

Particulate Matter

MEDIA PACKAGE



BROWARD
COUNTY
FLORIDA

Pollution Prevention, Remediation
and Air Quality Division
www.broward.org/air

Agency Overview:

Broward County is located within the United States Environmental Protection Agency's designated Southeast Florida Airshed, which consists of Miami-Dade, Palm Beach, and Broward counties. The main air pollutant of concern within the airshed is ozone. The air quality in Broward County is classified in the "good range" of the Air Quality Index more than 85 percent of the year, with motor vehicle emissions as the major source of air pollution.

As part of the Pollution Prevention, Remediation and Air Quality Division mission, the Air Quality Program educates Broward County residents, regulated facilities and schools, on the importance of good air quality and the steps they can take to help keep the air clean.

The Air Quality Program enforces federal, state, and local air pollution regulations through licensing and compliance activities and by promoting pollution prevention. We are responsible for the operation and maintenance of a comprehensive network of air quality monitoring stations throughout Broward County to make sure federal air pollution standards are met. Our staff also participates in local land use planning activities and informs the public about the importance of alternative means of transportation to help protect air quality.

Through our licensing and compliance efforts and educational outreach, the Broward County Air Quality Program is working to protect one of our most important natural resources, the air we all breathe.

Our Mission:

"To safeguard human health and the natural environment, and enhance the quality of life in Broward County by maintaining, protecting and improving overall air quality."

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Additional Reference Materials

- *EPA's Particle Pollution and Your Health Brochure*
- Our Nation's Air: *Highlights*

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Please see the website for additional information: www.broward.org/air

Did You Know?

Fact: We have clean air in Broward County that meets all federal standards.

The U.S. Environmental Protection Agency (U.S. EPA) sets national health standards for air quality that must be met. Broward County has done what was necessary to meet those standards and has been maintaining good air quality for the past fifteen years. In fact, the air quality has improved here, as well as in other cities in the United States, during the past decade.

Fact: The standards just got tougher.

On February 27, 2006, the U.S. Supreme Court upheld the constitutionality of the Clean Air Act, and reaffirmed EPA's stance that the standards must be based solely on public health considerations. In September 2006 the particulate matter standard was tightened. While these new standards are expected to have great benefits on our air quality, the way we manage and preserve air quality today will affect whether or not we continue to meet the new standards.

See the *Particulate Pollution and Your Health* brochure for more information.

Fact: We may have difficulty meeting the new air standards.

Despite the local and regional air quality improvements we still have a lot of work ahead. EPA periodically reviews the standards, and revises them to public health and environment. This means that although we are making progress in reducing air pollution, we may need to implement additional control measure to meet new air quality standards.

Fact: Much of the air pollution doesn't come from where you may think.

More than half of the air pollution in Broward County comes from cars, trucks

and other fuel burning machines, like lawn mowers, that we use around the home.

Fact: The penalties for not meeting the federal air standards can be severe.

If Broward County does not meet the new air quality standards, businesses and consumers could end up paying for stricter air pollution controls. This could have a negative impact on the local economy, including expensive pollution reduction requirements for the industry and restrictions on federally funded projects.

Fact: In Broward County, the air quality is unhealthy for sensitive groups only a few days out of the year.

Most of the time our air is healthy to breathe; only on some days, under hot, dry and windless weather conditions does air become polluted enough to be of concern. You may recall during May 1998, that stagnant weather patterns prompted the Florida Department of Environmental Protection to issue a first ever statewide air pollution advisory.

Fact: You can register to receive up-to-date air quality information.

To receive up-to-date air quality information, sign up for EnviroFlash! Enviroflash is a free service that provides customized air quality information via email or pager/ digital cell phone. Please visit www.broward.org/air/airqualityalert.htm to sign up for the free e-mail notification. You can also call the Air Quality Index Information Line at 954-519-1280.



Using the Air Quality Index color-coded scale, forecasts help you to quickly learn when air pollution is expected to reach unhealthy levels in your area.

