



March 28, 2023

The Honorable Michael Regan  
Administrator  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Mail code 1101A Washington, DC 20460  
Submitted via regulations.gov

**RE: Reconsideration of the National Ambient Air Quality Standards for Particulate Matter — EPA-HQ-OAR-2015-0072; FRL-8635-01-OAR**

Dear Administrator Regan:

On behalf of the Asthma and Allergy Foundation of America (AAFA), we appreciate the opportunity to comment on the proposed decision on the National Ambient Air Quality Standards (NAAQS) for Particulate Matter (PM). AAFA, a not-for-profit organization founded in 1953, is the leading patient organization for people with asthma and allergies, and the oldest asthma and allergy patient group in the world. AAFA is dedicated to improving the quality of life for people with asthma and allergic diseases through education, advocacy, support, and research.

We understand that the EPA is reconsidering the agency's December 2020 NAAQS decision because the available scientific evidence and technical information indicate that the current standards may not be adequate to protect public health and welfare, as required by the Clean Air Act. We applaud this reconsideration, but EPA's proposed new standards still fall short of the levels recommended using the best available current science. To adequately protect public health, EPA should select more stringent standards offered by many stakeholders in public comments. Specifically, EPA should finalize the levels at 8 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) for the annual standard and 25  $\mu\text{g}/\text{m}^3$  for the 24-hour standard. Our concerns are detailed below.

**Background: Asthma and Air Quality**

Particulate matter 2.5 micrometers in diameter or smaller, including soot, poses numerous health risks, particularly for children, seniors, and people with chronic



illnesses like asthma. Exposure to this particulate matter can cause worsened asthma and chronic obstructive pulmonary disease (COPD); heart attacks, strokes, heart disease, congestive heart failure; and lung cancer.<sup>1</sup> Increased risk of low birth weight, infant mortality, impaired lung function in children; and shortened lifespans are additional poor health outcomes associated with exposure to this particulate matter.<sup>2</sup> Soot pollution affects millions of people each year. According to the American Lung Association, 63 million Americans each year are exposed to repeated short-term spikes in soot pollution, and more than 20 million Americans suffer dangerous levels of soot pollution on a year-round basis.<sup>3</sup>

The patient population AAFA represents is especially vulnerable to the health harms perpetuated by weak PM standards. Twenty-five million Americans have asthma, including about 5 million children, and over 3,500 people die each year from asthma.<sup>4</sup> Poor air quality and exposure to air pollution are very significant risk factors both for developing asthma and for exacerbating asthma in those who already have a diagnosis. Particle pollution diminishes lung function and causes greater use of asthma medications. It also causes increased rates of emergency room visits, hospital admissions, and school absenteeism related to asthma. Asthma is the most common chronic illness in children and is the number one chronic cause of missed school days.<sup>5</sup>

As noted in the proposed rule, the body of evidence indicates that individuals with pre-existing respiratory diseases, particularly asthma and COPD, may be at increased risk for PM<sub>2.5</sub>-related health effects compared to those without pre-existing respiratory diseases.<sup>6</sup> For asthma, epidemiologic evidence demonstrates

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<sup>1</sup> U.S. EPA, *Integrated Science Assessment (ISA) for Particulate Matter* (Final Report, 2019). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-19/188, 2019. Available at <https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=347534>

<sup>2</sup> U.S. EPA, *Integrated Science Assessment (ISA) for Particulate Matter* (Final Report, 2019). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-19/188, 2019. Available at <https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=347534>

<sup>3</sup> State of the Air 2022, The American Lung Association, April 2022.

<sup>4</sup> Asthma and Allergy foundation of America, Asthma Facts, Found at <https://aafa.org/asthma/asthma-facts/>

<sup>5</sup> Asthma and Allergy Foundation of America, Asthma Facts, Found at <https://aafa.org/asthma/asthma-facts/>

<sup>6</sup> U.S. EPA, 2019a, section 12.3.5



associations between short-term PM<sub>2.5</sub> exposures and respiratory effects, particularly evidence for asthma exacerbation, and controlled human exposure and animal toxicological studies demonstrate biological plausibility for asthma exacerbation with PM<sub>2.5</sub> exposures.<sup>7</sup>

### **The National Ambient Air Quality Standards**

The NAAQS are national limits on key air pollutants. Under the Clean Air Act, EPA is required to review these air pollution standards every 5 years to ensure the standards align with what current science says is needed to protect health. Under the current standards, the levels are 12 µg/m<sup>3</sup> for annual exposure and 35 µg/m<sup>3</sup> for 24-hour exposure. In the current rule, EPA proposes a range of 9-10 µg/m<sup>3</sup> for the annual PM standard and no change to the 24-hour PM standard. However, these proposed standards are not adequate to provide strong health protections.

