

How can air pollution affect the environment?

In addition to causing health problems, air pollution has a great impact on the environment. They can make life difficult even when many people may not recognize them as the cause. Forests, plants, watersheds and soils can be altered as particles fall out of the air. Some substances emitted into the air are accumulating in the food chain and environment, causing national concern. Suspended gases can damage or stress plants, making them prone to insects or disease. Emissions of carbon dioxide and methane are creating global climate change.

Some effects are nuisances that degrade the quality of life. Airborne dusts can make your house dirty inside and out, sulfur and nitric gases can slowly destroy paint, corrode metal or degrade monuments, tombstones and buildings. Pollutants can reduce scenic views and shroud once-pristine valleys and vistas.

But clean air is also important for Iowa's economy and businesses. If an area routinely fails to meet outdoor air standards, it can be federally declared in "nonattainment" status under the Clean Air Act. That means stepped up efforts must take place to reduce local emissions with sometimes costly, stringent control equipment. In this manner, the area will hopefully return to its former clean air status. Preserving clean air means less regulatory oversight and less operating costs in addition to less health care costs associated with unhealthy air.



What can YOU do to help fight air pollution?

Drive Less: Transportation is the #1 source of man made air pollution. Combine trips, bike, walk, carpool, or use public transit. Purchase fuel efficient vehicles. Avoid letting your car idle for extended periods of time.

Avoid burning leaves: Leaf smoke is a major health threat for many Iowans. The dense smoke is made of fine soot particles, carbon monoxide and toxins that causes asthma attacks in Iowa. Composting or mulching turns potential air pollution into fine mulch for your lawn, garden or flowers. Solid waste disposal is another alternative.

Get Involved: Report smoking cars or other illegal sources of air pollution to your local air quality division.

Don't Sweat! Choose to use gasoline powered lawn equipment on cool days or early evening when sunlight has less time to react with the exhaust. Most Iowans don't realize using a gas mower for one hour emits the same as driving a car 340 miles! Consider purchasing electric or battery-powered lawnmowers or non-motorized reel mowers.

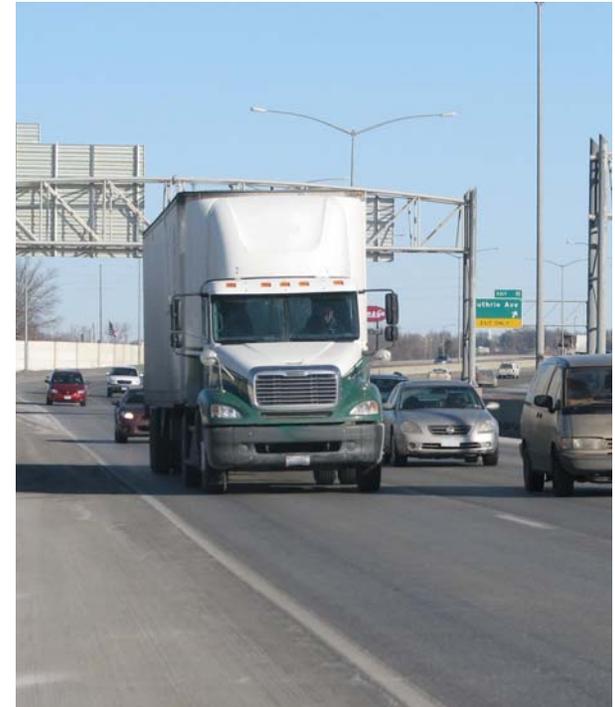
Fireplace Sense: Learning to burn more efficiently means less smoke and more heat from less wood. Only burn properly cured, dry, well split and clean wood. Never burn plastics or garbage. Consider upgrading to new woodstoves or clean gas fireplaces.

For more information please contact:

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Air Pollution and YOU



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Polk County Air Quality

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What is air pollution?

Air pollution includes a number of harmful substances that can be found in the air. While most types of air pollution come from nature, many are man-made. When air pollution levels rise, it can cause a serious threat to your health and the environment. The two most common forms of air pollution include:

OZONE: Ozone, also known as smog, is not released directly into the air – cars, factories and power plants produce chemicals that can create ozone. Ozone can also form more easily in hot weather. At ground level, ozone can pose a very serious danger to your health.

PARTICULATE MATTER: Particulate matter includes tiny microscopic particles and liquid droplets that are more than 7 times smaller than the width of a human hair! Particulate matter comes from diesel trucks and cars, power plants, refineries, factories and wood smoke. These particles are so small, they can travel deep into your lungs and cause a number of health problems.

Other types of air pollution that are regulated by the government include: **CARBON MONOXIDE, NITROGEN OXIDE, SULFUR DIOXIDE, and HAZARDOUS ORGANIC COMPOUNDS (HAPS).**

What health problems can air pollution cause?

Unlike water, we consume air automatically, continuously and without choice as to when or where. Adults breathe about 20,000 times daily, with an average volume intake of 15,000 liters. Athletes may consume 30,000 liters of air. Most people drink a few liters of water daily as a volume comparison.

Breathing in polluted air can have immediate effects, including: coughing, wheezing, shortness of breath, and irritation of the eyes, nose and throat. Similarly, spikes in air pollution levels can trigger chest pain, lung infections, asthma attacks, strokes and heart attacks. Being around air pollution

for long times can also be quite harmful, raising the risk for many serious diseases, including lung cancer, heart disease and asthma.

Children, with their developing lungs and rapid breathing, can pull in more pollutants per pound of body weight than an adult breathing the same air. On days when air pollution is high, children are at increased risk.

Older Iowans are also susceptible to bad air. Because Iowa is unique due to our large percentages of elderly residents, high quality air is especially vital.

Are YOU at risk for health problems from air pollution?

While air pollution can hurt all individuals, certain people are at greater risk for adverse health effects caused by air pollution:

- People with lung disease, such as asthma, emphysema or Chronic Obstructive Pulmonary Disease (COPD)
- People suffering from heart disease, diabetes or other serious illnesses
- Children and babies
- The elderly
- Those who live or work near high levels of air pollution, including freeways, ports and industry

Air Quality Index (AQI)	The Levels of Health Concern	Colors
When the AQI is:	Air quality conditions are:	Symbolized by the color:
0 to 50	Good	Green
51 to 100	Moderate	Yellow
101 to 150	Unhealthy for Sensitive Groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon

People with a high risk should check for air pollution and change their daily activities when levels are high. The Air Quality Index (AQI) offers a quick guide to understanding air quality threats (see left bottom), and many newspapers and websites post AQI levels daily.

In addition, you can sign up to receive a daily e-mail that will alert you to that day's current AQI level. Go to www.airquality.co.polk.ia.us to sign up now.

When air quality is poor, high-risk groups should stay indoors.



How is the AQI determined?

Polk County Air Quality operates and maintains a series of air quality monitors throughout central Iowa that test for air pollutants such as ozone and particulate matter. These monitors, similar to the one pictured above, determine the amount of pollutants on a 24 hour a day, 7 day a week basis. The AQI is calculated using these known concentrations then the results are posted in local newspapers, television stations as well as on the web.