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## Why should we be concerned about burn barrels?

Smoke and fumes from burn barrels are not just a nuisance, they can be extremely hazardous to your and your neighbors' health:

- A recent study shows that the amount of hazardous air pollutants emitted by burn barrels is many times greater than if the same amount of garbage was burned in an industrial-type incinerator with strict air pollution controls. For some pollutants, only 2-40 open burning households can produce as much pollution as a clean-operating municipal incinerator serving thousands of households.
- More than 400,000 New Mexicans live in areas where burn barrels have been allowed by the previous regulation. They produce almost 200,000 tons of refuse a year.
- Even if only half of this amount of refuse is burned in burn barrels, it would be New Mexico's greatest source of dioxin emissions to the air. Dioxin is highly toxic and accumulates in the environment, and in people's bodies over their lifetime.
- Because of these concerns, at least fourteen states ban backyard burning of domestic wastes, and it's restricted in almost all other states.

## How much air pollution is produced by New Mexico's burn barrels? How does this compare with air pollution from industrial sources?

Backyard trash burning is the single largest source in New Mexico of air emissions of dioxin and some other highly toxic pollutants. For details, see [emissions estimates](#), including [comparisons with industrial sources](#).

## **What are the health and environmental effects of pollutants from burn barrels?**

Some of the more toxic air pollutants produced by backyard trash burning are toxic at extremely low concentrations, are likely to cause cancer, and are suspected of interfering with immune response and the normal function of hormones. Several of these persist for years in the environment and in organisms, so they accumulate up the food chain and in our bodies over many years. Therefore, even very small amounts of these extremely toxic, persistent, and bio-accumulative chemicals are a cause for concern. For example, the U.S. E.P.A. health-based drinking water limit for 2,3,7,8-TCDD, the most toxic form of dioxin, is 0.00003 micrograms per liter. To dilute one pound of TCDD down to this low concentration would take 4 trillion gallons of water, which is about 10 times the maximum capacity of Elephant Butte Reservoir. So, even a few pounds of emissions of dioxin is enough for us to be concerned about health effects. Read our [evaluation of burn barrel emissions](#), with links to more [information on health and environmental effects](#).

## **Is the ash toxic?**

The ash residue from burning household waste is potentially hazardous. It can contain hazardous concentrations of heavy metals such as lead, cadmium, mercury, arsenic, chromium, copper and zinc, as well as toxic organic compounds such as PCBs, dioxins and furans. These chemicals come from burning of items commonly found in household waste, such as plastics, some kinds of inked and coated paper products, batteries, thermostats, fluorescent lamps, consumer electronics, light bulb sockets, and plated metal products. They can leach from the ash into surface water and groundwater, or they can enter the body directly through breathing or swallowing ash or ash-contaminated soil, or by eating food grown in ash-contaminated soil. Reducing household refuse burning will reduce the amount of these hazardous chemicals being spread around New Mexico's environment in the form of ash.

Download the New Mexico State University Cooperative Extension Service's [Farm\\*A\\*SystFact Sheet on farmstead hazardous waste disposal](#) (used by permission), including information on burn barrel ash.

## **Many of us have always burned our trash, so why is this a problem now?**

Several things have changed over the last several decades. There is mounting evidence of potential dangers to health caused by open burning of refuse. Rural areas now have much greater availability of alternative, less environmentally harmful ways of disposing of refuse. Industrial sources of air pollution have had to meet increasingly strict air pollution control requirements over the last thirty years, while very little has been done to reduce emissions from some very high-pollution sources such as burn barrels. Many people think that burning trash is "cleaning up" because it eliminates the odors and flies. But with what we now know about the toxins produced by burning today's trash, it is clear that this is a very unhealthy way to get rid of it, even though we don't always smell or taste the toxic pollutants that are produced.

## **If we can't burn our trash, won't our waste disposal costs go up because we'll be taking more trash to the landfill?**

Yes, there is a cost for proper disposal of trash. New Mexico has put a lot of funds into developing a system of sanitary landfills that will prevent the groundwater pollution that was produced by the old "town dumps." Burning trash to avoid landfill disposal costs just shifts the pollution problem from groundwater to air. We recognize that even a modest increase in solid waste fees can be a burden on people with limited or fixed incomes. Many solid waste authorities have a fee structure that provides a lower rate to people with limited income. Also, householders can greatly reduce the amount of waste that needs to be taken to the landfill by recycling and composting.

## **What about trash not from households, that is, commercial and industrial waste?**

Open burning of commercial and industrial waste is already prohibited by the state's Solid Waste Management regulation (20.9.1 NMAC)

## **Won't a ban on burning trash just result in more illegal dumping?**

Both of these ways of disposing of trash are environmentally harmful. Rather than debate which of these harmful practices is worse, we should focus our efforts on the

solutions to both of these problems – providing clean and affordable trash disposal for everyone, making sure everyone uses these environmentally safe disposal systems, and reducing the amount of trash we produce by reusing and recycling.

## **Why are we going to a system of regional landfills with convenience centers and drop-off bins? Is state government helping to pay for this system?**

The trends over the last decade have been:

- Closures of old "town dumps" to prevent contamination of streams, groundwater and air;
- More reliance on large regional landfills since it is more economical to have a few large ones rather than many small ones;
- More publicly-provided drop-off facilities (dumpsters, convenience centers, etc.) in rural areas;
- Curbside pickup only in larger villages and towns; this is not economical for more rural areas; and
- More than 20 million dollars in state grant funds have been used to support local communities' efforts to establish clean, non-polluting ways of disposing of their refuse.

## **Why is state government involved in backyard burning? Isn't it a local issue?**

By state law (New Mexico Air Quality Control Act), the Environmental Improvement Board is responsible for adopting regulations for abatement of air pollution statewide (except in Bernalillo County and Indian lands, where local or federal agencies have authority), and the NM Environment Department is responsible for developing air pollution control plans and for enforcing the regulations. If a local government chooses to adopt an ordinance at least as strict as the state regulation, the Environment Department will agree to let the local governments handle day-to-day enforcement. The Environment Department would still have legal authority to enforce the state regulation if necessary. Many communities may prefer this arrangement, for a number of reasons: residents may have greater access to local government officials, communities could add tighter restrictions if they thought it advisable, and fire departments may want to combine their own permit system with this rule.

## **What did the Environment Department and the Environmental Improvement Board decide to do about these problems?**

Because of the new evidence about the toxicity of the pollutants produced by refuse burning, and the increasing availability of clean alternatives for refuse disposal, the Department proposed, and the Board agreed, to phase out household refuse burning in New Mexico. The *Open Burning* regulation's prohibition on household refuse burning became effective in 2004.