



Earth Gauge

A National Environmental Education Foundation Program

## Air Quality Awareness Week

**Air Quality Awareness Week**, presented by NOAA's National Weather Service and the United States Environmental Protection Agency (EPA), takes place **May 3-7, 2010**. The Agencies are asking Americans to "Be Air Aware" by highlighting different air quality topics on each day of the week. Here, find information about each topic and tips to share with your viewers.

For more information about Air Quality Awareness Week and the daily topics, visit [www.airquality.noaa.gov](http://www.airquality.noaa.gov) or [www.epa.gov/airnow/airaware](http://www.epa.gov/airnow/airaware). View talking points for including air quality forecasts in your weathercast at [www.airnow.gov/index.cfm?action=tvweather.talking](http://www.airnow.gov/index.cfm?action=tvweather.talking).

### MONDAY: OZONE AND PARTICLE POLLUTION

Ozone and particle pollution are two of the most common air pollutants in the U.S. While ozone is of greatest concern during the summer months, particle pollution occurs year-round.

- **What is Ozone?** Ground-level ozone pollution forms through a reaction of heat and sunlight with volatile organic compounds (VOC) and nitrogen oxides (NOx). VOCs can come from gasoline fumes and various industrial processes; NOx comes from car exhaust, power plant emissions and other sources. *Ground-level ozone pollution* is different from *stratospheric ozone*, which extends six- to thirty-miles above the Earth and provides protection from UV rays. EPA describes ozone as "good up high, bad nearby."
- **What is Particle Pollution?** Particle pollution is a mixture of small solids and liquid droplets in the air that come from smoke, exhaust, dust, pollen, gases and other sources. Fine particles are so small that they are cannot be seen by the naked eye; they are about 1/30<sup>th</sup> the diameter of one human hair!



### TUESDAY: WHAT CAUSES POOR AIR QUALITY?

Air pollution differs across cities and regions, depending on the amount of emissions from vehicle exhaust, power plants, wood-burning, gasoline fumes and other sources. Natural events can also affect air quality. For example, wildfires and volcanoes can contribute to particle pollution.

*Weather can have a big impact on air quality:*

- **Hot, sunny days** are prime conditions for ozone pollution to form.
- **Temperature inversions** can trap polluted air over cities for extended periods of time. Geographic features, such as mountains, can have the same effect by preventing air pollution from dispersing to other areas.
- **Wind** can transport air pollutants from one place to another, sometimes covering hundreds of miles!

*Reducing vehicle emissions can make a big difference for air quality. Here are some ways to reduce your impact:*



- **Walk it.** If you can, consider walking to work on nice days. Not only do you reduce vehicle emissions, but you also sneak in some extra exercise.
- **Dust off your two-wheeler.** Consider biking to your destination instead of driving. There is almost one adult-sized bike per household in the U.S., but few adults report taking bike trips.
- **Use Public Transportation.** Check out your local transit options and consider taking the bus or train instead of driving.
- **Carpool.** Join a friend to cut your emissions and transportation expenses (gas, parking) in half.

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## WEDNESDAY: KEEPING YOUR LUNGS AND HEART SAFE

In 2008, an estimate one in 15 Americans (about 20 million people) had asthma, and in 2006 more than 81 million Americans had some form of cardiovascular (heart) disease. Ozone and particle pollution can trigger asthma attacks and other health problems for individuals with lung conditions, and particle pollution can be dangerous for individuals with heart conditions. Sensitive groups, including children and older adults can be particularly vulnerable to health problems from air pollution.

*If you have health conditions that are affected by poor air quality, take simple steps to protect your health:*

- **Check the air quality forecast delivered by your local meteorologist.** When particle or ozone pollution levels reach “Code Orange,” it’s time to take extra precautions.
- **Avoid strenuous activities.** When air pollution levels are high, try to avoid strenuous outdoor exercise and yard work to reduce your risk.
- **Reschedule.** On extremely high air pollution days, such as “Code Red,” consider rescheduling outdoor sporting events, hikes and other strenuous activities.



## THURSDAY: HOW TO GET CURRENT AIR QUALITY INFORMATION

According to EPA and NOAA, about 300 U.S. cities issue regular air quality forecasts. The **Air Quality Index (AQI)** provides information on air pollution levels in a specific area, as well as the health threats associated with those levels. EPA provides air quality forecasts for five pollutants: ground-level ozone, particle, carbon monoxide, sulfur dioxide and nitrogen dioxide.

Air Quality Index Levels of Health Concern	Numerical Value	Meaning
Good	0-50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	51-100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101-150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151-200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201-300	Health alert: everyone may experience more serious health effects.
Hazardous	> 300	Health warnings of emergency conditions. The entire population is more likely to be affected.

If you provide the air quality forecast, remind your viewers that they can get their local air quality information on-air. They can also look up their local air quality forecast at [www.airnow.gov](http://www.airnow.gov).

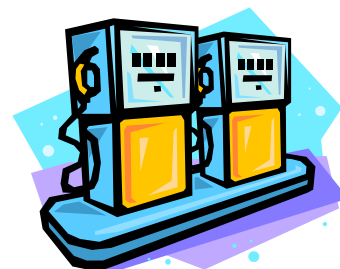
The **EnviroFlash** service – a partnership between EPA and local air quality agencies – gives customized air quality information to citizens who subscribe online. Visitors can sign up for free at [www.enviroflash.info](http://www.enviroflash.info) to get air quality forecasts, current conditions and pollution notifications sent via E-mail. Those who are at high risk from poor air quality, such as the elderly, children and those with heart and lung disease, may especially benefit from this service.

## FRIDAY: WHAT YOU CAN DO

In addition to using transportation alternatives and protecting your health, there are many other ways to reduce air pollution in your community.

### *Reducing Ozone Pollution:*

- **Keep it in the tank.** Wait until after 6pm to fill up at the gas station to avoid releasing fumes during the hottest parts of the day.
- **Don't top-off.** When you do fill up your tank, prevent gas spills by resisting the urge to top-off.
- **Postpone yard work.** When you use gas-powered lawn equipment, wait until the cooler evening or early-morning hours. If you are replacing lawn and garden equipment, consider electric or hand-powered versions.



### *Reducing Particle Pollution:*

- **Burn carefully.** Avoid burning trash and leaves. If you use a fireplace or wood-burning stove, reduce smoking by only using well-seasoned wood.
- **Maintain your vehicle.** Regularly changing oil and air filters can reduce particles emitted from your car.

For more tips on protecting air quality, visit EPA's “What You Can Do to Clean the Air” at [www.epa.gov/air/actions](http://www.epa.gov/air/actions).

### *Sources:*

NOAA and EPA. *Air Quality Awareness Week*. [www.airquality.noaa.gov](http://www.airquality.noaa.gov); [www.epa.gov/airnow/airaware](http://www.epa.gov/airnow/airaware)

The American Lung Association. *State of the Air Report Key Findings, 2010*. <http://www.stateoftheair.org/2010/key-findings/>

The American Heart Association. *Cardiovascular Disease Statistics*. <http://www.americanheart.org/presenter.jhtml?identifier=4478>