

All About



air

a COMPREHENSIVE air quality GUIDEBOOK

# Introduction

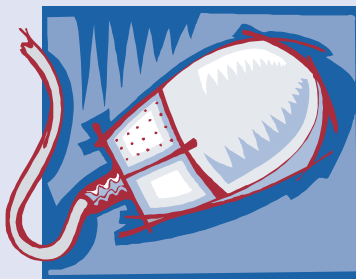
## **We All Need Clean Air**

We all need it to live. We all use it, day in and day out. Even though air is vital to our survival, it is a subject we may not think or know much about. Each and every one of us can make a difference on the quality of our air.

This guidebook has been assembled with the goal of raising awareness and answering outdoor air quality questions for the residents of Butler, Clermont, Hamilton and Warren counties in Southwestern Ohio. For more information, please visit the Hamilton County Department of Environmental Services (HCDOES) website at *[www.hcdoes.org](http://www.hcdoes.org)*.

### **Check Us Out Online....**

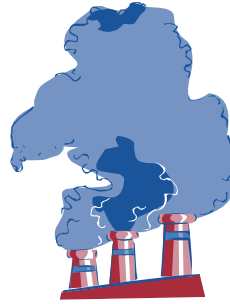
....at [www.hcdoes.org](http://www.hcdoes.org). You can access air quality information and data, pollen and mold counts and a multitude of out-reach opportunities. Kids and adults alike will enjoy the informative kids activities page. Be sure to check out the HCDOES calendar for a complete list of air quality



# Table of Contents

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**2 INTRODUCTION**  
*We All Need Clean Air!*  
*Exploring Our Air*



## **WHAT'S THAT SMELL?**

To report an air quality complaint, call the 24-hour hotline at (513) 946-7777 or (800) 889-0474.

**6 WHO REGULATES OUR AIR?**  
*The AQMD Organization*  
*Complaint Program*  
*Pollen & Mold*

**9 HOW DOES AIR POLLUTION AFFECT OUR HEALTH?**  
*Air Quality Index*  
*Health Effects Chart*

**12 ENVIRONMENTAL EFFECTS OF AIR POLLUTION**  
*Global Warming*  
*Greenhouse Effect*  
*Acid Rain*

**15 HOW IS THE AIR QUALITY MY COMMUNITY?**  
*Air Quality Data in Your Neighborhood*



**16 WHAT CAN BE DONE TO IMPROVE OUR AIR QUALITY?**  
*In Your Car*  
*In Your Home*  
*In Your Yard*  
*Smart Buying Tips*

**21 FUTURE AIR QUALITY ISSUES**  
*What's being done now to help our air quality improve?*

**23 FREE! AIR QUALITY RESOURCES**  
*Free Publications*  
*Free Resources*  
*Web Site Resources*  
*Make an Air Quality Commitment*

# Exploring Our Air

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Air is all around us. Air supplies us with oxygen, which is essential for our bodies to live. Specifically, air is an elastic, invisible mixture of gases (chiefly nitrogen and oxygen, as well as hydrogen, carbon dioxide, argon, neon, helium, etc.) that surrounds the earth.

## What is air pollution?

Air pollution consists of other particles and gases found in the air that are not part of air's natural composition. Air pollution can be from natural sources (such as forest fires, volcanoes and dust storms) or generated by humans.

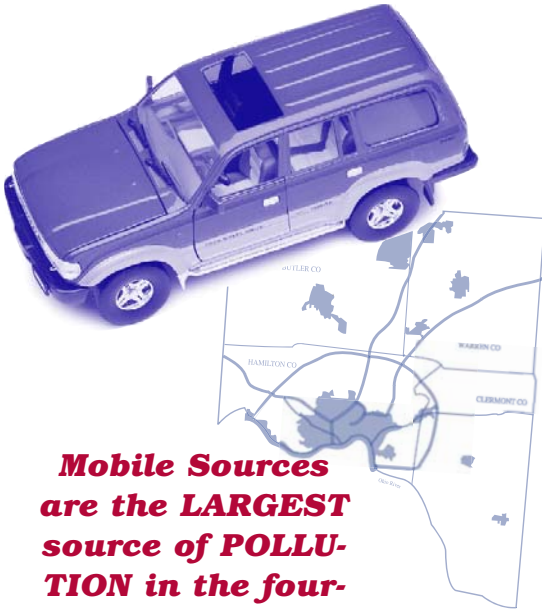
For each region, the exact causes of air pollution may differ. Pollution is dispersed differently depending on the geographical location, temperature, wind and other weather factors. Human activities release substances into the air, some of which can cause problems for humans, plants and animals. These activities contribute to the contamination of our air, forming pollution.



## How is air pollution formed?

Air pollution is made up of many kinds of gases, droplets and particles that reduce the quality of the air. The air in many U.S. cities is polluted by activities such as driving cars and trucks; burning coal, oil and other fossil fuels; and manufacturing chemicals. Air pollution can even come from smaller, everyday activities such as cutting your grass, dry cleaning, filling your car with gas and from degreasing to painting operations. All of these activities add gases and particles to the air we breathe. When high concentrations of these gases and particles accumulate in the air, they can harm us and our environment.