Criteria Air Pollutants

Pollutant	Symbol	Major Man-Made Sources	Human Health & Welfare Effects	Control Methods
<p>Particulate Matter Airborne solid particles and liquid droplets.</p> <p>Grouped into two categories:</p> <p>“Coarse particles” from 2.5 to 10 microns in diameter</p> <p>“Fine particles” smaller than 2.5 microns in diameter</p>	<p>PM</p> <p>PM₁₀</p> <p>PM_{2.5}</p>	<p>Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.</p>	<p>Can get deep into your lungs, or even enter your blood stream, and cause serious health problems: Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; decreased lung function; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).</p>	<p>Pollution control equipment and reduction of fuel combustion.</p>
<p>Ozone (Smog) A colorless or bluish gas</p>	<p>O₃</p>	<p>Formed by a chemical reaction between volatile organic compounds (VOC) and nitrous oxides (NO_x) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.</p>	<p>Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems.</p> <p>Damages plants; reduces crop yield.</p> <p>Damages rubber, some textiles and dyes.</p>	<p>Pollution control equipment; reducing NO_x emissions from power plants and industrial combustion sources; introducing low-emission cars and trucks; using “cleaner” gasoline; use of low-VOC solvents.</p>



Give Your Car a Break - Leave your car at home. Walk, bike, carpool, or use mass transit.

Criteria Air Pollutants

Pollutant	Symbol	Major Man-Made Sources	Human Health & Welfare Effects	Control Methods
Sulfur Dioxide A colorless, nonflammable gas	SO ₂	Formed when fuel containing sulfur, such as coal and oil, is burned; when gasoline is extracted from oil; or when metal is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, large ships, and fuel combustion in diesel engines.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel; damage crops and natural vegetation. Impairs visibility. Precursor to acid rain.	Use of low-sulfur fuels, energy conservation (reduces power plant emissions), and pollution control equipment. Ultra Low Sulfur Diesel is now mandatory.
Carbon Monoxide An odorless, colorless gas	CO	Formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.	Transportation planning, vehicle emission testing and reduction, efficient combustion techniques, and energy conservation.
Nitrogen Dioxide A reddish-brown gas	NO _x	Fuel combustion in motor vehicles and industrial sources. Motor vehicles; electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming, and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.	Exhaust gas recirculation in motor vehicles; reduction of combustion temperatures in industrial sources; energy conservation; pollution control equipment.



Drive a Fuel-Efficient Vehicle or Alternative Vehicle- Getting a few extra miles per gallon makes a big difference. Saves thousands of pounds of Carbon Dioxide and a lot of money per year.

AIR QUALITY INDEX

Broward County Air Quality Index: 954-519-1280

Air Quality Email Alert: www.broward.org/air/airqualityalert.htm

	HEALTH CATEGORIES	OZONE	FINE PARTICLES
300	VERY UNHEALTHY	Active children and adults, and people with respiratory disease such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.	People with respiratory or heart disease, the elderly and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.
200	UNHEALTHY	Active children and adults, and people with respiratory disease such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.	People with respiratory or heart disease, the elderly and children should avoid prolonged exertion; everyone else should limit prolonged exertion.
150	UNHEALTHY FOR SENSITIVE GROUPS	Active children and adults, and people with respiratory disease such as asthma, should limit prolonged outdoor exertion.	People with respiratory or heart disease, the elderly and children should limit prolonged exertion.
100	MODERATE	Unusually sensitive people should consider limiting prolonged outdoor exertion.	None
50	GOOD	None	None



