or expected to safely operate for 129 years.

#### **Part Three: Solutions**

Fire protection systems must be considered as non-potable systems due to the poor quality of water often found in them. Listed below are several concerns the building owner and water purveyor should have with these systems.

1. The growth of offensive microorganisms, which can create taste and odor problems.
2. The leaching of metals such as zinc, cadmium, iron, copper, or lead into the water.
3. The addition of corrosion inhibitors, antifreeze, or other chemicals to protect systems.
4. Dry systems containing compressed air or nitrogen.
5. Systems which are constructed with unapproved or non-potable water piping or materials.
6. A loss of pressure on the potable water supply main, or an increase in pressure on the consumer's system, which allows water from these systems to enter the potable supply.

If backflow from these systems should occur, the hazards will vary from a low health hazard or aesthetic concern to a high health hazard.

The purveyor may require a detector meter on the system to detect any unauthorized use or leakage within the system. This is usually accomplished using a double check detector assembly, or reduced pressure detector assembly, depending on the degree of hazard determined by the purveyor. A single detector check or single check valve is not considered an approved backflow preventer.

Most fire protection systems will have a fire department pumper connection. In these cases, the pumper connection must be installed downstream of the backflow prevention assembly.

All fire protection systems that are connected to the water purveyor's potable water system, either directly or indirectly on the property side of a potable water service, should be isolated with an approved backflow prevention assembly. The level of backflow protection should be commensurate with the degree of hazard.

#### **Degree of Hazard**

There are two factors to consider when determining which method of controlling cross connections should be selected. One factor is the type of cross connection involved: i.e., a direct type or an indirect type. The other factor is the degree of hazard—in other words, how serious a threat to public well-being is a particular

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material? Degree of hazard may be that amount of threat to the health and well-being of the public. It may be classified into three categories: lethal hazard, contaminant (high) hazard, pollutant (low) hazard.

1. Lethal hazard is the highest degree we know. Substances such as radioactive material and raw untreated sewage are in this class.
2. Contaminant hazard is the next highest degree. It involves an impairment of the quality of the water to an extent that creates a danger to public health through serious illness or death. Materials such as chemicals and industrial fluids, which are poisonous, fall into this category.
3. Pollutant hazard is a substance that would be objectionable in a water system, but not necessarily hazardous to health. Examples of this would be edible food products, untreated steam, and compressed air.

### Protective Methods and Assemblies

Mechanical backflow prevention devices and assemblies offer the best protection against cross connection hazards and are now required by law. Per the Illinois plumbing code:

“All premises intended for human habitation or occupancy shall be provided with a potable water supply. The potable water supply shall not be connected to non-potable water and shall be protected from backflow and back siphonage.”

Approval agencies, representing many diverse geographical areas and levels of government, have established performance criteria regarding the function, manufacturing, installation, testing, and maintenance of backflow prevention devices and assemblies.

The five recognized methods/assemblies for protecting against cross connection hazards are:

1. Air gap may be used as protection for either type of cross connection, direct or indirect type, and for any degree of hazard.
2. Atmospheric vacuum breaker may be used as protection for indirect type cross connections only, and for any degree of hazard. This unit must be installed on the discharge side of the last control valve on a system so that it will not be subject to backpressures.
3. Pressure vacuum breaker may be used as protection for indirect type cross connections only, and for any degree of hazard. This unit must be installed so that it will not be

subject to backpressure, but may be installed subject to continuous supply line pressures.

4. Double check valve assembly may be used as protection for either type of cross connection, but it is limited for use in pollutant hazard situations.
5. Reduced pressure principle backflow prevention assembly may be used as protection for either type of cross connection and it may be used in contaminant or pollutant hazard situations.

It is beyond the scope of this article to describe the operation of each of the five types of backflow prevention devices above. Furthermore, the proper selection of the correct backflow prevention device is a complex process involving numerous variables. Of tremendous importance, however, is the need to select a qualified expert contractor, properly licensed, insured, and certified in cross connection control device inspections.

(CCCDI) Scrutinizing your contractor’s safety performance record and checking their references are proven methods of ensuring a quality installation that will stand the test of time.

Furthermore, along with building ownership comes certain responsibilities and civic duties. Not only is it the law to have backflow prevention devices installed in your building, the law requires that these devices be tested and certified at least once per year (Illinois Environmental Protection Agency) by an approved inspector. Since most backflow prevention devices can be tested and certified for the nominal fee of just one or two hundred dollars, it makes no rational sense for a building owner to skip the annual test for economic reasons. Building owners are advised to carefully consider the costs of defending a costly negligence lawsuit in the event of a backflow prevention device failure. In this case, compliance with the law is a very small price to pay given the alternative.

Thank you for taking the time to read this article. Permission is granted to translate, print, share, and distribute this article with the intent to inform and educate the general public at large. •

**Tom Hartel** is President of Valley Fire Protection Systems, an award-winning fire protection contractor that is based in St. Charles, Illinois. Valley is a full service, third generation company that also operates a plumbing and backflow prevention division. We are licensed and perform work in Illinois, Indiana, Ohio, Michigan, and Wisconsin. Mr. Hartel can be reached at: (630) 761-3168. The company website is: [www.valleyfire.com](http://www.valleyfire.com). Credits- Special thanks to Wilkins Backflow Preventers- a Zurn Company. •

*“Not only is it the law to have backflow prevention devices installed in your building, the law requires that these devices be tested and certified at least once per year (Illinois Environmental Protection Agency) by an approved inspector.”*



# Advancing Cold Storage Fire Suppression Using Performance-Based Design

by Melisa Rodriguez

*Vertical Business Development Leader - Storage, Fire Suppression Products, Johnson Controls*



The preservation of perishable goods in cold storage facilities is of paramount importance in today's global supply chain. To achieve this, dependable and effective fire suppression is necessary. Refrigerated warehouse fires can result in high-value property loss if the building and its contents are not properly protected with an appropriate fire suppression system.

However, sprinkler systems in areas subject to freezing can be challenging to install and maintain due to the harsh working environments and difficulty of putting a system back in service after a water discharge. Sprinklers are often installed within the storage racks which can further complicate installation and maintenance. For these and other reasons, installers and end users often avoid in-rack sprinklers and prefer ceiling-only protection.

Historically, dry sprinkler systems are popular for cold storage applications. However, the design criteria in NFPA 13, FM Global data sheets and other prescriptive standards put limits on the height and the type of hazards allowed to be protected by dry systems. Other solutions like the use of listed antifreeze come with their own set of challenges in cold storage settings, along with a prohibitive cost and limit on system size.

As an alternative to the available options that can be utilized on a prescriptive bases, designers and engineers can turn to Performance Based Design (PBD) as a viable option to protect these spaces with effective suppression. Many jurisdictions have processes in place for the use of PBD, and both NFPA and the IBC have provisions within that help guide both the designer and the AHJ in understanding this approach.

## A New Performance-Based Sprinkler Solution

One example of performance-based design for cold storage fire suppression is the Quell™ Cold Storage Fire Suppression System. Quell uses a PBD approach to provide a double-interlock preaction sprinkler system that performs like a wet sprinkler system. The PBD has been supported with multiple full-scale fire tests in partnership with UL and FM.

The Quell™ Cold Storage Fire Suppression System design method's primary goal is to strictly control when water is applied to a fire:

- When applied too early, water droplets from the first activated sprinklers can be carried back up to the ceiling by



the fire plume and cool the adjacent sprinklers enough to prevent them from activating.

- When applied too late, more sprinklers will activate than ideal for an effective density of water from each sprinkler.
- With full scale fire testing, it is clear that when the onset of water discharge can be kept within this ideal time window, the sprinkler system is able to suppress the fire and contain it to the area of origin.

The Quell™ design methodology utilizes a means of early detection as one of the pre-action trigger events, typically in the form of linear heat detection. This helps ensure that water is not introduced into the system piping unless the detection system signals heat from a fire along with the operation of a sprinkler. This also allows for preliminary measures to be automatically deployed, such as pre-starting the fire pump to avoid delays and to shut down any mechanical ventilation systems so there will be no air flows that would impact the sprinkler operation by moving the hot gas away from the fire origin. The Quell™ design utilizes proprietary large orifice upright CMSA sprinklers that are high temperature rated to ensure the heat detection signals the control panel prior to sprinkler activation. Lastly, a specialized fluid delivery calculation software, SprinkFDT-Q, is used to ensure water delivery to the activated sprinklers is achieved within the required time limit to suppress and contain the fire.

As the global demand for cold chain logistics continues to rise, the Quell™ design method emerges as an indispensable asset, ensuring the integrity and safety of perishable goods while safeguarding the interests of stakeholders throughout the supply chain.

*For more information, go to [www.tycofpp.com/quell](http://www.tycofpp.com/quell)*

# The Roar Before Dewar

by Mike Parker, *President, Children's Burn Foundation of Florida, Inc*

The day before the Buddy Dewar Golf/Skeet Classic, the Florida Fire Sprinkler Association hosts *The Roar before Dewar*. This event allows golfers to come in a day early, play a round of golf and then attend a reception hosted by Quality Fabrication. Each year at this event there is a putting contest where funds are raised for a charity. The 2024 charities of choice was The Children's Burn Foundation of Florida/Camp Tequesta. A great organization for kids who have been victims of fire.

It started with a dream of burn survivor Ruth Pierson. In 1991, that dream became a reality when the first statewide camp for burn survivor children was organized and The Children's Burn Foundation of Florida, Inc. (CBFF) was formed. For over 33 years, young burn survivors have had the opportunity to attend their own special camp, Camp Tequesta. CBFF proudly partners with the Florida State Elks Association ([www.felks.org](http://www.felks.org)).

In addition to providing a real camp experience, the over 400



acres Marion County site offers great outdoor activities, such as a heated swimming pool, archery, high angle ropes course with multiple challenges, canoeing, baseball, nature walk, slip-n-slide, cabin lodging, kid-friendly camp food, bonfires and more! Elks Camp Director Nick Miller fulfills all camping needs, while providing a private and exclusive camp experience. The CBFF Board Members, volunteers and burn survivors all agree that the Elks have provided an outstanding "home" for burn camp.

Camp Tequesta is the number one priority and annual project for Children's Burn Foundation of Florida, Inc. During the second weekend in November, burn survivor children from across Florida attend camp for four wonderful, fun-filled, jam-packed days. Children's Burn Foundation of Florida, Inc. pays 100% of the expenses for transporting, lodging, feeding, and entertaining the children while at camp. Burn survivor children between the ages of 6 – 17 are accepted. The only restrictions are that the

children are one-year post-burn, and comfortable with being away from their parents/guardians, siblings, and/or other family members.

