

# Commercial Harbor Craft Regulation Implementation



**February 11, 2009  
Sacramento**



**California Environmental Protection Agency**

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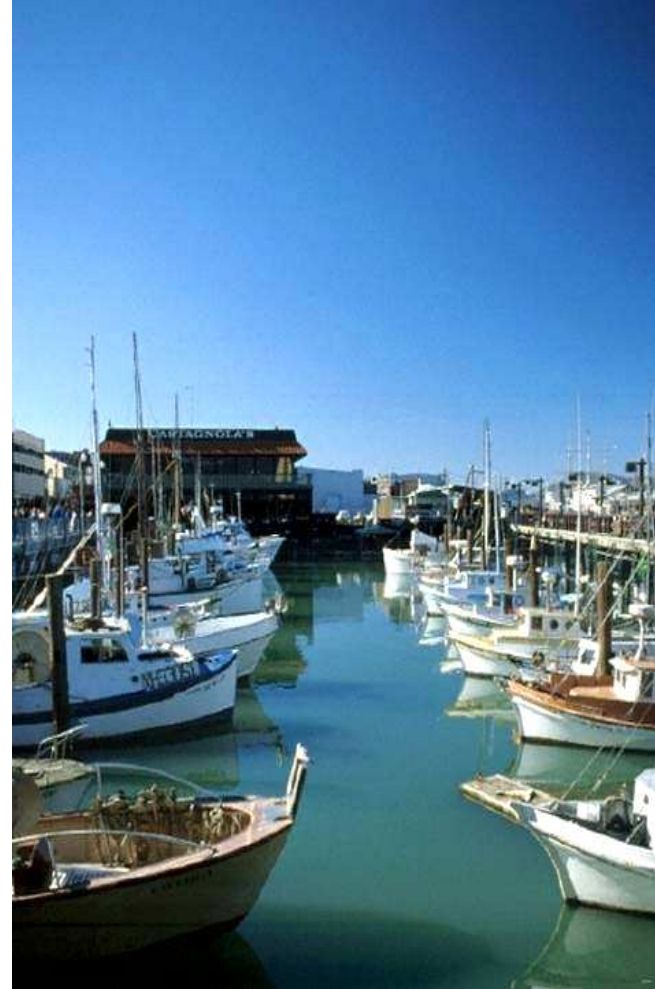
**Air Resources Board**

# Commercial Harbor Craft Regulation

- ◆ Board approved in Nov. 2007
- ◆ Became effective Jan. 1, 2009
- ◆ Operational and new engine requirements for all commercial harbor craft
- ◆ In-use engine requirements for ferries, excursions vessels, tugboats, and towboats

