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Part VI

# Department of Housing and Urban Development

## 24 CFR Parts 3280 and 3282
## Manufactured Home Construction and Safety Standards: Smoke Alarms; Proposed Rule

**DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**

**24 CFR Parts 3280 and 3282**

**[Docket No. FR–4552–P–01]**

**RIN 2502–AH48**

## Manufactured Home Construction and Safety Standards: Smoke Alarms

**AGENCY:** Office of the Assistant Secretary for Housing-Federal Housing Commissioner, HUD.

**ACTION:** Proposed rule.

**SUMMARY:** This proposed rule would amend the Federal Manufactured Home Construction and Safety Standards to revise the requirements for the location and placement of smoke alarms. The purpose of these amendments is to improve the effectiveness and performance of smoke alarms in early warning detection of manufactured home fires and to reduce the rate of fire fatalities in new manufactured housing.

**DATES:** *Comments Due Date:* July 17, 2000.

**ADDRESSES:** Address all comments concerning this proposed rule to the Rules Docket Clerk, Office of the General Counsel, Room 10276, U.S. Department of Housing and Urban Development, 451 Seventh Street, SW, Washington, DC 20410. Comments should refer to the docket number and title listed above. A copy of each comment submitted will be available for public inspection and copying weekdays between 7:30 a.m. and 5:30 p.m. at the above address. Comments submitted by facsimile (FAX) will not be accepted.

**FOR FURTHER INFORMATION CONTACT:** Rebecca J. Holtz, Acting Director, Office of Consumer and Regulatory Affairs, Room 9156, U.S. Department of Housing and Urban Development, 451 Seventh Street, SW, Washington, DC 20410; telephone (202) 708–0502 (this is not a toll-free number). Persons who have difficulty hearing or speaking may access this number via TTY by calling the toll-free Federal Information Relay Service at (800) 877–8339.

**SUPPLEMENTARY INFORMATION:**

### I. Background

The National Manufactured Housing Construction and Safety Standards Act of 1974 (42 U.S.C. 5401–5426) ("the Act") authorizes the Secretary to establish and amend the Federal Manufactured Home Construction and Safety Standards ("the Standards" or "HUD Code"), codified in 24 CFR part 3280. The purpose of the Act is to reduce the number of personal injuries and deaths and the amount of insurance costs and property damage resulting from manufactured home accidents, and to improve the quality and durability of manufactured homes (42 U.S.C. 5401).

One of the most significant factors in meeting these objectives, from the perspective of fire safety, is the requirement in the Standards for the installation of permanently wired smoke detectors in manufactured homes (24 CFR 3280.208). The enforcement program for this requirement is designed to ensure that a manufactured home is not labeled or shipped without such smoke alarms. Nevertheless, fire data studies conducted for HUD by the National Fire Protection Association (NFPA) have continued to indicate that in about 40% of HUD-code homes where fatal fires have occurred smoke alarms were not present or operational.

This fact suggests a high rate of occupant disabling of smoke alarms. This may be a result of frequent false and nuisance alarms caused, for example, by the close proximity of these devices to cooking appliances. In addition, findings from the National Smoke Detector Project conducted by the Consumer Product Safety Commission (CPSC) indicated that for all homes investigated only about 70% of the smoke alarms were working.

The NFPA also reported that the rate of fire fatalities for all manufactured homes was cut nearly in half when alarms were operational. This emphasizes the importance of reducing the occupant disabling problem and improving the reliability and effectiveness of smoke alarms.

HUD had also previously designated the NFPA to undertake a consensus process to develop recommendations for new manufactured housing standards. The Department has received both a proposal (TIA 97–1) and the NFPA 501 Standard (1999 edition) developed through that process. The proposal and relevant provisions in NFPA 501 contained recommendations that would revise the present smoke alarm requirements in HUD's Standards. The Department also commissioned the National Institute of Standards and Technology (NIST) to evaluate the adequacy of the current requirements for smoke alarms in the Standards and to recommend alternatives that are consistent with national fire safety standards for other types of housing and that would reduce the incidence of nuisance alarms.

