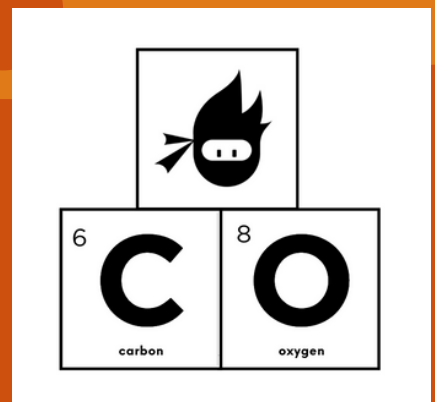


2023-2024 ACADEMIC YEAR  
INCIDENTS RECORDED AUGUST 1, 2023 – JULY 31, 2024

# U.S.-BASED CAMPUS REPORT CARD



CO Safe Schools  
[CarbonMonoxideInSchools.org](http://CarbonMonoxideInSchools.org)

# A message from our founder



This academic year, 21-year old college student Jonathan Rodriguez died in on-campus housing at Evergreen State College in Washington from carbon monoxide poisoning.

The investigation into his death found 4 critical issues that contributed to his death: that a tankless water heater recently installed by contractors in the student housing unit was not installed properly; that CO detectors were sounding but ignored; that there was a lack of training and understanding of the alarm system; and that current college protocols related to CO safety and procedure were insufficient.

Our research and personal CO poisoning experience shows these kinds of issues aren't exclusive to Evergreen State – and that's why we exist.

**Carbon monoxide poisoning is 100% preventable.**

This year's report is dedicated to the Rodriguez family, in hope that other lives will be saved and health protected due to the lessons learned from this loss.

## THIS YEAR'S REPORT CARD SHOULD CONCERN US ALL

- There was an 82% increase in school-based CO incidents in 2023-2024 school year (over previous year)
- There was a 134% increase in injuries requiring emergency medical treatment reported in 2023-2024 school year (over previous year)

With passion and service,

*Nikki James Gellner*

**CO Safe Schools' goal is to bring awareness and education to, not only the general public, but also to stakeholders engaged in creating safer campus environments including journalists, public servants, first responders, school administrators, teachers, and parents. Together, we can achieve CO-safe campuses.**

## How to Read This Report Card

As CO Safe Schools uses press-reporting to compile data, we are limited by what's reported from various sources to the amount of data we are able to collect. We regularly audit our listings to confirm any updates/changes to key data points. Below are the explanations of the categories we track and audit for school-based CO reporting.

**INCIDENT LIST** – The date of the incident and name of the school. Dates give us an indication of what time of year the carbon monoxide event takes place on a campus.

**BY REGION** – The region of the U.S. where the carbon monoxide incident occurs. This can shed light on where additional education, preparedness, or regulations may need to be evaluated for the protection of health and life safety.

**BY DEMOGRAPHIC AREA** – Will indicate whether the community is urban (access to life and safety resources), or rural (limited access to life and safety resources).

**BY CAMPUS TYPE** – This will indicate the primary purpose of the campus – and give an indication as to the age groups affected by the carbon monoxide incident.

**BY OCCUPANCY TYPE** – This will indicate where the carbon monoxide incident occurred on the property, and what that particular space is used for (based on Building Code).

**BY DETECTION ON-SITE** – This will indicate whether or not campus-provided detection devices were on site at the time of the carbon monoxide incident. It will also indicate, based on reporting, whether or not the alarm alerted occupants.

