

# 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 a source of indoor CO. 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.

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 <https://www.cpsc.gov/Safety-Education/Safety-Education-Centers/Carbon-Monoxide-Information-Center>

### 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 have established requirements for CO alarms in schools. Below is a list of state laws and regulations that require the use of CO alarms in *existing school facilities*, though this is not necessarily an exhaustive list of all such policies.

It is important to note that this summary does not address CO alarm requirements for new or renovated school facilities. Some states have established such requirements through their education laws, building codes, or fire codes. The 2015 version of the International Fire Code (IFC) – one model code adopted by many states – added a provision requiring CO alarms in classrooms in new educational occupancies.

States included in the summary chart below: **CO, CT, IL, NJ, NY, RI, UT, VA, WV**

<b>CARBON MONOXIDE ALARMS</b>	
<b>STATE &amp; CITATION</b>	<b>SUMMARY OF LAW/REGULATION</b>
<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 <b>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.</b>
<b>CONNECTICUT</b> Ct. Gen. Statutes § 29-292	Connecticut public safety law requires that the state fire code include a requirement for carbon monoxide detection and warning equipment in all public and non-public school buildings.
<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 the 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 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.
<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.
<b>RHODE ISLAND</b> R.I. Stat. § 16–21–5.1 216 R. I. Code Regs. 20-10-4.28	Rhode Island education law requires, as of January 1, 2019, installation and maintenance of CO detectors in all school buildings where students are in attendance for any portion of the day. Carbon monoxide detectors must be installed and maintained in accordance with the National Fire Protection Association (NFPA) Code and the state fire safety code requirement; if the state fire marshal determines that no provisions in these codes are applicable to installation in schools, the provisions applicable to day care services may be used as guidance.
<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) in areas with a gas water heater or boiler, an HVAC

Ut. Admin. Code R277-400-12	unit drawing outside air that could be contaminated with CO, and other areas with an open flame or fuel-fired appliance. The CO detection system may be part of a fire alarm system or standalone system. If CO levels exceed 70 ppm for one hour, the system must activate audible and visual alarms and the affected area must be evacuated.
<b>VIRGINIA</b> Va. Code § 22.1-138.2	Requires that each public school building that was built before 2015 and that houses any classroom for students must be equipped with at least one carbon monoxide detector.
<b>WEST VIRGINIA</b> W. Va. Code, § 15A-10-12	Requires installation of CO detectors in every public or private school or daycare facility that uses a fuel-burning heating system or other fuel-burning device that produces combustion gases. The device must be located in each area with such fuel-burning device.

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