



DIESEL EMISSION REDUCTION ACT (DERA) MINING EQUIPMENT RETROFIT SALT RIVER PIMA MARICOPA INDIAN COMMUNITY

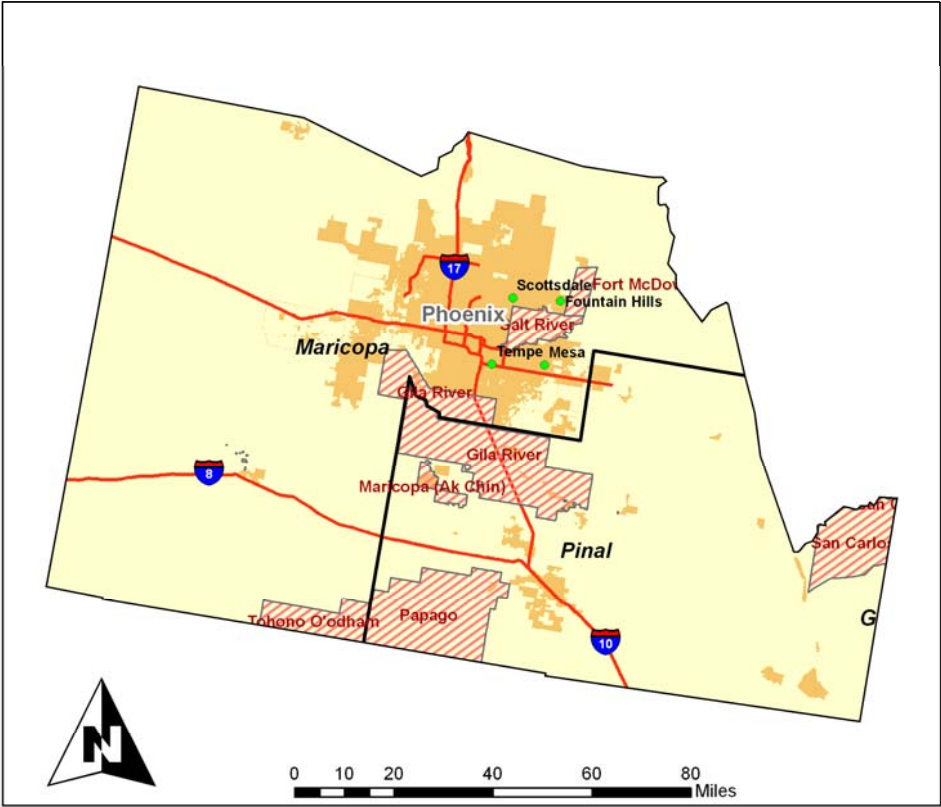
Community Development Department (CDD)
Environmental Protection & Natural Resources (EPNR)

Diesel Emission Reduction Workshop – February 18, 2016
Phoenix, AZ

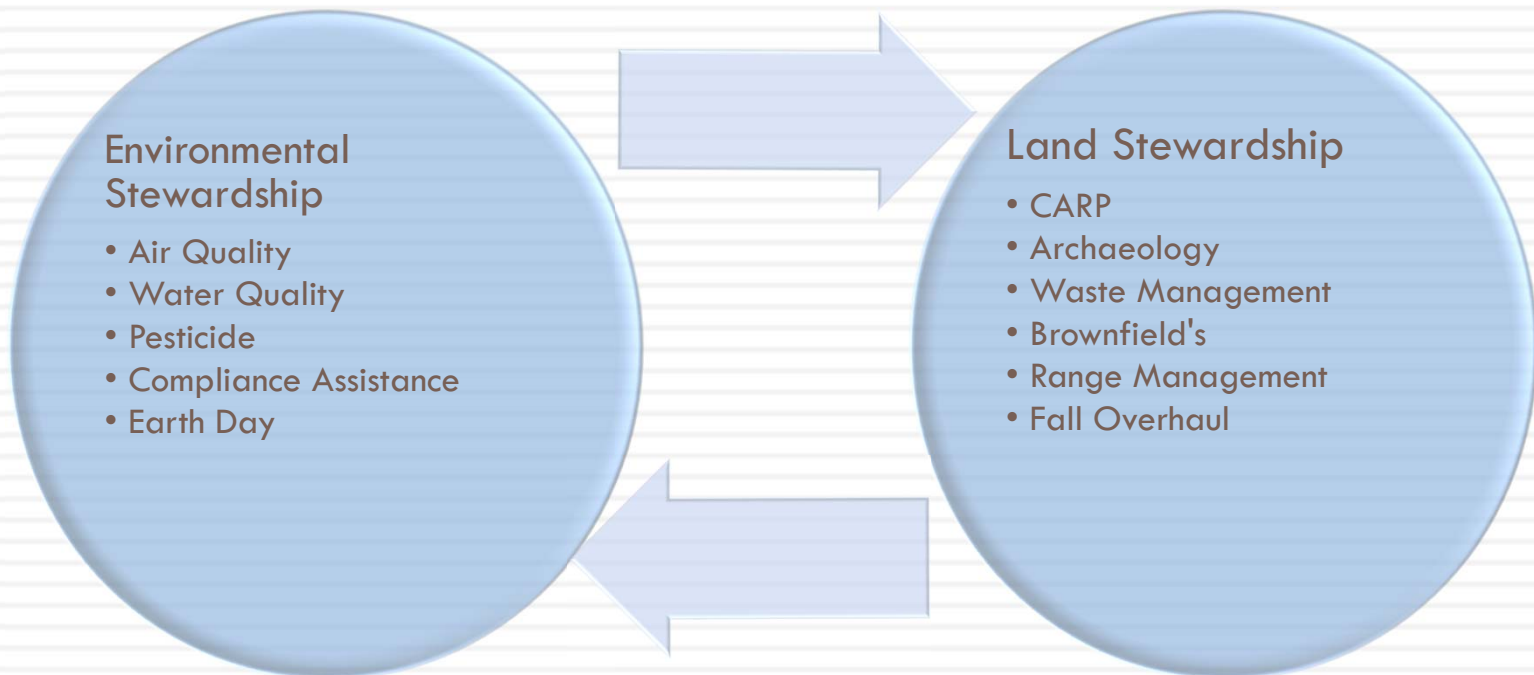
Salt River Pima Maricopa Indian Community

