



# FIRE BUCKET



April 2020

A publication of the Central Ohio Chapter of the Society of Fire Protection Engineers

[SFPECOC.Webs.com](http://SFPECOC.Webs.com)

## Next Meeting

Due to the Corona Virus we will be cancelling our May Meeting.

We hope to resume Chapter meetings in September.

## Future Meetings

June 26, 2020 – Phil Gentile Golf Outing

We will provide information soon on if we can hold this year's golf outing.

## Burn Center Outing

The 31<sup>st</sup> annual Burn Center golf outing is planned for Monday, September 28, 2020. We will be returning the Medallion County Club in Westerville, OH.

Details will be available soon.

## NFPA Conference and Expo 2020

[Source: NFPA](#)

NFPA has made the difficult decision to cancel the 2020 NFPA Conference & Expo® scheduled for June 15-18 in Orlando.

Although this is an important event for NFPA and its stakeholders, at this time, the world continues to be significantly impacted by COVID-19, and it will not be possible to host and conduct this event in Orlando in June. The well-being of our attendees, exhibitors,

business partners and staff is of utmost importance to us.



[Watch NFPA President and CEO Jim Pauley's announcement, or read the full statement below.](#)

## New Video Outlines Fire Safety Considerations For Hand Sanitizer

[Source: NFPA](#)

If in the past few weeks you've visited any store that typically sells hand sanitizer, you've likely had no luck finding it. Faced with COVID-19 fears, frantic shoppers have snatched up every last bottle of hand sanitizer along with the rest of the

disinfectant wipes, sprays, and toilet paper. To meet the surge in hand sanitizer



demand, some businesses already versed in the world of alcohol, like breweries and distilleries, are shifting their production capabilities to crank out hand sanitizer instead of booze.

The problem with that, safety experts have warned, is it could create a fire hazard, especially when large amounts of hand sanitizer are being stored in areas that weren't

designed to hold such a highly flammable product. While most hard liquor clocks in at 40 percent ethanol by volume, hand sanitizer ranges from 60 to 95 percent. "They may have introduced things that compromise previously put in place protections," Guy Colonna, director of NFPA's Engineering Technical Services division, says in the video.

When more than 5 gallons of hand sanitizer is being stored, the provisions found in NFPA 30, Flammable and Combustible Liquids Code, apply. These provisions require, for example, storage in a flammable liquids cabinet or in an area protected by an automatic sprinkler system, depending on how much liquid is being stored. [NFPA Video](#)

**Paper Mill Explosion**

[Source: WMTW](#)

Incredible video of a paper mill explosion in Maine. Video was recorded on a semi-truck dash cam. *Language warning.*

[Explosion Video](#)



Jay, Maine — The quick actions of workers at the paper mill in Jay are being credited with limiting the damage caused by Wednesday's large explosion, according to investigators.

A digester at the mill exploded, sending a plume of wood fiber, water and pulping liquor into the air.

The Maine Fire Marshal's Office said Investigators interviewed several mill employees who were in the immediate vicinity of the digester when it exploded, and although

debris came very close to the building they were in, all escaped without injury.

Despite the severe damage, several of those mill workers manually shut down valves to prevent further damage after the explosion.

**The Life Safety Lessons Learned From COVID-19 Should Be Applied, Not Forgotten**

[Source: NFPA](#)

By Jim Pauley, President And CEO, NFPA

For some time now, the world has been navigating uncharted territory. The fluidity of the coronavirus pandemic has been significant and swift, and its impact will be felt for quite some time.

Without question, dealing with COVID-19 has been daunting, but on a somewhat surreal level – it has been strangely familiar for an organization that has worked for nearly 125 years to reduce risk and address emerging hazards.

Our staff and stakeholders have been working to keep those on the frontline, as well as a wide range of workers, businesses, elected officials and private citizens informed with real world, timely safety guidance. The relevant resources that we have developed lately could not have taken shape without key insights, feedback, and interest from our members, committee representatives, and the many organizations with whom we collaborate on a regular basis.