The findings and recommendations from the NFPA and NIST evaluations were compatible and have formed the basis for the proposed revisions to the smoke alarm requirements in the Standards contained in this rule. In addition, HUD has included provisions in the rule for testing smoke alarms to ensure that all installed smoke alarms are operational. These testing provisions are based in part on recommendations in the NFPA study on manufactured home fire data and other proposals now being considered by the NFPA Consensus Committee.

### II. Proposed Changes

The proposed rule would make the following major changes to the Standards:

—The proposed rule would replace the term "smoke detector" with the term "smoke alarm". While these terms are commonly used interchangeably, other housing codes generally define a "smoke detector" as a device that detects visible or invisible particles of combustion but does not include an alarm. By contrast, a "smoke alarm" is a self-contained unit that is responsive to smoke and incorporates a sensor, controls, and an alarm-sounding device.

—The proposed rule would revise all of the current location requirements contained in the Standards to enhance performance, improve audibility, and minimize the potential for false alarms. In general, the proposed rule would require more smoke alarms per home.

—The proposed rule would require manufacturers to install a smoke alarm that protects the living room and kitchen areas. However, the proposed rule would restrict manufacturers from installing a smoke alarm in the kitchen to minimize false alarms due to cooking and the potential for occupants to disable the alarm. If installed within 20 feet of a cooking appliance, the proposed rule would require that the smoke alarm include a temporary silencing feature (hush button) to provide consumers with a mechanism to shut off the alarm temporarily for about 15–20 minutes (e.g., if the alarm sounds frequently during periods of cooking). Alternatively, the proposed rule would permit manufacturers to install photoelectric type smoke alarms, which are less sensitive to cooking fumes.

—The proposed rule would require manufacturers to install a smoke alarm in each bedroom rather than outside each bedroom because occupants are most vulnerable when asleep.

—The proposed rule would permit manufacturers to mount smoke alarms on ceilings to avoid other locations

that may be more vulnerable to false alarms. The proposed rule would prescribe clearance distances, and manufacturers would not be able to modify them, even if permitted by the listing for the alarm. In rooms with sloping ceilings, the proposed rule would require manufacturers to mount smoke alarms within the distance determined by the hypotenuse of a right triangle whose horizontal leg measures 3 feet and whose vertical leg is perpendicular to its horizontal leg from the highest point of the ceiling.

—The proposed rule would require manufacturers to install smoke alarms that are interconnected so that the operation of any one alarm activates all other alarms in the home to maximize the likelihood of being awakened to nighttime fires. In addition, as recommended by both the NFPA and NIST evaluations, the proposed rule would permit the use of smoke alarms powered by a battery rated for a 10-year life as an alternative to permanently wired alarms with battery back-up. While HUD is aware that there are currently no commercially available 10-year battery-powered alarms that include an interconnection feature, HUD decided to include the 10-year battery alarm option in this proposed rule as an incentive to develop the interconnection feature. HUD is interested in receiving comments on the use of 10-year battery smoke alarms, including any suggestions regarding methods to encourage homeowners to maintain or replace these alarms as needed.

—The proposed rule would establish separate operational, location, and connection requirements for visual and tactile appliances that can benefit hearing- and sight-impaired persons.

—The proposed rule would require additional restrictions on the placement of smoke alarms for bathrooms, kitchens, and areas where forced air equipment is located to improve the effectiveness and functionality of the alarms.

—The proposed rule would require operational testing at the factory to ensure that all alarms are responding. The proposed rule would also require manufacturers to replace any alarm that, though correctly wired, does not function properly during testing. The proposed rule would also require manufacturers to provide installers with specific written instructions for inspecting and testing smoke alarms during installation of the home, and to provide homeowners with the smoke alarm manufacturer's information describing the operation, method and frequency of testing, and proper maintenance of the smoke alarm.