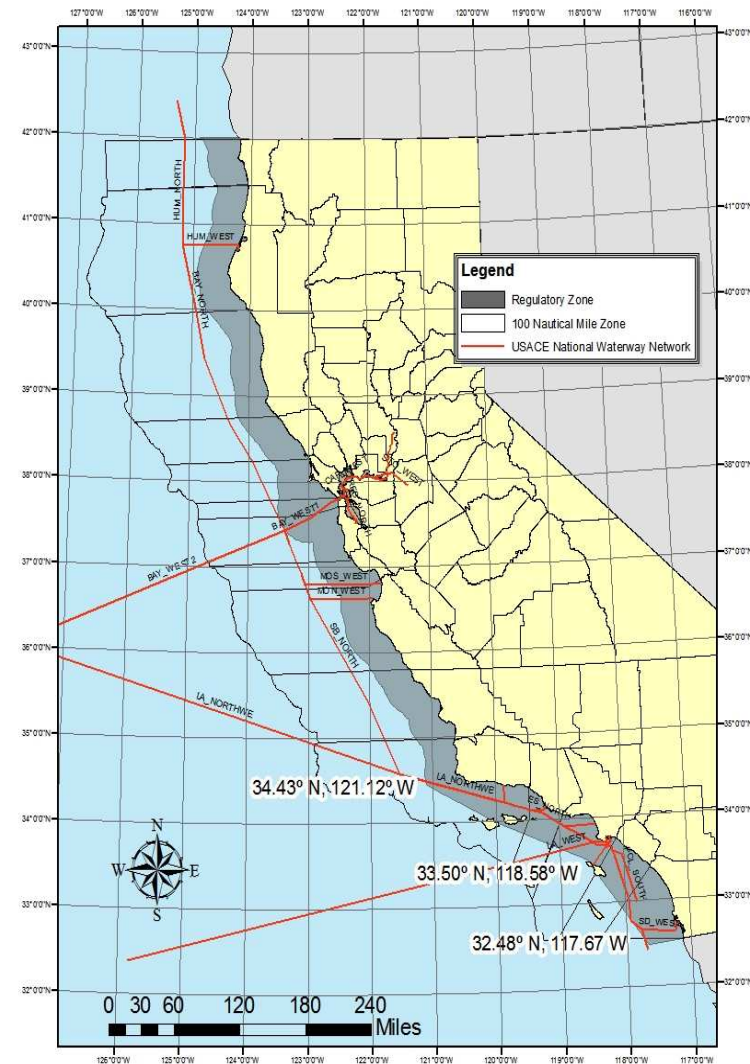
# Commercial Harbor Craft Vessel Types

- ◆ Ferries
- ◆ Excursion vessels
- ◆ Tugboats and towboats
- ◆ Crew and supply vessels
- ◆ Commercial fishing
- ◆ Charter fishing boats
- ◆ Pilot boats
- ◆ Work boats
- ◆ Other vessels



# Requirements Apply to Vessels Within Regulated California Waters

- ◆ All internal waters
- ◆ All estuarial waters
- ◆ All ports and terminal facilities
- ◆ All waters within 24 nautical miles of California baseline

