



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410

OFFICE OF PUBLIC AND INDIAN HOUSING
OFFICE OF HOUSING
OFFICE OF LEAD HAZARD CONTROL
AND HEALTHY HOMES

SPECIAL ATTENTION OF:

Regional Administrators; Directors of HUD
Regional, Hub, and Field Offices of Public
Housing; Multifamily Regional
Center/Satellite Office Directors; Public
Housing Agencies; Housing Choice Voucher,
Project-based Voucher, Project-Based Rental
Assistance, Section 202, and Section 811
Property Owners; Healthy Homes
Representatives

NOTICE PIH 2022-01
NOTICE H 2022-01
NOTICE OLHCHH 2022-01

Issued: January 31, 2022

This notice remains in effect until amended,
superseded, rescinded.

Cross References:

NOTICE PIH 2019-06
NOTICE H 2019-05
NOTICE OLHCHH 2019-01

Section 3(b)(6) of the United States Housing
Act of 1937 (42 U.S.C. 1437a(b)(6),
42 U.S.C. 1437 et. seq.)

Subject: Carbon Monoxide Alarms or Detectors in U.S. Housing and Urban Development
(HUD)-Assisted Housing

I. Purpose

Public housing agencies and authorities (PHAs), and Owners of properties that receive federal rental assistance have an important role to prevent potential loss of life and severe injury associated with carbon monoxide (CO) in housing they own or manage. This notice reminds PHAs and Owners of CO poisoning risks in housing, identifies resources for preventing and detecting CO exposure, and provides notice of Section 101, “Carbon Monoxide Alarms or Detectors in Federally Insured Housing” of Title I of Division Q, Financial Services Provisions and Intellectual Property, of the Consolidated Appropriations Act, 2021, Pub. L. No. 116-260, 134 Stat. 2162 (2020) (“the Act”), that requires CO alarms or detectors be installed in certain HUD-assisted housing within two years of enactment.

This notice clarifies that HUD will enforce the requirements instituted by Congress requiring that all Public Housing (PH), Housing Choice Voucher (HCV), Project Based Voucher (PBV), Project Based Rental Assistance (PBRA), Section 202 Supportive Housing for the Elderly (Section 202), and Section 811 Supportive Housing for Persons with Disabilities (Section 811) comply with the International Fire Code (IFC) 2018 standards on the installation of CO alarms or detectors by December 27, 2022. For the full 2018 IFC Code, as well as Chapter 9 and Chapter 11 regarding CO alarms or detectors, please visit <https://codes.iccsafe.org/content/IFC2018>;

<https://codes.iccsafe.org/content/IFC2018/chapter-9-fire-protection-and-life-safety-systems;>
[https://codes.iccsafe.org/content/IFC2018/chapter-11-construction-requirements-for-existing-buildings.](https://codes.iccsafe.org/content/IFC2018/chapter-11-construction-requirements-for-existing-buildings)

PIH Notice 2019-06¹, HN 2019-05, and Office of Lead Hazard Control and Healthy Homes (OLHCHH) Notice 2019-01 reminded Owners and operators of PH, PBRA, HCV, PBV, and Section 202²/811³ properties to have operational CO detectors, where specified, as required by the state or local law, code, or other regulation.

Additionally, this notice identifies resources for the types of devices to install, ideal placement, maintenance, and monitoring; and is applicable to housing with fuel-fired/burning appliance(s) or an attached garage.

This notice remains in effect until amended, superseded, or rescinded.

II. Definitions

Carbon Monoxide Alarm: A single or multiple station alarm intended to detect carbon monoxide gas and alert occupants by a distinct audible signal. It incorporates a sensor, control components and an alarm notification appliance in a single unit.

Carbon Monoxide Detector: A device with an integral sensor to detect carbon monoxide gas and transmit an alarm signal to a connected alarm control unit.

III. Background

The Act requires the installation of CO alarms or detectors in certain Federally Assisted Housing by December 27, 2022.⁴ The Act CO alarms or detectors be installed in each dwelling unit(s) receiving tenant-based or requires project-based assistance or is owned or operated by a PHA or by the owner of a dwelling unit receiving project-based assistance in a manner that meets or exceeds the standards described in Chapters 9 and 11 of the 2018 publication of the International Fire Code (IFC), as published by the International Code Council (ICC).⁵

This notice is being issued to provide notice that the Secretary of Housing and Urban Development will, consistent with the Act, enforce standards relating to CO alarms and detectors and in support of decent, safe, and habitable housing in HUD's low-income housing assistance programs.

