

National Fire Sprinkler Magazine

The Flagship Publication of The National Fire Sprinkler Association

November-December 2021

No. 229



THE FREEZE PROTECTION ISSUE



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Enforcing the NFPA 25 Antifreeze Sunset Date
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**Extended Winter Freeze Events with No Power—
A lose-lose proposition for fire protection**
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**Choosing the Right Listed Antifreeze for
Compliance with NFPA 25**
page 32



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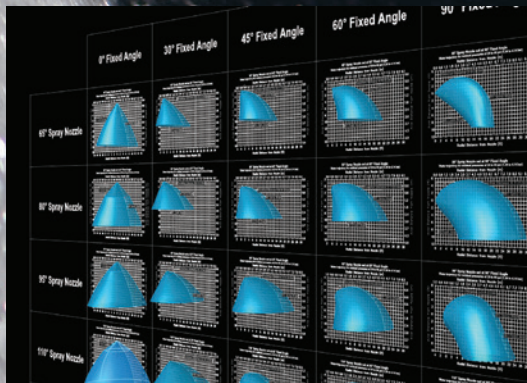
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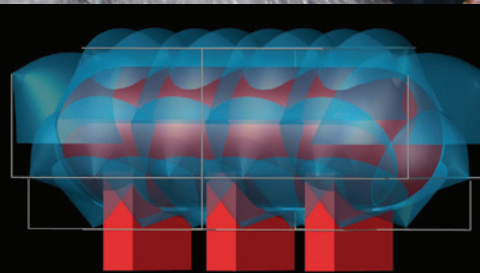
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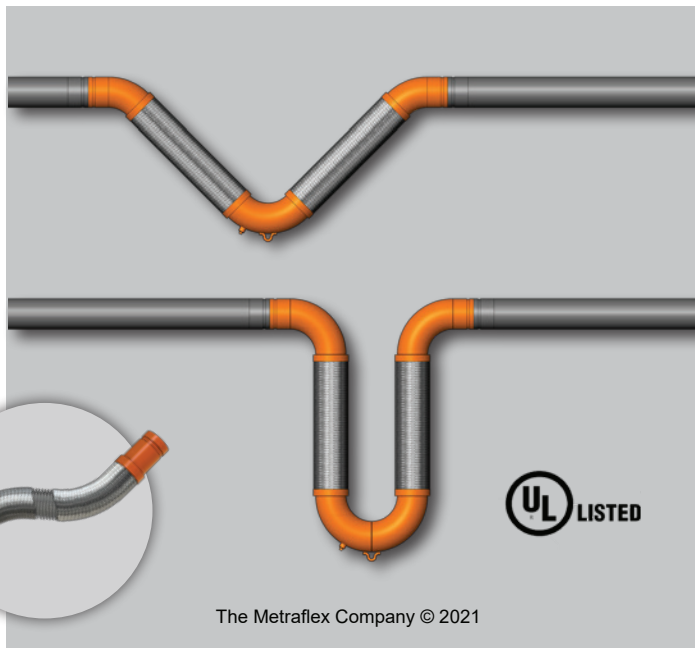
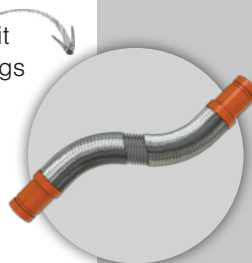
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Decision-Making in the Current Environment

NFSA is an organization built over 115 years ago, formed and reshaped over those many years to make tough decisions for the betterment of the fire sprinkler industry. From a world-wide pandemic with supply chain issues and deep vaccination debates, from codes and standards development, to the daily enforcement of contractors and AHJs (Authority Having Jurisdiction); NFSA is made up of all walks of life in the fire sprinkler industry and isn't afraid to make decisions.



The cancellation of our 2020 Business and Leadership Conference in May of 2020 was an easy decision because the country was essentially on lockdown and nearly every company in our industry faced self-imposed travel restrictions. The decision to pivot and utilize the tools and talent we had at NFSA to conduct a 100% virtual conference was not easy and required hundreds of other decisions to successfully execute, which we did with success. The postponement of the **2021 North American Fire Sprinkler Expo** was not as easy of a decision, because there wasn't a national lockdown, restrictions varied from state to state and locality to locality, with even a more fierce debate about the vaccine, despite the record-breaking spikes of a new variant of COVID-19, the delta variant.

Again, NFSA is an organization built to make the right decision at the right time. With a local mask mandate in place in Clark County, Nevada, spikes of cases more than 1,700 per day, and with hospitals at 89% capacity 45 days out from the conference, it was time to make decisions. With a great Seminar Committee committed to all our members, and the success of NFSA overall, the debate was great and all factors considered with votes cast and support from staff, the information was passed to our Executive and Finance Committee, which is made up of 10 Board members, out of the total 25 board members, charged with assisting and supporting the President in policy and operational decisions between Board meetings, as well as making recommendations for the overall fiscal policy and strategic direction for the entire year.

After two days of dialogue and debate and a few weeks of fact-finding information from staff, the decision was made to postpone until 2022 and come back with another full expo that will be timely and fruitful for the fire sprinkler industry. NFSA will bring a 2022 North American Fire Sprinkler Expo to life that includes in-person and virtual components tailored to meet the needs of the fire sprinkler industry and our diverse makeup of members. The staff and our committees are excited to bring a new experience in a new day and time that will reshape how we deliver member networking and learning and development.

COVID-19, along with the many of the natural and manmade disasters our world has faced over recent years, have taken a toll on human life, property, and people's spirits. All things happen for a reason that are beyond our belief, but not beyond our ability to have hope and renewed spirits. Our decision-making starts with our perspective as we rise every day. NFSA is strong, if not stronger, than ever. We are committed to serving the fire sprinkler industry better than ever before. We can and we should resurge, given the blessings this industry has been bestowed with, and the strength we have gained as a result of that prosperity.

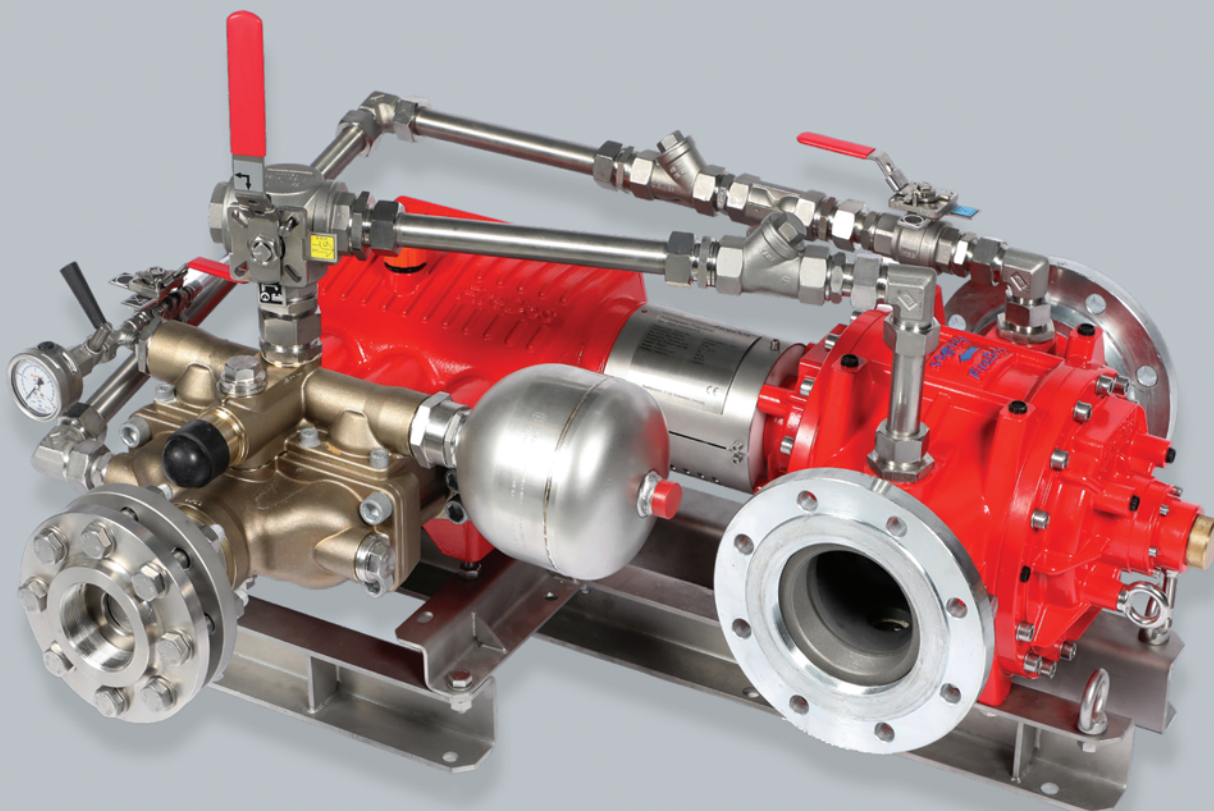
Please trust, please get the vaccine (*unless you have religious reasons*), and please continue to support the fire sprinkler industry. Our country, and the world, need you to save lives and protect property, it's a form of the greatest calling.

Take care, stay safe, and stay well.
May God Bless,

A handwritten signature in black ink that reads "Shane Ray". The signature is fluid and cursive, with a large, stylized "S" and "R".

Shane Ray, President

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Bring on 2022!

Well for as difficult as 2020 was, with most of us facing the first pandemic in our lifetimes (I think Bruce LaRue might have been around long enough to catch the tail end of the Spanish Flu Pandemic), I know 2021 couldn't get here quick enough for me. As we turned the corner from 2020 into 2021, Operation Warp Speed showed real results and there were enough actual doses of vaccine available to get into everyone's arms. We had real hope to get our lives back to normal for the summer of 2021.

Unfortunately, vaccine hesitancy along with a wave of a highly contagious delta variant, would not allow us to shake this pandemic in 2021. I was originally so incredibly encouraged when we rescheduled our **2021 North American Fire Sprinkler Expo** for October at the Cosmopolitan in Las Vegas. When the COVID-19 cases started to plummet in mid-spring, I could see myself addressing our large opening session audience Vegas-style, with an extra spicy Bloody Mary in my hand and a Shane Ray joke rolling off my lips. Well, the euphoria was not long lasting as we watched cases, hospitalizations, and deaths begin to significantly rise again as the delta variant ripped across the country, hitting the least vaccinated areas the hardest. Unfortunately, we could not put COVID behind us. Las Vegas, suffering from both extremely high case and hospitalization numbers, was forced to go back to its mask mandate previously lifted to help protect its residents and visitors. NFSA leadership then made the difficult decision in September to once again reschedule our annual seminar and push our North American Fire Sprinkler Expo, back to Spring of 2022 (details to follow).



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Thankfully, industry sales did not go backwards in 2021. Many parts of the construction industry remained robust throughout all the year. We all were touched one way or another by supply chain issues related to the pandemic. As of this writing, steel piping still continues to be at historically high prices, with increases of 150% - 200% off of 2020 lows. All other materials and components saw significant price increases as well. Many items that were normally a stock item on our suppliers' shelves became "lead time" orders, and construction projects felt the sting of almost all of its suppliers and contractors suffering from similar problems. I am somewhat amazed that, with all these issues, the construction industry has plugged on as strongly as it has.

When I took over as Chairperson of the Board in 2018, NFSA was beginning to wind down on its transition period and finally had ample bodies in place for most of our operations. Now, in 2021, I feel comfortable saying that I think we have "transitioned." It's been a long arduous journey. I must commend President Shane Ray for pushing through this difficult task and surrounding himself with a strong supporting cast. Shane kept most of his 2021 promises to me. He brought EOD back to a shining star of NFSA and one of our members most treasured benefits. He finally unloaded our previous headquarters in Patterson, NY, and he personally put an offer in on a home (and I'm hoping by the time this hits the newsstands he's living in it) in the Baltimore area.

All-in-all, 2021 has had its ups and downs. I'm personally going to plan on seeing all of you in person in 2022 at our next seminar. I'm keeping my fingers crossed that we are in the position where we can pull it off.

I'm still encouraged and quite excited to see what 2022 will bring and hope that NFSA's list of accomplishments will continue to grow. I remind you that I'm honored to serve our members and industry and am quite thankful to all of you for the opportunity bestowed upon me to do so.

Respectfully yours,

A handwritten signature in black ink, appearing to read "Kent Mezaros". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Kent Mezaros, *Chairman*



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Tips for Project Risk Management Success

by Adrian Wlas

The benefits of risk management are vast, yet for many projects this is an area still commonly overlooked. By applying simple and consistent risk management techniques we can easily minimize the impact of potential threats, as well as leverage potential opportunities. This not only ensures meeting the agreed scope, cost and time but also improves the overall health and efficiency of the project operation, team members and wider stakeholders. This article comes back to the basics on the key rules of managing risk, to ensure your projects are consistently delivered with full success.

Tip #1 - Implement a solid identification process

Sounds simple right. However, there are still many projects today that are managed with absolutely no formal risk identification incorporated. Then there are others that think they are using risk management appropriately but are not applying the correct techniques to identify risks. The identification process will depend on the project, the organization, and the company culture involved. So, it is best to consider those areas when determining the most effective approach. This could be as simple as educating the team on what a risk is and asking them periodically to review the landscape for new risks.

Tip #2 - Be positive

Risk management includes identifying and managing both negative risks and positive ones, yet most projects typically seem to focus only on the negative ones. Ensure to add clear reminders and pointers within your risk management process to consider positive risks. A deliverable being delivered well before its due date can be a good thing, but also can have unforeseen impacts on other areas or leave the project operating inefficiently. On the other hand, such a positive risk can actually help to balance out the impact of negative risks in other areas.

Tip #3 - Prioritize for efficiency

All risks are not equal and there are always limitations around how much resource can be applied to mitigate them. As such, it is essential to classify risks in terms of 'probability' or how likely the risk is to occur and the 'impact' level if the risk materializes into an issue. Doing so will allow the project manager and all team members to easily see which risks to focus on. Use of a risk register template is a very effective means of doing so. Most organizations would have a standard template for this, if not there are many that can be found online.

Tip #4 - Apply correct ownership

It is often common for people within the project organization to assume that the project manager owns all risks, but this is false. Risks can affect wide areas of the wider stakeholder group and it is



typical that resources with the relevant knowledge or skills in that area are much better placed to become the owner of the risk and to carry out the appropriate mitigation actions.

