

# National Fire Sprinkler Magazine

March-April 2024

No. 244



The Flagship Publication of The National Fire Sprinkler Association

**PREVIEW**

**2024**

Annual **SEMINAR**  
Business & Leadership  
**CONFERENCE**

MAUI



## **LITHIUM-ION BATTERIES & EV CHARGING ISSUE**

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# IT ~~CANNOT~~ BE DONE

Protection of Lithium-ion cell formation areas



Li-ion test setup

Thermal runaway

Suppression

Extinguishment

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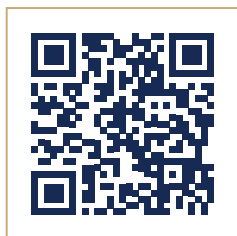
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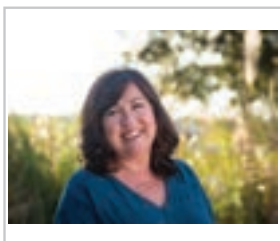
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## Electric Vehicles (EV) and Fire Sprinkler Systems (FSS)

First, isn't it funny how quickly social media and famous people can rearrange how we communicate with one another? Not only do I talk funny, if any of you have noticed, but I have for years had to discipline myself in how I talk to different audiences, because it's easy for us in the fire protection world to speak our own language.

I spelled EV out in my title because I know a lot of people that read my article that aren't in our industry, to quantify, maybe five (my mom and daughter on occasion and maybe very close personal friends). I hope you are asking the question, Shane, how do people outside our industry read your article, it's members only? I reply "family." I also used the Shane Ray abbreviation for fire sprinkler systems, because if anyone ever reads any of my journals or any of my handwritten articles, that's what it is. I'm not popular enough to create our own word.



*“And when we are challenged?  
Our industry has over 100 years of  
answering the challenge! We have 120  
years of being over 96% effective and  
we still are today. Fire sprinklers that  
are properly designed, installed, and  
maintained by qualified contractors  
with qualified fitters, as well as within  
buildings that are used for what they  
were built for, plus in communities that  
have proper permitting, plans review,  
inspections, enforcement, and a well-  
trained fire department, are closer to  
99% effective in any occupancy type”*

For our industry, it's not just EV that are challenging our FSS, it's the modern contents, the volume of these unregulated materials in people's homes and buildings that have never been regulated, and you also can't regulate what you don't test in the environment it's going to be used.

And when we are challenged? Our industry has over 100 years of answering the challenge! We have 120 years of being over 96% effective and we still are today. Fire sprinklers that are properly designed, installed, and maintained by qualified contractors with qualified fitters, as well as within buildings that are used for what they were built for, plus in communities that have proper permitting, plans review, inspections, enforcement, and a well-trained fire department, are closer to 99% effective in any occupancy type.

We face more challenges today than in my all my years in fire protection. These challenges aren't because of our industry. I am speaking of public policy makers who are supporting profit and personal preferences out of ignorance. The Republican Governor of Virginia just issued an order in January to reduce all government regulations by 25%, including the building and fire codes. When you have a minimum code already, what gives? We have a Democratic Governor who won't appoint a fire marshal and won't allow the fire code to be adopted within the state. There are over 5,000 bills introduced in this country this year that impact our industry, and yes, besides the ones we are promoting, they are all typically against us.

The public policy push for EV and the car manufacturers rush to the money that incentivizes it, is putting us all at risk. I have been on the phone with elected officials and fire officials nearly every day in 2024 about EV

in parking garages, EV in basements, EV in townhouse garages, ordinances to prohibit EV charging within 50 ft. of structures, and on and on.

Why is this bad for our industry? Because somewhere in the testimony of why the fire and building official or elected officials would want to do this, someone will say the fire sprinklers won't extinguish it. Let's not forget that our industry's product has allowed the builders, developers, owners, etc. to build to new heights and create new configurations. We have done this without increasing severe risk in the community.

*continued on page 6*

## From the President's Desk

Shane Ray

*continued from page 5*

We are now in the middle of a battle that I am not sure is winnable and our reputation is hard to maintain. As we battle for high-rise retrofit all over the country. We have won a step in Minnesota thanks to our amazing team, we have made progress in Philadelphia, Hawaii, Pittsburgh, Florida, and on and on. Now we have a battle waging in Maryland over laws and regulations in regard to high-rises, and our team has done an amazing job.

I hope you have stuck with me this long as my preacher says on Sunday. Why did I go to high-rise in an EV article? I could have talked about the Energy Code battle and its impact on the fire sprinkler industry. It's all about our opponents and proponents and ours changes from issue to issue. Despite our best efforts to educate and advocate for this great industry, the task is monumental and almost everyone else that comes to the "debate", ok it's a "fight", outguns us with money, which means they have more people to throw at the issue.

What none of them have is a team like ours. Yes, I am supposed to be the #1 cheerleader, but I'm serious and those of you that know me, know, I don't say it if I don't mean it and that I don't lack the passion for what I do. I am so thankful for our team, and I am so, so thankful for all the members that support our passion.

EV, ESS, HPS, MDU ADU, blah, blah, blah. Bring it on, this industry can handle it and get up to 99% effective.

Humbly Serving,



Shane Ray, *President*

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# EVs are Here to Stay... at Least We Have Maui!

Aloha to the Fire Sprinkler Family! The 2024 seminar in Maui is quickly approaching on our calendars, get ready! It has been a long time since NFSA was in Hawaii. I cannot wait for that first full week of May. My excitement is, of course, not because of the warm 85-degree weather, the sandy beaches, or the grilled macadamia nut crusted mahi at dinner every night I am there! No, not at all! The swimming pools next to palm trees swaying in the trade winds are great. The golf courses are also incredible, and I never turn down a Mai Tai at sunset. But those are not the real reasons for my enthusiasm to travel across the Pacific, of course not.



My eagerness is like yours, all about the sprinkler content. Looking forward to the early morning, outstanding presentations in the sessions, and the tremendous amount of business collaboration among suppliers and peers. If this education happens while we are wearing shorts and a Tommy Bahama shirt, so be it. It is all about the content, that is my story, and I am going to stick with it as long as I can. I do know all our employees who are staying at home holding down the forts understand and appreciate that it is just a business trip. Attendance allows participants a great opportunity to learn how to improve their operations on the mainland. Education and sessions, that is the reason I go. Come to think of it, maybe we could just do the whole seminar virtually instead of flying over a large ocean?



Never mind, forget that dumb idea, everyone needs a Luau and some fresh pineapple occasionally. *Mahalo!*

The technical discussions in this issue of NFSM surround Lithium-Ion Batteries and EV charging, so read on. Can you imagine this subject making the issue of **SQ** (former moniker of our association's magazine) even ten years ago? Who would have believed or understood the transformation the world is making before our eyes with elaborate computers on wheels and new battery capabilities that can power future cities? Worldwide there were 14 million electric cars sold in 2023 alone, and the figures should keep expanding exponentially into the future. At the same time, we are told that in extreme cold weather chargers did not work, as witnessed in Chicago this January. Owners were left stranded. Skeptics have proclaimed the weight of these new vehicles with their heavy batteries will wear out our already worn highways and bridges. The power grid in this country can barely keep up with housing and industrial needs. Pundits say there is no way everyone can add EVs.

Get over it, EVs are here to stay and it's our opportunity to minimize and control fires where they are stored. Our industry has always had a standard mantra: you build it, you occupy it, you stack it, you store it, you assemble it, we will figure out how to protect it from the ravages of fire. The lithium battery or whatever the next generation of batteries are made of, will continue to be a challenge. Today, progress is being made and will continue to be made until we fully understand and resolve the threat. If all else fails we can just ask AI I guess, while the rest of us are at a cocktail party in Maui.

I hope to see many of you in the Islands, it is going to be a great event, do not miss it.

*Jim*

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# 10 Keys to Guaranteed Success in Negotiations

by Paul Wilson

**N**egotiating is a skill that, like warfare tactics, must be honed. It is important to be mentally prepared to win. Do the groundwork well before you reach the negotiating table and decide on the "path" you are going to take. Positivity will help, along with a sense of confidence and self-esteem. Set aside any doubts you may have and stride forward prepared to win at all costs.

The five cornerstones of successful negotiation skills are placing emphasis on common points; presenting clear arguments; being innovative and open to several options; focusing on the problem being dealt with; looking for a clear solution. The key is to be clear about your preferred outcome. However, in the back of your mind you must be willing to compromise to some extent.

A good negotiator is an excellent communicator and understands how people think, feel, and function. You must be able to befriend the people seated on the other side of the negotiating table. You must know when to push hard, when to accept a compromise, and when to walk away. A negotiator is in many ways an artist, he needs a great amount of creativity to steer the negotiations to a successful completion. A negotiator must keep in mind the three Fs: fair, fast, and firm.

*According to the experts, there are tactics to be used for negotiating:*

1. **Be focused on the problem or issue.** Logical arguments are the key to smooth negotiations.
2. It is important to **be firm yet polite** when making a stand or presenting a point.
3. **Clearly emphasize the advantages and disadvantages.**
4. **Be patient** and let the process of negotiation take its course.
5. **Put ego aside and concentrate on the matter at hand.** It is finding an amiable solution that's important not self-worth or position.
6. **Never threaten or manipulate** the opposite party-it is completely unethical and unfair.
7. **Aim for solutions that are interest-based** and not what individual desires or aims are. It is best to consider any situation as a whole rather than from a personal viewpoint.
8. **Avoid psychological traps** and have the magnanimity to admit when you are wrong. Be open-minded.

9. **Don't accept weak solutions and try and negotiate a plausible settlement.** Temporary measures are not what you need. A permanent solution must be sought.

10. **Value time, schedules, and deadlines.** A good negotiator will not beat around the bush or adopt delay tactics or waste time talking about mundane matters. It is professional to immediately get down to the business at hand.

Did you realize that people are born negotiators? From the first breath a baby takes it makes all around him dance to his tunes. Most of us consciously or unconsciously do what we must do to get our own way in life. And, if we look closely, it is just mastering the art of negotiation. •

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# Li-ion Batteries: One Bird Multiple Stones

by Jeff Dunkel, P.E.



As we have stated many times, Li-ion batteries are ubiquitous, and their proliferation in our daily lives is only growing. Li-ion battery hazards are not only unique in the way they fail and their difficulty to mitigate, but they are also unique in the fact that the hazard or risk changes depending on the manner they are used, stored, or disposed. As with any industry when a new challenge arises, ideally the solution would be consistent in all situations, unfortunately this is not the case with Li-ion batteries. Though battery cells may have similar construction and to a lesser degree a similar chemistry, how these batteries are applied affects the hazard. The purpose of this article is not to solve the battery problem, rather to highlight the variables, and help find the right path to safely using this technology.

## Li-ion Battery Energy Storage (LIBES) Systems

Battery storage is often assumed to be or have the same hazard as battery energy storage, this is not the case. Energy storage is the storage of energy, most often in the form of electricity, though other types of energy can be stored such as mechanical energy or thermal energy. Of course, in the case of energy storage systems using batteries the energy being stored is electricity. The challenge of battery energy storage is the fact it does not behave, nor can it be classified as other common hazards such as flammable gases, or electrical current.

