

Work Group

Codes, Standards & Regulations

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Agenda

- About the WG
- High-Level Chronological Summary of C&S
- Snapshot of State Laws
- Enforcement and Jurisdiction Best Practices
- WG Goals for 2023 and 2024

About the Work Group

- Codes, standards, and regulations effect systemic change by requiring cities, states, and industries to abide by certain rules
- From a legislative perspective, cities and states may choose to adopt and enforce codes for CO detection in commercial and residential buildings
- Work with various associations and other stakeholders to drive requirements in codes, standards & regulations
- Identify areas of improvement in codes & standards

Product Listing Standards

- **UL 2034, *Single and Multiple Station Carbon Monoxide Alarms***
 - 1992: UL published the first edition of the “alarm” standard
 - 1998: Standard was modified to address alarm activations that occurred as a result of transient CO levels and temperature inversions, that resulted in a high number of false alarms prior to 1998
- **UL 2075, *Gas and Vapor Detectors and Sensors***
 - 2004: UL published the first edition of the “detector” standard
 - Section 15.1 requires detectors to operate within the sensitivity parameters defined in UL 2034

Installation Standard

- **NFPA 720**

- 2005: NFPA published the first edition of the *Standard for the Installation of Carbon Monoxide (CO) Warning Equipment in Dwelling Units*
- 2009: The scope of the standard was expanded to include commercial buildings and CO detection systems
- 2015: NFPA Standards Council decided to move the requirements in NFPA 720 to NFPA 72

- **NFPA 72[®], *Fire Alarm and Signaling Code***

- 2019: Included requirements from the NFPA 720 standard
- 2022: Several technical requirements were added

ICC Model Codes



- **International Residential Code (IRC)**
 - 2009: Was the first model code to require CO alarms in detached one- and two-family dwellings and townhomes not more than 3 stories
 - 2012: Permitted CO detectors, connected to a household system, to be installed in lieu of CO alarms
 - 2018: New requirement for CO alarms to be interconnected when more than one is installed in a dwelling unit

ICC Model Codes



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- **International Fire Code (IFC)/International Building Code (IBC)**
 - 2012: New requirement to install CO detection in new hotels, apartment buildings, university dormitories, hospitals, and nursing homes having a fuel-burning appliance or an attached garage
 - 2015: New requirement to install CO detection in new K-12 schools
 - 2018: New retroactive requirement for CO detection in existing dwelling units and sleeping units
 - 2021: Added a retroactive requirement for CO detection in existing I-1, I-2, I-4, R occupancies, and in classrooms in Group E occupancies
 - 2024: New requirement for the installation of CO detection in all new buildings having a known CO source

ICC Model Codes

- **International Existing Building Code (IEBC)**
 - 2018: New requirement to install CO detection in existing hotels, apartment buildings, university dormitories, hospitals, and nursing homes undergoing an alteration, addition, or change of occupancy
- **International Property Maintenance Code (IPMC)**
 - 2018: New requirement for CO alarms and detection systems to be
 - Maintained in accordance with NFPA 720
 - Replaced when inoperable or begin producing end-of-life signals

NFPA Model Codes

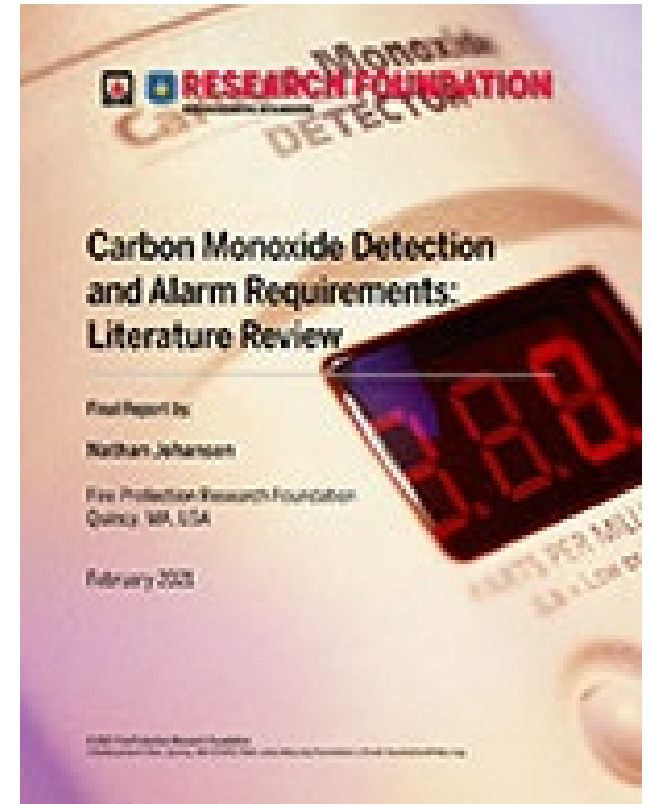


- **NFPA 1 and NFPA 101**

- 2012: New requirement to install CO detection in new one- and two-family dwellings, hotels, apartment buildings, university dormitories, hospitals, and nursing homes having a fuel-burning appliance or an attached garage
- 2015: New requirement for the installation of CO detection in new K-12 schools
- 2018: New requirement to install CO detection in new assembly buildings, small/large board and care facilities
- 2021: New requirement to install CO detection in existing hotels

Legislation

- Fire Protection Research Foundation (FPRF) 2021 Report provides a review of State Regulations
- [HERE](#) is a link to the 2021 Report
- The state regulations are found in pages 16 thru 21



Enforcement Best Practices



WG Goals

- **2023 Goals**

- 2027 Edition of the IFC/IBC: Develop a proposal to ensure a responsible party will be notified of an activated CO alarm installed in a commercial occupancy
- Analyze: Conduct a gap analysis of current requirements in codes and standards to identify areas for improvement

WG Goals

- **2024 Goals**

- 2027 Edition of NFPA 101: Develop a public input to require CO detection for *all* occupancies having a known CO source
- Fire Service Standard Operating Procedure (SOP): Work with the fire service to develop a SOP for responding to a CO incident
- Research: Work with the FPRF on a project to evaluate the current alarm thresholds in UL 2034
- Legislation: Monitor state and local jurisdiction for bills and engage as necessary by working with applicable associations
- Education: Conduct webinars, write articles, and possible record podcasts about the new requirement in the 2024 IFC/IBC

Interested in Getting Involved?



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