



CAL MARITIME

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FOR IMMEDIATE RELEASE

**CALIFORNIA MARITIME ACADEMY RECEIVES \$500,000 CLEAN AIR
GRANT TO REPLACE ENGINES IN THREE CAMPUS WORKBOATS
Will Pay for Cleaner/More Fuel-Efficient Diesels**

(Vallejo, CA – Dec. 18, 2008)... A \$500,000 grant from the California Air Resources Board's (CARB) Carl Moyer program will help the California Maritime Academy replace outdated diesel engines aboard three of its campus workboats – the *Black Bear*, *Little Bear*, and *Cub*. The installation of new state-of-the-art clean-diesels will result in improved fuel efficiency and a marked reduction in concentrations of nitrous oxide and other gasses and particulate matter. For Cal Maritime, the upgrades also provide a valuable hands-on learning experience for cadet engineering instruction.

Cal Maritime marine vocational instructors Richard Muller and Mike Andrews played a lead role in preparing what proved to be a winning grant application to the Bay Area Air Quality Management District (BAAQMD), CARB's regional arm. The Carl Moyer grant program was created by the Legislature and CARB with a goal of reducing toxic emissions from a wide range of industrial applications using heavy and light-duty diesel engines. In general, grants pay for new engines, less the cost a user would have paid to rebuild an original unit. Replacing old engines with today's state-of-the-art technology produces the greatest benefits in terms of reduced gasses and particulate matter. The Moyer program provides over \$140 million of grant funds annually.

"We estimate that these new engines will reduce our output of nitrous oxides by more than half," said Andrews. "Equally valuable, we expect an improvement in fuel efficiency of between 30 and 50 percent."

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Muller said today's modern diesels have improved computerized control systems which carefully monitor both the amount of fuel fed to each piston and the timing of its ignition, based on the current load on the engine. "Better control of those functions and the use of turbo-charging means that the fuel is more efficiently burned, with less pollution."

Work has already begun on the *Cub*, starting with removal of the boat's original six-ton 330-HP engine. "Fully assembled, it is eight feet long, six feet high and about four feet wide," Andrews explained. "To get it out, we had to cut a hole in the forward engine room bulkhead and move it into the forward cargo area so we could lift it out through the hatch. Engineering cadets helped tear it down to the main engine block for removal - a tremendous learning experience for them in the real-life challenges of a project like this." Reflecting the advances in diesel technology, the replacement engine, a 340-HP Caterpillar, is about one-third the size of the unit it replaces. It will be installed early in 2009, followed by work on the *Black Bear* and *Little Bear*, next summer and early in 2010 respectively.

According to Cal Maritime Library Archivist Larry Stevens, the *Black Bear* was built in 1948 as a yard tug and joined the CMA fleet in 1988. *Little Bear* and *Cub* were originally built as Army supply boats in 1953 and came to Cal Maritime 42 years ago in 1966.

"These three boats have provided stalwart service to our Marine Transportation training program," Andrews adds. "Eight-cadet senior crews use them to learn skills in Navigation, Seamanship and Ship Handling. The eighteen-month installation process is designed to work around our ongoing cadet training schedules. With the new engines and proper maintenance, we expect the three will be around for several decades more.

The Moyer grant program is named in honor of Dr. Carl Moyer, an environmental consultant who devoted much of his career in California to building coalitions of business, government and environmental groups to reduce air pollution from heavy duty vehicles.

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