If there is a silver lining to these harrowing times, it is that more people will have a better understanding of what's required to truly ensure public safety. If we are lucky, the most enduring aspect of the coronavirus will be that it helps us to solve not only the life safety concerns that most people never considered before but also the ones for which complacency has set in.

Only time will tell if the challenges and opportunities that surfaced during these dark days will, in fact, be applied or ignored in the years ahead. Here are some considerations - some successes, others continued hurdles – that we need to recognize and assess:

**Emergency Preparedness.** After another historic tragedy, the 9/11 Commission and the US Department of Homeland Security recognized NFPA 1600®, Standard on Continuity, Emergency, and Crisis Management, as the US National Preparedness Standard®. Available at no cost, this document offers valuable guidance for reducing harm and developing contingency plans. There is no shortcut to preparedness.



**Responder Safety.** Emergency responders are on the frontlines every day. Low levels of PPE, poor testing access, infection control inefficiencies, EMS impact, and insufficient funding, among other occupational obstacles, have made responders' roles and responsibilities all the more arduous. First responders need the tools and resources to do their jobs as safely and effectively as possible.

**Healthcare.** The demands being put on medical facilities and personnel challenged code officials, health care providers, trade workers, accrediting organizations and NFPA to work together to find quick, creative solutions while maintaining basic fire and life safety benchmarks. Collaboration is critical in times of crisis.

**Building and Life Safety.** Commercial buildings sit empty and new construction has come to a grinding halt, while multi-unit residences and single-family homes are full. Despite shifts in occupancy and functionality, the need for fully operational fire and life safety systems remains constant. Ignoring the codes in place for doors, hallways, and stairwells or overlooking the safety systems in buildings under construction is shortsighted. Safety must always be at the forefront.

**Fire Protection Systems.** Inspection, testing and maintenance (ITM) is paramount in the built environment; those who work in this space should be deemed essential while this virus plays out. Innovative technologies like remote video inspection should be used to ensure that adequate levels of maintenance can be performed on schedule.

**Code enforcement.** Long before COVID-19, authorities having jurisdictions (AHJs) were overburdened by occupancy inspection requirements. With all the modifications and associated risks that have surfaced lately, that burden has morphed and grown. We can't lose sight of occupancy complications or the emerging hazards that code officials struggled with in recent weeks, such as storage of large quantities of sanitizer, big box stores locking exits to thwart hoarders, and overcrowding airport terminals, to name a few.

**Policy and procedures.** Elected officials struggled to identify a systematic procurement approach, a distribution process, or defined pandemic policy. If we cannot ensure that firefighters, EMS and law enforcement have adequate access to the resources they desperately need, first responders will be ill-equipped when safety is on the line.

**Public education.** NFPA research shows that cooking and heating are among the top causes of home fires. With more people quarantined and cooking amid distractions, and in some cases, residents looking for alternative ways to warm their homes due to financial constraints, we reminded the general public about the importance of working smoke alarms, home escape planning, and other safety guidance. There was a far greater appetite for this information than usual. Everyone plays a role in safety.

**Community Risk Reduction.** Given the upheaval in our world today, community leaders need to preemptively assess what risks they have in their communities and develop plans that direct resources towards solutions before disaster strikes. As more towns, cities and counties embrace the true concept of Community Risk Reduction, we will have better outcomes in safety.

**Ecosystem.** Each of the life safety struggles and opportunities that I mentioned here are components of the Fire & Life Safety Ecosystem – a system that minimizes risks and relies on collaboration. The Ecosystem calls for a culture of best practices and stakeholder accountability; and serves as the blueprint for rebuilding our global safety infrastructure.

As the world continues to grapple with COVID-19, NFPA will continue to generate insights and tools that address responder safety, emergency planning, as well as building, fire and life safety issues.

The concerns and considerations highlighted above are addressed in greater detail in recent blogs found on [www.nfpa.org/coronavirus](http://www.nfpa.org/coronavirus).