We have discussed the mechanisms of Li-ion battery hazards such as thermal runaway to great extent, all batteries have the potential for thermal runaway, however that hazard is increased with Li-ion batteries. One factor that makes Li-ion Battery Energy Storage (LIBES) systems significantly more hazardous is the large number of cells in proximity to each other. Thermal runaway in a single battery cell lasts seconds, however an event in a large LIBES system can and have lasted weeks. Without proper cooling or separation, a single cell entering thermal runaway will result in the adjacent cells following. Thermal or physical damage to a cell may not result in immediate thermal runaway, it may be delayed hours or even days, this is what causes the extended events.

As we know floor space is money, with that in mind it is desirable to store as many batteries as possible within the smallest area



possible to maximize energy storage in a small space, this is called energy density. While high energy density creates a larger hazard the fact that the batteries in a LIBES system are continuously being charged and discharged increases the risk. Charging and discharging causes heat increasing the likelihood of overheating the batteries and degrades the batteries overtime. Both factors can lead to a compromise of the battery cell internal separator which will cause thermal runaway and tipping the first domino. Add in the fact that these battery cells are often charged to 100% capacity potentially makes LIBES systems one of the most considerable battery hazards in the industry today.

## Battery Storage

Battery Storage is just as it sounds, the storage of batteries. Whether it be palletized, cartoned, rack or shelf storage all battery storage has one thing in common, they are not in active use. New batteries in storage or transport for commercial or consumer use are not typically fully charged. It is common for batteries to leave the manufacturer at a 30% to 60% state of charge. The lower the state of charge reduces the vigor of thermal runaway, and the fact these batteries are not actively being charged or discharged reduces the chances of thermal runaway happening in the first place.

Li-on batteries have been used in consumer electronics for decades, yet this problem is just now coming to light. As with any hazard in an ideal world we would have prescriptive design criteria, however if you are looking in NFPA 13 you will not find it. NFPA 13, 2022 edition, Table A.5.6 provides a list of commodities not

*continued on page 12*

continued from page 11

addressed by NFPA 13, which includes Li-ion Batteries. Currently the only available protection criteria for Li-ion battery storage is provided by FM Global in Data Sheet 8-1, this criteria is for a very limited application and was addressed in detail in the January edition of NFSA's *Tech Tuesday* e-newsletter.

### Batteries in the Waste Stream

When there is a trend in fires in the United States it is most often identified by the fire service, however in July of 2021 the EPA raised the red flag reporting an increased number of fires in waste management facilities. With the ever-increasing number of personal devices powered by Li-ion batteries it is only natural that



these devices age, and eventually need replacement. To properly dispose of batteries, one must deposit these devices or the batteries to a proper collection point, which can often be found at many retail stores. Due to laziness or ignorance these devices along with their batteries often get tossed in with the everyday household waste and will continue through the common waste stream.

The EPA report documented 245 fires between 2013 and 2020 in 65 different waste facilities, meaning some facilities experienced multiple fires. The report stressed that these numbers were low considering they only documented fires that were publicly reported and likely not all fires caused by Li-ion batteries were attributed correctly. Mechanical Damage to a charged battery will result in thermal run-away. Introduce that battery into the waste stream, which is likely to pass through heavy equipment and compactors, failure is almost guaranteed. The difference in this case is that the batteries are an ignition source, unless there are a considerable number of cells the thermal run-away event will not last long however it will ignite the abundant fuel in the waste pile, after which it becomes more like a conventional fire.

### Electric Vehicles (EV)

One of the fastest growing applications for Lithium-Ion Batteries is electric vehicles. In the United States electric vehicles and hybrids

make up 16% of light duty vehicle sales in 2023. Worldwide electric vehicles sales in 2022 exceeded ten million, and the share of electric cars in total sales has more than tripled in three years, from approximately 4% in 2020 to 14% in 2022. Like the challenges the fire sprinkler industry is having in the built environment, responding fire departments are also looking for new means and methods to properly mitigate this hazard.

It is important to note that while EV fires act very differently than Internal Combustion Engine (ICE) vehicles, and do create a unique challenge fire, EV's have a lower risk over all for fire. According to one analysis of U.S. government data, EV fires appear to occur less frequently than ICE vehicles, with 25.1 fires for every 100,000 vehicles sold compared to 1,529 fires for ICE vehicles, and the majority of these fires happen on the road.

Even with the reduced likelihood of an EV fire the unique hazard they produce was enough for multiple modifications in codes in standards. The 2022 edition of NFPA 13 has increased the recommended occupancy classification for parking garages from Ordinary Hazard Group 1 to Ordinary Hazard Group 2. This increase in design criteria was in response to both the more difficult fires introduced by EV's but also the fact that modern vehicles contain more plastic than vehicles when the criteria was initially developed. The 2023 edition of NFPA 88A will also require all parking garages to have sprinklers, prior to this edition open parking garages did not require sprinklers.

### Micro Mobility Devices

The least discussed but possibly most life-threatening use of Li-ion batteries is micro mobility devices, to include eBikes, eShooters, eMotorcycles, Hoverboards and other small mobility devices. If the concern of thermal run-away was not bad enough, through in low cost, poorly maintained, and misused battery equipment often kept in homes that are not protected by an automatic fire sprinkler system, this all creates a larger issue. Few cities in the United States



have seen more fires involving these devices than New York City. On October 12th, 2023, the Fire Department for the City of New York (FDNY) hosted a symposium titled, *A Conversation with the Insurance Industry About Lithium-Ion Batteries*. The focus of this symposium was micro mobility devices.

New York City has seen many issues arise with small publicly

continued from page 12

available and privately owned scooters. One major issue is charging, some eScooter rental companies crowd source their charging, anyone with an app and access to an outlet can make money charging rental scooters. Like energy storage systems, floor space is money, so it is not uncommon for these scooters to be packed into tight spaces including egress paths, charging near each other and often improperly.

In New York City on Tuesday June 20th, 2023, four people were killed and two others critically injured in a residence when a fire broke out in a e-bike repair shop on the first floor of a six-story building. In August of 2023, the owners of the shop were found guilty on charges related to charging of batteries and the number of batteries in the store. The fact that these devices will be inside residential occupancies, including single family homes, will most likely increase the need for sprinkler protection in these spaces.

### Typing it all together

Li-ion Battery fires have created a challenge the fire industry has not seen before, and in a perfect world there would be a single answer, however the ever-evolving ways Li-ion batteries are used each create a unique hazard. In any case the primary goal would be to prevent thermal runaway from happening all together. While thermal runaway will always be an issue there are steps to be taken that can reduce the likelihood of it happening in the first place. Effective battery management systems are now able to monitor data in batteries and either prevent overcharging or provide some sort of early warning. Manufacturers are now incorporating protection measures in the batteries themselves including shielding for individual battery cells and other proprietary technologies that help to reduce the proliferation of thermal runaway within

the battery modules. Specialized gas detection systems are now available with the goal of detecting the insipient stages of thermal runaway and taking action to prevent progression. With all these preventative measures, suppression will still be needed, and as of today the only prescriptive suppression technology provided in the model codes and standards is a properly designed fire sprinkler system. Other types of suppression systems are being used, however only when tested for a specific application. In a thermal runaway event cooling the adjacent cells is key, getting water to those cells fast is paramount. •

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# Virtual Reality Reveals the Speed of Fire and the Power of Fire Sprinklers

Exposure to home fires puts responders at risk from fire, collapse and health hazards. Each new home built without home fire sprinklers makes the community less safe for all.

With HFSC's new virtual reality video you can help decision makers, stakeholders and others in your community understand what you know all too well: today's home fires are fast and deadly.

With user-controlled 360-degree full-room views, they'll experience actual house fires in virtual reality, feeling as if they are in the rooms. They'll see flashover in the unsprinklered room in

real time and watch a sprinkler automatically control the blaze in another.

This new resource lets you share your knowledge with convincing evidence of the need to protect new housing stock with sprinklers. It can be watched with 3D glasses/headset for an immersive experience or in 2D on HFSC's website.

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

Visit [HomeFireSprinkler.org/VR](https://HomeFireSprinkler.org/VR).



Scan this QR code with your smartphone to learn more.





# Replacing Aged Sprinklers in Existing Buildings

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



Modern sprinkler systems have evolved significantly in the past 120+ years. If nothing else, any casual user of NFPA 13 (or any other code or standard) has noticed these standards do not get smaller with each new edition. Codes and standards evolve to address new hazards with modern technologies. For comparison, Table 1 highlights the obvious to veteran users, i.e., the book got bigger to accommodate the growth in technology and protection. Today, in NFPA 13, fire sprinklers have more special sprinklers, operating temperature categories, more deflector styles, larger and smaller K-factors, increased water distribution, and different operating elements, such as fast, (quick and residential) response sprinklers compared to earlier editions.

**Table 1 – Size of NFPA 13**

Edition	# and size of pages	Area of paper in square feet
1896 NFPA 13	30 – 3x5 in.	4
1974 NFPA 13	165 – 5x7 in.	40
2022 NFPA 13	562 – 8.5 x 11 in.	360

Fire sprinklers today have progressed and are designed to meet modern fire loading and represent significant improvements to sprinklers installed years ago. Furthermore, today’s sprinklers have the manufacturers installation bulletins (cut sheets) available for installation and special rules. This is missing for many older sprinklers. These manufacturer installation rules are easily found when the SIN (sprinkler identification number, required on all new sprinklers since Dec. 31, 2000) is entered into an internet search engine or searched in a manufacturer’s website. Table 2 highlights the advancement of sprinkler technology and establishes some of the key milestones for sprinklers and design over the past 100 years. The history of sprinklers as shown in Table 2 (page 16), is a very high level of key sprinkler changes that happened in each decade.

The current edition (2023) of NFPA 25, the Standard for Inspection, Testing, and Maintenance of Water-based Fire Protection Systems (ITM) requires sprinklers manufactured after 1920 and in-service for 75 or more years the option to either replace

all sprinklers or send a representative sample for testing (1% or a minimum of four of each type) and then retest every five years. Table 3 (page 17) highlights the testing frequencies in NFPA 25 and provides a schedule of follow up testing or inspection. Currently, NFPA 25 does have 1920 as the maximum age before replacement, allowing 104-year-old sprinklers (1920 to 2024) in buildings, however this may change in the current development of the 2026 edition of NFPA 25 and in the development of the 2027 International Fire Code (IFC) edition. The technical committees of both documents have proposals to reduce the age of installed sprinklers. For example, the IFC code committee will look at a proposal to limit the fire sprinkler installation date to 80 years. If successful, the 2027 IFC, in the year 2027 would affect sprinklers in 1947 and earlier. Each passing year, another year of installed sprinklers are replaced and eventually the sprinklers in Table 2 are addressed with new sprinklers. More to come on the development of these proposals.

Regarding NFPA 25 ITM frequencies, a contemporary example is standard response sprinklers installed in dwelling units. Standard response sprinklers have not been allowed in light hazard occupancies since the 1996 edition of NFPA 13. Since 1996 (or when this edition of the standard was referenced or adopted), dwelling units and sleeping units (considered light hazard per NFPA 13) are protected with quick response or residential sprinklers with lower or faster activation times that correlate to a measurement called Response Thermal Index or RTI. This lower RTI means fire sprinklers have a quicker activation time to prevent flashover and increase the life safety of the occupants.

