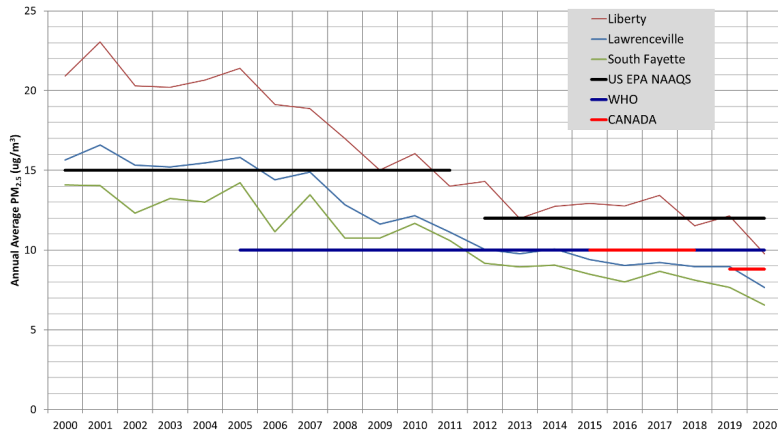


**Allegheny County Council, Sustainability Committee Special Session on Air Quality  
Event Summary  
July 7, 2021, 4:00 – 5:30 pm  
Chair: Hon. Anita Prizio**

John Graham, Ph.D., Senior Scientist, Clean Air Task Force



**Annual Average PM2.5 in Allegheny County**



In 2020, EPA Staff Recommended a revised standard in from 8 to 10 ug/m3.

- Revisions in NAAQS over the next several years could place the county in violation of standards for both PM and Ozone.
- Non-monitored pollutants or locations may have harmful levels that have gone undetected.
- Air Pollution in Allegheny County has improved over the last two decades

- Allegheny County fails to meet the SO2 hourly NAAQS, met the PM2.5 standard for the first time in 2018-20 and continues to have harmful ozone episodes
- Many locations across the county experience poor and peak pollution levels
- PM and SO2 levels in the county are generally worse than other places east of the Rocky Mountains.

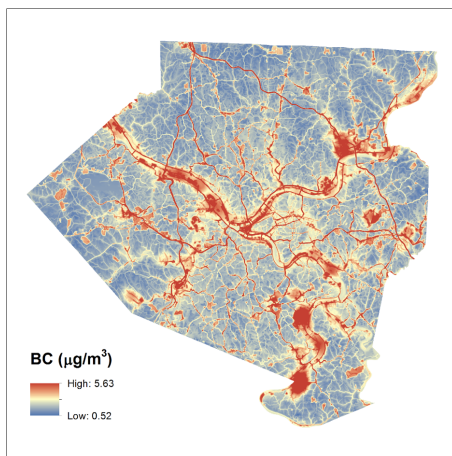
Dr. Deborah Gentile, MD, Medical Director, Community Partners in Asthma Care



- Recent medical studies confirm adverse health effects of air pollution in Allegheny County:
  - [Asthma prevalence of 22.4% among predominately minority and poor children residing near point sources of air pollution](#)
  - 70% exposed to annual PM2.5 levels greater than WHO limit of 10 ug/m3
  - [Increased asthma symptoms and rescue medication use and near doubling of out-patient and emergency room visits following Clairton Coke Works fire on 12/24/2018.](#)

- Short and long-term PM2.5 exposure causes mortality and cardiovascular effects (heart attack, stroke, arrhythmias).
- Short-term SO2 exposure causes respiratory effects, particularly asthma.
- Short and long-term PM2.5 is likely to cause respiratory effects (asthma, COPD, infections).
- Long-term PM2.5 is likely to cause cancer and nervous system effects (dementia).
- Newer studies with larger populations report adverse health effects below current standards
- Recommendations are to 1) reduce short-term PM2.5 standard from 35 to 25-30 ug/m3 over 24 hours; 2) decrease long-term PM2.5 standard from 12 to 8-10 ug/m3 annually.

**Albert Presto**, Ph.D., Associate Research Professor, Department of Mechanical Engineering, Carnegie Mellon University and Center for Atmospheric Particle Studies (CAPS)



- Allegheny County has a unique wealth of hyper-local air quality data
- We can use this data to better understand:
  - Emissions from and impacts of major and minor sources
  - Human exposures to air pollution
  - Environmental injustices
- [Environmental Justice \(EJ\) tracts were 4 to 25 times more likely to be in the highest quartile of exposure](#) compared to the lowest quartile for Black Carbon and NO<sub>2</sub>, respectively.

### Responses to Council Members' Key Questions about Allegheny County's Air Quality:

- When one looks at U. S. counties whose AQ averages exceeded the 12ug/m3 annual average back in 2009-11 (including Allegheny County) and compare how they fared in the 2018 – 2020 period, every upwind county from Allegheny County had a greater reduction in absolute and percent reduction of PM 2.5 than Allegheny County did.
- Allegheny County had a 24% improvement over this period; however, all of the upwind counties performed better (49% - 28% improvement).
- The air transported into the county was 4.2 ug/m3 better in 2018-2020 than 2009 - 2011, yet the reduction observed in Allegheny County was only 2.9 ug/m3 better.
- Allegheny County's local pollution source emissions slowed their decline relative to other counties for a portion of the past decade, delaying local PM 2.5 improvements.