Each child is assigned an adult counselor, that will stay with him/her while at camp, thus always ensuring one-on-one adult supervision. For the safety of the children, all counselors and volunteers undergo a background check prior to camp. For older children, the Junior Counselor program allows teens 16 and 17 years of age to mentor the younger children, while still assigned to an adult counselor. Evidence of their maturity comes full circle when they return as adult counselors the following year, prepared to give back to the foundation as they share their life experiences with the younger children. We have a number of adults that were campers as kids, that have returned as volunteers and staff members.

Children's Burn Foundation of Florida, Inc. is a 501(c)3 tax exempt corporation. The Board of Directors, Regional Coordinators, and support staff volunteer their time for the benefit of the children. We have no paid staff. CBFF operates entirely on personal and corporate donations from the community. These donations allow the foundation to plan and organize the annual burn camp and provide financial assistance to the burn survivors.

## Additional Assistance After Camp

These young burn survivors now can apply for scholastic and or medical financial assistance previously unavailable. It is through the generosity of the public and corporate world that the Children's Burn Foundation of Florida, Inc. can bring this program to the survivors. Scholarships are open to any child who has been a Camp attendee. Education scholarships are awarded, after review, to any camping continuing their education through 2- or 4-years college or trade schools.

*For more information, we can be found at [www.childrensburnfoundationoffl.com](http://www.childrensburnfoundationoffl.com) •*



# Engaging Your Staff in Continuing Education: A Path to Growth and Success

by Jeni Pierce, *NFSA Training & Education Manager*



In today's fast-paced and ever-evolving work environment, continuing education is essential for both personal and professional growth. Engaging your staff in ongoing learning not only enhances their skills but also boosts morale, job satisfaction, and overall productivity. Here are some effective strategies to foster a culture of continuous education within your organization.

## 1. Understand the Learning Needs of Your Staff

Recognize that adult learners have specific needs and preferences. Tracking continuing education credits, adhering to local or state requirements is always a must, but it is also important to identify the areas where your employees feel they need improvement or may have an interest in learning a new skill. Tailoring educational programs to meet these needs will make the learning experience more relevant and engaging.

## 2. Offer Flexible Learning Options

Given the demanding schedules of many employees, offering flexible learning options is crucial. Consider providing online modules, webinars, and blended learning approaches that allow staff to access educational materials at their convenience. This flexibility ensures that learning can fit into their busy lives without causing undue stress. Offering multiple training opportunities on the same topic gives employees options and allows companies to stagger attendance, keeping business moving.

## 3. Incentivize Participation

Motivate your employees to engage in continuing education by offering incentives. These could include financial rewards, recognition programs, or opportunities for career advancement. When employees see tangible benefits from their efforts, they are more likely to participate actively.

## 4. Create a Supportive Learning Environment

Foster an environment that encourages collaboration and interaction. Organize study groups, activities, or peer-to-peer mentoring programs where employees can share knowledge and experiences. This not only enhances learning but also builds a sense of community and support within the organization.

## 5. Invest in Quality Educational Resources

Ensure that the educational resources you provide are of high quality and relevant to your employees' roles. Partner with reputable training providers and invest in up-to-date materials and technologies. This demonstrates your commitment to their professional development and ensures they receive the best possible education.

## 6. Encourage Practical Application

Incorporate practical, hands-on activities into your educational programs. Use case studies, simulations, and role-plays to help employees apply what they have learned in real-world scenarios. This not only reinforces their learning but also makes it more engaging and memorable.

## 7. Provide Constructive Feedback

Regular feedback is essential for continuous improvement. Implement various assessment methods, such as quizzes, presentations, or practical demonstrations, to gauge understanding and provide constructive feedback. This helps employees identify areas for improvement and reinforces their learning.

## 8. Celebrate Achievements

Recognize and celebrate the achievements of your employees who engage in continuing education. Whether it's completing a course, earning a certification, or mastering a new skill, acknowledging their efforts boosts morale and encourages others to follow suit.

## Conclusion

Engaging your staff in continuing education is a win-win for both employees and the organization. By understanding their learning needs, offering flexible options, incentivizing participation, and creating a supportive environment, you can foster a culture of continuous learning that drives growth and success. Investing in your employees' education is an investment in the future of your organization.

I hope you find these strategies helpful! Do you have any specific goals or challenges related to continuing education in your organization? Visit [NFSA.org](https://www.nfsa.org) for all your training needs. We offer a wide variety of in-person and on-demand training opportunities featuring industry experts. Private contract classes are also available on request. •

# The Sleep Genius

by Jennifer Kouyoumjian,  
*Visual Communications Manager, Reliable Automatic Sprinkler Co., Inc.*



Rob Sweetman is called the “*Sleep Genius*.” He helps exhausted first responders get critical sleep. His sleep program, *62Romeo*, is about saving lives by using sleep science, Cognitive Behavioral Education for Insomnia (CBE-i), and relaxation techniques from the world’s leading experts. Reliable is now proud to partner with Rob and his team to help on this mission. “They call me the Sleep Genius. I did not give myself that name. It is like on the Appalachian Trail, you cannot give yourself a trail name.” - Rob Sweetman.

## Serendipitous Beginnings

A few weeks ago, John Corcoran and I had a video interview with Rob Sweetman to find out how Kevin “K.J.” Fee Jr. and Kevin Fee quickly became friends with Rob and how Reliable joined the 62Romeo mission. A “serendipitous divine intervention” were the words that came to mind when I heard the story.

## A Mission Driven by Loss

We had many questions prepared, but Rob did not need a prompt. He is passionate about sleep, has a great story, and is being divinely inspired on his mission to save lives. Sweetman believes the divine will step in when you do the right thing for a bigger cause.

Sweetman is a former Navy SEAL. The loss of his platoon friend, Ryan Larkin, who tragically died by suicide, drove him on a mission to save others like him. “I wanted to help SEALs, and if not SEALs, people in the Navy, and if not Navy, the military,” said Sweetman.

## Expanding the Scope to Firefighters

About a year into launching 62Romeo, three things happened in a short period that changed the scope of 62Romeo. Nate Brown, a former SEAL and firefighter, brought Rob the names of a dozen firefighters who wanted to participate in the 62Romeo’s sleep coaching program. Sweetman learned from Brown how badly firefighters needed help, “Dude, the firefighters are struggling right now.” Soon after, a 62Romeo relaxation coach whose husband works as a Firefighter/Flight-Paramedic showed Rob a documentary they had produced around the firefighter suicide epidemic. Moved, Rob said, “It is explicit, to say the least, but you can watch it and understand where the fire service is these days. It was really bad.”

Rob explained to us that the suicide rate is higher in firefighters, and the average lifespan of a firefighter after retirement is 36

months. With Rob’s understanding of the relationship between sleep health and mental health, he knew he had to act quickly. More sleep and downtime are clear solutions to the epidemic.

## Partnership with Reliable Sprinkler

The final experience that called Rob to a more expansive mission for 62Romeo happened on tour at Reliable Sprinkler. Rob Sweetman met K.J. Fee at a SEAL Future Foundation event in South Carolina. K.J. and Rob are captivating and engaging, so I was not surprised to learn they hit it off as friends. K.J. invited Rob for a tour of Reliable. Rob was very eager to visit the factory in Liberty. He said, “I am a graduate of Liberty High School, where Reliable is located, and for a couple of decades, I held all the records in wrestling. I’m a big part of the community and want to serve as a larger part of the community one day.” Rob thought he might see friends from high school!

After Rob toured Reliable and visited K.J.’s office, he saw a



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photograph of a firefighter with flames surrounding him, which gave him an idea. Rob pointed to the photo and said to K.J., "The Fee family and Reliable give to the Navy SEALs. Navy SEALs are awesome, and I am a former SEAL. SEALs have a lot of support... but do you know who does not have as much support? Those guys (firefighters) are in a bad way, and I think I have a way to help them." This started the conversation, got Kevin Sr. got involved, and Reliable became a partner with 62Romeo to help firefighters specifically. Now, the organization gives scholarships to firefighters to put them through the program.

"We created this thing with the mission to save guys like Ryan, and it turned out that now we're going to save people in the fire service. It's a beautiful connection between the mechanical fire suppression system and the people on the ground," said Rob.

### How It Works

Rob's approach with 62Romeo blends sleep science with relaxation techniques and education. The six-week program is designed to create lasting habits for better sleep. "We needed to keep participants engaged for at least a month," Rob explains.

### Scaling the Program

To scale the program, Rob focuses on two key areas: accreditation and automation. The accreditation process, which has been underway for six months, is essential for securing funding from fire departments, military divisions, and other organizations. "Accreditation is a wall we keep running into. We must be recognized as an accredited course to secure funding," Rob says.

Automation plays a role in managing the participants. By automating enrollment, equipment distribution, and progress tracking, 62Romeo can handle thousands of participants. "Automation allows us to manage 10 classes with the current infrastructure," Rob notes.

### Next Steps and How to Participate

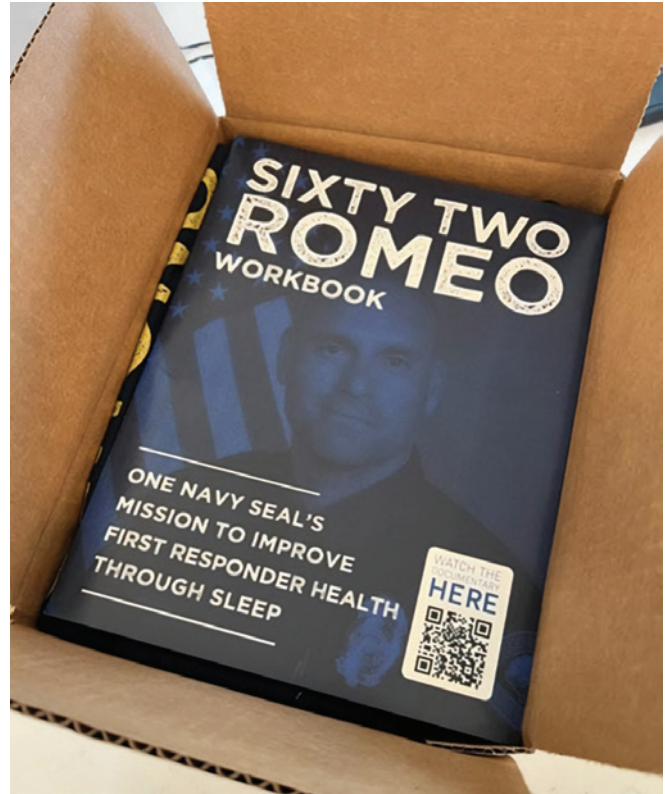
During the interview, we got a glimpse into the future, and it was awe-inspiring. Rob is also expanding 62Romeo with Happy Canyon Ranch, a new yoga retreat center, near Telluride, Colorado, providing a space for in-person connection and fellowship. "There's nothing like being out in nature and connecting with people," Rob says.

