

# Holiday Related Ignition Source Control and Safety

Christmas is one of the most cherished times of the year. However, there is an increased risk of fire and injury if proper precautions are not taken for outdoor lighting displays, candles, extension cords and space heaters.

According to the National Fire Protection Association (NFPA), from 2010 through 2014, an estimated 16,070 non-home electrical fires (structure fires that involved some type of electrical failure or malfunction) were reported each year. These fires resulted in an estimated annual average of 10 deaths, 200 injuries, and \$610 million in direct property damage.

## ***Outdoor Light Displays***

Outdoor lighting and other electrical decorations add to the splendor of the season, but if not used safely, can also increase the risks of fire, electrical shock hazards and employee injuries. Follow these steps from the American Public Power Association to protect your facility, employees and volunteers from electrical and fire hazards related to outdoor holiday decorations.

- Make sure all extension cords and electrical decorations used for outdoor decorating are marked for outdoor use.
- Outdoor electric lights and decorations should be plugged into circuits protected by ground fault circuit interrupters (GFCIs).
- Inspect all lights, decorations, and extension cords for damage.
- Install timers to control all indoor and outdoor electrical decorations or remember to turn them off before leaving the facility at the end of the day.
- Avoid overloading electrical outlets with too many decorations or electrical devices.
- Never connect more than three strings of incandescent lights together.
- Keep all decorations at least 3 feet away from heating equipment or an open flame.
- Purchase electrical decorations from reputable retailers and that are approved by a reputable testing lab such as UL, Intertek, or CSA.
- Fasten outdoor lights securely to trees, structures, or other firm supports to protect them from wind damage, but take care not to attach the lights in a way that could damage the cord.
- Keep all cords and light strings clear of snow and standing water.
- Make sure spotlights used to illuminate decorations are well-ventilated, protected from weather, and a safe distance from flammable items.
- Always unplug electrical decorations before replacing bulbs/fuses.
- Use wooden or fiberglass ladders when decorating outdoors. Metal ladders conduct electricity. Inspect ladders for loose or missing screws, hinges, bolts, and nuts before using.
- Use the right ladder height, ensuring ladders extend at least three feet past the edge of the roof.

## ***Candles***

There's a special beauty and tranquility to candles, but a lit candle is also an open flame, and a potential fire hazard if not carefully monitored. Each year, church properties experience serious fires resulting from the misuse of candles. The U.S. Fire Administration reports an average of 1,300 church fires occur each year, causing around \$38

million in property loss. Sadly, many churches are older and are not outfitted with proper safety features. Approximately 65% of these fires happened in buildings with no smoke alarms while 96% of the locations did not have sprinkler systems.

A study by the U.S. Consumer Product Safety Commission (CPSC) suggests that 85% of candle fires could be avoided if consumers followed three basic rules:

- Never leave a burning candle unattended.
- Never burn a candle on or near anything that might catch fire.
- Keep candles out of the reach of children and pets.

Since candles are an important symbol of the church and are readily used in churches, these guidelines from the NFPA must be followed to reduce the chance of fire in your facility.

- Candles should be placed in a sturdy candle holder.
- Handheld candles should not be passed from one person to another at any time.
- When lighting candles at a candle lighting service, have the person with the unlit candle dip their candle into the flame of the lit candle.
- Lit candles should not be placed in windows where a blind or curtain could catch fire.
- Candles placed on, or near tables, altars, or shrines, must be watched by an adult.
- If a candle must burn continuously, be sure it is enclosed in a glass container and placed in a sink, on a metal tray, or in a deep basin filled with water.
- Matches and lighters should be stored out of the reach of children, in a locked cabinet.
- Places of worship should be equipped with a smoke/fire detection and sprinkler system.
- Candles should be kept out of the reach of children and pets. Young children should never hold a lit candle.
- Consider providing battery-operated candles for children. A parent should decide when a child is mature enough to light a candle with supervision.

Remember, a candle is an open flame, which means that it can easily ignite anything that can burn. Make sure to use the proper precautions when lighting and using candles. As an alternative, consider using flameless candles.

### ***Extension Cords***

Extension cords are a convenient way to supply power right where you need it, but they can also create hazards. Regardless of the size or rating of the cord, an extension cord is a temporary solution. Cords are not meant to be used as a long-term extension of a permanent electrical system. A heavy reliance on extension cords is an indication that you have too few outlets to address your electrical needs. Have additional outlets installed where you need them.