## **2021 BOARD OF DIRECTORS AND NOMINATING COMMITTEE**

SFPE (National) is currently seeking applicants to serve in the following leadership positions on its Board of Directors beginning in 2021 as well as its 2021 Nominating Committee.



President-Elect (1)  
Secretary-Treasurer (1)  
Directors (4)  
Nominating Committee Members (3)  
Desired Qualifications of Board Members (from SFPE Standing Rules)

Those interested in serving on the 2021 Nominating Committee must complete and submit the Nominating Committee Application Form with a color head shot photo to be included on the ballot, if selected as a candidate.

Board Director and Nominating Committee forms must be sent to Maxine Katz at [mkatz@sfpe.org](mailto:mkatz@sfpe.org) no later than May 19, 2020. They will be sent to the 2020 Nominating Committee for review and their selections will be put on the ballot this fall.

For more information, visit the [SFPE website](#).

## **SFPE Webinars**

SFPE offers a variety of training webinars. The webinars are free to SFPE (National) members. Non-members can pay a relatively small fee to attend. Upcoming seminars include:

- Specific Application Window Sprinklers - Thursday, April 23, 2020
- PoE, A Digital Extension Of Architectural And Engineering Evolution: An Overview Of Tentative Applications On Fire - Monday, April 27, 2020
- PE Licensure - How and Why? - Monday, May 4, 2020
- Vent to Prevent Corrosion: NFPA 13 Guidelines for Air Venting in Wet Fire Sprinkler Systems - Wednesday, May 6, 2020

[For a complete list of Webinars click here.](#)

## **Fires by occupancy or Property Type**

[Source: NFPA](#)

NFPA has released a tool to find the estimated average number of fires, civilian deaths, civilian injuries, and direct property damage resulting from fires per year for incidents reported to local U.S. fire departments during the five-year period of 2014-2018.

Below is the data for Structure Fires.





**RESEARCH**

Select a Type of Fire  
 Outside or Unclassified Fire  
 Structure Fire  
 Vehicle Fire

Number of Fires Reported to Local Fire Departments in the United States by Property Use: 2014-2018 Annual Averages

Major Property Class (click here to expand)	Fires	Civilian deaths	Civilian injuries	Property loss
1 - Assembly	15,984	14	176	\$333,380,930
2 - Educational	4,763	1	50	\$64,628,767
3 - Health Care, Detention & Correction	6,719	5	156	\$56,766,880
4 - Residential	382,399	2,746	11,477	\$7,561,851,557
5 - Mercantile or Business	18,972	15	282	\$849,120,202
6 - Industrial, Utility, Defense, Agriculture, Mining	2,925	2	36	\$230,102,755
7 - Manufacturing, processing	5,270	3	167	\$509,513,456
8 - Storage	22,401	32	299	\$637,147,702
9 - Outside or special property	27,418	19	113	\$135,960,099
Unclassified or unknown property	6,946	7	56	\$80,039,075
<b>Grand Total</b>	<b>493,797</b>	<b>2,844</b>	<b>12,812</b>	<b>\$10,458,511,401</b>

[NFFPA Fires by occupancy or Property Type Tool](#)

**5 common causes of industrial fires and explosions in 2020**

[Source: Industrial Safety & Hygiene News](#)

March 25, 2020  
 Kayla Matthews

Industrial fire safety is a necessary part of any industrial warehouse and manufacturing plant, though fires and explosions vary from causes and severity. As industrial fire protection standards improve each year, safety and health professionals want to ensure the best practices on how to prevent fires and explosions. Something like combustible dust is a well-known cause of fires and explosions. However, there are several other sources for fires as well. With each cause will come different steps for protection.

