

## **Smog Alert? But It's Winter**

Submitted by: Jasmin Watson-El, Public Affairs Intern

Did you know that smog is not just a summertime air quality issue? Depending on the weather conditions and pollution levels, smog alerts can be issued anytime of the year, including the winter.

Smog is a term used to describe air pollution that is a result of the interaction of sunlight with certain chemicals in the atmosphere. The two primary pollutants in smog are ground-level ozone (O<sub>3</sub>) and particulate matter (PM).

### **Ozone**

Ground-level ozone is formed when vehicle emissions containing nitrogen oxides (primarily from vehicle exhaust) and volatile organic compounds (from paints, solvents, and fuel evaporation) interact in the presence of sunlight.

### **Particulate Matter (PM)**

PM (dust, soot, ash and other solids and aerosols) can come from a variety of sources, including wood burning, diesel engines, gasoline engines, factories and power plants. Individually, these particles and droplets are invisible to the naked eye, but collectively, they can appear as clouds or a fog-like haze.

High levels of smog are typically associated with the summer due to the presence of sunlight and warmer temperatures. However, the smog problem actually occurs throughout the year, with winter smog (due to particulate matter contributions rather than ozone) being a serious concern when stagnant air causes a build up of pollutants in the air. This is usually caused by increased wood heating and vehicle usage in the winter months.

A Smog Alert is typically issued by the Hamilton County Department of Environmental Services (HCDOES) between 2:00 p.m. and 2:30 p.m. the day before high ozone and/or high particulate matter levels are anticipated. HCDOES, in cooperation with local meteorologists and the National Weather Service, determine if conditions are favorable to issue a Smog Alert. If the data indicates that ozone or particulate matter may exceed National Ambient Air Quality Standards, a Smog Alert is issued. Air quality standards are based on an Air Quality Index (AQI).

The Hamilton County Department of Environmental Services needs your help. Any action, regardless of how small, can help make a difference in improving air quality. Please consider the following actions at home and on the road to help reduce smog:

- Taking the bus (METRO: 513-621-4455 or TANK: 859-331-8265)
- Carpooling or vanpooling (RideShare: 241-RIDE)
- Keeping your vehicle maintained
- Limiting idling
- Conserving electricity

Making a few adjustments to your daily activities can help conserve energy, natural resources and prevent Smog Alerts during the winter months. For more information, please visit [www.hcdoes.org](http://www.hcdoes.org)