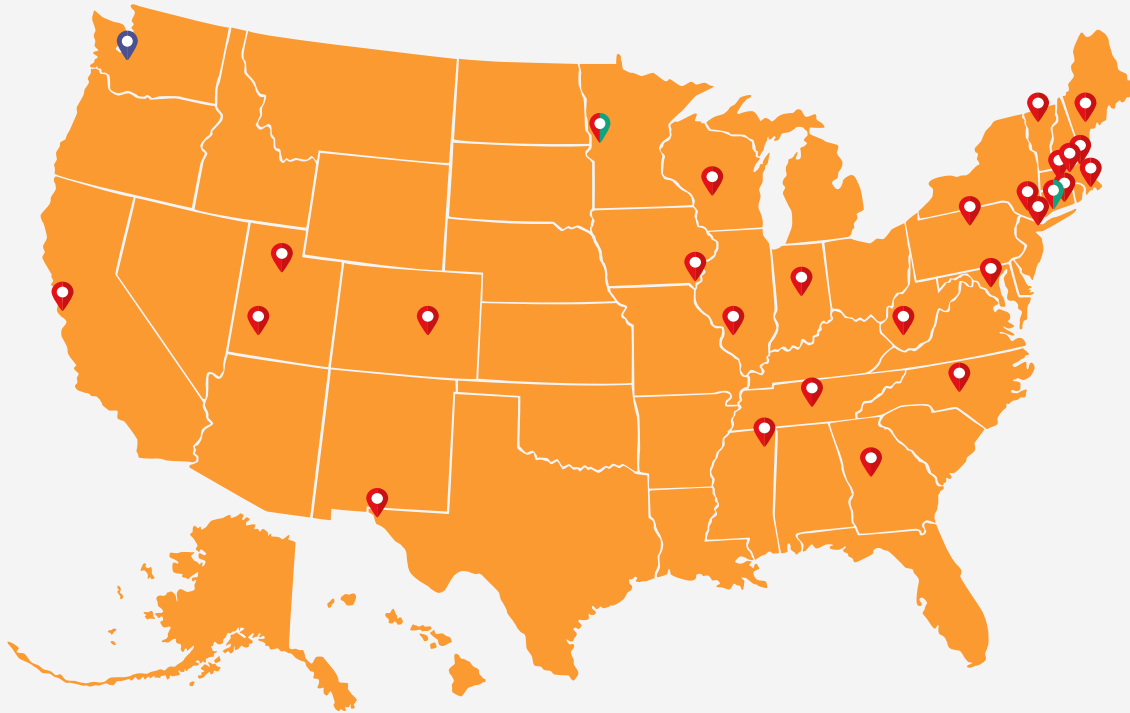
**BY SOURCE TYPE** – This will indicate whether the source of the carbon monoxide exposure was discovered immediately or following the carbon monoxide incident, and if that information was reported to the public.

**BY PPM LEVEL REPORTED** – Carbon monoxide accumulation is measured in parts per million (ppm). Reporting the highest known level of ppm recorded by gas meters or detection devices allows the public to know the level of exposure the occupants were subjected to. PPM should be communicated to all occupants, and first responders, as well as reported to the public for every carbon monoxide incident. For more information on how ppm level impacts physical and mental health, see the health impact chart included in this report.

**KNOWN INJURIES** – This will indicate the number of people killed, injured, or requiring medical treatment at the time of the exposure. It will not include the total number of evacuated or evaluated by their own medical providers after the event.



# 2023-2024 ACADEMIC YEAR

## US-BASED, PRESS-REPORTED INCIDENTS



- 08/01/23- EGBERT INTERMEDIATE (NY)
- 08/22/23 - CATAWBA COLLEGE (NC)
- 08/31/23 - PERRY MERIDIAN MIDDLE (IN)
- 09/11/23 - MACDUFFIE SCHOOL (MA)
- 09/13/23 - COVENTRY VILLAGE SCH. (VT)
- 09/27/23 - UC SANTA CRUZ (CA)
- 10/19/23 - NETTLE MIDDLE (MA)
- 10/25/23 - BOOKER T WASHINGTON MS (NY)
- 11/03/23 - RANKIN MIDDLE (MS)
- 11/03/23 - LYCOMING COLLEGE (PA)
- 11/23/23 - MURDOCK MIDDLE/HIGH (MA)
- 11/29/23 - AMERICAN PREP ACAD (UT)
- 11/30/23 - LINCOLN SCHOOL (MN)
- 12/04/23 - LINCOLN SCHOOL (MN)
- 12/04/23 - BURLINGTON NOTRE DAME (A)
- 12/06/23 - HOOD COLLEGE (MD)

- 12/11/23 - EVERGREEN STATE COLLEGE (WA)
- 12/22/23 - ASSAWOMPSET ELEMENTARY (MA)
- 01/05/24 - ELM HILL EARLY LEARNING (TN)
- 01/12/24 - PRARIE HEIGHTS ELEMENTARY (CO)
- 01/17/24 - YALE UNIVERSITY (CO)
- 01/18/24 - CANYON VIEW MIDDLE (UT)
- 01/22/24 - LAKE REGION HIGH (ME)
- 01/23/24 - CUMBY HIGH (TX)
- 02/05/24 - NITRO ELEMENTARY (WV)
- 02/17/24 - WESLEYAN UNIVERSITY (CT)
- 03/05/24 - WESLEYAN UNIVERSITY (CT)
- 03/26/24 - CLENDENIN ELEMENTARY (TX)
- 03/27/24 - DOBBS ELEMENTARY (GA)
- 04/04/24 - ST CLARE CATHOLIC (IL)
- 04/09/24 - UW - MADISON (WI)

 Fatality recorded  Multiple incidents at property

# A breakdown of the U.S. incidents in the 2023-2024 academic year

CO Safe Schools uses press-reported incidents as our primary source of data collection. We audit our incident reporting regularly to see if changes have been reported regarding CO sources, injuries, and other data points, as many times these points are not available through spot- and breaking news. **We believe community journalists play a major role in accurately educating the public and serving as watchdogs of the community** and it's our goal to partner with media organizations to make reporting better and more accurate for the public from the get-go. The data below represents U.S. campuses, and the reporting period is August 1, 2023 – July 31, 2024.