# The Four Major Sources of Air Pollution



**Mobile Sources** are the **LARGEST** source of **POLLUTION** in the four-county region of **Southwestern Ohio**.

## Mobile Sources

A variety of vehicles, engines and equipment that produce air pollution and move, or can be moved, from place to place are mobile sources.

## Industrial Sources

Before the automobile, industrial operations were the major source of air pollution emissions world-wide. Industrial sources are often classified into groups that relate to the product that is produced and the raw material that is used.

## Area Sources

Area sources can be both stationary and mobile. They are typically defined as sources of air pollution that are too small to be individually catalogued and are treated as a group.

## Stationary Sources

These sources are all non-mobile sources, but the term is often used to refer to larger stationary sources, as opposed to area sources.



**Industrial sources WERE ONCE the largest source of emissions world-**

## Air Pollution Ingredients

The National Ambient Air Quality Standards (NAAQS) were set by the EPA to evaluate/rate pollutants considered harmful to public health and the environment. There are two types of national air quality standards, primary and secondary. Primary standards set limits to protect public health, including the health of “sensitive” groups such as asthmatics, children and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation and buildings.

### NAAQS Criteria Pollutants

The NAAQS monitor for six principal air quality contaminants called “criteria” pollutants including:

- Carbon Monoxide (CO)
- Nitrogen Dioxide (NO<sub>2</sub>)
- Ozone (O<sub>3</sub>)
- Lead (Pb)
- Particulate Matter (PM)
- Sulfur Dioxide (SO<sub>2</sub>)

To learn more about these pollutants and their health effects, see page 11.

## Hazardous Air Pollutants

In addition to the six criteria pollutants, there are toxic air pollutants, also known as hazardous air pollutants (HAPs). HAPs include benzene (found in gasoline), asbestos, cadmium, mercury and chromium.

There are many sources of HAPs, mainly created by humans. Mobile sources and stationary sources can both emit HAPs into the air. Nature can also release air toxins through volcanic eruptions and forest fires.

# Who Regulates Our Air?

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The Hamilton County Department of Environmental Services (HCDOES) houses both the Solid Waste Management District and the Air Quality Management Division (AQMD). The AQMD works with local, state and federal government agencies, businesses, communities and citizens to achieve and maintain healthy air quality. The AQMD serves Butler, Clermont, Hamilton and Warren counties in Southwestern Ohio. Additionally, the AQMD serves as a local contract office under the authority of the Ohio Environmental Protection Agency (OEPA) and the United States Environmental Protection Agency (EPA).

## The AQMD

### **Permits & Enforcement (P&E)**

The P&E section monitors the compliance status of the businesses and industries who have permits which regulate their air pollution emissions, from smokestacks, paint booths and industrial furnaces.

The P&E Section also prepares permits, conducts facility inspections and reviews, initiates enforcement actions and responds to air quality complaints received on the 24-hour hotline.

### **Monitoring & Analysis (M&A)**

The M&A section maintains the 42 continuous and intermittent monitors measuring pollutants on a daily basis throughout Southwestern Ohio. The results are released to the public as the Air Quality Index (AQI). They also conduct pollen and mold counts, work with local meteorologists to determine when to issue a smog alert, measure air toxic levels, perform anti-tampering inspections, coordinate emissions inventory programs and observation and validation of all stack (source) testing in the four-county region.

## Complaint Program

The P&E Complaint Program allows residents to call 24-hours a day, seven days a week (excluding major holidays) to report any outdoor air quality concerns. The hotline, established in 1991, provides prompt service to the air quality concerns of residents in Butler, Clermont, Hamilton and Warren counties. The number of complaints have steadily decreased, a success the AQMD attributes to its expanded community outreach efforts and continued agency enforcement. To report a complaint, please call our 24-hour hotline at (513) 946-7777 or (800) 889-0474.

## Smog Alerts

A Smog Alert is issued by the Hamilton County Department of Environmental Services (HCDOES) between 2:00 p.m. and 2:30 p.m. the day before a high-ozone levels are anticipated. Each morning, April 1 through Oct. 31st, M&A staff retrieve and review monitoring data and weather forecast information. If unhealthy levels of ozone concentrations are expected, a conference call is scheduled by HCDOES, in cooperation with local meteorologists and the National Weather Service, to determine if conditions are favorable for the development of ozone. If it is reasonable to expect high ozone levels for the next day, a Smog Alert is issued. For clean air tips during a Smog Alert, see page 16.

## Pollen & Mold

More than 35 million people in the U.S. suffer from allergies, which are often pollen or mold. The M&A staff monitors pollen and mold levels on a daily basis. This information is then communicated to the public through the local media, the AQMD website at [www.hcdoes.org](http://www.hcdoes.org) and through the Pollen & Mold Hotline at (513) 946-7753.



*Ragweed is the most allergenic plant in North America. It blooms from August through October.*

Although it is not possible to regulate pollen and mold, by supplying the daily pollen and mold counts to the public, the AQMD can alert those with allergies and sensitive groups to take steps to limit their exposure to these allergens.

