

# What's wrong with Outdoor Wood Boilers?

When operated, Outdoor Wood Boilers pose a constant smoke nuisance, constant health threat, and depreciate property values.

**"Current outdoor wood-fired heaters are substantially less efficient and more polluting than other home-heating devices."**

**U.S. EPA**

Clean Air Revival, Inc. is a 501-C3 organization. Please join in our effort to educate others by sharing this brochure and/or making a tax-deductible donation to: Clean Air Revival, Inc., P.O. Box 1045, Point Arena, CA 95468-1045

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Sources: U.S. EPA, NY Attorney General, and NESCAUM.

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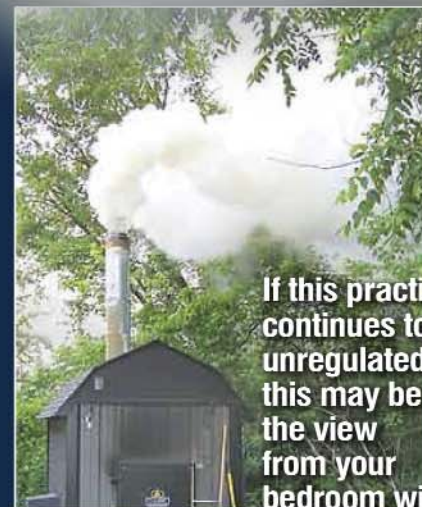
# Outdoor Wood Boilers

The Silent Presence

Protect your home and property values.

Protect your family's health.

**PREVENT HAVING YOUR HOME COVERED IN SMOKE 24 HOURS A DAY.**



If this practice continues to be unregulated, this may be the view from your bedroom window!



***These devices are now also being used in residential and populated areas.***

As an average person, you probably do not know what an Outdoor Wood Boiler (OWB) is. There may even be one in your area without your realization. According to the U.S. EPA, a typical OWB burns wood to heat water that is piped underground to a nearby structure (usually a home), resulting in heat for the building. An OWB resembles a small shed with a smokestack, typically located

on the outside of the building to be heated. Although originally designed for rural use, these devices are now also being used in residential and populated areas.

There are some common issues surrounding the use of OWBs. One example is that OWBs are engineered to burn through cycles and smolder. The result is excessive smoke. Also, wood is not necessarily burned in an OWB. Some owners burn items such as trade wastes, garbage, wet unseasoned wood, newspapers, and other hazardous materials. Another example is that unlike traditional chimneys, OWB stacks are not above the roofline. Finally, improper maintenance, neglect, and creosote buildup can cause a serious fire and damage property as well as the unit itself.

## Frequently Asked Questions:

### Does the release of smoke from an OWB have an effect on a person's health?

Yes, OWBs produce smoke when wood does not burn completely. Most OWBs smoke even when operated according to the manufacturer's instructions. The smoke contains a complex mixture of gases and particulate matter, such as PM2.5. Once inhaled, these particles can affect the heart and lungs and can aggravate existing diseases. Many scientific studies of wood smoke exist, showing its effects on human health.

### How much pollution does an OWB create compared to other heating sources?

One OWB emits as much pollution as:

- 12 EPA-certified indoor wood stoves
- 1,000 homes with oil heat
- 1,800 homes with natural gas heat

### How much PM2.5 is created by OWBs compared to other heating methods?

OWB = 72 g/hr  
 Conventional Wood Stove = 18 g/hr  
 EPA-Certified Stove = 6 g/hr  
 Oil Furnace = 0.07 g/hr  
 Gas Furnace = 0.04 g/hr



### How does wood smoke compare to other sources of pollution?

An EPA report states that sources of particulate pollution (national average) are residential wood burning, 35%; forest fires, 13%; autos and trucks, 21%; other residential fuels, 1%; and other sources, 30%.

*After the initial purchase, there may be additional expenses that are incurred.*

### What is an OWB's efficiency?

According to the New York Attorney General, OWBs average 43% efficiency.

### What is the expected number of OWBs to be used?

NESCAUM predicts that by the year 2010, nearly 500,000 units may be in use in the United States.

### Do people save money using Outdoor Wood Boilers?

After the initial purchase, there may be additional expenses that are incurred. It may cost as much to install the unit as it did to purchase the OWB. Installation costs that are required are expenses that are not always planned. Additionally, an electricity or water bill may double or triple during usage. Also, if access to wood is not available, purchasing wood will be a necessary expense. Finally, being diagnosed with a health problem such as asthma, heart or lung disease, or cancer is an expense that is irreversible.

**The Clean Air Revival's goal is to create awareness by educating the public about wood smoke pollution. Currently, OWBs are a major contributing source of wood smoke pollution. We encourage you to support our efforts in spreading awareness about this growing issue. For more detailed information, please access our websites.**