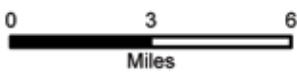
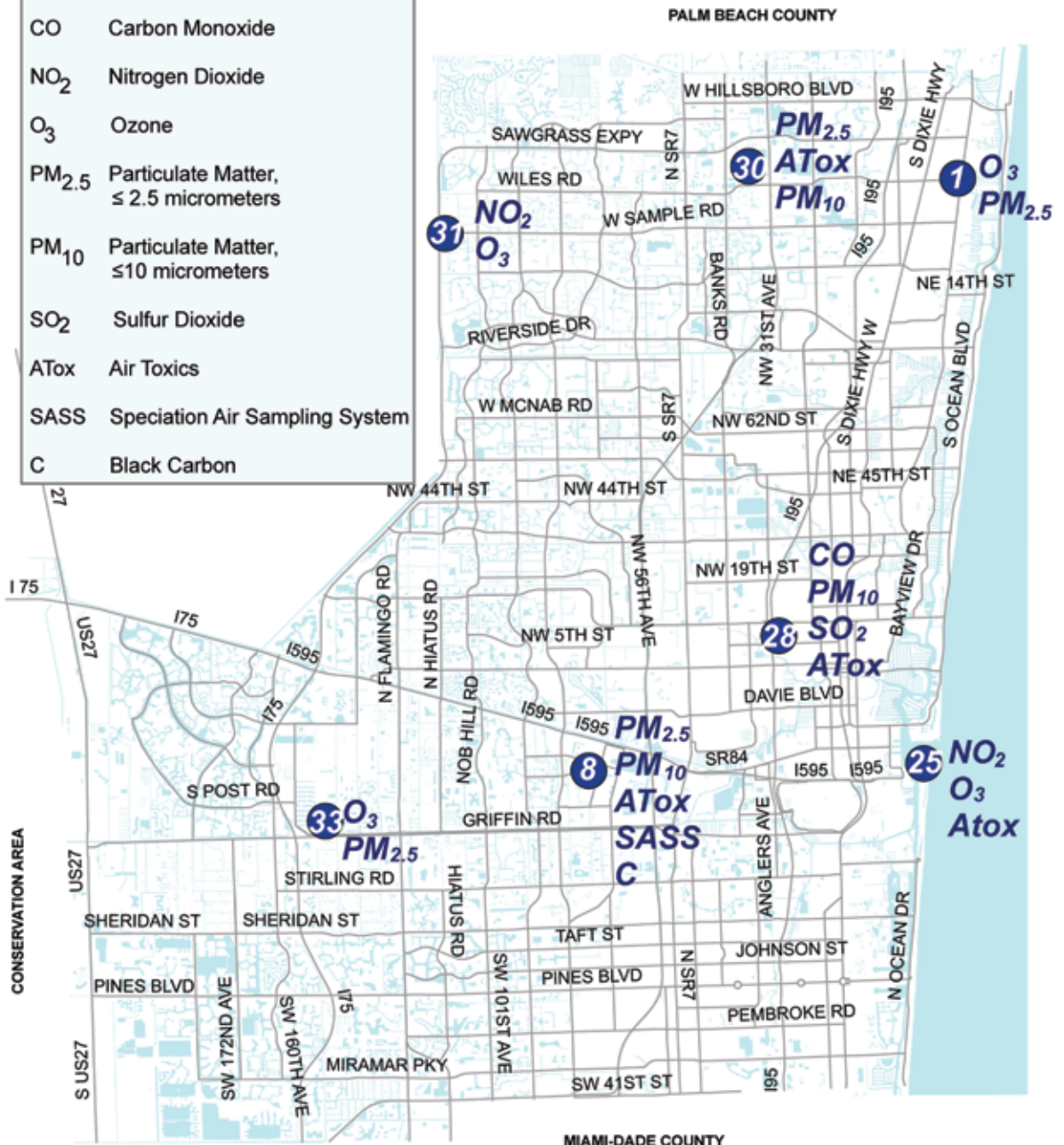
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Air Monitoring Stations Map

Broward County Air Quality Monitoring Network

LEGEND:

CO	Carbon Monoxide
NO ₂	Nitrogen Dioxide
O ₃	Ozone
PM _{2.5}	Particulate Matter, ≤ 2.5 micrometers
PM ₁₀	Particulate Matter, ≤ 10 micrometers
SO ₂	Sulfur Dioxide
ATox	Air Toxics
SASS	Speciation Air Sampling System
C	Black Carbon



Updated: April 2010



Environmental Protection & Growth Management Department

This camera-ready ads can be used by the media during poor air quality days to educate citizens about the simple steps they can take to protect their health and improve air quality.

Things You Can Do During Poor Air Quality Days



Here are a few things individuals, business, and other organizations can do during poor air quality days to reduce the threat of Ozone exposure:

- Avoid unnecessary use of your cars and trucks (combine trips whenever possible).
- Car pool or use mass transit.
- Keep your automobiles properly tuned up
- Refuel your car after 6:00 p.m. and don't top off the tank.
- Ride your bike or walk whenever possible.

Things You Can Do During Poor Air Quality Days



Here are a few things individuals, business, and other organizations can do during poor air quality days to reduce the threat of Particle Matter (PM) exposure:

- Reduce travel.
- Avoid vigorous physical activity.
- Avoid using leaf blowers and other dust - producing equipment.
- Drive slowly on unpaved roads and other dirt surfaces.
- Get involved with air quality improvement programs in your community.
- If you own or operate an industrial source of PM, comply with local rules that apply to your operation. Work with local agencies to develop strategies that will further reduce PM emissions.



Environmental Protection & Growth Management
Department Pollution Prevention, Remediation and Air Quality Division.

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CALL 954-519-1280
FOR TODAY'S AIR QUALITY INDEX