In addition to addressing these changes, commenters are encouraged to submit other recommendations that would make smoke alarms more tamper resistant and less susceptible to nuisance alarms, and to suggest methods that would encourage homeowners to replace smoke alarms because of their age or other factors that may hinder their performance.

A conforming change to the terminology used in 24 CFR part 3282, Manufactured Home Procedural and Enforcement Regulations, substituting "alarms" in place of "detectors" is also made by this rule.

## III. Findings and Certifications

*Regulatory Planning and Review*

The Office of Management and Budget (OMB) has reviewed this rule in accordance with Executive Order 12866, (captioned "Regulatory Planning and Review"). OMB determined that this rule is a "significant regulatory action" as defined in section 3(f) of the Order (although not an economically significant regulatory action under the Order). Any changes to the rule resulting from this review are available for public inspection between 7:30 a.m. and 5:30 p.m. weekdays in the Office of the Rules Docket Clerk.

*Paperwork Reduction Act*

The proposed new information collection requirements contained in § 3280.208(f) have been submitted to the Office of Management and Budget (OMB) for review under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520). Under this Act, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection displays a valid control number. OMB has issued HUD the control number 2502–0253 for the information collection requirements under the current Manufactured Housing Construction and Safety Standards Program.

The public reporting burden for this new collection of information is estimated to include the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Information on the estimated public reporting burden is provided in the following table.

| Information collection | Number of respondents | Responses per respondent | Total annual responses | Hours per response | Total hours |
|---|---|---|---|---|---|
| § 3280.208(f) Manufacturer's Alarm Instructions | 340 | 1,088 | 370,600 | .0833 | 30,833 |

In accordance with 5 CFR 1320.8(d)(1), HUD is soliciting comments from members of the public and affected agencies concerning the proposed collection of information to:

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Interested persons are invited to submit comments regarding the information collection requirements in this proposal. Comments must be received by July 17, 2000. Comments must refer to the proposal by name and docket number (FR–4552–P–01) and must be sent to:

Joseph F. Lackey, Jr., HUD Desk Officer, Office of Management and Budget, New Executive Office Building, Washington, DC 20503

and

Rules Docket Clerk, Office of the General Counsel, Room 10276, U.S. Department of Housing and Urban Development, 451 Seventh Street, SW, Washington, DC 20410

*Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531–1538) establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. This rule will not impose any Federal mandates on any State, local, or tribal governments or the private sector within the meaning of the Unfunded Mandates Reform Act of 1995.

*Environmental Review*

A Finding of No Significant Impact (FONSI) with respect to the environment was made in accordance with HUD regulations in 24 CFR part 50 that implement section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4223). The FONSI is available for public inspection during regular business hours in the Office of the Rules Docket Clerk, Office of General Counsel, Room 10276, U.S. Department of Housing and Urban Development, 451 Seventh Street, SW, Washington, DC 20410.

*Impact on Small Entities*

The Secretary, in accordance with the Regulatory Flexibility Act (5 U.S.C. 605(b)), has reviewed and approved this proposed rule and in so doing certifies that the rule would not have a significant economic impact on a substantial number of small entities. The rule would revise HUD's existing regulations for the placement and installation of smoke alarms in new manufactured housing. The requirements would ensure that smoke alarms installed in new homes will be more effective in warning of the presence of smoke. This is accomplished primarily by changing the location requirements to ensure that alarms operate more effectively. Because manufacturers are already required to provide working smoke alarms in manufactured homes, the costs associated with complying with new requirements would be minimal.

HUD has conducted a material and labor cost impact analysis for this rule. The potential cost impact, based on a per home cost determined to be approximately $28.05, multiplied by 350,000 homes produced in a year (assuming conservatively that no manufacturer currently uses AC smoke alarms with battery backups), is $9.8 million annually. This does not represent a significant economic effect on either an industry-wide or per unit basis.