As mentioned above, NFPA 25 requires testing of sprinklers in all existing systems and the frequency for testing depends on the type of sprinkler installed. Table 3 is the schedule of frequencies from NFPA 25 for all sprinklers with options to test or replace. As an ITM example, the standard response sprinkler installed in a dwelling unit in 1995 will not be retested until 2045. Whereas the quick response sprinklers in the dwelling unit installed in 1996 will get retested in 2021, then in 2031, 2041, and on. There is a bit of injustice here. The standard response sprinkler in 1995 and retested in 2045 is less of a burden on the owner where the quick response has increased maintenance with the 1996 installation and 2021 testing and then every 10 years. What is missing in the codes and standards is when or how to better protect these existing

*continued on page 16*

**Table 2 – Key fire sprinkler history**

1920s	Changed sprinkler solder composition	Introduction of quartzoid bulb sprinklers
1940s	Eliminated ¾ inch piping	Added hazard classifications to NFPA 13
	Introduced sidewall sprinklers	
1950s	Removed conventional sprinklers.	Directed spray pattern to be 100% to floor
1960s	Six categories of k-factors	Five categories of temperature ranges
1970s	Added high challenge K-8 sprinklers for storage	Hydraulic calculations first permitted in NFPA 13
	Added extended coverage sprinklers	Fire sprinkler tradeoffs first occur in building codes
	NFPA 13D published	
1980s	Introduced residential sprinklers	First large drop sprinkler for storage
	Added ESFR sprinklers for protection in NFPA 231 and NFPA 13	NFPA 13R published
1990s	Merges Ordinary Hazard Group 3 to Ordinary Hazard Group 2	Quick response sprinklers required for light hazard
	Hydraulic calculations mandated for all new systems	NFPA 231 storage criteria added to NFPA 13
	NFPA 13A and 14A becomes NFPA 25	
2000s	Sprinkler Identification Number (SIN) required for all sprinklers	Flexible hose with sprinklers
	Dry sprinklers added to NFPA 13	
2010s	Added CMSA sprinklers to NFPA 13	14 categories of k-factors and nine temperature ranges

dwelling units with newer sprinklers. Should not the occupant in the 1995 apartment have the same level of life safety as the 1996 apartment? Again, these questions and issues are starting to come up in NFPA and ICC codes and standards discussions. If the NFPA and ICC committees agree that 80-years is the maximum life of a fire sprinkler, the 1995 standard response sprinkler, installed in a dwelling unit would be replaced in the year 2075 with a quick response sprinkler.

The thermal operating elements in quick response and residential sprinklers operate faster and provide better life safety to the occupants, while protecting the property. The National Fire Sprinkler Association (NFSA) tested several older standard response sprinklers (with bulb and links) removed from existing dwelling units that resulted in a RTI range of 186 -276. This RTI range has an average of 223, which passes the test for the current standard response sprinklers, however, they are well above the maximum of 50 for fast response sprinklers installed today in dwelling and sleeping units. To put it differently, the current NFPA 13, NFPA 13R, and NFPA 13D standards requires sprinklers in dwelling units to have fast response (quick or residential) sprinklers with an RTI from 0 – 50.

Aside from the thermal element issue, sprinkler technology for storage has evolved significantly in the past 30 years. Today, NFPA 13 has high-piled storage protection criteria for Control Mode Density Area (CMDA), Control Mode Specific Application

(CMSA) and Early Suppression Fast Response (ESFR) sprinklers. Unlike 80 years ago, today NFPA 13 does not allow k-5.6 or k-8.0 sprinklers for new high-piled storage protection and requires a minimum of K-11.2 or larger sprinklers in the modern design. The replacement of old sprinklers, if the hazard has stayed the same (if not then NFPA 25 as well as the IFC and NFPA 1 *Fire Code* will require an upgrade) and if the 80-year date is codified, the replacement sprinklers in aged storage occupancies will be replaced with like sprinklers to provide the same level of protection when it was installed, but not to the current level of high-piled storage criteria.

Existing buildings with existing sprinkler systems have some challenges ahead. It helps that NFPA 13 has had a long history and NFPA 25 enforcement is increasing across the US. As a final thought, it is interesting the first edition of NFPA 25 in 1992 required replacing sprinklers manufactured in 1920 and earlier. This resulted in a smaller gap of 72 years, versus the 104-year difference (2024 – 1920 = 104) in NFPA 25 today. Prior to NFPA 25, the ITM for sprinklers was in the recommended practice of NFPA 13A. In the 1971 edition of NFPA 13A, it suggested to replace all sprinklers when they became 50 years old. Automatic fire sprinkler systems in the built environment not only provide life safety and property protection but also provides many design, construction, and maintenance benefits. Today, we need to look ahead and provide some codified solutions for future generations to live, work, and play in sprinklered buildings. •

**Table 3**

Type	Frequency	Requirements	Action	Next milestone frequency		
All sprinklers	before 1920	Replace	Creates new installation date	50 years for standard, 25 years for fast response		
All sprinklers	50 years	Test representative sample or,	Retest every 10 years	at 60 years	at 70 years	at 75 years
		Replace	Creates new installation date	50 years for standard, 25 years for fast response		
All sprinklers	75 years	Test representative sample or,	Retest every 5 years	at 80 years	at 85 years	at 90 years and on
		Replace	Creates new installation date	50 years for standard, 25 years for fast response		
Fast response, except ESFR & CMSA	25 years	Test representative sample or,	Retest every 10 years	at 35 years	at 45 years	at 55 years and on
		Replace	Creates new installation date	25 years		
Fast response ESFR & CMSA	20 years	Test representative sample or,	Retest every 10 years	at 30 years	at 40 years	at 50 years and on
		Replace	Creates new installation date	20 years		
Dry sprinklers	20 years	Test representative sample or,	Retest every 10 years	at 30 years	at 40 years	at 50 years and on
		Replace	Creates new installation date	20 years		
Extra high solder link (325 F+) exposed to maximum ambient temperatures	5 years	Test representative sample or,	Retest every 5 years	at 10 years	at 15 years	at 20 years and on
		Replace	Creates new installation date	5 years		
Sprinklers exposed to harsh/corrosive environments	5 years	Test representative sample or,	Retest every 5 years	at 10 years	at 15 years	at 20 years and on
		Replace	Creates new installation date	5 years		
Listed corrosion resistant sprinklers	10 years	Test representative sample or,	Retest every 5 years	at 15 years	at 20 years	at 25 years and on
		Replace	Creates new installation date	10 years		

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# The Truth Burns

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

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

Our landing page for *The Truth Burns* can be found here:

<https://fireadvocates.org/the-truth-burns/>

 CommonVoices1

 CommonVoices1

## fireadvocates.org

*Fire Sprinklers Save Lives*



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



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

NOTES  
FROM THE

# Fire Scene



by Vickie Pritchett,  
Vice President of Advocacy and Outreach

## Aloha is Calling!

The excitement continues to build for **NFSA's 2024 Annual Seminar and Business & Leadership Conference** scheduled for May 8-10, 2024, at the beautiful Wailea Beach Resort in Maui.

We are looking forward to an action packed three days of networking, learning, and fun! Registration will open on Tuesday afternoon at 3:00 p.m. on May 7th, with workshops beginning bright and early Wednesday morning the 8th. You won't want to miss general sessions with a Keynote Address by Rosa Say, author of national bestseller *Managing with Aloha*. What fun it will be to learn business basics that transfer from "*Aloha*" to all of us in our respective roles! We will also have fire sprinkler industry updates, economic forecasts, and some of the best workshop presentations from NFSA members and more!

To find out all the details, please visit [bit.ly/NFSAMaui24](https://bit.ly/NFSAMaui24) and make sure that you're registered for #fastestwateraloha – if you have any issues securing your room or with registration, feel free to reach out, I'm always happy to help!

The **Wailea Beach Resort** staff are looking forward to sharing Aloha with us and appreciate that we are helping Maui recover from the wildfires of 2023. The resort area where we are was not affected, but many of the staff did live in areas affected. Their gratitude for us is evident with every interaction, and the excitement is real!

I've shared with the hotel that we are just like a family reunion, because we are so accustomed to our annual gathering! I hope to see you there.

I'd also like to remind NFSA members that your association is actively engaged in National Conferences, from the International Builders Show, to the Pacific Coast Builders Show, to League of Cities! To keep track of all the places Team NFSA is on your behalf, please visit our events/calendar [bit.ly/NFSACalendar](https://bit.ly/NFSACalendar) and join us anytime you can! Having members participate with us in the booths help us bring the fire sprinkler industry to life and is a real member value/benefit for you. If you have any questions about these opportunities, please reach out to me!

In the meantime, I hope 2024 is off to an amazing start, and I hope to see you soon in Hawaii!

*Until Next Time, Mahalo,*

*Vickie*

**WEDNESDAY, MAY 8TH, 12:30 SHOTGUN  
START AT THE BEAUTIFUL WAILEA BEACH  
EMERALD GOLF COURSE!**





# FIRE SPRINKLERS IN ACTION

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



## COLORADO



### Two Fire Sprinklers Extinguish Apartment Fire

*Thanks to John Zink, Fire Marshal, Fort Morgan, CO Volunteer Fire Department for this report.*

At approximately 1500 on November 21st, Fort Morgan Volunteer Fire Department was dispatched to the Sol Naciente Apartment Complex on a report of a domestic disturbance involving a possible assault and fire.

Responding fire units staged nearby waiting for the police department to ensure that the scene was stable. When cleared, fire crews entered the second-floor apartment and determined that two fire sprinklers had activated prior to arrival, extinguishing the fire in the kitchen/living room area. There were no injuries due to the fire.

A previous sprinkler save had occurred in this complex on January 4, 2021. That fire was the result of a faulty kitchen light and was extinguished by a single sprinkler.

According to Zink, "'Sprinklers save lives and property' has always had meaning on the job."

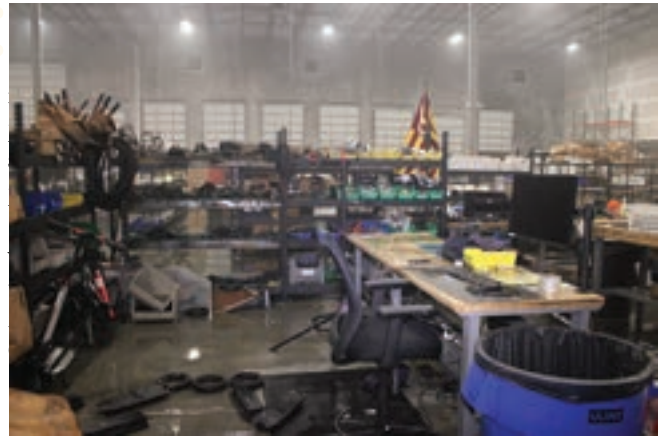
## FLORIDA

### Two Fire Sprinklers Extinguish Lithium-Ion Battery Fire in Electronics Store

*Thanks to San Carlos Park, FL Fire & Rescue Fire Marshal Steve Lennon for sending us the sprinkler save!*

The building is a 100,000 sq ft flex space warehouse with 35ft high ceiling. A ESFR system (with pump) was installed by NFSA Member Wayne Automatic for shell protection and future tenant(s) build out.