## BY REGION

13 - Northeast (MA, MD, CT, ME, PA, NY, VT)  
7 - South (TX, MS, GA, WV, NC)  
6 - Midwest (WI, IL, IA, MN, IN)  
5 - West (CA, WA, UT, CO)

## BY DETECTION ON SITE

9 – No detection on site  
3 – Yes, alerted  
3 – Yes, but did not alert  
16 – Not reported

## BY DEMOGRAPHIC AREA

22 – Urban/Suburban  
9 – Rural

## BY SOURCE TYPE

15 – Faulty appliance (HVAC, kitchen, cleaning)  
8 – Improper ventilation (human/installation error)  
7 – Unknown source/Not reported  
1 – Inadequate ventilation (random/nature)

## BY CAMPUS TYPE

9 - College/University  
6 - Elementary School  
6 - Intermediate/Middle School  
4 - High School  
4 - Daycare/Early Childhood/PreK  
2 - Mixed Use (K-12/K-8)

## BY PPM REPORTED

27 – Did not report/disclose PPM  
2 – <100 ppm reported  
1 – 101 - 500 ppm reported  
0 – 501 - 1000 ppm reported  
1 – >1000 ppm reported

## BY OCCUPANCY TYPE

17 – Educational/Administration  
7 – Residential/Student Housing/Dorms  
4 – Daycare/Early Learning Building  
2 – Assembly/Gymnasium & Recreation  
1 – Campus-owned building (other use)

## KNOWN INJURIES/FATALITIES

1 – Fatalities  
61 – EMS transported to hospital/hospitalized  
91 – Received EMS treatment on scene  
25 – Advised to seek offsite medical treatment

# Take the steps to become CO safe

Where do you go from here?  
Our Campus Report Cards are not just about looking back, but also looking forward.

While our report cards are provided annually (which began with the 2022-2023 academic year), an ongoing incident database for US-based school exposures is maintained at: [CarbonMonoxideInSchools.org/victims](https://CarbonMonoxideInSchools.org/victims)

## 01

### **Get educated about modern CO sources and audit your campus.**

Visit [CarbonMonoxideInSchools.org](https://CarbonMonoxideInSchools.org) for actionable resources, fast facts, and real-time reporting on campus CO safety. Use our CO Risk On Your Campus guide to evaluate the current level of risk in and around your buildings. Hang the Health Effects Chart on the next page in your break area.

## 02

### **Install the appropriate level of carbon monoxide protection.**

Carbon monoxide detection devices are not one-size-fits-all. Work with dedicated advisors to make sure you're equipping your campus with the right kind of detection in the right places. Just because there might not be a requirement, doesn't mean you shouldn't do it.

## 03

### **Make a plan and share it with all occupants of your property.**

Carbon monoxide incidents are not shelter-in-place events – they require immediate evacuation of occupants into fresh air. Make sure staff and occupants have proper training to safely, efficiently, and effectively get out of the building first and notify responders afterward.

## 04

### **Require your school partners and vendors to be safe, too.**

Many carbon monoxide events occur due to the arrival of temporary, portable, gas-powered devices on campus. If work is being done on or around your campus property (like construction or landscaping), require vendors to use portable CO devices while conducting work.

# CARBON MONOXIDE PPM LEVELS AND THEIR IMPACT TO HEALTH

Carbon monoxide, or CO, interferes with the ability of red blood cells to carry oxygen to vital organs. CO is measured in Parts Per Million (PPM). CO alarms will alert differently based on product & manufacturer.

0 – 9 PPM

No health effects. This PPM level is the typical level of CO found in rural, indoor and minimal-traffic city areas.

10 – 20 PPM

Cardiovascular and mental effects in vulnerable populations (children, elderly, immunocompromised); chronic exposure at this level: unexplained headaches, nausea problems in otherwise healthy adults.