Tip #5 - Communicate and track to closure

With correct identification, classification, and owner allocation in place, project managers need to be careful that this is not considered to be the final step in the process of risk management. At this stage it is critical that the risks are correctly communicated. Firstly, to the owner assigned to manage the mitigation actions and secondly to the wider stakeholder group affected so they are aware of the risk and potential impact to their respective areas. It is also then essential that the risks are regularly monitored and tracked through to closure regarding progress on mitigation actions and potential changes to the impact / probability classifications as those actions come to fruition.

Summary

By following these tips, project managers will be well placed to be in a position of control in relation to the management of risks for their projects. Ultimately, this will ensure a sound foundation for the successful delivery of their work.

Article Source: https://EzineArticles.com/expert/Adrian_Wlas/2554273

A close-up photograph of a worker in a red long-sleeved shirt with reflective silver stripes on the sleeves. The worker is using a long-handled tool, possibly a wrench or a similar fastener tool, to work on a dark metal structure. The background is slightly blurred, showing more of the industrial setting. The lighting is dramatic, with strong highlights and deep shadows.

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Friction Loss Coefficients for Dry & Preaction Systems

by Michael J. Joanis, PE



What is a friction loss coefficient?

The friction loss coefficient represents the roughness of the internal surface of the pipe. It is commonly referred to as the C value or C factor. The smoother the internal pipe surface, the higher the C value. Conversely, the rougher the internal pipe surfaces, the lower the C value. The initial C value is determined by the pipe material and how it is manufactured. The material that makes up internal surfaces has a roughness and may include slight imperfections as it is manufactured. These factors are very minor and can only be detected during precise measurements. More importantly, the internal roughness of the pipe and associated C value is influenced by the rate of internal corrosion and/or the buildup of scale. New steel pipe will have a C value of 140, however NFPA 13 adjusts the C values to account for internal corrosion as the pipe ages. Dry and preaction systems experience variable rates of internal pipe corrosion and scale based on the type of pipe and whether air or nitrogen is used.

Why is this an issue for dry and preaction systems?

NFPA 13, up to and including the 2010 edition, required dry and preaction systems to use a C value of 100 when using black steel pipe, but permitted internally galvanized pipe to use a C value of 120. This was based on the premise that internally galvanized pipe would offer better corrosion resistance and allow for a higher C value.

Starting with the 2013 edition of NFPA 13, the standard required all dry and preaction systems to use a C value of 100, regardless of the pipe type. This was based on observations that indicated internally galvanized pipe did not have sufficient corrosion resistance to justify the increased C value.

Traditionally, the standard contemplated dry and preaction systems using black or galvanized steel pipe with air. Starting with the 2016 edition, the concept of increasing the C value when nitrogen was used in lieu of air was considered. Eliminating the air in the piping and replacing it with nitrogen at high concentrations could reduce corrosion. This would then potentially permit an increase to the C value. While working on the 2016 and 2019 editions, the committee agreed with this concept, but cited concerns over ensuring the nitrogen supply would be properly maintained and not changed to air at a later date. Subsequently, the committee decided not to make any change to the C value when

nitrogen was used in the 2016 and 2019 editions.

However, the committee did make a change for the 2022 edition. Section 28.2.4.8.1 now provides an allowance for an increased C value when using nitrogen. Table 28.2.4.8.1 for the Hazen-Williams C values indicates that black steel and galvanized steel pipe, for both dry and preaction systems, using nitrogen in accordance with Section 8.2.6.9, could have the C value increased to 120.

Based on the committee’s previous concerns, Section 8.2.6.9 was added to require the following additional conditions be met:

1. The nitrogen supply must be from a listed nitrogen generator that is permanently installed.
2. The generator shall be capable of supplying and maintaining at least 98 percent nitrogen concentration throughout the system at a minimum leakage rate of 1.5 psi (0.1 bar) per hour.
3. A means of verifying nitrogen concentration shall be provided for each system where increased C value is used.
4. The nitrogen generator shall be installed per the manufacturer’s instructions.
5. The nitrogen generator shall be maintained in accordance with Chapter 32 which references the 2020 edition of NFPA 25.

How does the C value affect friction loss?

Friction loss for dry and preaction systems is determined by using the Hazen-Williams formula. In this equation, the C value is raised exponentially to the 1.85 power and is located in the denominator of the equation. Thus, as the C value increases, the result is an exponential decrease in the friction loss.

$$p = 4.52Q^{1.85} / C^{1.85}d^{4.87}$$

p = frictional resistance (psi/ft of pipe)

Q = flow (gpm)

C = friction loss coefficient

d = actual internal diameter of pipe (in.)

Changing the C value for dry and preaction system from 120 to 100 results in 40% more friction loss. Here are some examples:

continued on page 12

continued from page 11

Nominal Pipe Size (in.)	Flow (gpm)	C Value	Friction Loss (psi) per 100 ft. of pipe
4	240	100	2.67
		120	1.90
4	500	100	10.4
		120	7.43
2 ½	100	100	5.55
		120	3.96
2 ½	200	100	20.00
		120	14.28
1 ½	50	100	12.3
		120	8.78
1 ½	100	100	44.5
		120	31.77

Given the significant effect C value has in determining friction loss, dry and preaction systems can benefit hydraulically when the increased C value is used. This is especially important for systems with larger system demands (gpm), longer pipe runs, and/or smaller pipe sizing. For small systems, the hydraulic improvement may be minimal and not needed. However, for larger dry and preaction systems, the hydraulic savings can add up quickly and have a significant impact on the overall system demand.

Conclusions:

NFPA 13, 2022 edition now permits dry and preaction systems to use an increased C value of 120 when nitrogen is used. The higher C value results in lower friction loss. Dry and preaction systems have always required additional inspection, testing, and maintenance. It is important when nitrogen is used to increase the C value, that the nitrogen supply is properly installed and inspected to ensure the hydraulic benefit it provides is always maintained. The use of nitrogen for dry and preaction systems can reduced corrosion, increase C value, reduce friction loss, decrease pipe size, reduce system volume, reduce water delivery times, and thus provide improved fire protection. When designing your next dry or preaction system, we recommend you investigate the hydraulic advantages of using nitrogen as detailed in the 2022 edition of NFPA 13. •

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Enforcing the NFPA 25 Antifreeze Sunset Date

by Jeffrey M. Hugo, CBO, Vice President of Codes and Public Fire Protection



The NFPA 25 antifreeze sunset date is part of every NFSA council, committee, and chapter conversation. While it is undergoing some revisions in the 2023 edition of NFPA 25 (see the article in this edition by Vincent Powers), the adoption of the 2023 edition of NFPA 25 does not happen through a fire code reference until the 2024 model code editions are published and adopted. The sunset date is going to be a reality across the U.S. before any changes in the 2023 NFPA 25 occur, so, contractors and building owners will need to get plans in place to comply with the antifreeze changes.

Short history of the sunset date

For existing fire sprinkler systems, NFPA 25, Standard for the Installation, Testing and Maintenance of Water-Based Fire Protection Systems (ITM) has restricted the use of antifreeze solutions in existing NFPA 13 and NFPA 13R sprinkler systems since the 2011 edition. Existing systems with legacy antifreeze (propylene glycol and glycerin) have a sunset date of September 30, 2022.

Since the 2013 editions of NFPA 13, Installation of Sprinkler Systems, and NFPA 13R, Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies, antifreeze in new sprinkler systems is prohibited, unless the antifreeze is listed. Currently, there are three listed antifreeze products on the market that meet the listing requirements of NFPA 13 and NFPA 13R:

1. Freezemaster™ Antifreeze – www.freezemaster.com
2. Tyco LFP® Antifreeze - www.tycofpp.com/lfp
3. Tyco LFP® Antifreeze+ - www.tycofpp.com/lfp

What does the sunset date of September 30, 2022, mean?

Since the 2011 edition of NFPA 25 (through TIA 11-4), the September 30, 2022, date has been established as an end to legacy antifreeze in existing fire sprinkler (NFPA 13 and NFPA 13R) systems. This rule can be found in every NFPA 25 edition since 2011. Specific section numbers in NFPA 25 for September 30, 2022, are noted in Table 1. By this date, existing sprinkler systems using legacy antifreeze need to update to one of the listed antifreeze solutions (noted in this article), or apply other measures to protect systems in areas under 40° F.

TABLE 1

NFPA 25 Edition	September 30, 2022 Section
2011	5.3.4.2.1 (See TIA 11-4)
2014	5.3.4.2.1
2017	5.3.3.4.1
2020	5.3.4.4.1

How is this date applied or enforced across the U.S.?

NFPA 25 is a referenced standard in both model fire codes in the U. S.; the International Fire Code (IFC) and the NFPA 1 Fire Code. The IFC and NFPA 1 are mostly maintenance codes for existing buildings, but it is not uncommon to see either used for new construction rules too. For existing sprinkler systems, this means where the IFC or NFPA 1 is adopted at the state level or locally, the NFPA 25 standard is automatically adopted and enforceable. Table 2 shows the code edition and referenced enforceable edition of NFPA 25 (and NFPA 13 and NFPA 13R).

Some home rule states, such as Illinois, Missouri, Colorado, and more, allow local jurisdictions to have local ordinances that specifically adopt a different edition of NFPA 25. In home rule states, it is entirely possible to have the latest published edition enforced locally. It is also possible to run across a locally adopted edition of NFPA 25 that did not specifically adopt the TIA that applied the sunset date. Ordinances and local codes are usually linked to the jurisdiction website.

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TABLE 2		
ICC and NFPA Code Edition	Referenced NFPA 13 & 13R Edition	Referenced NFPA 25 Edition
2024*	2022	2023**
2021	2019	2020
2018	2016	2017
2015	2013	2014
2012	2010	2011
2009	2007	2008
*Published fall of 2023 / **Published fall of 2022		

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If the local jurisdiction does not have a fire code, can the sunset date be enforced?

There are some areas in the U.S. that do not specifically adopt the IFC or NFPA 1 for a fire code. For example, the State of Michigan has a statewide building code but not a statewide fire code. In these cases, the sunset date is still enforceable through the building code or the local property maintenance code. For example, the Michigan Building Code (MBC), Section 903.5 references the inspection, testing, and maintenance of fire sprinkler systems through the IFC. While Michigan does not have a statewide fire code, the IFC can be locally enforced by this MBC reference. As explained above, NFPA 25 is referenced by the IFC. The code path, from the IBC, to the IFC, to NFPA 25, to the sunset date in NFPA 25 is lengthy but it is the path of enforcing the sunset date if a fire code is not specifically adopted.

Another avenue to enforcement of the sunset date in NFPA 25 is through the International Property Maintenance Code (IPMC). The IPMC is usually adopted locally through a code enforcement department. The IPMC can be tied to local business licenses, such as for rental housing or liquor licenses. The IPMC is also used locally for enforcing maintenance to properties and since fire

protection is a building system, Chapter 7 of the IPMC references and requires ITM of fire sprinkler systems to NFPA 25.

Prepare for September 30, 2022, and watch for local changes

For code officials, Authorities Having Jurisdiction, and building owners, there is not much wiggle room for avoiding the sunset date when the model codes are adopted, unless those codes or standards are modified upon adoption. Yes, there are currently some jurisdictions that have amended the sunset date out of NFPA 25 and some who still allow legacy antifreeze in new systems. These locations are few and far between, however. We encourage members to be vigilant to monitor state and local code changes. The NFSA expects to see an uptick in state and local legislation and regulatory actions to allow more time for legacy antifreeze to remain or the elimination of the sunset date altogether. As with any code, standard, legislation and regulatory question or issue, the NFSA has staff dedicated to research, advocate, and defend the fire sprinkler industry on this issue. •

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NFSA's Learning Playbook

by Evan Combs, **Manager of Learning & Development**



NFSA's newly rebranded Learning and Development Team is committed to enhancing the learning experience we offer to the fire sprinkler industry and larger community. We achieve this through implementing proven educational science and strategy. To ensure the team is meeting its goals, we user-test our content and analyze the data to inform and evaluate course production.

Our educational catalog is expanding in terms of the roles we are supporting, technology we are leveraging, and instructional strategies we are implementing. The following are highlights of enhancements we have made in 2021 that will drive us into an innovative 2022, and beyond.

Proposals for ITM (vILT)

Proposals for Inspection, Testing, and Maintenance is a new virtual Instructor-Led Training (vILT) that targets sales roles in ITM and understanding the requirements when developing a proposal for contract. To engage learners in a real-time virtual environment, instructors must implement engagement tactics they may not normally need for an in-person class. In these sessions that are smaller in size (24 learners or less), we are implementing more activities that give learners the opportunity to apply what they learn and try it out for themselves in a low-risk environment, before they potentially impact a critical deal. We are also implementing small group work that helps leverage two instructional strategies, peer education and inquiry-based learning.

- **Peer Education** – Learners come to a class with very different experiences; educational programs should leverage this to help students share and grow from collaboration. Guided group work allows individuals to share what they know, learn from each other, and collectively drive toward goals in a non-competitive environment.
- **Inquiry-Based Learning** – NFSA's learning strategy leans heavily on instruction that forces the learner to critically think about real-world situations that are relatable to their career and promotes curiosity. This is achieved through asking thought-provoking questions at the beginning of classes and presenting scenarios that are used and referred to throughout the instruction.

Balcony Sprinklers: IBC vs. NFPA (eLM)

Balcony Sprinklers: IBC vs. NFPA is a new eLearning Module (eLM) that focuses on how various codes and standards differ on balcony protection. eLMs are a way to leverage educational

technology and enhance our ability to serve immediate learning goals. These time-sensitive needs could be requirements for license recertification, or to support a "Just in Time" mindset, learning about specific topics or skills as they present themselves in the field. In addition to this, NFSA's new eLMs provide a much higher quality experience by leveraging tools that integrate adaptive learning, stealth assessments, and cognitive disruption.

- **Adaptive Learning** – As a student moves through an NFSA eLM, they receive feedback on performance. In its simplest form, if you select the wrong answer on a multiple-choice question, you are provided with an explanation as to why it is incorrect or pointed to additional material to support that topic of instruction.
- **Stealth Assessments** – In theory, a stealth assessment is a form of assessing the learner at the point of instruction in a way that does not impede on their learning. In NFSA's newer eLMs, we implement assessment items during instruction, rather than waiting till the end of the lesson, ensuring that any performance is addressed immediately in the context of the topic. This strengthens learning habits and aids in targeting areas for improvement.
- **Cognitive Disruption** – All learners require an opportunity to break up their attention and digest what they learn. The buzzword in the education industry as it relates to this topic is microlearning, which at its core, is a strategy that helps by delivering content in small pieces. However, it becomes difficult to dig into complex topics in a microlearning format, so the NFSA's newer courses take an approach where content continuously shifts its delivery method between visually stimulating multimedia, exercises and activities, and user-driven content discovery.

