By the Numbers – Fire Prevention

FIRE PREVENTION

DID YOU KNOW?

Fire kills more people each year than all-natural disasters combined.

- Every 24 seconds there is a fire that requires the fire departments attention.
- There were 1,319,500 fires reported by fire departments in 2017 resulting in 3,400 deaths.

Every 85 seconds, a fire breaks out somewhere in Canada. And in the United States, the number of fatal work injuries resulting from fires and explosions in 2010 rose to 187, an increase of 65% over the previous year. Of the 187 fatalities, 82 occurred in multiple fatality incidents.

More than one in every four office property fires (29%) was caused by cooking equipment, but these fires accounted for just 6% of the direct property damage experienced by office properties. Fires that were intentionally set caused the largest share of direct property damage (20%), while causing 10% of office property fires. Electrical distribution and lighting equipment were the second leading cause of office property fires (12%) of fires, while causing 15% of direct property damage.

Just over one-fifth (22%) of the reported fires in office properties began in the kitchen or cooking area, causing one percent of the direct property damage. The highest share of direct property damage (24% of total) resulted from fires starting in an office, which were the cause of 12% of office property fires. Although just two percent of office fires began in the attic, ceiling/roof assembly or concealed space, they were responsible

for 13% of the direct property damage. Four out of five office property fires were confined to the room of origin.

When present, wet pipe sprinklers operated 90% of the time in fires large enough to activate the equipment, and they were effective in 88% of these fires. Deaths per 1,000 fires were 62% lower in stores and offices equipped with wet pipe sprinklers compared to properties with no automatic extinguishing equipment.

KEEP IN MIND

Eliminating fire hazards is a central part of any **Workplace Safety Program**.

These seem like simple and straightforward requirements. But in operation, they often prove to be anything but. Alarming numbers of citations get issued because employers fail to carry out these tasks; sadly, such breakdowns also lead to fatalities.

The key to avoiding mistakes is to remain vigilant. You must be constantly on the lookout for problems **before** fire breaks out (or an OSHA inspector finds them for you). Like most employers, you might form your workers into fire safety teams and have them conduct regular inspections. But you also need to ensure those teams know what they're doing. That's a training imperative if you want them to conduct a meaningful inspection. All of the above is just rhetoric without a well-planned and cogent foundation. The optimal inspection is the formation and implementation of a comprehensive

Fire prevention policy. which incorporates the following:

A. Emergency Plans

Tells how to evacuate in case of fire and how to account for all those evacuated. Fire drills based on the emergency plan will assist in understanding what to do during an emergency.

B. Fire Safety Equipment

Fire extinguishers, fire alarms, smoke detectors, fire sprinkler

systems all play a vital role in fire prevention. It is important therefore to ensure that all equipment is in working order and in compliance with fire safety codes.

- The stipulated number of extinguishers are present (within 75 feet distance from any place in your facility).
- The size, rating, and type of fire extinguishers match the requirement for your kind of business. (At least a 2A-10BC size rating).
- The extinguishers, fire alarm panels, and fire sprinklers have been serviced and inspected within the previous 12 months.
- All extinguishers are mounted on the wall in keeping with the specified fire safety recommendations (the top of the unit must be no higher than 3.5 feet if extinguishers are greater than 40 pounds and 5 feet if lighter.)
- There are no warning lights on your fire alarm panel.
- There is adequate clearance around fire sprinkler deflectors (at least 18 inches, according to the NFPA).
- There are no signs of leakage, physical damage or corrosion on any of the equipment.
- The valves, hose connections, and water pressure are adequate to the requirements of the fire code.

C. Fire, Exit Routes

Ensure that there are no obstructions to people exiting the building in case of a fire emergency.

This includes pathways, exits, aisles, and walkways.

- At least two stipulated fire exits are present.
- All exit doors are unlocked at all times of occupancy.
- Aisles that lead to and away from fire exits are unobstructed.
- The pathway that leads to exit doors is wide enough (at least 36 inches wide.)
- Fire exits are provided with panic hardware.
- All doors to fire exits can be easily opened in case of emergency.

- Easy access to fire protection equipment like fire extinguishers and fire alarm control panel.
- The paths to the exits are well lit and clearly marked.
- The exit signs have backup batteries (to allow for a minimum of 90 minutes power backup) in case the lights go off during a fire emergency.

D. Good Practices for Fire Safety

Strictly adhering to compliance standards in the following areas can go a long way in ensuring

fire prevention.

- All combustible materials are stored in fireproof cabinets.
- The number of people in your premises doesn’t exceed the maximum occupancy limits at any time.
- Electrical sockets are not overloaded and there are no improper multi-plug adapters used.
- All electrical panels are easily accessible and there are no obstructions to their use.
- All potentially flammable materials are kept away from electrical (Usually, a 3 feet clearance is required.)

E. Regulation-Training

The underpinning of a successful and effective fire prevention is **Training**.

Employers should train workers about fire hazards in the workplace and about what to do in a fire emergency. If you want your workers to evacuate, you should train them on how to escape. If you expect your workers to use firefighting equipment, you should give them appropriate equipment and train them to use the equipment safely. **(See Title 29 of the Code of Federal Regulations Part 1910 Subparts E and L; and Part 1926 Subparts C and F.)**