



The goal of the West Coast Collaborative is to leverage federal funds to strategically reduce emissions from the most polluting diesel sources in impacted communities. The Collaborative seeks to improve air quality and public health by targeting the highest polluting engines with the most cost effective control strategies.

## DERA 2017: School Bus Replacements in Arizona

The West Coast Collaborative (WCC) is pleased to announce the Maricopa County Air Quality Department's (MCAQD's) completion of a United States Environmental Protection Agency (US EPA) Diesel Emissions Reduction Act (DERA) State Program grant to replace heavy-duty diesel school buses in Arizona. This project was implemented using \$372,072 in DERA grant funding combined with \$248,048 in matching funds from the Arizona Department of Environmental Quality (ADEQ), and \$1,589,903 in cost-share funds from participating fleets.

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### What is the Project?

This project replaced 13 legacy diesel school buses with new vehicles powered by model year 2019 diesel engines. The older, replaced vehicles were removed from service and permanently destroyed.

### Why is this project important?

This project's primary objective is to improve the environmental health by partnering with public fleet operators to replace high-emitting, legacy heavy-duty diesel vehicles with modern clean diesel technology. Exposure to diesel exhaust has been associated with decreased lung function and retarded lung development and can also exacerbate the symptoms of asthma, bronchitis and pneumonia. This project will reduce human exposure to diesel emissions as well as the negative health effects associated with exposure. Expected unquantifiable benefits of the project include increased awareness of the need to improve air quality, particularly among Arizona residents and others concerned with health and welfare.

### What are the Environmental Benefits?

Over the remaining lifetime of the 13 affected engines, these upgrades are estimated to reduce emissions of fine particulate matter (PM<sub>2.5</sub>) by 0.4 tons, oxides of nitrogen (NO<sub>x</sub>) by 5.5 tons, hydrocarbons (HC) by 1 ton, carbon monoxide (CO) by 2.4 tons, and carbon dioxide (CO<sub>2</sub>) by 140 tons. Additionally, the reduction of PM<sub>2.5</sub> emissions will also reduce black carbon (BC), which influences climate by directly absorbing light, reducing the reflectivity ("albedo") of snow and ice through deposition, and interacting with clouds. The project will also conserve over 12,000 gallons of diesel fuel.

### Who are the Partners on this project?

The project was led by MCAQD, a local agency whose mission is to provide clean air to Maricopa County residents and visitors, in partnership with ADEQ and participating fleets. MCAQD received the DERA grant award through the WCC, and distributed the grant funds to participating fleet operators: Agua Fria Union High School District, Cartwright School District, and Deer Valley Unified School District. MCAQD was responsible for data monitoring and reporting for the project.

### What is the Collaborative?

The WCC is an ambitious partnership between leaders from federal, state, local, and tribal government, the private sector, academia, and environmental groups committed to reducing diesel emissions along the West Coast. Partners come from all over Western North America, including: Alaska, Arizona, California, Hawaii, Idaho, Nevada, Oregon, Washington, Canada, Mexico and the Pacific Islands. The WCC is facilitated by the US EPA DERA Program.

<https://www.epa.gov/dera>

### How can I find out more information?

For more information on this project, please contact John Mikulin at US EPA ([mikulin.john@epa.gov](mailto:mikulin.john@epa.gov) / 415-972-3956). For more information on the WCC, please visit our website. [www.westcoastcollaborative.org](http://www.westcoastcollaborative.org)