

**State of California  
Air Resources Board  
Board Item Summary**

**Item # 23-5-1: Public Meeting to Consider Proposed Research Contract with the University of California, Berkeley, Titled "Impacts of Air Pollution on Life Expectancy across Multiple Generations: Race, Ethnicity and Vulnerability Perspectives"**

**Staff Recommendation:**

The California Air Resources Board (CARB or Board) staff recommends that the Board approve funding of the proposed research contract with the University of California, Berkeley titled "Impacts of Air Pollution Exposure on Life Expectancy Across Multiple Generations: Race, Ethnicity and Vulnerability Perspectives." The execution of this contract will support CARB's work to identify air pollution health impacts and exposure disparities in vulnerable communities to support development and implementation of its regulations, strategies, and programs. This item is added to the agenda to satisfy Board approval requirements in Government Code section 1091 because Dr. Balmes is affiliated with the UC Berkeley department involved in the contract.

**Discussion:**

Although state regulatory efforts have reduced air pollution to meet state and federal health-based standards and improved the health of Californians, pollution reductions have not been experienced equally in all communities. The objective of this study is to understand the patterns of fine particulate matter (PM<sub>2.5</sub>) exposure and its impact on life expectancy over 30 years (1990-2020) within two generations, in different racial/ethnic and vulnerability groups, and within census tracts in California. This contract will evaluate which communities continue to experience high levels of pollution and negative health impacts over time and across generations, looking at all communities but also specifically in vulnerable communities and communities of color. The study will identify these communities by investigating impacts of PM<sub>2.5</sub> on life expectancy using Medi-Cal data. The census tract level disparities in PM<sub>2.5</sub> exposure and life expectancy loss from PM<sub>2.5</sub> will be mapped for the entire state in an online and publicly accessible format. University of California, Berkeley researchers will collaborate with the Regional Asthma Management & Prevention program to conduct community outreach to solicit feedback on the project and maps, and to share the final research results. This research will support CARB's regulations, strategies, and programs to better protect vulnerable communities by understanding which census tracts and groups in California have the highest magnitude and persistence of PM<sub>2.5</sub> exposure and PM<sub>2.5</sub> specific impacts to life expectancy over two generations.

**Summary and Impacts:**

The information gained through this contract will support CARB's ability to evaluate the effects of its policies and programs, including a wide range of public health benefits. It will also support the Board's decision-making and effective program implementation to help protect the health of vulnerable communities heavily impacted by pollution exposures. \$500,000 is requested to fund this contract. Approval by the Board will authorize staff to put this contract in place to undertake the activities described.