A fire occurred in a consumer electronics business (approx. 30,000 sq ft of total building) that deals with new and refurbished cellular devices, e-scooters, and e-bikes. Business was closed for the evening, but the owner had security video which showed a lithium-ion e-bike battery (on a charger, unattended) catching



## INDIANA

### Fire Dept. Credits Fire Sprinkler System with Saving Day Spa

*Thanks to Shambaugh & Sons Service Designer Patrick Green for sending us this sprinkler save.*

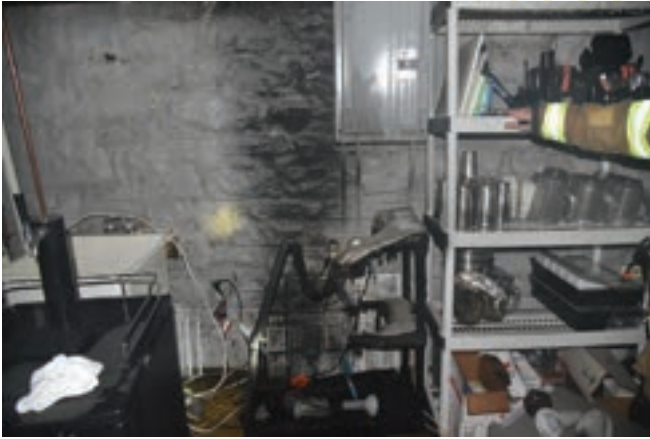
Shortly after 2:30am, Fort Wayne, IN firefighters went to a local day spa to investigate a smoke detector alarm. They found smoke inside the building and a small fire in a laundry room.

The fire was under control in about 30 minutes. Firefighters credited the fire sprinkler system likely prevented any significant fire damage.

### Single Sprinkler Saves Conference Center

*Thanks to Noblesville, IN Division Chief/ Fire Marshal Darrell Cross for sending in this sprinkler save.*

On December 3 at 10:19am, the Noblesville Fire Department responded to a report of a commercial business fire at the Mill Top Conference Center.



On scene, crews discovered a small fire in a storage room in the basement that had been extinguished by a single fire sprinkler. The building is an old five-story flour mill with a basement, built in 1865 and repurposed in the 2000s into a conference center and wedding venue.

Due to the action of the sprinkler system, there was no damage to the building, which is valued at \$1.5 million. Property loss was limited to \$1,000.

### MAINE

#### Sidewall Sprinkler Saves Apartment Building

*Thanks to Saco, ME Fire Department Deputy Fire Marshal David Pendleton for sending in this sprinkler save!*

On December 26th, a 911 call was received shortly before 8pm from the occupant of an apartment who discovered a fire in a bedroom, which was being contained by the building's fire sprinkler system at the time of the call. The occupant alerted her daughter, and the family safely evacuated outside.

Fire crews arrived on the scene and saw no smoke or fire but did confirm the fire in the bedroom was fully extinguished by the fire sprinkler system.

The apartment is part of a complex consisting of two, three-story buildings connected by an enclosed breezeway with 24 units in total.

An investigation determined that a candle on top of a bookshelf ignited decorative items nearby and that some of these items dropped onto a plastic tote below, causing the ignition of the tote. The single side-wall sprinkler in the bedroom performed as designed and extinguished the fire.

The Saco Fire Department stated that the quick activation of the building's fire sprinkler system prevented a developing fire from extending beyond the first few items ignited.

#### Fire Sprinkler System Extinguishes Inn Fire

*Thanks to Public Safety Inspector Marc Veilleux of the Maine State Fire Marshal's Office for sending us this sprinkler save and to the Town of Yarmouth Fire Rescue for posting it on their Facebook page.*

On December 30th, the Yarmouth Fire Department was alerted to a fire at a local inn. Crews arrived on scene to find the fire had already been extinguished by the #firesprinkler system.



Yarmouth crews cleared the scene approximately two hours after being called. No injuries were reported.

### MARYLAND



#### Single Fire Sprinkler Saves Shopping Center

*Thanks to the Maryland State Fire Marshal's Office for sending out a press release about this sprinkler save.*

On December 22nd at 11:45am, a fire was reported at a Bel Air, MD shopping center. Upon arrival, crews discovered that a fire had erupted in a utility room annex located on the rear of the building.

The fire department reported that once the fire breached the utility room, it was controlled by one activated fire sprinkler. There was no fire damage to any of the stores and no injuries were reported.

*continued on page 22*

## Fire Sprinklers in Action

continued from page 21

### MICHIGAN

#### Single Sprinkler Saves Local Salon

*Thanks to Michigan State Fire Marshal Kevin Sehlmeier for sending in this sprinkler save!*

On December 3rd, the Birmingham, MI Fire Department was called to a local salon for report of a fire. Upon arrival, crews found a fire in a utility room being controlled by the fire sprinkler system.

Salon had a domestic installed fire sprinkler in the utility room. The fire had started in a double stack dryer and the sprinkler activated as designed, containing the fire to just the dryer stack.

According to the Fire Department, "The sprinkler definitely saved the day. Especially with no reporting fire alarms installed."

### MINNESOTA



#### Single Sprinkler Extinguishes Hotel Fire

*Thanks to Assistant Chief Chris Ferguson of the Rochester, MN Fire Department for sending us this sprinkler save.*

**Time and date of Incident:** 11/28/2023 at 19:34

**Situation Found:** Crews arrived on scene to find a hotel being evacuated due to a fire alarm. They encountered smoke in a hallway and upgraded the response to a full structure fire and were later able to confirm that an activated fire sprinkler had extinguished a fire that was contained to a single hotel room.

RFD continued to work on scene to ensure the safety of guests and to remove smoke and water from the building. Smoke and water damage was limited to the hotel room where the fire had occurred. No injuries to guests, staff or firefighters.

### TENNESSEE

#### Fire Sprinkler System Saves Lives and Local Business

*Thanks to Dickson, TN Captain Brent Ham & Fire Marshal Robby Street for sending us this sprinkler save!*

On November 12th, City of Dickson Fire Department crews were dispatched to a commercial water flow alarm at a local commercial business. Fire crews arrived at the facility, which manufactures wood doors, to find smoke visible and signs of fire sprinkler system activation. Firefighters made an interior attack in the 160,000 sqft industrial building to find the seat of the fire.

The source of the fire was determined to be an electric forklift, which was charging at the time. The fire activated two fire sprinklers. The sprinklers kept the fire small enough and prevented the fire from spreading beyond the area the forklift was in.

Fire damage was limited to the forklift and some cosmetic interior damage. Most importantly, there was no loss of life. The fire crews were able to extinguish the fire and the sprinkler system was then shut down. Once the facility was cleared and ventilated, on-site employees were able to assist firefighters in removing the forklift outside where the fire department could continue to cool it and its battery after the fire damage to control the thermal runaway.

### TEXAS

#### The #Fastestwater Difference in Action!



*Thanks to Farmers Branch Fire Dept. Division Chief/Asst. Fire Marshal Scott Burke for sending in this sprinkler save!*

**1/13/24**

New and used furniture sales and storage. One fire sprinkler extinguished mattress fire.

**1/10/2024**

Truck bed liner spraying operation. Three fire sprinklers activated and extinguished the fire. No data collected on head model or last company to service/inspect.



continued from page 22

### Single Fire Sprinkler Saves Apartment Building

*Thanks go to Assistant Chief Tim Oates of the Coppell, TX Fire Department for sending in this sprinkler save.*

Coppell Fire Department units were dispatched on an automatic fire alarm activation for an apartment complex on Monday, November 27, 2023. Upon arrival crews encountered light smoke coming from one of the units.

Fire Department crews forced entry finding light smoke and one fire sprinkler activated. Fire was contained to the kitchen area with damage being limited to the cardboard boxes left in proximity to the stove, microwave oven and upper cabinets.

Tenants had left for work prior to fire. Damage was estimated to be less than \$2,000... potential sprinkler save of \$750,000 (building and contents value).

### Fire Sprinkler System Extinguishes Fire in Apartment Garage

*Thanks to Lake Travis, TX Rescue's Lieutenant Taylor Wade for reporting this sprinkler save.*

On January 6th at 11:16pm crews were dispatched for a water flow at an apartment complex. Upon arrival, they found a fire sprinkler activation in the garage of one unit. There was a small fire in the garage that was fully extinguished by the fire sprinkler system prior to firefighters' arrival.

By examination of the scene and interviewing those present, it was determined that someone smoking cigarettes in the exact same area an hour prior likely ignited some contents and was the probable cause.

Thanks to the fire sprinkler system, the fire caused minimal damage to the structure itself and was primarily isolated to the contents in bins.

### Single Sprinkler Saves Apartment Complex

*Thanks to Thomas Varady, Captain Community Risk Reduction-South Montgomery County Fire Department for sending this great description of the #fastestwater difference!*

On Saturday, January 6, 2024, South Montgomery County Fire Department ESD 8 responded to a water flow alarm at The Marquis at The Woodlands apartment complex. According to initial information, it was reported as an extinguished kitchen fire. Upon arrival, our crews discovered that an activated fire sprinkler in one of the apartments had effectively controlled a fire on the stove top.

The tenant at the location informed us that he had inadvertently fallen asleep with food cooking, leading to the kitchen fire. Our team promptly secured the water supply in the riser room and drained the sprinkler system. Additionally, we assisted in removing most of the water from the affected apartment.

Notably, our inspection division had conducted a thorough

inspection of the property just days before this incident. We ensured that all sprinkler and fire alarm systems were in service and had undergone recent yearly inspections. The presence of the sprinkler system and the functional fire alarm undoubtedly played a crucial role in preventing the escalation of the fire and minimizing damage.

The quick response and effective operation of the sprinkler system not only saved countless lives, but also prevented further damage to the building. This incident serves as a powerful reminder of the importance of well-maintained fire safety systems in residential/commercial structures.

I wanted to share this success story and express our continued commitment to fire safety. Incidents like these highlight the positive impact of such efforts.

### WISCONSIN

### One Fire Sprinkler, Over \$2.5M Building Saved!

*Thanks go to Waukesha, WI Fire Marshal Brian Charlesworth for sending us this sprinkler save.*

We had a sprinkler save during the evening of December 20th. We responded to an automatic alarm at a 24-unit apartment building.

When the crew arrived, they found water flowing in Apt 22. A single fire sprinkler activated and extinguished a cooking fire on the stove top.

The entire building was able to remain occupied after the response. The building has an assessed value of \$2,613,000. This was a significant save for our community. •





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# Electrifying, Inspection, Testing, and Maintenance of Fire Protection Systems

by Vince Powers, *Inspection, Testing, and Maintenance Specialist*



It is widely known that there are fire protection issues with electric vehicles, lithium-ion batteries, and charging stations when it comes to fires. The question is what is the solution? There is no easy answer for this and NFPA 13 does not have prescriptive requirements to protect these hazards. So, let's talk about properly maintaining the fire protection systems already in place to protect them.

are required to be installed as an Ordinary Hazard Group II (OHII) hazard classification. As stated before, there are no prescriptive requirements or recommendations for protecting electric vehicles (EV). This can create several issues, mostly in that there is no easy way to protect EV with sprinkler systems. Previous systems in parking garages were typically Ordinary Group I (OHI) hazard classification, which provides less density which means less protection. Typically, the charging stations are installed in new or existing parking garages without evaluation of the fire protection systems, creating potential hazards.



