



# PREVENTION

## Highlights

### Winterizing for Fire Safety

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- Workplace Fire Prevention & Survival

# PREVENTION Highlights

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### Our Mission

The Office of the State Fire Marshal (OSFM) is dedicated to protecting lives and property from the hazards of fire or explosion and will promote prevention, educational and investigative activities to mitigate incidents, promote life safety and deter crimes.

### The Fire Prevention Division

The goal of the Fire Prevention Division is to reduce the potential impact of fire and explosion hazards where people live, work and congregate (other than one- or two-family dwellings) through code enforcement, inspections, plans review, licensing, and public education.

### Prevention Highlights

Prevention Highlights is published quarterly to provide facility managers and others with information necessary to operate fire-safe facilities.

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Connect with us!



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# Edu-Note

by Shawn



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*As winter approaches, we must keep safety in mind. There are things that are not a concern the remainder of the year that must receive close attention during the colder months. In this issue Keller Fire has provided information on keeping your sprinkler systems thawed and flowing smoothly.*

*When it comes to safety in the workplace, we often overlook fire safety. Preventing and surviving a fire in the workplace requires quality and repetitive training. This training comes in the form of fire drills, fire extinguisher training and knowledge of facility's policies regarding fire safety. Taking this topic seriously can make the difference in the outcome of a fire in your workplace.*

*Sometimes the systems put in place to keep us safe from fire become inoperable. This can be due to a planned outage or a malfunction in the system. These systems not functioning properly may require a fire watch to be implemented. Knowing the steps and requirements to Fire Watch will allow all to remain safe in your facility until a time that your safety systems can be repaired.*

*The Office of the State Fire Marshal provides guidance for a multitude of topics in the form of our Fire Facts. Our site boasts over 60 Fire Facts full of useful material. These documents can be found on our website at [firemarshal.ks.gov](http://firemarshal.ks.gov).*

*If you have any questions or would like to set up a presentation, please send me an email [shawn.alexander@ks.gov](mailto:shawn.alexander@ks.gov).*

*—Shawn Alexander, Fire Prevention Staff Development Specialist*

## Congratulations, Mike Wikle!



Mike Wikle

Fire Prevention Inspector Mike Wikle was recently promoted to Supervisor in our Enforcement Division in Topeka.

Mike joined the OSFM in 2008 as a field inspector doing fire inspections in western Kansas. Prior to working at the OSFM, he spent 16 years as a volunteer firefighter/ EMT with the Rock Creek Township Fire

District Number 5 in Meriden.

He lives in Topeka with his wife and two dogs, Leo, (Little Pup), and Salvy (Chunky Monkey). He has two sons and three grandkids. When he is not working, he enjoys smoking and barbecuing meat, college football (OU) and kayaking and fishing.

"The new position is a good fit with my current skills and training I have obtained," Mike said.

**Congratulations, Mike!**

## Welcome to OSFM...



Evan DuVarney

The Office of the State Fire Marshal is pleased to welcome Deputy Boiler Inspector Evan DuVarney.

Evan's territory will include Area 1, which covers northwest and north central Kansas.

He comes to our office from Hadley Redevelopment and brings over 25 years of steam boiler experience with him.

He lives in Russell with his wife of 20 years, Cathleen, daughter, Neleh, and three dogs. He enjoys the outdoors and hunting.

**Welcome, Evan!**



# Fire Watch: What it Means for your Building, Staff, Occupants

If your building is required by fire code to have a fire safety system, you potentially will end up on fire watch. These systems include, but are not limited to, automatic fire alarms and automatic sprinkler systems.

You might be asking, “What is a Fire Watch?” According to the NFPA (National Fire Protection Association) The assignment of a person or persons to an area for the express purpose of notifying the fire department, the building occupants, or both of an emergency; preventing a fire from occurring; extinguishing small fires; or protecting the public from fire or life safety dangers.

Simply put, fire watch is a short-term, emergency measure intended to provide an acceptable level of life safety in a building that has an impaired fire safety system. It is critical to remember it is a compensatory measure only. It is intended to allow continued occupancy of a building or facility that may not be safe for building occupants during the time period required for implementing appropriate changes or repairs. The purpose of the fire watch is to check ALL areas of the building on a regular basis for fire/life safety emergencies and then to alert the facility occupants to take appropriate action as early as possible.