AAFA strongly urges EPA to select more stringent standards – 8 µg/m<sup>3</sup> for the annual standard and 25 µg/m<sup>3</sup> for the 24-hour standard – as they are clearly supported by scientific evidence.

Addressing annual exposure is crucial to protecting the health of people with asthma as well as to preventing asthma: EPA’s own Regulatory Impact Analysis shows that an annual standard of 9 micrograms per cubic meter would only avoid 5,400 cases of asthma onset, whereas 8 micrograms per cubic meter would avoid 11,000 cases of asthma onset.<sup>8</sup> Meanwhile, the 24-hour standard is what informs the daily Air Quality Index (AQI), the national system that alerts sensitive groups when air quality is dangerous. We encourage our asthma community to check the AQI daily because they may have to change their activities or medicines—things like limiting outdoor air exposure as much as possible or wearing a mask.

It is critical that the daily standard reflect the scientific evidence on unsafe levels for 24-hour exposure, so that people are informed if spikes in air pollution could harm their health.

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<sup>7</sup> U.S. EPA, 2019a, section 12.3.5.1

<sup>8</sup> EPA. (Dec, 2022). [Regulatory Impact Analysis for the Proposed Reconsideration of the National Ambient Air Quality Standards for Particulate Matter](#), EPA-452/P-22-001; page 24 (ES-2)



## Disproportionate Impact on Minority Populations

In the United States, the burden of asthma falls disproportionately on the Black and Hispanic populations, and especially on Black and Hispanic children. These groups have disproportionately high rates of poor asthma outcomes, including hospitalizations and deaths.<sup>9</sup> In fact, Black Americans are three times more likely to die from asthma and five times more likely to be treated in an emergency room for asthma than white Americans.<sup>10</sup>

These are the same populations that confront higher exposure to air pollutants like particulate matter. Communities of color routinely have the highest rates of soot exposure in the country, with deadly consequences. Hispanic individuals are 25% more likely to die of particulate matter exposure than are White residents; Black residents are 300% more likely.<sup>11</sup>

EPA's proposed standards would leave many communities behind. By failing to propose the strictest limits, many people of color will only see modest gains in the reduction of mortality from air pollution. For the Black community, who faces the highest disparity in soot pollution, EPA's proposal will barely begin to address the disparity in soot exposure. A stricter standard will save lives. By setting the annual standard at 8  $\mu\text{g}/\text{m}^3$ , EPA could reduce the Black mortality rate from soot pollution by about 7 times more than it would with a standard at 10  $\mu\text{g}/\text{m}^3$ , the upper boundary of the current proposal.<sup>12</sup>

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<sup>9</sup> Asthma and Allergy Foundation of America, (2020). [Asthma Disparities in America: A Roadmap to Reducing Burden on Racial and Ethnic Minorities]. Retrieved from [aafa.org/asthmadisparities](https://aafa.org/asthmadisparities).

<sup>10</sup> Asthma and Allergy Foundation of America, (2020). [Asthma Disparities in America: A Roadmap to Reducing Burden on Racial and Ethnic Minorities]. Retrieved from [aafa.org/asthmadisparities](https://aafa.org/asthmadisparities)

<sup>11</sup> Christopher W. Tessum et al., *PM<sub>2.5</sub> pollutants disproportionately and systemically affect people of color in the United States*, 28 Apr 2021, Vol 7, Issue 18.

<sup>12</sup> Testimony of Michael Lewis, Environment Texas Research & Policy Center, the Environmental Protection Agency Public Hearing on the Proposed Change to PM 2.5 Standards, February 23, 2023



## Conclusion

AAFA calls on EPA to finalize standards at the levels that the science shows are strong enough to protect health. Stronger standards will reduce cases of asthma onset and prevent thousands of premature deaths each year. We urge the EPA to choose the most protective levels considered— 8  $\mu\text{g}/\text{m}^3$  for the annual standard and 25  $\mu\text{g}/\text{m}^3$  for the 24-hour standard – in the final rule.

EPA must act swiftly and boldly to finalize the strongest possible science-based soot pollution standards that will ensure cleaner and safer air for families, advance environmental justice, and protect our health.

Thank you very much for your time and attention. If you have any questions, please contact me at [kmendez@aafa.org](mailto:kmendez@aafa.org).

Sincerely,

A handwritten signature in black ink that reads 'Kenneth Mendez'. The signature is written in a cursive, flowing style.

Kenneth Mendez  
President and Chief Executive Officer  
Asthma and Allergy Foundation of America