Charging stations are being retrofitted in existing garages often with dry pipe sprinkler systems in place. NFPA 25 the *Standard for Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems* in Section 4.1.6 states that whenever something changes in a building the owner must complete an evaluation of the fire protection system to ensure the system will properly protect the contents of the building or in this case, a parking garage. Starting in the 2022 edition of NFPA 13, the *Standard for Installation of Sprinkler Systems*, parking garage sprinkler systems

For these reasons, it is imperative that the existing fire protection systems be kept in the best working condition possible. Often fire protection systems are not being properly maintained in accordance with NFPA 25. It is common that only an annual inspection and test of the systems is being conducted. Throughout the standard there are daily, weekly, monthly, and quarterly ITM (Inspection, Testing, and Maintenance) requirements in addition to the less frequent requirements of annual, three- and five-year frequencies. Most of the time the more frequent requirements daily, weekly, quarterly etc. are overlooked because the Authority Having Jurisdiction (AHJ) often does not directly enforce these frequencies. It is not that the AHJ allows these more frequent items to be overlooked, but simply does not have the workforce to review these inspections and tests. This is misconstrued by the building owner or representative that an “annual” is all that is required.

Parking garages inherently add to potential problems when it comes to fire protection systems that include, but are not limited

*continued on page 26*

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to, corrosion and damaged components. Any delays in sprinkler system operation can increase the ability of the system to properly perform until the fire department arrives.

In general, the 2022 edition of NFPA 13, requires water to reach the inspector's test connection within 60 seconds. *Section 8.2.3.6.1* provides provisions to allow for calculating water for outlet times. *Table 8.2.3.6.1* shows the anticipated number of sprinklers that may open, as well as the anticipated time for water to reach the inspector's test connection. Fires with higher release rates, as evident in EV fires, are expected to open more sprinklers. The more sprinklers that operate the faster the air will deplete allowing the water to move through the pipe faster. The table was developed to address the different time intervals and number of sprinklers expected to operate in various hazards. For example, a light hazard dry pipe system has a requirement of 60 seconds for water to reach the inspector's test with the expectation of a single sprinkler operation. An OH II has a requirement of 50 seconds for water to reach the inspector's test valve with the expectation of two sprinklers operating.

**Table 8.2.3.6.1 Dry Pipe System Water Delivery**

Hazard	Number of Most Remote Sprinklers Initially Open	Maximum Time of Water Delivery(s)
Dwelling unit	1	15
Light	1	60
Ordinary I	2	50
Ordinary II	2	50
Extra I	4	45
Extra II	4	45
High piled	4	40

The reason for this is that the industry has a misunderstanding that the dry pipe system must deliver water to the inspector's test within 60 seconds in accordance with the 2023 edition of NFPA 25. In the body of the standard, NFPA 25 does not address water delivery times. *Annex Section A.13.4.5.2.2.2* provides the steps to take when conducting a full flow trip test of a dry pipe system and explains why there is no time requirement in NFPA 25 for water delivery. The annex section also explains that when using either a manual demonstration or computer calculation to simulate water delivery using multiple outlets to predict water delivery time that a full flow test using a single inspector's test should have been completed at system acceptance. This will set the baseline for future trip tests and comparisons to determine if there are any problems with the system.

NFPA 25, *Section 4.6.4*, states that the technician must compare the trip test times to the original acceptance tests. In most cases, the technician does not ask the owner or representative for the original acceptance tests and simply compares the current test results to the last full flow test. This may not show significant

differences in water delivery time. Any issue in the system, if any, may go unnoticed. *Section 4.3.4* states that the owner shall maintain system installation drawings, hydraulic calculations, original acceptance tests, and manufacturer data sheets for the life of the system. It is too often assumed that these documents are not available, so they are not verified to be available. It is imperative that technicians ask for these documents. How can the flow test of any system such as the fire pump tests and main drain tests be verified correctly without these documents?

Most of the previous information is related to the interior of the fire sprinkler system, which shows the significance of maintaining the internal conditions of the system including internal assessments which are not discussed in this article. Now let us discuss the external conditions, which are much easier to verify. The fire sprinklers, piping and hangers are required to be inspected annually from the floor level. This inspection is to verify that the system appears to be in operational condition. The most common issue in parking garages is external corrosion and paint. *Section 5.2.1.1.1* states that the sprinklers shall be free of leakage, damage, and loss of fluid. The section also states that the sprinklers shall be free of corrosion, loading, and paint (new in 2023) detrimental to sprinkler performance. Detrimental to sprinkler performance is somewhat subjective and will be discussed in a future article and blog, the annex provides some guidance on what is detrimental to sprinkler performance. Sprinklers that exhibit any of the issues outlined in *Section 5.2.1.1.1* can delay the operation of the sprinkler system. It may not seem like a big issue to have one or two sprinklers with these deficiencies, but if the system is protecting EV cars, then the fire can spread rapidly, overwhelming the sprinkler system and its ability to operate properly. Chapter 13 of NFPA 25 also provides additional external and internal inspection requirements for all system valves further ensuring proper operation of fire protection systems.



In the end, the point of this article is to bring awareness to all the requirements of properly maintaining fire protection systems and that, in many cases, the system is not being maintained in accordance with the minimum requirements set forth in NFPA 25. When situations such as an EV fire happens in a garage without a properly functioning fire protection system, the fire can spread to other vehicles and the property itself, possibly putting lives in danger and causing significant damage to property.

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F.D.C. Quick Connections	Description	Stand Pipe	Wall Mount
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	30° Elbow, NPSH Female Swivel x Storz: Threads onto NPT Male Pipe Thread	✓	✓
	30° Elbow, NPT Male Rigid x Storz: Threads into NPT Female Pipe Thread	✓	✓
	Straight, NPT Female Rigid x Storz: Threads onto NPT Male Pipe Thread. NEW Low Profile models	✓	✓
	Straight, NPT Male x Storz: Threads into NPT Female Pipe Thread	✓	✓

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# Installing Fire Sprinklers in a Mock Airplane



by Michael Wilson, *NFSM Digital Marketing Manager*

The National Fire Sprinkler Association and contractor member **Rich Fire Protection** collaborated on a unique project for the fire station at the Atlantic City, NJ International Airport. This partnership involved installing fire sprinklers in an unconventional location: a mock airplane used for emergency training.

This project, unique in the realm of fire protection, involved protecting a training area for airport firefighters. Located in the firehouse mezzanine, this mock airplane serves as a crucial training ground for firefighters and EMS personnel, preparing them to handle aircraft medical emergencies.

The project's inception followed a mandate from the New Jersey Department of Community Affairs' Codes and Standards Division. The Department mandated a fire sprinkler system for the training area. When this mandate came up, the fire department knew who to turn to: the NFSM and Rich Fire Protection.

The NFSM and Rich Fire Protection were up for the task. Our association was instrumental in the project at the Atlantic City International Airport, providing vital funding and strategic support, thereby ensuring compliance with fire safety standards, while Rich Fire Protection's skilled labor and technical expertise were key to effectively installing the unique fire protection system.

Rich Fire Protection, recognizing the project's distinctiveness, eagerly bid and was chosen for the job. It wasn't merely a retrofit but an adaptation of an unconventional space, requiring considerable skill and precision. The project's execution entailed extending the existing fire sprinkler system into the mock plane. Impressively, the physical installation was completed in just one day with only four fire sprinklers. However, extensive planning and preparation were the most time-intensive aspects, ensuring flawless execution.

Obstructions can be deadly when it comes to fire, which is why the NFSM was proud to work with Rich Fire Protection to protect those who protect us. Fires in training areas and fire stations are not unheard of, which is why having the highest degree of protection possible is ideal.



*Interior of mock airplane*



*Rich trucks outside of station*



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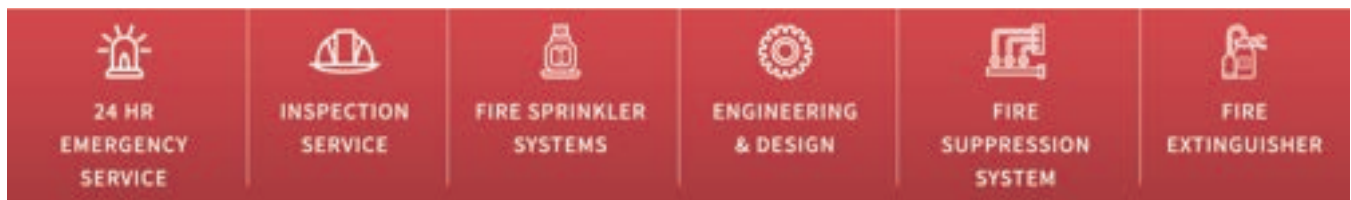
*The mock entire exterior*



### About Rich Fire Protection

Founded in 1979 amidst rising concerns about fire safety in casinos, particularly in Atlantic City, Rich Fire Protection played a key role in enhancing safety across the city's casino strip. Today, the company remains a vital player in protecting Atlantic City and New Jersey, offering comprehensive fire protection services including 3-D design, installation, maintenance, alarm monitoring, and a responsive 24-hour emergency service.

*For more information on Rich Fire Protection, visit their website at <https://www.richfire.com/>.*



*Rich, 669, Firefighters*



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*Fire is fast. Fire sprinklers are faster.*



## Do Maui Like the Locals

We are beyond thrilled to meet you all in Maui this May! I've been to the Hawaiian Islands once before. My first thought was, "If there's a heaven, it looks like Hawaii!"

Nestled in the heart of the Pacific Ocean, Maui is the second-largest Hawaiian island, known for its killer landscapes, gorgeous beaches, and vibrant nightlife. There's so much to see and do, you'll have wrest yourself out of that beach chair and explore! Here's where the locals go!



**Take a drive on the Road to Hana!** Whether you rent a car and drive yourself, or take advantage of the many van tours available, you should not miss the scenic Hana Highway! Word of caution, if you get car sick, take your Dramamine! The Road to Hana has over 600 turns and stretches 52 miles between Paia and Hana, with 59 stone bridges and hundreds of hairpin curves. There's plenty of opportunities to stop and enjoy local fruit stands, farms, botanical gardens, and awesome views. Bring cash if you plan to stop for a bite. The little stands and shops don't take credit cards. You will pass by lush rainforest, rugged ocean vistas, countless waterfalls, and probably quite a few spectacular rainbows, as well as some food stands that serve fresh banana bread, among other

island staples, making it a photo buff's must-do. Your Instagram will never be the same!



**Paako Cove** is the "secret cove" locals enjoy on the southwestern edge of Maui. It gets its reputation as a "secret" because you need to literally walk through a wall to even know it's there. The cove is the perfect place to relax in the sun or snap some unforgettable photos of the coast and the far-off island of Kahoolawe. It's a ten-minute ride from our host hotel.



**The Olowalu Reef**—Take a half hour ride from our host hotel up the beautiful Road to Hana to visit the Olowalu Reef. Known as the "Mother Reef", it is home to coral that is over 1,500 years old. In 2017, the Olowalu reef was declared a Mission Blue Hope Spot—a place that is critical to the health of our oceans. It boasts a stunning diversity of coral and harbors the largest known manta ray population in the United States. A great place to snorkel!

**Maui Pickers Paradise**—When you visit the Olowalu Reef, take a short side trip to this quirky store! Avoid those tourist trap tacky souvenir shops, indulge your treasure-hunting fantasies, and bring home something truly unique to the islands. We have it on good authority that the owner loves to haggle! This is a can't miss shopping experience.