A fire watch should be implemented when certain conditions are discovered either by the facility or by other authorities. Examples of when a fire watch may be required by the Office of the State Fire Marshal (OSFM) include:

- ▶ Outage or significant impairment of the fire alarm signaling system for more than 4 hours in a 24-hour period
- ▶ Outage or significant impairment of the automatic fire suppression system for more than 10 hours in a 24-hour period.
- ▶ Outage or significant impairment of the facility water supply.
- ▶ Impairment of the facility’s exiting system NOT significant enough to warrant evacuation and shutdown of the facility.



If your facility is placed in fire watch, there are steps to take to ensure the requirements are met. These steps require a fire watch policy to be in place and all staff are familiar with it.

- ▶ Notify ALL staff and occupants (if appropriate) immediately.
- ▶ Notify the Authority Having Jurisdiction (AHJ) of the Fire Watch condition. The AHJ for all healthcare occupancies in the state of Kansas is the Office of the State Fire Marshal and can be reached at (785) 296-3401. Schools, colleges, and correctional facilities are also required to notify OSFM of fire watch conditions. The aforementioned occupancies must also notify their local jurisdictions of the Fire Watch condition.
- ▶ Fire watch shall be maintained during entire period of facility occupancy.
- ▶ Person(s) assigned to the Fire Watch SHALL HAVE NO OTHER DUTIES.
- ▶ Fire Watch plans include notification and communication procedures. Portable radios and cellular phones may be used to send an alarm to occupants and emergency response forces.

*Fire Watch continued on page 5...*



## Fire Watch continued from page 4...



- ▶ Fire Watch shall include ALL AREAS of the facility. Special attention shall be paid to storage areas, janitor closets, attics, utility spaces, and other normally unoccupied areas.
- ▶ Fire Watch rounds shall be continuous. However, all areas are to be checked at least hourly.
- ▶ Healthcare facilities, schools, colleges, and detention facilities must send a log of the Fire Watch round at the end of each shift until the situation is corrected. This is preferably done via email to [prevention@ks.gov](mailto:prevention@ks.gov).

Those assigned to perform a fire watch should be specifically checking, but not be limited to, the following:

- ▶ Potential fire ignition sources, including frayed electrical wires and improperly stored flammables.
- ▶ Fire extinguishers must be in their proper locations, undamaged, unobstructed, visible, fully charged, and operational, and bands that secure the pin shall be intact.
- ▶ Excessive trash, garbage, and combustible materials.
- ▶ Exits, stairwells and corridors must be clear of any obstructions that would impede emergency movement.
- ▶ Operation of illuminated exit signs (electrical or photo-luminescent) should be inspected.

- ▶ Self-closing doors should be examined to ensure they are not blocked or wedged and may close freely.
- ▶ Sprinkler systems (if active) must be inspected for possible sprinkler head obstruction, leakage, closed valves, or decreased pressure.

While it is likely a planned impairment will require you to be in fire watch at some point, it is possible to avoid most emergency situations. The best way to avoid an emergency impairment is consistent maintenance and testing. Ensuring you have all requirements met in this area is a huge step towards curbing breakdowns of your fire safety systems. Keep in mind, it is your responsibility to schedule and follow through with system maintenance and testing.

## Now Hiring!

The Office of the State Fire Marshal is looking to fill two open Deputy Boiler positions. These positions offer health insurance, retirement, paid holidays, as well as sick and vacation leave.

If you have a passion for protecting the lives and property of the citizens of Kansas, you are a hard worker and have a great work ethic, we are looking for someone just like you! Please visit the State of Kansas Jobs website at [jobs.ks.gov](http://jobs.ks.gov) to apply today!

**For a list of OSFM current job openings visit**  
<https://firemarshal.ks.gov/Jobs.aspx>



# Winterizing Fire Sprinkler Systems

By Craig Schraad  
Keller Fire and Safety

As temperatures drop and winter approaches, it's crucial to ensure that your fire sprinkler system is properly winterized. Freezing temperatures can lead to system malfunctions and damage, potentially putting lives and property at risk. This white paper provides a comprehensive guide on how to prepare your fire sprinkler system for winter conditions. We will discuss the importance of understanding your system, detecting and preventing freezing issues, and implementing maintenance practices to ensure the system's reliability during the cold months. Since most freezing issues occur in the attic, now is the time to perform these system checks while the attic temperatures are pleasant.