These strategies promote soft skills in critical thinking, collaboration, and growing a self-serving mindset, which targets the "development" in learning and development. It is important that learners exit these programs and bring these skills back with them to the workplace, encouraging themselves and colleagues to challenge themselves and their work.

Looking forward, NFSA's Learning and Development Team will continue to explore and test its learning strategy, ensuring its efficacy. If you take an NFSA class or program and would like to share your feedback, or take part in our user testing for new content and strategy, please contact us at learning@nfsa.org.

For more information on these products, or to view our catalog, please visit <https://community.nfsa.org/learning>

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Elevation Fire
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We hope you'll choose to support our Advocates' Coalition as we work to create Fire Safe Homes

Working together, we can create resources to educate those who make the decisions regarding community fire protection.

Our goal is to be a go-to resource for community leaders who need a first-person account of the devastating impact fire can have on a community and a family. We can prevent future tragedies, and we believe that our stories help everyone understand in a way that makes a difference. Visit our website for additional resources and information. Order our Media Kit for a complete package of PSAs, media information, talking points, statistics and actual examples of resources used in communities. Your support is greatly appreciated, and as a non-profit 501(c)3 we are now ready to grow our mission and expand our efforts. We hope you'll support our team as an Advocate, Supporter or Corporate member (details on reverse side, along with form).

 CommonVoices1

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Did you see us on Fox & Friends and Good Morning America?



FOX & friends

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Turning Up the Volume!



by Vickie Pritchett, Vice President/Executive Officer

As I reflect on 2021, I must use the lens/filter that focuses on NFSA's marketing and outreach efforts. This has been the year that we have "turned up the volume," and I'm very happy to report on several key highlights! I would also like to recognize a Team NFSA colleague who plays a big role in this elevated presence, and that's Joanne Genadio, our Marketing Manager and NFSM Editor. Joanne works tirelessly to keep our social media channels full of breaking news — both fire sprinkler saves and tragedies that could have been avoided are spotlighted. It's also the place to find out what's going on with NFSA, so if you're not following us on Facebook, Twitter, Instagram, and LinkedIn, I encourage you to do so.

Now, let's spotlight some of our targeted outreach:

A new commercial! Our first commercial, *What Used to Be*, had a serious tone to it as it highlighted what happens when a fire ravages your home. Our newest, and second commercial, takes a light-hearted approach to one of our great myths – regarding water damage and how much a fire sprinkler flows. We took a line that President Shane Ray shares at every side-by-side burn demo; *Everything will dry out, but nothing will unburn* and combined it with our *Fire Sprinklers Buy Time. Time Buys Life* messaging. You can check out both commercials on our www.firesprinklersbuylife.com website. This website focuses on pure education and works as a way for us to help interested individuals find a fire sprinkler contractor. We leverage our field staff to truly give this a personal touch and we've been very pleased with the outcomes.

A monthly presence on both **Daytime TV** series and **Lifestyle TV** segments, Presley Media has worked with us to bring fire sprinkler stories to life monthly, with specific themes. If you've missed them, you can find them on our **YouTube** channel at <https://bit.ly/NFSAYouTube>. The reach, both in households and impressions from this investment has been significant and we plan to continue with this strategic content development and outreach.

An entire episode of **Designing Spaces** featured fire sprinklers! We shot footage in new homes and also included a retrofit of Chief Bill Killen's home. Chief Killen is a former International Association of Fire Chiefs President, local fire chief, and former fire chief for NASA. Oh, the stories he has to share, and the treasures he has to protect. He lovingly says that protecting his wife, Carol, is the number one reason he is so happy to now be living with fire sprinklers. You can see the **Designing Spaces** segment by also



checking out our **YouTube** channel where we have it posted for "forever viewing". The show debuted during Fire Prevention Week on the **Lifetime** channel.

Outreach to the American School Counselors Association!

We presented to 4,000 school counselors gathered for their annual conference and included a full-page ad in their magazine, which reaches 44,000 school counselors. The positive feedback has inspired us to expand our materials that promote jobs within the fire sprinkler industry. We mean it when we say we are serious about finding the right people to fill empty spots within your respective businesses. You can see the materials we created here: www.nfsa.org/careers

As this year winds down, I hope you all know that Team NFSA wishes you a wonderful holiday season, and that we are focused on continuing our efforts to support our mission "To protect lives and property from fire through the widespread acceptance of the fire sprinkler concept" with our work. It's a joy and honor to serve you, and we look forward to a great 2022!

Until next time, Stay safe,

Vickie



FIRE SPRINKLERS IN ACTION

Annapolis, MD

Single Sprinkler Contains Kitchen Fire

Thanks to Anne Arundel County, MD Fire Department's John T. Lane, CFPS, Division Chief-Fire Marshal for sending us this sprinkler save.



Fire and Explosives Investigation Units (FEIU) responded as part of the "Working Fire Dispatch" and arrived on location. FEIU investigators concurred with the on-scene unit's determination that the fire originated on/at the kitchen stove located within an apartment and that the cause of the fire was the result of the control knob/s for the natural gas-fueled stove top range being moved to the "ON" position.

The initial fuel package ignited from the range burner was the combustible components of an unplugged electric portable smokeless grill situated on the top of the range. Noted is that one (1) wet pendant residential sprinkler located in the room of origin activated and contained the fire to the room of origin prior to complete extinguishment.

Cass Lake, MN

Single Sprinkler Controls Fire in Residential Treatment Facility

Thank you to Jon Nisja, Fire Safety Supervisor, Minnesota State Fire Marshal Division, for sending in this sprinkler save!



A fire occurred in a building in Cass Lake, which was formerly a casino and is now used as residential treatment facility

Fire started in laundry room (not sprinkler-protected). One sprinkler was outside open laundry room door. That sprinkler prevented the fire from spreading down the hallway and noticeably cooled the smoke down and kept it in that wing of the building minimizing smoke damage.

St. Paul, MN

Second Sprinkler Save in Apartment Building Within Two Years

Thanks go to St. Cloud Fire Marshal Michael Post and Jon Nisja, Fire Safety Supervisor for the Minnesota State Fire Marshal Division, for sending us this sprinkler save!



St. Cloud has experienced another sprinkler save in a multi-story, multi family structure! A stove fire was controlled by two fire sprinklers. Firefighters were able to use water pooled in the kitchen pots & pans to complete extinguishment.

A subsequent investigation determined the fire was accidental in nature. This is the second sprinkler save in this building in the last two years.

Frisco, TX

Sprinkler Saves



Thanks to Frisco, TX Fire Marshal Kelly Kistner for sending us these sprinkler saves!

Week of September 6th-Apartment Building Fire-Single vehicle fire in the parking garage with damage to vehicles on either side. A single sprinkler kept the fire in check until crews extinguished what remained. No damage to the parking garage. No injuries.

On September 12th, the Frisco FD responded to a water flow alarm at a multi-family occupancy. Upon arrival, fire crews found a fire that had been extinguished by the sprinkler system. The occupant had been frying fish when the oil caught fire and activated a sprinkler. Fire damage was minimal and there were no injuries.

McKinney, TX

Single Sprinkler Puts Out Flames in Balcony Storage Area

Thank you to McKinney, TX Fire Dept. Public Information Officer Merit Ossian for sending us this sprinkler save.



The McKinney, TX Fire Department (MFD) responded to a water flow alarm at an apartment complex on Friday, Sept. 10th. Firefighters arrived at the Saxon Woods apartments to find that a fire sprinkler inside a balcony storage area had extinguished the fire. No one was injured and damage was minimal.

Spring, TX

Single Sprinkler Saves Gym

Thank you to the Montgomery County, TX Fire Marshal's Office for posting the following sprinkler save on their Facebook page! Special thanks go to Fire Marshal Jimmy Williams for sending us the original press release and photos.

Fire sprinkler save in South Montgomery County when fire erupted at a LA Fitness location.

The fire alarm system activated first to warn the gym's occupants and give them time to escape before the building began filling with smoke.

As the fire began to spread from the dryer, a single fire sprinkler activated and held it in check. The South Montgomery County Fire Department arrived within minutes and quickly extinguished the remaining fire.

Minimal damage and no injuries thanks to the foresight of our Commissioner's Court, who first adopted our County Fire Code in 2008.



Rochester, MN

Sprinkler Save at Apartment Building

Thanks to Rochester Fire Marshal Chris Ferguson for sending us this sprinkler save.



On Sept. 21st at 1:56 p.m, firefighters arrived at an apartment building to find smoke, fire and water spray coming from a window on the fourth floor of the building. Crews went inside the building and up to the floor to investigate conditions. It was found that two sprinklers activated and contained the fire. Firefighters finished the job, ensured that the fire was out, stopped the sprinkler water flow, and then assisted with water removal. Property damage was limited and many of the apartment's residents were able to return to their apartment immediately following the event. No injuries were reported.

The apartment building was built in 2019 and its automatic sprinkler system was critical in keeping the fire from spreading. These systems not only help protect life safety but also aid in a community's economic resiliency. RFD's Fire Marshal's Division maintains a progressive fire inspection and prevention program. Part of this is ensuring that residential and commercial buildings have the appropriate fire sprinkler system installed and maintained. Even small fires spread quickly and grow exponentially. Fire sprinkler systems can keep fires from spreading and even extinguish them. •



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The Antifreeze Solution

by Vince Powers, *NFSA's ITM Specialist*



Protecting sprinkler systems from freezing can be a challenge in many parts of the country, specifically in areas of buildings that do not have climate control. NFPA requires that water-filled pipes be maintained at a minimum temperature of 40 degrees Fahrenheit. If the minimum temperature cannot be maintained, an alternative system must be installed, such as dry pipe or antifreeze systems.

Antifreeze systems can be a good way to keep sprinkler systems from freezing if they are properly installed, maintained, and the correct solution is used. During 2010, in Truckee, CA, a cooking fire set off sprinklers in an apartment with an antifreeze system installed. The antifreeze solution was at a high percentage by volume and when the sprinkler activated the elevated mixture caused an explosion. There have been other instances where a high mixture of antifreeze solution contributed to the fire as well. In 2010, NFPA launched an investigation into antifreeze which resulted in requirements to limit the percentages of glycerin and propylene glycol used in antifreeze fire sprinkler systems. This would be a good time to note that only glycerin can be used in CPVC (orange) sprinkler piping. Both glycol and glycerin can be used in steel piping and absolutely no automotive or marine antifreeze can be used in fire sprinkler systems.

Link to Antifreeze investigation and other information on NFPA website: <https://bit.ly/NFPAFRZ>

This investigation caused significant changes in the fire sprinkler industry. New antifreeze systems were no longer allowed to be installed after September 12, 2012, unless a listed antifreeze was available. There was an exception for ESFR systems, where a premixed solution was permitted to be installed in accordance with *NFPA 13, The Standard for the Installation of Water-Based Fire Sprinkler Systems, 2016 edition, Section 7.6.2.2.*

Link to Requirements for Antifreeze Systems, NFPA: <https://bit.ly/FRZreq>

This also caused many changes in *NFPA 25, The Standard for Inspection, Testing, and Maintenance of Water-Based Fire Sprinkler Systems*. Since the 2011 edition of NFPA 25 was ready to be released when the investigation by NFPA was completed, a tentative interim amendment (TIA) was created. A TIA is created when something can cause building or system damage or possible personal injury to amend a specific edition of an NFPA standard.

Below is a link to the 2011 edition TIA's.

Link to NFPA 25 2011 Edition TIA for Antifreeze Solutions:
<https://bit.ly/TIAas>

Essentially the TIA limited the amount of antifreeze mixture in systems, as well as led to several changes in the future editions of NFPA 25.

Existing antifreeze systems are required to be tested for concentration levels annually. The systems must be maintained at the anticipated minimum temperature for a specific region. A chart that depicts the lowest one day mean temperatures across the United States can be found in Annex A of NFPA 25.

For years, depending on what region the antifreeze was being installed, it was common practice for contractors to purchase concentrate antifreeze and mix the solution onsite to the proper levels before pumping into the sprinkler system. A premix solution could also be purchased, but the premixed solutions typically only protected to about -15 F. This temperature does not work for all parts of the country.

With the TIA and other changes in NFPA 25, solutions were no longer allowed to be mixed onsite. Only premixed solutions are allowed to be used in existing antifreeze systems. These changes also included a sunset date of September 30, 2022, for existing antifreeze systems. This means that if a listed antifreeze solution was not available by this date, then the existing antifreeze system would have to be changed or modified, and the antifreeze solution would have to be removed. The common solution would require these systems to be changed to dry pipe systems, which would create additional issues of properly pitching the pipe or possibly heating the spaces, which is also not an easy task.

Included in these changes is a limitation on the percentage of antifreeze allowed in existing systems. The concentration of antifreeze solution is now limited to 38% by volume for glycerin, 30% by volume for propylene glycol. If the existing solution type could not be properly determined, the solution must be removed and replaced with new premixed solution. There are also requirements to test the solution at multiple points in the system. A minimum of two points is required for systems that are 150 gallons or less, and one additional point for every additional 100 gallons. For example, if testing a 300-gallon system, the solution would be required to be tested at a minimum of four points. Two for the first 150 gallons, one for the next 100 gallons, and one for the last 50 gallons. Requirements for testing existing antifreeze

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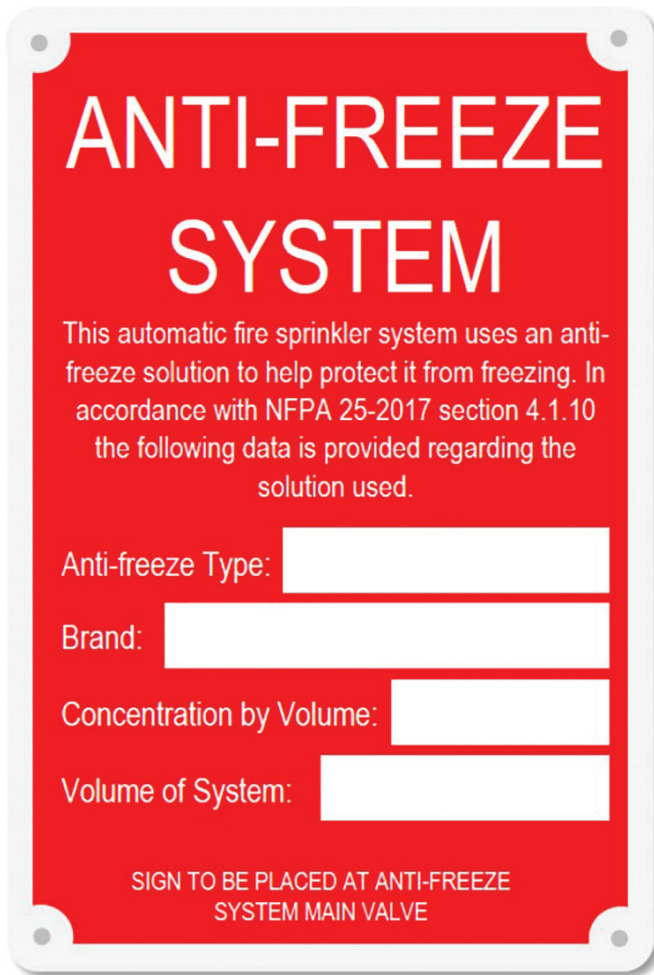
“Currently the sunset date of September 30, 2022, for existing legacy (glycerin and glycol) systems, is still required and any existing antifreeze solutions must be replaced with a listed antifreeze.”

