

## How You Can Help

Burning wood efficiently can reduce smoke and save on heating costs. Keep your home and family safe by following these tips:

### • Burn the right wood

Use only seasoned hardwood. Burning wet or “green” wood that has not been properly seasoned creates more smoke and less heat when burned. Firewood should be seasoned for at least six months.



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### • Use the right stove

It's best to use an EPA certified stove, installed by a qualified technician. If you can't buy a new woodstove, be sure your stove pipe is cleaned at least annually. Clean ashes out regularly and make sure all gaskets are in good shape to keep the stove air tight.



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### • Burn the right way

Maintain a bright, hot fire and do not let it smolder. More smoke means decreased efficiency and more creosote buildup in the chimney which could lead to a chimney fire. Annual cleaning reduces creosote buildup. Burning wood safely and efficiently will also save money.



NH DES

## The Keene Valley



City of Keene

A partnership of:

Cheshire Medical Center  
Greater Monadnock Public Health Network  
Keene State College  
NH Department of Environmental Services  
Southwest Region Planning Commission

For more information:

**Greater Keene Air Quality**  
[www.swrpc.org/airquality](http://www.swrpc.org/airquality)

**EPA Burnwise**  
[www.epa.gov/burnwise](http://www.epa.gov/burnwise)

**For Local Air Quality Forecasts:**  
[www.airquality.nh.gov](http://www.airquality.nh.gov)

**NH's Air Quality Information line**  
1-800-935-SMOG

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# Do You Heat Your Home With Wood?

## Learn Before You Burn



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**Burning wood efficiently can reduce smoke and save on heating costs**



**Burn the right wood**



**Use the right stove**



**Burn the right way**

## What's the Problem?

On calm, cold, winter nights the Greater Keene area can experience temperature inversions. These inversions occur in valleys when warm air above traps cold air below.



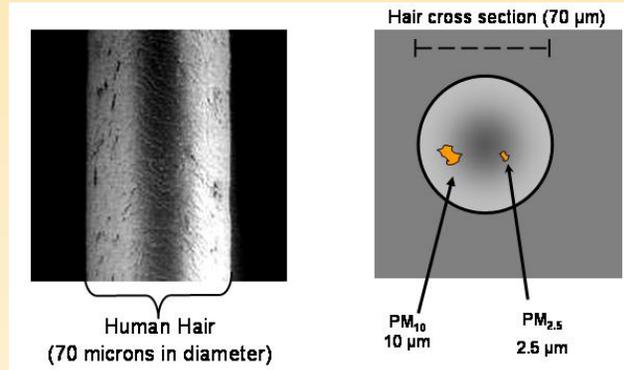
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During these inversions, small particle pollution from wood stoves and other pollution sources is trapped and concentrated near the ground. If the levels of pollution exceed the EPA standard, regulatory controls would be required that could negatively impact the Greater Keene area economy.

Trapped pollution can also seep into houses through closed doors and windows causing potential health problems.

## Small Particle Pollution

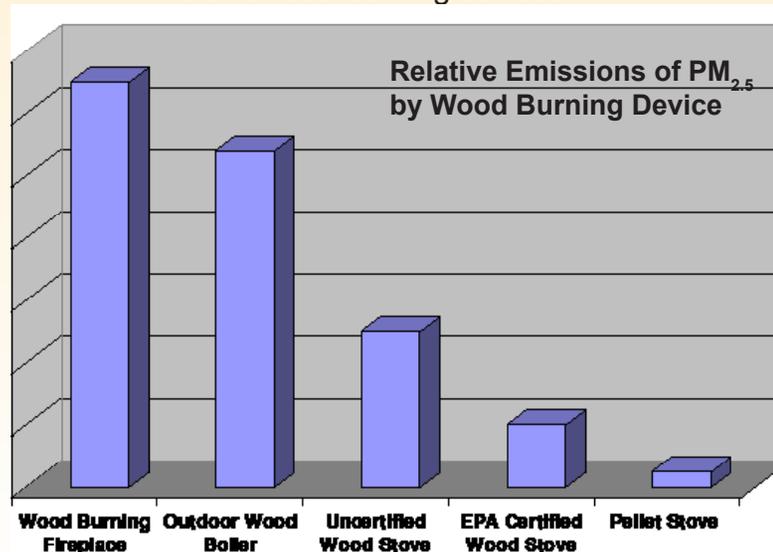
Small particle pollution is a complex mixture of extremely small particles and liquid droplets. These particles are much smaller in diameter than a human hair. They have a 2.5 micron diameter ( $PM_{2.5}$ ).



M. Lipsett, California Office of Environmental Health Hazard Assessment

## Emissions from Heating Devices

The diagram below compares the emissions of small particle pollution ( $PM_{2.5}$ ) from different wood burning devices.



Data Source: USEPA

## Health Impacts from Wood Smoke

The small particles in wood smoke can be inhaled deep into the lungs, collecting in the tiny air sacs where oxygen enters the blood. This can cause breathing difficulties and sometimes permanent lung damage. Some particles are so small they directly enter into the blood stream. Inhalation of small particles can cause heart problems, irritate lungs and eyes, trigger headaches and allergic reactions, and worsen respiratory diseases such as asthma, emphysema, and bronchitis.



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## Part of the Solution

You are being asked to be a part of the solution. We all want to protect the health of our family and our neighbors. Limiting air pollution is good for all of us. We can all do our share for clean air!

Burning clean, dry hardwood in an energy efficient wood stove helps minimize air pollution. Watch weather conditions and pay attention to Air Quality Action Day notifications. Visit [www.airquality.nh.gov](http://www.airquality.nh.gov) for air pollution forecasts. On the infrequent days when small particle levels are forecasted to be high and the winds are calm, if you have an alternative heating source, you may want to avoid burning wood until the winds increase. This will help to keep your wood smoke from impacting people's health.