Keller Fire & Safety composed this article as a general informative guide with a Winterization Checklist provided after the conclusion. For a comprehensive analysis you should contact your current sprinkler contractor or call Keller Fire & Safety.

**I. Know Your System:** It is essential to understand your fire sprinkler system, how to shut it down, how to confirm if it's shut down, understand its zoning, and general understanding of how it operates. If you have dry pipes in your system, they are typically placed in unconditioned spaces such as attics. If dry systems are not properly drained, the sprinkler pipes may burst in the winter months when exposed to freezing temperatures. Additionally, if you have a sprinkler system with pipes full of water, they must not be exposed to freezing temperatures.

## Items to identify:

- ▶ Know the location of the sprinkler control room and how to shut down your fire sprinkler system.
- ▶ Understand how your fire sprinkler system is zoned and which valves control each area of the building.
- ▶ Determine if you have a dry system or an antifreeze system and know the area that it protects.
- ▶ Know the location of dry system pipes and ensure they are sloped to drain properly.
- ▶ Identify the location of your drum drip drains. Document their locations.
- ▶ Ensure that sprinkler riser room heaters operate properly and that dampers fully close when not activated.

Condensation is a significant reason dry pipe systems freeze. Even a properly operating dry system will accumulate water due to condensation, and many people underestimate the amount of water that can build up in a dry system once the weather gets cold. Think about a cold glass of your favorite beverage on a hot summer day

and how quickly condensation forms on the glass and eventually onto the table. Similarly, a dry sprinkler pipe in a cold attic will have condensation forming on the inside of the pipe. As the air compressor continues to pump warm air into the dry pipe, condensation continues to build and can easily produce enough water to freeze and burst a pipe if the water is not drained. To drain the system, two things need to happen:

- ▶ Drum drip drains must be emptied, and you need to know their locations so that you don't miss one.
- ▶ Dry pipes need to slope toward the drum drip drains and not have low spots that trap water. The slope of the pipes may change over time due to loose pipe hangers, settling roofs and foundations, resulting in pipes not flowing water to the drains. Pipes should be checked with a level to ensure proper drainage. Another reason for water accumulation in dry pipes is valve leakage. Drain points in the sprinkler rooms should also be included in the regular maintenance schedule. When temperatures drop, drum drip drains should be checked and drained every week.

**II. What to Look For:** The following is a list of issues that occurred last winter when temperatures plummeted to record levels.

- ▶ Sprinkler systems were exposed to cold outside air in several ways:
  - ◇ Mechanical and Sprinkler Riser Rooms
    - Louvers were stuck open allowing freezing air to hit the sprinkler pipes. When diesel generators are tested each month, the louvers open to provide ventilation. However, not all louvers closed properly, exposing the sprinkler pipes to freezing temperatures.
    - Heaters installed to keep the pipes warm were turned off. Many times, the heaters are on circuit breakers, and the breakers are turned off when people leave work, leaving the sprinkler piping exposed to freezing temperatures. Mark the circuit breakers and train employees on how heaters are wired.
    - Temperature switches are designed to turn the heater on when temperatures fall below a specific value. Test the sensors to ensure that they work.

Winterizing continued on page 13...



# WINTERIZATION CHECKLIST

## **Dry System**

- Checked for proper set-up of priming water level and air pressure per manufactures specific requirements
- Checked air compressor for proper operation
- Drained condensation from the air compressor tank
- Drained condensation from low point drains

## **Anti-freeze System**

- Inspected per NFPA 25 requirements
- Checked for proper set-up
- Checked freeze level of solution
- Replaced anti-freeze solution

## **Valve Room**

- Checked operation of heaters
- Checked that dampers are closed
- Checked for unprotected openings

## **Stair Enclosure**

- Checked operation of heaters
- Checked that dampers are closed
- Check for unprotected openings

## **Fire Department Connections**

- Check for water or obstructions in the connection
- Check automatic drip valve for proper functioning

## **Storage Tank**

- Checked tank heater for proper operations

## **Miscellaneous**

- Checked heat tracing for proper operation
- Checked integrity of pipe insulation
- Checked integrity of insulation over wet pipes in attics
- Checked fire pump test header for proper drainage
- Checked private hydrants for proper drainage
- Checked sprinkler systems drains and test valves for leakage.

