

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

Item # 21-1-5: Public Meeting to Consider Proposed Research Contract with the University of California, Berkeley, Titled "Impacts of Train and Port Pollution and Air Toxics on Respiratory Symptoms and Emergency Department Visits within Vulnerable Communities in Southern California"

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 "Impact of Train and Port Pollution and Air Toxics on Respiratory Symptoms and ED Visits within Vulnerable Communities in Southern California." The information provided by this contract will support CARB's air quality, environmental justice, and climate programs and provide essential new data for health assessments of rules and regulations.

Discussion:

In this proposed new contract, the University of California, Berkeley will study the respiratory health impacts of oxides of nitrogen (NOx) and fine particulate matter (PM2.5) emissions from locomotive and port craft operations as well as air toxics from local and mobile sources within the vulnerable communities in Southern California. The impact of air pollution on medication use and emergency department visits and sources of impacts within these communities will be identified. This study will help CARB quantify the health impact of criteria pollutants and air toxics and identify sources of impact in the vulnerable and impacted communities. The study will provide the information needed to include respiratory disease exacerbations as a new endpoint for CARB's health analysis in regulatory processes.

While the Goods Movement industry is important to California's economy, the distribution of goods from their entry ports to the rest of the United States involves diesel-powered vehicles and equipment and can create significant exposures and health impacts in the vulnerable communities along the distribution routes. The adjacent Los Angeles and Long Beach Port complex are the two busiest container ports in the United States, moving more than \$260 billion in goods a year. The vulnerable communities near the ports suffer from exposure from not only criteria pollutants like NOx and PM2.5, but also air toxics from mobile and rail sources. Further, local and regional sources of air toxics from industry processing create disproportionately higher exposures in these vulnerable communities.

Summary and Impacts:

This research contract will support CARB's regulations and policies to reduce emissions from Rail and Port operations from goods movement that particularly impact environmental justice communities and will promote health equity in research. The information that will be gained through this contract will support the Board's decision-making and effective program implementation to help protect the health of vulnerable communities heavily impacted by pollution exposures. Approximately \$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 in this proposal.