The following chart provides a comparison of cost based on HUD's existing regulation and this proposed rule, and the estimate of the approximate cost increase of this new rule.

| | Current rule | New rule | Change | Cost increase |
|---|---|---|---|---|
| (1) Smoke alarm | 2 × $5.50=$11<br>2 AC powered alarms (Ionization). | 2 × $8.50=$17.00<br>2 × $8.50=$17.00<br>4 AC+Battery alarms (Ionization). | 34 − 11=23 | $23 |
| (2) Wiring | 40′ × $0.06=$2.40 | 40′ × $0.07=$2.80<br>20′ × $0.07=$1.40 | 4.20 −2.40=1.80 | 1.80 |
| (3) Labor | $3.25 | 6.50 | 6.50 − 3.25=3.25 | 3.25 |
| Total | | | | 28.05 |

In estimating the cost under the current regulation and proposed new regulation, HUD used the following assumptions based on an average home (28″ × 60″) that contains three bedrooms: (1) The home has a smoke alarm in each bedroom and one in the common area (all four smoke alarms have battery backups); (2) installation involves 40 feet of 14–2 wiring for two smoke detectors (current rule), and an additional 20 feet of 14–3 wiring for the two newly required alarms in each bedroom); (3) the cost of installation of 14–2 wiring = $0.06 per lineal foot; (4) the cost of installation of 14–3 wiring = $0.07 per lineal foot; (5) the labor costs are lump sum costs that were obtained from manufactured home builders; (6) the prices reflected in the table were obtained from manufactured home producers (i.e., close to actual costs incurred by manufactured home builders); (7) the cost obtained from smoke alarm manufacturers are generally higher than costs paid by home producers (the costs do not include larger quantity discounts); and (8) approximately 30% of manufactured home producers currently are using AC+ battery smoke alarms.

Notwithstanding HUD's determination that this rule would not have a significant economic effect on a substantial number of small entities, HUD specifically invites comments regarding any less burdensome alternatives to this rule that will meet HUD's objectives as described in this preamble.

*Federalism Impact*

This rule does not have Federalism implications and does not impose substantial direct compliance costs on State and local governments or preempt State law within the meaning of Executive Order 13132.

**List of Subjects**

*24 CFR Part 3280*

Fire prevention, Housing standards, Manufactured homes.

*24 CFR Part 3282*

Administrative practice and procedure, Consumer protection, Intergovernmental relations, Investigations, Manufactured homes, Reporting and recordkeeping requirements, Warranties.

Accordingly, for the reasons stated in the preamble, HUD proposes to amend 24 CFR parts 3280 and 3282 as follows:

1. The authority citation for 24 CFR part 3280 continues to read as follows:

**Authority:** 42 U.S.C. 3535(d), 5403, and 5424.

2. Amend § 3280.202 as follows:

a. Remove from the definition of "Single-station alarm device" the word "detector" and add in its place the word "alarm";

b. Remove the definition of "Smoke detector"; and

c. Add the definition of "Smoke alarm" to read as follows:

* * * * *

*Smoke alarm:* A single- or multiple-station alarm device that is responsive to smoke.

3. Revise § 3280.208 to read as follows:

(a) *Labeling.* Each smoke alarm required under this section must conform with the requirements of ANSI UL 217–1993, Single and Multiple Station Smoke Alarms, or ANSI UL 268–1989, Smoke Detectors for Fire Protective Signaling, and must bear a label to evidence conformance.

(b) *Required smoke alarm locations.* (1) At least one smoke alarm must be installed in each of the following locations:

(i) To protect the living room and kitchen space. When located within 20 feet horizontally from cooking appliances, the smoke alarm must incorporate a temporary silencing feature or be of a photoelectric type.

(ii) In each sleeping room.

(iii) On the ceiling of the upper level above each stairway, other than a basement stairway, in any multistory home completed in accordance with this part or part 3282 of this chapter. The alarm must be located so that smoke rising in the stairway cannot be prevented from reaching the alarm by an intervening door or obstruction.

(iv) For each basement stairway, the instructions for installers and information for homeowners required in paragraph (f) of this section must clearly indicate that a smoke alarm is to be located on the basement ceiling near the stairway.