# Fire Fact 080 — Fire Safety Book

*References (s): 06-IFC/901.6.2, K.S.A 31-133(a)*

Every facility will have some type of fire safety system, whether a smoke detector, a fire extinguisher, or a large building-wide system. These safety features must be tested on a regular basis to make sure they will work in the event of an emergency. Some tests and checks can be done by the facility owner/operator, and others must be done by licensed or qualified professionals. All maintenance and regular checks should be documented, and this documentation should be kept for at least 3 years. This includes documentation of drill records, maintenance and testing of alarms, emergency lighting, fire extinguishers, automatic sprinklers, and suppression systems. During an inspection, these records will be reviewed by the inspector.

One of the simplest ways to keep this documentation organized and accessible is to create a facility Fire Safety Book. This book should contain the information listed below. If a facility has more than one building, a Fire Safety Book should be kept at each building and a comprehensive book (containing documentation for all buildings) should be kept in a central location.

## **First Section**

Contains maintenance and testing documentation for emergency lighting, emergency generators, fire alarm and any detection systems, automatic sprinkler systems, standpipe systems, portable fire extinguishers, and commercial cooking suppression systems.

## **Second Section**

Contains fire and tornado drill records.

- Healthcare Facilities: 1 per shift, per quarter (Fire)
- School Facilities: 9 drills for each school year (4 Fire, 2 Tornado, 3 Crisis)
- Childcare Facilities: 1 per month (Fire) / 3 times per year (Tornado)

## **Third Section**

Contains copies of the OSFM inspection reports and Plans of Correction from the previous year. This section will include any additional requested documentation and approval correspondence.

## **Fourth Section**

Contains copies of emergency plans for evacuation.

## **Fifth Section**

Contains code footprint drawing certified by a licensed Kansas design professional for ALL new construction projects, as required by the KBFSH. This includes any project designed, proposed, under construction, or completed after September 1, 1997. This also includes copies of all additional documentation required for plan approval.



# Fire Fact 080 — Fire Safety Book

References (s): 06-IFC/901.6.2, K.S.A 31-133(a)

Listed below are the maintenance and testing documentation that must be available for review at the time of inspection.

The Office of the State Fire Marshal Inspector will provide the facility representative a listing of the documentation requirements during the entrance conference. The Inspector will provide a time frame estimate for when he/she will review documentation. Facilities must have all documentation ready for review at the specified time. Inspectors cannot wait for facilities to obtain copies of any missing paperwork.

We believe this chart will assist owners and operators in collecting and retaining testing and maintenance records. This will help bring facility compliance to the highest level of fire safety for the public occupancy and assembly of the citizens of Kansas.

|                         |                                  |                          |
|-------------------------|----------------------------------|--------------------------|
| <b>Emergency Lights</b> | <b>Fire Pump</b>                 | <b>Smoke Detectors</b>   |
| Monthly (30 sec)        | Weekly                           | Annual                   |
| Annual (90min)          | Monthly                          | Sensitivity Testing      |
| <b>Exit Signs</b>       | Annual                           | <b>Tornado Drills</b>    |
| Monthly (30 sec)        | <b>Flame Retardand Treatment</b> | 2 Times yr *             |
| Annual (90min)          | Documentation                    | <b>Crisis Drills</b>     |
| <b>Fire Alarm</b>       | Maintenance logs                 | 3 Times yr *             |
| Monthly                 | <b>Generator</b>                 | <b>Miscellaneous</b>     |
| Quarterly               | Weekly                           | Boiler Certificate       |
| Semi-annul              | Monthly                          | Code Footprint           |
| Annual                  | Annual Load (if required)        | Elevator Maintenance     |
| Battery                 | <b>Hood Suppression</b>          | Medical Gas System       |
| <b>Fire Dampers</b>     | Bi-Annual                        | <b>Facility Policies</b> |
| Test and Lube (4yrs)    | Cleaning                         | Evacuation Plans         |
| <b>Fire Drills</b>      | <b>Sprinkler System</b>          | Fire Procedures          |
| 1 <sup>st</sup> Quarter | Weekly (dry)                     | Fire Watch               |
| 2 <sup>nd</sup> Quarter | Monthly (Wet)                    | Generator Malfunction    |
| 3 <sup>rd</sup> Quarter | Quarterly                        | Power Strips             |
| 4 <sup>th</sup> Quarter | Annual                           | Portable Heaters         |
| Monthly                 | 5 yr Internal                    | Smoking Policy           |
|                         | Standpipe Hyrdo (5yr)            |                          |

\* Annotates a requirement for education facilities





# Clothes Dryer Safety

Doing laundry is most likely part of your every day routine. But did you know how important taking care of your clothes dryer is to the safety of your home? With a few simple safety tips you can help prevent a clothes dryer fire.