Visit 62Romeo's website to participate in the program or learn more. Firefighters can apply for scholarships. "This is not just a job for me; this is a life passion, divine intervention. We are committed to helping as many people as possible achieve better sleep and, ultimately, better health," Rob emphasizes.

62Romeo demonstrates the power of innovative, compassionate approaches to health and well-being. With the scaling of his program, the vision of healthier, well-rested people is becoming a reality.

### Why 62Romeo?

In the organization's early days, Rob's catchphrase was "six weeks to sleep restoration" or 62R shortened. During a military podcast, The Scuttlebutt Show, the host (using the military pho-



netic alphabet) morphed 62R into 6 (weeks) 2 (to) Romeo (sleep Restoration), or Sixty-Two-Romeo. That name ended up sticking with them from then on.

### About the Author:

*Jennifer Kouyoumjian is the Visual Communications Manager at Reliable. With 35 years of experience in industrial firms, she specializes in visual storytelling, marketing, and strategic communication.*

<https://62romeo.com/>  
<https://www.instagram.com/sleepgeni.us>  
<https://www.62romeo.org/founder>



# Northwest Fire Systems is Growing!

by Samantha Tabera,

*Northwest Fire Systems Service Administrator/ Inspections Quality Control*

Since acquiring Glacier Fire in 2022, Washington state's Northwest Fire Systems has been able to grow its residential fire sprinkler division.

As it stated in a recent Northwest Fire Systems social media post, "Your home holds so much more than your tangible items. It holds memories, it holds laughter, it holds good times and bad – it holds your entire life. You shouldn't have to worry about losing all of that to a stray spark or ember."

In Washington state, ten jurisdictions require residential fire sprinklers in all new construction, while sprinklers can be voluntarily installed throughout the state. Northwest Fire Systems has expertly installed sprinklers in a wide range of homes, including the luxury detached accessory dwelling unit shown in the photo.



# Five Years Later—What Do Texas Fire Survivors Really Want? *Major National & Texas Fire Safety Wins: 2019 – 2024*



By Cindy Giedraitis, *NFSA South Central Regional Manager*

It has been five years since Kaitlyn Denson and Joseph Tarin died in an Austin apartment fire (July 15, 2019 - The Woods of Barton Skyway) and six years since five young people died and several others, including Common Voices Advocate Zach Sutterfield, were severely burned in a San Marcos apartment fire (July 19, 2018 – Iconic Village).

Kim Denson (Kaitlyn’s mom) texted me and reminded me that Kaitlyn’s fire death was reaching a five-year anniversary. Kim asked NFSA to let her know what major fire safety wins we have had in Texas and Nationally in the past 5 years.

First, I cried, then I prayed and then with new resolve, I went back, talked to our NFSA Team, and tried to pull together some major fire protection accomplishments that improve occupant life safety! Many Texas Cities and ESD’s (Emergency Service Districts) now adopt the Model International Codes and NFPA Standards with as few amendments as possible. The cities of Dallas and Houston adopted the 2021 International Codes in 2023 and 2024. The City of Austin is adopting the 2024 International Codes January 2025. Strict adoption of the Model Codes provides the best fire protection as these codes and standards have been developed by technical experts including NFSA staff, member contractors, member supplier manufacturers, fire officials, engineers, insurance authorities, and others.

Many Texas cities and jurisdictions have adopted the Model 2021 or most recent 2024 International Codes and these are definitely fire safety “wins”! The following highlights are some of the most significant occupant life safety code updates.

## IFC – International Fire Codes

- **2021 - High-Rise Building** retrofit is now included in the main body of the 2021 IFC (Section 1103.5.4) for all high rises and provides a timeline for building owners to provide fire sprinklers, alarms and more. In the past, retrofit of high-rise buildings was in the International Fire Code Appendix M and had to be adopted separately.
- **2021 - A-2 – Assemblies** used for food and/or drink with 300 or more where alcoholic beverages are consumed was adopted in the 2018 IFC and strengthened in the 2021 IFC to include occupant loads of 100 or more in fire areas that exceed 5,000 feet in all stories including the levels of exit discharge.

- **2021 - I-2 - Institutional** occupancies usually healthcare facilities where patients are treated and cared for also provided 1 hour fire resistance rated construction in 2018 and strengthened the requirements in 2021 to include emergency planning.
- **2024 - Use and storage of Lithium-ion** batteries now requires fire sprinklers and alarms in Group B, F-1, M and S-1 that use or store Li-On Batteries regardless of whether they are used with an ESS – Energy Storage System. Micromobility devices with Lithium-ion batteries are now included in the IFC.
- **2024 – Local Exterior** alarms with audible and visual are required for all fire sprinkler systems except 1-2 family dwellings. Monitoring is required for sprinkler systems.
- **2024 – Smoke** alarms must be installed 10’ or less from cooking appliances and must be replaced when they are over 10 years old from the date of manufacture.
- **2024 – Audible Alarms** with 520 HZ low-frequency signal must be installed in Group R-1, R-2 and I-1.
- **2024 – Carbon Monoxide** Detector requirements are more specifically detailed when CO Sources are present in all occupancies except F, S, & U.

## National CARES Act - 2020

The NFSA Team has been working for decades to provide national tax incentives for fire sprinkler systems. Finally, the NFSA Team efforts were realized, and fire sprinklers were included in The Federal Tax Cuts and Jobs Act which passed in 2017, and then strengthened in the CARES Act which passed in March of 2020. NFSA and many national fire service agencies worked with Congress to create the CARES Act of 2020. The CARES Act adds in the income tax provisions for high-rise commercial buildings (IRS -Section 168). This addition for high-rise retrofit and construction was made in the corona virus stimulus package which passed on March 27, 2020. NFSA encourages owners to

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work with their tax expert for their specific projects.

Cost Recovery Section 13201 provides a temporary 100 percent expensing for certain business assets. Previously sprinkler systems in commercial structures were depreciated over a 39-year time horizon. Under the new law any sprinkler system installed or upgraded after September 27, 2017 in an existing commercial structure until December 31, 2022, will be able to be fully expensed. Therefore, the property owner will be able to immediately write off the full cost of the sprinkler system. After 2022 the ability to deduct the cost is as follows: 2023 80% 2024 60% 2025 40% 2026 20% 2027. The depreciation schedule is now permanently set at 15 years.

The fire sprinkler incentives are: Small Business Section 179 Expensing – Previously qualified small businesses were allowed to fully expense purchases such as computers, equipment, and light duty vehicles up to an annual cap of \$500,000. Under the new law Congress has added fire protection as an eligible expenditure under section 179 of the tax code. Congress also increased the cap to \$1 million as the amount that a small business can deduct in a single year. This provision applies only to commercial structures and cannot be used for retrofitting sprinklers into residential structures. However, critical occupancies such as entertainment venues could easily be done under this provision. This change is also a permanent law and unlike section 13201 is not gradually phased out over time.

### Texas Major Retrofit Wins

Texas Historic Retrofit Ordinances

The following Texas cities have implemented historic downtown retrofit ordinances:

Conroe Historic Downtown

Dennison

Denton – local Main Street & TIRZ grants

Grapevine Downtown Historical 20-year low interest loans provided.

Lewisville – Downtown Historical Lewisville

McKinney

Plano – local grants

South Texas - Brownsville

### Texas Multi-Family Retrofit Ordinances - “Burn Me Once, Don’t Burn Me Again.”

The key to success is having the requirement adopted in the code. Actual code adoption allows insurance to help pay for the installation.

#### Plano, TX – Adopted 2008

Existing R-1, 2, 3, and 4 Occupancies: In R-1, 2, 3, and 4 occupancies where a fire has occurred and displaces one or more occupants, the affected building shall be fire-sprinkled prior to the re-occupancy of the unit/building.

#### Lewisville, TX

If a nonconforming structure is destroyed by fire, the elements, or other cause, it may not be rebuilt except to conform to the

provisions of the zoning ordinance and general development ordinance. In the case of partial destruction by fire or other causes not exceeding 50 percent of its value, the building official shall issue a permit for reconstruction. If destruction is greater than 50 percent of its value, the board of adjustment may grant a permit for repair or replacement after a public hearing if they find the following:

- The rebuilding of the nonconforming structure would not adversely impact surrounding properties.
- The structure was not destroyed by the intentional act of the owner or the owner's agent; and
- Allowing the rebuilding of the nonconforming structure is consistent with the intent of this section

#### San Marcos, TX – Adopted 2019

In R-1, 2, 3, and 4 occupancies where a fire has occurred and displaces one or more occupants, the affected building shall be fire-sprinkled prior to the re-occupancy of the unit/building.

- Fire Extinguishers are required in each unit and in shared areas.
- Heat Producing Devices on Balconies: Charcoal burners, open flame cooking appliances, LP gas burners, outdoor grills, barbecue grills, or any other outdoor cooking appliance that generates sufficient heat to cook in, on, or about the appliance, shall not be operated or stored on balconies or within 15 feet of a structure or combustible material.

### The Future - National 2027 International Fire Code Proposals

*\*Please note all these proposals are still subject to the October 2024 ICC Hearings and will probably have revisions.*

#### Post Fire Repair or Protection – Burn Me Once; Don’t Burn Me Again

##### F 162-24 IFC Section 1108

Where an unsprinkled Group I, Group R-1, Group R-4 Occupancy is repaired for reconstructed following a fire incident that caused more than 25% of a fire area to remain unoccupiable for a period 60 or more days, an automatic sprinkler system complying with Section 903.3 shall be installed throughout such fire area or fire areas as part of the repair or reconstruction.

#### Animal Housing – Pet Boarding New Chapter in the IFC

##### F 231-24 IFC Chapter 42

Use of a Group B or M Occupancy to house 10 or more cats/dogs for over 12 hours/day will require a fire safety plan and Group B occupancies will require life safety systems.

#### Short Term Rentals

##### F280-24 – Appendix P – Short-Term Residential Safety Program

Establishes Appendix P. Must be adopted by ordinance or legislation to be enforced. Requiring a permit, CO2 Alarm, Smoke Alarms, Portable Fire Extinguishers, Portable Heating Requirements, restriction on outdoor cooking on combustible balconies, fire protection system maintenance, escape ladders and exit identification. Can also require annual inspections by Fire Code Official.



