



Statement of
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American Lung Association Board of Directors
Chair, Public Policy Committee
Before the
Committee on Environment and Public Works
United States Senate
The EPA Good Neighbor Rule: Healthier Air for Downwind States
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Introduction

Good morning, my name is Dr. David Hill, and I am a practicing pulmonary and critical care physician in Waterbury, Connecticut. I serve as a Clinical Assistant Professor of Medicine, Yale University School of Medicine and Frank Netter College of Medicine at Quinnipiac University.

I speak today in my role as a member of the Board of Directors for the American Lung Association and chair of its Public Policy Committee. I have been a volunteer with the American Lung Association for three decades working to save lives by improving lung health in my community, the state of Connecticut and nationally.

In my clinical practice, I see adults and children as young as 6 years old with severe lung diseases including asthma and chronic obstructive pulmonary disease. I am also an attending physician at Waterbury Hospital and St Mary's Hospital in Waterbury.

Personally, I have exercise induced asthma, as do my two adult children. We have difficulty breathing on hot, humid days when the air quality is poor. This leads us to stay indoors and avoid pursuing activities we enjoy.

Connecticut and Air Pollution

Each April the American Lung Association releases its annual "State of the Air" report. In our 2022 report, we document that in the years 2018, 2019 and 2020, more than 122.3 million people lived in the 156 counties that earned an F grade for ozone, including four of Connecticut's eight counties. My home county of New Haven and our neighboring counties of Middlesex and New London earned failing grades for ozone. Our neighbor to the southwest, Fairfield County, is the most polluted county in Connecticut and in the entire New York Metro area. In fact, Fairfield County has the dirtiest air for ozone pollution in the eastern United States.

My patients ask me, why is the air so polluted in Connecticut?

We don't have oil refineries or other large petrochemical plants or coal fired-power plants that are the more visible sources of air pollution. We certainly have a huge burden of emissions from the tailpipes of cars and trucks on our roads. But I tell my patients that the biggest challenge for Connecticut is our location. We live at the end of another tailpipe - the one that brings pollution from upwind states to our state. Controlling or eliminating the sources of pollution in Connecticut alone isn't enough to ensure our air is clean and healthy to breathe. We need all the sources in all the upwind states that contribute to our unhealthy air to clean up their emissions.

Our most persistent air pollutant is ozone.

Ozone is a powerful lung irritant; some have likened ozone exposure to a sunburn on the lungs. When inhaled, it causes inflammation and can damage multiple body systems. Ozone exposure can also shorten lives. Short-term exposure causes breathing problems such as chest tightness, coughing, shortness of breath and worsened symptoms for people with asthma and COPD.¹ Long-term exposure may cause lasting harm to respiratory health. Ozone exposure also increases the risk of metabolic disorders like diabetes;² harm to the central nervous system;^{3,4} reproductive and developmental harm, including preterm birth and stillbirth;^{5,6} possible cardiovascular effects;⁷ and premature death.⁸

We also know that there are health harms of ozone exposure even at levels below the current EPA standard. For example, studies show decreased lung function and increased inflammation in the airways of adults at levels well below the standard.^{9,10,11} Research has consistently shown over time that ozone is more dangerous at lower levels than previously understood.

Part of the reason Connecticut and many other states have a problem with transported ozone is that ozone is not directly emitted from polluting sources. Instead, it forms when other emissions, including volatile organic compounds and nitrogen oxides, react in the atmosphere. This can result in ozone formation hundreds of miles from the source of the precursor pollutants.

What's more, nitrogen oxides (NOx) are powerful air pollutants on their own. And in addition to being precursors to ozone, they can also react to form numerous other pollutants, all of which have additive detrimental impacts on human health and the environment.

We also know that air pollution disproportionately affects people of color and socially disadvantaged communities. One study found that non-Hispanic Blacks, as the paper characterized the group, were more likely to live in counties with worse ozone pollution among

¹ U.S. EPA. (2020, Apr). [Integrated Science Assessment for Ozone and Related Photochemical Oxidants](#). EPA/600/R-20/012. Section 3.1.4.1.

² U.S. EPA. (2020, Apr). [ISA](#). Section 3.2.4.6.

³ U.S. EPA. (2020, Apr). [ISA](#). Section 5.1.3.

⁴ U.S. EPA. (2020, Apr). [ISA](#). Sections 7.2.1 and 7.2.2.

⁵ Gao Q, Zang E, Bi J, Dubrow R, Lowe SR, Chen H, Zeng Y, Shi L, Chen K. Long-term ozone exposure and cognitive impairment among Chinese older adults: A cohort study. *J Env Int*. 2022; 160:107072.