- Have your dryer installed and serviced by a professional.
- Do not use the dryer without a lint filter.
- Make sure you clean the lint filter before or after each load of laundry. Remove lint that has collected around the drum.
- Rigid or flexible metal venting material should be used to sustain proper air flow and drying time.
- Make sure the air exhaust vent pipe is not restricted and the outdoor vent flap will open when the dryer is operating. Once a year, or more often if you notice that it is taking longer than normal for your clothes to dry, clean lint out of the vent pipe or have a dryer lint removal service do it for you.
- Keep dryers in good working order. Gas dryers should be inspected by a qualified professional to make sure that the gas line and connection are intact and free of leaks.
- Make sure the right plug and outlet are used and that the machine is connected properly.
- Follow the manufacturer's operating instructions and don't overload your dryer.
- Turn the dryer off if you leave home or when you go to bed.

## AND DON'T FORGET...

Dryers should be properly **grounded**.

Check the **outdoor vent** flap to make sure it is not covered by snow.

Keep the area around your dryer **clear** of things that can burn, like boxes, cleaning supplies and clothing, etc.

Clothes that have come in contact with **flammable substances**, like gasoline, paint thinner, or similar solvents should be laid outside to dry, then can be washed and dried as usual.

## FACT

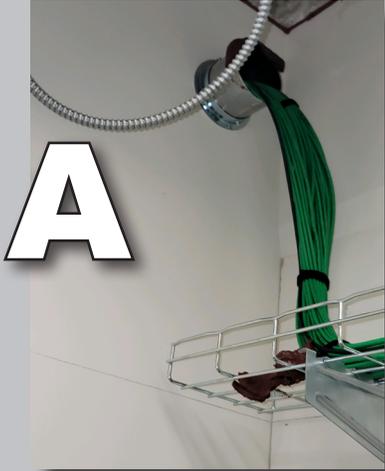
! The leading cause of home clothes dryer fires is failure to clean them.



**NATIONAL FIRE PROTECTION ASSOCIATION**  
The leading information and knowledge resource on fire, electrical and related hazards



# SPOT the violations



**A**

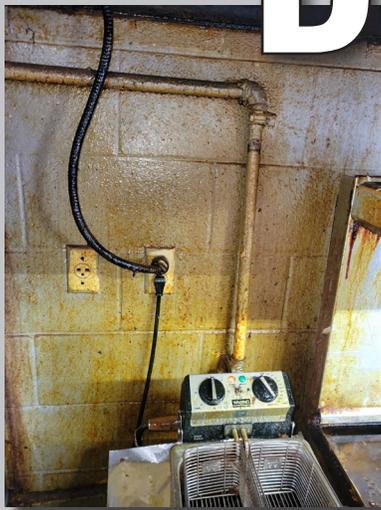
**B**



**C**



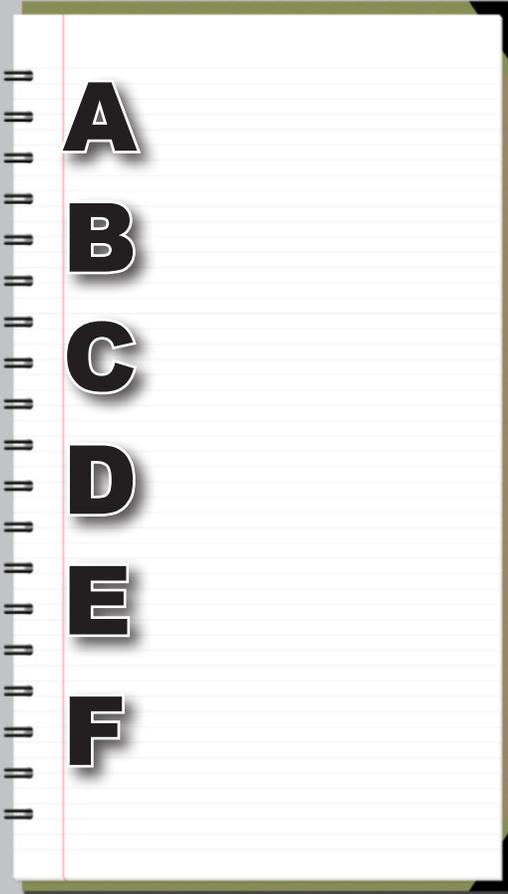
**D**



**E**



**F**



Answers on Page 12



# Workplace Fire Prevention & Survival

By Shawn Alexander

Across Kansas, there are many different work environments and they all come with their own fire hazard challenges. At the Office of the State Fire Marshal, we are committed to keeping Kansans safe through fire prevention. However, we all can take on the responsibility of preventing fires in the workplace. In the event of a fire, your survival may depend on your knowledge of classes of fires and the proper procedures to follow for your facility.

