

# New Federal US EPA Regulations for Wood-Fired Hydronic Heaters and Forced-Air Furnaces

## Summary

On February 3, 2015, the U.S. Environmental Protection Agency (EPA) signed the new federal regulation 40 CFR Part 60, Subpart QQQQ, *Standards of Performance for New Hydronic Heaters and Forced-Air Furnaces*.

**Effective date of this regulation:** May 15, 2015

**The rule affects devices designed to burn wood or wood pellet fuel:**

- Wood-fired Hydronic Heaters:
  - ⇒ Outdoor Wood Boilers
  - ⇒ Indoor Wood Boilers
- Wood-fired Forced-Air Furnaces

**The rule includes:**

- Requirements for
  - ⇒ manufacturers of hydronic heaters and forced-air furnaces,
  - ⇒ quality of wood pellets used as fuel,
  - ⇒ sellers of all types of regulated hydronic heaters and forced-air furnaces, and
  - ⇒ owners and operators of wood-fired hydronic heaters and forced-air furnaces;
- Emissions standards;
- Certification processes, test methods, and reporting requirements.

**Key Requirements of the Rule Specifics:**

1. Wood Burners Emission Limits
2. Permanent Labeling Requirements
3. Specific Fuel Requirements
4. Owner's Manuals Requirements and other Point-of Sale Materials and Training
5. Procedures for Operation of Wood Burners

## Important Compliance Dates and Facts

**As of May 15, 2015: Wood-Fired Hydronic Heaters** *manufactured* must meet the Particulate Matter emission limit of 0.32 lb/MMBtu heat output (weighted average), with a cap of 18 grams/hour for each test run.

**Forced-Air Furnaces** must meet work practices and operational standards of the regulation.

**After December 31, 2015:** retailers *may not* sell any wood-fired hydronic heaters, such as outdoor wood boilers and indoor wood boilers, that do not meet the Particulate Matter emissions limit of 0.32 lb/MMBtu heat output (weighted average) with a cap of 18 grams/hour for each test run.

**As of May 16, 2016: Small Forced Air Furnaces** (< 65,000 Btu/hour heat output) must meet the Particulate Matter emission limit of 0.93 lb/MMBtu heat output (weighted average), as specified by U.S. EPA.

**As of May 15, 2017: Large Forced Air Furnaces** ( $\geq$  65,000 Btu/hour heat output) must meet the Particulate Matter emission limit of 0.93 lb/MMBtu heat output (weighted average), as specified by U.S. EPA.

**As of May 15, 2020: Hydronic Heaters** must meet the Particulate Matter emission limit of 0.10 lb/MMBtu heat output for each burn rate if tested using crib wood; or the alternate limit of 0.15 lb/MMBtu heat output if tested using cordwood, as specified by U.S. EPA.

**Forced-Air Furnaces** (all sizes) must meet the Particulate Matter emission limit of 0.15 lb/MMBtu heat output, as specified by U.S. EPA.



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## Manufacturers must provide:

- Model-specific descriptions of proper operation and best practices, included in the owner's manuals;
- Training for distributors on proper operation and best practices for units;
- Written and video versions of proper operation and best practices information for purchasers/operators/users of the heaters.

## Owners and operators must:

- Use proper burn practices for units subject to these regulations,
- Operate each unit in a manner consistent with *the owner's manual*,
- Use only wood chips and pellet fuels specified in the owner's manual; pellets must be graded under a licensing agreement with a third-party organization approved by the EPA, and
- Not burn Prohibited Fuels.

**The rule requires** manufacturers to *void the warranties* in cases of improper operation, including burning of improper fuel.

## These rules DO NOT:

- Regulate heaters fueled solely by gas, oil, or coal.
- Regulate **existing** wood heaters that are already in use in or at people's homes.
- Set visible emissions limits from these heaters.
- Prohibit the use of these heaters in non-heating seasons.

## Regulation and Summary Documents

The regulation and summary documents are available on-line at <http://www2.epa.gov/residential-wood-heaters>.

## Prohibited Fuels

- Residential or commercial garbage;
- Lawn clippings or yard waste;
- Materials containing rubber, including tires;
- Materials containing plastic;
- Waste petroleum products;
- Paints or paint thinners;
- Asphalt products;
- Materials containing asbestos;
- Construction or demolition debris;
- Paper products, cardboard, plywood, or particleboard; \*
- Railroad ties, pressure-treated wood, or pallets;
- Manure or animal remains;
- Salt water driftwood or other previously salt water saturated materials;
- **Unseasoned wood** (wood with a moisture content of 20% or more; or 35% or more for chip wood);
- Any materials that are not included in the warranty and owner's manual for the subject wood heater; or
- Any materials that were not included in the certification tests for the subject wood heater.

\* The regulation does not prohibit the use of fire starters made from paper, cardboard, sawdust, wax, and similar substances in an affected wood heater.

## Assistance

For more information on the requirements of these federal standards, please contact:

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