



**Public Workshop to Discuss
Reducing Emissions from
In-Use Commercial Harbor Craft**

Background and Overview

March 23, 2004

California Environmental Protection Agency



Air Resources Board

Presentation Overview

- Need for Reductions
- Commercial Harbor Craft
- Regulatory Development Process

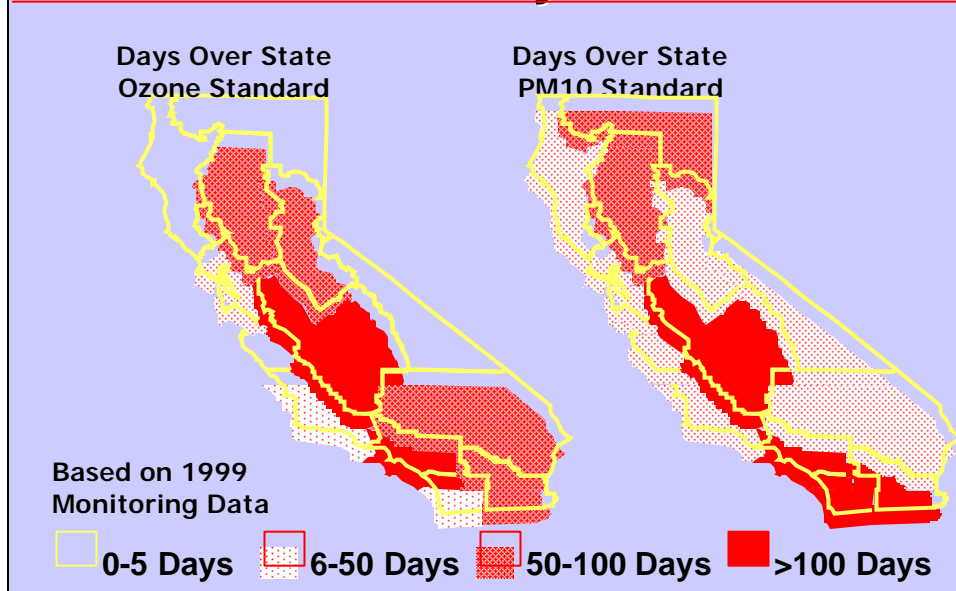
Need For Reductions



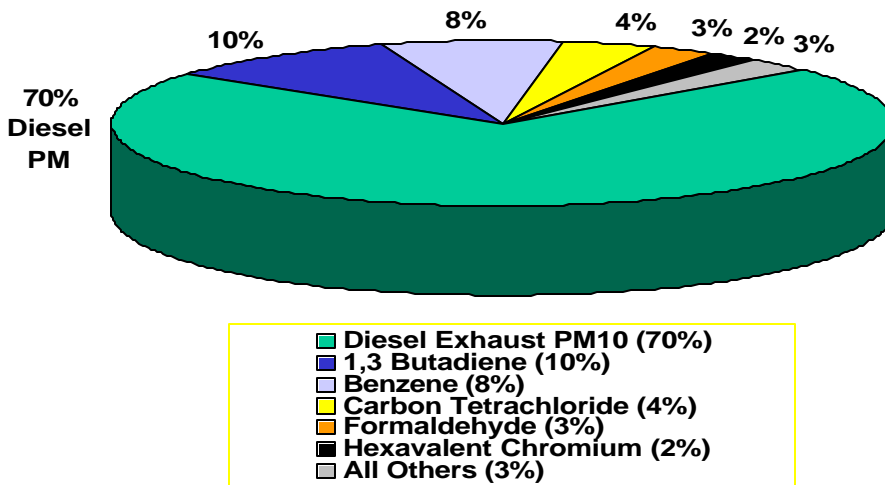
Despite Progress Much Left to Do

- Over 90% of Californians exposed to unhealthy air
- Additional emission reductions needed to attain air quality standards
- Risk from air toxics is too high

Over 90% of Californians Breathe Unhealthy Air at Times



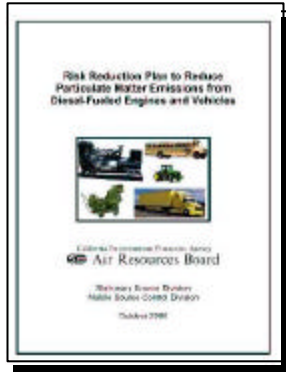
Statewide Air Toxics Risk for Year 2000



What Are The Health-Related Impacts of Air Pollution?



Framework For Continuing Improvement



Governor's Action Plan



Four Statewide Marine Measures

- Reduce emissions from existing harbor craft
- Reduce port land-side emissions sources
- Adopt more stringent new engine standards
- Reduce emissions from existing oceangoing ships

