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Blowing smoke over the region's air quality

Summary: The American Lung Association (ALA) has released its annual "State of the Air" report and is once again promoting its dubious claims. Previous *Policy Briefs (Vol. 19, No. 19, Vol. 18, No. 21, and Vol. 15, No. 21)* have all refuted ALA's declarations and called attention to its misuse of data, methodology and attempts to falsely correlate health statistics with pollution levels.

The ALA's 2019 "State of the Air" report claims the Pittsburgh-New Castle-Weirton, Pa.-Ohio-W.Va. metro area "worsened for ozone and it is the second year in a row worsened for particle pollution." A closer examination of data indicates ALA's assertions are misrepresentative as a whole of Pittsburgh's MSA, Weirton and New Castle.

Ozone

Ozone is considered an outdoor air pollutant. The Allegheny County Health Department (ACHD) noted in its Air Quality Annual Data Summary for 2019 that the county did not have any recorded days that exceeded the EPA compliance standard for ozone in 2019. The county has three ozone monitors and records ozone measurements over an eight-hour period. The EPA designated Allegheny County to follow the 2008 EPA standard of 0.075 parts per million (ppm) per eight-hour period. The EPA's 2015 standard (highest standard) for ozone is 0.070 ppm. Data from the ACHD shows the county is at attainment of its 2008 EPA standard as well as EPA's 2015 standard at all monitoring sites.

Remarkably, even though the EPA designated Allegheny County to follow the 2008 EPA standard it meets the EPA's more restrictive 2015 standard with each monitor measuring below the standard countywide in 2019—South Fayette (0.066 ppm), Lawrenceville (0.066 ppm) and Harrison (0.067 ppm).

As for ALA's claims that the area has had more unhealthy days of high ozone, ACHD's data proves otherwise. In 2019, Allegheny County recorded zero days when ozone exceeded the EPA's standards also known as "ozone exceedance days." In 2018, ACHD recorded 14 days when ozone levels exceeded EPA standards. Notably, Allegheny County's ozone measurements in 2019 improved from 2018, not worsened.

The remaining counties in Pittsburgh's MSA also recorded measurements below both the EPA's 2008 and 2015 standard for ozone in 2019. Armstrong County measured 0.06 ppm. Beaver County measured 0.062 ppm. There is no ozone monitor in Butler County. Fayette County measured 0.059 ppm. Washington County measured 0.059 ppm. Westmoreland County measured 0.064 ppm. Outside of Pittsburgh's MSA, Weirton, W.Va., (with two monitors) measured 0.059 ppm and New Castle, Pa., measured 0.058 ppm.

Yet again, the validity of ALA's "State of the Air" report is called into question. How can the entire Pittsburgh MSA, along with Weirton and New Castle, receive a "failing" grade for ozone when every monitor in 2019 measured below the 2008 and 2015 EPA standard? Furthermore, Allegheny County is not designated by the EPA to follow the 2015 EPA standard, yet it still meets it in 2019. Usually meeting a stricter standard than required would indicate a favorable score but apparently not when ALA is doing the grading.

Particulate Matter (pm2.5)

The EPA's standard of compliance for particulate matter (pm2.5) is 12.0 micrograms per cubic meter (mcg/m3). Allegheny County has 14 monitors that measure pm2.5. Eleven monitors measured below the standard. The average particulate matter reading across all Allegheny County monitors in 2019 was 9.8 mcg/m3.

ALA's report always associates the Liberty Borough monitors with the entire Pittsburgh MSA-Weirton, W.Va., and New Castle, Pa. region. It's also important to note that the monitors in Liberty Borough are located at the largest coke manufacturing facility in the United States. In 2019 the particulate matter monitors in Liberty measured 12.1 mcg/m3, 12.2 mcg/m3 and 14.2 mcg/m3. Moreover, the Liberty monitors were out of EPA compliance for particulate matter for only nine days in 2019. Clairton is the next closest monitor to Liberty and measured only 7.9 mcg/m3. This begs the obvious question that if the air quality was so poor in the area, shouldn't the second nearest monitor to the coke plant measure significantly higher pollution levels? Clairton's monitor measures four points below the EPA's particulate matter standard calls the ALA's objectivity into serious question.

Comparing Allegheny County particulate matter measurements from 2009 to 2019 demonstrates the impressive reduction in particulate matter over the past 10 years. In 2009 the average pm2.5 monitor measured 12.32 mcg/m3. Thus, since 2009 there has been a 20 percent decrease of particulate matter in Allegheny County.

The other counties that are part of the Pittsburgh MSA demonstrated continued adherence to the EPA's standards for measuring well below the 12.0 mcg/m3 standard. Armstrong County's monitor measured 7.7 mcg/m3 in 2019. Beaver's two monitors averaged 9.65 mcg/m3 in 2019. Butler County does not have a monitor but the nearest monitor in Allison Park (in north Allegheny County) measured 6.8 mcg/m3 in 2019. Fayette

County's two monitors averaged 7.7 mcg/m3 in 2019. Washington County's five monitors averaged 7.62 mcg/m3 in 2019. Westmoreland County measured 7 mcg/m3 in 2019. Lawrence County (New Castle, Pa.) does not have a monitor. Weirton's two monitors averaged 9.45 mcg/m3 in 2019. Labeling counties with no monitors as having poor air quality is overreach at its worst.

ALA's declaration that the air quality gets a "failing" grade in a region spanning from Pittsburgh's MSA to Weirton, W.Va., to New Castle, Pa., and Ohio is highly dubious considering only the Liberty Borough monitors measured above the EPA's compliance standard in 2019. Why is such a large geographical area being labeled as having poor air quality because of three monitors situated in one location in the region? ALA's assertions are yet again suspect because examination of the data tells a different story.

The facts demonstrate the Pittsburgh MSA, Weirton and New Castle have made significant improvements in ozone levels and decreased particulate matter over the last decade and within the past year. ALA's attempts to malign this success are disingenuous and misleading and ought to stop and should certainly not continue to be used to damage the region's image.

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