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solutions can be found in the following sections for each edition of NFPA 25.

2011	TIAs
2014	Section 5.3.4
2017	Section 5.3.3
2020	Section 5.3.4

Also note that a new requirement in the 2017 edition of NFPA 25 is an antifreeze sign. The sign requires name of manufacturer, antifreeze type, brand, the concentration by volume, and the volume of the system.



In 2019, the first listed antifreeze was released. There are now three listed antifreeze solutions on the market. They can be used in CPVC and steel piping. This is certainly an improvement over the legacy antifreeze that can only be used in specific materials. As

of now, the listed antifreeze solutions can protect as low as -25 F. The difference between legacy and listed antifreeze is that the newly listed antifreeze solutions must comply to UL 2901. Underwriters Laboratory sets the standards for safety, quality, and performance expectations. For a product to become “listed” it must pass specific testing criteria. For antifreeze solutions, they must pass the requirements of UL 2901.

Link to UL 2901:
<https://bit.ly/AF2901>

Currently the sunset date of September 30, 2022, for existing legacy (glycerin and glycol) systems, is still required and any existing antifreeze solutions must be replaced with a listed antifreeze. There could be some challenges with replacing the existing antifreeze solutions with a listed solution and the manufactures specifications must be followed when making these changes. Currently there are two listed antifreeze solutions available: Freezemaster (Lubrizol) and LFP Antifreeze (Tyco).

Currently, NFPA 25 is in the second revision for the 2023 edition. There have been many discussions among committee members on how to address the antifreeze solution and sunset dates. This edition, currently in development, should be released sometime in late 2022, after or near the sunset date requirements. In the second draft of the next edition, a public comment was made to comply with the existing requirements and have all legacy antifreeze solutions removed such that only listed antifreeze would be allowed. During the Technical Committee meetings in early September 2021, the suggestion was made and voted on to allow the legacy antifreeze solutions to remain, provided they meet the current requirements of NFPA 25. This would mean the required sign must be in place and the antifreeze solution must meet the required percentages for the type of antifreeze installed (glycol or glycerin) or the solution must be replaced with a listed antifreeze. It is also proposed that during inspection, if for any reason the solution fails, it must be replaced with listed solutions. Essentially, if the current solution tests within the requirements of the standard, it can remain, but under no circumstances for both existing and new antifreeze systems, could the legacy antifreeze be refilled or introduced into the system.

This is what the committee is currently leaning toward for the 2023 edition. However, that does not mean things will not change between now and the release of the next edition of NFPA 25. As many know and understand, properly maintaining fire sprinkler systems is imperative to ensuring a reasonable degree of performance when needed. Antifreeze systems require additional care and attention compared to wet pipe sprinkler systems to keep the system from freezing. This is because material compatibility, antifreeze types, and antifreeze concentrations must be maintained. •



GET THE JOB DONE RIGHT THE FIRST TIME.

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Nitrogen: THE Solution for Freeze Protection

by Andrew Loeffelman, *Engineered Corrosion Solutions*

As professionals in the fire protection industry, we have all witnessed the incredible damage that can be done by a sprinkler system freeze-ups. The winter season falls upon us and service calls for busted, frozen pipes start rolling in. This can be especially frustrating for facility owners/managers who expect their dry systems to be just as the name suggests – dry! In the case of cold storage applications, ice plug formation can render entire facilities without any means of fire protection. It is important for us in the fire protection industry to know and understand what our options are to prevent what can be a catastrophe for a building owner from occurring, as well as keep facilities safe and protected.

In the case of dry and preaction sprinkler systems, trapped water is most often introduced from three (3) main sources: 1) initial hydrotesting after installation, which is near impossible to completely remove; 2) condensate from supervisory compressed air; and 3) system trip-testing. Because of required system testing and the traditional practice of maintaining supervisory pressure with compressed air, it must always be assumed that trapped water is present in dry and preaction systems. If this trapped water is not routinely discharged via auxiliary drains a freeze-up will inevitably occur once exposed to freezing temperatures.

Some traditional methods for freeze prevention include routinely exercising drum drips, utilizing listed antifreeze systems in lieu of dry systems, and the use of compressed air dryers. Each of the options, while permitted by codes and standards, present operational challenges that should be considered. The use of drum drips can be difficult to track, unreliable, time-consuming, and expensive for end users if they are paying a contractor for these services. Just a single missed maintenance cycle for draining a drum drip can result in a freeze up. In the case of legacy antifreeze systems, these chemicals have been known to break down into acidic compounds over time, resulting in aggressive acid corrosion. The options for listed antifreeze chemicals are also very limited. The final traditional method for freeze prevention is the use of compressed air dryers. While this can be an effective solution “out of the box”, the long-term effectiveness of these machines is maintenance dependent. Air dryers have been known to be maintenance intensive, and if maintenance is not properly performed the air dryer will not maintain a low enough dew point to prevent condensate buildup. This will eventually result in freeze ups from trapped condensate water.

Nitrogen has emerged as the solution to prevent freeze-ups in dry and preaction fire sprinkler systems in both outdoor and

cold storage environments. Nitrogen gas produced by a nitrogen generator has a very low dew point of approximately -90o F when produced at 98% purity, much lower than any other technology. Nitrogen generators only require light maintenance, a simple and inexpensive annual filter change is all that is required. Lastly, an end user also receives the added benefit of corrosion prevention via oxygen removal from the sprinkler system, which no other technology provides. Properly sized nitrogen generators do not have any problem maintaining systems with leak rates that comply with NFPA 25 leak allowance (1.5 psi per hour). If keeping up with existing leak rates is a concern, then the system shall be brought into compliance with NFPA 25 standards.



There is also a misconception in the industry revolving around the use of dry supervisory gases (i.e., nitrogen and dry air) that should be addressed – these technologies do not “dry out” sprinkler systems on their own and this expectation should never be communicated to an end user. This is because a massive volume of dry gas is required to absorb a small amount of trapped water. For example, to absorb just 1 gallon of water, a volume more than 40,000 gallons of completely dry gas would be required. This is not practical or realistic for a sprinkler system application. It is best practice to install and commission a nitrogen generator into service, then continue to routinely exercise drum drips until no evidence of trapped water is observed. This practice is solely to remove any moisture left in system piping prior to commissioning the nitrogen generator. From that point forward the nitrogen generator will not introduce any additional moisture into system piping; the system will remain dry and freeze ups will thereby be prevented.

With cold storage applications, the idea is the same: utilize a nitrogen generator as a long-term reliable solution that will not introduce condensate into system piping. When protecting freezer areas, no amount of water vapor in the supervisory gas is acceptable as it will immediately condense and freeze at the entry point to the freezer. Ice plugs in cold storage applications are acutely dangerous because of this fact, a complete or even partial obstruction in the supply main at the freezer entry point can severely impede or even completely prevent water from reaching a sprinkler in the event of a fire. Nitrogen generators eliminate this risk and provide

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peace of mind, unlike other technologies that are less reliable and/or maintenance dependent.

As time goes on, technology continues to evolve, and new innovative solutions are brought to the surface that solve age-old problems. This rings true for any industry and nitrogen technology is no exception to this rule for us fire protection professionals. Nitrogen generators should always be considered not only as a solution for corrosion prevention, but also as a solution to the widely recognized issue of sprinkler system freeze-ups. Together we

can continue to improve the reliability of the fire sprinkler systems we install and service. •

ABOUT THE AUTHOR

Andrew Loeffelman is the Vice President of Sales at Engineered Corrosion Solutions. ECS is the industry leader in corrosion control, offering products ranging from nitrogen generators to wet system air vents, as well as testing/evaluation of existing sprinkler systems. Andrew can be reached at 314-415-1385, or aloeffelman@ecscorrosion.com

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Extended Winter Freeze Events with No Power – *A lose-lose proposition for fire protection*

by Cindy Giedraitis, *NFSA* and Jeff Shapiro, PE *International Code Consultants*

Cold weather can pose a challenge to water-based fire protection systems, but a well-designed system that takes advantage of building heating systems, insulation, antifreeze, heat tracing and other freeze mitigation methods will typically survive unscathed. However, reliance on heating systems, which typically rely on utilities for power and fuel gas, presents a vulnerability that is not specifically contemplated by codes, standards, or system designs.

Fire-protection system contractors rely on others to ensure that heat will be provided and maintained in accordance with building design specifications. Although this model tends to work well overall, severe cold weather events that go beyond design assumptions, particularly when concurrent with a long-term loss of energy to building heating systems, is an exception, which was demonstrated in dramatic fashion during Winter Storm Uri last February. The result was widespread catastrophic damage to fire-protection systems across the south-central region of the U.S.

In search of lessons learned that might be translated into future action, the NFSA Texas Chapter and the Texas Fire Protection Association hosted two expert panel discussions in May and September 2021. Both panels discussed the unique challenges that Winter Storm Uri posed to owners, sprinkler contractors, system designers, and code officials. Steve Rians, Vice President of Sales with American Fire Protection Group, Van Fitch, Service Sales Manager with J.F. Ahern Company, NFSA Contractor Members; and Daniel Merritt, Sales Director with Reliable Automatic Sprinkler Company; NFSA Supplier Manufacturer Member, all participated with other expert panelists including Mike Joanis, PE, NFSA's Director of Contractor Services, Kelley Stalder, PE, of the Texas State Fire Marshal, Ernest McCloud, Assistant Texas State Fire Marshal, and Chief Ariana Kistner of Rockwall Fire Department on the NFSA Winter Freeze Panel. One key takeaway was agreement that the crux of the disaster was the combination of 1) An extended period of substantially below-freezing weather, and 2) An extended loss of electrical power.

Systems taken out of service... a lose-lose proposition

When buildings are designed with required fire protection systems, there is an underlying assumption by codes and standards that these systems will remain in-service at all times, other than as needed for

maintenance. Likewise, insurers typically provide rate credit based on an assumption that fire protection systems will be operational. Accordingly, owners are expected to keep their systems in service, regardless of an impending risk of freeze-related damage.



The lose-lose proposition is clear. If a system is shut down and drained in an effort to limit or prevent freeze damage from a pending catastrophic freezing event, the owner is technically in violation of code, and any contractor facilitating the shutdown might be exposed to questions about their authority for such actions. On the other hand, if a system is kept in service and freezes, it will be partially or totally inoperable due to ice blockage, and failure of pipe and/or fittings may lead to catastrophic water damage and an extended system outage while awaiting repair. Either way, the system is out of service for some period, and selecting a path is a choice between the lesser of evils.

Recognizing that a frozen system experiences major leaks after thawing will take longer to get back into service than a system that was drained and may experience only a few smaller leaks in areas where piping didn't drain properly, the option of preemptively shutting off and draining a system seems to be the better choice. However, there is currently no clear allowance in model codes offering owners and contractors the authority to take such an action on their own.

A note about emergency repairs

When systems do suffer damage, it is worth noting that International Building Code and International Existing Building Code Section 105.2.1 and International Fire Code Section 105.1.4 all state that a permit application is not needed prior to making an emergency repair. However, an application must be submitted to the code official the next business day. This allows owners to remediate potentially dangerous circumstances without waiting to complete the normal administrative application and review process. While not a solution to the question of

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preemptive damage prevention, it is an indication that codes intend to be reasonably flexible to deal with emergency conditions that cannot be reasonably addressed by “normal” application of code requirements.

A possible path forward

During the NFSA/TFPA panel discussion, this point was discussed, and there seemed to be broad agreement that the topic warrants further discussion in the codes and standards development arena, perhaps as a modification to Section 901.7 of the IFC, which governs “systems out of service” and discusses procedures to be followed for system impairments. Although such disasters might be

a rare event, the legal authority for owners and contractors to have enough flexibility to act without fear of liability for non-compliance or concern for compliance with all of the system impairment rules currently set forth in the IFC and NFPA 25 seems to be something that’s warranted and is currently missing from model codes.

Accordingly, the NFSA ITM Committee is exploring the possibility of proposing new code text that would provide a unique level of flexibility to preemptively prevent damage to water-based fire protection systems in response to a pending natural disaster that presents simultaneous risks of severe and extended periods of freezing coupled with a loss of utility service. This is a great example of NFSA helping to identify and address issues in codes and standards that impact our members and the code officials with whom we interact. •



Choosing the Right Listed Antifreeze for Compliance with NFPA 25

by Sean Pearce

Winter is almost here. It is time to prepare fire sprinkler systems for the cold.

This winter and next present special winterization challenges. All systems are required to be inspected by a qualified technician every year, but NFPA 25 also has additional requirements for antifreeze systems for contractors, ITMs, building owners, and facility managers to consider before September 30, 2022.

To prepare existing antifreeze fire sprinkler systems for both the cold and NFPA 25 requirements, ask three questions of any antifreeze product: Is it listed, will it work for my application, and is it effective? The choice of listed antifreeze now will set up the system for ongoing success.

Does it meet the rigorous technical challenges of becoming UL-listed?

Since 2001, there have been at least two high-profile incidents of site-mixed, unlisted fluids in fire sprinkler systems exploding during a fire, injuring and even killing victims. Even a single incident is too many not to invest in lifesaving changes.

NFPA responded in 2011 by specifying the use of factory-premixed, UL-listed antifreeze in all antifreeze systems by fall 2022. Unlike unlisted, “mix-your-own” and factory pre-mixed fluids, listed antifreeze must pass a multitude of tests to earn its UL-listing and ensure it will not contribute to a fire, but instead will perform as designed and tested. But the rigor of UL testing is significant. Over the last decade leading up to the NFPA 25 deadline, only three products on the market have passed the rigorous tests included in UL 2901, and they are not identical.

