Open Burning of Residential Trash

*Environmental Impacts and Safer Alternatives*

**What is “Open Burning”?**

“Open burning” means the burning of any type of combustible material where smoke and other emissions are directly released to the outside ambient air. Open burning of some materials is only allowed in New Hampshire under certain conditions. For example, homeowners are allowed to burn leaves and brush under controlled conditions with approved permits from local officials and/or the local fire warden.

The burning of residential waste materials, such as paper, plastics, and household trash, in an open fireplace, burn barrel or incinerator is prohibited by law in New Hampshire. New Hampshire residents have access to facilities and services that recycle and dispose of solid waste. The practice of open burning, and particularly burning of trash, can result in many harmful public health and environmental effects.

**What problems are associated with open burning?**

Burning of residential trash often releases high levels of particulates, acid gases, heavy metals, carbon monoxide, dioxins and other toxins, some of which are carcinogenic (having the potential to cause cancer). As described below, these pollutants can cause very serious human health problems and can impact you, your neighbor and your family’s health.

- One of the most harmful pollutants released during burning of trash is dioxin. Dioxin is a known carcinogen and is associated with birth defects. Dioxin can be inhaled directly or deposited on soil, water and crops where it becomes part of the food chain.

- Burning trash can release hexchlorobenzene (HCB) to the environment. This compound is a highly persistent toxin that degrades slowly in the air. Therefore, it can travel long distances in the atmosphere. It bioaccumulates in fish, marine animals, birds, lichens, and animals that feed on fish and lichens. HCB is a probable human carcinogen, and based on animal studies, long-term, low-level exposures to HCB can damage a developing fetus, lead to kidney and liver damage, and cause fatigue and skin irritation.
• Formaldehyde is released when pressed wood products, paints, coatings, siding, urea-formaldehyde foam, and fiberglass insulation are burned. Exposure to formaldehyde can result in watery eyes, a burning sensation in the eyes and throat, nausea, difficulty in breathing (i.e., coughing, chest tightness, wheezing), and skin rashes. Prolonged exposure to formaldehyde may cause cancer.

• Burning of plastics, or polyvinyl chloride (PVCs), can produce hydrogen chloride gas, or hydrochloric acid, which can cause fluid buildup in the lungs and possible ulceration of the respiratory tract.

• The visible smoke from burning is composed of tiny particles (particulates), which contain toxic pollutants. If inhaled, these microscopic particles can reach deep into the lungs and remain there for months or even years. Breathing particulates increases the chances of respiratory infection, can trigger asthma attacks, and causes other problems such as coughing, wheezing, chest pain, and shortness of breath.

• Carbon monoxide is generated from the incomplete combustion of trash. Carbon monoxide is a colorless, odorless gas that prevents oxygen from being absorbed by the blood and lungs. It is especially dangerous when breathed by young children with immature lungs, the elderly, and people with chronic heart conditions or lung diseases.

What should homeowners do with household trash?

New Hampshire communities are required to provide access to solid waste management facilities for their residents. Some municipalities provide curbside pickup, and most have transfer stations and recycling facilities. Call your local town office if you have any questions about where residents can take their trash for proper management. Your town may also have a list of solid waste haulers that can provide pickup for a fee. Homeowners are strongly encouraged to properly recycle glass, plastics, aluminum, newspaper, cardboard, used motor oil, and other recyclable materials as much as possible.

Composting appropriate wastes and using leaves and grass clippings for mulch are good alternatives to open burning of waste. Leaves, grass clippings, manure, coffee grounds, and vegetable and fruit peelings are all suitable for composting. Composting produces valuable soil fertilizer through the natural process of decomposition. Compost piles are simple to begin and maintain, and take up relatively little space. Finished compost can improve soil texture, increase the ability of the soil to absorb air and water, suppress weed growth, decrease erosion, and reduce the need to apply commercial soil additives.

For more information on open burning, contact the New Hampshire Department of Environmental Services, Air Resources Division, at 271-1370.