

Testimony Supporting SB0780 and SB0781

Senate Environment and Transportation Committee

March 3, 2026

Position: SUPPORT

Dear Chair and Members of the Committee,

Thank you for the opportunity to provide testimony in support of SB0780 and SB0781, the CHERISH our Communities Acts.

As a public health scientist and educator, and a Professor and Chair of the Department of Environmental Health and Engineering in the Johns Hopkins Bloomberg School of Public Health and Director of the NIH funded CHARMED Community Health Center, I am writing in strong support of xxx. I have doctoral training in human physiology with a particular focus on respiratory immunology and environmental health. I have worked in the field of environmental health for 30 years focusing on understanding the health impact of a range of pollutants from industrial activity on vulnerable individuals (pregnant women, children) and disadvantaged communities.

Health Impacts of Environmental Pollutant Exposures

It has long been known that exposure to a range of airborne pollutants (PM2.5-PM10, CO, sulfur dioxide, nitrogen dioxide, black carbon) from a variety of sources (polluting factories, fossil fuel shipment facilities, trash incinerators, landfills, and polluting factories) contributes to loss of life, long-term health problems, and years of diminished quality of life and productivity.

A prime example is that exposure to particulate matter pollution (PM2.5) is strongly linked to all-cause mortality as well as specific diseases including stroke, heart disease, chronic obstructive pulmonary disease, asthma, lung cancer, and pneumonia. The life expectancy in Maryland for all causes is lower in Baltimore than other parts of the State. Moreover, the life expectancy of Black men and women in MD are lower than their white counterparts (MD Life expectancy, 78.5 white, 74.3 black).

In 2021 in Baltimore alone, the Maryland Department of Health found that asthma rates in Baltimore City are not only higher than the national average, but disproportionately affect children, African Americans, and low-income residents. A staggering 18.6% of children in Baltimore suffer from asthma, compared to just 5-8% nationally. Adults in the city also suffer at higher rates, with 13.7% of the population living with asthma—well above both state and national averages. More troubling still, emergency room visits for asthma-related conditions in Baltimore are the highest in the state, with African Americans experiencing asthma-related hospitalizations and mortality rates far higher than their white counterparts.

Additionally, my colleagues and I have found that exposure of pregnant women to even low levels of air pollution (PM2.5) during pregnancy is associated with inflammation of the placenta and a dose-related increased risk of preterm birth (PTB) and low birth weight (Nachman et al., 2016; MD, 6.7 White, 12.8 black).

Prematurity is the leading cause of death in children under 5 years old (infant mortality, 6.1% in MD compared to 5.4% in US, with 9.8% in non-Hispanic blacks). Surviving infants are at greater risk of developing hypertension, obesity, diabetes, and stroke later in life (Mao et al., 2017). These children also often experience neurodevelopmental challenges (Saigal and Doyle, 2008) including Attention Deficit Hyperactivity Disorder (ADHD) (Ahmed, 2024; Forns J, 2018) and autism (MD rates-7% in PTB compared to 1.5% in general population).

Cumulative Impacts

The science behind cumulative impacts shows that the health effects of these pollutants don't simply add up—they interact in complex ways, worsening outcomes over time. We observed that urban Baltimore ambient air contains a wide variety of harmful chemicals [PM2.5, polyaromatic hydrocarbons, and heavy metals (lead, mercury, cadmium)] (Walters et al., 2001) each of which have been individually associated with adverse health outcomes including neurodevelopmental impairment and respiratory disease (Agency for Toxic Substances and Disease Registry; Yang et al, 2024; Zhi, et al., 2025). An illustration of the cumulative burdens of toxic exposure in a community is the report by Hsieh et al (2024) that the increased density of gas stations (benzene) in a neighborhood is associated with increased cancer risks because of cumulative emissions from the individual gas stations. This data highlights the need to take cumulative impacts into consideration when making decisions regarding expansion or development of new pollutant sources in an overburdened community.

Economics Costs of Pollutant Exposures

Addressing the cumulative impacts of pollution is not just a matter of science—it's a matter of economic justice. The costs of unchecked pollution are staggering. In Baltimore, asthma alone results in thousands of emergency room visits every year, with the burden falling disproportionately on the public healthcare system.

In 2019 alone, an estimated \$23 million in emergency room costs were associated with asthma treatment, with nearly 71% of those costs covered by public funds. Added to these figures, are the high health care costs for treatment of PTB-associated comorbidities (estimated at \$5.09 billion in 2016) and the loss of economic productivity due to PTB-associated reductions in cognitive potential (11.9 IQ point decrements on average) (Trasande and Liu, 2011). These costs represent only a fraction of the broader economic impact of environmental pollution on healthcare, lost productivity, and education.

In 1999, the EPA estimated that from 1990-2010, the Clean Air Act prevented over 230,000 premature deaths which were primarily associated with reductions in ambient particulate matter. They estimated that the benefits of the Clean Air Act exceeded the costs by a factor of more than **30 to one**. Given the high costs of pollution-related health costs in MD, the benefits of the CHERISH Act will most certainly outweigh the estimated cost of its implementation in addition to saving lives and increasing the productivity of Marylanders.

Environmental Justice Concerns

This cumulative impact of environmental stressors is a critical factor in public health, especially for communities already burdened by systemic inequality. From the Maryland EJ Screening tool we know that people in many Maryland communities are faced with more than their fair share of chemical stressors as well as challenging health disparities, social and economic circumstances.

According to the U.S. Environmental Protection Agency (EPA) communities of color are exposed to higher-than-average levels of toxic air pollution. In fact, MDE reports that there are 70 regulated pollutant sources in the Curtis Bay area alone. These cumulative exposures over the lifespan of residents result in higher rates a variety of chronic health conditions that place an enormous burden on both individuals and the healthcare system.

Conclusion

It is crucial that we adopt policies that recognize the full complexity of environmental harm. To truly address the health disparities exacerbated by pollution, we must consider how multiple environmental stressors affect communities when approving permits. Only by taking a comprehensive approach to understanding and mitigating cumulative impacts can we protect public health and ensure a healthier future for all.

I respectfully submit that the CHERISH Act's requirement for an Existing Burden Report provides decision makers with a more complete understanding of this critical context so risk management decisions can be made that protect health in all communities.

I support SB0780 and SB0781

- **to ensure that permit decisions are made with a full understanding of the health impacts on affected communities.**
- **I look forward to working with community members and state and local decision makers to implement practical cumulative risk and impact assessment approaches for Maryland.**

References

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