



**Testimony Supporting SB 781
Senate Education, Energy, and the Environment Committee
Written Testimony**

Position: SUPPORT

The views expressed here are our own and do not necessarily reflect the policies or positions of Johns Hopkins University/Johns Hopkins Health System.

Dear Chair Feldman and Members of the Committee,

Thank you for the opportunity to provide testimony in support of SB 781, Cumulative Harms for Environmental Restoration for Improving our Shared Health – CHERISH Our Communities Act. As experts in cumulative risk assessment, community environmental health, and food systems policy, we are writing to express our strong support of SB 781, the CHERISH Our Communities Act.

For 29 years, the Johns Hopkins Risk Sciences and Public Policy Institute (RSPPI) has worked to apply human health risk assessment methods to develop policies that reduce the health impacts of chemical exposures. Our research and practice in the fields of exposure science, chemical risk assessment, risk policy and management have supported scientific assessments and policy making on a wide variety of environment and health issues. Through this work we have developed expertise in health risks of arsenic and other metals that leach from coal combustion waste (fly ash) disposal, use of antibiotics, biosolids and pesticides in food production, tobacco regulation, urban agriculture, and exposures to air toxics including benzene and other organic solvents. The Johns Hopkins Center for a Livable Future (CLF) has been studying the complex relationships among agriculture, the environment, and health since our founding in 1996. CLF has done extensive research on the public health implications of industrial food animal production, including the public health concerns of living proximate to animal feeding operations and the planetary health implications of food production and consumption.

Main points covered in our comment letter are: 1) why policy action to reduce cumulative exposure is needed; 2) the health impacts and risks that result from cumulative exposures; and 3) the readily available methods we have to prepare Burden Reports.

1) An everyday reality: Cumulative exposures and impacts

Most people do not realize that everyday activities—e.g., getting to work, the food we eat and products we use—expose us to complex mixtures of environmental chemicals and other non-chemical stressors (e.g., low income, nutritional status, psychosocial stress). We can do some things on our own to reduce these exposures, but broader action and policy changes are also needed to protect public health. Each person's ability to respond to these stressors depends on their own health status and their ability to access other resources such as health care within their community. For example, good nutrition reduces the amount of lead (Pb) people absorb from environmental sources. 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. Exposure to confined animal feed operations (CAFOs) is another example of an environmental exposure that disproportionately impacts low-income communities and communities of color in Maryland. The negative health and environmental impacts associated with CAFOs can become concentrated in these communities due to limited economic and political resources, making it even more important that the risks faced by these communities are considered in our policy. The CHERISH Act's requirement for a 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.

2) Examples of cumulative risk and impact

Research at the individual, community and state levels finds chemical mixtures and combined exposures of chemical and non-chemical stressors to be associated with outcomes such as mortality, increased cancer risk and child neurodevelopment. Researchers at RSPPI developed a method to pair a cumulative risk assessment with community health finding that exposures to large mixtures of toxic air pollutants (>100 chemicals) were associated with increased mortality at the neighborhood level in Philadelphia. In Maryland, research showed that cancer risks estimated from exposures to mixtures of air toxics were higher in communities of color and low socio-economic position. Research has shown that people can have different responses to certain exposures depending on health status or wealth measured as socio-economic status. For example, an analysis of data from the National Health and Nutrition Examination Survey found that women of reproductive age who had prior Hepatitis B infection were more likely to have higher levels of mercury in their blood, which would put their infants at greater risk of developmental delays. Other research found that people with different socio-economic status had differing amounts of IQ loss due to lead (Pb) exposure from air, with those of lower socio-economic status having greater IQ loss. Studies of air and other pollutant exposures in combination with race, ethnicity, or stress show increased risks of adverse birth and neurodevelopmental outcomes. Concentrated Animal Feeding Operations (CAFOs), which emit air pollutants, odors and gases, and biological agents, are another potential source of cumulative risk. CLF researchers authored a study focused on the cumulative effects of living near multiple, large poultry CAFOs, and found that living in closer proximity to these facilities was associated with increased risk of community acquired pneumonia.

3) Employ readily available methods for Burden Reports

Creating a Burden Report can draw upon a strong foundation of well-recognized methods in a community-engaged approach. Methods such as health impact assessment and chemical mixtures risk assessment can provide the necessary context on health, social factors and the

chemical exposures affecting community residents. The US EPA has applied health impact assessment to promote “sustainable and healthy communities.” The Maryland Department of Health offers a Health Impact Assessment Toolkit including the ability to “... map Maryland health, environmental, and social economic data at the county, ZIP code, and census tract level.” Data on environmental exposures can be evaluated with mixtures and cumulative risk assessment methods that have been available for many years. These same cumulative risk assessment methods are being used as part of New Jersey’s Environmental Justice Law implementation. Leveraging these approaches to incorporate consideration of cumulative harms in environmental permitting decisions would be an important step forward for public health to reduce cumulative exposures and prevent harm in Maryland’s communities.

We support SB 781 to ensure that permit decisions are made with a full understanding of the health impacts on affected communities.

We look forward to working with community members and state and local decision makers to develop and implement practical cumulative risk and impact assessment approaches for Maryland. Please reach out to Patti Truant Anderson at ptruant1@jhu.edu for any additional information or references.

Sincerely,

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