Two testing areas to consider when judging a quality listed antifreeze are:

- **Will the listed antifreeze be compatible with the system’s materials?** Different listed antifreeze products are approved for different sprinkler system materials. Take care with galvanized piping systems, as not all listed antifreezes are compatible with this material.
- **How does it contribute to the prevention of corrosion and microbiologically influenced corrosion (MIC)?** While UL 2901 includes a test for corrosion, it’s still important to consider the specific corrosion performance of each listed antifreeze, as corrosion can cause fire sprinkler systems to

fail or to require repair and eventual replacement. A quality antifreeze will have not just passed but will surpass corrosion/MIC-resistance tests.



Corrosion performance of listed antifreeze is especially important to consider for metallic piping systems.

Is it listed and approved for use with the application, system size and material?

Not all antifreezes are created equal, so it is important to select the appropriate listed antifreeze for the system’s needs and to carefully consult each product’s technical data sheet or installation guide during the selection process. When reading the guides, consider the following:

- **System volume and antifreeze volume listing:** An antifreeze listing defines volume limitations for each application. For Ordinary Hazard applications specifically, the system’s size may exceed the volume listing for certain listed antifreeze products, which would require valving off the system into smaller subsections to stay in compliance.
- **Minimum design pressure requirements:** Some listed antifreeze products have minimum design pressure requirements, which could require significant changes to a system to be safely used.
- **Compatibility with system materials:** As stated earlier, an antifreeze listing for use with materials such as galvanized piping, PEX and elastomeric seals may limit the antifreeze

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products to choose from to avoid damaging the system.

NFPA 25 makes listed antifreeze a must. But it is up to owners or contractors to assess the system's specific design and needs and to choose the right listed antifreeze product for safe, effective freeze protection.

Will it protect the system against damage from exposure to the severe cold?

NFPA requires freeze protection on a sprinkler system anywhere that the temperature can drop below 40°F (-4.4°C). The two essential considerations for winterizing an antifreeze sprinkler system are *freeze point*, or the temperature at which ice crystals start forming, and *minimum use temperature*, or the listed lowest temperature the fluid will flow through the system as designed. Both listed antifreeze and unlisted fluid have a freeze point; unlisted fluids will not have minimum use temperature, as they are not listed to UL 2901, which defines minimum use temperature.

Following is a temperature map that shows a geographical line, based on mean daily temperature, to help determine the need to protect aboveground piping from freezing. Mean daily temperature is the average of the highest and lowest temperatures in a given location over a 24-hour period.



Lowest one-day mean temperatures (°F) by isothermal lines

Located above the temperature line of an antifreeze's minimum use temperature on the map? This does not necessarily mean listed antifreeze cannot be used. There are certain partially conditioned spaces where listed antifreeze can be used as long as temperatures won't drop below the minimum use temperature for a sustained period of time. Such structures include walk-in coolers, small temperate parking garages, and basement garage rooms.

Assess the minimum use temperature and freeze point of a listed antifreeze and check those numbers against the building location on the temperature map (accounting for partially conditioned spaces) to determine whether listed antifreeze product can be used.



Small, temperate parking garages are considered partially conditioned spaces that can use listed antifreeze.

Winterize Right with Listed Antifreeze

Ready or not, cold weather is coming soon – and so is the NFPA 25 deadline that all antifreeze systems must be drained and refilled with a listed antifreeze by September 30, 2022.

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ABOUT THE AUTHOR

Sean Pearce is a veteran of the Toronto Fire Services, where he was a front-line fire fighter, Captain in Training and Executive Officer to the Fire Chief. After this he worked as a Marketing and Regional Manager for the Canadian Automatic Sprinkler Association (CASA). Sean has participated in various Provincial and National Code and TAC Committees, including the Retrofit of Care facilities, the compulsory certification of the fire sprinkler industry in Ontario and others.



Sean was the fire protection technical advisor for the Government of Ontario – Ministry of Seniors Affairs. He has also supported the City of Calgary and several clients in Calgary on Canada's first fully sprinklered community in North America.

Currently Sean is a Fire Protection Business Development Manager with Lubrizol. Sean graduated from the University of Toronto School of Continuing Education, Marketing and Competitive Intelligence.

Fall Time Is Soup Time and with NFSA, There Is “Soup for You!”

by Cindy Giedraitis, *NFSA South Central Regional Manager*

Fall is here and for me that means its soup time. When I think of soup; I think of my favorite sitcom episode – “No Soup for You!” on Seinfeld. This episode makes me laugh, because we always think that this should never happened to us; however, when we experience this “*you are denied*” attitude, personally; it’s not so funny!

NFSA Area 8/South Central wants to make sure that both members and non-members have access to fire sprinkler information and resources that help us to do our best. I like to think of those resources as a big bowl of soup.

At NFSA, it’s easy to get some soup, and if you are an NFSA Member— you can get a refillable deluxe bowl of soup!

What kind of soup and how much do you want?

All Fire Protection professionals and the public can eat the soup at NFSA’s wonderful website filled with so many chunky and delicious resources. For instance, try our ITM Page (<https://nfsa.org/itm/>) or Find a Career in the Fire Sprinkler Industry page (<https://nfsa.org/careers/>) or our wonderful and FREE or discounted learning events, <https://community.nfsa.org/learning/home>.

NFSA members get free Expert of the Day advice every day and as often as they want. NFSA members get free or discounted live technical trainings with CEUs every month, and receive a state-by-state industry update from our Field Ops Division every month to provide them with pre-emptive information regarding licenses, legislation and construction. NFSA members get chapter meetings for industry fellowship and regional information.

What makes NFSA The Best Soup?

- **Our Team Members** – 80% of our staff have worked in a fire department, a fire sprinkler company, or as an engineer
- **Our Learning & Development** – Our Learning & Development team will help your team get licensed, and do their job correctly.
- **Our Field Operations Team** - We care about keeping folks safe from fire – Our Team Members work directly with fire departments and fire survivors to prevent these tragedies happening to any more families. We also work to provide Career Recruitment and Education about the fire sprinkler industry for high school and college students. •

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* *Environmental Impact of Automatic Fire Sprinklers*, FM Global, 2010



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Home fire sprinkler incentives can reduce construction costs, while protecting residents and firefighters, and help to protect the environment.

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For more information about home fire sprinkler incentives, including case studies, video testimonials, fact sheets and NFPA 13D information, visit our website at HomeFireSprinkler.org/crr.

Impact of Loss of Heat on Fire Sprinkler Systems:

How to Reduce the Likelihood of Sprinkler Piping Freeze Failures

by Joshua Swann, Ph.D., P.E., and Nick Nava, P.E.

Fire sprinkler systems are found in many commercial and industrial occupancies but are also becoming increasingly popular and required in newly constructed single-family homes in many jurisdictions throughout the United States. The installation of a fire sprinkler system has been shown to provide increased levels of property and life safety protection during a fire event, but also introduces requirements and recommendations for inspection, testing, and maintenance to keep systems operational and functional. Aside from operating and discharging water during a fire event, sprinkler systems may inadvertently discharge water for many reasons, one of which is due to exposure to freezing temperatures. As many remember in February 2021, a deep freeze in the southern United States accounted for countless water losses where actions by owners or representatives could have been taken to avoid such losses.

At temperatures above 32°F, water molecules are in constant motion and rapidly colliding with one another; their momentum overpowers the force of the hydrogen bonds. As the temperature of water decreases, the water molecules become less energetic and begin slowing down. The slowing water molecules lead to an increase in density (i.e., less space between the water molecules). When the temperature of the water approaches 32°F, the water molecule's motion becomes sufficiently slower such that the force of the hydrogen bonds becomes dominant and causes the molecules to form a crystalline structure (ice) held together by hydrogen bonding. Due to the orientation of the hydrogen bonds, the molecules in the crystalline structure push further apart which leads to a notable decrease in density. The decrease in density results in the water ultimately expanding approximately 9% once it transitions into ice.

In a wet pipe fire sprinkler system, pipes are filled with water available for a rapid discharge upon activation of the sprinkler system. However, when a wet pipe sprinkler system is subjected to temperatures below the freezing point of water (due to the loss of heating, inadequate insulation, or change in use of a space), the water in the system is susceptible to freezing and thus expansion as ice is formed. Since the sprinkler pipes are typically full of water, the expansion due to the freezing process leads to an increase in pressure within the sprinkler pipes. The formation of ice causes the volume of water undergoing freezing to expand and push on the unfrozen water. Tests performed by Exponent

indicate that pressures in excess of 5,000 psi can be experienced within pipe freeze scenarios. Since water is incompressible, the forces exerted by the formation of ice are directly translated through the remaining water and the pipe and fittings. As a



Joshua Swann

Nick Nava

result, water pressures within the pipe can significantly exceed the pressure rating of the piping, fittings, and sprinklers, which can lead to a mechanical failure. After mechanical failure, water can flow from the fracture opening or as the ice thaws causing water damage. It is important to note that most freeze failures do not necessarily occur directly at the location of the freeze, instead, the increased water pressure is experienced throughout the piping system and the failure occurs at the weakest point, commonly at a fitting.

NFPA 13, *Standard for the Installation of Sprinkler Systems*, indicates that the use of a wet fire sprinkler system is not adequate in locations where temperatures cannot be reliably maintained at or above 40°F. Therefore, if a power outage or other unexpected situation arises during winter that leads to a loss of heating, the building owner or their designated sprinkler system representative should monitor the building temperatures to ensure the sprinkler system is not subjected to temperatures below 40°F. If it becomes apparent that the ambient temperatures around the sprinkler system components are below 40°F and the heating system will not be restored in a timely manner, the building owner or designated representative should consider steps to prevent an unwanted freeze failure in the sprinkler system piping.

Preferred methods to prevent water from freezing within sprinkler systems include actions such as providing temporary building heat or installing heat tracing on piping as these actions permit the sprinkler protection to remain active. While not preferred, an alternate approach can include taking appropriate steps to drain the fire sprinkler system. If contacted to drain a sprinkler system to remedy potential freezing concerns, a fire sprinkler contractor should keep in mind the following items. From a

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“The fire code and NFPA 25 should be referenced carefully when taking the system out of service. A fire sprinkler contractor should be careful not to automatically assume the responsibility for impairment coordinator from the building owner when performing service. Work acknowledgement and contract language can assist in clarifying respective responsibilities.”

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practical standpoint, draining the system would involve opening the main drain at the riser and allowing water in the system piping to fully drain. In addition to the main drain, among other items, the auxiliary drains and floor control valve drains should also be drained to ensure all water from the system is adequately removed. If the system is drained prior to freezing, the excessive pressures mentioned above, can be avoided preventing mechanical failure and a subsequent water loss. Actions should be taken as soon as an adverse condition is noticed to avoid any possible freezing.

Actions to prevent sprinkler freezes can be performed by a qualified building owner or representative or a fire sprinkler contractor who receives an emergency service call. A fire sprinkler contractor who is contacted to assist with preventing freezing conditions should strongly suggest methods that permit the system to remain in use. Additionally, contractors should make certain they take appropriate action to avoid “ensuring” the customer that draining will absolutely prevent the system from freezing or breaking to avoid unnecessary liability. The reason for this is that the water in a sprinkler system in a building without heat for some time may have already frozen and mechanically fractured piping. As heat is reintroduced to the building and water is reintroduced to the sprinkler system, the system should be monitored for water dripping or flowing to ensure there are no fractured or disconnected piping or fittings that are leaking water.

It is important to remember a sprinkler system is required to be in service at all times. If the system is to be drained and taken out of service for preplanned work or emergency work, appropriate impairment procedures must be implemented. The International Fire Code and NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, have specific notification requirements when a sprinkler system is taken out service, including tagging the system and notifying the fire department, the insurance company, and appropriate stakeholders. The building owner is responsible for assigning an impairment coordinator to address the impairment procedures. These impairment procedures include evacuating the building or providing a fire watch until the system is placed back in service. The fire code and NFPA 25 should be referenced carefully when taking the system out of service. A fire sprinkler contractor should be careful not to automatically assume the responsibility for impairment coordinator from the building owner when performing service. Work acknowledgement and contract language can assist in clarifying respective responsibilities. As the system is restored to service, notification should again be provided to the appropriate stakeholders that the impairment has been resolved. •

ABOUT THE AUTHORS

Joshua Swann, Ph.D., P.E., a licensed fire protection engineer for Exponent, leverages his knowledge of inspection, testing, and maintenance procedures of fire protection systems to analyze their failures in residential, commercial, and industrial applications.

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¹ International Association for the Properties of Water and Steam (<http://www.iapws.org/faq1/freeze.html>)

NFPA 25 Sprinkler Field Service Test

by Grant Lobdell, *Dyne Fire Protection Labs*

Sprinklers, like any metal object exposed to the atmosphere, will degrade over time. As a result, NFPA 25, the Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, requires periodic replacement or testing of sprinklers. Where replacement can be quite costly, understanding and utilizing the sprinkler field service test can be a cost-effective alternative for building owners.

When to Test

After installation, sprinklers are to be replaced or initially tested at an interval based upon their type and the environment they are exposed to. Standard sprinklers that are not exposed to a harsh environment do not need to be replaced or tested until 50 years after installation. However, due to being a relatively new technology and their track record thus far, fast response and dry sprinklers require replacement or testing after just 20 years and 15 years respectively, according to the current, 2020 edition, of NFPA 25.

However, if the sprinklers are stored in a harsh environment, replacement or the initial test will be required much sooner. Sprinklers in harsh environments will need to be replaced or tested after just five or ten years depending on if they are specifically listed as corrosion resistant or not.

If the field service test is completed in lieu of replacement and results are acceptable, the sprinklers represented by the results can remain in service. They will again be due for replacement or testing in five or ten years, depending again on whether they are exposed to harsh conditions, and their age.

What to Test

NFPA 25 does not define the sample area. Instead, the sample area should be defined by the building owner or their designated representative, understanding that if even one sprinkler in that area fails the field service test, all sprinklers in that area must be replaced. The sample area can be as big or small as the building owner or their designated representative would like to balance the testing and potential replacement costs in the event a sprinkler fails. Generally, at a minimum, sprinklers stored in different environments are separated into different sample areas, especially when it is believed one environment has had a much greater impact on sprinkler performance than another.

Once the sample area is defined and the floor level inspection is completed, a minimum of four, or 1%, (whichever is greater) of the remaining sprinklers in that area are to be removed from service and replaced. Note that each type of sprinkler should be represented in this sample set. Whereas NFPA 25 states that sprinklers that only differ in orientation, which does not impact the field service test, can be considered the same type for the purpose of the field service test, any other difference should be accounted for in the sample set. Differences could include, but are not limited to, the manufacturer, temperature rating, and release mechanism or water seal design. As a result, it is certainly possible that more than the minimum is needed in the sample set, depending on the sample area and the amount of sprinkler types within it.



