

CARBON MONOXIDE ALARMS IN SCHOOLS

OVERVIEW OF STATE LAWS

Part of the ELI Series

Environmental Law Institute

*Topics in School
Environmental Health:
Overview of State Laws*

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Why is this Issue Important for School Environmental Health?

Carbon monoxide (CO) is an odorless, colorless gas produced from the incomplete oxidation of carbon in combustion processes. In school facilities, sources of carbon monoxide may include worn or poorly maintained combustion devices (e.g., boilers, furnaces), or a malfunctioning flue. Vehicle exhaust from nearby idling vehicles can also be sources. If carbon monoxide builds up in the air inside a school facility, students and staff can be harmed by breathing in the gas. Early symptoms of CO poisoning may mimic the flu and include headache, dizziness, weakness, nausea, vomiting, chest pain and confusion. At high concentrations, CO exposure can cause loss of consciousness and death.

Key measures for preventing the accumulation of CO indoors include proper design and maintenance of fuel-burning equipment and limitations on vehicle idling. The use of carbon monoxide alarms, which alert occupants to elevated CO levels within a building, can be an important complement to these preventive measures. The U.S. Consumer Product Safety Commission (CPSC) has worked with Underwriters Laboratories (UL) to help develop a safety standard (UL 2034) for CO alarms.

For more information on carbon monoxide from the U.S. EPA, the Centers for Disease Control and Prevention and the CPSC, see

<http://www.epa.gov/iaq/schools/tfs/guidee.html>,

<http://www.cdc.gov/co/default.htm> and

<http://www.cpsc.gov/en/Safety-Education/Safety-Education-Centers/Carbon-Monoxide-Information-Center/Carbon-Monoxide-Questions-and-Answers-/>

What Types of State Policies are Included in this Overview?

This Overview includes state laws and regulations that require or promote the use of carbon monoxide alarms in schools, though it may not necessarily include all such policies. State agency guidance documents and other materials are not covered in the absence of a related law or regulation addressing CO alarms directly. Many states and localities have enacted laws and regulations requiring CO alarms in certain types of residential buildings, and a growing number are establishing requirements for CO alarms in schools.

States included in the summary chart below: **CA, CO, CT, DC, IL, MD, NY, UT, WV**

| STATE & CITATION | CARBON MONOXIDE ALARMS SUMMARY OF LAW/REGULATION | LAW REQUIRES CO ALARM? |
|--|---|------------------------|
| CALIFORNIA Ca. Educ. Code § 32081 | California law requires the state fire marshal to propose for adoption in the state building code a standard for installation of CO devices in school buildings. The standard must require that CO devices be installed in a public or private K-12 school built pursuant to the 2016 state building code (and later versions) if a fossil-fuel burning furnace is located inside the school. The law encourages existing schools with fossil-fuel burning furnaces to install CO devices. | YES (New schools) |
| COLORADO Co. Rev. Stat. § 25-1.5-101; 6 Co. Code Regs. § 1010-6.9.3 | Colorado health law authorizes the Department of Public Health and Environment to establish and enforce sanitary standards for the operation and maintenance of schools. Department regulations require schools to install operational CO alarms in areas where fossil fuel-fired heaters and appliances are used. Alarms must be tested at least annually, with devices that rely only on battery power to be tested monthly and batteries replaced at least annually. Documentation of testing is to be made available upon request. | YES |
| CONNECTICUT Ct. Gen. Statutes § 29-292 | Connecticut public safety law requires that the state fire code regulations include “provision for ...carbon monoxide detection and warning equipment in... all public or nonpublic school buildings...” According to the law, the fire code regulations must include requirements and specifications for the installation, use, testing, and inspection of CO detection and warning equipment in public and nonpublic school buildings. The fire code must also require that the equipment meet or exceed specified UL standards and be installed and maintained in compliance with NFPA standards. Battery-operated CO warning equipment or equipment using batteries for backup power are prohibited in public and private school buildings for which a building permit for new occupancy is issued on or after January 1, 2012; after that date, a certificate of occupancy may not be issued unless the building is equipped with CO detection and warning equipment complying with the fire code regulations. | YES |
| DISTRICT OF COLUMBIA D.C. Code § 38-2803 | District of Columbia education law requires the D.C. Department of General Services to conduct an annual survey to update information on the condition of each D.C. public school facility, including “a review of whether or not the facility has a working carbon monoxide detector” and to submit the survey results to the D.C. Office of Public Education Facilities Planning. | NO |
| ILLINOIS 105 Ill. Comp.Stat. §§ 10-20.56, 34-18.49 | Illinois law directs school boards to require that each school be equipped with approved CO alarms or CO detectors located within 20 feet of a CO-emitting device. For schools designed after effective date of the law, alarms must be permanently powered by the building’s electrical system or be an approved CO detection system. CO alarms or detectors must be in operating condition and inspected annually. | YES |
| MARYLAND Md. Educ. Code § 4-117 | Maryland law requires newly constructed or substantially remodeled school buildings to include installation of carbon monoxide alarms in areas of new and | YES (New and) |

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|---|---|------------------------------------|
| | existing educational occupancies where fuel-fired equipment is present. The law requires schools to install CO alarms in compliance with NFPA standards and to ensure that a signal from the CO alarm will be automatically transmitted to an approved supervising station or to a constantly attended on-site location. | Remodeled Schools) |
| NEW YORK N.Y. Exec. Law § 378 (5-d) 19 N.Y. Code Rules & Regs. §1228.4 | New York law requires the state's uniform fire prevention and building code to address standards for the installation of CO detecting devices that require the owner of every commercial building to install and maintain operable CO detecting devices if the building has an attached garage or appliances, devices or systems that may emit CO. The fire prevention and building code defines a commercial building as "any new or existing building that is not a one-family dwelling, a two-family dwelling, or a building containing only townhouses" and establishes the requirements for placement and maintenance of CO alarms or CO detection systems in existing and new commercial buildings. The code further requires that in "Educational Group E" facilities, CO alarm signals must be "automatically transmitted to an approved on-site location that is normally staffed by school personnel during normal school hours." | YES |
| UTAH Ut. Stat. § 15A-5-204 | Utah law establishes carbon monoxide detection system requirements as part of the state fire code. The law requires installation of CO detection systems in new and existing Group E occupancies (including K-12 schools) where a fuel-burning appliance, fire place, or forced air furnace is present. CO detection systems must be installed in accordance with the International Fire Code. | YES |
| WEST VIRGINIA W.V. Stat. §18-5-10; W.V. Code of State Rules § 126-172-2 | West Virginia regulations incorporate the state's Handbook on Planning School Facilities, which establishes requirements and considerations for planning and constructing new school facilities, additions and major renovations. The Handbook requires installation of an electric-powered carbon monoxide monitor/alarm in each area that produces combustion gases. The device must be tied into the building control system and alarm when activated. | YES (New and Remodeled Schools) |

Rev. February 2016
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