The CPSC estimates that each year, about 4,000 injuries associated with electric extension cords are treated in hospital emergency rooms. About half are the result of people tripping over extension cords. CPSC also estimates that about 3,300 residential fires originate in extension cords each year, killing 50 people and injuring about 270 others. The most frequent causes of such fires are short circuits, overloading, damage and/or misuse of extension cords.

Follow these tips to use extension cords safely:

- Purchase only cords that have been approved by an independent testing laboratory.
- For outdoor projects, use only ones marked for outdoor use.

- Read the instructions about the cord's correct use and the amount of power it draws.
  - Select cords that are rated to handle the wattage of the devices with which they'll be used. A cord's gauge indicates its size: The smaller the number, the larger the wire and the more electrical current the cord can handle.
  - Also consider the length you'll need. Longer cords can't handle as much current as shorter cords.
  - Choose cords with polarized or three-prong plugs.
  - Use a GFCI with every extension cord which protects against the most common form of electrical shock – the ground fault.
  - Keep extension cords out of high-traffic areas where they pose a tripping hazard.
  - Do not run extension cords through walls or ceilings. This may cause the cord to overheat.
  - Make sure that cords are not pinched in doors, windows, or under heavy furniture, which could damage the cord's insulation.
  - Never remove an extension cord's grounding pin in order to fit it into a two-prong outlet.
  - Avoid powering multiple piece of equipment with one cord.
  - Don't plug multiple cords together.
  - Don't run extension cords under rugs or furniture.
  - Never tape extension cords to floors or attach them to surfaces with staples or nails.
  - Don't bend or coil cords when they're in use.
  - Cover unused cord receptacles with childproof covers.
  - Stop using extension cords that feel hot to the touch.
  - Major appliances (refrigerators, dryers, washers, stoves, air conditioners, microwave ovens, etc.) should be plugged directly into a wall receptacle outlet.
  - Always store cords indoors.
  - Unplug extension cords when they're not in use.
  - Replace worn, old or damaged extension cords right away.
  - Pull the plug—not the cord—when disconnecting from the outlet.

### ***Space Heaters***

Portable electric space heaters are commonly used to provide supplemental heat during the colder months. Unfortunately, space heaters can increase the risk of fire and electric shock if not used properly. According to the NFPA, the use of supplemental heating equipment, such as space heaters, is the leading cause of home fires from December - February, and the second leading cause of home fires year-round.

Space heater safety is not just a residential concern. Portable electric space heaters can also be found in use in commercial buildings across the country. As such, they also pose a major workplace safety hazard. Fires can be caused by space heaters without adequate safety features, space heaters placed near combustibles, or space heaters that are improperly plugged in.

A safety recommendation and recognized best practice is to prohibit space heaters in the workplace. If space heaters are allowed, providing training, enforcing safe use and having guidelines in place can reduce the risks to employees and facilities. The Electrical Safety Foundation International (ESFI) offers the following space heater safety tips:

- Employees should be required to obtain approval from a boss or facility manager prior to using a space heater.
- All space heaters should have the certification of an independent testing laboratory. Verify the device is

approved for commercial use and has a switch that automatically shuts off the heater if it is tipped over.

- Before using any space heater, read the manufacturer's instructions and warning labels carefully.
- Inspect heaters for cracked or broken plugs or loose connections before each use. If frayed, worn or damaged, do not use the heater.
- Proper placement of space heaters is critical. Heaters must be kept at least three feet away from anything that can burn, including papers, clothing and rugs.
- Locate space heaters out of high traffic areas and doorways where they may pose a tripping hazard.
- Plug space heaters directly into a wall outlet. Do not use an extension cord or power strip.
- Do not plug any other electrical devices into the same outlet as the heater.
- Operating space heaters should never be left unattended. They should be turned off and unplugged at the end of the work day or whenever the employee leaves the room.
- Never use fuel powered (kerosene, propane, etc.) heaters due to the fire hazards they create.

### ***Best Practices - Electrical Work/Repairs***

All electrical work should be completed by a qualified electrician. A qualified electrician should be contacted if there is/are:

- Frequent problems with blowing fuses or tripping circuit breakers
- A tingling feeling when touching an electrical appliance
- Discolored or warm wall outlets
- A burning or rubbery smell coming from an appliance
- Flickering or dimming lights
- Sparks from an outlet

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