How the Test is Done

Sprinklers removed from service for the field service test are to be sent to a recognized testing laboratory acceptable to the Authority Having Jurisdiction. The laboratory will plunge each sprinkler into an oven at a specific temperature and air flow, and monitor them for sudden pressure loss, signaling activation has occurred and the waterway has fully cleared. *(see photo next page)*

All the variables of this destructive test, including the oven air temperature and flow rate, the ambient temperature, and the temperature rating of the device, are combined in an equation to determine each device's Response Time Index (RTI).

$$RTI = \frac{t_f * (\sqrt{\mu})}{\ln \left[\frac{(T_g - T_o)}{(T_g - T_r)} \right]}$$

RTI = Response Time Index [(m-s)^{1/2}]

t_f = Time to activate (s)

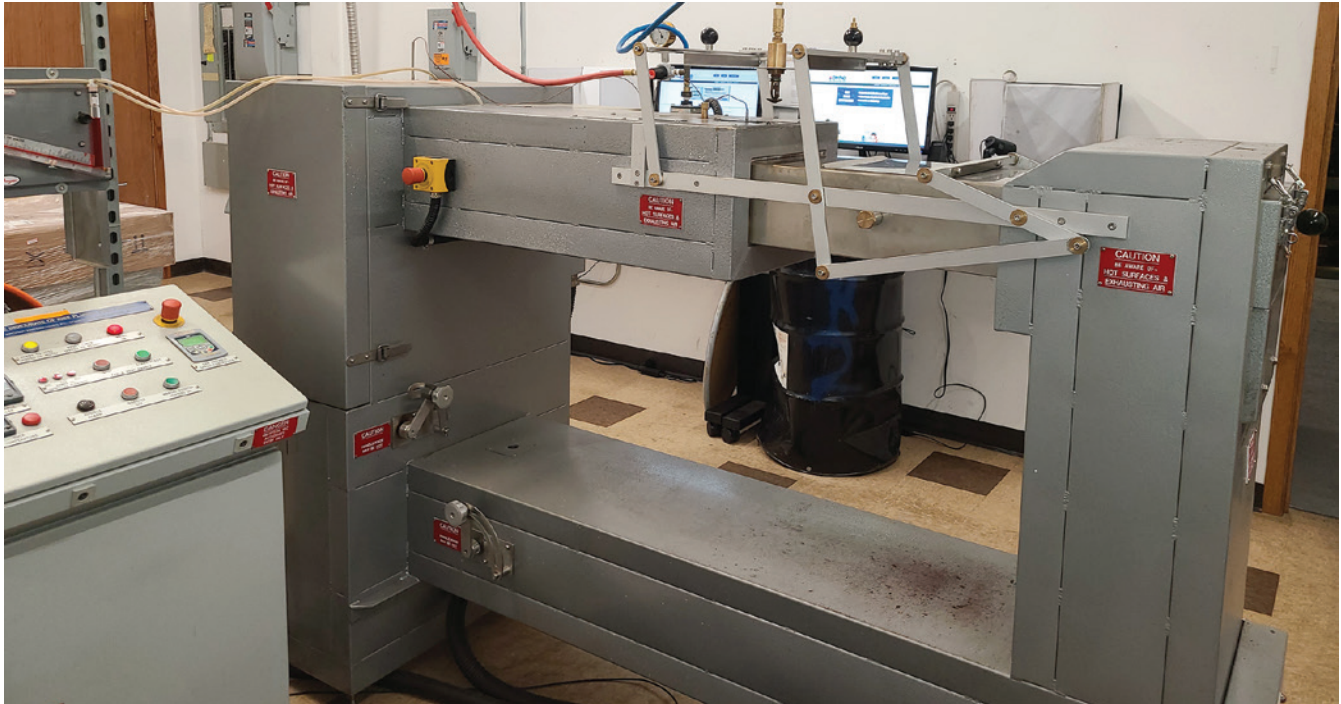
μ = Oven velocity (m/s)

T_g = Oven temperature (°C)

T_o = Ambient temperature (°C)

T_r = Temperature rating of sprinkler (°C)

continued on page 39



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NFPA 25 defines acceptable RTI results based on the type of sprinkler. ESFR sprinklers should have an RTI ≤ 50 (meter-seconds)^{1/2}, quick response and residential sprinklers should have an RTI ≤ 65 (meter-seconds)^{1/2}, and standard sprinklers should have an RTI ≤ 350 (meter-seconds)^{1/2}. The laboratory should base their determination on both the RTI result and whether the sprinkler waterway fully cleared with just 7 PSI or the minimum listed operating pressure for dry sprinklers.

To date, Dyne Fire Protection Labs, which is an ISO 17025 accredited laboratory for the sprinkler field service test, has only found that 6.6% of the sprinklers sent in for testing failed to meet these requirements. It is important to note, though, that 55.1% of those failures are directly due to an O-ring water seal failing to fully clear during the test despite activation. While sprinklers featuring an O-ring water seal have been the subject of voluntary recalls in the past and have not been listed at Underwriters Laboratories (UL) in over 15 years, some do remain in service. Should your sample area contain sprinklers with this design, outright replacement would be recommended. Sprinklers manufactured prior to 1920 also require replacement and should not be considered for testing. All other designs, especially those not exposed to harsh environments, have a very low failure rate. In most cases, the field service test of just a few sprinklers will delay full replacement of all sprinklers, and the associated cost, for many years. •



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NFPA 25 Sprinkler Field Service Testing

Children Teaching Mom Lessons on Courage

by Elizabeth Lafond Coppez

“It’s ok, Mommy. You can do it. Let’s go!”

I hesitate. Her shoulders slump in disappointment.

“Mommy has to do this on her own,” my husband explains. Grateful and frightened, I shuffle to the chair lift alone and hang on for dear life.

The dark pandemic winter of 2020-2021 was a thick mixture of fright, worry, and boredom, with a liberal dash of icy chill. My husband suggested we should try skiing, and I was very guarded about this option. My last ski adventure was ten years ago...how would I be able to help my kids when I would need just as much help?

After much deliberation, we decided to try Otis Ridge in Otis, MA. What a sweet mountain! I felt transported to a different, simpler time. We stayed on the bunny slope and mastered the “pony pull.” My kids loved it. Next up, Butternut.

So, there I am, alone on this chair lift rising to the top of the Cruiser trail at Butternut in Great Barrington. It’s so quiet. The March spring sunshine feels so warm. I start to panic. Do I remember how to dismount the lift?

I tell myself to “get it together,” and fall into a daydream, reliving my old ski days in my 20s when I first learned the sport.

My first real descent was at the Dartmouth Skiway in Lyme, NH. I was dressed in borrowed ski gear and equipment, completely unaware of how to ski. At the top of the mountain, I fumbled like a baby giraffe trying to walk for the first time. I am told to “pizza pie!” as I flail and falter the entire way down. I keep thinking, “what does a pizza have to do with skis?” I’m an embarrassment on this elite, Ivy League slope among athletes who started this sport as toddlers.

But I don’t give up. Fast forward a few years to Mt. Snow in Stow, VT, where friends have a home by the mountain. I am among a big group of beginners, and we are assisted by some experts. While exploring Mt. Snow, my friends don’t give up on me. They help and encourage me, and soon I’m flying down the intermediate slopes feeling so accomplished.

I did it. I’m skiing. It’s amazing. Sticky snow covers the trees like marshmallows, the winter air fills my soul with a sense of adventure, and I wonder if I’ll ever dread the winter months again.

Then, skiing became a memory. Until now, ten years later and my daydream vanishes as my skis glide off the lift onto the slope. I’m on two feet!

Slowly, I begin gliding down the mountain, right and then left,

gently and carefully. My legs burn. My heart pounds. And I smile as wide as I can.

I slide to the bottom of the mountain, and I’m cheered by my little family of four. Enthusiastic Grace says, “See, Mommy? You did it. Let’s go!” And up we go, together on the chair lift. My bright-eyed, eager seven-year-old reminds me to let go of the worry, or the what-ifs. She shows me how to live in the moment and take a chance on having some fun.

And she’s not the only one with this magical spirit. Joseph took his first leap off our diving board this summer without any coaxing or help. He decided to carefully mount the board, walk to the edge, side-smile to me and jump. He was simply ready to go!

I’m turning 40-years-old this fall, and the number is boggling my mind. How did this happen? Am I supposed to feel old?

No way. I’ve got a pocket full of courage from Grace and Joe, and I’m not afraid to use it. We’re going to ski, play tennis, jump off the diving board into our pool, and run around in the yard with games of tag and soccer. Butternut awaits this winter. I pledge to play like a kid to feel young and see age as just a number.

In fact, I was just summoned. The next round of fun awaits. *“Come on, Mommy, let’s go!”* •



Grace R. Coppez enjoys the view from the top of the Cruiser trail at Butternut in Great Barrington, Mass., during a ski day with her family. (photo credit: Pete Coppez)



What Hooked 'Em in '21

Before I get to what rocked the socks off our social media followers this past year, I want to take a moment to thank our NFSA family for the support and contributions our magazine has received.

We receive great feature articles from our members for every issue, this year more than ever before. The themes of each issue are available in our media kit on our website. Be sure to check out what's coming up and consider contributing when a theme fits your expertise or interest.

When I first decided to debut a "member takeover" issue in 2018, I held my breath and crossed my fingers, hoping our members would respond and perhaps even enjoy contributing and seeing their name in print, not to mention that I'd get to hand over the Social Scene reins to somebody else for a change! Well, this past member takeover issue was the best yet! Participation has only grown over the years and the quality of the submissions gets better and better. I have gotten so many emails and compliments about the articles in this issue, and those compliments belong to all who took the time to participate. So, a hearty and heartfelt thank you to the wonderful authors that took pen to paper (or fingers to keyboard) and gave us an issue to remember.

To our advertisers: you enable us to deliver the quality and value our readers have come to expect from NFSM. Even though I often need to chase many of you to get your ads in on time, please know how much I appreciate each one of you! I look forward to working together in 2022.



Now, on to what grabbed the attention of our social media followers. I'm proud to report that the clear winner of social media views and reposts are the *Fastestwater Friday Facts* that post each Friday to our Twitter, Facebook, LinkedIn and Instagram accounts. From the day Henry Parmalee patented his fire sprinkler, to a tribute to those we lost on 911, and everything in between, these posts each have an average of 2,000 views across all channels. On Twitter, they are retweeted an average of 30 times. On Facebook, an average of 20, on Instagram, 25 take the time to like and/or repost, and on LinkedIn, an average of 22 shares spread the *#fastestwater* word to thousands of viewers.

Our *#fastestwater* hashtag has been taken up by numerous accounts, and I smile every time I see it used on social media. Members and non-members both use the hashtag. The more,

the merrier, and I can only imagine the amount of fire sprinkler goodwill that is spreading across the social media airwaves. On a weekly basis, the hashtag reaches an average of 155K accounts and is shared over 300 times.

As popular as all our posts about sprinkler saves are, nothing gets 'em more than posts regarding unreported saves. Seems our followers love to get the "inside story" that the media fails to report. They are eager to share news that cannot be gotten by traditional means. These unreported saves are sent to us by NFSA members. We need your help to keep this trend going! Fire Departments, Building Officials, Suppliers and Manufacturers and Sprinkler Contractors across the country share these posts. It doesn't matter where a save takes place, fire sprinkler followers want to know about them, and they want to help spread the news. We've got a Sprinkler Save thread going in the Fastestwater Community on our website. Please check it out and please join in the conversation by reporting saves in your area. Not only will we spread the good news on social media, we'll also feature it in our **Spotlight on Fire Sprinklers** e-newsletter and in the magazine.

As with everything else, anything that deals with kids and pets, whether they've been harmed by or saved from fire, always garners sharing and views. The recent fire at a kennel in Texas that killed 75 dogs drew outcry from animal lovers and families all over the country. Our posts that reported the tragedy, and later on followed up with information on the City Council considering a new bill that would require fire sprinklers in animal boarding facilities, were shared and commented on at a rate far above posts on other subject matter.

Finally, posts regarding NFSA activities always receive a great response. Whether it's a new commercial we've debuted, an appearance on a local television station, a charity golf event we've attended and contributed to, our followers enjoy seeing what we're up to and how we proactively support our fellow associations, fire departments, and other Partners in Progress. The goodwill generated by NFSA staff and members is truly appreciated and recognized.

And so, I end this writing the way it began, with a thank you. Thanks to those of you that follow us on social media and take the time to repost our daily offerings. Thanks to those who send us sprinkler saves and news that enable us to share it with not only our followers, but with the public, whose knowledge about fire sprinklers has surely been increased due to the invaluable information you supply. As we often say on social media, We Couldn't Do What We Do Without You! •

Wishing you all a joyous and safe holiday season,

Joanne

National Fire Sprinkler Association Launches “Something to Think About” During Fire Prevention Week 2021

The National Fire Sprinkler Association’s second commercial highlighting the importance of fire sprinklers debuted during Fire Prevention Week. The lighthearted but pointed commercial pokes fun at the persistent myth of water damage from sprinklers. How many times have you heard myths about fire sprinklers like “They all go off at once”, “What about all that water?” The truth is, only the fire sprinkler closest to the fire activates and it flows, on average, only 13 gallons per minute! When you contrast that to the 200-250 gallons per minute that the fire department hose will flow, you can better understand the statement that is worth thinking about -- “Everything will dry out, but nothing will unburn.”



NFSA was happy to join with the National Fire Protection Association (NFPA) in celebration of the long-standing tradition of Fire Prevention Week. NFSA had numerous live fire sprinkler demonstrations scheduled throughout the United States during the entire month of October to celebrate the occasion, and applauded NFPA for its continued leadership, vision, and work in the codes and standards arena.

“Today’s fires burn hotter and faster than ever,” explains NFSA President Shane Ray. “We are proud to continue investing in thought-provoking media outreach to help educate and share information with citizens, policy makers, firefighters and the news media. Working together we can create a stronger fire sprinkler industry and a safer world.”

To view the new commercial, visit www.firesprinklersbuylife.com or NFSA’s YouTube Channel.

NFSA appreciates the collaboration and support of its supplier and manufacturer members, who continue to champion the creation of these new and innovative resources designed to educate about the important of fire sprinklers. “To protect lives and property from fire through the widespread acceptance of the fire sprinkler concept,” has never been timelier, as NFSA works every day to realize that mission.



