

Air Quality Index Flag Program Coordinator Handbook

**Environmental Engineering and Permitting Division
Air Monitoring and Outreach**



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For more information, visit [*Broward.org/Air*](http://Broward.org/Air)


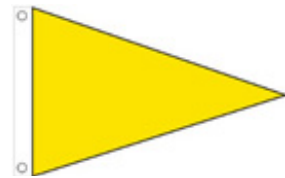
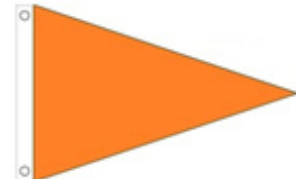


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Welcome to Broward County's Air Quality Index (AQI) Flag Program

The Broward Air Quality Index (AQI) Flag Program helps employees, staff, and the community become aware of daily outdoor air quality conditions using brightly colored flags. Each day, a flag is raised at participating organizations that signal the level of air pollution for that day. The flag colors correspond to the colors used in the Environmental Protection Agency's (EPA) Air Quality Index, which tells how clean or polluted the air is for that day.

Flags Explained

Flag	Color	What does it mean?
	Green Flag	Indicates Good Air Quality
	Yellow Flag	Indicates Moderate Air Quality
	Orange Flag	Indicates Air Quality is Unhealthy for Sensitive Groups

Note: The AQI Index is comprised of six air quality levels; however, in South Florida, any AQI conditions above the Orange flag are considered rare. In the event we do experience unhealthy or very unhealthy air quality, health advisories will be issued from the Environmental Engineering and Permitting Division (EEPD) in the local media.

Air Quality Synopsis

- Air Quality is a measurement of the quality of the air. **Air Quality** can be affected by **pollutants** released from **stationary sources** as well as **mobile sources**.
- **Transportation** is the **number one source** of **air pollution** in Broward County.
- In Broward County, the two most common pollutants of Air Quality are: **Ozone** and **Particulate Matter**.
- Broward County's Air Quality is **Good 80%** of the year.
- Broward County has **six monitoring stations** located throughout the county that measure and report on the level of pollutants in our air.
- The Environmental Protection Agency maintains a website called **AirNow** strictly dedicated to forecasting and providing observational **AQI data**.

How does the Broward AQI Flag Program work?

Application/Set Up Program

Organizations interested in participating in the Broward AQI Flag Program can email the Broward County Environmental Engineering and Permitting Division (EPPD) at ***airoutreach@broward.org***.

If your Organization is selected, EPPD will provide the selected organizations with all the materials needed to implement the program, which include:

- 3 Flags: Green, Yellow, and Orange.
- Air Quality Information Poster (Poster should be displayed somewhere in the office, in high traffic area).
- The EPA will add your organization to the online table of participating businesses and will send you an official participation certificate for display
- All necessary materials and resources for the coordinator and the staff to have a successful program.

Duties/Established Program

Check the air quality each morning via one of the following options:

- ✓ Opening the Broward County Air Quality Flag Program webpage
- ✓ Subscribing to ***EnviroFlash*** which allows anyone to get the daily air quality forecast sent to your email, cell phone or Twitter
- ✓ Viewing the ***AirNow*** website
- ✓ Using the Air Now Mobile Application (available on the Android and Apple)
- ✓ Receiving notifications from EPPD staff when the AQI goes out of the good (green) range.

- 1) Coordinate with staff to hang the corresponding flag that represents that day's air quality early each morning
- 2) Include an air quality message about the outdoor air quality during a morning email sent to all staff.



Steps for a Successful Flag Program

Step 1: Contact EEPD to obtain the flags

Email airoutreach@broward.org to inform us of your interest in our AQI Flag Program. If approved, you will receive three flags: green, yellow, orange. The flags are rectangle style and there are two options for dimensions: 2'x3' flags and 3'x5' flags. Please contact EEPD so we can place the most appropriately sized flags for your organization.

Step 2: Educate and inform the staff and the community at the start of the program

Choose a date to begin flying your flags, and then educate and inform your organization and the surrounding community. The EPA will add your organization to the online table of participating organizations and will send you an official participation certificate for display. Train personnel about the Air Quality Index and the Flag Program so they can help administer the program and teach the staff.

Step 3: Find out the daily air quality forecast and fly the corresponding flag

Like the weather, air quality changes from day to day. Your local or state air quality agency makes a daily air quality forecast that predicts the AQI color for both ozone and particle pollution. The forecast appears in the early afternoon and predicts the air quality for the next day.

As mentioned previously, you can check air quality each morning via one of the following options:



- Opening the Broward County AQI Flag Program webpage
- Viewing the AirNow website
- Using the Air Now Mobile Application (available on the Android and Apple)
- Receiving notifications from EEPD staff when the AQI goes out of the good (green) range.

Step 4: Know what actions to take when the air quality is unhealthy

General Actions When Ozone or Particle Pollution Levels are Unhealthy

Ozone and particle pollution are the most widespread air pollutants in Broward County. When either ozone or particle pollution is at an unhealthy level, the chances of being affected increase the longer a person is active outdoors and the more strenuous the activity. Based on the recommended actions listed staff should use their judgment to decide how to modify planned outdoor activities when air quality is unhealthy.