## Spotlight on Industry Leaders: Katherine Hartsgrove's Journey with Backflow Direct

by Christopher Keeley,  
*Staff Writer - Backflow Direct*

Katherine Hartsgrove's journey in the backflow prevention industry is a testament to dedication, adaptability, and a passion for problem-solving. As an integral part of Backflow Direct's success, Katherine's story is one of resilience and commitment to customer satisfaction.

Katherine Hartsgrove has been at the forefront of the backflow prevention industry since the inception of the Deringer line of backflow devices. In 2016, she was tasked with managing inside sales and helping to elevate Backflow Direct to its current prominence. With a background in parts distribution and experience with a major manufacturer, Katherine brought a wealth of knowledge and expertise to the role.

After almost four years with Backflow Direct, Katherine made the transition to Woodland, California, taking on the role of Sales Operations Specialist.

Katherine's interest in the industry began during her college years, where she majored in drafting and design. Her fascination with the movement of water led her to aspire for an engineering degree in fluid dynamics. Her first industry-related job was as a fire sprinkler designer. However, the economic downturn in 2008 led to her being laid off. Undeterred, she took a job as a file clerk at a company her roommate worked at. Recognizing her background, the owner quickly moved her into a sales position at a backflow preventer distributor company. This role paved the way for her subsequent positions and eventually joining the Backflow Direct team.

"My favorite part of working in the backflow prevention industry is the ability to help people," Hartsgrove said.

Katherine's typical day involves a lot of customer interaction, primarily through phone calls and emails. She assists customers in troubleshooting issues, selecting the right backflow devices or parts, and answering any other questions they might have.

One unique aspect of working at Backflow Direct that Katherine particularly enjoys is the opportunity to interact directly with end users, not just wholesalers and representatives. This direct communication allows her to build strong relationships with customers, many of whom have followed her throughout her career.

Katherine's commitment to customer service is evident in her daily interactions. She has countless stories of helping customers find the exact parts they need, often identifying and resolving issues that might otherwise go unnoticed. Her ability to ensure customers get the correct part the first time has earned her a reputation for exceptional service.

"I like the realness of talking to the people in the field. Joking with them, listening to their stories.," she said. "It feels more like a conversation between friends than a vendor/customer relationship."

To many, she is described as being the face of Backflow Direct. When asked about how this makes her feel, she said "Proud. I really do believe that the Deringer backflow preventer is the best device on the market currently and the feedback I get from my customers encourages me to continue to offer the level of customer care they have become accustomed to."

Katherine Hartsgrove's journey with Backflow Direct highlights the importance of dedication, customer service, and building strong relationships in the industry. •

## Finding My Calling

by Christy Caldwell, *Sales Southern Fire Protection of Orlando, Inc.*

Throughout my career, I've embraced hard work and avoided the confines of a desk job early on. Introduced to the fire sprinkler business by my uncle, I began as a pipe fitter in 1989, navigating in a predominantly male dominated industry. This proved both fulfilling and instructive, and paved a path into design after just three years. Concurrently, I ventured into teaching at local high schools and vocational schools and sharing my expertise with up-and-coming apprentices.

I joined Southern Fire Protection in 1994, Where I spent about ten years in design before finding my calling in sales. Interacting with clients and witnessing projects materialize from blueprints to fully operational fire sprinkler systems ignited my passion. In



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2021, I proudly joined the Florida Fire Sprinkler Association Board of Directors, engaging in various committees and was elected to be a part of the Executive Committee, a position I am very proud to hold.

As a board member, I champion fire safety education and advocacy across Florida, collaborating with legislators and citizens alike. I am deeply honored to contribute to an industry dedicated to preserving lives and property. I eagerly anticipate the collective strides we'll make on the FFSA Board of Directors. •

## To Serve and Safeguard

by Jeremy Deen

*Inspector, International Fire Protection*

As a newly appointed board member and the ITM Chair of the Florida Fire Sprinkler Association (FFSA), I am both humbled and motivated by the opportunity to contribute to this organization. Joining the FFSA board is not only a personal goal but, it represents a commitment to serving and safeguarding the communities around us. Being nominated and voted in as the ITM Chair is a privilege and a testament to my passion and qualifications in this field. I have worked for several years in ITM and have assisted at many FFSA events including Tagging for Success and the Future Builders Camp, which has allowed me to share my knowledge with both industry and non-industry professionals.

I firmly believe that advocating, educating, and working toward advancing safety standards and practices in Florida is a priority of the Florida Fire Sprinkler Board of Directors. It fills me with pride to contribute towards these objectives in our great state of Florida. The Board places significant emphasis on collaboration, developing guidelines, best practices, and educational resources that enable businesses and individuals to maintain the highest levels of training. I am committed to upholding this tradition of excellence and am prepared to tackle the challenges that lie ahead as a member of FFSA Board of Directors and an advocate for the fire sprinkler industry. •

## Continuing the Legacy

by Bobby Dewar P.E., *Contract Design Manager at Wayne Automatic Fire Sprinklers, Inc.*



Having grown up with my father working as a fire marshal and then for the Florida Fire Sprinkler Association and NFSA, I was no stranger to fire protection, fire sprinklers and how they worked. I made the decision to work in fire protection after finishing engineering school in 2003. I quickly learned

there was much more to this industry than hanging pipe and installing sprinklers. It also became apparent that fire protection goes unnoticed by most of the public. Laws, rules, codes, and standards govern our industry, and they are a vital part of the process of implementing the fire protection systems that keep us all safe.

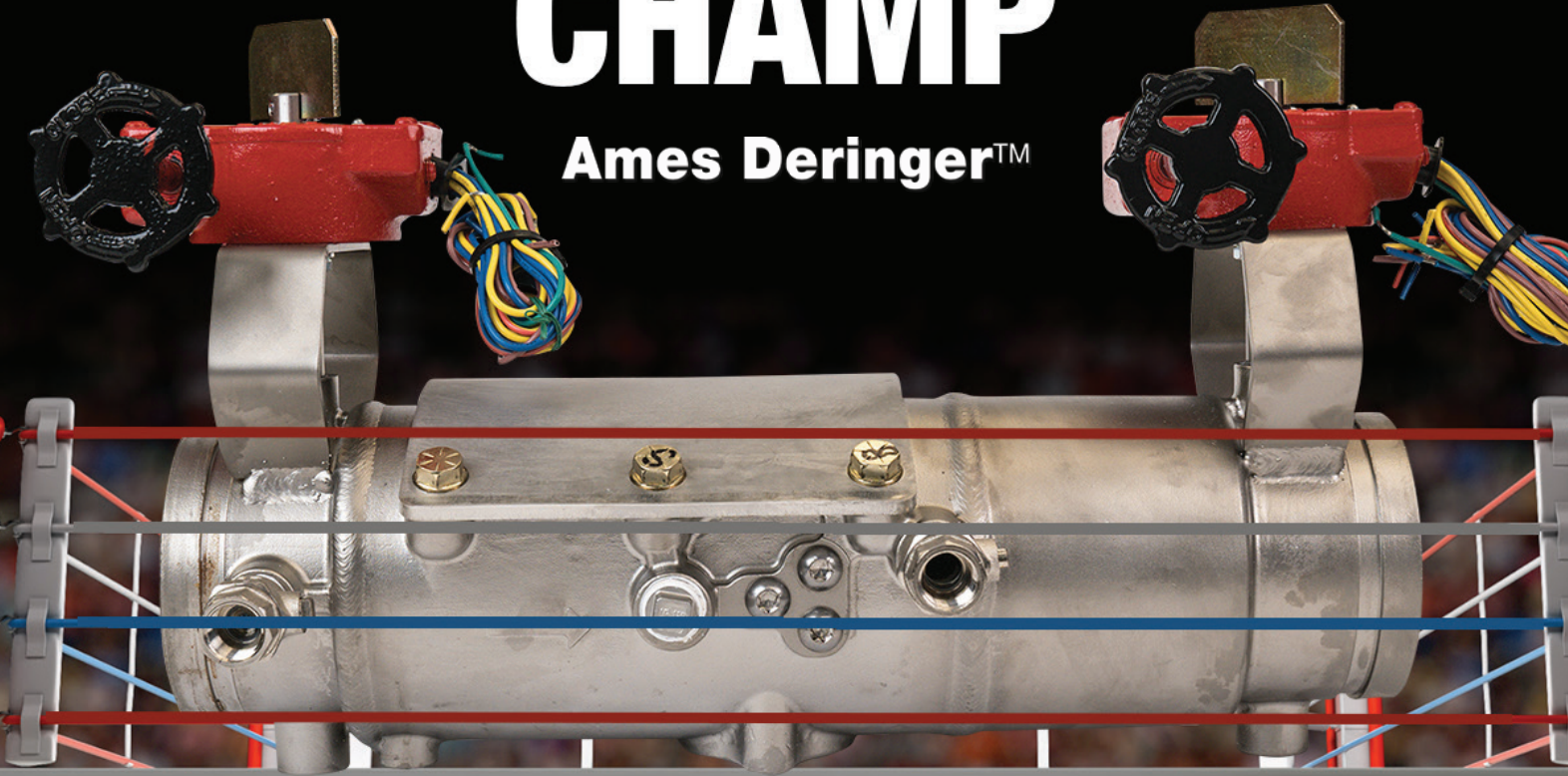
Being able to attend several FFSA board meetings and joining the future leaders committee of the FFSA was a great experience to get a look behind the scenes. I would recommend that anyone in the industry attend these meetings. Seeing how other leaders in the industry dedicated their time to not only advancing the rules that govern our industry, but also helping with training and promotion was inspiring. The association touches so many things: training of contractor members and AHJs, and finding common ground with other associations, such as the Florida Fire Marshals and Inspectors Association, to support legislation or rules that streamline permitting and inspection processes, educating our next generation at the Future Builders of America Camp and promoting and educating builders at the Southeastern Builders Conference about how sprinklers work, just to name a few.



It is an honor to be appointed to serve on the Board of Director of the FFSA. The legends that came before us have built an amazing legacy, and we have a responsibility to keep that going. I look forward to working with our board and all our association members to add to what those before us have done for our industry and leave it in a better place for the next generation.

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## A Rewarding Experience

by Glenn Painter, *Area Manager, MJ Wood*

In 2014, after sitting with our NFSA union negotiating committee I was approached by an NFSA staff member to introduce me to the Future Leadership Committee (FLC). I ran it by my company, and they supported me joining the committee. I applied and was approved in late 2014 to join the FLC. I began attending meetings in-person and virtually but felt that I could still do more at a local level. So, in 2015/2016 I began to



attend some of the Florida Fire Sprinkler Association meetings and events. I quickly ended up on the planning committee for Hawk's Cay, a multi-day training seminar for contractors to get continuing education credits for their Florida State Licenses.

