Commercial Harbor Craft
Proposed Regulation Workshop
Sacramento
June 28, 2006
California Environmental Protection Agency
Air Resources Board

Overview

♦ Background
♦ Proposed Regulatory Concepts
♦ Next Steps
Background

Goals

- Develop a statewide control measure to address emissions from commercial harbor craft
- Diesel Risk Reduction Plan
- Meet goals of the Goods Movement Plan
Emission Reduction Plan for Ports and Goods Movement

- Cleaning up Existing Harbor Craft and U.S. EPA or ARB Cleaner Engine Standards

<table>
<thead>
<tr>
<th>Percent Control</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
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<tbody>
<tr>
<td>25%</td>
<td>30%</td>
<td>40%</td>
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</table>
Applicability

♦ Ferries
♦ Tug and Tow Boats
♦ Work, Crew, and Pilot Boats
♦ Fishing Boats

Proposed Regulatory Overview

♦ Separation between Fishing and Non-fishing harbor craft
  – Different requirements
  – Different compliance dates
Fishing Fleets

- Fishing
  - Commercial Fishing
  - Commercial Passenger Fishing
- Approach designed to maintain level of Moyer availability

Fishing Fleets Standard

Existing Engine

Retrofit with Level 1 (or Equivalent Performance Based Standard)
Fishing Fleet Compliance

♦ Oldest – Highest Use Engines First

♦ Starting 2008
♦ Complete 2013

Non-Fishing Fleet Vessel Types

♦ Ferries
♦ Tug and Tow
♦ Crew
♦ Work
♦ Pilot
♦ Other Vessels
Non-Fishing Fleets Phase 1

Tier 0 or Tier 1 Engine

Or

Install Highest Level VDECS

Install Tier II Engine

Non-Fishing Fleet Compliance Phase 1

- Starting 2008
- Complete 2013
Non-Fishing Fleets Phase 2a

Installed VDECS (Tier I or 0 engine)

Replace with Tier III

Non-Fishing Fleet Compliance Phase 2a

- Starting 2013
- Complete 2018
Non-Fishing Fleets Phase 2b

- Installed Tier II
  - Replace with Tier III
  - Install Level 3 VDECS

Non-Fishing Fleet Compliance Phase 2b

- Starting 2016
- Complete 2021
Verified Diesel Emission Control Strategies

♦ If no VDECS available
  – Compliance Extension
  – Up to two years

Record Keeping Requirements

♦ Annual Record Keeping
  – Keep on vessel
Reporting Requirements

♦ Compliance Plan
♦ Demonstration of Compliance
♦ Annual Reporting

Preliminary Fishing Emission Inventory (tpy)

<table>
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<tr>
<th></th>
<th>Baseline</th>
<th>After Implementation</th>
<th>% Reduction</th>
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<tbody>
<tr>
<td>PM</td>
<td>448</td>
<td>336</td>
<td>25%</td>
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<tr>
<td>NOx</td>
<td>11,192</td>
<td>11,192</td>
<td>0</td>
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Preliminary Non-Fishing Emission Inventory (tpy)

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>After Implementation</th>
<th>% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>977</td>
<td>93</td>
<td>91%</td>
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<tr>
<td>NOx</td>
<td>25,712</td>
<td>13,691</td>
<td>47%</td>
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Next Steps
Next Steps

♦ Next workshop July 27, 2006
♦ Workshop End Aug./Early Sept.
♦ Release Initial Statement of Reasons
♦ Board Date November

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