Workplace Fire Safety

rev. 12-2023

Office and Store Fires

There were 16,500 office and store fires in the United States in 2020. They caused $932 million in direct property damage.

Source: US Fire Administration

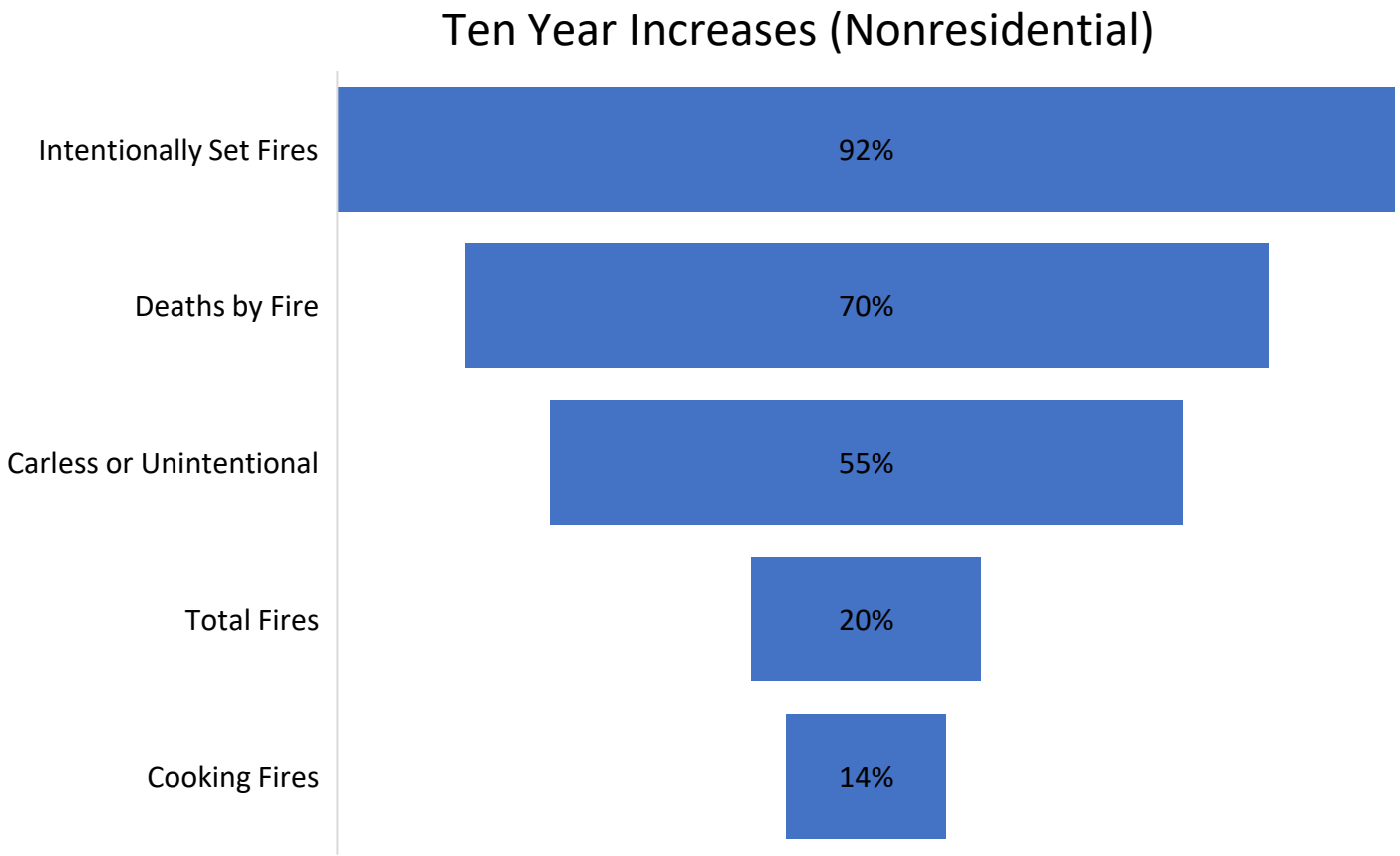
Nonresidential Building Fire Trends

2021 national estimates for nonresidential building fires and losses:

- 116,500 fires
- 115 deaths
- 1,025 injuries
- $3,697,200,000 in dollar loss

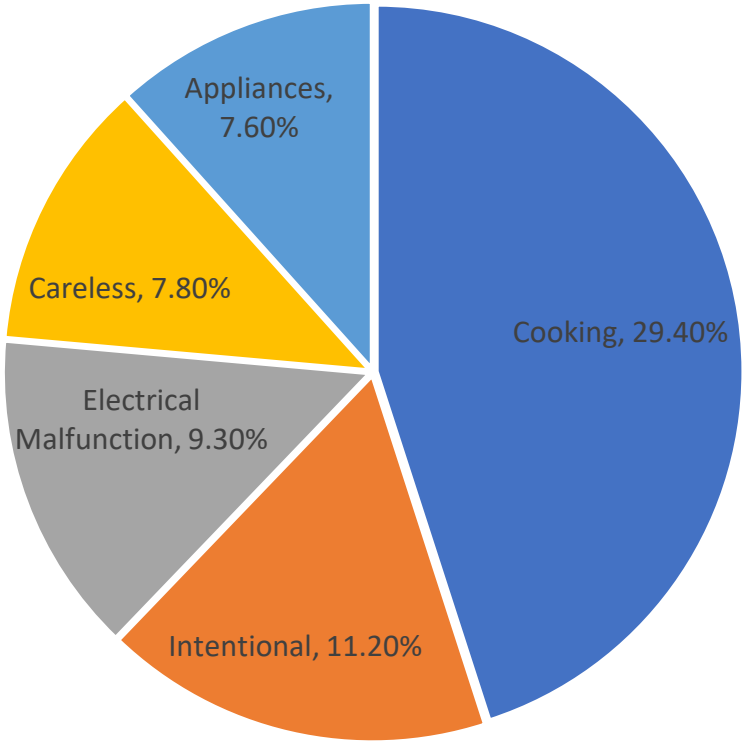
Source: US Fire Administration

Ten Year Trends from 2012 to 2021



Source: US Fire Administration

Causes of Nonresidential Fires:



Source: US Fire Administration

Space Heater Fires

Space heaters cause:

- 1,700 fires per year
- 80 deaths per year

Source: https://pirg.org

NC DEQ Space Heater Policy

Space heaters are only permitted in DEQ offices under two conditions:

1) Facilities Department states in writing they cannot maintain 68 degrees F in the work area

-or-

2) A licensed physician states in writing that 68 degrees F is not sufficient for the employee

NC DEQ Space Heater Policy

- A permit is required with four to five signatures (employee, supervisor, safety representative, facilities, & physician)
- Make & model of heater is on the permit
- Must be plugged directly into a wall outlet
- Three-foot distance from any combustible material
- Must be turned off when unattended

Space Heaters & Circuit Breakers

- Before a space heater is approved in a DEQ building Facilities must verify that the wiring in the area can support the space heater
- Never reset a breaker by yourself
- If a circuit breaker trips, contact the Facilities Department or landlord
- Do not reset breakers tripped by space heaters in rental properties

Surge Protectors, Extension Cords, & Daisy Chains

"Because electrical resistance increases with increased power cord length, **interconnecting cords increases the total resistance and result in heat generation**. This creates an additional risk of equipment failure and fire, particularly when paper and other combustible materials are in contact with the wires."

Source: www.ocwr.gov

Surge Protectors vs. Power Strips

Surge Protectors protect electronic devices from fluctuations in power caused by other devices cycling on and off, lightning strikes, transformer damage etc.

Power Strips allow you to plug more than one device into an outlet

Space Heaters and Power Strips

If you have a permit for a space heater it must be plugged directly into a wall outlet.

Plugging spaces heaters into power strips can lead to:

- Overheating
- Electrical Failure
- Electrical Fires

Power Strips

Most power strips can power multiple items. However, when two or more power strips are connected, the strip connected to the outlet is providing much more power than the approved amount.

Power strips & surge protectors must be equipped with internal circuit breakers or fuses.

UL rating is always preferred

Source: www.ehs.okstate.edu

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Power Strip Sizing

If you have a permit for a space heater it must be plugged directly into a wall outlet.

Plugging spaces heaters into power strips can lead to:

- Overheating
- Electrical Failure
- Electrical Fires

Extension Cords

- OSHA only allows extension cords on a temporary basis (<90 days).
- Office spaces should be arranged so extension cords are not required, or new outlets should be installed.
- Extension cords must be visually inspected before each use and have a ground wire.
- Temporary extension cords passing through doors, windows or other openings must be protected from damage.

Extension Cords

- Extension cords should not be repaired when the insulation or plugs are damaged.
- Portable GFCI protection must be provided when using hand tools unless the cord is plugged into a GFCI protected outlet.
- Extension cords must be tested for continuity and tagged every 3-12 months depending on the application.

Daisy Chains

- “Daisy chaining” is the connection of two or more extension cords or power strips. Daisy chaining is usually a result of inadequate access to power outlets and can lead to overloaded circuits and fire risk.

- Never connect one surge protector or extension cord to another.

Source: www.ehs.okstate.edu

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