Over the past ten years, my attendance to FFSA meetings grew from sporadic to attending just about every meeting possible. Since I was attending anyway, it made sense for me to run for a board seat when it became available late in 2022. In early 2023 I was elected to a board seat with the Florida Fire Sprinkler Association (FFSA), a chapter of NFSA. The number of years that I attended FFSA meetings really made the transition to board member rather seamless, and I quickly became Chair of Florida Future Leadership (a developing program) and a combined Membership, Public Education committee. This is a role that I am still getting a grasp on, but with the support of some exemplary FFSA leadership, it has been a great experience.



The FFSA not only has a great deal of contractor support, but the AHJ involvement really adds strength to the association. We

have regular area interest meetings throughout the state that deal with current issues along with upcoming code changes and permitting challenges that are highly attended by members and AHJs. With the help of our dedicated contractors, we had over 17 side-by-side burns last year, and plan to have as many, if not more, in 2024.

In 2019, the FFSA began supporting the Future Builders Association, which introduces high school students to many of the building trades. We started presenting the fire sprinkler trade to these students from across the state the past four years during their FBA Camp. I have been heavily involved the past three years and it has been a great experience to introduce our youth to our amazing industry and show them what we have to offer.

The time that I have spent being involved with the NFSA FLC, attending FFSA events and meetings, and now becoming a board member with FFSA has been a very rewarding experience and I look forward to serving for many years to come! I appreciate all the support from the NFSA staff, FFSA board members, and the leadership of my company Milton J. Wood Fire Protection. •

## Raising Awareness

by Jessica Whitton

*Estimator, Gator Fire Protection*

Upon entering the industry in 2006, I embarked on a journey to fully understand the crucial importance of fire sprinkler systems in ensuring the safety of lives. It is truly remarkable how immersing oneself in an industry can unveil the significance of its components, such as sprinkler systems, which often go unnoticed by the public. Initially, I was unaware of the value that fire sprinklers held in terms of life safety. While individuals tend to take notice of fire extinguishers upon entering a facility, they may overlook the sprinkler heads protruding from the ceilings or walls and wonder, "What are those and how do they work?" I certainly did, and now it has become a habit for me to carefully observe my surroundings whenever I enter a facility, ensuring that it is adequately protected.



Joining the Future Leaders Committee for the Florida Fire Sprinkler Association (FFSA) in 2017 proved to be a wise decision as it broadened my understanding of the industry beyond my own company. Having mentors who possess extensive knowledge and passion for their work can be incredibly motivating and beneficial for personal and professional growth. Their enthusiasm has inspired me to share that same passion and educate others about the importance of sprinkler systems in both commercial and residential structures. Since becoming a Future Leader, I have recently been selected to serve on the Legislative Committee, The Carry-On Committee, and The Fire Defense Coalition Committee. This allows us to carry on the hard work and

dedication of the previous leaders, which is truly an honor.

Raising awareness about the prevalence of residential fires and the effectiveness of sprinkler systems in reducing their impact is essential and remains one of my top priorities. Many individuals may not realize just how common residential fires are and the significant difference a properly installed sprinkler system can make in saving lives and minimizing property damage. I am committed to continuing to spread my passion and knowledge about the industry to encourage greater engagement from others. •





## Confessions of a Boomer: How social media challenged and changed my life

*From Joanne Genadio: I'm thrilled to hand over my column to Jeannene! I remember her trepidation when she contacted me about her new social media responsibilities! It's not as easy as some may*

*think. "Welcome to my world," I thought to myself. Well, Jeannene dove in and came out with a gold medal! She's done an outstanding job on LinkedIn and I'm happy to repost many of her LinkedIn posts, then she and I watch her likes and comments grow with glee. From one Baby Boomer to another, great job, Jeannene!*

"...and as part of your responsibilities, we want you to post frequently on LinkedIn." Those were the words spoken to me by my new boss. I was thrilled that I had just landed a great job. "Of course." I replied, but my mind was racing. What would I talk about? Who would be interested in what I have to say? What if I embarrass myself- or the company?! I had posted infrequently on LinkedIn, having created my profile in 2015 to stay connected with the fire protection community while I worked and lived in the Middle East. I shared a few photos with dramatic desert backdrops and created several posts about the job sites I worked on. Overall, I stayed in my lane, assuming that most people weren't interested in my daily activities. I didn't even have a Facebook account and now I was being asked to be the face of my company on a platform that, to say the least, I was not entirely comfortable with.

*I am not alone in my social media anxiety.*

Coming along at the tail-end of the "Boomer" generation back in the day, some of my favorite TV shows were still in black and white, I had to get up to change the channel and adjust the "rabbit ears". My generation watched grainy images of Neil Armstrong

as he took man's first footsteps on the moon. My mom and I sang along to Neil Diamond on the 8-track tape player in our Volkswagen Fastback as we made our way to the library to peruse Encyclopedia Britannica. We couldn't afford to purchase a set of these beauties for our home, no matter how convincing that door-to-door salesman was. I remember checking out every one of the Time-Life series of books. In the time before home computers and mobile phones, this was our "search engine". But things were changing fast in the 1960s and 70s, and there were advances in technology on the horizon. My dad's work gave him the latest in communications technology, a beeper. We thought that he was so important with that on his belt! We replaced our clunky 8-track tapes with those sleek, modern cassette tapes and we knew that we were living in the age of The Jetsons and The Man from Glad when we got our first microwave oven and cordless phone!

Like many Boomers, I have struggled to embrace the latest technology. I'm not talking about the advances in fire protection sprinklers, detection and notification devices, or design software. Hydraulically calculated systems have replaced pipe schedule systems. Schedule 10 pipe and grooved fittings have benefitted both the cost of the job and the lives of the fitter. I have struggled to get on board with social media. I resisted change, thinking perhaps this was all a passing fad. After all, I thought, "I'm a very good communicator – I don't need the internet!"

What I have learned is just as technology has changed in our industry, it has also changed the way we communicate. Yes, I am a very good communicator and a great relationship builder, but I wasn't taking advantage of advances in the way people communicate. I was still using the proverbial megaphone when an electronic public address system was available. "Why?" I asked myself. Why was I so resistant to jumping on the social media bandwagon? Well, as it turns out there is a BIG learning curve, and it was going to take



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a good deal of time and effort to learn the ins and outs of posting, podcasting, and streaming. Those of us over the age of 30 did not grow up with all of this. We did not hang out with our friends, sharing and downloading the latest “apps”. No, we had families, jobs, and lives when the first home and office computers became available. At the time, the most knowledgeable and skilled asset that every office had was The Secretary. These wonderful women typed countless pages of reports and proposals on modern electric typewriters. Secretaries handled all the paperwork for us. Most of us didn’t even know how to type and we didn’t know how to operate a copy machine -because they didn’t exist in the typical office environment. They labeled countless file folders and placed them in filing cabinets -THAT is how we stored data. They were the heart of every business and most importantly they knew how to operate all the office equipment.

### Moving ahead

As technology changed, we all had our workarounds. I could listen to my music on those shiny CDs that lined the wall above my carefully curated home entertainment system, complete with DVD and VHS players that played movies of my choice from Block Buster and later, my local Red Box. I didn’t need to be bothered with trying to learn how to download, upload, or stream, when I could just hop in my car to grab a pizza and my favorite movie rental.

At our age, we don’t like to look like we don’t know what we are doing. I was convinced that if I dug in my heels long enough and resisted this change, it would all go away, right? -Wrong! I didn’t have any children of my own to help drag me into the 21st century, (or even the 20th century). In hindsight, I realized that I was cut off from young people. Frankly, I just couldn’t relate to them. Heck, I couldn’t understand what they were talking about most of the time! And let’s be honest, in the 19 years that I have been in this industry, I find myself looking at the same faces year



after year as a technical committee member and contractor. Our national conventions are looking rather, dare I say, geriatric. Some recent statistics have shown that most of us are between the ages of 40 to 60+.

I noticed that when it came to social media, I was standing still. I

couldn’t dismiss those sideways glances at the gym anymore when I pulled out my Walkman. During one of my many moves, friends helping me pack my belongings suggested that my home entertainment system should be in a museum! They did not appreciate my CD collection, let alone my vinyl records or my VHS player. I think the last straw was when AT&T told me that they would no longer support my prized flip phone (I felt like Captain Kirk when I used that phone, “Beam me up Scottie!”) I was going to have to upgrade to a “smartphone”. And therein lay the problem, I was being left behind. The “tools” were smarter than me. Look, we are all busy trying to make a buck, be successful at our jobs, and have some fun along the way. I knew that I was going to have to roll up my sleeves and get out of my comfort zone. I could no longer consider myself tech-savvy simply because I knew how to reset the clock on my VCR and microwave oven. I had to ask for help and admit to whoever was helping me that I didn’t know a thing about social media, streaming, podcasts, downloading, or anything else related to the internet. I was going to have to start asking a lot of embarrassing questions.

We all know how frustrating sitting at a computer can be. Tapping away at the keys, cursing under our breath (or in my case – out loud) as we perform one search after another in a desper-



ate attempt to learn something. The biggest hurdle for me was the change in teaching styles, things had changed dramatically. Anyone who knows me knows that I sit in the front row of every class or presentation I attend. I am an instructor-led, interactive learner, I ask questions, lots of them. I stand in line at the end of a presentation to shake hands with the instructor. Then I got his business card so that I could follow up with even more questions. (Thank you, Russ Leavitt, Bob Caputo, Matt Klaus, Top Meyers, Pete Schwab, et al, who have patiently stood by me all these years and who still take my calls.) So, this is my learning style. I am not a fan of “self-guided learning”. I do not want to read pages of instructions, switching back and forth between screens. Only to end up on the FAQ page of a website desperately searching for the answers. This is where other poor souls like me, in our dying moments of frustration and despair simply type questions into the search engine and hit “send”. Launching it into the abyss, hoping -no praying, that a human will reach out to save us. I also do not enjoy the animated training videos that well-meaning employers have required so many of us to participate in. Please,

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just give me a human being for five minutes – is there a human being in the house?!

But there is good news for us, the “social-media-challenged”. After spending a few months tapping the keyboard, searching, and reading FAQ’s, this all gets easier. It gets easier because YOU get smarter. One of my best discoveries was YouTube. This is a place where kind-hearted people take the time to walk us through, step by step, how to do just about anything. Now THIS, was my kind of learning! I repaired my clothes dryer, thanks to a guy who had the same problem with his dryer. I also replaced a component in the dash of my old car because someone else had the same issue and posted a how-to video! I was no longer alone in this battle to become tech-savvy. There are a lot of people like me, and fortunately for us, there are a lot of people willing to show us the way.