Know the locations of primary and secondary exit pathways. Fire is fast. In less than 30 seconds a small flame can turn into a fully engulfed room. That is not the time to start learning where the exits are.

Recognizing hazardous conditions and identifying different classes of fire are the first steps to preventing and surviving a fire. Preventative actions taken before an emergency can greatly reduce the severity of such an emergency. Furthermore, knowing what actions to take during an actual fire will increase your chance of survival as well as the survival of those around you.

There are five classes of fire, and each requires a specific extinguisher. Using the wrong extinguisher for a class of fire can be life threatening. Keep in mind that most fire extinguishers are combination class ABC.

**Class A** – Ordinary combustibles: wood, paper, rubber, some plastics, or fabrics

**Class B** – Flammable or combustible liquids: gasoline, oil, or paint

**Class C** – Energized electrical equipment: wiring, appliances, or outlets

**Class D** – Combustible metal: magnesium, potassium, or sodium

**Class K** – Cooking oils and fats: commercial cooking

Portable fire extinguisher should only be used on small fires in the early stages. Once a fire begins to grow, it is best to evacuate. Portable fire extinguishers should not be considered a substitute for automatic fire protection systems. These systems include fire alarms, sprinkler systems.

Now that we know the classes of fire, we can look at how to prevent each class.

## Class A –

1. Remove excess paper and debris from your workspace
2. Smoke only in designated areas
3. Keep combustible materials in a covered metal container

## Class B –

1. Use flammable and combustible liquids in a well-ventilated area and keep them away from sources of ignition
2. Properly store flammable or combustible Liquids in sealed, spill proof containers
3. Keep portable storage cans to less than five gallons

## Class C –

1. Check all equipment for old or worn wiring and damaged fittings or plugs
2. Report faulty equipment immediately to your supervisor or facility management personnel
3. Keep wall outlets from becoming overloaded
4. Use of extension cords:
  - For temporary use only
  - Not a substitute of permanent wiring
  - Never run through walls, doors, ceilings, or floors
  - Never attach to structure or fire protection equipment

## Class D –

1. Follow your facilities safety policies regarding working with metals

## Class K –

1. Ensure the kitchen design and equipment adhere to adopted fire codes
  - Proper installation of required equipment
  - Consistent maintenance, testing and cleaning of equipment
2. Ensure appropriate extinguishing equipment is installed and maintained
3. Keep staff trained on how to respond in the event of a fire

The best way to survive a fire is to have a plan. You should know the location of at least two exits. It is important that you are completely familiar with your work area. Know your exit routes and walk them often. Most of us are familiar enough with our homes that we can navigate them in the dark. It is equally important to be as familiar with your workplace.

With a small enough fire, it may be appropriate to use a fire extinguisher to put it out. For this reason, it is critical that you know the location of the nearest extinguisher. Equally important is the need to be properly trained in their use.

You should know the location of the fire alarm pull stations. These are the most efficient way to notify all occupants of a building to the presence of a fire.

Last but certainly not least, you should know and practice your facility's plan of escape and where to meet. This will provide an opportunity to ensure all occupants have evacuated and are accounted for.

Armed with this information, we all can do our part to prevent and survive fires in the workplace. Remember, the life you save may be your own.