## Additional Services & Outreach

Along with the technical operations of the AQMD, an education and outreach program provides residents, schools, communities and business in Southwestern Ohio with air quality information. The AQMD offers free resources to schools, citizens, communities and businesses. Publications, including the *Living With Allergies* brochure, Progress Reports, Data Reports and *The Breeze* newsletters, are all produced by the AQMD to educate and promote awareness of air quality issues in the four-county region.

### [www.hcdoes.org](http://www.hcdoes.org)

The AQMD website, [www.hcdoes.org](http://www.hcdoes.org), displays the daily AQI levels and pollen and mold counts and contains a variety of informative and educational topics such as, who has applied for a permit for an air pollution source and games and activities for children and teachers.

## Drive Them Wild!



*Our hands-on educational lessons focus on the interaction of people, plants and buildings with air quality and more importantly, what students can do to help clean the air.*

## Additional Resources

Free AQMD presentations are available on a variety of air-related topics for both children and adults. The AQMD also provides resources and/or exhibits by request for your events. For additional information on the resources and activities provided by the AQMD, please contact the Public Affairs Specialist at (513) 946-7754.

# How Does Air Pollution Affect our Health?

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## Air Pollution Effects on Health

Different people react differently to air pollution. Some individuals are much more sensitive to pollutants than others. Young children and elderly people typically suffer more from the effects of air pollution, as do people with health problems such as asthma, heart disease and lung disease.

Air pollution can affect our health in many ways with both short-term and long-term effects. The extent to which an individual is harmed by air pollution usually depends on the total exposure to the damaging chemicals, i.e., the duration of exposure and the concentration of the chemicals must be taken into account.

It is important for “at risk” groups to pay attention to the Air Quality Index (AQI) to find out local air quality conditions and take precautions based on that report.

**Air Quality Index (AQI)** - The EPA created this daily air quality report in order to help people understand what their local air quality means to their health. The AQI is determined using measurements of the main air pollutants that are regulated by the Clean Air Act: ground-level ozone, particulate matter, lead, carbon monoxide, sulfur dioxide and nitrogen dioxide. The AQI is reported in the newspapers, on local television and on radio weather reports, on our webpage at [www.hcdoes.org](http://www.hcdoes.org) or by calling (513) 946-7753.

## Health Effects

### Short-term

These health effects include irritation to the eyes, nose and throat and upper respiratory infections such as bronchitis and pneumonia. Other symptoms can include headaches, nausea and allergic reaction. Short-term air pollution can aggravate pre-existing medical conditions such as asthma and emphysema.

### Long-term

These health effects can include chronic respiratory disease, lung cancer, heart disease and even damage to the brain, nerves, liver, or kidneys. Continual exposure to air pollution affects the lungs of growing children and may aggravate or complicate medical conditions in the elderly.

## ***Air Quality Index***

<b>Air Quality</b>	<b>Air Quality Index</b>	<b>Protect Your Health</b>
Good	0-50	No health impacts are expected when air quality is in this range.
Moderate	51-100	Unusually sensitive people should consider limiting prolonged outdoor exertion.
Unhealthy for Sensitive Groups	101-150	Active children and adults and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
Unhealthy	151-200	Active children and adults and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertions.
Very Unhealthy (Alert)	201-300	Active children and adults and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion; everyone else, especially children, should limit outdoor exertion.

## Health Effects Chart

Pollutant	Most at Risk	Health Effects
<p><b>Carbon Monoxide (CO)</b> A colorless, odorless gas formed when fuel is not burned properly.</p> <p><b>Sources:</b> Vehicle exhaust, industrial processes, residential wood burning, natural sources of wood burning</p>	Those with cardiovascular disease, fetuses and young children.	Reduces amount of oxygen reaching the body's organs and tissues. Cardiovascular patients may experience chest pain or other symptoms. CO affects mental alertness and vision.
<p><b>Nitrogen Dioxide (NO<sub>2</sub>)</b> Forms when fuel is burned at high temperatures.</p> <p><b>Sources:</b> Motor vehicles, electric utilities and other industrial, commercial and residential sources</p>	Children and those with respiratory diseases.	Coughing, wheezing and shortness of breath may occur. Can also increase the risk of respiratory illness in children.
<p><b>Ozone (O<sub>3</sub>)</b> a colorless gas formed by a chemical reaction between volatile organic compounds and oxides of nitrogen in the presence of sunlight</p> <p><b>Sources:</b> Indirectly from motor vehicles, electric utilities and industrial sources.</p>	Children, elderly, adults active outdoors and people with respiratory illness.	Inflammation and irritation of the respiratory tract. Breathing difficulty, coughing and throat irritation. Can affect lung function and worsen asthma attacks.
<p><b>Lead (Pb)</b> Found naturally and in manufactured products</p> <p><b>Sources:</b> Since lead was phased out of gasoline, metal processing is the major source of lead.</p>	Infants and young children are sensitive to low levels of lead.	Can damage organs, affect the brain and nervous system, heart and blood pressure.
<p><b>Particulate Matter (PM)</b> Includes carbon-based particles, dust and acid rain aerosols.</p> <p><b>Sources:</b> motor vehicles, industrial facilities and burning</p>	People with lung disease and cardiovascular disease.	Can trigger asthma attacks and cause wheezing, coughing and respiratory irritation in individuals with sensitive airways.
<p><b>Sulfur Dioxide (SO<sub>2</sub>)</b> Forms when fuel containing sulfur (coal and oil) is burned.</p> <p><b>Sources:</b> Electrical utilities, industrial facilities and diesel engines</p>	Children and adults who are active outdoors.	Bronchoconstriction or a narrowing of the airways, causing wheezing, chest tightness and shortness of breath. Long-term exposure can cause respiratory illness.