NFSA & Fire Sprinklers Spotlited in Episode of Designing Spaces!

It was fire sprinklers in action in new home construction, as well as the retrofit of former NASA firefighter and past President of the International Association of Fire Chiefs, Chief Bill Killen as NFSA and fire sprinklers were featured in an episode of Designing Spaces.

The segment is a great example of Partners in Progress. Shout out to NFSA Member Morristown Fire Sprinkler for doing the retrofit of Chief Killen’s house. Morristown’s Kenny Rogers was featured in the episode! •





General Air Products Welcomes New Regional Sales Manager

General Air Products is pleased to announce the recent hiring of Jeff Hill to the position of Regional Sales Manager - West. As part of the General Air sales team, Hill will work with distributors and contractors in the Western region of the United States to provide training and support for General Air's full line of dry pipe sprinkler system filling solutions. Additionally, Jeff will work to develop new business relationships within the fire protection industry. Hill brings with him 32 years of experience, in the fire sprinkler industry including equipment, fabrication and supply sales. Visit www.generalairproducts.com.

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CHAPTERS

CHAPTERS IN ACTION

Connecticut Chapter

Connecticut Chapter Back in Action!

NFSA's Connecticut Chapter was excited to finally get back to its first in-person meeting in a year and a half. There were 45 member vendors and guests at the August 10th evening event at Hops on the Hill in South Glastonbury. President John Abbate welcomed everyone as they arrived and saw that members were engaged. Locally brewed libations were provided by Hops on the Hill and food by Modern America Mobile Cuisine. All were excellent.

There was a demonstration of the NFSA Live Fire and Sprinkler Valve Trailer conducted by NFSA's own team of Terin Hopkins and Vince Powers. Everyone agreed it was a successful event and all were happy to meet in-person again.



Mid-Atlantic Chapter

NFSA Hosts Successful Area 2 Seminar; Inducts Five Members into Mid-Atlantic Region Hall of Fame



The National Fire Sprinkler Association's 2021 Area 2 Mid-Atlantic Seminar was a success! Over 100 members attended the conference at the scenic Crystal Springs Resort in Hamburg, New Jersey.

The agenda included presentation from a variety of guest speakers, including Sher Grogg, Common Voices; Russ Fleming, Northeast Fire Suppression Associates; Dale Florio, Princeton Public Affairs Group; NFSA President Shane Ray; Gregory B. Cade of NFPA; Gary Lewis, City of Summit; and Dr. Charles Jennings, John Jay College of Criminal Justice. Attendees learned several things from these presentations, from technical issues to current trends in legislation on a state and federal level. They were also able to spend some quality time with their colleagues and friends. Several attendees were able to partake in all the resort had to offer, including golf, wine tasting, fly fishing, and even a cornhole tournament (congratulations to Shawn Rockwell and Kent Mezaros on their tournament victory!)

Welcoming the Mid-Atlantic Hall of Fame Inductees

On Saturday evening, the NFSA inducted five members into the Mid-Atlantic Hall of Fame. These members were selected based on the years of quality and dedicated service to bettering the fire sprinkler industry in the region. The National Fire Sprinkler Association was honored to induct the following members into their Area 2 Mid-Atlantic Hall of Fame:

- Pat Conklin
- Buck Buchanan
- Robert Gagnon
- Walt Steinel Sr.
- Russ Fleming

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These members have left a profound impression on their colleagues and the industry that will far outlast their decades of service.



Left to right: Robert Gagnon, Dave Oliver, Kent Mezaros, Shane Ray, Walt Steinel Sr., Pat Conklin

Capital Region



The Capital Region Chapter hosted their first in-person meeting in over a year, and it was a big success. Over 30 contractors, manufacturers and designers were at Frisco Tap House for an in-depth discuss on Delegated Design. Big shoutout to Mark Hopkins from Terconsulting for moderating our panel of national experts representing Authorities Having Jurisdiction, Fire Protection Engineers, Design Professionals, and Legal Counsel.

Florida Fire Sprinkler Association

Florida Fire Sprinkler Association at Daytona Beach Shores

FLORIDA FIRE SPRINKLER ASSOCIATION
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Contractor V (underground)	\$125.00	

A ONE OF A KIND CONFERENCE
You can register www.floridafiresprinkler.com
Registration open November 1, 2021

The Florida Fire Sprinkler Association is headed back to Daytona Beach Shores in February. We will be offering 32 CEUs, including mandatory classes for Contractor I and II, as well as CEU requirement for Contractor V. We already have a slate of great speakers lined up, with the full agenda being available on November 1. Contractors, come and hear some wonderful speakers with some great topics from risk assessment to NFPA 241. All 32 hours in one beautiful location. Breakfast and lunch included each day and a vendor showcase on one of the nights. If you need CEUs and don't want to sit through the same old classes, come and experience a whole new agenda with top notch speakers at Daytona Beach Shores.

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NFSA
NATIONAL FIRE SPRINKLER ASSOCIATION
The Voice of the Fire Sprinkler Industry

#fastestwater

Fire Sprinklers Save Lives!

CHAPTERS IN ACTION

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Northern Illinois Fire Sprinkler Advisory Board

Illinois Burn Prevention Association Golf Invitational a Success!

On September 28th, the Northern Illinois Fire Sprinkler Advisory Board was a proud sponsor of the Illinois Burn Prevention Association's 25th Annual Golf Invitational. With 128 golfers in attendance, the event raised \$130,000 for Illinois' burn camp for children, local hospital burn units, and burn survivor advocacy organizations. Common Voices received \$10,000. USA Fire Protection's Chad Huennekens accepted the check on behalf of the organization.



Wisconsin Chapter

Burn Center Golf Invitational



Each year, the NFSA Wisconsin Chapter hosts the annual Burn Center Golf Invitational at the Grand Geneva Resort and Spa in Lake Geneva. 2021 marks the event's 33rd year. The event saw 186 golfers enjoy a sunny day. It is attended and supported mainly by companies within the fire sprinkler industry. While we are still finishing the financial information at the time of this writing, it appears that we will donate over \$95,000 to various charities, including Ascension CSM Burn Unit, Wisconsin Youth Burn Camp, Common Voices and Newspapers in Education – Fire Prevention Week Section. Since its inception, the event has raised over \$2.8 million.

Northwest Region

Fire Marshal Roundtables

The Columbia-Willamette and Puget Sound hosted their annual Fire Marshal Roundtables at their October meetings, with area fire marshals updating chapter members on policies, staffing and other issues affecting our industry. The chapters look forward to a presentation from Engineered Corrosion Solutions at the December meetings. Both Northwest chapters are in the process of planning 2022 meetings; please contact a chapter board member or Regional Manager Suzanne Mayr if you have ideas for speakers. •



■ Viking Integrated Safety Introduces Intelligent Video Flame Detectors

Viking Integrated Safety (VIS) announced a new series of intelligent video flame detectors, the Viking VSF300 and VSF301. These video flame detectors are specifically designed for hazardous industries where fast optical flame detection is critical and nuisance alarms are not an option. The detectors process live video images to intelligently recognize the characteristic properties of flames optically, by means of FM- and SIL 2-certified flame detection algorithms and an onboard digital signal processor (DSP). The VSF300 & VSF301 detectors feature unrivalled fields of view (FOV) and have superior flame sensitivity, making them highly immune to false alarms, even in the presence of sunlight, rain, fog, and hot objects.

The VSF300 detector is designed to detect a 1ft² (0.1m²) hydrocarbon pool fire at up to 197 ft (60m), within a 120° horizontal and 85° vertical FOV, for both indoor and outdoor applications. The VSF300 has a much longer detection range than conventional flame detectors, providing substantial savings in installation costs with fewer detectors for most applications.

The VSF301 can detect a 1ft² (0.1m²) hydrocarbon pool fire at up to 144 ft (44m), with a 90° horizontal and 65° vertical FOV. The VSF301 also features a live color NTSC/PAL video feed for real-time situational awareness. The detector also includes a Micro SD memory card slot for alarm video recording to help in forensic analysis.

In addition to the VSF video flame detectors, VIS also introduced the VSF303 multi-spectrum infrared (IR) flame detector that quickly detects hydrocarbon fires over a long range, including those not detectable in the visible spectrum. It is the only IR flame detector without an external reflector, which can become contaminated by salt, dust, water, snow, or sand causing false alarms. The VSF303 complements the VSF301 and VSF300 video flame detectors and is designed for the same environments.

Viking Integrated Safety features a Global Engineering Support Services Center that assists with a client's design, installation, and maintenance of each fire protection project, from beginning to end. This design support can speed your project to deployment, while ensuring a comprehensive and cost-effective solution.

For more information on Viking Integrated Safety, visit SafetySupplyNet.com or call 800.968.9501.

■ Gast Manufacturing Announces New 120R-200 Series Dry Sprinkler Compressor Models

Gast 2.0 horsepower 120R rocking piston technology is now launched, with U.S. based design and manufacturing. Two options are available with riser mount and 20-gallon stationary tank mount.

A wide range of sprinkler system sizes are covered with these two

models, with a system capacity range of 920 to 4,200 gallons. Gast 120R compressors feature a digital pressure switch and gauge, highly engineered cup seal materials for industry leading compressor life, and industrial grade shock mounts for low vibration. Oil-less operation means lower maintenance and this twin-cylinder design has no separate drive belts like some lubricated compressors.

Visit www.gastmfg.com/products/120R/120R-200 for more information.



■ Potter Announces Signalink Bridge Wireless Supervisory System

Potter Electric Signal Company, LLC announces the release of the Signalink™ Bridge Wireless Supervisory System, which will now allow users the ability to use fully supervised wireless

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communication between dry contact devices.

The Signalink Bridge removes the need to hard wire dry contact devices to each other and operates on a 2.4 GHz frequency. Each Signalink device has a maximum communication range of 800' with a weather and UV resistant polycarbonate enclosure that is NEMA 4 rated for outdoor applications. This makes the Signalink Bridge an ideal retrofit system for use in historical buildings where wiring and conduit isn't a preferred option. Additionally, the system is also compatible with any previously installed fire panel or fire alarm system.

In addition to no longer needing extensive wiring and conduits, the Signalink devices do not require resetting or silencing. A software driven setup tool via a laptop allows users to check signal strength among other features. Post-mounting kits are available as well for further installation options.

Since Signalink devices can connect to any fire panel as another point to monitor, they can be utilized in an unlimited number of applications. An example of a typical application would be monitoring of supervisory switches on PIV or OSY valves in parking lots or pits where conduit is missing or damaged. Another example would be in temporary installations, such as construction sites, where monitoring requirements are continually changing, and devices are being moved around the site.

Visit www.pottersignal.com for more information on Signalink Bridge and all products and services that Potter offers.



The resources include the VR video shot in an actual house fire without and with fire sprinkler activation. The technology will be adapted in 2D video for on-demand use via the Internet. The 360-degree, 3D format will be created in a guided, immersible education version.

This portable side-by-side will allow a viewer wearing a headset to experience the fire as if they were inside the burning house. Guided by the fire service educator, viewers will see it from any angle, hear the fire crackle, see flashover, and watch the flames and smoke spread. Their experience will be dramatically contrasted with the fire sprinkler activation and its control of the fire.

For 25 years, HFSC has been working with the fire service to mitigate home fire loss. HFSC's free resources help fire departments improve and increase their local home fire sprinkler education and advocacy. Live flashover and fire sprinkler side-by-side events have been a successful centerpiece of this collaboration, presenting realistic home fire and sprinkler scenarios to the public to reinforce the speed of fire and the importance of having fire sprinklers, smoke alarms and escape planning.

Seeing is believing, but live burns are not viable for every fire department due to expenses, storage, maintenance and burn regulations. "HFSC's new virtual reality education presents a better side-by-side," said Lorraine Carli, HFSC president and NFPA vice president of Outreach and Advocacy. "This novel educational approach will help fire departments reach key decision makers in their jurisdictions with the facts about today's house fires and the unparalleled protection afforded by installed fire sprinklers."

■ Wayne Automatic Fire Sprinklers, Inc. To Deploy BirdDog Life Safety Inspection & Data Collection System from Asurio, Inc.

Asurio, Inc. (www.asurio.com) announced it has been commissioned to deploy the BirdDog Life Safety Inspection System for Wayne Automatic Fire Sprinklers, Inc. Wayne Automatic Fire Sprinklers, Inc. maintains offices in six locations: Ocoee, Jacksonville, Ft. Myers, Deerfield Beach, and Tampa, Florida, as well as Concord, North Carolina.

The BirdDog Inspection System is powerful, configurable, life safety inspection software that's designed for industries & organizations that need to conduct inspections for fire life safety, government requirements & more. Configurable for national, regional & local fire safety inspection standards, the BirdDog Inspection System automates & streamlines the facility inspection process, and also manages, shares & reports on inspection data & inspection results.

"We choose Asurio's BirdDog Life Safety Inspection System due in large part to their professional staff, industry knowledge and involvement, and ability to help us manage the risk involved with life safety inspections," said Wayne Automatic's Director of Fire Protection Services Scott Holland

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■ Home Fire Sprinkler Coalition Awarded FEMA Grant to Roll Out Next-Generation Virtual Reality Home Fire Education

The Home Fire Sprinkler Coalition (HFSC) has been awarded a 2020 Fire Prevention & Safety (FP&S) grant from the Federal Emergency Management Agency (FEMA). With it, HFSC will pioneer and evaluate use of its innovative virtual reality (VR) home fire sprinkler educational technology, funded by a seed grant from property insurer State Farm.

In the coming year, HFSC will build on the production of its state-of-the-art, 360-degree, 3D and 2D virtual education tools. This next-generation home fire safety education will be introduced to the fire service with best-practices training through various state coalitions. It will also be rolled out nationally with a consumer digital awareness campaign.

■ New Tyco® Rapid Install Sprinklers Bring Simplicity, Flexibility to Warehouse Fire Protection

Johnson Controls is releasing two new Tyco early-suppression, fast-response (ESFR) Rapid Install Sprinklers (RIS) for protection of warehouse and storage facilities. The Model ESFR-22 and Model ESFR-25 pendent sprinklers, and their accompanying custom welded outlet fitting, simplify installation for fire protection contractors by featuring pre-installed rubber gaskets and a thread connection that can be installed by hand with no need for tools, tape or sealant.