(2) A smoke alarm required under this section must not be placed in a location that impairs its effectiveness or in any of the following locations:

(i) Kitchens, garages, and any space where the temperature can reasonably be expected to fall below 40 °F or exceed 100 °F;

(ii) Within 3 feet horizontally from a door to a kitchen, a bathroom containing a tub or shower, or a supply grille of a forced-air heating or cooling system or appliance;

(iii) Within 3 feet horizontally from any discharge grille when a home is equipped or designed for future installation of a roof-mounted evaporative cooler or other equipment discharging conditioned air through a ceiling grille into the living space; and

(iv) Any location that is not in accordance with the listing, unless required under this section.

(c) *Mounting requirements.* (1) Except in rooms with sloped ceilings or as permitted pursuant to paragraph (e) of this section, smoke alarms must be mounted either on the ceiling at least 4 inches from each wall or on a wall with the top of the alarm not less than 4 inches or more than 12 inches below the ceiling.

(2) Except as permitted pursuant to paragraph (e) of this section, in rooms with sloped ceilings, smoke alarms must be mounted on the ceiling within 3 feet, measured horizontally, from one of the highest points of the ceiling and at least 4 inches from any structural element.

(d) *Connection to power source.* (1) Each smoke alarm must be powered from:

(i) The electrical system of the home as the primary power source and a battery as a secondary power source; or

(ii) A battery rated for a 10-year life, provided the smoke alarm is listed for use with a 10-year battery.

(2) Each smoke alarm whose primary power source is the home electrical system must be mounted on an electrical outlet box and connected by a permanent wiring method to a general electrical circuit. The wiring circuit for the alarm must not include any switches between the over-current protective device and the alarm and must not be protected by a ground fault circuit interrupter.

(3) Smoke alarms must be interconnected such that the operation of any one smoke alarm causes the alarm to be triggered in all smoke alarms in the home.

(e) *Visible and tactile notification appliances.* (1) In addition to the smoke alarms required pursuant to this section, the manufacturer must provide visible and listed tactile notification appliances when ordered by the purchaser. These appliances are required to operate from the primary power source, but are not required to operate from a secondary power source.

(2) A visible notification appliance in a sleeping room:

(i) Must have a minimum rating of 177 candela, except that where the visible notification appliance is wall-mounted or suspended more than 24 inches below the ceiling, a minimum rating of 110 candela is permitted; and

(ii) Must be located within 16 feet of the pillow, in any sleeping room that is larger than 14 × 16 feet.

(3) A visible notification appliance in an area other than a sleeping room must have a minimum rating of 15 candela.

(f) *Testing and maintenance.* (1) After being installed by the home manufacturer at the factory, each smoke alarm must be tested in accordance with the alarm manufacturer's instructions. Any smoke alarm that is correctly wired and does not function as designed during the test must be replaced. Any smoke alarm that is replaced by the home manufacturer also must be tested in accordance with this paragraph.

(2) Home manufacturers must provide specific written instructions for installers on how to inspect and test the operation of smoke alarms during installation of the home. These instructions must indicate that any smoke alarm that does not meet the inspection or testing requirements needs to be replaced and retested.

(3) Home manufacturers must provide the homeowner with the alarm manufacturer's information describing the operation of the smoke alarm, method and frequency of testing, and proper maintenance. This information shall be placed in a conspicuous location within the manufactured home in a manner likely to assure that it is not removed until removed by the purchaser. No dealer, distributor, construction contractor, or other person shall interfere with the distribution of this information.

4. The authority citation for 24 CFR part 3282 continues to read as follows:

**Authority:** 42 U.S.C. 3535(d) and 5424.

5. Amend § 3282.203(b)(4) by removing the word "detectors" and adding in its place the word "alarms".

Dated: April 21, 2000.

**William C. Apgar,**

*Assistant Secretary for Housing-Federal Housing Commissioner.*

[FR Doc. 00–12563 Filed 5–17–00; 8:45 am]