HUD recognizes CO poisoning as an important safety issue for families in assisted housing. According to the National Center for Environmental Health, "each year more than 400 Americans die from unintentional CO poisoning not linked to fires, more than 20,000 visit the

¹ <https://www.hud.gov/sites/dfiles/PIH/documents/PIH-2019-06.pdf>.

² https://www.hud.gov/program_offices/housing/mfh/progdesc/eld202.

³ https://www.hud.gov/program_offices/housing/mfh/grants/section811ptl.

⁴ <https://www.congress.gov/116/bills/hr133/BILLS-116hr133enr.pdf#page=981>.

⁵ The Act's requirements also apply to several other Federally Assisted Housing programs administered by other HUD components; those requirements will be addressed separately.

emergency room, and more than 4,000 are hospitalized.”⁶

CO is an odorless, colorless, and toxic gas. It is impossible to see, and is a tasteless gas produced by incomplete combustion of fuel burned in vehicles, small engines, stoves, lanterns, grills, fireplaces, gas ranges, or furnaces. It can build-up indoors and poison people and animals who breathe the toxic fumes. The effects of CO exposure can vary from person to person depending on age, overall health, and the concentration and length of exposure. Exposure can cause harmful health conditions, permanent brain damage, life-threatening cardiac complications, fetal death or miscarriage, and death in a matter of minutes. Individuals who are asleep or intoxicated may die from CO poisoning before experiencing any symptoms.⁷

IV. Requirement to Install Detectors and Alarms

The ICC publishes the IFC and periodically updates it. Among other standards, the IFC establishes minimum requirements for CO alarms or detectors in jurisdictions which adopt the IFC into its codes or laws, except for properties where the International Residential Code (IRC) applies. In its administration section, the 2018 IFC notes the model code provisions do not apply to properties covered under the 2018 IRC (Single Family Housing, Duplexes & Townhomes) with some limited exceptions⁸.

HUD encourages PHAs and Owners to adopt standards at or above the standards of the [2018 International Fire Code \(IFC\)](#) as soon as possible for the health and safety of residents. PHAs and Owners are on notice that these requirements will be enforced by HUD after the effective date of December 27, 2022.

V. Preventing CO Intrusion and Funding Resources

This Notice provides HUD’s intent to identify building-related sources of CO for PHA and Owner awareness and education for residents or tenants. The material in this and the next section summarizes guidance provided by the U.S. Environmental Protection Agency (EPA), the Centers for Disease Control and Prevention (CDC), the Consumer Product Safety Commission (CPSC), the Federal Emergency Management Agency, and the U.S. Fire Administration. CO alarms or detectors are not a replacement for the proper installation, use, and maintenance of fuel-burning appliances or for well-ventilated garages. PHAs, Owners (e.g., landlords), and managers should ensure that combustion equipment is maintained and properly adjusted. Vehicle use should be carefully managed adjacent to buildings and in vocational programs through signage or policy updates. Where feasible, Owners and managers can provide additional ventilation as a temporary measure when high levels of CO are expected for short periods of time.⁹

⁶ CDC. Carbon Monoxide FAQs <https://www.cdc.gov/co/faqs.htm>, July 1, 2021.

⁷ *Ibid.*

⁸ 2018 IFC: 102.5 Application of residential code. [Chapter 1 Scope and Administration, 2018 International Fire Code \(IFC\) | ICC Digital Codes \(iccsafe.org\)](#)

⁹ EPA. Carbon Monoxide's Impact on Indoor Air Quality. <https://www.epa.gov/indoor-air-quality-iaq/carbon-monoxides-impact-indoor-air-quality>.

Examples of activities to prevent CO intrusion include:

- Ensure gas appliances are properly adjusted.
- Install, properly maintain, and assure through periodic inspection that exhaust fans are functional and vented to outdoors over gas stoves.
- Ensure that flues over fireplaces are operational and capable of opening and closing by residents.
- Use appropriately sized wood stoves certified to meet EPA emission standards with tightly fitting doors.¹⁰
- Perform annual inspections, clean, and tune-up central heating systems (furnaces, flues, chimneys) and ensure that these activities are conducted by a trained professional.
- Ensure leaks are repaired promptly.
- Provide regular resident CO education through policies or signage.

Sources of CO that can be found in a housing environment, as described in the EPA's webpage *Carbon Monoxide's Impact on Indoor Air Quality*, include:¹¹

- Unvented kerosene and gas space heaters.
- Leaking chimneys and furnaces.
- Back-drafting from furnaces, gas water heaters, wood stoves, and fireplaces.
- Gas stoves.
- Generators and other gasoline powered equipment.
- Automobile exhaust from attached garages.
- Auto, truck, or bus exhaust from attached garages, nearby roads, or parking areas.
- Incomplete oxidation during combustion in gas ranges and unvented gas or kerosene heaters.
- Worn or poorly adjusted and maintained combustion devices (e.g., boilers, furnaces) if the flue is improperly sized, blocked, or disconnected; or the flue is leaking.