The ESFR-22 RIS (22.4 K-factor) and ESFR-25 RIS (25.2 K-factor) both provide warehouse design flexibility by eliminating the use of in-rack sprinklers when protecting high-piled storage. The ESFR-22 RIS and ESFR-25 RIS are cULus Listed and FM Approved for specific applications with a maximum storage height of 43-feet (13,1 m) and a maximum ceiling height of 48-feet (14,6 m) without the requirement for in-rack sprinklers. Both sprinklers permit the use of a maximum deflector-to-ceiling distance of 18-inches (460 mm), compared to 14-inches (356 mm) distance for ESFR sprinklers with K-factors of 14.0 and 16.8.

Tyco ESFR Rapid Install Sprinklers are ideal for ceiling-only sprinkler protection of warehouses and storage facilities containing cartoned and unexpanded plastics, exposed and expanded plastics (in accordance with NFPA 13 and FM Global standards), and some storage arrangements of rubber tires, roll paper, flammable liquids, aerosols, and automotive components.

To learn more about protecting your warehouse or storage operation with Tyco ESFR Rapid Install Sprinklers, go to www.tycoffpp.com/esfr-ris.



Paul Sincaglia. “And with fires growing faster, hotter, and more destructive than at any time in history, the IFSA continues to seek global partners who recognize the value and reliability that automatic water-based systems provide in order to create a stronger fire protection industry and a safer world.”

Serving as the primary trade association for automatic water-based fire suppression industry around the world, the IFSA has awarded over US\$ 3M in grant funding to a variety of organizations over the last 20 years. That funding was used to support a range of research, education, training, and regulatory advocacy projects in countries around the world.

A key focus for IFSA’s Fiscal Year 2022-2023 grant award cycle will be in one or more of the following areas:

- Developing or growing organizations with similar objectives to the IFSA
- Educating regulators, public officials, as well as the public regarding the advantages and demonstrated success of automatic water-based fire suppression systems
- Enhancing fire safety regulations and building & fire codes
- Adopting recognized product standards to maintain industry integrity, and
- Improving local industry performance through enforcement of recognized installation, and maintenance standards

Applications and instructions can be found on the IFSA website. Please visit <https://www.firesprinkler.global/grants> to download an application Grant Applications for the Fiscal Year 2022-2023 funding cycle are due December 1, 2021.

■ International Fire Suppression Alliance, Ltd. Opens the FY2022-2023 Grant Application Cycle.

The International Fire Suppression Alliance, Ltd. (IFSA) is pleased to announce that grant applications are now being accepted for organizations seeking funding in IFSA’s Fiscal Year 2022-2023. The application process is open to any fire safety related group, association, or agency outside of North America seeking to promote, expand, and improve the use of automatic water-based fire suppression systems as a means of reducing fire related losses.

“Fires in buildings don’t care what country you are in or what language you speak. But we know fires continue to kill and injure far too many while also doing irreparable damage to homes, businesses, and our environment.” says Managing Director



REGIONAL NEWS

*From Maine to California,
and every place in between,
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Helping our members is Job #1.*

NEW ENGLAND **Connecticut**

NFSA's Live Fire Sprinkler Demonstration Training Unit Trailer was at the Litchfield County Regional Fire School in Torrington, Connecticut presenting and demonstrating all things fire sprinkler and standpipe. We were joined by a fantastic group of fire professional at an amazing fire school. Thanks to Connecticut State Fire Marshal Bill Abbott for the invitation and leadership. A shoutout John Abbate (CT NFSA Chapter President) and Paul Zbikowski (NFSA) for coordinating the events, and to the entire Academy staff for their hospitality.



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CAPITAL REGION
Maryland

NFSA was at the beach for the Maryland Association of Counties Conference (MACo), held at the Roland E. Powell Convention Center in Ocean City, Maryland. It was great seeing all of the County leadership and talking fire sprinklers. It was an amazing event, and there's nothing like being at the beach when a state record 1,135 lb. Blue Marlin is caught. Thanks to Ocean City Fire Department for their hospitality and our NFSA team for all the hard work.



Photo by Craig Weedon, Maryland Dept. of Natural Resources

MINNESOTA

100 Fire Marshals Witness Side-by-Side Demo

On September 29th, 100 Fire Marshals from across the state of Minnesota witnessed our side-by-side burn demo at the Fire Marshals Association of Minnesota annual conference.

NFSA also had an information booth on the first day of the conference where we signed up a new member and interviewed NFSA member Dyne Fire Protection. The second day featured NFSA's Tim Butler narrating the well-attended burn.

SOUTH CENTRAL
Texas

UPCOMING EVENTS

TX Fire Marshals Conference

November 2-5, 2021

Embassy Suites San Marcos, Texas

NFSA is hosting "Burn Me Once; Don't Burn Me Again" Retrofit Panel Session with Texas Fire Survivors and Fire Marshals.

Arkansas Fire Marshals Conference

November 9-11, 2021

Mount Magazine Lodge, Paris Arkansas

NFSA is hosting "Best Practices for NFPA 13D" with NFSA's Roland Asp

NFPA 14 Updates – Virtual

November 10, 2021

Register <https://community.nfsa.org/events/calendar>

It's All About Underground – Fire Lines

NFSA Texas December Chapter Meeting

December 8, 2021

Grapevine Public Safety Building, Grapevine Texas

What underground fire lines are you installing or requiring? This presentation will discuss the recent changes in the AWWA C-900 standard as well as appropriate building riser entrance locations. Presented by: Pete Schwab, Wayne Automatic Fire Sprinklers
More information: <https://community.nfsa.org/learning/home>

NFSA Area 8 - The Bad, Good, Better and Best News That Has Already Happened!

Louisiana Emergency Update In Response to Hurricane Ida September 3, 2021

In order to avoid unnecessary dispatching of OSFM (Office of the Louisiana State Fire Marshal) or local fire inspection partners, many of whom are currently assisting in storm-related recovery and inspections, to locations where systems have been repaired after a notification was submitted to the OSFM, firms shall be required to notify the OSFM by sending an email to sfm_lspplicensing@la.gov with the IMS generated reference number (e.g., 21-LC-1-12345) and address of the location of the system in the subject line of the email. You should also note in the email that the system has been repaired and has been returned to a fully operational condition.

Additionally, and most importantly, if impacted structures are occupied prior to the repairs being completed, firms must advise the system owner or responsible party that a temporary fire watch will be required either in cooperation with a local fire department or by instituting a fire watch themselves until such time as repairs are completed and systems are operating properly. Instructions regarding fire watch procedures can be found at http://sfm.dps.louisiana.gov/fi-fd_firewatch.htm and should be provided to the owner or responsible party.

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REGIONAL NEWS

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OFSA's Annual OFSA Boondoggle

Oklahoma Fire Sprinkler Contractors (OFSA) hosted its Annual OFSA Boondoggle in Shawnee Oklahoma; August 30-September 1, 2021. Over 80 folks attended including NFPA 25 Expert Vince Powers, NFSAs ITM Specialist and Michael Phillips, NFSAs Special Projects Coordinator.



Raymond Lawson, Western States Oklahoma Regional Manager Greets OFSA Boondoggle Attendees



Michael Phillip, NFSAs Special Projects Coordinator takes a swing at the NFSAs Hole



Trevor Gillispie, AL Fire Sprinkler, Oklahoma City at the NFSAs Hole



Vince Powers, NFSAs ITM Specialist teaches what to do "When NFPA 25 Just Isn't Enough"

NORTHWEST

A Busy Last Half of '21 for the Northwest Region!

NFSA and Bozeman Fire Department presented residential fire sprinkler live fire demonstration at the **Montana Fire Service Conference** in October.

The **University of Alaska Fairbanks Fire Department** hosted a day-long NFSAs class in September. Taught by NFSAs Vince Powers, the well-attended class concentrated on standpipes, with in-person look at some of the university's fire protection systems.

The **Fire Sprinkler Advisory Board of Puget Sound and U.A. Local 699** teamed up for their annual Fire Sprinkler Shootout. The Sprinklerman mascot greeted golfers as they enjoyed a breakfast sponsored by Smith Fire Systems. Victaulic sponsored a delicious post-golf barbecue. Thank you to all the golfers and hole sponsors who made the day a great success! Plans are already underway for the 2022 event.

NFSA was proud to participate in the **Idaho Fire Protection Forum's 22nd annual Hack & Slice Golf Tournament**.

NFSA participated in the **Washington State Fire Marshal Association Prevention Institute**, with a presentation by Jeff Hugo, NFSAs Vice President of Codes, Standards and Public Fire Protection. Regional Manager Suzanne Mayr was on hand with fire sprinkler resources.

Washington state coalition held its quarterly "best practice forum" in September, an on-line event that facilitates discussion on residential sprinkler issues facing contractors, builders and AHJs. The next forum is set for Dec. 16th.

With the 2022 legislative sessions already in the bill pre-filing process, NFSAs Northwest Manager **Suzanne Mayr** is currently monitoring activities in Olympia, Salem, Juneau and Boise for laws and rules affecting the sprinkler industry.

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FLORIDA
Tagging for Success

Tagging for Success is a program for Water-based Inspectors to earn CEUs in a fast-paced, fun environment. We have two locations in 2022. Water-based Inspectors are required by the State of Florida to have 16 CEUs by June 30, 2022. Who said earning CEUs can't be fun? Tagging for Success is an interactive day for Water-based Inspectors, as well as Contractors I & II. The day will begin with visits to the Reliable Sprinkler hands-on learning trailer, NFSA valve trailer, fire pump inspection, side-by-side fire sprinkler demo and interactive learning at workstations described as the "five points of learning".

1. Questions from State Fire Marshals will be a game event where inspectors will be required to answer laws pertaining to water-based inspectors.
2. Name that Standard, with questions directly out of NFPA 25.
3. Identify sprinkler types, a display of several sprinklers. Participants must identify which sprinkler is which.
4. Tag That System, all inspectors will have red, yellow, and green tags and will see pictures of actual building systems. The inspector must use the appropriate tag and document why and what reference was used to get to that result.
5. Contract Language – what is and what is not acceptable. The Inspector must identify issues with reporting issues within an NFPA 25 Inspection.

Day two will be in classroom classes on Fire Pumps, Backflows, Liability and Relationships with Alarms and Sprinklers.

MARK YOUR CALENDARS!

- Island Beach Resort, Ft Walton Beach, FL**
- January 26-27 Water-based Inspectors**
- January 28 - Bonus Day for Contractor I & II**
- Daytona Beach Shores Resort, Daytona Beach Shores, FL**
- February 7-8 Water-based Inspectors**
- February 7-10 - 32 Hours Contractor I & II**

Open for registration November 1, 2021!

Approved for Water-based Inspectors, Contractors I & II and AHJs. •



2022 FFSA is offering "Tagging for Success"! This is a two day event that includes two full days of training for Waterbased Inspectors. This event takes participants out of the classroom and into an interactive learning environment including:

1. Hands on training in the Reliable Sprinkler learning trailer, NFSA Valve Trailer and local training trailers
2. The State Fire Marshal's game show testing your knowledge of state industry requirements
3. The game "Name That Standard" testing your knowledge of NFPA standards with chances to win prizes
4. The Fire Sprinkler Challenge testing your knowledge of the different types of fire sprinklers
5. Tag that System giving participants the opportunity to put their knowledge to use identifying which systems need to be tagged and why!
6. Day 2 will be filled with classes by industry experts that will benefit all waterbased inspectors

This event includes two days of interactive learning, games and prizes. Get all 16 CEUs required for renewal with hands on training and winning prizes.



Register online at
www.floridafiresprinkler.com



LETTERS TO THE EDITOR

TO: STEVE COOK (CANNISTRARO), ALAN MOUNT (JCI),
PAUL ZBIKOWSKI (NFSA) AND ALEC CAMBIO (LI PIPE)

Dear Steve, Alan, Paul, Alec and all the wonderful NFSA golf tournament volunteers,

On behalf of the Boston Shriners Hospital, thank you all for a fantastic day of good spirit, fundraising and golf. We truly enjoyed the day with you all and thank you for being the light in lives of the children we care for. The partnership with NFSA – Boston Chapter is one we cherish and appreciate. You keep our communities safe from fire devastation and we care for the little ones who are injured in a fire. Our missions could not align more! Thank you!!!!

I have attached some photos from the Tournament. Our Board members had so much fun playing golf on such a beautiful course and helping to support the NFSA's efforts in support of the Boston Shriners Hospital.

Looking forward to next year, but in the meantime feel free to reach out should you want us to visit at one of your Chapter meetings or set up time for your group to come to Boston for a COVID safe check presentation.

Hope you are able to get the much-deserved R&R this weekend.

Best

Shiva

Shiva Damghany
Director of Development - Boston
Shriners Hospitals for Children — Boston

FROM: FORMER NASA FIREFIGHTER AND PAST PRESIDENT OF THE
INTERNATIONAL ASSOCIATION OF FIRE CHIEFS, CHIEF BILL KILLEN

As some of you know, we had a 13D residential sprinkler system installed in our home in August which was coordinated by and with the National Fire Sprinkler Association (NFSA). The process was filmed by the Designing Spaces television team and reviewed and edited by NFSA leadership. The program is titled Fire Protection, and will be broadcast on the Lifetime channel. Designing Spaces: Wednesday, October 6, 2021 and Wednesday, October 13, 2021 on Lifetime at 7:30 AM EST.

Carole and I sincerely appreciate the assistance and support of Chief Shane Ray, NFSA President, Vickie Pritchett, NFSA Executive Officer, and NFSA Area 3 Regional Manager Brian Biggs, for their role in this project. We are honored to be a part of NFSA's mission "*To protect lives and property from fire through the wide-spread acceptance of the fire sprinkler concept.*" It was a great experience working with the Morristown Automatic Sprinkler Company Operations Manager Kenny Rogers and Sprinkler Mechanics Ben Hogan and Doug Broderick. We were impressed with the care these specialists embraced during the installation process.

We encourage you to view the program and consider the value of retrofitting your home with a 13D residential sprinkler system.

Bill & Carole Killen



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 sent as attachments to emails or through a file transfer site. We cannot use images embedded within a document. 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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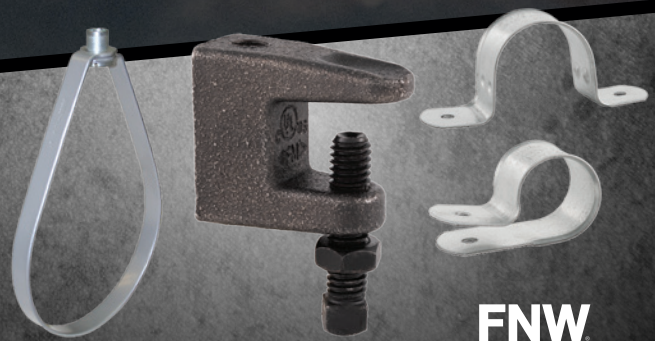




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