# The Environmental Effects of Air Pollution

Poor air quality can affect a region in a number of ways, specifically, property values can diminish and employment can be affected as businesses may not be as willing to locate in an area where the regulations may be tighter. Existing business may have to endure stricter restrictions on emissions and on growth. If air quality standards are not met, an area can lose federal transportation funding.

Residents of Southwestern Ohio are already familiar with one cost that comes with air pollution, the automobile emissions check, or E✓Check. E✓Check requires all gasoline or diesel-fueled vehicles, 25 years old or newer and weighing less than 10,000 pounds, to undergo testing.

As businesses work to comply with air quality regulations, the cost can also be felt on society. As business costs increase due to the installation and operation of emission control systems, so will consumer costs.

Air pollution does not just affect people, it can also cause serious problems to our environment including global warming, acid rain and the greenhouse effect. Learn more about these issues on the following page.



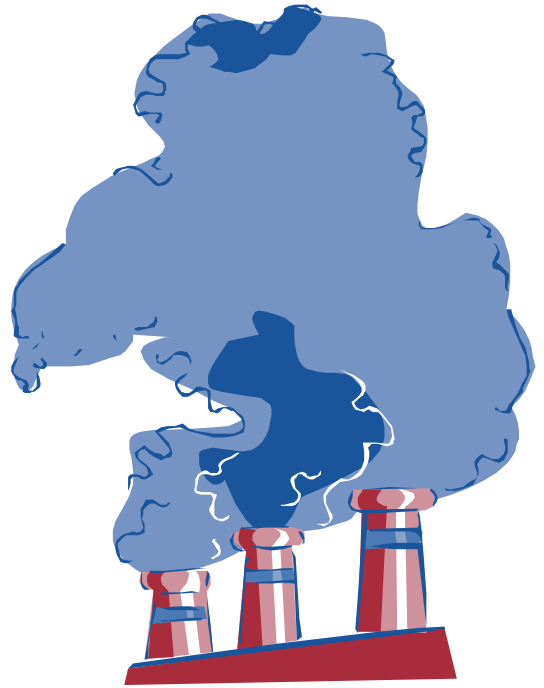
***AQMD equipment used for monitoring particulate matter (PM<sub>2.5</sub>)***

## Global Warming

According to the National Academy of Sciences, the Earth's surface temperature has risen by about 1°F in the last 100 years, with accelerated warming in the 1980's and 1990's. The warmest years recorded since record-keeping began in 1860 were in 1998 and 2002. Effects of this temperature change are being felt around the world as ice-sheets melt, sea-levels rise and weather patterns change. Temperatures have changed many times in geological history, however, recent changes are being attributed to an increase in atmospheric pollution, mainly carbon dioxide, a greenhouse gas.

## Our Air Is Changing

Recent changes in our earth's temperature are being attributed to an increase in atmospheric pollution.



## The Greenhouse Effect

The sun's heat energy is being trapped in the Earth's atmosphere causing temperatures to rise. Atmospheric greenhouse gases (water vapor, carbon dioxide and other gases) act just like the glass windows on a greenhouse, allowing light energy in, but stopping heat energy from escaping. Over time, more and more heat energy is trapped, increasing the global temperature. The greenhouse effect is a natural phenomenon and, without it, the average earth temperature would be about 0°F, well below freezing. However, due to pollutants produced by human activities this effect is accentuated.

## Acid Rain

Acid rain, or acid deposition, is caused by the air pollutants Sulfur Dioxide ( $\text{SO}_2$ ) and Nitrogen Oxides ( $\text{NO}_x$ ). Acid rain occurs when these pollutants react with water, oxygen and other chemicals to form acidic compounds. It does not always fall as rain; it can be acid snow or fog and can even fall as dry deposition: gases or particles. It can take several hours to several days for air pollution to change to acid rain. Winds carrying this polluted air often end up depositing the acid rain many miles from the source of the pollution. Acid rain can also damage cars, buildings and erode statues.



**Several instruments are clustered on the AQMD rooftop in Corryville and used for monitoring different air pollutants.**

# How is the Air Quality in my Community?

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## **Air Quality Data Report**

To find out, request a copy of the Air Quality Data Report at (513) 946-7777 or visit [www.hcdoes.org](http://www.hcdoes.org).

## **Taking Control of Air Quality in Your Neighborhood**

Southwestern Ohio meets five out of the six National Ambient Air Quality Standards (NAAQS). The air quality data collected in 2002 shows that we are in compliance with all six standards, however at this point (Fall, 2003) we are still classified as being in moderate non-attainment for the 1-hour ozone standard. However, the EPA recently finalized two new NAAQS to be implemented in 2004.

