



Issue Brief: Wood Smoke and Air Quality in Multnomah County

Wood smoke contributes to poor air quality

The smell of burning wood is pleasant to some and often evokes feelings of home and hearth, but for people with respiratory illness it often spells danger as well. The fact is, it's not really healthy for anyone. Wood smoke is a major source of air pollution in Multnomah County. In fact, it's the primary source of health-harming small particle pollution during winter months. Like many other sources of air pollution, the problem becomes worse when many people are burning and producing smoke. When we experience weather conditions that prevent clean air from circulating through our communities, smoke concentrations can rise and make the air unhealthy to breathe.

Wood smoke has been shown to contribute to heart disease, lung disease, respiratory distress, low birth weight, and a growing body of scientific literature suggests that it can be harmful to human health even when there isn't enough to see or smell. Children, older adults, people with existing health conditions and those with depressed immune systems are at higher risk to its effects.

Wood smoke affects our environment

Burning wood creates black and brown carbon (soot) that deposits on snow, increasing melting by decreasing reflectivity. Wood smoke is also a contributor to regional haze, which affects our ability to see the Oregon landscape, like the view of Mount Hood from downtown Portland.

Wood smoke can also affect our regulatory environment. The US Environmental Protection Agency sets acceptable levels of certain pollutants in populated areas. Our region is at risk of violating the standard for fine particulate matter, which could result in sanctions on business, industry, and individuals- all at the cost of Oregonians.

Policy approaches to reduce wood smoke

In order to protect communities from the impact of wood smoke, the US EPA developed a framework that's demonstrated success in many communities across the country, that we can apply in Multnomah County. The three-tiered approach utilizes *outreach and education*, *incentives to replacing wood stoves*, and *curtailment rules* to promote reductions of smoke emitted into the air.

Outreach and education: Approaches include methods to "burn wise", which promote behavior changes like seasoning before burning firewood and education about weather inversion days.

This seeks to reduce the amount of smoke that households produce, as well as discouraging burning on days when weather conditions favor poor air quality. Preliminary outreach is currently underway.

Incentives to replacing wood stoves: Many people in Oregon use wood stoves as a heat source (an estimated 350,000 statewide) so a long term strategy for reducing wood smoke in our communities is to help households replace old wood stoves with newer, cleaner burning devices. This comes at a significant expense, so the county will be exploring funding for such a program, including public-private partnerships.

Curtailment Rules: The county is considering enacting rules to reduce wood smoke during winter months- when the problem is at it's worst. Program staff worked with the county attorney to develop a draft curtailment ordinance.

What the curtailment rules propose:

- **Prohibits operation of a wood stove, fireplace, or any other indoor wood or solid fuel burning device, on residential or commercial property, on days forecast to have poor air quality, unless a qualified exemption is met**
- **Prohibits outdoor recreational burning of solid fuels on days forecast to have poor air quality, unless a qualified exemption is met**
- Applies from October 1st through March 1st
- Exemptions include: low income households, households where wood or solid fuel is the sole source of heat, households where the primary heating device is temporarily not functioning, interruption of utility service, and where preemption under State Law exists
 - **Includes exemption of fires where the sole purpose is cooking food, such as pizza ovens and BBQ's**
- Additional exemptions at the discretion of the department are possible
- Pellet stoves are permitted
- Prohibition is issued in 24 hour increments and is determined by meteorological and burning activity forecasting
- Enforcement is complaint based and begins with outreach and education, with monetary penalties beginning on third and subsequent offenses
- Emergency clause, becomes effective upon passage