**Let's Eat!** –Any guide to where the locals go would not be complete without a list of places the locals love to eat. Beware the tourist traps, locals say they are many (*Mama's Fish House-shhhhh!*) To truly eat like the locals, they say look for the mom-and-pop eateries, where they say you find the “real soul” of Hawaiian cooking.



Morning starts with most locals stopping at **Akamai Coffee** for their morning brew. It's located right in Wailea. They roast coffee only with beans grown on Maui so you're getting a true taste of the island.



Best place to grab a beer and shoot the breeze with some locals is the **Pint and Cork**, right in Wailea. It boasts the largest selection of local beer on the island, 14 of them on tap! Looking for a gorgeous view and a handcrafted cocktail? Look no further than **The Birdcage**, an open-air establishment famed for its cocktails and fresh sushi; not far from us in the Hotel Wailea.

If you want to eat fancy, you'll have plenty of options in Wailea. If you want to eat like the locals, get in an Uber. They say Kihei is the place to be. Luckily, it's only a nine-minute drive!

For the island favorite, Loco Moco, head to **Nalu's South Shore Grill**. It's a bowl full of ingredients you're not sure would go together, but the result is purported to be delicious! Put on your

adventurous hat and give it a try! Nalu's has several variations on the classic to choose from.

Kihei's **Da Kitchen** is one of Hawaii's most recognized restaurants.

Featured on *Diners, Drive-Ins and Dives*, Da Kitchen's focus is delivering quality local food in eyebrow-raising portions. Be sure to ask your server about the daily specials! You'll get a real taste of farm (or sea) to table.



**Coconut's Fish Café** is Maui's top-rated casual restaurant. If you're craving wild-caught fish, Hawaiian flavors, and family recipes, this is a can't miss destination. Their fish tacos with wild-caught mahi are

famous way beyond Hawaii's shores.



One side note, if you're a fly by the seat of your pants person, like I sometimes tend to be, Kihei is home to the best food trucks on the island. It's not a bad idea to take a walk, see the sites, find a food truck with a fun menu and order away! Support local business!

*I look forward to seeing you all in Maui. I DO NOT look forward to the plane ride. JFK-HNL-OGG.*

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# What's Cooking?

*In many homes, the answer may be FIRE!*



Did you know cooking fires are the number one cause of home fires and home injuries? The leading cause of fires in the kitchen is unattended cooking. Never leave your cooking unattended.

Remember, home fire sprinklers can contain and even extinguish a cooking fire in seconds, saving lives and property! Find out more at [www.firesprinklersbuylife.com](http://www.firesprinklersbuylife.com).



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## Congratulations to Newly Elected SAM Council Members and Board Area Directors

Elections are signs of a healthy association, and we are happy to report that 39% of our SAM members voted in the December 2023 election for SAM Council.

Congratulations to:

<b>Ray Fremont, Jr.</b>	<i>General Air Products</i>
<b>Rick Kelly</b>	<i>Watts Water Technologies Company</i>
<b>Lainey Liotta</b>	<i>Lubrizol</i>
<b>Dave Weinrich</b>	<i>Bull Moose</i>

We also send a big welcome back to the following Board Members, who ran un-opposed:

Area 5	<b>Jon Ackley</b>	<i>Dalmatian Fire</i>
Area 8	<b>Conor Kauffman</b>	<i>Kauffman Company</i>
Area 12	<b>Jim Boulanger</b>	<i>Patriot Fire</i>

Working together we will realize our vision of *“A Stronger Industry... A Safer World,”* and we will see our mission *“To protect lives and property from fire through the widespread acceptance of the fire sprinkler concept”* realized every day.

Thank you to all who serve, and to all who voted, let’s make 2024 our best year ever!



## NFSA Joins USFA's Fire Stop Tour

The week of January 22nd, NFSA President **Shane Ray** had the honor to take part in the U.S. Fire Administration's 2024 Fire Stop Tour, headed by **Dr. Lori Moore-Merrill**. Joining the tour were leaders from IAFF, IAFC, NFFF, NVFC, FSRI and NFPA, among others.

The tour took the group to Detroit, Michigan, Chicago, Illinois and Columbus, Ohio to draw public attention to fire safety measures that can be taken to make sure children and older adults are both fire safe and *#WinterReady*.

On the tour, President Ray was able to address attendees and the media about the modern built environment and the need for state and local governments to stop the practice of removing fire sprinklers from the national model building and fire codes and standards. A video of Shane's speech is available on NFSA's YouTube channel.

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continued from page 36

## NFSA President Shane Ray Touts Hometown Sprinkler Save

A big thank you to **Chief PJ Duncan** of the Pleasant View, TN Volunteer Fire Department for this awesome fire sprinkler save. This one hits close to home for me, and makes me so proud. Pleasant View is the department where I served as Fire Chief for 13 years, and where my family still lives today.

On January 25th, at 3:40am, the FD responded to a call at Pleasant View Village, a development built in the early 2000s where all buildings are fire sprinklers protected. This development helped us pave the way for a Town, and ultimately County-Wide, fire sprinkler ordinance in 2001.

The fire broke out on the second floor of the commercial space of a chiropractor's office, in a chair where sheets that were used for massage were piled after coming out of a hot dryer. The contents use with massage oils, along with the heat, caused the fire to ignite after smoldering. With the live/work concept at Pleasant View in full force, there was a family fast asleep in a third-floor apartment. That's right, an entire family saved by one fire sprinkler activating and controlling this fire that occurred in the commercial occupancy below. That my friends, is the fire sprinkler difference. That is Fire Sprinklers Buy Time. Time Buys Life in action.

I can't help but smile to know that the team who worked hard to see the vision become a reality back in the early 2000s has something to be so proud of. Chief Duncan, thank you. Keep being a non-typical fire department.

Our own Vice President of Advocacy and Outreach **Vickie Pritchett**, former Economic and Community Development Director of Cheatham County, was a big part of helping the fire departments and fire chiefs adopt these lifesaving requirements. The quality of life in Cheatham County was improved with this proactive life-safety decision, and taxes have remained low. A true win-win proposition and firefighters are protected as well. Partners in Progress! ♦



# CHAPTERS IN ACTION

## FLORIDA

### Tagging for Success

In the inaugural event of 2024, the Florida Fire Sprinkler Association kicked off the first of four Tagging for Success programs tailored for Waterbased Inspectors. The session commenced in Fort Walton Beach at the beautiful Island Resort, attracting approximately 65 Waterbased inspectors who diligently earned their mandatory 16 Continuing Education Units. The first day was brimming with interactive experiences, encompassing the following activities:



#### *Inside:*

- Name that Standard (NFPA 25 related questions and answers)
- Florida Law (Law as it pertains to Waterbased Inspectors)
- What Tag is This (Poster size pictures – identify which tag is appropriate)
- Riser Build
- Backflow Blitz

#### *Outside:*

- Side-by-Side Fire Sprinkler Demo
- Fire Pump Trailer
- NFSA Valve Trailer
- Sprinkler Spray Patterns
- Reliable Sprinkler product cutouts and discussions.

On the second day, participants engaged in classroom sessions specifically designed for Waterbased Inspectors. Early feedback from attendees and their supervisors has been overwhelmingly positive, with the event garnering a five-star rating. The program repeated its success in Daytona Beach on January 29th – 30th, a private class for a local Florida contractor on January 31st - February 1st and followed by our last session in Coral Springs on February 6th-7th. Nearly 300 individuals benefited from the



Tagging for Success program, which has proven to be an engaging, educational, and consistently sold-out experience.

### Does Your Family Know...

For years, the Florida Fire Sprinkler Association traversed the state, conducting informative side-by-side fire sprinkler demonstrations and dispelling misconceptions about the crucial role these systems play in saving lives during a fire.

Throughout these events, we have consistently asked families of fire sprinkler contractors who attend these demonstrations thought-provoking questions, especially the younger members of



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our industry, such as: "How many fire sprinklers typically activate in a home fire?" "What triggers the activation of a fire sprinkler?" "In comparison to a fire hose from the fire department, how many gallons per minute does a residential fire sprinkler use?" "How many minutes does one usually have to evacuate their home during a fire?"

Surprisingly, our findings reveal that over 90% of our industry's families are unable to answer these essential questions. This realization underscores the need for improved education within our own families, particularly among our children, and highlights our failure to adequately celebrate the remarkable industry we work in. As a response, the FFSA is initiating a campaign entitled Does YOUR Family Know... aimed at sharing facts and dispelling myths.

At the end of the year, a contest will be held for the families within our industry, with details currently in development. It is high time that we take pride in our work at home. Do your family members possess knowledge about the impact fire sprinklers can have in a fire emergency? It's time for us to proudly share our achievements within our own households.

### ILLINOIS



On January 11, 2024, at the Illinois NFSA Chapter meeting, Cybor Fire Protection's **Rich Ray** was reelected to the JATC/Negotiations committee. This will be a four-year term.

### NORTHWEST CHAPTERS

Both the Puget Sound and Columbia-Willamette Chapters are setting up a great schedule of industry speakers for the 2024 round of meetings. Watch your inbox! If you have topics you'd like featured at an upcoming meeting, be sure to contact your Chapter Chairs or Regional Manager Suzanne Mayr.

### INDIANA & MICHIGAN

#### NFSA President Shane Ray Visits Indiana and Michigan

The NFSA Indiana and Michigan Chapters were honored to have NFSA President Shane Ray make holiday visits at our chapter meetings held during the month of December.

While attending the NFSA Indiana Chapter Holiday Dinner at the Country Club of Indianapolis on December 7th, President Ray and NFSA Area 5 Director Jon Ackley, were honored to recognize three long-time members on their upcoming retirements:

- Dalmatian Fire Protection Vice President of Operations **Mark Adair**, 43 years in the industry, and 34 years with Dalmatian plans to retire in the Spring.
- Core & Main Inside Sales Representative **Mary Clemmer Minnis** retiring after 26 years.
- Plumbers Supply Territory Manager **John Jutz** retiring after 16 years. Prior to joining Plumbers Supply John was a Louisville Kentucky Firefighter.

While attending the NFSA Michigan Chapter Holiday Social at the Sidecar Slide Bar in Birmingham, Michigan on December 13th, President Ray joined Chapter Officers in officially welcoming the Macomb Group (Director of Fire Protection Jared Rose, and Ryan Champine) as our newest members of the Chapter.



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During the meeting, the chapter made a check presentation led by Chair Steve Cook, speaking on behalf of NFSA. A check for \$35,000.00 was presented to David Foye Chairman of the Board of Governors for Shriners Children's Boston by Steve, Nick Stevens-Chapter Secretary and Alec Cambrio-Treasurer.

## MINNESOTA

### Former Minnesota State Fire Marshal Praised for Fire Sprinkler Advocacy

At the January meeting of NFSA's Minnesota Chapter, former Minnesota State Fire Marshal James (Jim) Smith was recognized for his outstanding support of fire safety and his strong advocacy for fire sprinklers. Marshal Smith's division took a lead role in the investigation of a multiple fatality high-rise fire in Minneapolis in November 2019. His personal testimony at the State Legislature was instrumental in the passage of legislation to retrofit older high-rise buildings. In his public comments following the fire and his testimony at the Capitol, Marshal Smith offered frank statements about how the fatalities would have been avoided had the building been sprinklered. As a result, the Minnesota Legislature passed high-rise retrofit requirements and grant programs to help eliminate that type of tragedy in the future.

