



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.

## Puget Sound Maritime Air Emissions Inventory & Diesel Emissions Reduction Project and the Port of Seattle Diesel Emissions Reduction Project

The West Coast Collaborative is pleased to announce that EPA has selected the Puget Sound Maritime Air Emissions Inventory & Diesel Emissions Reduction Project for \$100,000 in EPA funding with \$310,000 in matching funds from other organizations; and the Port of Seattle Diesel Emissions Reduction Project for \$35,000 in EPA funding with \$70,000 in matching funds.

### What are these projects?

The Puget Sound Maritime Air Emissions Inventory & Diesel Emissions Reduction Project is the first project of the Puget Sound Maritime Air Forum, a regional voluntary association of ports, industry, regulatory agencies, and other members with operational or regulatory responsibilities related to maritime industry air quality impacts. The Puget Sound Maritime Air Emissions Inventory is an activity-based inventory of all maritime-related air emission sources in the Greater Puget Sound region. This project also promotes the use of control technologies like diesel oxidation catalysts (DOC), cleaner fuels like ultra-low sulfur diesel (ULSD) and biodiesel, and public education activities such as idle reduction programs for truckers and equipment operators at the seaport.

The Port of Seattle Diesel Emissions Reduction Project will implement the priority strategies developed by the Puget Sound Maritime Air Emissions Inventory & Diesel Emissions Reduction.

### Why are these projects important?

Due to their close proximity to ports like the Port of Seattle—the nation's seventh-largest container port—some Puget Sound communities face high health risks from port air pollutants. In

children, air pollutants like particulate matter (PM) and nitrogen oxides (NO<sub>x</sub>) have been linked with asthma and bronchitis, and high levels of the pollutants have been associated with increased school absenteeism and emergency room visits.<sup>1</sup>

PM is the microscopic soot emitted by diesel engines. Public health authorities associate exposure to PM with an increased risk of premature death, greater number of hospital admissions for heart and lung disease, and amplified adverse respiratory symptoms such as asthma. Long-term exposure to diesel exhaust may also pose a lung cancer hazard to humans. Recent studies of children's health conducted in California have demonstrated that particle pollution may significantly reduce lung function growth in children because particulate matter becomes embedded in the deepest recesses of the lung where it can disrupt cellular processes.<sup>2</sup>

NO<sub>x</sub> are a major contributor to ozone formation ("smog") which affects human health and the natural environment. Recent studies reveal how elevated ozone levels are linked to the onset of asthma in exercising children, and ozone can damage the respiratory tract, causing inflammation and irritation, and induce symptoms such as coughing, chest tightness, shortness of breath, and worsening of asthma symptoms.<sup>3</sup> NO<sub>x</sub> also exacerbate global climate change.

### What are the estimated environmental benefits of these projects?

Through its thorough tracking and targeting of the sources of diesel emissions at the port, these projects will create more effective emissions reduction strategies for the maritime sector. By promoting cleaner emission technologies and fuels and conducting public education programs, these projects expected to significantly reduce emissions of PM, NO<sub>x</sub> and other pollutants from diesel vehicles on or around the ports.

<sup>1</sup> Bailey, Diane. Plenys, Thomas. Solomon, Gina. Campbell, Todd R., Ruderman Feuer, Gail. Masters, Julie and Tonkonogy, Bella. (March 2004). "Harboring Pollution: the Dirty Truth about U.S. Ports." Natural Resources Defense Council. p. 3.

<sup>2</sup> American Lung Association of California and Cal-EPA Air Resources Board. (January 2004). "Recent Research Findings: Health Effects of Particulate Matter and Ozone Air Pollution." Website accessed July 2005: <http://www.arb.ca.gov/research/health/fs/PM-03fs.pdf>

<sup>3</sup> *ibid*

## How are these projects funded?

The West Coast Collaborative is providing the following support for the Puget Sound Maritime Air Emissions Inventory & Diesel Emissions Reduction Project:

- \$100,000 from EPA
- \$310,000 in matching funds from the following Puget Sound Maritime Air Forum members:
  - American Lung Association of Washington
  - Olympic Region Clean Air Agency
  - Pacific Merchant Shipping Association
  - Port of Anacortes
  - Port of Everett
  - Port of Seattle
  - Port of Tacoma
  - Puget Sound Clean Air Agency
  - Washington Department of Ecology
  - Washington State Ferries
  - Western States Petroleum Association

The Collaborative is providing the following support for the Port of Seattle Diesel Emissions Reduction Project:

- \$35,000 from EPA
- \$70,000 from Port of Seattle and the Puget Sound Clean Air Agency

## About the matching fund donors

The Puget Sound Maritime Air Forum (the Forum) is a voluntary association of ports, maritime organizations, regulatory agencies, and other parties with operational or regulatory responsibilities related to maritime industry air quality impacts. Members of the Forum have a shared interest in protecting the region's ambient air quality attainment status, participating in policy decision making processes that could impact maritime operations in the future, ensuring that such processes are based on best available information, minimizing regulatory mandates, enhancing the region's competitive advantages, preserving positive relationships with neighbors, and enjoying the benefits of cleaner air.

The purpose of the Forum is to work collaboratively to:

- Build greater technical understanding of marine air emissions and their impacts on public health and the environment, starting with preparation of a high quality maritime emissions inventory;
- Support implementation of cost effective maritime air pollution control strategies by sharing expertise and resources and building

partnerships when activities require the cooperation of multiple organizations for success; and

- Serve as the Puget Sound forum for the ports and vessels track of the West Coast Diesel Emission Reduction Collaborative.

The Port of Seattle is the fifth largest container port in the U.S. and the 20th largest in the world. Served by 24 regularly scheduled steamship lines, it is the top U.S. port in container tonnage exports to Asia (6.2 million metric tons in 1994). The Port manages 28 commercial marine terminals with 24 container cranes, a modern deep-draft grain terminal, a warehouse complex/distribution center, a customs examination station, and a foreign trade zone including 1,400 acres of port marine and airport facilities.

Transportation services are provided by more than 30 steamship operators/agents, 30 tug/barge operators, and more than 150 truck/warehouse operators.

The Puget Sound Clean Air Agency was established by state law to help provide Puget Sound residents with clean air. The agency is based in Seattle and serves King, Kitsap, Pierce, and Snohomish counties. It enforces federal, state, and local air quality laws and regulations in the four counties. The agency works in partnership with the U.S. Environmental Protection Agency, the Washington Department of Ecology, the Puget Sound Regional Council, the Washington Department of Transportation, industry, local jurisdictions, and private citizens.

## What is the Collaborative?

The West Coast Collaborative is an ambitious partnership between leaders from federal, state, and local 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 California, Oregon, Washington, Alaska, Arizona, Idaho, Nevada, Hawaii, Canada and Mexico. The Collaborative is part of the National Clean Diesel Campaign ([www.epa.gov/cleandiesel](http://www.epa.gov/cleandiesel)).

## How can I find out more about the Collaborative?

For more information about the West Coast Collaborative, please contact Peter Murchie ([murchie.peter@epa.gov](mailto:murchie.peter@epa.gov), 503-326-6554) or visit our website at [www.westcoastcollaborative.org](http://www.westcoastcollaborative.org).