Commercial Harbor Craft

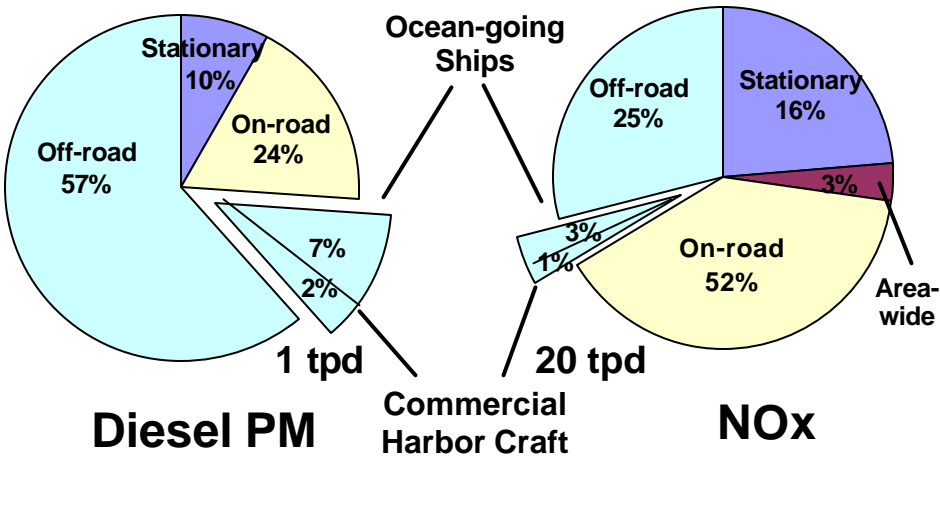


Variety of Commercial Harbor Craft are Used in California

- Commercial Fishing Boats
- Commercial Passenger Fishing Boats
- Crew and Supply Boats
- Ferry / Excursion Boats
- Pilot Boats
- Tow / Push Boats
- Tug Boats
- Work Boats

Commercial Harbor Craft Contribute to Diesel PM and NOx Emissions

Year 2000 Statewide Diesel PM and NOx Emissions



Existing Emission Reduction Strategies for Commercial Harbor Craft

- New Engines
 - IMO standard
 - National regulation
- In-Use Engines
 - Carl Moyer Program
 - NOx and PM Emission Reduction Program
 - Local district programs
 - Passenger ferries required to use CARB diesel fuel

Planned Measures: Adopt More Stringent New Engine Standards

- Adopt more stringent federal standards for new harbor craft engines
 - **NOx standards based on the federal Tier II and III off-road standards**
 - **PM standards based on state-of-the art technology**
- Adopt programs 2003-2004, implement 2008-2010
- Concept for Federal action



Planned Measure: Reduce Emissions From Existing Harbor Craft

- Reduce emissions through the use of add-on controls, cleaner fuels, and repowering with new engines
- Adopt programs 2003-2005, implement in 2005
- Fulfill SIP Commitment and make progress on DRRP commitment
- ARB responsible agency

Two-pronged Approach will be Used to Pursue Emission Reductions for In-Use Harbor Craft



- Propose the use of CARB diesel
- Develop strategy to achieve reductions through
 - add-on controls
 - clean new engines
 - engine modifications

Committed Emission Reductions from In-Use Harbor Craft Statewide and South Coast

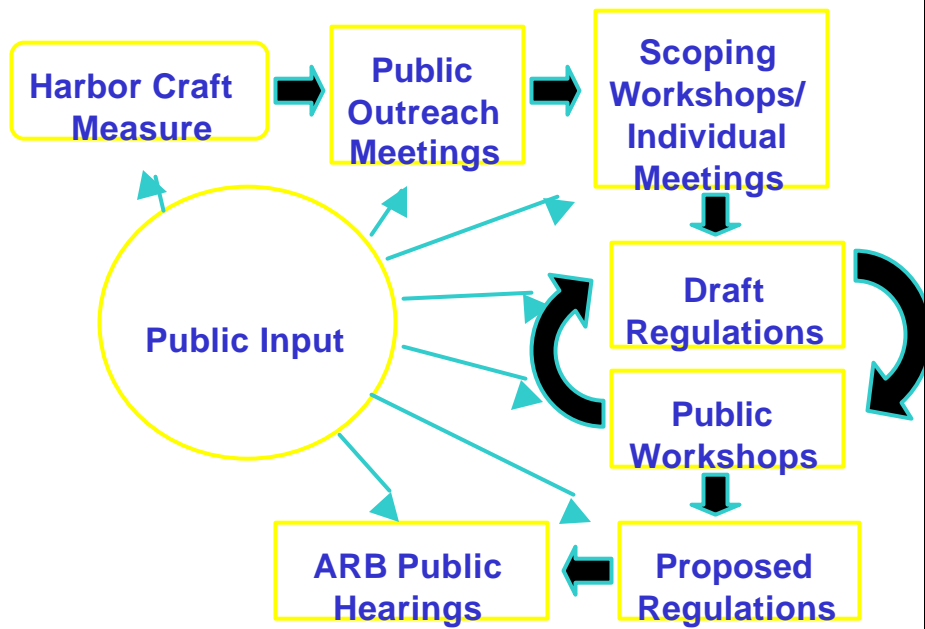
2010 Target Reductions for Commercial Harbor Craft

Pollutant	Statewide (tpd)		South Coast (tpd)	
	SIP	DRRP	SIP	DRRP
NOx	5.0	NA	2.7	NA
ROG	0.45	NA	0.1	NA
PM ₁₀	0.28	0.83	0.05	0.17

Regulatory Development Process



Public Process



Additional Support Activities

- Harbor Craft Survey
 - ▶ Finalized 3/04
 - ▶ Follow up surveys underway to obtain additional details
- Update Emissions Inventory
- Demonstration Projects
 - ▶ Naval Pilot Emission Control Program
*ARB funding with U.S. Navy
 - ▶ ARB Funding Demonstration Project with UC Riverside (CE-CERT)

Timeline

- Begin Regulatory Development Process
 - ▶ March 2004
- Public Workshops and Stakeholder Meetings
 - ▶ March 2004 through Fall 2005
- ARB Public Hearing
 - ▶ Fall 2005



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