

February 28, 2023

Remarks for Public Meeting on Air Quality

Allegheny County Courthouse, 4th Floor - Gold Room
436 Grant Street
Pittsburgh, PA 15219

Thank you for holding this meeting and for inviting me to speak today. I am Matthew Mehalik, Executive Director of the Breathe Project, an organization dedicated to improving our region's air quality working together with over 65 regional organizations and institutions with science and public health at our core.

I am here, hopefully, to alert this council to the dire need for institutional leadership to protect the health of our county's residents from both chronic and acute air quality issues in our county.

From a chronic perspective, our entire county's air quality still ranks poorly.

Allegheny County ranks in the top 1 percent of counties in the U.S. for cancer risk from point source air pollution. Our air poses a significant threat to public health with an increased risk of heart and lung disease, asthma, diabetes, cancer, and premature death.¹

Based on the EPA's Highest-10 Air Quality Index data, which tracks which regions of the country rank in the top-10 worst airsheds, based on Air Quality Index information on an hourly basis, our county has appeared on this top-10 worst list about 40% of all days and #1 worst over 10% of all days in 2022.²

In 2022, 179 out of 365 days were considered not good air quality days.³ In 2021, 200 out of 365 days were considered not good air quality days.⁴ According to an analysis of our region's pollution sources from the National Emissions Inventory, particle pollution from stationary industrial point source pollution is the largest contributor to our region's pollution, accounting for approximately half of our region's pollution.⁵ An analysis of data from one of our region's monitors in Allegheny County, Liberty, registered annual particulate matter (PM 2.5) concentrations worse than 90% of all monitors in the U.S. Four other monitors in Allegheny County measured annual PM 2.5 levels worse than 70% of the U.S.⁶

¹ Breathe Project – Air Pollution Sources. Online: <https://breatheproject.org/air-pollution-sources/>, accessed December 5, 2022.

² EPA AirNow's Worst Ten Air Quality (AQI) Pittsburgh Reporting Areas, Available online: <https://airstats.createlab.org/highest-ten/>, accessed December 5, 2022.

³ Breathe Project – Air Pollution Sources. Online: <https://breatheproject.org/air-pollution-sources/>, accessed December 5, 2022.

⁴ Breathe Project – Air Pollution Sources. Online: <https://breatheproject.org/air-pollution-sources/>, accessed December 5, 2022.

⁵ Breathe Project – Air Pollution Sources. Online: <https://breatheproject.org/air-pollution-sources/>, accessed December 5, 2022.

⁶ Breathe Project – Air Pollution Sources. Online: <https://breatheproject.org/air-pollution-sources/>, accessed December 5, 2022.

A 2017 study of asthma in regional schools found children exposed to the highest levels of PM 2.5 had nearly a two-fold risk of having a diagnosis of asthma. In the city of Clairton, where North America's largest coking operation and the region's largest source of particle pollution exists, 34% of the children were at risk for asthma compared to the national rate of 8% and the state and county rates of 10-13%.⁷

The most important thing this institutional body can do, and what each county council member can do, is send in comments to the US EPA demanding that the agency **improve its annual average fine particle and soot standard so that it can be set to 8ug/m3 to protect health from fine particle air pollution.** The current standard is 12 ug/m3, which was set in 2012 and based on public health data that is older than a decade. Our region is barely meeting this old standard and is one of the very last places in the entire country to squeak by last year. All recent public health data points to the need to set this standard as low as possible – all evidence shows that the presence of ANY particle pollution produces negative health impacts. The World Health Organization currently has this set to 5 ug/m3. The EPA seems willing to move our standard to 8 ug/m3, but it will only do so if people demand that it do so. Each of you should take action to save lives by sending in your written comments to demand the lowering of this standard to 8 ug/m3.

From an acute air pollution perspective, our region still experiences periodic levels of very high pollution.

Allegheny County, particularly in the Mon Valley near the Liberty Monitor, experiences a substantial number of days with temperature inversions, and these inversions have large impacts on regional air quality. We know that these events frequently occur in the overnight or early morning hours when atmospheric conditions and low wind velocity conditions trap pollution emitted overnight by industrial operators in river valley communities.

The bulk of these appearances occurred in the spring, early summer, and late fall periods of time, when wildfire regions were not dominating this list, as was the case during summer and early fall periods of time, and especially when these overnight temperature inversions were more frequent.

A Clean Air Task Force analysis of surface emissions under inversion conditions from 2016 – 2019 showed that these temperature inversions augment the pollution gradient to be nearly a factor of 2.0 at the Liberty monitor (to 19 ug/m3 on average) when compared with surrounding monitors (10 ug/m3) under strong inversion conditions.⁸ These events can cause short-term spikes in air quality that frequently exceed 150 (Unhealthy for Everyone) level on the AQI for at least several hours in the overnight period that then decrease when the inversions dissipate, typically after 11 am. These weather dynamics result in the 24-hour average coming in just under the 35ug/m3 24-hour standard; however, a large portion of the population breathes high levels of pollution in the overnight hours, producing frequent complaints about air quality.