## Winterizing continued from page 6...

- ◇ Ensure that the doors to rooms on top of roofs and other outside mechanical room doors actually latch and are closed. Always double-check doors after contractors leave.
- ◇ Check for holes in the attic beyond the typical roof vents. For example, animals make large holes in attics and apparently their favorite place to make a hole is next to water pipes!
- ◇ Verify that attic insulation covers the sprinkler pipes.
- ◇ Generally, check your system to ensure that outside air does not blow directly on the sprinkler pipes.
- ▶ Check the header on the fire pump.
  - ◇ When testing a fire pump, valves are opened to test the system, so check the test header to ensure that water is not left in the test header pipe. It is not scary to open the valve once you know how to do it. Ask your sprinkler technician, I am sure that they will walk you through the process.
- ▶ Dry system piping Pitch Check.
  - ◇ Verify the level of the dry pipe to make sure it drains at a minimum of 1/2" per 10' of pipe toward a drain.
  - ◇ A pitch check may take time but is well worth the investment. While performing the check, document the pipe layout and the location of drum drip drains.
- ▶ Drum drip drains.
  - ◇ Know the location of all drum drip drains and document the locations.
  - ◇ Set up a schedule to drain them weekly during the winter months.
- ▶ Drain Air Compressors.
  - ◇ Air compressors get full of condensation and can push wet air into dry sprinkler pipes if not drained regularly.
  - ◇ Most air compressors have drains on the bottom of the tank, and even if the compressor has an automatic drain function, test it by releasing the drain valve to see if condensation is building in the tank.
- ▶ Antifreeze systems.
  - ◇ Check the glycol levels before the winter months.
  - ◇ Ensure that the antifreeze loop can withstand temperatures below negative 10 degrees.
  - ◇ The old-school approach of testing antifreeze with a floating ball tester will not work on Glycol or Glycerol-based systems, and plastic pipes require special antifreeze.
  - ◇ Test the RPZ (reduced pressure zone) back-flow preventer. If this back-flow preventer fails, it will not prevent antifreeze from flowing back into the regular sprinkler pipe, diluting the water in the antifreeze loop. Without a proper test, you will not know it has failed until it's too late.
- ▶ Check fire department connections.
  - ◇ Storz valves will hold water in the fire department connections.
  - ◇ Siamese connections allow water to drain, so make sure you know the difference.
- ▶ Private Hydrants need to be checked to ensure that the weep holes work. Open the cap and look inside the pipe to check the water level. If you see water, the weep holes are not working.

Conclusion: Winterizing your fire sprinkler system is a critical maintenance task to safeguard against freezing, which can compromise the system's reliability. Regular inspections, proper maintenance, and knowledge of your system are the key components of a successful winterization process. By following the steps and guidelines outlined in this white paper, you can ensure that

## Answers to Spot the Violations (page 11)

A. THE FIRE CALKING HAS PULLED AWAY FROM THE TUBE AND IS MISSING LEAVING AN AP-  
PROX. 4" OPEN PENETRATION THROUGH FIRE/SMOKE BARRIER. B. HOOD SUPPRESSION SYSTEM  
GAUGE IS SHOWING PRESSURE BELOW GREEN. C. HOOD IS NOT THE REQUIRED TYPE 1. D. BACK  
WALL AND SURROUNDING AREA OF THE COOKING APPLIANCES ARE CAKED IN GREASE. E. MULTI  
PLUG ADAPTER IN USE SHOWING SIGNS OF SCORCHING. (MIGHT BE AN APPLIANCE PLUGGED  
INTO IT) F. PATH OF EMERGENCY EXIT EGRESS IS BLOCKED BY TABLES, CHAIRS, AND SCREENS.





# Electric Portable Space Heater Safety

When the weather turns cold, it can bring a chill into our homes. Portable space heaters have become a popular way to supplement central heating or heat one room. If you plan to use portable electric space heaters, make sure to follow these tips and recommendations:

## HEATER CHECKLIST

- Purchase a heater with the seal of a qualified testing laboratory.
- Keep the heater at least 3 feet (1 metre) away from anything that can burn, including people.
- Choose a heater with a thermostat and overheat protection.
- Place the heater on a solid, flat surface.
- Make sure your heater has an auto shut-off to turn the heater off if it tips over.
- Keep space heaters out of the way of foot traffic. Never block an exit.
- Keep children away from the space heater.
- Plug the heater directly into the wall outlet. Never use an extension cord.
- Space heaters should be turned off and unplugged when you leave the room or go to bed.

## Types of electric space heaters

### Oil or water-filled radiator

Heated oil or water travels through the heater.

### Fan-forced heater

A fan blows warm air over metal coils.

### Ceramic heater

Air is warmed over a ceramic heating element.

### Infrared heaters

Heat is created by infrared bulbs.

## Fact

Two in five deaths in space heater fires involve portable electric space heaters.



**NATIONAL FIRE  
PROTECTION ASSOCIATION**  
The leading information and knowledge resource  
on fire, electrical and related hazards