**1. Hot work**

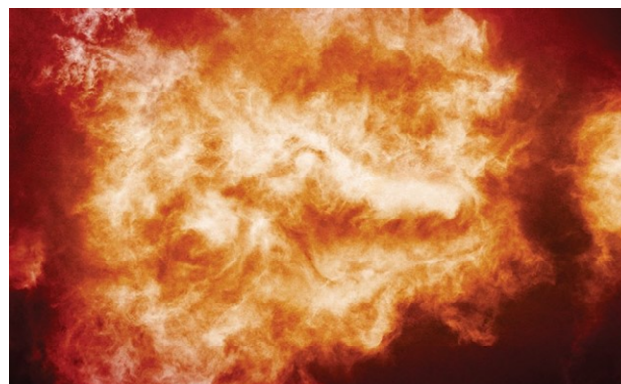
Hot work encompasses tasks like welding, sawing and drilling — anything that involves sparks or is a potential source for ignition. Fires and explosions can start from hot work when the sparks disperse and ignite any flammable items or substances nearby.

For instance, in 2014, a welder's torch ignited several fires that resulted in injuries and fatalities. To prevent hot work fires, professionals should try to opt for any alternative methods when possible. This choice isn't always feasible, so training and clearing the area of flammable things during hot work will help.

**2. Electrical**

Electrical hazards occur with exposed wiring, overloaded outlets or circuits and extension cords. These instances make for easy ignition. From 2011 to 2015, electrical issues accounted for 24% of structural fires — the highest percentage of all causes. Throughout these years, there were 37,910 fires annually.

Prevention of electrical fires requires proper distribution of power, no overloading of any outlets and keeping extension cord use to a minimum. Electrical components require standard maintenance as well.



**3. Machinery**

Any machinery that operates frequently or extensively can potentially be a fire and explosion hazard. Due to the friction of moving parts in machines and operations, these items can cause fires. The elements can also jam and cause an explosion.

One example of how to take industrial safety measures is with chillers, which can prevent explosions or fires. These chillers will use a refrigerant to transfer heat away and outside. Cleaning and maintenance will also help reduce machinery fires.

**4. Vehicles**

Vehicles can run into similar fire and explosion risks as machinery. Some industrial and manufacturing vehicles break down due to poor maintenance or accidents. Overall, vehicle fires contributed to 9% of manufacturing and industrial fires every year from 2011 to 2015.

These statistics still hold true in 2020. Vehicle fires, and industrial fires, in general, are a significant problem within the manufacturing and production sector. Proper maintenance and operation of these vehicles can reduce risks.

**5. Gasses and liquids**

Some gasses and liquids are inherently flammable. Things like crude oil, rocket fuel and other toxic fluids can easily ignite in a warehouse. Gasses, too, become significantly more dangerous when in contact with a source of fire.

In 2010, a Middletown, Connecticut power plant faced a gas explosion that caused five fatalities. To prevent explosions and fires like these, employees must understand the ideal storage for liquids and how to handle gasses properly. They must always have control over ignition sources as well.

**Safety measures to prevent fires and explosions**

With each of these areas of risk, proper protection is a top priority. They may all require different forms of protection from eyewear, headwear, gloves and more. Employees will also need the right tools to successfully accomplish each task safely.

Proper training is another important step. Safety increases when employees have a full understanding of their responsibilities and operations. Frequent maintenance will reduce fire and explosion risks, too. Inspections and analyses will help organizations understand what needs updating or replaced. Procedures and protocols are also invaluable. Professionals should create physical and digital versions of every workers' operations so that they have easy access. Then, with knowledge of protocols in emergencies, employees will know how to work efficiently to contain risks.

**Davis Love III's home destroyed**

[Source: Golf Channel](#)

Davis Love III's St. Simons Island, Georgia, home was destroyed by a fire early Friday. The 21-time PGA Tour winner and wife, Robin, were not injured in the blaze.



“While everyone in our family is saddened at the loss of our home that was filled with so much laughter and incredible memories, we’re very blessed that everyone is safe and unharmed,” Love said in a statement.

The Loves were at home when the fire began and called emergency officials at 5:18 a.m. ET. Three fire engines responded to the incident but were unable to bring the fire under control.

“We’re very thankful to the first responders who made a valiant effort to save our home, and we’re keeping things in perspective as people across our community and around the world are struggling with the current unprecedented health crisis,” Love said.

