



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: Public Works Vehicle Replacements and Retrofits in Phoenix, Arizona

The West Coast Collaborative (WCC) is pleased to announce the City of Phoenix's completion of a United States Environmental Protection Agency (US EPA) Diesel Emissions Reduction Act (DERA) grant to replace and retrofit municipal public works vehicles in Phoenix, Arizona. This project was implemented using \$692,252 in DERA grant funding combined with \$2,009,663 in cost share funds from the City of Phoenix.

What is the Project?

This project replaced 17 model year 1995-2006 heavy-duty diesel public works vehicles with new vehicles powered by model year 2019 and newer diesel engines. The project also installed diesel oxidation catalyst (DOC) exhaust retrofit devices on 10 model year 2005-2006 heavy-duty diesel fire pumps.

Why is this project important?

This project's primary objective was to improve the environmental health by partnering with public fleet operators to replace and retrofit high-emitting, legacy heavy-duty diesel municipal 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 27 affected engines, these upgrades are estimated to reduce emissions of fine particulate matter (PM2.5) by 0.5 tons, oxides of nitrogen (NOx) by 9.2 tons, hydrocarbons (HC) by 0.7 tons, carbon monoxide (CO) by 2.6 tons, and carbon dioxide (CO₂) by 72 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 also conserved over 6400 gallons of diesel fuel using more fuel-efficient diesel powertrain technology.

Who are the Partners on this project?

The project was led by the City of Phoenix Office of Environmental Programs (Phoenix OEP), which advances environmental protection and sustainability through leadership, education, and policy/program development in Phoenix, Arizona. Phoenix OEP received the DERA grant award through the WCC and distributed the grant funds to participating city fleet operators (i.e., Phoenix Public Works, Streets, and Water Departments). Phoenix OEP 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, 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, the Pacific Islands, Canada and Mexico. The WCC is part of the US EPA National Clean Diesel Campaign (<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 / 415-972-3956). For more information on the WCC, please visit our website. www.westcoastcollaborative.org