



Fact Sheet

Outdoor Wood-Fired Boilers: Protect Yourself from Health Risks

Overview



What is an outdoor wood-fired boiler?

Outdoor wood-fired boilers (OWB), also called hydronic heaters, are freestanding wood burning devices that heat water, which is then pumped to one or more structures to provide heat.

They are growing in popularity as heating costs increase.

The basic design of the OWB encourages a slow, cooler fire to maximize the amount of heat transferred from the fire to the water.

Slow, cooler fires, however, burn inefficiently and create more smoke and creosote (a chemical) than higher temperature fires.

One OWB emits pollution equivalent to:

- 22 EPA certified wood stoves

- 205 oil furnaces
- 8,000 natural gas furnaces

Fast Facts

- 20,000 OWB units have been purchased in Ohio
- sales continue to climb
- currently there is no Ohio state law regulating these units.

Smoke from OWB has the potential to increase health problems such as:

- respiratory symptoms
- exacerbation of asthma
- decreased breathing ability

Some communities have banned OWB because of health risks.

You can make a difference by urging community leaders to prohibit or regulate

Health Impacts



Wood smoke contains a mixture of at least 100 different compounds in the form of gases (carbon monoxide, sulfur dioxide) and fine sooty particulate matter (PM).

Exposure to PM contributes to:

- painful breathing
- wheezing
- asthma attacks
- headaches

Most susceptible to these health impacts:

- children
- elderly
- those with respiratory ailments (such as asthma)
- those with heart disease
- pregnant woman

There are reports of people having to go to the emergency room as a direct result of being exposed to OWBs.

Legality



Some states, cities, and local governments regulate or prohibit outdoor wood-fired boilers.

The U.S. Environmental Protection Agency is working with OWB manufacturers to reduce the amount of pollution emitted from new OWB.

Currently, Ohio has no state law or regulation on OWB. The Ohio EPA drafted solid rules, but did not adopt them.

Right now, the following communities have banned or regulate OWB in Ohio:

- Fairfield
- Garrettsville

- Forest Park
- Maderia
- Monroe
- Orrville
- Springdale
- Warsaw

Since heat transfer efficiencies for in-use outdoor wood boilers are as low as 20% to 30%, a better wood burning option is to install an EPA-certified wood stove.

They burn less wood, make much less smoke, and have a longer unit “life expectancy.”

You’ll save money in the long run.

Sample Regulation

If a community does not ban OWB, they can seek to regulate them. Below are some guidelines:

- Only allowed to operate between September 13 and April 15.
- The unit must be at least 200 feet from a property line.
- The stack must be at least five feet higher than the peak of any roof structure located within 150 feet of the unit.
- Only clean wood must be used.
- The unit shall meet a particulate matter emissions limit of 0.44 Lb/MMBtu heat input.
- The unit shall meet a particulate matter emissions limit of 0.32 Lb/MMBtu heat output.

Sources: U.S. EPA, Ohio EPA, American Lung Association, Ohio Environmental Council

For more information
contact:

Ohio Environmental Council
1207 Grandview Ave, Suite 201
Columbus, Ohio 43212

tel (614) 487-7506
fax (614) 487-7510
e-mail OEC@theOEC.org
web www.theOEC.org