NFSA President Shane Ray praised Marshal Smith for the public testimony and comments he made following the fire in the Cedar High Apartments: "It took guts to say what Jim said, but he said it at the time it most needed to be said." President Ray went on to state that Jim's comments started a national conversation about federal funding of public housing and prioritizing fire safety and sprinkler installations in HUD housing projects. "Not one penny of federal funding should go to HUD housing units if they are providing substandard housing – housing not up to the latest fire safety codes."

Marshall Smith was – and remains – a most credible and powerful fire sprinkler advocate. He retired from public service in early 2023. Chief Deputy Amanda Swenson served in the interim for several months until Dan Krier was appointed as State Fire Marshal in the fall of 2023.

The entire NFSA family wishes Jim and his family a long and healthy retirement and the continued admiration and friendship of the fire service community.



(L to R): MN Chapter President Sean Flaherty, Former State Fire Marshal Jim Smith, and Chapter Vice Chair Jill Larson-Vito



Jim Smith and NFSA Fire Protection and Data Specialist Jon Nisja



**EARLY BIRD  
REGISTRATION  
CLOSES  
MARCH 15!**

## Maui Awaits!

Registration is now open for our 2024 Annual Seminar and Business & Leadership Conference at the beautiful Wailea Beach Resort in Maui!

**May 7-10, 2024**



Perfectly placed within steps of the ocean, **Wailea Beach Resort** offers scenic luxury in a stunning locale. Experience stylish comfort along the water's edge in beautifully appointed hotel rooms with ocean-inspired décor, mini-refrigerators, plush bedding and high-speed Wi-Fi.

This gorgeous resort boasts 4-star amenities like a modern fitness center, championship-level golf courses and a tranquil spa.

Ignite your senses with diverse dining options, private floating cabanas and a vibrant luau show. Refresh in the sparkling waters of five pools, featuring the longest hotel water slide in all of Hawaii. Punctuate your day with a relaxing evening on your large balcony or oversized lanai, and enjoy stunning views, including vibrant Maui sunsets and an occasional humpback whale!

Use the convenient QR code to register:



# SPRINKLERING OF NEWS

## ■ America's Fireboat Fire Fighter Begins Essential Preservation Efforts

The Fireboat *Fire Fighter* Museum announced that preservation efforts for the fireboat are officially underway. Now in her 85th year, the iconic fireboat is undergoing extensive renovations to return the vessel to her original glory.



Escorted by the United States Coast Guard, as well as local fire departments, a four-person crew sailed *Fire Fighter* from her home at the Mystic Seaport Museum in Mystic, CT to the Goodison Shipyard in Quonset Point, RI.

Although these preservation efforts are now underway, additional fundraising is still needed to complete the capital improvements, as well as to cover ongoing operational expenses. Companies within the fire protection industry are being sought to underwrite the remaining costs with donations and / or gifts in kind. Examples include a new fire suppression system for the engine room to

fight diesel and electrical fires, a ship detection system for fire / smoke, intrusion, power loss, engine room temperature high water, heating unit monitoring, and the installation of permanent deck fire capabilities.

For over seven decades, this fire service icon safeguarded the New York Harbor. During World War II, *Fire Fighter* stood ready as ammunition-laden boats left for Europe, providing courageous service on famous rescue missions including the fire and capsizing of the SS *Normandie* and the massive munitions ship *El Estero* fire. Following the attack on 9/11, the fireboat was tasked with the greatest challenge of her career – pumping water from the Harbor after the Twin Towers collapsed and all water hydrants were crushed. *Fire Fighter* and other FDNY Marine Units were the sole source of water for firefighting efforts at Ground Zero. And in 2009, toward the end of her active career, she participated in the rescue of US Airways Flight 1549 passengers after its emergency landing in the Hudson River.

In addition to donations, volunteers are needed in the Quonset Point, RI area for organizing, cleaning, polishing, painting, electrical and mechanical tasks that do not require specialized tools and skills. To learn more about volunteer opportunities, please contact Charlie Ritchie President and Director of the *Fireboat Fire Fighter Museum* at [ceritchie1@aol.com](mailto:ceritchie1@aol.com).

Visit *Fire Fighter's Facebook page* at <https://www.facebook.com/groups/americasfireboat/> for regular preservation updates and information. *Fire Fighter* is expected to be operational and returned to Mystic, CT for tours and events in Spring 2024.

## ■ Viking's Environmentally Sustainable Oxeo Extinguishing System

Viking Group, Inc. is pleased to offer the expanded Oxeo Extinguishing System, an exclusive inert gas solution for high-challenge fire scenarios due to its use of nitrogen or argon. These two naturally occurring components of the ambient air leave no residue on sensitive electronic equipment and thus result in no secondary damage, making them well-suited for data centers, archives, evidence storage, turbines, diesel generators, and much more.



Oxeo Extinguishing System is cULus Listed and FM Approved to protect Class A, B and C fires, and is suitable for protection of Class D fires due to its use of argon. With tank capacity options ranging from 30, 80 and 110L, 2,901 psi (200 bar) or 4,351 psi (300 bar) pressure ratings, and system options for both pressure reducing and constant flow, Oxeo provides the industry with electronically non-conductive inert gases that result in no environmental impact.

To learn more about Viking Special Hazards products including the Oxeo Extinguishing System, visit [www.vikinggroupinc.com](http://www.vikinggroupinc.com) or contact your local Viking SupplyNet distribution center.

### ■ UL Listed K28 Specific Application ESFR Glass Bulb Added to Viking's Storage Sprinkler Lineup

Viking Group, Inc. is excited to announce the latest addition to its storage portfolio: the VK5141, a K28 Specific Application ESFR glass bulb pendent sprinkler. With a UL Listing for ceiling heights up to 48 ft. (14.6 m), the VK5141 suppresses high-challenge fires in storage areas.

The VK5141 is a K28 sprinkler intended for use in buildings utilizing wet systems and has a maximum working pressure of 175 psi (12 bar). This sprinkler features a threaded 1" NPT (25 mm BSPT) connection and is available in a brass finish at temperature ratings of 155°F (68°C) and 200°F (93°C). New VK5141 sprinklers are available for use with revolutionary InstaSeal® technology and will feature Torque-Assist caps for compatible applications! Simply hand tighten the sprinklers to save time and money – no thread tape, pipe dope or sealants needed.

To learn more about Viking's ESFR Sprinklers including the VK5141, visit [www.vikinggroupinc.com](http://www.vikinggroupinc.com) or contact your local Viking SupplyNet distribution center.



### ■ SFPE Foundation Awards Research Grants on Li-Ion BESS Fires, Fire Testing of Resilient & Sustainable Building Materials, and the Interface Between Digital Buildings and Fire Service Operations

SFPE Foundation proudly announces the funding of research into several projects in alignment with its commitment to the Grand Challenges Initiative research agenda.

#### PROJECT TITLE:

**Environmental and Health Impacts of Thermal Runaway Events in Outdoor Lithium-Ion Battery Energy Storage System (BESS) Installations**

#### Project team:

Jamie McAllister (PhD, PE) of FireTox LLC is the principal investigator, with Brendan McCarrick (PE), and Zeldia Zhao also on the project team.

The aims of the project are to better understand the health and environmental aspects of li-ion BESS fires such as products of combustion, factors that influence propagation, and firefighting tactics. The project team will use this information to model li-ion BESS fire plume dispersion. They will then use the models to develop a risk analysis of the health and environmental impacts of such fires.

#### PROJECT TITLE:

**Fire Testing of Resilient and Sustainable Building Materials**

#### Project team:

Principal investigator Prof. Richard Walls (PhD, MSc, BScEng, GDE, BTh, PrEng), Dr. Natalia Flores-Quiroz (PhD, MSc, BScEng), and Yohannes Shewalul (MS, BS) of Stellenbosch University, with Carlo Kuhn of Ignis Testing, and a to-be-hired postdoctoral researcher.

The objectives of the project are to identify the sustainable building materials being used in construction, the fire testing methods being used for those materials, and potential fire risks that are not addressed in existing testing methods with further experimental fire testing. In addition to advancing the GCI research agenda, the project also contributes to the Resilience/Sustainability and Building Fires threads of the SFPE Research Roadmap.

#### PROJECT TITLE:

**The Interface Between Digital Buildings and Fire Service Operations**

#### Project team:

Dr. Nils Johansson of Lund University will serve as project leader. He is accompanied by Dr. Enrico Ronchi of Lund University and Dr. Katelynn Kapalo of the Western Fire Chiefs Association's Applied Sciences Center for Resilience Studies.

The primary goal of this research project is to study the flow of digital information from smart buildings to the fire service and how it can be optimized. A specific interest is the integration of data from tools for Smart Firefighting and their usage by incident commanders.

Additional information about the SFPE Foundation, its Grand Challenges Initiative, and the public comments on these four papers is available at [sfpe.org/foundation](http://sfpe.org/foundation).

### ■ Fayette Pipe Introduces Schedule 80 Black Steel Pipe

Fayette Pipe has announced the launch of its USA-made ASTM A53 Type E Grade A ERW XH Schedule 80 black steel pipe for steam, water, gas, or air lines.

Fayette's extra heavy Schedule 80 is available in diameters of 1/2" to 1-1/2" and from 10' up to 21' in length in plain, threaded, and coupling ends. It is suitable for welding and threading. Schedule 80 is ready for shipment anywhere in the continental United States.

All Fayette Pipe products are hydrostatic and nondestructive electric tested to ensure the highest quality. The company also manufactures Schedule 10 and 40 American-made and melted black steel pipe, used in fire sprinkler, HVAC, and low-pressure plumbing applications. It also produces a variety of black carbon

# SPRINKLERING

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and zinc-plated pipe nipples and fittings under the Fayette Nipple brand.

*Schedule 80 submittal data sheet is available at [www.fayettepipe.com](http://www.fayettepipe.com)*

## NEW Victaulic VicFlex™ Series GH1 Flexible Fitting



The Victaulic VicFlex™ Series GH1 is a grooved-end flexible fitting designed for quick installation around obstacles and offsets. This FM-Approved and UL-Listed braided hose is available in 24", 36" and 48" lengths and comes in a variety of diameters ranging from 1¼ – 4".

The Series GH1 also offers a 1" IGS™ option that includes captured couplings on both ends of the hose and comes in 25", 30", 42", 54" and 66" lengths. With industry trusted VicFlex technology, the Series GH1 eliminates the need for complicated hard pipe configurations and simplifies connections in difficult spaces.

