

Plan On It

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State Adopts Outdoor Wood Boiler Regulations

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In the absence of mandatory federal standards, in 2011 the NYS Department of Environmental Conservation (DEC) enacted new regulations regarding the sale and use of outdoor wood boilers (OWB) in New York ([Part 247: Outdoor Wood Boilers](#)). The new regulations were brought about primarily to address an increasing number of complaints from neighbors living near OWBs. The regulations are meant to ensure that new OWBs burn at least 90% cleaner than older, unregulated models, and that emissions are better dispersed.

What is an Outdoor Wood Boiler?

According to the DEC, an outdoor wood boiler (OWB) is, "A fuel burning device that:

- a. is designed to burn wood or other fuels;
- b. is specified by the manufacturer for outdoor installation in structures not normally occupied by humans; and,
- c. is used to heat building space and/or water via the distribution, typically through pipes, of a gas or liquid heated in the device."

OWBs typically look like a small shack with a short chimney sticking out of the roof. They are located outside of the home, have a large firebox that requires less-frequent filling than an indoor woodstove or fireplace, and typically a thermostat in the heated structure that controls the burn rate remotely.



Photo Credit: Victoria Arocho for The Boston Globe

An example of an outdoor wood boiler.

Issues Surrounding OWBs

Claims that OWBs provide an economical home heating option may be offset by some of the issues that surround their use. The large firebox and demand-driven burn rate can result in slow-burning fires where the wood smolders inside the firebox, creating creosote buildup and resulting in

thick smoke being released into the air. Depending on other factors such as the location of the unit and height of the smokestack, this smoke can linger, entering neighboring homes and impacting use of yards and other outdoor areas.

The smoke from an OWB contains dangerous particulates (PM_{2.5}) and other pollutants, and can negatively affect human health and peoples' enjoyment of their homes and yards. PM_{2.5} is fine particulate matter that is small enough to evade your body's natural filters and easily reach deep into your lungs, causing both short- and long-term health problems such as asthma, acute respiratory symptoms and disease, chronic bronchitis, decreased lung function, and can even lead to premature death.

According to then-Acting DEC Commissioner Peter Iwanowicz in a press release issued 12/10/2010:

"This is about ensuring that new outdoor wood boilers burn cleaner -- not only for people who buy OWBs and their families, but also for their neighbors. It's not unlike the switch to cleaner cars. It's also to ensure that OWB stacks are high enough to disperse emissions rather than having them blow directly into houses and other dwellings. That's important for public health. Also, we have listened to the agricultural community and made appropriate exceptions for farming operations."

PM_{2.5} is released during the combustion process when wood is burned. While the US Environmental Protection Agency (EPA) began requiring lower emissions from indoor woodstoves back in the late 1980s, the EPA has so far only issued voluntary guidance for OWB manufacturers to reduce unit emissions.

According to a report ([Smoke Gets in Your Lungs](#)) released by the NYS Attorney General's office in 2005, a properly-used OWB emits, "on an average per hour basis, about four times as much fine particulate matter pollution as conventional wood stoves, about 12 times as much fine particle pollution as EPA-certified wood stoves, 1000 times more than oil furnaces, and 1800 times more than gas furnaces."

Provisions in the New State Regulations

Under the new state regulations, **all new residential OWBs** must meet the following provisions:

- Units must be [certified by NYS DEC](#) for emission limits;
- Setback of at least 100' from property line (unless located on contiguous agricultural lands larger than five acres, where the unit shall maintain a minimum setback of 100' from the nearest residence not served by the OWB);
- Permanent stack height of a minimum 18' above ground. However, if a unit is the subject of a valid nuisance complaint, the DEC reserves the right to require an extended stack height of up to two feet above the peak of any roof structure within 150' of the OWB.
- Display a permanent manufacturer label, as outlined in §247.7 of the regulations;
- Distributors must provide prospective buyers with a copy of the regulations, and require the buyer's signature on a notice containing information about the OWB unit and the buyer, as outlined in §247.9 of the regulations. The signed notice is then submitted to the appropriate DEC regional office.

The following provisions apply to **all OWBs, both new and existing**:

- A list of prohibited fuels is outlined in §247.3 of the regulations;
- Only the following approved fuels shall be burned in an OWB:
 - Seasoned clean wood;
 - Wood pellets made from clean wood;
 - Non-glossy, non-colored papers, including newspaper, may be used only to start an OWB;
 - Heating oil in compliance with the stated regulations;
 - Other fuels approved by the DEC per certification requirements outlined in §247.8 of the regulations.

Local Communities with Additional OWB Regulations

The new state regulations provide a baseline for the operation and sale of OWBs, but municipalities have the right to adopt additional requirements as long as they are as restrictive as, or more restrictive than, the state regulations. A review of local codes throughout Dutchess County found at least eight (8) municipalities that have addressed OWBs on the local level:

- Town of Amenia — [Chapter 84](#)
- Town of Beekman — [Chapter 152](#)
- Town of East Fishkill — [Chapter 134](#)
- Village of Fishkill — [Chapter 100](#)
- Town of Hyde Park — [Chapter 79](#)
- Village of Millerton — [Chapter 170](#)
- Town of Red Hook — [Chapter 73](#)
- Village of Rhinebeck — [Chapter 76](#)

Regardless of whether or not your community has adopted additional OWB regulations, **a building permit may be required** prior to installation of an OWB — please check with your local Building Department for more information.

Summary

As the heating season is once again upon us and folks may be installing new outdoor wood boilers or firing up older models, it is important that everyone be informed about the new state regulations. Reducing wood smoke pollution by enforcing emission standards and regulating fuel types will result in cleaner air for all New Yorkers.

More Information

[Part 247: Outdoor Wood Boilers](#) (NYS DEC Regulations)

[General Information about OWBs](#) (NYS DEC)

[Smoke Gets in Your Lungs: Outdoor Wood Boilers in NYS](#)

[Fine Particulates Information](#) (NYS DEC)

[PM_{2.5} Monitoring Information](#) (NYS DEC)

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