⁶ U.S. EPA. (2020, Apr). [ISA](#). Section 7.1.3.

⁷ Mendola P, Ha S, Pollack AZ, Zhu Y, Seeni I, Kim SS, Sherman S, & Liu D. (2017). Chronic and acute ozone exposure in the week prior to delivery is associated with risk of stillbirth. *Int J Environ Res Pub Health*. 14:731.

⁸ U.S. EPA. (2020, Apr). [ISA](#). Sections 4.1 and 4.2.

⁹ Adams, W. C. (2006). [Comparison of chamber 6.6-h exposures to 0.04–0.08 ppm ozone via square-wave and triangular profiles on pulmonary responses](#). *Inhalation Toxicology*, 18(2):127–136.

¹⁰ Brown, J. S., Bateson, T. F., & McDonnell, W. F. (2008). [Effects of exposure to 0.06 ppm ozone on FEV1 in humans: a secondary analysis of existing data](#). *Environmental health perspectives*, 116(8), 1023–1026.

¹¹ Kim, C. S. et al. (2011). [Lung Function and Inflammatory Responses in Healthy Young Adults Exposed to 0.06 ppm Ozone for 6.6 Hours](#). *American Journal of Respiratory and Critical Care Medicine*, 183(9).

all communities monitored for the pollutant.¹² Our “State of the Air” report grades counties on ozone and daily and annual particulate matter pollution. We show in the 2022 report that people of color were 61% more likely than white people to live in a county with a failing grade for at least one pollutant. In my home county – New Haven County – and our most polluted neighbor Fairfield County, 40% of the residents are people of color. Ozone pollution isn’t just a health issue, it’s also a driver of health disparities.

We also know that climate change is making ozone pollution worse in much of the country. As I mentioned, ozone forms when other emissions react in the atmosphere in the presence of heat and sunlight. Generally speaking, higher temperatures mean a higher likelihood of unhealthy levels of ozone. That’s why ozone pollution is most often worse in the summer, and why climate change is leading to higher ozone levels as temperatures rise.¹³

My Patients

On days with high ozone levels, some of my patients may need to take more medication, including quick relief medication such as inhalers, when they feel an asthma attack starting and they are struggling to breathe. On days with high ozone, my office phone starts to ring and our waiting room fills up with patients. People miss work or school. Parents stay home to care for sick children. Much of the year our patients complain of difficulty breathing on bad air quality days. When I am working in the critical care unit, I am treating the most severe cases of life-threatening asthma or COPD when ozone levels are high.

The high levels of ozone in Connecticut have an adverse impact on my patients. One of my patients, Sandra, a lung cancer survivor, suffers from Chronic Obstructive Pulmonary Disease, or COPD. The impacts of climate change increasing heat in the summer and the ozone pollution has made her a prisoner in her home. Last summer, she said, “The only time I would go out would be to go to a doctor. Other than that, I stayed inside because I couldn’t breathe.” On smoggy days we see far too many patients like Sandra.

Last week, I met with a new patient. He is a 56 year old marathon runner with allergic rhinitis and new mild asthma. He moved from Northern Vermont to Connecticut. He noted that since moving to Connecticut, he is more short of breath during exercise despite running on much flatter ground. His symptoms worsen in hot humid weather and he attributes it to the noticeably worse local air quality. As a former middle school science teacher, he started monitoring air quality himself so he could better manage his symptoms.

I want my family and my patients to be able to enjoy breathing outdoors without difficulty, because when you can’t breathe, nothing else matters.

A Strong Good Neighbor Rule

The American Lung Association strongly supports the Clean Air Act and the important tools it provides to reduce air pollution. As we have tracked in our “State of the Air” report, the nation is

¹² Miranda ML, Edwards SE, Keating MH, Paul CJ. [Making the environmental justice grade: The relative burden of air pollution exposure in the United States](#). Int J Environ Res Public Health. 2011; 8: 1755-1771.

¹³ U.S. Global Change Research Program (2018). [Fourth National Climate Assessment](#). Chapter 13.

making progress in reducing air pollution. But we know that climate change is making air pollution worse. The higher temperatures lead to more ozone formation. And more ozone means my patients suffer.

People in my state, and my patients in particular, are important beneficiaries of EPA's new Good Neighbor rule.