35 PPM

Flu like symptoms in vulnerable populations. An increase in cardiac and/or respiratory complaints in healthy adults with consistent, chronic exposure. *This PPM level would have to be sustained for 10 hours to set off a basic UL standard, single-station CO alarm properly installed in the area of exposure.*

50 PPM

Headache and dizziness after 8 hours of exposure at this level in healthy adults; Aggravation of symptoms of existing conditions. *This PPM level would have to be sustained for 8 hours to set off a basic UL standard, single-station CO alarm properly installed in the area of exposure.*

70 PPM

Flu-like symptoms for healthy adults including headache, nausea, dizziness, fatigue. *This PPM level would have to be sustained for 1-4 hours to set off a basic UL standard, single-station CO alarm properly installed in the area of exposure.*

150 PPM

Elevated symptoms in vulnerable populations. In healthy adults, impaired mental function after 2-6 hours of exposure at this level. *This PPM level would have to be sustained for 10 - 50 minutes to set off a basic UL standard, single station CO alarm properly installed in the area of exposure.*

400 PPM

Hallucinations, dementia, and serious headaches within 1-2 hours; life threatening after 3 hours. *This PPM level would have to be sustained 4-15 minutes to set off a basic UL standard, single station CO alarm properly installed in the area of exposure.*

800 PPM

Dizziness, nausea and convulsions within 45 minutes. Loss of consciousness within 2 hours. Death within 2-3 hours for healthy adult.

1,600 PPM

Healthy adult would experience nausea, dizziness and headaches in less than 20 minutes; death would occur within 1 hour. *Smoldering wood fires, malfunctioning furnaces, water heaters, and kitchen ranges typically produce concentrations exceeding 1,600 ppm.*

3,200 PPM

Headache, dizziness and nausea within 5-20 minutes. Quickly impaired thinking. Death within 30 minutes.

6,400 PPM

Headache, dizziness and nausea within 1-2 minutes. Thinking impaired before response possible. Death within 10-15 minutes.

# Frequently Asked Questions

## DO BUILDINGS NEED TO HAVE A GAS-FIRED SOURCE TO HAVE A CARBON MONOXIDE ISSUE?

A building **does not** need a fuel-fired system to have a CO exposure incident. While boilers, furnaces, and HVAC systems are the #1 source of CO incidents in schools, **they're not the only source**. A growing percentage of emergency CO-related incidents in schools are caused by things like snow- or nest-blocked vents, propane-powered cleaning equipment, idling vehicles, and using gas-powered equipment in improperly ventilated areas.

## ARE ALL STAFF MEMBERS OF CAMPUSES REQUIRED TO HAVE CO SAFETY TRAINING?

At this time, **most educators and faculty nationwide are not required to complete any kind of carbon monoxide awareness, prevention, or situational training**. If there is no installed detection, or if detection devices are malfunctioning, front-line staff such as teachers and maintenance teams are the only ones who can recognize a CO issue as it's occurring. Teachers will see changes in children's typical behavior and will be the first to see a "group" symptom emerging and where it's happening. It is imperative they know what they're looking for, how to respond, and who to alert when it comes to CO.

## IS THERE A FEDERAL LAW REQUIRING CARBON MONOXIDE DETECTION IN SCHOOLS?

Due to current state and federal laws, as well as assorted building codes being adopted or enforced across all states, a majority of schools throughout the U.S. do not have CO detection on site because they're not required to – particularly in existing, older campus buildings, assembly areas, or structures without CO-producing equipment installed. It has been proven that if campuses aren't required to do it, they often don't. Budget constraints, aging buildings and equipment, and increasing demands of curriculum and training often mean the CO conversation is left to maintenance personnel and risk managers. However, many staff, parents, and community members who occupy the building are under the impression their health and life safety are being protected – when it's not.

## SHOULD I JUST ORDER SOME CARBON MONOXIDE DETECTORS OFF AMAZON?

Not all detection devices are created equal, and currently, most building code recommendations are the bare minimum for life safety. You can still suffer short-term and long-term health issues if you choose detection that isn't designed for the specific needs of your school and space. There are key differences between carbon monoxide monitors, stand-alone alarms, and integrated detection systems. When it comes to children's and life safety, you want to invest in the devices that will protect their development and health – not just save their lives. What a school should be using for CO protection based on its unique size, age, systems, and layout is often far greater than the minimum recommendations for safety made by code councils, local codes, or state law. It is imperative to understand the unique needs of your school and its occupants – and install detection devices accordingly.

## DOES CARBON MONOXIDE EXPOSURE AFFECT EVERYONE THE SAME?

Children are at higher risk than healthy adults when exposed to carbon monoxide and experience more long-term side effects. Due to their age and current stage of development, children will respond to CO exposure differently than the adults in the room with them. Children have a higher metabolism and breathe faster, meaning they will be inhaling and distributing carbon monoxide more often. Their developing minds are still in the growth stage, and exposure to poisonous toxins can change neurological response and organ development in the long term. Younger children, in particular, are unable to communicate the physical issues being experienced, and it is not abnormal for them to appear drowsy and fussy.



# CO SAFE SCHOOLS

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