Preliminary data indicates that Southwestern Ohio will not meet these two new standards. The ozone standard was changed from a 1-hour ozone standard to an 8-hour ozone standard and a new standard was created for fine particulate matter (2.5 microns in size or smaller).

Data on the other pollutants is extremely promising. Lead has gone down to trace levels and is no longer monitored due to the low values and the levels of carbon monoxide, sulfur dioxide and nitrogen dioxide have also dropped substantially. To find out more about monitoring data collected by the AQMD or about the two new standards, contact the HCDOES to request a copy of the latest Data Report at (513) 946-7777 or visit [www.hcdoes.org](http://www.hcdoes.org).

# What Can Be Done to Improve Air Quality?

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## **In Your Car**

In Southwestern Ohio, the largest source of air pollution comes from vehicles. Cars can produce particulate matter, sulfur dioxide, carbon monoxide and toxic gases. There are many things we can do to drive cleaner and to drive less often. Anything we can do to use our vehicles less and to make them run more efficiently will reduce air pollution.

### **Clean Air Car Tips**

- Don't top-off your tank.
- Fill-up after 6 p.m.
- Avoid high speeds.
- Avoid quick starts.
- Drive a steady speed.
- Use air conditioning wisely.
- Avoid idling.

### **Properly Maintain Your Car**

- Keep your car properly tuned.
- Keep tires properly inflated.
- Check for air conditioning leaks.
- Change car filters often.
- Drive fewer miles; carpool, use public transport, combine trips, telecommute, etc.

## **Alternative Fuel Vehicles**

### **Dedicated Vehicle:**

Runs only on the alternative fuel

### **Bi-Fuel Vehicle:**

Runs on an alternative fuel and conventional fuel.

### **Flexible Fuel Vehicle:**

Runs on any combination of gasoline and ethanol or gasoline and methanol.

### **Hybrid Vehicle:**

Runs on an internal combustion engine and an electric drive train.

### **Fuel Cell Vehicle:**

Hydrogen is chemically transformed into electricity to generate power to run the vehicle.

## Alternative Fuels

With the health risks associated with poor air quality, the price of gasoline on the rise and our dependence on foreign fuel sources increasing, there is a rising need to take advantage of available alternative fuels.

### **Alternative Fuel Examples:**

Biodiesel	Natural Gas
Electricity	Propane
Ethanol	P-Series
Hydrogen	Solar Energy
Methanol	



### **Electric Car**

Electric vehicles produce no tailpipe emission. However, the vehicle's batteries must be replenished by plugging into an electric source.

## Hybrid Vehicles

Ready to make the switch to a hybrid vehicle? Honda produced the first commercially available gasoline-electric hybrid vehicle known as the Honda Insight. New hybrids are produced by a growing number of manufacturers each year, providing more options in size, power and features. Unlike electric vehicles, you do not plug these cars in. Instead, they generate their own electricity when braking or coasting.

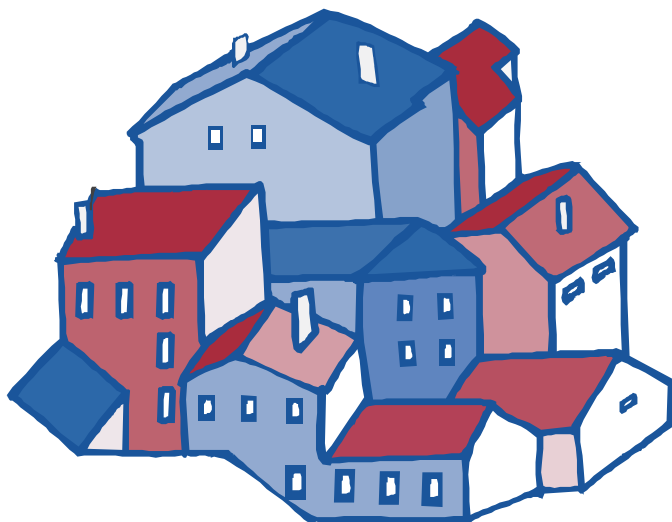


### **AQMD Insights**

The AQMD uses two Honda Insight vehicles. These cars are very fuel efficient vehicles, capable of 61 mpg (city) and 68 mpg (highway).

## In Your Home

Power plants in our area burn coal, oil, or gas to create electricity. Burning fossil fuels releases particulate matter and gases, such as sulfur dioxide and carbon dioxide, into the air. By saving energy we cut down on pollution and save money.



### The 3R's and Air Pollution

The 3 R's (reduce, reuse and recycle) can also help to clean the air. They often save energy and reduce transportation distances, therefore, cutting down on air pollution. For example, recycled aluminum uses 95% less energy than manufacturing aluminum from bauxite ore. Remember, to really recycle you also need to purchase items made from recycled material.

### Clean Air Tips for Your Home

- Insulate and weatherstrip
- Close doors to seldom used rooms; limit heat or air conditioning
- Use fluorescent lights instead of incandescent lights
- Wash clothes in cold water
- Run washing machine and dish washer with full loads
- Turn off lights and appliances when not in use
- Replace appliances with *Energy Star* products
- Use fans and limit air conditioning
- Close drapes in summer, open drapes in winter to warm the home
- Limit oven use in the summer
- Don't use oil-based paints and solvents on ozone alert days
- Keep lids on all solvents when not in use.
- Use wood stoves and fireplaces wisely and sparingly

## In Your Yard

A typical 3.5 horsepower gas mower produces the equivalent amount of volatile organic compounds in an hour as a new car drive for 340 miles. To cut down on air pollution, try these yard tips.



