



Commercial Harbor Craft Proposed Regulation Maritime Air Quality Technical Working Group

September 12, 2006



California Environmental Protection Agency

Air Resources Board

Background

- ◆ Reduce emissions mainly through the use of engine repowers and retrofits.
- ◆ First priority – Near shore impacts
- ◆ Adopt programs starting 2008
- ◆ Fulfill Goods Movement Goals and make progress on Diesel Risk Reduction Plan commitment

Commercial Harbor Craft Vessel Types

- ◆ Includes many types of vessels including;
- ◆ Tug/Tow
- ◆ Ferries
- ◆ Fishing Vessels
 - Commercial Fishing
 - Passenger Fishing
- ◆ Crew, Supply, Pilot, Work, and Other Vessels

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Marine Engine Standards

- ◆ Tier 0 Engines are unregulated
- ◆ U.S. EPA has established Tiered Standards
- ◆ Tier I and Tier II
 - Vary by engine displacement and model year
- ◆ Tier III / IV(?) are not yet promulgated

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Commercial Harbor Craft Statewide Inventory

	2004
PM	3.9 tpd
NOx	92.6 tpd
ROG	10.5 tpd

Projected inventory is current focus for ARB staff

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Commercial Harbor Craft Goods Movement Emission Reduction Plan Goals

- ◆ 2010 -25%
- ◆ 2015 -30%
- ◆ 2020 -40%

Both PM and NOx reductions

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Commercial Harbor Craft Proposed Regulation Overview

- ◆ Separated Non-fishing and Fishing Vessels
- ◆ Focus on Engine Repower or Retrofit
- ◆ Option of an Alternative Compliance Plan
- ◆ Targeting Old, High Use Engines First
- ◆ On-going Engine Emission Testing To Support Regulation
- ◆ Scheduled for Board Consideration Feb. '07

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Non-Fishing Vessel Overview

- ◆ Current Population mainly Tier 0 engines
- ◆ Proposed Compliance Dates (2008-2014)
 - Repower with Current Certified Engine or,
 - Documented Equivalent Emissions or,
 - Alternative Compliance Plan



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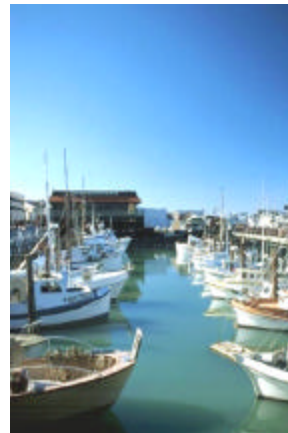
Fishing Vessel Overview

- ◆ Typically Tier 0 Engines
- ◆ Proposed Compliance Dates (2011-2018)
- ◆ Targeting a 25% PM Reduction fleet wide
- ◆ Potential Compliance Options
 - Minimum Level 1 Emission Control or,
 - Certified Engine
- ◆ Retain opportunity for Carl Moyer funds
 - Additional PM, NOx, and other emission reductions

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Potential Issues

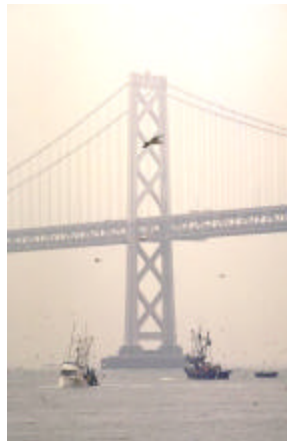
- ◆ Economic Impacts
- ◆ Stringency and timing of new U.S. EPA engine standards
- ◆ Limited Strategies Available
- ◆ Technical Feasibility



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Outstanding Items

- ◆ Compliance Timelines
- ◆ Sell Through Provisions
- ◆ Low Use Exemptions
- ◆ Applicability with other ATCM / Regulations
- ◆ Tech Assessment
- ◆ Additional Requirements for Higher Use Vessels



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