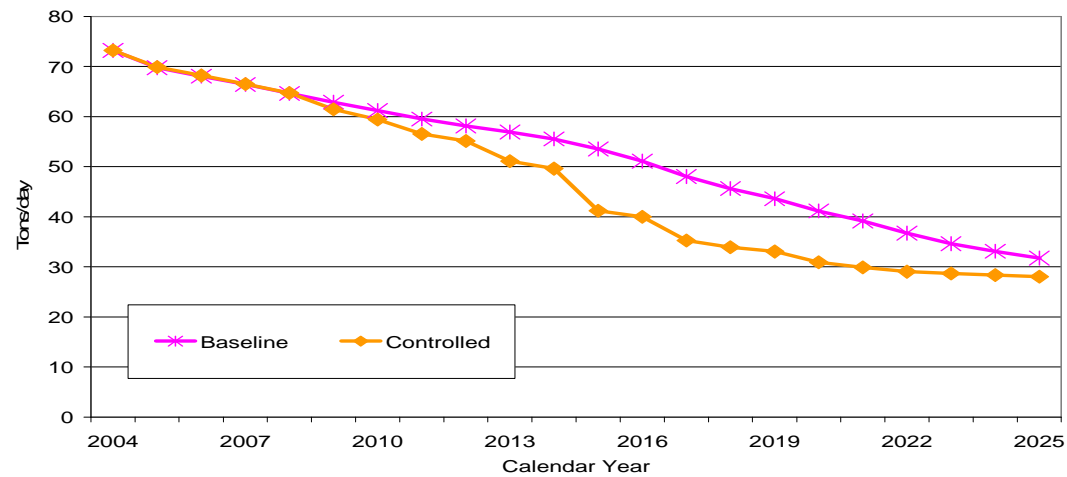


# Harbor Craft Regulation Provides Significant Emission Reductions

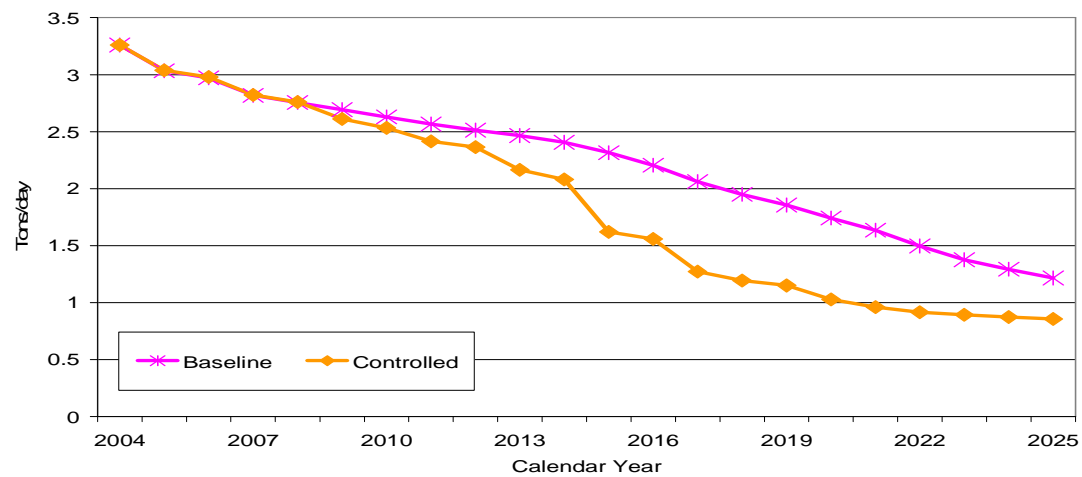
- ◆ Emission reductions provide needed health benefits
  - Diesel PM – toxic air contaminant
  - Oxides of Nitrogen (NOx) – forms ozone
- ◆ Reductions support several key plans
  - Diesel Risk Reduction Plan
  - Goods Movement Plan
  - San Pedro Bay Port Clean Air Action Plan
  - State Implementation Plan (SIP)

# Projected Statewide PM and NOx Emission Reductions

Commercial Harbor Craft Statewide NOx Emissions



Commercial Harbor Craft Statewide PM Emissions



# Exemptions from Entire Regulation

- ◆ Vessels traversing within 24 nautical miles of the California Coast without stopping
- ◆ Temporary emergency rescue/recovery vessels
- ◆ Recreational vessels
- ◆ Ocean-going vessels (except ocean-going tugs)
- ◆ Vessel engines registered with the Portable Engine Registration Program prior to January 1, 2009
- ◆ U.S. Coast Guard vessels
- ◆ Military tactical support vessels

# Engines on Barges

- ◆ Exempted if:
  - Registered in PERP or permitted by local air district prior to 1/1/09
  - Registered in PERP after 1/1/09 if:
    - Not permanently affixed to barge
- ◆ Engines may also be required to permit with the local air district



# Operational Requirements

- ◆ Fuel use
  - CARB diesel or approved alternative
- ◆ Monitoring
  - non-resettable hour meters on all engines
- ◆ Recordkeeping
- ◆ Reporting
  - Initial report (Feb.28, 2009)
  - Change of ownership, vessel use, or operation report
  - Compliance plan and demonstration
    - Ferries, excursion, tugboats, and towboats



# Engines on New Vessels and Replacement Engines

- ◆ New build vessels
  - Engine must meet U.S. EPA marine engine standards in effect at the time of vessel acquisition
    - New build ferries have an additional BACT requirement
- ◆ Replacement engines on in-use vessels
  - Engine must meet U.S. EPA marine engine standards in effect at the time of engine acquisition

# New Build Ferry BACT Requirement

- ◆ BACT - Best Available Control Technology
- ◆ Propulsion engines on new build ferries must meet Tier 2 or 3 standards plus apply BACT
- ◆ ARB application and review process
  - Determination made on case-by-case basis
- ◆ May comply with Tier 4 engine when available

# U.S. EPA Marine Engine Standards Effective Dates

- ◆ Tier 1 - 2000
- ◆ Tier 2 - 2004 to 2007
- ◆ Tier 3 - 2012 to 2014
  - 2009 - less than 100 hp
- ◆ Tier 4 - 2014 to 2017