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**An Unbeatable Team!**

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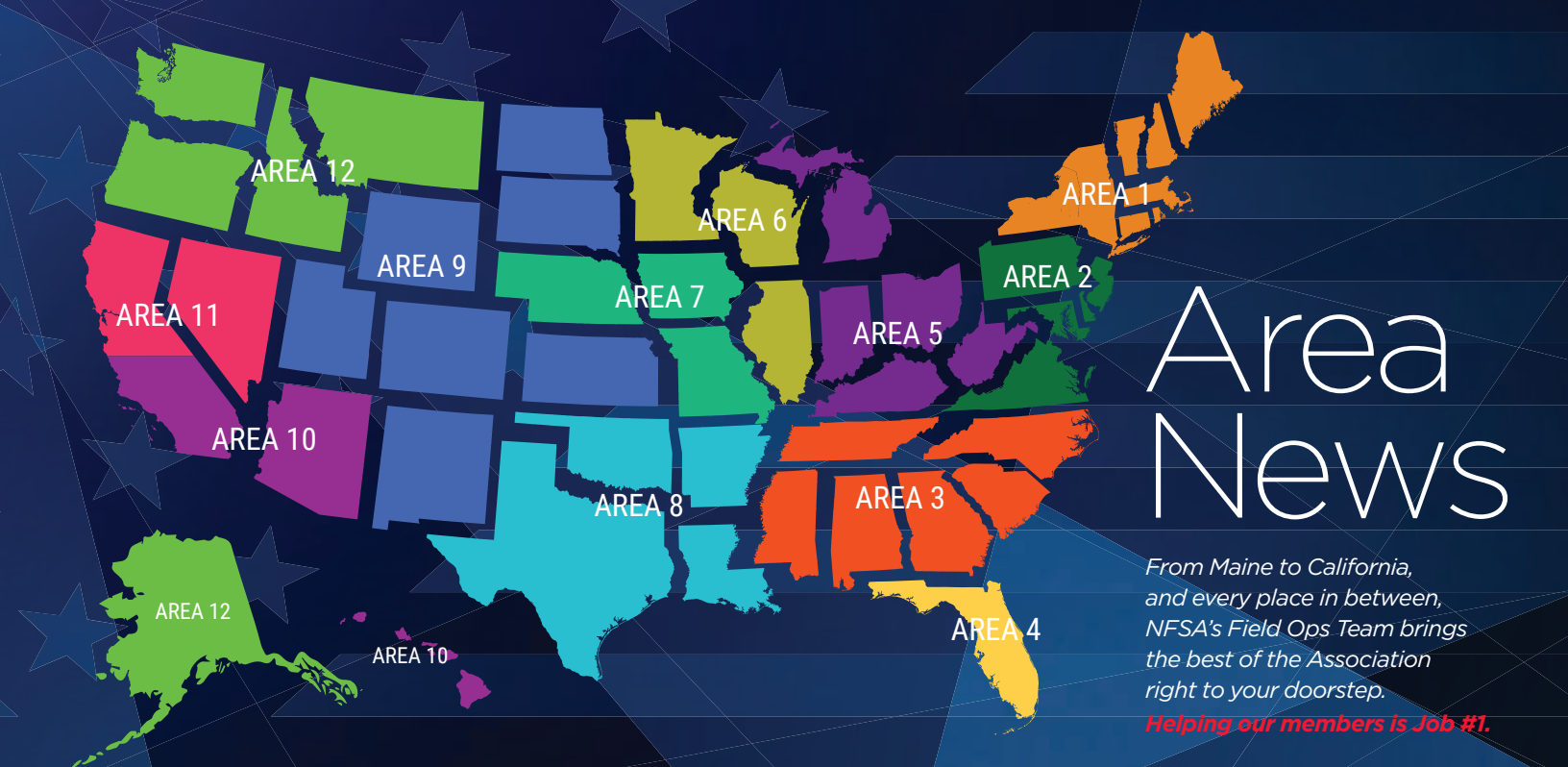
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# Area News

*From Maine to California, and every place in between, NFSA's Field Ops Team brings the best of the Association right to your doorstep.*

***Helping our members is Job #1.***

## AREA 2

DELAWARE, MARYLAND, NEW JERSEY, PENNSYLVANIA, VIRGINIA, DISTRICT OF COLUMBIA

### Cutting-Edge Valve Trailer Now in Mid-Atlantic Region

The NFSA Mid-Atlantic Team proudly assumed custody of its cutting-edge valve trailer, marking a significant addition to the team's array of assets. Measuring an impressive 31 feet, this state-of-the-art trailer features a rear burn cell designed for live fire sprinkler burn demonstrations, incorporating four standpipes and a sophisticated 13D fire sprinkler system complete with a pump and tank.



The standpipes, comprising wet riser, dry riser, and protection riser, showcase the trailer's versatility. Moreover, the fourth riser showcases six meticulously integrated pressure reducing valves, demonstrating the trailer's multifunctional capabilities. A fully operational fire protection prop, the trailer is equipped with a functional Fire Department Connection, underscoring its practicality.



Designed with precision, the trailer serves as an invaluable tool for training Authorities Having Jurisdiction and firefighters. Its

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primary purpose extends beyond mere training, as it also serves as an educational platform for the public. The NFSA Mid-Atlantic Team envisions leveraging this sophisticated apparatus to impart essential knowledge on how to effectively interact with life-saving equipment. Through this initiative, the team seeks to elevate awareness and understanding of fire protection measures, reinforcing its commitment to public safety and emergency preparedness.

**AREA 6**

ILLINOIS, MINNESOTA, WISCONSIN

**Wisconsin Sprinkler Save-Arson Fire Controlled by Sprinkler System**

December 26, 2023/Sparta, WI



A teenager has been arrested in connection to a fire that started inside a Sparta Walmart. The Monroe County 911 Communications Center received several 911 calls around 10:40 a.m. Tuesday reporting a fire inside the Walmart. The Sparta Fire Department and Sparta Police Department responded and found an active fire inside. The store was evacuated, and the fire department worked to put out the fire, which was controlled by the store’s fire sprinkler system.

**Illinois Fire Sprinkler Inspectors License**



As part of Illinois Statute 225 ILCS 317 Fire Sprinkler Contractor Licensing Act, part 109 Fire Sprinkler Contractor and Inspector Licensing, new and updated for 2023, were required to reflect changes within the Act. This includes a fire sprinkler inspector license. This part of the statute took effect on January 1, 2024. The rules governing this license were effective December 6, 2023.

Any individual that inspects or tests a fire sprinkler system will need a Fire Sprinkler Inspector License issued by the Office of the Illinois State Fire Marshal. This does not relate to installation/acceptance as per NFPA 13, 13R, 14, 15, 16, 20, 22, etc. The OSFM has been flooded with inspector license applications and they are asking local fire marshals and inspectors to delay enforcement until the end of March. The Fire Marshal’s office will focus on processing the applications and on education to both the fire sprinkler industry in Illinois and the AHJs.

The office attended the January Illinois Chapter meeting to answer any questions that the Chapter members had. In attendance was Fire Prevention Division Manager Jeff Rath, Garry A. Grugan, Fire Safety Compliance Manager, and Jeph Bassett, Sprinkler & Fire Equipment Licensing Compliance Specialist. The applications can be accessed by going to the Illinois State Fire Marshals website under the fire prevention division tab.

*For more information please contact NFSA Illinois State Coordinator James Brown at [jbrown@nfsa.org](mailto:jbrown@nfsa.org).*



## AREA 8

ARKANSAS, LOUISIANA, OKLAHOMA, TEXAS

### Oklahoma Department of Labor Licensing

NFSA and OFSA are teaming up to assist the Oklahoma Department of Labor to review and update the Licensing test for Oklahoma Fire Sprinkler Technicians and Inspectors. NFSA's ITM Specialist Vince Powers is serving on the Oklahoma Department of Labor Career Tech Test Committee.

### Oklahoma Legislation 2024

NFSA is monitoring the following Oklahoma Legislative Bills that were introduced in 2023 and carried over to the upcoming 2024 Legislative Session.

- **SB 652 - Professions and occupations; adding nonprofit organizations to exclusions.**

Bill Analysis SB 652 exempts any nonprofit organization and its volunteers performing plumbing installations, mechanical installations, or electrical installations for a single-family dwelling unit from the provisions of the Plumbing License Law of 1955, Mechanical Licensing Act, and the Electrical License Act, respectively.

- **SB 387 - Sales Tax Exemption for Certain Goods and Services for Construction of Nonprofit Facility**

SB387 provides a sales tax exemption for sales and services consumed for the construction of a facility placed in service in 2023. The exemption extends to any person, entity, contractor, or subcontractor that has entered into a construction contract with the organization building the facility. For purchases and services consumed prior to the effective date of the act, the Oklahoma Tax Commission is directed to issue refunds to the purchasers in the full amount of sales tax paid.

### OFSA - Oklahoma Fire Sprinkler Association 6th Annual Boondoggle

April 3-5, 2024, Tulsa, OK

Registration for the OFSA Annual Boondoggle is now available on the OFSA.info website. Golf will take place April 3rd, 2024, followed by continuing education and a vendor show. Continuing Education will include NFSA's Inspection & Testing for Fire Sprinklers: Thursday - Friday, April 5th, 2024.

### New Louisiana State Fire Marshal Appointed by New Louisiana Governor Jeff Landry

A message from State Fire Marshal Bryan J. Adams:

*"As I embark on my role as the Louisiana State Fire Marshal, I am grateful to Chief Dan Wallis for his exemplary leadership and unwavering dedication. Chief Wallis has set a high standard and paved a remarkable path for the Office of State Fire Marshal. Our commitment remains steadfast in revitalizing the trust and*

*collaboration that has long been the cornerstone of the Louisiana Fire Service. We are resolute in our pledge to continue being the supportive partner that we have always been. I am deeply appreciative and honored by the opportunity extended to me by Governor Jeff Landry. With 43 years of involvement in the Louisiana Fire Service, I eagerly anticipate the challenges that lie ahead. I am wholeheartedly dedicated to elevating both the office and the Louisiana Fire Service to new heights."*

Bryan Adams' career in fire and emergency management service spans over 40 years. He has also served in a variety of roles in state and local government with experience in risk management, budget management, human resources, and information technology. Bryan is currently a commission member of the Louisiana Fire & Emergency Training Academy and has been a huge part of the transition of that program to the Office of State Fire Marshal. Bryan was appointed as the recovery officer for several Hurricanes that impacted Jefferson Parish and Louisiana including Hurricane Katrina, Rita, Gustav, Ike and most recently Hurricane Ida. He also served as the logistics coordinator for the BP oil Spill in Grand Isle and the 2016 Baton Rouge Flood. Bryan resides in Westwego, Louisiana.

*Area 8/NFSA South Central Regional Manager  
Cindy Giedraitis, cindy@nsfa.org/979-324-8934*

## AREA 12

ALASKA, IDAHO, MONTANA, OREGON, WASHINGTON

### Northwest Update:

The 2024 legislative session is well underway in Alaska, Idaho, Oregon, and Washington. As of the deadline for this article, several sprinkler-related bills have been introduced, including a new rule to strengthen the penalty for not complying with adopted building coded in Idaho, new guidance for fire protection for pet care penalties in Washington, and changes to Washington's contractor licensing and certification rules. Northwest NFSA members should watch their inboxes for updates and opportunities to participate.

NFSA is partnering with the Washington State Association of Fire Marshals for a series of classes throughout 2024. Topics include fire sprinkler and alarm plan review, and an in-class and hands-on pumps class, and a seminar on sprinkler selection as well as other topics. NFSA members receive a discount; register on the WASFM website.

The 2024 dates are set for the quarterly Washington State Residential Fire Sprinkler Coalition "Best Practices Forums" via Microsoft Teams. All contractors, fire and building officials are invited to join the open discussion. The forum focusses on issues that face stakeholders as we work for more efficient, cost-effective installation of residential fire sprinkler systems. If you have any questions or would like to be added to the invitation list, please contact Northwest Regional Manager Suzanne Mayr. •



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