The Create Lab at Carnegie Mellon University has created a crowdsourced app that documented over 70,000 air quality complaints over 4 years. These complaints are based on people smelling bad air, which has been shown to have a strong correlation with sulfur emissions, precursors to PM 2.5 formation.⁹ The visualization of these reports, in another app, "Plume Pgh," shows how weather inversions trap these pollutants in the Mon Valley, resulting in these smell reports that occur in the waking hours, when people get up and enter the dome of pollution in the mornings.¹⁰

⁷ Deborah A. Gentile , Tricia Morpew , Jennifer Elliott , Albert A. Presto & David P. Skoner (2020): Asthma Prevalence and Control among Schoolchildren Residing near Outdoor Air Pollution Sites, Journal of Asthma, DOI: [10.1080/02770903.2020.1840584](https://doi.org/10.1080/02770903.2020.1840584).

⁸ Graham, John. "Pittsburgh Air Quality Trends," Presentation at the "Air We Breathe Asthma Summit," Pittsburgh, PA, November 5, 2021.

⁹ See "Summary of Findings" and "Relationship between Smell Reports and Pollutants" at <https://smellpgh.org/analysis>

¹⁰ See <https://plumepgh.org/?date=2021-10-14> for a good example.

This frequent dosing of pollution at high levels for hours at a time in the overnight and early morning hours is incredibly impactful. Recent data collection surrounding the Clairton Coke Works shows that spikes in benzene levels accompany these spikes in particles and hydrogen sulfide, the source of smell complaints. All of these emissions were clearly shown by ACHD to come from the Clairton Coke Works. EPA has [classified benzene](#) as a known human carcinogen for all routes of exposure.

It is reasonable to link our region's poor cancer statistics as well as the many voices frequently heard in the Mon Valley about family and community disruptions to these ongoing acute pollution episodes. This situation needs to stop.

From an institutional and individual council member perspective, you should include in your comments to the US EPA a demand to **improve the 24-hour standard so that it is set to 25ug/m3 for the 98th percentile and make the standard a 24-hour rolling average instead of a midnight-to-midnight standard.** Currently, this standard is set to 35 ug/m3, and our region, once again, barely squeaks by and is one of the last regions to do so. When inversions lift, highly concentrated pollution disperses. But people exposed to very high levels of pollution for 8 hours or so are highly negatively impacted. Our region can benefit from revisions to the 24-hour standard because of the unique conditions that exacerbate pollution in Southwestern Pennsylvania in addition to the revisions to the annual standard.

If we succeed in getting these changes to national policy, the problems that we experience with the current episodic rule will be made mostly moot. These standards would force the changes in operations at the most polluting facilities to protect the health of Mon Valley residents and all of Allegheny County.

Our region's 2.6 million people are at risk unless both the annual and daily standards are revised. This includes vulnerable populations who bear disproportionate risks from current levels of air pollution: 55,269 children with pediatric asthma; 213,963 people with adult asthma; 160,478 people with COPD; 228,249 people with cardiovascular disease; 267,874 people living with low incomes; and 372,912 people of color.¹¹ The environmental justice concerns are clear, substantial, and must play a prominent role in setting updated standards.

The Breathe Project encourages each of you and the governing body as a whole, and all of your constituents to tell the EPA in writing by March 28, 2023 to set its annual standard to 8 ug/m3, the level at which there is a clear consensus of evidence suggesting benefits for reducing PM 2.5 emissions below this level as an annual standard, and reduce the 24-hour standard to 25ug/m3 on a 24-hour rolling basis because of the frequent spikes in air pollution that occur under the industrial points source, topographic, and temperature inversion characteristics of our region.

In addition, there are some additional actions that County Council can do to exercise its institutional responsibility:

- Only appoint members to the Board of Health that commit to protecting county residents from polluted air and that have a public health, scientific, and air quality background.
- Only approve a new Health Department Director who will lead on air quality enforcement.
- Stop the hollowing out of ACHD's expertise and capabilities under its current mismanagement.
- Address ACHD budget issues so that ACHD can have experienced staff to address needed enforcement, monitoring, and inspection capabilities.
- Completely re-do ACHD's subcommittees to remove clear conflicts of interests that exist on those committees. The fact that US Steel chairs the "Pollution Prevention and Education" committee is emblematic of regulatory capture that exists in that agency. US Steel's chosen law firm frequently badgers community advocates on the Air Advisory Committee.

¹¹ ALA SOTA 2022, Available online: <https://www.lung.org/research/sota/city-rankings/states/pennsylvania/allegheny>, accessed 12/05/22.

- Commit to NEVER agreeing to consent decrees and settlement agreements that create pay-to-pollute arrangements with major polluters. The 2019/2020 settlement agreement with the Clairton Coke Works is a case-in-point.
- Demand that ACHD do a better job of sitting down with residents to hear their complaints and respond to their concerns. Currently, ACHD has sealed itself off from any meaningful dialog with the community.
- Hold the current and any future County Executive accountable for protecting the health of county residents from air pollution. No more blaming the weather to taking unseemly victory laps by cherry picking unrepresentative statistics to mislead the community on air quality issues. Commit to protecting county residents.

Let's save thousands of lives, reduce burdens on vulnerable people, and take action that makes everyone proud of our country by embracing these improvements.

Sincerely,

Matthew M. Mehalik, Ph.D.