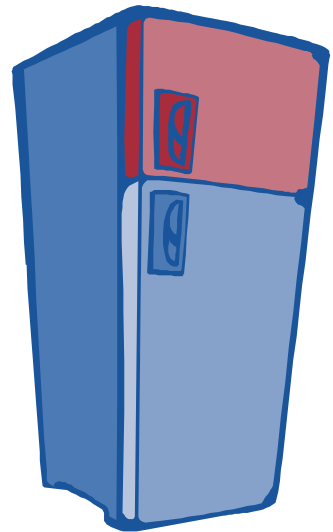
### ***Clean Air Tips for Your Yard***

- Use gas-powered garden equipment after 6 p.m.
- Use a funnel when filling lawn equipment
- Use manual equipment when available
- Use electrical rather than gas-powered
- Plant deciduous trees around the south side of your home for summertime shade
- Plant evergreen trees on the north and west sides to create a wind barrier
- Plant ground cover instead of grass to reduce mowing

## Appliance Disposal

You can donate old working appliances to a variety of local organizations. Non-working refrigerators, freezers and air conditioners may require special handling, due to the coolant, chlorofluor-carbons (CFC's) they contain. CFC's must be removed by a certified technician when appliances are being disposed or recycled. Many appliance sales and repair companies provide this service for a fee.

Be sure to obtain written proof of removal; it is needed before the appliance can be accepted by a recycler. The law has stiff penalties (up to \$25,000 in fines) for anyone who illegally discharges CFC's. For more information, call your local Solid Waste District.



### **CFC Removal**

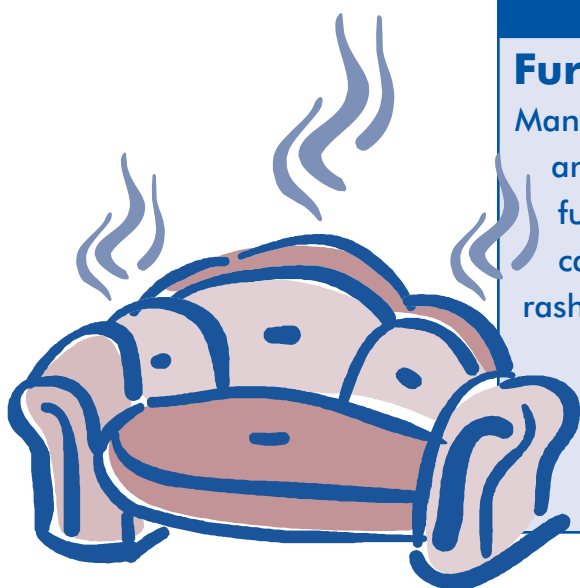
Contact an appliance sales and repair shop for CFC removal. A fee may be involved.

## Smart Buying Tips

Look for the Energy Star logo on new appliances. In 2002 alone, Energy Star helped reduce air pollution the equivalent of taking 14 million cars off the road and saved more than \$7 billion on energy bills without sacrificing product features or personal comfort.

The EPA developed the Energy Star program in 1992 to identify and promote energy-efficient products to reduce greenhouse gas emissions. It has now developed into an industry/government partnership, that offers consumers and businesses energy efficient solutions.

With over 30 product categories and thousands of models available, it is easy to find products that deliver the same or better performance as comparable models. You can even buy an Energy Star home or office! The EPA website, [www.energystar.gov](http://www.energystar.gov), allows you to search for brands and models, find retail outlets and even find available rebates.



### Furniture Fumes

Many household items (e.g. cleaning products and furniture) can produce unhealthy fumes such as formaldehyde. This may cause eye, nose and throat irritation; skin rashes; headaches; and dizziness. High indoor temperatures and humidity and newer products can increase the rate fumes are released.

(visit [www.epa.gov/iaq/](http://www.epa.gov/iaq/)).

# Future Air Quality Issues

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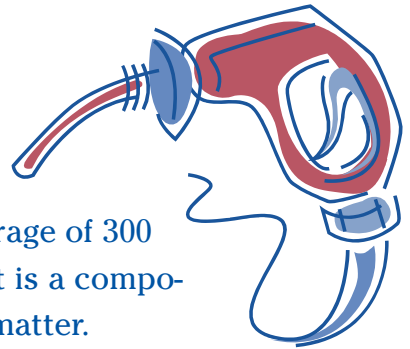
Only through the efforts of scientists, business leaders, legislators and individuals, can we reduce the amount of air pollution on our planet. Although there have been significant improvements in air quality since the Clean Air Act Amendments first passed in 1970, there is still more work to be done. The EPA has proposed several rules to help clean the air, including:

## Tier 2 Gasoline Engine Standards

The EPA adopted more protective tailpipe emissions standards for passenger vehicles that now includes sports utility vehicles, minivans and light-duty pickup trucks. These measures will reduce nitrogen oxides and hydrocarbons, lowering ozone and particulate matter formation.