**The hidden dangers in firefighting foam**

[Source: US Fire Administration](#)

Per- and polyfluoroalkyl substances (PFAS) are a large family of man-made chemical compounds found in a wide range of consumer products such as nonstick products, polishes, waxes, paints and cleaning products. Two PFAS compounds, perfluorooctane acid (PFOA) and perfluorooctanesulfonic acid (PFOS), may be present in firefighting aqueous film forming foam (AFFF) solutions.

**Dangers**

Certain PFAS can accumulate and stay in the human body for long periods of time. Long-term exposure to PFAS/PFOA/PFOS, in high concentrations, causes a buildup in the body. This buildup may have negative health effects like a risk of thyroid disease and testicular, kidney and bladder cancers.

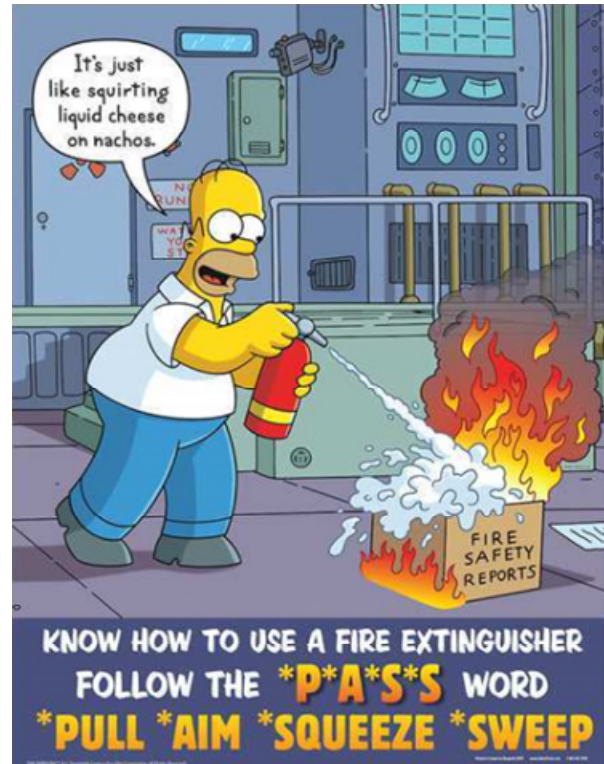


**Protection against exposure**

PFAS/PFOA/PFOS may be orally ingested, absorbed through the skin or inhaled through exposure in the atmosphere. Personnel at departments that use firefighting AFFFs with PFAS/PFOA/PFOS should practice the following controls to stay safe from exposure:

- Replace older AFFF stocks with fluorine-free foam solutions.
- Contain and manage AFFF and water runoff.
- Wear personal protective equipment (PPE) and a self-contained breathing apparatus (SCBA) whenever handling AFFF.
- Properly remove and bag contaminated PPE prior to transporting.
- Use cleaning wipes on your face, neck and hands immediately after exposure.
- Clean contaminated PPE and SCBA before its next use.
- Shower within one hour of returning to the station or home.

**Have You See This**



**Web Links**

SFPE Central Ohio Chapter  
[www.sfpecoc.webs.com](http://www.sfpecoc.webs.com)

Society of Fire Protection Engineers (National)  
[www.sfpe.org](http://www.sfpe.org)

American Fire Sprinkler Association  
[www.firesprinkler.org](http://www.firesprinkler.org)

ICC Website  
[www.iccsafe.org](http://www.iccsafe.org)

National Fire Sprinkler Association  
[www.nfsa.org](http://www.nfsa.org)

N.I.C.E.T.  
[www.nicet.org](http://www.nicet.org)

Ohio State Fire Marshal  
[www.com.state.oh.us/sfm](http://www.com.state.oh.us/sfm)

OSU Fire Safety Website  
[www.firesafety.osu.edu](http://www.firesafety.osu.edu)

Underwriters Laboratories  
[www.UL.com](http://www.UL.com)

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