In the 1999 thriller “The Sixth Sense”, Haley Joel Osmet declared, “I see DEAD people.” Well, in 2023, I spoke to YOUNG people. The producers and hosts of the YouTube podcast, The Dope & Tape Show, reached out to me and asked me to be a guest on their show. I didn’t know how to be a guest on a podcast. I barely knew how to watch a podcast, let alone be on one. After receiving my invitation, I spent hours watching past episodes. I was nervous, after all, appearing live was one thing, but the evi-



dence of my appearance on their show would be on the internet in perpetuity. Here’s a pro tip: One look at myself “on camera” with ambient light quickly taught me that the first, and possibly most important thing required, was a “halo light”. Oh, and decent Wi-Fi. There is nothing quite as horrifying as finding out that during your time on air, your image froze. Of course, the captured image is always the most unflattering, with your eyes half closed and your mouth wide open. The easy part was getting Amazon to deliver a lovely halo light to my door. The hard part was opening up to Brian Williams and Blue Collar Bobby and letting them in on my “dirty little secret.” I was not social media ready. They taught me how to set up my laptop for the podcast, calmed my nerves, and answered my endless questions. And 7 months ago, on November 21st at 9 pm, we went live with episode 96 of The Dope & Tape Show. It was awesome! So many of my industry friends signed into the chat to support me (or to watch me crash and burn) I was able to use my appearance on the podcast as material for posts on my LinkedIn page. I also proudly told my boss

and co-workers about my newly acquired social media prowess.

One of the biggest benefits of my appearance on the podcast is the visibility that the platform has given me. I often spend time on the phone with Blue Collar Bobby, who is tech-savvy. I visit Bobby’s LinkedIn, Twitter, and Instagram pages and he patiently walks me through the basics sharing so many pro tips on what gets “eyeballs”. Since my appearance on the show, Brian, Bobby, and I have become friends, offering support to each other in our areas of expertise. Brian has come to Florida, where we have collaborated on sales calls. I was able to share with him what I am good at, building relationships, bringing people and businesses together, and delivering excellent customer service. Both Brian and Bobby continue to inspire me.

### **Sooooooooo....**

So, how has all of this changed my life? I’m glad you asked. I have gone from about 1000 to 5000+ followers on LinkedIn. My posts regularly get thousands of views, impressions, and reactions (up to 45,000+). Professionals have reached out to me to collaborate. I have obtained new clients who found me because of my activity on LinkedIn. People introduce themselves to me at local and national events, telling me that they enjoy my posts on LinkedIn. Some have even generously referred to me as an Influencer! I have come a long way -and I have only just begun. (Look out Instagram.) Getting to know Bobby and Brian has not only helped me increase my social media skills but has also opened me up to generations of younger people that I had closed myself off from. I have learned that there are a lot of young people out there who have a great work ethic, are eager to learn, and are willing to share what they know. My entire perception has changed, and I challenge my beloved fellow boomers to take another look at those following in our footsteps. I have made it my mission to advocate for the generations of fitters and inspectors not only in the Dope & Tape audience but also the guys I meet out in the field every day. I look forward to meeting and collaborating with young people.

I’d like to tie all of this together by saying that, yes, we have seen some good ‘ole days. But our best days are not behind us. The big change I had to make was to not only accept change but to embrace it. I want to learn everything that I can, to experience as much as possible, and that means that I cannot be afraid of change. I have found inspiration all around me including the great futurist, Peter Diamandis, “We are living toward incredible times where the only constant is change, and the rate of change is increasing,” from Stephen Hawking, “Intelligence is the ability to adapt to change,” and Jordan Petersen shared this gem, “Order is not enough. You can’t just be stable and secure and unchanging. There are still vital and important new things to learn.”

Lastly, I would like to echo these words from Elon Musk, “*Take risks now and do something bold. You won’t regret it.*”•



What a great June week we enjoyed at the Pacific Coast Builders Show in Anaheim, California. As a sponsor of the Leader-to-Leader pre-conference, we were able to participate in this program, and were recognized in front of the largest homebuilders in America. Our commercial, What Used to Be provided a great conversation starter, and we are proud to sponsor and participate in Leader-to-Leader.

The Expo Hall in the Anaheim Convention Center provided a great opportunity for us to meet homebuilders and spend time with our members who helped us staff the booth. A big thank you to our supplier, manufacturer and contractor members who joined in!



## NFSA with National Association of State Fire Marshals



It was great to support our friends at the National Association of State Fire Marshals in Kansas City, MO this past July. NFSA President Shane Ray was honored to provide Monday's keynote address and reconnect with so many friends across the U.S. A big thank you to Tom Brace, KJ Spurlock and Vickie Pritchett for joining President Ray at the event. It was also great to see NFSA SAM Council Vice Chair and Future Leadership Committee Chair Lainey Liotta present on anti-freeze.

Thanks goes to NFSA Board Member and Contractors Council Chair James Lewis for joining us as well, check out the picture of James with "Coach" sporting the Super Bowl ring to boot!

Events like this one showcase the importance of our outreach and advocacy with our national fire service organizations and are truly examples of "Partners in Progress." •



# CHAPTERS IN ACTION

## BOSTON

### Join us for the 7th Annual Boston Chapter Golf Tournament!

This year's event will be held Monday, September 30th at the private Plymouth Country Club in Plymouth, Massachusetts.

Registration begins at 8:00 am, with a "shotgun" start at 9:00 am. This will be a 4-person, best ball scramble format. The dinner banquet is back! We will also once again have the Hole-N-One LPGA beat the pro on the course.

The cost for this event is \$225 per golfer. To help us properly plan for this event, please pre-register as soon as possible. Thank you for your support and we look forward to a great day of golf.

This year proceeds will be used to help support NFSA Boston Chapter and Shriners Children's Boston.

For more information, contact State Coordinator Paul Zbikowski at [zbikowski@nfsa.org](mailto:zbikowski@nfsa.org).

## ILLINOIS

*Next Illinois Chapter Meeting*

Thursday, September 26, 2024

Gibson's-Oak Brook

2105 Spring Rd.

Oak Brook, IL 60523

5pm-9pm

### *Chapter Successes*

On June 30th the Illinois Chapter Attended the Hickory Hills Street Fair, and with the assistance of the Roberts Park Fire Protection District performed a side-by-side demonstration. The event was well attended, and it was a pleasure to spread the sprinkler message to the crowd.

NFSA's Illinois Chapter has had many successes so far this year. Early in the year, the fire sprinkler inspector licensing took effect. The Chapter helped to educate the sprinkler industry and the fire service on the new requirements. We attended conferences and spread the fire sprinkler message to the fire service. We also helped to deliver the Truman Fire Forum to the state, and got the fire service, sprinkler industry, and elected officials in the same room to talk sprinkler policy.

Illinois State Representative Michael Kelly has been a partner in prevention by getting a house resolution passed declaring Home Fire Sprinkler Week in the State of Illinois. On the Senate side of the state, Senator Patrick Joyce also passed a resolution declaring Home Fire Sprinkler Week, another partner in prevention.

We performed a side-by-side demo just steps away from the state capitol. It was attended by many state representatives, senators and members of the Illinois State Fire Marshals Office. This was a huge success with many compliments from all that attended.

The Chapter once again introduced a home fire sprinkler tax

incentive bill. The bill came up short in the revenue committee, but I am sure we will try again next year with even more support. In Illinois, the Industry truly does have partners in prevention, and we will continue to build those partnerships and relationships.

On September 10, 2024, the Illinois Chapter, along with the Northern Illinois Fire Sprinkler Advisory Board, will be doing a side-by-side burn for the Will County Public Health & Safety Committee. These committee members are elected board members to the Will County Board. A special thanks to the Joliet Fire Department helping to make this happen.

## MINNESOTA



### NFSA, Local 669, and Canosia Fire Department Live-Fire Demonstration

Following the July Minnesota Chapter Meeting, NFSA staff and the Canosia Volunteer Fire Department conducted a side-by-side demonstration for members, perspective members, and fire department members. The Canosia VFD is led by Fire Chief Gene Stevens, who also serves as Sprinkler Fitters Local 669 Business Agent for District 28. District 28 includes Minnesota, and North and South Dakota.

## TEXAS

*Fall 2024 NFSA Texas Chapter Events*

Texas AHJ & Fire Sprinkler Contractor Forums  
September 17, 25 & 26, 2024

It's time to register for our annual NFSA & FSCATX (Fire Sprinkler Contractor Association of Texas) Fire Sprinkler AHJ

# CHAPTERS IN ACTION

Forums. These Fire Sprinkler Forums to discuss national, state, and local codes with local (Authorities Having Jurisdiction) and how Fire Sprinkler Contractors can be best prepared to design, install & inspect/maintain fire sprinkler systems.

## *Winter 2024 – 2025 NFSA Texas Chapter*

**November 5** – Central Texas Chapter Meeting - Winterization & Insulation, Central Texas, NFSA Engineer Mike Joanis

**November 21** – Houston Area Texas Chapter Meeting – Houston, NFSA’s Roland Asp

**February 2-5, 2025** –NFSA Texas Dallas Chapter Meeting

**April 11 or 14, 2025** – 3rd Texas Sprinkler Shootout 2025

**May 7-10, 2025** – NFSA National Seminar, Nashville, TN

Register for All NFSA Texas Events:

<https://member.nfsa.org/events/nfsa-event-calendar/TX>

NFSA Contact: Cindy Giedraitis - [cindy@nfsa.org](mailto:cindy@nfsa.org)

979-324-8934

## WISCONSIN

### Busy Times for Valve Demo Trailer

The Wisconsin Valve Demonstration trailer has been quite busy this year traveling to Minnesota and Michigan for training, as well as SE Wisconsin. We had the opportunity to showcase this trailer to our contractors at various events in June. We visited J.F

Ahern in Fond du Lac to demonstrate the fire sprinkler demo and tour the valve area for three groups of summer interns. We then visited Design Build Fire Protection and USA Fire Protection of Wisconsin to provide demos and tours to the employees at their employee picnics. We are scheduling training for the local vo-tech college and Milwaukee metropolitan fire departments to complete the year. •



# SPRINKLERING

## SPRINKLERING OF NEWS

### ■ AFG, SAFER, and USFA Reauthorization Bill Signed into Law

On July 9, 2024, President Biden signed into law the Fire Grants and Safety Act (S.870). After two years of advocacy by CFSI and our National Advisory Committee members, the AFG and SAFER grant programs will continue to be able to deliver vital federal support to fire departments across the nation and enable them to address their baseline needs. Specifically, this bill:

- Reauthorizes the Assistance to Firefighters Grant (AFG) and Staffing for Adequate Fire and Emergency Response (SAFER) grant programs through fiscal year 2028,
- Reauthorizes the U.S. Fire Administration through fiscal year 2028, and
- Extends the sunset date for AFG and SAFER to September 30, 2030.