## Gasoline Sulfur Content

By 2006, the sulfur content of gasoline will be lowered to an average of 30 parts per million (PPM) from a current average of 300 PPM. Sulfur can cause many problems, as it is a component of acid rain and can form particulate matter.



## On-Road Heavy-Duty Diesel Engine Rule

The EPA's new on-road diesel engine rule will require diesel engines manufactured beginning in 2007 to use high-efficiency catalytic exhaust emission control devices. These "catalytic converters" for trucks will decrease hydrocarbon and nitrogen oxide emissions by 90% of current levels. These reductions will lower the amount of smog forming pollutants and particulate matter that is produced.



## Ultra-Low Sulfur Diesel

The new “catalytic converters” used on diesel engines can clog up if high sulfur diesel fuels are used. Therefore, EPA will require that all diesel fuel produced by 2006 will contain no more than 15 PPM sulfur. Current diesel fuel contains an average of 500 PPM. The formation of sulfate particulate will be reduced which helps us achieve the PM<sub>2.5</sub> standard.

## Proposed Multi-Pollutant Bills for Utility Boilers

There are several bills in Congress which specifically target reductions in emissions from utility boilers. All bills propose to set a national cap on the amount of pollutants that can be emitted on a national basis. New boilers could not be built until older, more polluting boilers are cleaned up or shut down.



***The Air Quality  
complaint hotline  
is open 24-hours  
7-days a week!***

### **ADMD Hotlines**

**Air Quality Index or Pollen and  
Mold Information**

(513) 946-7753

**24-Hour Complaint Hotline**

(513) 946-7777 or (800) 889-0474

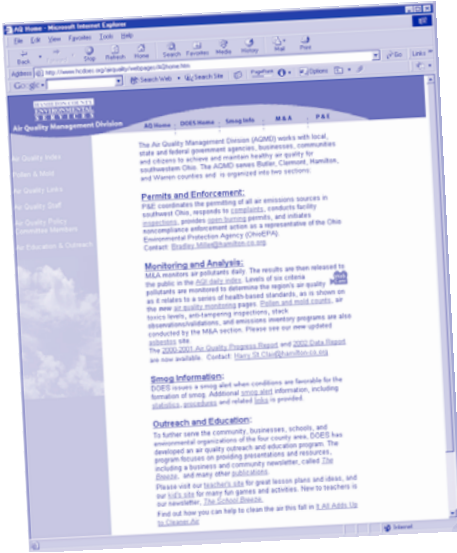
**Smog Information**

(800) 621-SMOG

Visit [www.epa.state.oh.us](http://www.epa.state.oh.us)

# Free! Air Quality Resources

[www.hcdoes.org](http://www.hcdoes.org)



- Today's AQI Index
- Pollen and mold count
- Records of applicants for a permit to install
- Permits to demolish a building
- Additional forms and applications
- Gas pump safety
- Alternative fuel and vehicle information
- Kids games, experiments and science fair information
- Much more!

## Midwest HazeCam

Regional haze, caused by air pollution, causes problems with visibility. Visit the Haze Camera network to see haze around the Midwest, at [www.hcdoes.org](http://www.hcdoes.org) or [www.mwhazecam.net](http://www.mwhazecam.net). The network includes several urban and rural locations. Camera images are updated every 15 minutes and near real-time air quality data (instantaneous) and meteorological data (hourly average) are provided to distinguish natural from man-made causes of poor visibility and to provide current air pollution levels to the public.

A screenshot of the MidWest hazecam website. The main feature is a live camera feed from Cincinnati, OH, showing a hazy urban landscape. Below the camera feed is a weather and air quality data panel. The data includes: Current Temp: 66°, Humidity: 71%, Wind Speed: 2 mph, Direction: SE, Precip: 1 hour N/A, 24 hours N/A. There are also sections for "Description" and "Who's Affected" with a color-coded scale from Good (0-50) to Unhealthy (151-200).

Description	Who's Affected	Ideal Conditions
Good 0 - 50	Nobody	
Moderate 51 - 100	Unusually sensitive individuals	
Unhealthy for sensitive groups 101 - 150	Sensitive Groups • Children • The elderly • Asthmatics • People with lung disease • People with heart disease • Adults who are active outdoors	
Unhealthy 151 - 200	General public and especially sensitive groups	

## AQMD Events

Invite us to bring an exhibit and/or resources concerning local air quality issues to your next event. We attend numerous events around the four-county region, including Earth Day and the Hamilton County Public Employees Recognition Day, to name a few. Contact the Public Affairs Specialist at (53) 946-7754 for more details.

The Regional Ozone Coalition (ROC) is a voluntary association of local governments, organizations, businesses and individuals committed to reducing smog and promoting air quality awareness in Southwestern Ohio and Northern Kentucky. The ROC meets bi-monthly and provides information and resources for the public.



*do your share for cleaner air*

Each year, the ROC coordinates a smog season kick-off event where you and your friends and family can learn about our air quality and what you can do to reduce air pollution. Please contact the AQMD at (513) 946-7748 or visit [www.doyourshare.org](http://www.doyourshare.org) for more information about the ROC.

