



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 2018: School Bus & Short-Haul Truck 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 legacy heavy-duty diesel school buses and short-haul trucks in Arizona. This project was implemented using \$414,882 in DERA grant funding combined with \$276,588 in matching funds from the Arizona Department of Environmental Quality (ADEQ), and \$1,790,817 in cost-share funds from participating fleets.

### What is the Project?

This project replaced 16 legacy heavy-duty diesel vehicles with: 10 model year 2020 propane (LPG) school buses, 4 model year 2020 diesel school buses, and 2 model year 2019 Class 7 diesel short-haul trucks. 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 school bus and trucking fleet operators to replace high-emitting, legacy heavy-duty diesel vehicles with modern clean diesel and alternative fuel technologies. 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 16 affected engines, these upgrades are estimated to reduce emissions of fine particulate matter (PM2.5) by 0.7 ton, oxides of nitrogen (NOx) by 8.9 tons, hydrocarbons (HC) by 1.3 tons, carbon monoxide (CO) by 4.7 tons, and carbon dioxide (CO<sub>2</sub>) by 169 tons. Additionally, the reduction of PM2.5 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 72,000 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: Deer Valley Unified School District, Turbine Alloys, Yuma Elementary School District, and Yuma Union High School District. MCAQD will be 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)