



December 2025

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A Holiday Reminder for Fire Safety

As the holiday season draws near, Cosey Engineering & Consulting wants to remind you to be sure to water your Christmas tree so that your festivities don't go up in flames.



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Winter Holiday Fire Facts

- U.S. fire departments responded to an estimated average of 832 home structure fires per year that began with decorations, excluding Christmas trees. These fires caused an annual average of 3 civilian fire deaths, 28 civilian fire injuries and \$17 million in direct property damage.
- Electrical distribution or lighting equipment was involved in more than two in five (43%) home Christmas tree fires.
- Nearly one in four (24%) Christmas tree fires were started by lamps or bulbs. Twelve percent were started by candles.
- Roughly two of every five (42%) home Christmas tree fires started in the living room.
- Candle fires peak in December and January with 12 percent of candle fires occurring in December and 10 percent of candle fires occurring in January.
- Thanksgiving is the peak day for home cooking fires, followed by Christmas Day and Christmas Eve.
- Year round, one-third (33%) of home decoration fires were started by candles. This jumped to half in December when candles started

50% of such fires.

- Cooking started one-fifth (20%) of decoration fires.

Source: NFPA's Applied Research

Messages to share:

- Keep candles at least 12 inches away from anything that burns. Make sure they are in stable holders and place them where they cannot be knocked down easily.
- Consider using battery-operated flameless candles, which can look, smell and feel like real candles.
- Inspect holiday lights each year before you put them up. Throw away light strands with frayed or pinched wires.
- Read manufacturer's instructions for the number of light strands to connect.
- Water your Christmas tree every day. A dry Christmas tree can burn very hot and very fast.
- Make sure your tree is at least 3 feet away from heat sources like fireplaces, radiators, space heaters, candles or heat vents. Also, make sure your tree does not block exits.
- Get rid of your tree after Christmas or when it is dry.

Source: U.S. Fire Administration

LLC NEWS

We have a new Q&A page on our website to help answer our most asked questions.

OUR STORY

Florida Burn Bans in Effect

Florida counties are currently under burn bans due to unusually dry weather, with restrictions in place to reduce wildfire risk. Local governments and the Florida Forest Service have enacted bans that prohibit open burning of yard debris, campfires, and bonfires in multiple areas across the state.

Florida Burn Bans in Effect

- Hillsborough County: Extended its emergency burn ban for a second week as of December 1, 2025. Only attended barbecue grills and certain agricultural burns approved by the Florida Forest Service are allowed.
- Polk County: Declared a countywide burn ban on November 25, 2025, citing drought conditions and a high fire danger index. This is the second ban issued this year, an unusual step for the fall season.
- Other Counties: Citrus, Manatee, Sarasota, Alachua, Bay, and several others currently have bans in place, according to the Florida Forest Service dashboard.

Why the Bans Matter

Florida's Keetch-Byram Drought Index shows elevated fire danger across much of the state. With warm temperatures and little rainfall, even small fires can quickly spread. Burn bans are designed to protect communities, reduce strain on firefighters, and prevent property loss.

What Residents Should Know

- **Prohibited activities:** Campfires, bonfires, and burning yard trash.
- **Allowed activities:** Cooking on attended barbecue grills; certain agricultural burns with special approval.
- **Penalties:** Violating a burn ban can result in fines or even jail time.

Florida's current burn bans are a proactive measure to safeguard communities during a period of high wildfire risk. Residents should stay informed through county websites and the Florida Forest Service to ensure compliance and help prevent dangerous fires.

Lithium Battery Charging Safety: Protecting Devices and People

Lithium-ion batteries power everything from smartphones to electric vehicles, but improper charging can pose serious risks. Fires, overheating, and reduced battery life are often the result of unsafe charging practices. By following a few simple guidelines, users can keep their devices safe and extend battery performance.

Key Safety Risks

- **Overcharging:** Leaving devices plugged in for extended periods can cause heat buildup.
- **Damaged Chargers:** Using frayed cables or counterfeit adapters increases fire risk.
- **Poor Ventilation:** Charging on beds, couches, or under pillows traps heat.
- **Extreme Temperatures:** Charging in very hot or cold environments stresses the battery.