As a lung physician, not a clean air attorney, I was frustrated to learn that not all power plants and large industrial polluters are required to have effective nitrogen oxide controls. I was surprised to learn that power plants don't always run their existing air pollution controls. It doesn't make sense to have lifesaving, effective pollution controls installed and simply turn them off. I was furious when I learned that this could occur even on the hottest and smoggiest days of the year. I was outraged that this behavior is legal. Under the old rules, these plants can still comply with their air pollution permits while not operating their controls.

I am glad that the EPA's Good Neighbor rule is going to require the installation of pollution controls and require the polluting facilities to run these controls. EPA's analysis estimates that this will reduce ozone-forming nitrogen oxide emissions from the 23 upwind states by approximately 70,000 tons during the 2026 ozone season. According to EPA, 25,000 tons will come from reduced nitrogen oxide emissions from fossil fuel-fired power plants. The EPA analysis shows that controls on the industrial sources will result in 45,000 tons of reduced nitrogen oxide emissions. In addition to the nitrogen oxide emission reductions, the Good Neighbor rule yields important reductions of sulfur dioxide emissions as well as fine particle emissions and annual carbon dioxide emissions. This is not just good news for people who live in downwind states but also for everyone who lives near these facilities.

As I mentioned above, ozone pollution takes a human toll. This Good Neighbor rule helps reduce the health burden of ozone exposure. EPA projects in 2026 that the Good Neighbor rule will

- prevent 1,300 premature deaths,
- avoid more than 2,300 hospital and emergency room visits, and
- cut asthma exacerbations by 1.3 million cases.

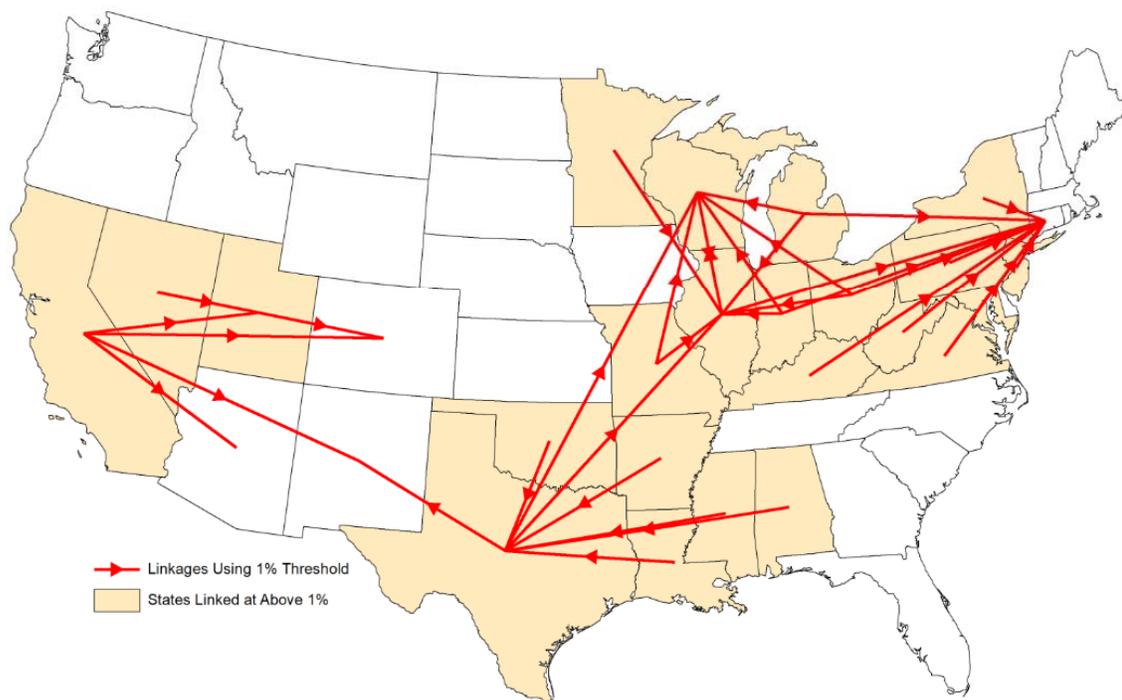
It will also improve productivity by

- avoiding 430,000 school absence days, and
- avoiding 25,000 lost work days.

This is good news for everyone who lives downwind from the 23 states who will become better neighbors. It is good news for the health of my patients, people across Connecticut, and people who live both near polluting facilities and downwind. I look forward to EPA implementing and enforcing the rule on time to make these much-needed health benefits a reality.

Thank you.

Interstate Pollution Linkages Under the Good Neighbor Plan



Note: Linkages are shown to and from the center of states.

Source US EPA <https://www.epa.gov/csapr/good-neighbor-plan-2015-ozone-naaqs>