# In-Use Engine Requirements

- ◆ Vessels operating as ferries, excursion vessels, tugboat, or towboats
- ◆ Tier 0 and Tier 1 engines replaced, rebuilt, or retrofitted to meet current emission standard (either Tier 2 or 3)
- ◆ Oldest, highest use engines comply first
- ◆ Two compliance schedules
  - Statewide (except South Coast)
  - South Coast

# Phased Compliance Schedule

- ◆ Statewide (except South Coast)
  - First compliance date December 2009
  - 2009-2016: Tier 0 engines
  - 2015-2022: Tier 1 engines
  - Accelerated compliance for ferry engines
    - all Tier 0 engines comply by 2014
- ◆ Accelerated schedule for South Coast
  - First compliance date December 2009
  - 2009-2013: Tier 0 engines
  - 2013-2020: Tier 1 engines

# Exemptions from In-Use Engine Requirements

- ◆ Temporary replacement vessels
  - ARB approval required
- ◆ Registered historic vessels
- ◆ Engines rated at less than 50 horsepower
- ◆ Engines operated less than 300 hours per year
- ◆ Near-retirement vessels

# Compliance Methods

- ◆ Replace with new engine
- ◆ Demonstrate in-use engine meets standard
  - Tier 2 prior to Tier 3 effective date
  - Tier 3 when standard becomes effective
- ◆ Demonstrate in-use engine operates less than 300 hours annually





## Engine Model Year for Compliance Date Determination

- ◆ Engine's actual model year
- ◆ Engine's actual model year +5
  - If a diesel emission control strategy is employed that reduces the PM or NOx emissions by >25%
- ◆ Engine Tier 1 Rebuild Model Year
  - If Tier 0 engine was rebuilt to meet Tier 1 standards prior to January 1, 2008

# Compliance Date Extensions

- ◆ ARB approval required
- ◆ Change in annual engine hours of operation
- ◆ No suitable engine replacement
- ◆ Manufacturer delay or installation difficulties
- ◆ Multiple engines on multiple vessels within fleet requiring compliance in one year

# Engines on Multiple Vessels within Fleet with Same Compliance Year

- ◆ ARB approval required
  - Two or more engines on two or more vessels all with the same compliance year
- ◆ 2009 or 2010 compliance dates
  - Phased compliance extended to the end of 2013
- ◆ 2011 and beyond compliance dates
  - One year extension

# Alternative Control of Emissions

- ◆ ARB approval required
- ◆ Must achieve equivalent or greater reductions
- ◆ Restricted to within one air district or specified geographic area
- ◆ Application process includes public review process

# Funding Opportunities

- ◆ Require real, surplus, quantifiable, and enforceable reductions
- ◆ Carl Moyer Program
- ◆ Proposition 1B
  - Funding in specific trade corridors only:
    - Los Angeles/Inland Empire, Central Valley, Bay Area, and San Diego/Border
  - Available for specific vessel types:
    - tugboats, towboats, crew and supply vessels, commercial fishing boats, work boats, and pilot boats
- ◆ Contact your local air pollution control district

# Summary of Requirements

Vessel Use	Operational Requirements			New Engine/Vessel Requirements			In-Use Engine Requirements
	Initial Report	Hour Meter	CARB Fuel	New Vessel	BACT*	New Engine**	Compliance Plan and Action
Ferry	√	√	√	√	√	√	√
Excursion	√	√	√	√		√	√
Tug	√	√	√	√		√	√
Tow	√	√	√	√		√	√
Fishing	√	√	√	√		√	
Work	√	√	√	√		√	
Crew	√	√	√	√		√	
Pilot	√	√	√	√		√	
Other	√	√	√	√		√	

\*Propulsion Engines Only

\*\* Replacement Engines on in-use vessels

# 2009 Compliance Dates

- ◆ February 28, 2009
  - Initial report due
  - Compliance plan for Dec. 2009 compliance date
  - Reporting forms available
- ◆ December 31
  - First in-use engine compliance deadline

# ARB Contacts

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