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# Wood Heating Savvy

Heating a home with wood makes sense in New Hampshire, the nation's second most heavily-forested state (after Maine). On a standard heating unit basis, wood is always less expensive than fossil fuels, although families must consider the heavy labor component involved with woodburning.

In New Hampshire, firewood is sold by a legal unit of measurement called the cord, equal to 128 cubic feet. A rule of thumb is that one cord of dry hardwood is equivalent to about 150 gallons of heating oil. Bear in mind that various species of hardwood differ significantly in their heating values; dense hardwoods, such as oak, sugar maple, white ash or apple will yield 40 percent to 50 percent more energy than light woods such as basswood, poplar or willow.

For purposes of both safety and fuel efficiency, burn only hardwood that was cut and split into stove lengths at least six months ago. By that time, the wood's moisture content should have dropped from about 80 percent to about 30 percent. A year of proper drying will reduce the moisture content to 20 percent, ideal for home heating.

Although firewood is often sold as *dry* or *seasoned*, these terms have no legal definition in New Hampshire. Cracks at the ends of each cordwood stick are a good indicator that the wood you're considering purchasing is dry enough for safe, efficient burning. Buy fuelwood in the spring or summer to avoid the premium prices and shortages that often occur after fall temperatures begin to drop.

Store your firewood under cover twenty-five feet or more from your house, stacked on pallets or planks to ensure good air circulation. Never burn painted or pressure-treated wood in your wood stove or furnace, as burning chemicals can release toxic fumes into your home or the atmosphere.

Also, don't treat firewood with pesticides. Storing fuelwood away from the house and bringing in only a day or two's worth at one time should prevent dormant or pupating insects from warming up and emerging to become pests inside your home.

According to the New Hampshire Fire Marshal's office, heating systems are the most common cause of house fires in New Hampshire. Protect your family and your property during the heating season by following these rules of wood heating safety:

- Have your chimney cleaned and checked and each heating appliance serviced every year. This will improve the efficiency of your heating system as well as its safety.
- Install furnaces or other heating appliances in accordance with manufacturer's instructions.
- If you purchase used heating equipment, hire an expert to inspect your chimney and install the heating appliance. Consult your local fire department for names of local heating contractors.
- As a rule of thumb, provide 36" of clearance between a wood heating appliance and a combustible surface.

- Use the same clearance for draperies, furniture, Christmas trees or other decorations or any other combustible materials. Do not dry clothing by draping it over a wood stove.
- If you aren't sure your heating system and chimney meet fire safety codes, ask your local fire department to inspect them.
- Use only dry, seasoned hardwood. If you are unsure about the rules for safe wood burning, consult your local fire officials for advice.
- Install a smoke detector on each level of your home. Replace the batteries annually - some families use the return of daylight savings time as the weekend to change their smoke detector batteries.
- Replace any smoke detector more than 10 years old; new research from the National Institute of Standards and Technology indicates that the sensors within smoke detectors lose their sensitivity with age.
- One carbon monoxide detector provides enough protection for an entire home, but is not a substitute for a smoke detector on that floor.
- Develop a fire escape plan and schedule family fire drills.
- Coals in a pile of wood ashes can stay live for many days. Store wood ashes in a covered metal container set on a dirt or concrete surface at least 36" from any combustible surface or materials.

Dry hardwood ashes make an excellent amendment for lawn and garden soils, helping raise soil pH and furnishing several minerals important for plant health, most notably potassium, which is typically low in unamended New Hampshire soils.

Spread the ashes in early spring, but only if a soil test indicates a need for lime. The rule of thumb is to apply about twice as much wood ash by weight as the amount of lime recommended by the testing lab. Spread the ashes evenly over lawn or garden surface, raking or tilling into the top layer of soil. (Make sure the ashes are cold before you spread them.) It's important to apply ashes evenly. Rain or irrigation water flowing through clumps of wood ashes may create a caustic solution that can damage or kill plants.

*safety information reviewed by J. William Degnan, New Hampshire's Acting State Fire Marshal, 3/02*

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