Background Information

Pollutant	Graphic	What is it?	Harmful Health Effects
Ozone		Ozone is a colorless gas found in the air we breathe. Naturally occurring ozone high above the earth's surface protects our planet from solar radiation. When ozone is created near the ground it is unhealthy to breathe and can also damage trees and crops.	<ul style="list-style-type: none"> • Constriction of airways • Coughing, painful breathing, wheezing and inflammation of the airways • Increased fatigue • Reduced athletic performance • Aggravated lung disease
Particulate Matter		<p>Particles in the air are a mixture of solids and liquid droplets that vary in size and are referred to as "particulate matter." Some particles - those less than 10 micrometers in diameter - pose the greatest health concern because they can pass through the nose and throat and get deep into the lungs. Ten micrometers in diameter is just a fraction of the diameter of a single human hair.</p> <p>Particles with diameters less than 2.5 micrometers are called "fine" particles. They are produced when fuels such as coal, oil, diesel or wood are burned in power plants and motor vehicles (e.g., cars, trucks, buses and marine engines). These particles are also produced by construction equipment, agricultural burning, trash and brush burning, and forest fires.</p>	<ul style="list-style-type: none"> • Irritation of the airways, coughing, or difficulty breathing • Decreased lung function • Aggravated asthma • Development of chronic bronchitis • Irregular heartbeat • Heart attacks • Premature death in people with heart or lung disease

What is the Air Quality Index (AQI)?

The Air Quality Index (AQI) is an index for reporting daily air quality. It tells you how clean or polluted your air is, and what associated health effects might be a concern for you. The AQI focuses on health effects one may experience within a few hours or days after breathing polluted air. The purpose of the AQI is to help you understand what local air quality means to your health. To make it easier to understand, the AQI is divided into categories. Each category corresponds to a different level of health concern. The levels of health concern and what they mean are:

How does the AQI work?

The higher the AQI value, the greater the level of air pollution and the greater the health concerns. For example, an AQI level of 40 represents good air quality with little potential to affect public health, while an AQI value over 201 represents very unhealthy air quality.

Air Quality Index Levels of Health Concern	Numerical Value	Color	Meaning
Good	0-50	<i>Green</i>	Air quality is considered satisfactory, air pollution poses little or no risk
Moderate	51-100	<i>Yellow</i>	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a small number of people who are unusually sensitive to air pollution
Unhealthy for Sensitive Groups	101-150	<i>Orange</i>	Members of sensitive groups may experience health effects. The general public is not likely to be affected
Unhealthy	151-200	<i>Red</i>	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects
Very Unhealthy	201-300	<i>Purple</i>	Health alert: everyone may experience more serious health effects
Hazardous	301-500	<i>Maroon</i>	Health warnings of emergency conditions. The entire population is more likely to be affected

Resources:

Template to Introduce the New Flag Program

How much pollution is in the air outside today? Soon, our entire community will have a simple way to find out...just look up! Starting [insert date], we'll be flying a brightly colored flag below our American flag that will show how clean or polluted the air is. This new flag program will help us continue to promote exercise while protecting health. [Alternatively, state the location where the flag will be displayed – in a lobby, as a rolling banner on a TV monitor, etc.]

Each colored flag corresponds to an air quality level:

Green – good air quality

Yellow – moderate air quality

Orange – unhealthy for sensitive groups, including all children and those with asthma or other respiratory issues

On green and yellow days, staff are encouraged to get outside and get moving! When air quality is orange or red, it is still OK to be outside, but we will encourage staff to take breaks and cut back on activities that involve lots of walking or running. In addition to helping us plan for exercise, the flags will help staff with asthma get to know whether their symptoms get worse when air quality is poor and whether they need to take extra steps to protect their health.

The flag program is used in many U.S. cities and we're proud to be the first organization in [city] to adopt it. Thanks to the Broward Environmental Engineering and Permitting Division for providing us with the flags! In addition to the new flags, we will have more information on [include when] to encourage staff to learn more about air pollution, how it affects us, and what we can do to make the air cleaner.

We will post more information about this exciting new program and our flag raising event on our website.

Frequently Asked Questions:

Q: How long can staff stay outside when the air quality is unhealthy?

There is no exact amount of time. The worse the air quality, the more important it is to take breaks, do less intense activities, and watch for symptoms. Remember that staff with asthma will be more sensitive to unhealthy air.

Q: Why should staff take breaks and do less intense activities when air quality is unhealthy?

Staff breathe harder when they are active for a longer or when they do more intense activities. More pollution enters the lungs when a person is breathing harder. It helps to:

- ▶▶ reduce time outside (e.g., take breaks)
- ▶▶ reduce intensity of activities (e.g., walk instead of run)

Q: Are there times when air pollution is expected to be worse?

- ▶▶ **Ozone pollution** is often worse on hot, sunny days, especially during the afternoon and early evening. Plan outdoor activities in the morning, when air quality is better, and it is not as hot
- ▶▶ **Particle pollution** can be high any time of day. Since vehicle exhaust contains particle pollution, limit activity near idling cars and buses and near busy roads, especially during rush hours. Also, limit outdoor activity when there is smoke in the air.

Q: How can I find out the daily air quality?

Go to the **AirNow** website. Many cities have a forecast and a current AQI that tells what the local air quality is now. The AirNow website shows what the pollutant of concern is. Sign up for emails, download the free AirNow app, or install the free AirNow widget on your website.

Q: If staff stay inside because of unhealthy outdoor air quality, can they still be active during the day?

It depends on which pollutant is causing the problem:

- ▶▶ **Ozone pollution:** If windows are closed, the amount of ozone should be much lower indoors, so it is OK to keep staff moving.
- ▶▶ **Particle pollution:** If the building has a forced air heating or cooling system that filters out particles then the amount of particle pollution should be lower indoors, and it is OK to keep staff moving. It is important that the particle filtration system is installed properly and well maintained.

Q: What is an asthma action plan?

An asthma action plan is a written plan developed with a student's doctor for daily management of asthma. It includes medication plans, control of triggers, and how to recognize and manage symptoms. See the **Centers for Disease Control & Prevention** for sample asthma action plans. When asthma is well managed and well controlled, students should be able to participate fully in activities.