

Residential Burn Barrels: A Source of Toxic Pollution



State of Oregon
Department of
Environmental
Quality

How does burning household waste produce toxic air pollution?

Burn barrels are inefficient and polluting; they produce low temperature fires, receive very little oxygen, and produce a lot of smoke (finely divided particulate matter). Under these conditions, many toxic substances are produced. Virtually all of the pollutants are released into the air close to ground level, where they are easily inhaled.

The majority of pollutants emitted from burning household wastes in a burn barrel (or other types of open burning) are carbon monoxide, carbon dioxide, very small breathable particles and nitrogen oxides. However, smaller amounts of more poisonous chemicals are also released into the air when household waste is burned. These include benzene, styrene, formaldehyde, dioxins and furans. These toxic chemicals are carried deep into the lungs, attached to fine particles. There, they embed into lung tissue and enter the bloodstream.

Dioxins and furans are known to cause cancer in humans. Burn barrels provide the right combustion conditions to promote the production of dioxins and furans. Those conditions include low temperature, low oxygen, high particulate matter, and the presence of chlorine.

When compared with municipal waste incinerators, burn barrels produce 10,000 times more dioxins and 1,000 times more furans for an equal volume of waste burned. Also, unlike municipal incinerators with installed air pollution controls, all of the emissions from a burn barrel are released directly into the environment, frequently in residential areas.

For these reasons, many cities have banned the use of burn barrels, or open burning altogether. Some of these cities include: Brookings, Bandon, Florence, Medford, Jacksonville, Talent, and Salem/Keizer.

Residential waste-disposal options

- **Recycling** - Readily available in most areas, recycling can reduce disposal costs by lowering the quantity of trash. Local recycling centers accept tin cans, aluminum, newspaper, cardboard, office paper, glass, plastic containers and used oil.

- **Garbage pickup service** – This service costs about \$16 per month in most areas.
- **Self-haul** – For do-it-yourself types, it is cheaper to haul trash to a permitted landfill or transfer site.

What materials can be burned?

Materials that can be safely burned include **untreated wood, paper and natural vegetative materials**. Oregon law prohibits the open burning of several materials (Note: burning in burn barrels is considered “open burning”). Prohibited materials include plastic, foam cups, meat trays and egg containers, plastic food wraps (Saran Wrap), carpeting and carpet padding, PVC pipes and vinyl flooring. Other prohibited materials include asphalt roofing material, tarpaper, wire insulation, rubber and fiberglass.

Burning prohibited materials can result in serious fines. For more information on Oregon’s open burning rules and recycling options, contact DEQ staff in your area (see sidebar to the right)

Complaints

Please call your local fire department to report an open burning complaint.

You may also contact DEQ’s complaint hotline at 888-997-7888 or submit a complaint online at <http://www.deq.state.or.us/complaints/>. You will need to provide a complete address if you would like DEQ to follow up on your complaint.

Alternative formats

DEQ is committed to accommodating people with disabilities. Please notify DEQ of any special physical or language accommodations or if you need information in large print, Braille or another format.

To make these arrangements, contact DEQ Communications and Outreach in Portland at 503-229-5696 or call toll-free in Oregon at 800-452-4011; fax to 503-229-6762; or email deqinfo@deq.state.or.us.

People with hearing impairments may call 711.

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