Legend

- Tribal Land Boundary
- Urban Area



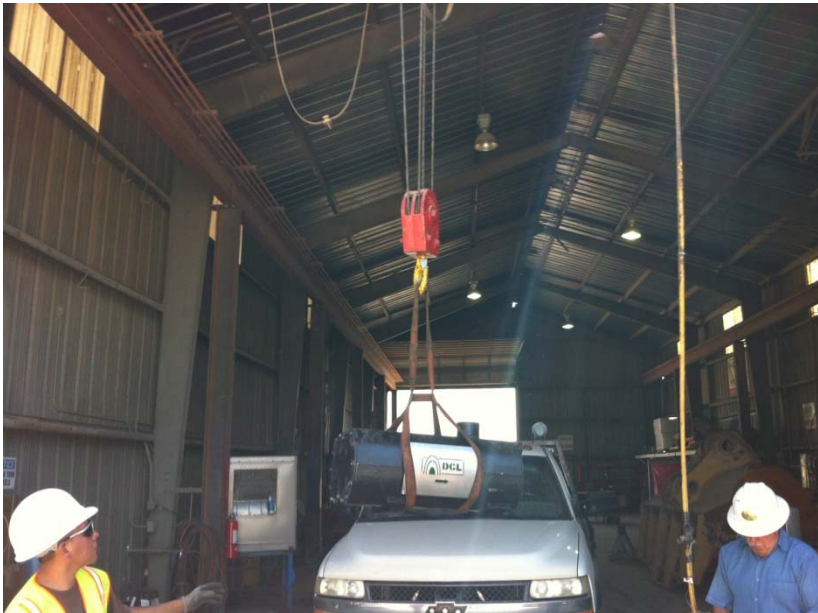
Environmental Protection & Natural Resources Division



SRPMIC Project

- ❑ Accomplished through National Clean Diesel Funding Assistance Program in 2012
- ❑ Retrofit 7 diesel-powered mining loaders to reduce air pollution (e.g., fine particulate matter-PM_{2.5}, hydrocarbon-HC and carbon monoxide-CO emissions) within a Particulate Matter (PM₁₀) NAAQS non-attainment area (i.e., Maricopa County, Arizona).

Retrofit Installations



Retrofit Installations

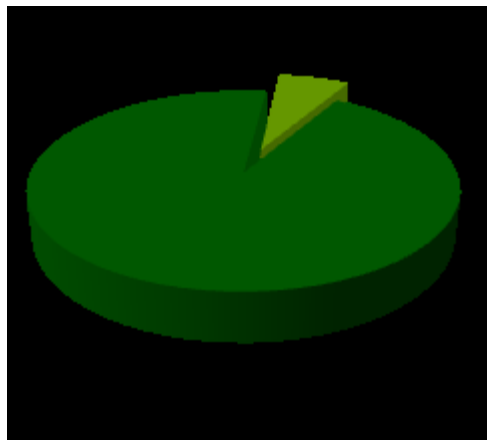


Mining Equipment Retrofit Project

- Retrofit 7 pieces of heavy-duty diesel mining equipment owned and operated by the Salt Rivers Materials Group with diesel particulate filters (DPFs)

□ Funding Sources:

EPA	\$150,000
SRPMIC	\$10,379
SRMG	\$2,110



Greatest Impact: Maricopa County



WEST COAST COLLABORATIVE
A public-private partnership to reduce diesel emissions

Project Results of Outcomes on Emission Reductions

Outcome Results of Emission Reductions

	NO_x (Nitrogen Dioxide)	PM (Particulate Matter)	HC (Hydrocarbon)	CO (Carbon Monoxide)	CO₂ (Carbon Dioxide)
Annual Reduction (tons/year)	0	0.2735	0.3902	1.5837	0
Lifetime Reduction (tons/year)	0	6.1601	8.6949	35.7782	0

DERA Summary

- ❑ SRPMIC places high value and effort on the prevention of childhood asthma.
- ❑ SRPMIC will improve the health and well-being of tribal children in the PM10 nonattainment area in the Community, strengthen our relationships with local business, and provide diesel exhaust retrofit devices to reduce harmful emissions in the Community.

Success

- ❑ The project was a great success because of the communication and synergy within the Community. All the participants' goals were to reduce diesel emissions to help improve air quality. This was a two-year project, however, with everyone working together, we were able to complete a year early.
- ❑ SRPMIC's biggest lesson was making sure to get support from the DPF manufacturers for the equipment they sell. SRPMIC had to work with technical contractors to revisit and optimize some of the DPF retrofits after initial installation to ensure that devices functioned properly.

West Coast Collaborative Hand Out



WEST COAST COLLABORATIVE
A public-private partnership to reduce diesel emissions

The goal of the 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 2011: Salt River Pima Maricopa Indian Community Mining Equipment Retrofit Project

The West Coast Collaborative (WCC) is pleased to announce the Salt River Pima Maricopa Indian Community (SRPMIC's) early completion of its project to retrofit heavy-duty diesel mining equipment. This project was implemented using \$150,000 in U.S. Environmental Protection Agency (U.S. EPA) Diesel Emissions Reduction Act (DERA) grant funding combined with nearly \$13,000 in leveraged funds from the SRPMIC and the Salt River Materials Group (SRMG).

What is this project?

Retrofit 7 heavy-duty diesel-powered mining loaders that are operated by the SRPMIC's wholly owned SRMG. The diesel particulate filter (DPF) retrofits installed under this project will significantly reduce the emissions of fine particulate matter (PM2.5) and other pollutants from the associated pieces of non-road mining equipment.

Why is this project important?

The SRPMIC's location within the dense urban region of Maricopa County, Arizona results in a broad range of economic development and land uses which, in turn, lead to a variety of pollution sources. The SRPMIC includes 12,000 acres of agricultural cultivation, large-scale aggregate mining operation, as well as landfill operations. The continued urbanization of this region has also encroached on the Community boundaries, with major highways such as the Pima Loop 101 (HWY 101-Pima Freeway), Loop 202 (Red Mountain Freeway) and Beeline Highway (AZHWY 87) coursing through the Community. This growth continues to significantly increase the number of mobile sources and resultant air pollution. The SRPMIC DERA project will reduce emissions from diesel mining equipment used on the Community.

What are the environmental & health benefits?

Over the lifetime of the project, the emissions of the 7 affected engines will be reduced by 6.1 fine particulate matter (PM2.5) tons, 8.7 hydrocarbon (HC) tons, and 35.8 carbon monoxide (CO) tons. On an annual basis, the associated PM2.5 emissions reductions will generate nearly \$33 dollars in monetary health benefits in Maricopa County, Arizona for every \$1 spent on the project.

How was this project funded?

The WCC provided \$150,000 in DERA grant funds to support this project. \$10,379 worth of in-kind services was contributed by SRPMIC along with \$2,110 in leveraged funds from SRMG.

Who were the Partners on this project?

The project was led by SRPMIC, a federally recognized Indian tribe located in Maricopa County, Arizona. SRPMIC received the DERA grant award through the WCC, and distributed the grant funds to the wholly owned and operated SRMG mining fleet. SRPMIC was also responsible for data monitoring and reporting for the project.

What is the West Coast Collaborative?

The WCC is an ambitious partnership between leaders from federal, state, local and tribal governments, 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, Hawaii, Idaho, Nevada, California, Oregon, Washington, Canada and Mexico. The Collaborative is part of the U.S. EPA National Clean Diesel Campaign (www.epa.gov/cleandiesel).

How can I find out more information?

For more information about this project, please contact John Mikulin at U.S. EPA (mikulin.john@epa.gov / 415-972-3956). For more information, on the WCC, please visit our website at www.westcoastcollaborative.org

Questions?

Stan Belone
Environmental Engineer
Community Development Department (CDD)
Environmental Protection & Natural Resources (EPNR)
Salt River Pima Maricopa Indian Community
Off: Two Waters, Bldg. B, 3rd fl., 10079 E. Osborn Rd., Scottsdale, AZ 85256
Mail: 10005 E. Osborn Rd., Scottsdale, AZ 85256

stan.belone@srpmic-nsn.gov

(480) 362-7626

(480) 577-1870