## Tri-State Alternative Fuels Coalition

Sponsored by the U.S. Department of Energy (DOE), the Clean Cities Program is a voluntary, locally based government/industry partnership. The objective of Clean Cities has been to create plans for local market places where people can learn what's required to create an alternative fuels community.

Due to HCDOES' commitment to improving air quality in this region and to the use and promotion of Alternative Fueled Vehicle's, we received approval from the Hamilton County Board of County Commissioners to officially house the Tri-State Alternative Fuels Coalition, the local Clean Cities Program. Contact the Greater Cincinnati Clean Cities Program Coordinator at (513) 946-7748.

## Alternative Fuel Vehicles at AQMD

HCDOES has a number of Alternative Fuel Vehicles (AFVs) in their fleet, including:

- Two Honda Insights (gasoline-electric hybrids)
- One natural gas Honda Civic GX (natural gas)
- One bi-fuel Chevrolet Lumina (natural gas and gasoline)

To learn more about AFVs, schedule a presentation or order a publication from the Public Affairs Specialist at (513) 946-7754. or visit [www.hcdoes.org](http://www.hcdoes.org).

## Free Presentations & Informative Publications

Presentations about air quality issues are available for children and adults. Invite us to your school, organization, business, etc. We can provide presentations on a variety of topics including alternative fuel vehicles.

We have many free publications and outreach materials including our award winning *Living With Allergies* brochure, a community/business newsletter, data report, tip sheets, magnets and more!



## Free State Air Quality Resources

### Ohio Environmental Protection Agency (OEPA)

This office provides small business assistance to aid companies in completing their air quality permitting paperwork.

*[www.epa.state.oh.us/](http://www.epa.state.oh.us/)*

### Office of Environmental Education (OEE)

The OEE provides funding through grants to many projects across the State. *[www.epa.state.oh.us/oeef/](http://www.epa.state.oh.us/oeef/)*

### Office of Pollution Prevention (OPP)

It provides free technical assistance to help companies reduce pollution and improve the environment.

*[www.epa.state.oh.us/opp/oppmain.html](http://www.epa.state.oh.us/opp/oppmain.html)*

## Free Federal Air Quality Resources

The Environmental Protection Agency's (EPA) mission is to protect human health and to safeguard the natural environment - air, water and land - upon which life depends. They provide information on current initiatives, key issues and top stories, funding, regulations and even environmental data for where you live. The EPA also has many materials available for both children and adults on their website at *[www.epa.gov](http://www.epa.gov)*.

## Other Air Quality Resources

American Lung Association: *[www.lungusa.org](http://www.lungusa.org)*.

STAPPA/ALAPCO (State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Officers): *[www.cleanairworld.org](http://www.cleanairworld.org)*.

# Clean Air Commitment

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Make the Clean Air Commitment by making a conscious effort to adopt some positive air quality changes into your everyday life. See how many you can make part of your everyday routine.

— **Limit driving and delay errands**

For short trips consider riding a bicycle or walking. Other options include carpooling, vanpooling, working at home, teleconferencing.

— **Ride the bus**

On a Smog Alert Day riding a Metro bus reduce the amount of cars on the road, which creates less pollution.

— **Avoid idling**

Don't let engines idle unnecessarily. When you can, avoid drive-through services.

— **Minimize "cold starts" by combining trips.**

Emission levels are highest when vehicles are first started.

— **Refuel your car after 6:00 p.m. on Smog Alert Days**

This reduces the time that escaping fumes have to "cook" during the heat of the day and form ozone.

**Don't overfill or "top-off" the gas tank**

— The refueling process releases ozone-producing fumes. Check to see that the gas cap fits tightly.

**Maintain your gasoline engines**

— This includes boats, mowers and other engines. Ask that the catalytic converter on your vehicle be inspected for proper function.

**Avoid traffic congestion**

— Whenever possible, drive during off-peak hours.

— **Avoid driving for your lunch break**

Take a lunch to work or walk to lunch, it's good exercise as well!

— **Use rollers and brushes**

Applying paint in this manner, instead of spray cans, cuts down on fumes.

— **Use latex paints**

Oil-based paints contribute to ozone-forming fumes.

— **Build and use a compost pile**

Compost yard waste instead of burning it to reduce air pollution.

— **Use an electric or push mower**

Use rakes, hand edgers, or brooms or other non-gasoline-powered equipment for other yard chores.

— **Limit or avoid charcoal lighter fluids**

The fumes from lighter fluid contribute to air pollution.

— **Conserve energy**

Burning fossil fuels in the production of electricity is a source of pollution contributing to ozone formation. Insulate and weatherstrip your home

— **Conserve water**

Run dishwasher and washing machines only with a full load. Conserving water also conserves energy—it takes electricity to treat and deliver drinking water.

— **Tell others**

By letting others know about our air quality and what they can do, everyone can learn *how to do their share for cleaner air.*

**HAMILTON COUNTY  
ENVIRONMENTAL  
SERVICES**

[www.hcdoes.org](http://www.hcdoes.org)



*Hamilton County Air Quality Management Division*  
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