

# CARBON MONOXIDE ALARMS IN EXISTING SCHOOLS

## OVERVIEW OF STATE LAWS

Part of the ELI Series

[Topics in School  
Environmental Health:  
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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

<https://www.epa.gov/indoor-air-quality-iaq/carbon-monoxides-impact-indoor-air-quality>,

<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?

Many states and localities have enacted laws and regulations requiring carbon monoxide alarms in certain types of residential buildings, and a growing number are establishing requirements for CO alarms in schools. This Overview includes state laws and regulations that require or promote the use of CO alarms in *existing school facilities*, though it may not necessarily include all such policies.

It is important to note that this Overview does *not* address CO alarm requirements for new or renovated school facilities. Some states have already established such requirements through their education laws, building codes, or fire codes. The 2015 version of the International Fire Code (IFC) – a model code adopted by many states – added a provision requiring CO alarms in classrooms in new educational occupancies. Thus, to the extent that states update their fire codes to incorporate provisions of the 2015 IFC, the number of states requiring CO alarms in newly constructed schools will increase.

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

STATE & CITATION	CARBON MONOXIDE ALARMS SUMMARY OF LAW/REGULATION	LAW REQUIRES CO ALARM IN EXISTING SCHOOLS ?
<b>CALIFORNIA</b> Ca. Educ. Code § 32081	California education law encourages existing schools with fossil-fuel burning furnaces to install CO devices. The law also requires the state fire marshal to propose for adoption in the state building code a standard requiring 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.	NO [But does require in new schools]
<b>COLORADO</b> Co. Rev. Stat. § 25-1.5-101; 6 Co. Code Regs. § 1010-6:6.9	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
<b>CONNECTICUT</b> 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
<b>DISTRICT OF COLUMBIA</b> 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
<b>ILLINOIS</b> 105 Il. Comp. Stat. §§ 10-20.57, 34-18.49; 41 Il. Admin. Code 112.100—250.	Illinois education 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. Implementing regulations issued by the State Fire Marshal define the CO detectors that may be used in	YES

	public schools and include specifications for approved CO alarms.	
<b>NEW JERSEY</b> N.J. Admin. Code § 5:70-4.9	New Jersey 's Fire Safety Code requires, as of September 3, 2017, the installation of CO detection equipment in all existing buildings, including educational facilities, that have fuel-burning appliances or attached garages. The code establishes criteria for the types of devices used and standards for installation and maintenance.	YES
<b>NEW YORK</b> N.Y. Exec. Law § 378 (5-d); 19 N.Y. Code Rules & Regs. § 1225.1	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 Uniform Code Supplement (which is incorporated by reference in state fire prevention and building code regulations) 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." The code establishes the requirements for placement and maintenance of CO alarms or CO detection systems in existing and new commercial buildings that contain any CO source or are attached to a garage and/or any other motor-vehicle-related occupancy.	YES
<b>UTAH</b> 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

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