The path to reauthorization adds new meaning to the quote, “United we stand, divided we fall.” Working together, CFSI, our National Advisory Committee members, leaders of the Congressional Fire Services Caucus and committees of jurisdiction, and other members of Congress built support for the legislation, which is why the measure achieved strong bipartisan support in both chambers.

While the legislative path for a bill to become a law can appear relatively straightforward, it is never smooth and requires constant, sustained, and coordinated effort. In this instance, the fire service remained persistent, staying the course and never relenting until the bill became law. The collaboration between the national organizations and many members of Congress cannot be understated and was essential in moving this bill forward, despite a series of hurdles.

#### *Credit for passage extends to a large group of congressional leaders, including the following:*

Congressional Fire Services Caucus Co-Chairs who demonstrate their strong support for the fire and emergency services every day and played vital roles in supporting this legislation:

- **Senator Susan Collins\*** - Lead Republican on the Senate version of the Fire Grants and Safety Act
- **Senator Tom Carper\*** - original cosponsor of the Fire Grants and Safety Act and a negotiator on the bill
- **Senator Jon Tester\*** - original cosponsor of the Fire Grants and Safety Act and Chair of the Congressional Fire Services Caucus in the 118th Congress
- **Senator Lisa Murkowski** - original cosponsor of the Fire Grants and Safety Act
- **Congressman Bill Pascrell** - Lead Democrat on the House version of the Fire Grants and Safety Act
- **Congressman Steny Hoyer** - original cosponsor of the Fire Grants and Safety Act
- **Congressman Mike Bost** - original cosponsor of the Fire

Grants and Safety Act

- **Congressman Brian Fitzpatrick** - original cosponsor of the Fire Grants and Safety Act

House and Senate Leadership:

- **Senate Majority Leader Chuck Schumer**
- **Senate Minority Leader Mitch McConnell**
- **Speaker of the House Mike Johnson**
- **House Majority Leader Steve Scalise**
- **House Minority Leader Hakeem Jeffries**

Committee Leadership who were original cosponsors of the bill and ensured that the legislation was able to successfully move through the House and Senate committee processes:

- **Senate Homeland Security and Governmental Affairs Committee Chairman Gary Peters\***
- **House Committee on Science, Space and Technology Chairman Frank Lucas**
- **House Committee on Science, Space and Technology Ranking Member Zoe Lofgren\***

Lead sponsor of the House version of the Fire Grants and Safety Act:

- **Congressman Tom Kean**

### ■ Johnson Controls Digital Enrollment Mobile App Provides Fast, EasyFire Alarm Device Installation and Configuration

Johnson Controls introduces the Johnson Controls Digital Enrollment mobile application, the fire detection industry’s first mobile app of its kind for auto-addressing fire detection and alarm devices. By simply scanning and downloading data via a QR code located on each addressable device, the Digital Enrollment app provides an addressing solution that helps eliminate errors and is faster compared to traditional methods, with no special tools required.

The app lets users install and configure addressable fire detection devices like point detectors, notification devices, call points and ancillaries offered under the Johnson Controls brands, including FireClass and Zettler.

The Digital Enrollment app gives users two workflow options for completing a new fire alarm system installation. The recommended option is to create a device list on the mobile app and sync it using the app’s panel configuration tool. Alternately, installers can download the device list from the configuration tool and sync that list with the serial numbers using the mobile app.

Each device’s QR code contains a serial number, SKU (part number) code, model number and manufacturing date. They also provide access to product-specific data such as tech pubs,

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# SPRINKLERING

## SPRINKLERING OF NEWS

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certificates, pricing and ordering info. In addition to new system installations, the Digital Enrollment app and QR code make it easier to reconcile the replacement of faulty or dirty devices.

Users can download the Johnson Controls Digital Enrollment app on the App Store and Google Play. Visit [fireclass.com](http://fireclass.com) or [zettlerfire.com](http://zettlerfire.com) to learn more.

### ■ Core & Main Announces Executive Leadership Changes

Core & Main Inc. announces changes to its executive leadership team.

Jack Schaller, president, has announced that he will transition to a role as executive vice president. Given the strong performance under his leadership, Schaller has committed to ensuring the ongoing success and continued growth of the business. As part of this transition, Schaller will continue supporting the integration of our newly acquired businesses, leading supplier relations and assisting with this organizational transition.

As part of that plan, Brad Cowles, president, will be expanding his role to lead the waterworks product line, previously led by Schaller. Cowles has more than 18 years of leadership experience in the organization, most recently leading the fire protection product

line. In addition to his core waterworks responsibilities, Cowles will have responsibility for several growth and margin initiatives.

Finally, Core & Main is excited to announce that Mike Huebert will join the company July 22, 2024, as president, overseeing our fire protection product line and certain other high growth product lines. Huebert is executive vice president of sales with Advanced Drainage Systems (NYSE: WMS) where he oversees field sales and engineering, national accounts and retail sales teams. He will bring a wealth of experience, having managed business development, commercial operations, and driving sales and operational performance for ADS, one of Core & Main's top suppliers.

### ■ Fayette Pipe Gains NYSCA Approval

Fayette Pipe, a manufacturer of American made and melted piping solutions, has announced its recent approval by the New York School Construction Authority (NYSCA). Effective immediately, Fayette Pipe is included on the NYSCA's list of approved manufacturers for Section 15510 HVAC Piping and Section 15410 Plumbing Pipe. The NYSCA manages one of the largest school construction programs in the U.S., which includes the planning, design, and construction of new and existing school facilities across New York City's five boroughs.

The NYSCA approval underscores Fayette Pipe's commitment to producing piping solutions that meet the rigorous standards required for educational facilities. This includes adhering to safety standards such as maintaining maximum water outlet temperatures at 120° F. to prevent scalding and providing high-quality piping that supports energy-efficient HVAC systems.

The company recently introduced FayetteGuard™, a specialized LED UV-cured coating that adds durability and aesthetic appeal to its Schedule 7, 10, 40, and 80 pipe. A complete line of carbon welded and galvanized nipples is manufactured by Fayette Nipple, a sister company. [www.fayettepipe.com](http://www.fayettepipe.com) •

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# OUR MEMBER TAKEOVER RECIPE OF THE YEAR!

## Smoked Salmon Jalapeno Spread

*by Andy Bigalke, VP, Chinook Fire Protection*



*Andy Bigalke, Vice President of Chinook Fire Protection in Anchorage, Alaska, with a fresh-caught red salmon straight from the Kenai River.*



### SMOKED RED SALMON-JALAPENO SPREAD

#### INGREDIENTS

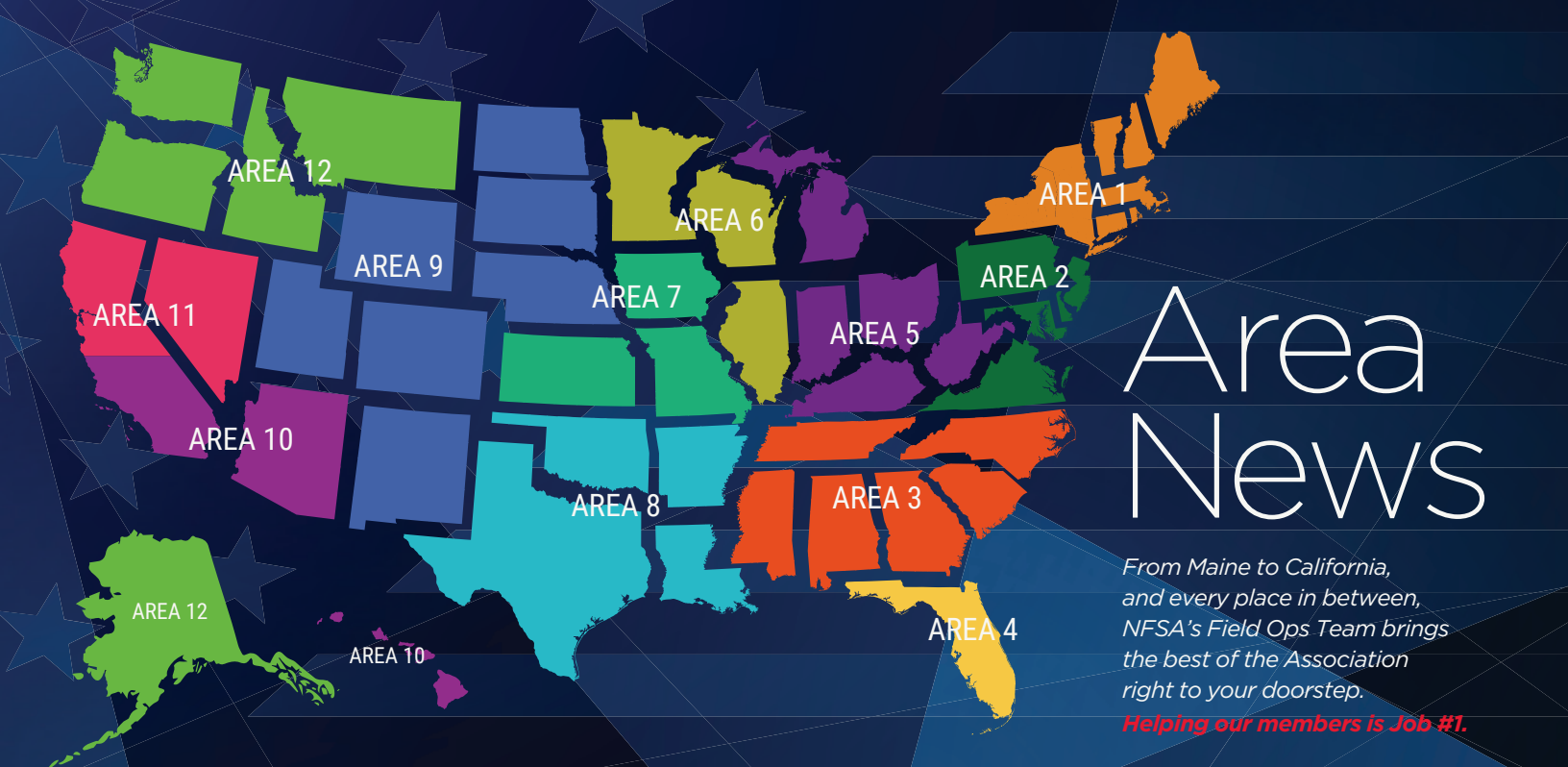
- 8 ounces cream cheese at room temperature
- ¼ cup heavy cream
- 1 scallion, thinly sliced or chopped
- 1 teaspoon fresh lemon juice
- ¼ cup chopped pickled Jalapeno peppers (store bought)
- 6-8 ounces of smoked red salmon, gently shredded. Remove any fine bones.
- 1-2 dashes of Tabasco to taste
- 1-2 teaspoons of Jalapeno pickling juice
- Couple of dashes of cayenne pepper

#### How To Make It

Mix the cream cheese and heavy cream together well in a large bowl. Stir in the scallions, lemon juice, one or two dashes of tobacco, and a teaspoon of Jalapeno pickling juice. Fold in the smoked salmon, chopped Jalapeno peppers and a dash or two of cayenne pepper. Give it a taste to see if you like it. Is there enough Salmon in the spread? Enough jalapenos? If not, mix in a little more to taste. If the salmon spread appears too thick, mix in another teaspoon or two of the Jalapeno pickling juice. Once satisfied place the dip in a nice bowl, cover it with wrap, and let it sit overnight in the refrigerator and get happy.