Safe Charging Practices

- Always use **manufacturer-approved chargers and cables**.
- Charge on **hard, flat surfaces** with good airflow.
- Avoid charging overnight or unattended for long periods.
- Keep batteries away from direct sunlight and heat sources.
- Replace batteries or devices that show **swelling, leaks, or unusual heat**.

Why It Matters

Lithium batteries are efficient and powerful, but they demand respect. Safe charging not only prevents accidents but also extends the lifespan of devices, reduces waste, and protects homes and workplaces from fire hazards.

Recent Fire in Hong Kong Highlights Critical Gaps in Fire Safety Oversight

The devastating fire in Hong Kong's Tai Po district this November — the deadliest in the city in more than a century — has become a sobering reminder of what happens when engineering expertise is sidelined in building safety. More than 90 lives were lost, hundreds were injured, and thousands displaced. Investigations point to a troubling pattern: faulty alarms, combustible materials, and inadequate fire-safety design, all compounded by the absence of qualified fire engineers in the planning and oversight stages.

Where It Failed

- **Building Materials:** Reports suggest that non-fire-resistant cladding and bamboo scaffolding accelerated the spread of flames.
- **Alarm & Suppression Systems:** Faulty alarms and missing sprinklers meant residents had little warning and no immediate

protection.

- **Design Oversight:** Engineers specializing in fire safety were not adequately involved in construction approvals, leaving critical gaps in evacuation routes and smoke control systems.

The Cost of Neglect

The tragedy underscores how **lack of fire engineering expertise** can turn small oversights into catastrophic failures. In many parts of Asia, rapid urban growth has outpaced safety regulation. High-rise living has surged — South Korea alone saw its number of tall buildings more than double in a decade — yet many lack essential fire-safety systems. Without engineers ensuring compliance, communities are left vulnerable.

Lessons for Small Communities

This fire is not just a Hong Kong issue; it's a **global wake-up call**. Smaller towns and developing regions often assume fire engineering is a luxury, but the reality is stark:

- **Lives Saved:** Properly designed alarms, sprinklers, and evacuation systems reduce fatalities dramatically.
- **Economic Protection:** Fires devastate local economies, displacing families and destroying businesses.
- **Community Trust:** Residents expect safe housing; failure erodes confidence in local governance.

The Role of Fire Protection Engineering

Fire protection engineering is more than code interpretation. It is the application of science and engineering principles to safeguard lives and property against fire. This includes:

- **Designing life safety systems** that perform under real-world conditions

- **Ensuring code compliance** that withstands scrutiny from regulators and insurers
- **Integrating fire safety early in design** to reduce long-term costs and risks
- **Building resilient infrastructure** capable of supporting Florida's growing communities

Partnering with Fire Marshals

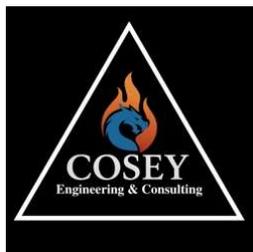
Equally important is the partnership between fire marshals and fire protection engineers. Fire marshals bring critical enforcement authority and on-the-ground experience, while engineers contribute technical design expertise and code application. When these roles work together, communities benefit from both proactive design and effective enforcement. By collaborating early in the planning and inspection process, Florida can achieve a higher standard of fire safety—one that not only meets code but anticipates risks and ensures systems perform when lives depend on them.

Moving Forward

To prevent future disasters, governments and institutions must:

- **Mandate fire engineering reviews** for all new construction.
- **Invest in training programs** to grow the pool of qualified fire engineers.
- **Update building codes** to reflect modern materials and high-rise realities.
- **Audit existing structures** to retrofit safety systems where missing.

The recent Hong Kong fire shows that **fire engineering is not optional – it is essential**. Communities that neglect this discipline risk repeating tragedies that could have been prevented with proper expertise. For small towns and growing cities alike, embedding fire engineers into every stage of development is the only way to safeguard lives and futures.



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