Rental property owners, managers, and residents all play an important role in preventing CO intrusion and responding quickly when it occurs and where sources of CO exist. Common exposures occur when residents introduce a CO source or result from building related sources, such as an inadequately exhausted vent or a faulty boiler. Other CO exposures occur during a natural disaster or utility interruption. Residents should avoid the use of portable generators, fired grills, vehicles, or fuel-burning space heaters as a heat or fuel-burning electric sources indoors. Therefore, resident education is strongly encouraged particularly during seasonal increases in CO use or during periods of electric or heat outages. PHAs and Owners should inform residents that CO exposure can be prevented. Examples to avoid unintentional CO poisoning include:

- Avoiding portable generators indoors and only using generators outdoors in well-ventilated areas away from all doors, windows, and vents.

¹⁰ EPA. EPA Certified Wood Stoves. <https://www.epa.gov/burnwise/epa-certified-wood-stoves>.

¹¹ EPA. Carbon Monoxide's Impact on Indoor Air Quality.

- A gas-burning stove or oven should not be used for heat.
- A fuel-burning space heater that is not vented to the outdoors should not be used.
- A car should not be left running in an enclosed garage.

PHAs operating public housing units may use either Operating Funds or Capital Funds for purchase, installation, and maintenance of CO alarms or detectors. Based on the Act's set-asides, the Capital Fund Program conducts competitions for additional funds for CO alarms or detectors. For the HCV and PBV programs, the property owner or landlord is responsible for the cost of CO alarms or detectors. PHAs may use their HCV administration funds for landlord outreach and education on these requirements. Owners of properties receiving assistance through the PBRA, Section 202, and/or Section 811 program may utilize the property's reserve for replacement account, residual receipts, general operating reserves, owner contributions, or secondary financing to fund the purchase, installation, and maintenance of CO alarms and detectors. These expenditures may be subject to a standard approval process where applicable, but the purchase, installation, and maintenance of CO alarms and detectors are deemed eligible expenses.

VI. Resident Education

In the Act, Congress directed HUD to provide guidance to public housing agencies on how to educate tenants on health hazards in the home, including CO poisoning, lead poisoning, asthma induced by housing-related allergens, and other housing-related preventable outcomes, to help advance primary prevention and prevent future deaths and other harms. This notice provides initial information and guidance for PHAs, Owners, and managers. PIH will develop additional materials for residents to promote healthy housing and prevent CO exposure. Planned materials include a highly graphic flyer using plain language tailored to federally assisted housing Owners and residents. The flyer will be available for black-and-white printing or for color printing.

HUD is developing CO materials for property management to support its educational activities. Materials will be posted to [HUD's website](#). Program notices and supplemental documents will inform Owners and managers of their responsibilities under the Act. Educational materials will be available for download without cost.

VII. Resources for Additional Information

- HUD's Office of Lead Hazard Control and Healthy Homes (OLHCHH). https://www.hud.gov/program_offices/healthy_homes/healthyhomes/carbonmonoxide.
- Centers for Disease Control and Prevention (CDC). *Carbon Monoxide Poisoning* information webpage located at <https://www.cdc.gov/co/default.htm>.
- Consumer Product Safety Commission (CPSC). Carbon Monoxide Fact Sheet. <https://www.cpsc.gov/safety-education/safety-guides/carbon-monoxide/carbon-monoxide-fact-sheet>.
- CPSC. Carbon Monoxide. <https://www.cpsc.gov/Safety-Education/Safety-Education-Centers/Carbon-Monoxide-Information-Center>.

- Environmental Protection Agency (EPA). *Protect Your Family and Yourself from Carbon Monoxide Poisoning* at <https://www.epa.gov/indoor-air-quality-iaq/protect-your-family-and-yourself-carbon-monoxide-poisoning>.
- Federal Emergency Management Agency, US Fire Administration. https://www.usfa.fema.gov/prevention/outreach/carbon_monoxide.html.

Further Information: Questions concerning this notice regarding Public and Indian Housing may be directed to Laura L. Miller-Pittman, Chief, Office of Policy, Program, and Legislative Initiatives, at PIH-OPPLI@hud.gov.

Questions concerning this notice regarding Multifamily Housing programs may be to Daniel Clark at Daniel.J.Clark@hud.gov.

Questions concerning technical issues regarding carbon monoxide alarms or detectors may be directed to the Lead and Healthy Homes help desk, at Lead.Regulations@HUD.gov.



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