Serve with the crackers of your choice. Think of the recipe as a guide and add a little less or more as you like. I used my own smoked red salmon that I caught on the Kenai River in Alaska. The last batch was two Red Salmon I smoked on our Treager. Sometimes near the holidays I quadruple the recipe to have extra to hand to hand out to friends, take to parties, or to bring into work. Enjoy!

*—Andy Bigalke, Chinook Fire Protection, Anchorage, Ak.*



# Area News

*From Maine to California, and every place in between, NFSA's Field Ops Team brings the best of the Association right to your doorstep. Helping our members is Job #1.*

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## AREA 1

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

### Save the Date for Our First Area 1 Conference!

The NFSA's inaugural Area 1 Conference is scheduled to take place from Tuesday, October 1, 2024, at 9:00 am to Friday, October 4, 2024 at 5:00 pm at the Renaissance Boston Patriot Place Hotel, located at 28 Patriot Place, Foxboro, MA 02035.

This highly anticipated event boasts a comprehensive agenda, featuring esteemed speakers from various sectors of the fire protection industry.

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## AREA 5

INDIANA, KENTUCKY, MICHIGAN, OHIO, WEST VIRGINIA

### Michigan Fire Sprinkler Demo Receives Great Media Coverage

On July 8th and 9th, NFSA teamed with MI Prevention, a statewide campaign to reduce fire deaths, to deliver two great days of learning and burning, six hours per day, of all fire sprinklers!

Thanks to the State Fire Marshal Kevin Sehlmeier, Wixom Fire Chief Brad Geistler, and Caledonia Fire Chief Scott Siler for making the live burns possible, and to the NFSA Team of Ron Ritchey, Brian Biggs, Marty Blackwell, and Steve Howard. We couldn't have pulled off burning the side-by-side and the valve trailers without this crew.

NFSA couldn't do any of this without our members. Thank you to Underwood Fire Equipment for hosting day one at their great facility. A special thanks to Damon and Chris Pietraz and their entire team for letting us take over their facility for a day.

Bringing the fire service and the fire sprinkler industry together at the greatest fire pump room in the country was an honor. With fire pumps running and the fire department pumping the connection, all eyes were opened to the powerful display of pumping over 1,500 gpm, with the fire sprinkler system and the fire department working together. That's our Partners in Progress.

Day two was at Viking Headquarters in Caledonia, Michigan. Talk about bringing the fire service and the fire sprinkler industry together! We burned with over 200 people in attendance, which included all Viking's staff. A special thanks to Jim Lake, Nancy Haughton, and the entire Viking team.

During the demonstration, Caledonia Township Fire Chief Scott Siler said, "Think if it's your family. Would you want them in your home to protect your family? It's the same thing for my firefighters. If they go out, I want them to be safe. If they don't have to risk their lives to put out a fire that was already taken care of by a sprinkler, it's great for us."

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## AREA 6

ILLINOIS, MINNESOTA, WISCONSIN

### 20-Year Membership Award to A.G. O'Brien Plumbing and Heating

On May 29th, Craig Johnson, of FirePro Sprinkler Specialists accepted a long-overdue membership recognition plaque for A.G. O'Brien Plumbing and Heating. Craig was the lead fire sprinkler professional at O'Brien. When O'Brien got out of the sprinkler business, Craig transferred to FirePro. NFSA thanks O'Brien for their 20 years of membership in NFSA and for their lifesaving work in the sprinkler industry.

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Best of luck also to Craig and Ben Gilbertson, the owner of FirePro Sprinkler Specialists. FirePro operates out of a second-floor loft office in Hermantown, Minnesota, and does design, installation, and ITM work in the Duluth/Superior area. They are licensed in Minnesota and Wisconsin.

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### AREA 8

ARKANSAS, LOUISIANA, OKLAHOMA, TEXAS

#### Installation and Winterization of Fire Sprinkler Systems

NFSA will be hosting 3 presentations in Texas that focus on Installation and Winterization Fire Sprinkler Systems in Areas Subject to Freezing. The goal is to promote discussion of fire protection system winterization issues, to support the design, installation, and maintenance of robust systems going forward.

*The 3 Winterization presentations will take place:*

- November 5, 2024 – NFSA Texas Chapter, San Marcos
- November 6, 2024 – Texas Fire Marshals Association
- November 21, 2024 – NFSA Texas Chapter, Houston

*Major Events for NFSA Area 8*

- September 23, 2024 – Lithium Ion/Energy Storage
- September 24, 2024 – Hydraulics for Fire Protection
- September 25, 2024 – Mass Timber & Tall Wood Buildings
- September 26, 2024 – Design Advantage & the IBC
- September 27, 2024 – Rough & Final Inspections
- November 19-20, 2024 – Fire Sprinkler Installation & Advanced Hydraulics Trainings
- November 19-21, 2024 – Greater Houston Fire Marshals Conference
- December 4-6, 2024 – Association for Career & Technology Education
- December 18, 2024 – Texas State Fire Marshal Discussion Meeting
- February 3-4, 2025 – NFSA Master Class - Estimating Proposals/Project Management

- February 5-5, 2025 – NFSA Texas Chapter Meeting Dallas
- February 11-12, 2025 – Texas Construction Association Walk on the Capitol
- April 2-5, 2025 – OFSA Boondoggle
- April 11 or 14, 2025 - Shootout
- May 7-9, 2025 – NFSA Annual Seminar

#### *Texas State Fire Marshal Discussion Series*

Join the Texas State Fire Marshal’s Office for three upcoming 2024 open forum discussions between the State Fire Marshal’s Office & industry partners. For more information or to register, please visit the Texas State Fire Marshal website: Fire Marshal Discussion Series.

*Upcoming discussion series dates:*

- September 18, 2024 – Lubbock
- December 18, 2024 – Rio Grande Valley

More Information for All NFSA Events:

<https://member.nfsa.org/events/nfsa-event-calendar/TX>

Area 8 – NFSA South Central Regional Manager  
**Cindy Giedraitis**, [cindy@nfsa.org](mailto:cindy@nfsa.org)/979-324-8934

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### AREA 12

ALASKA, IDAHO, MONTANA, OREGON, WASHINGTON

#### Northwest Update

The Fire Sprinkler Advisory Board of Puget Sound is launching another media campaign to promote fire sprinklers during Fire Prevention Week in October. The campaign will feature a radio and internet ad highlighting the speed at which fire sprinkler respond; billboards across the Puget Sound region; and a sponsored segment on KING 5’s popular Evening show. The campaign is funded by the local Industry Promotion fund.

The annual Sprinklerman Shootout was a success, with a sold-out field. Proceeds will benefit the Seattle Fire Foundation. Thanks to all of our golfers and hole sponsors, and especially our major sponsors: Breakfast – Smith Fire Systems; Beverage Cart – Core & Main; Barbecue – Victaulic; and Closest to the Pin Hole Sponsor – ASC.

Both the Puget Sound and Columbia-Willamette chapters will meet in October and December.

Fire sprinkler training continues to be in demand. Check the NFSA calendar for newly-added trainings. Currently, we have ITM and basic fire sprinkler training scheduled at the Alaska Fire Conference in September, a plan review class in the Puget Sound area in November, and an underground and ITM for the fire marshal training scheduled for November in Bend, Oregon. If you have training needs, please contact Northwest Regional Manager Suzanne Mayr to set up a training in your area. •

# The Truth Burns

*Common Voices advocates set the stage for why a focus on the impact of fire is worth a glance. Pause and think about our instinct to survive and ask yourself why do we become complacent when it comes to fire safety? The myth "it'll never happen to me"... sometimes, the truth burns.*



In 2022, Common Voices launched a bold plan to capture the stories of all Common Voices advocates. The dream/plan is to have these stories provide the inspiration for a streaming service to create a Docu-series and/or a documentary called "The Truth Burns." We believe that these stories are courageous, and that they can make a difference and prevent others from suffering similar tragedies. We hope you will join us in our efforts, share the links via all social media platforms, join our coalition with a donation. Working together, we can save lives, and we thank you for believing in our cause, supporting our advocates, and joining our movement for a Fire Safe America.

Our landing page for *The Truth Burns* can be found here:  
<https://fireadvocates.org/the-truth-burns/>

*Courageous stories that can make a difference and prevent others from suffering similar tragedies...*



 CommonVoices1

 CommonVoices1

**fireadvocates.org**  
*Fire Sprinklers Save Lives*

<https://fireadvocates.networkforgood.com/projects/125513-main-giving-page>







# National Fire Sprinkler Magazine

The Flagship Publication of The National Fire Sprinkler Association

## NFSM Article Submission Guidelines

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

### Query

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

*NFSM* runs full-length feature articles of approximately 800-1200 words.

### Feature Articles

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

### Writing Guidelines

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

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

### Illustrations

*NFSM* uses a variety of photographs, line art, charts, and maps.

We prefer to receive artwork electronically, and all illustrations should include credit and caption information.

### Copyrights

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

### Payment

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

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**DRY**

Style V9 FireLock™ Installation-Ready™ Sprinkler Coupling with Preassembled Guards  
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**STORAGE**

FireLock™ Series FL-ELCH/C Sprinklers with 1" Cover Plate Adjustment




**EXTENDED COVERAGE**

FireLock™ Series FL-SA/WS Window Sprinklers




**SPECIFIC APPLICATION**

FireLock™ Series FL-RES/C Sprinklers with 1" Cover Plate Adjustment



**RESIDENTIAL**

Vicflex™ Style VS2 Standard Coverage Sprinkler



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