Understanding Bad Air Days in Allegheny County

BREATHE PROJECT
The Air We Share

*The **Pennsylvania Constitution** states that people have a right to clean air, pure water and to the preservation of the natural, scenic, historic and esthetic values of the environment. In 2022, the **United Nations General Assembly** declared that everyone on the planet has a right to a healthy environment, including clean air, water and a stable climate.*

What is a Bad Air Day Alert?

- Bad air days are reported using the EPA's **Air Quality Index (AQI)**. The AQI is the system used to warn the public when air pollution is dangerous. Download the app at AirNow.gov.

- The AQI tracks ozone (smog) and particle pollution (tiny particles from ash, power plants and factories, vehicle exhaust, soil dust, pollen, etc.) as well as four other widespread air pollutants.

  - GASP shares AQI reports on their social platforms during bad air events.
  - Inversion Documentary on Twitter forecasts unhealthy air quality days regularly.
  - Allegheny County Health Department (ACHD), IQ Air, and Plume labs report AQI levels year-round.

US AQI Level		PM2.5 (µg/m³)	Health Recommendation (for 24 hour exposure)
Good	0-50	0-12.0	Air quality is satisfactory and poses little or no risk.
Moderate	51-100	12.1-35.4	Sensitive individuals should avoid outdoor activity as they may experience respiratory symptoms.
Unhealthy for Sensitive Groups	101-150	35.5-55.4	General public and sensitive individuals in particular are at risk to experience irritation and respiratory problems.
Unhealthy	151-200	55.5-150.4	Increased likelihood of adverse effects and aggravation to the heart and lungs among general public.
Very Unhealthy	201-300	150.5-250.4	General public will be noticeably affected. Sensitive groups should restrict outdoor activities.
Hazardous	301+	250.5+	General public at high risk of experiencing strong irritations and adverse health effects. Should avoid outdoor activities.

Understanding AQI levels:

- AQI under **50** is considered good air quality, meaning that it is safe for everyone.

- AQI between **51-100** can be harmful to sensitive groups like those respiratory issues, people with chronic heart or lung disease, pregnant people, elderly and those with diabetes.

  - **Protect yourself by**: Closing all windows and doors (if above 100, use an air filter if possible), limit outdoor activities especially in high-traffic areas, wear a filtered mask like N-95 or P-100, re-circulate air in your car.

- AQI over 101-150 is hazardous for all people, especially sensitive groups who could end up in the emergency room.
  - **Protect yourself by:** Limiting all activities to indoors (low energy activities preferred), close all windows and door and run filter if possible, wear a filtered mask like N-95 or P-100, and use the sources below to monitor the air.
  - AQI over 300 is considered hazardous for all people, no matter their health status.

The EPA and ACHD send out alerts to the public to inform them of bad air days, but they come in different forms. Below are some of the types of air warnings you will get:

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Air Alerts and Monitoring

Air **Advisory**, **Watch**, and **Warning**

- **Advisory** – Unhealthy pollution is occuring or in the daily forecast
- **Watch** – Risk of hazardous pollution in the near future and could pose a health threat
- **Warning** – Heavy Pollution is occuring and will pose a threat to health

Public Alerts & Monitors

- Allegheny Alerts - A county alert system that sends time-sensitive county updates wherever you specify, such as your home, mobile or business phones, email address, text messages and more. Sign up here.
- SmellPGH - Crowdsourced smell reports posted to an app by residents so we can better track how odors from polluting industries travel across the greater-Pittsburgh region.

- **24-hour vs hourly**
  - **24 Hour/Daily** – Reading of the average pollution AQI over a 24-hour period midnight to midnight
  - **Hourly** - The hour by hour AQI readings at the selected monitors

  - Plume labs & Plume PGH - reveals pollution peaks and fresh air moments throughout your day and throughout the world. Plume PGH is a specific real-time particle map from CMU's CREATE Lab that covers the greater-Pittsburgh region.
  - **Get a home monitor or filter** - For those who cannot afford a monitor or filter, there are many free programs like the ROCIS low-cost indoor air monitoring program and the Valley Clean Air Now (VCAN) Air Filter Distribution Program for Mon Valley residents.

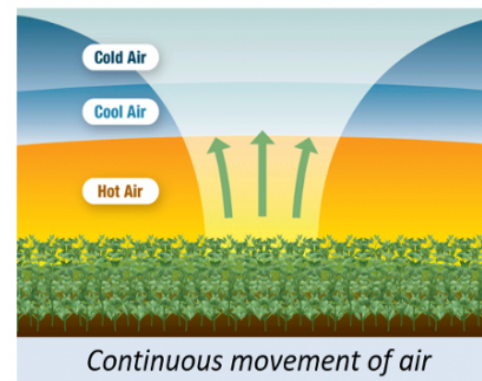## Inversion Days

- A **temperature inversion** occurs when a layer of warm air traps cool air near the Earth's surface. In areas where air pollution is high, temperature inversions can significantly affect our health. (Image via Iowa State University)
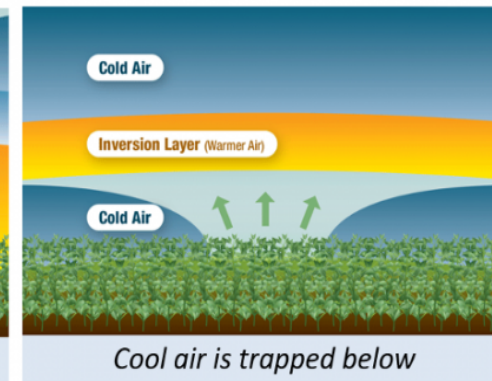
Outdoor monitoring:

- EPA Outdoor air monitoring
- Purple Low Cost air monitoring
- Breathe Cam - See our most polluting industries in real-time in Clairton, Braddock and Beaver County

During a typical day — Continuous movement of air. With an inversion — Cool air is trapped below. Agweb.com

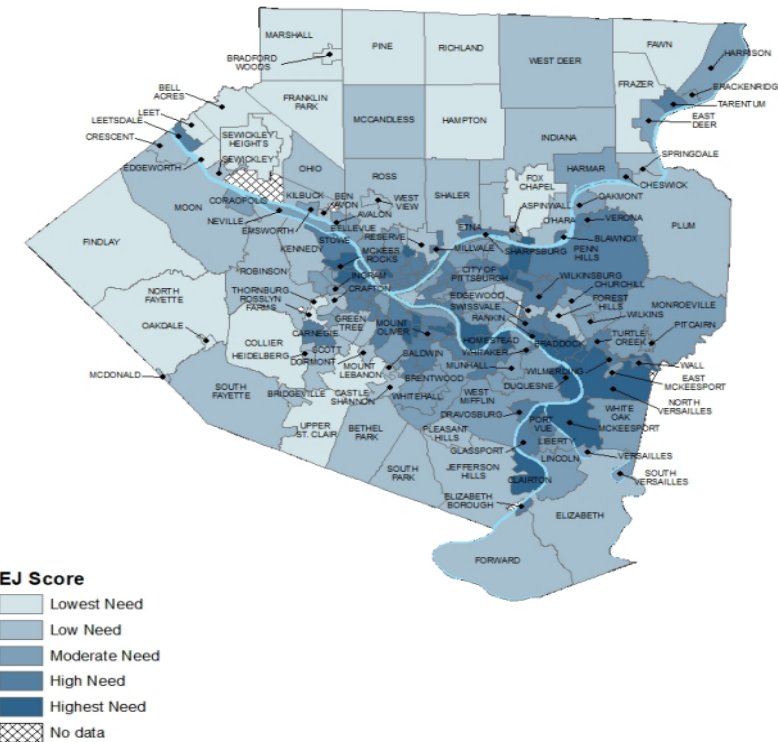# Improve the Health Environmental Justice Community's Air

Allegheny County ranks among the **worst 1% of counties in the U.S. for cancer risk from industrial pollution** AQI levels. In 2022 the Clairton Coke Works topped the list for **most-toxic industrial air polluter in Allegheny**. (PennEnvironment, 2023). In our County, 1.24 million people are **at risk and live in Environmental Justice communities**, (ej description).

Vulnerable populations who bear disproportionate risks of air pollution health impacts: 15,142 children with pediatric asthma; 104,584 people with adult asthma; 67,638 people with COPD; 95,494 people with cardiovascular disease; 13,161 pregnant people; and 278,320 people of color. (ALA SOTA 2023)

Strengthen EPA's Soot/Particle pollution standards

1. Scientific studies affirm that people experience chronic and acute health reactions to $PM_{2.5}$ at any exposure level. (Cohen, Brauer et al). We call on the EPA to set its annual standard to 8 ug/m3, the level at which there is clear evidence it improves the health of the community

2. In 2022 the Mon Valley Air Pollution Episode Rule passed to require 16 industrial facilities to reduce their pollution during "air quality warning" days. We support the EPA's efforts to require fenceline monitoring () for steel and iron industries. This will give us more accurate AQIs and faster warning for high pollutants like PM2.5 and Benzene (a cancer-causing pollutant) that often fills the air with a rotten egg stench.

3. Currently non-profits like VCAN are the only ones providing local communities with filter with limited budgets and growing waiting list, while millions of dollars of air fine money is going towards federal expenses like security cameras and garbage truck. We advocate for more accessibility and transparency of these funds the Community Benefit Trust and Clean Air Fund to support more residentially beneficial resources like air filters and weatherization to can aide in protecting our health.

Environmental Justice Scores, 2019

EJ Score
- Lowest Need
- Low Need
- Moderate Need
- High Need
- Highest Need
- No data

Learn More About Environmental Justice Resources in SWPA

Allegheny County Health Department (ACHD)

- Air info for residents
- Public meeting schedule
- Report an Air Complaint

Department of Environmental Protection

- Environmental Justice

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