Goods Movement Emission Reduction Goals

- Meet federal air quality standards
- Reduce community exposure to toxic air contaminants
- Mitigate anticipated growth in trade and associated emissions
- Identify funding needs
Draft Plan Features

- Public health assessments
  - Statewide impacts
  - Community impacts
- Emission reduction strategies
  - >20% diesel PM reduction by 2010 (from 2001)
  - 2/3 diesel PM risk reduction by 2020
  - Meets South Coast ozone & PM2.5 reduction targets

What the Draft Plan Covers

- All port emission sources, including cruise ships and fishing vessels
- All ship emissions to 24 miles offshore
- Cargo handling equipment
- Rail and truck travel associated with imports and exports
Health Findings

- 750 premature deaths/year today
- 920 premature deaths/year by 2020 without new controls
- Asthma attacks, lost work days, and other health effects also quantified

The Plan would reduce health impacts 60% or more by 2020

Basic Approach

- Cleaner engines
- Cleaner fuels
- Fleet modernization (retrofit or replace)
- Speed reduction and idling limits
- Shore-based power
- Potential mechanisms include rules, fees/incentives, market concepts, enforceable agreements
Emissions vs. Health Impacts (current)

Diesel PM Emissions

Premature Death Risk

Ships

Trains

Trucks

HarborCraft

Cargo Handling Equip.

Key: Equip ships with pollution controls, use cleaner fuels and use shore-based power

Number of Clean Ship Visits:

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<tr>
<th></th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
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<tbody>
<tr>
<td>&gt;30% NOx + 30% PM control</td>
<td>20%</td>
<td>50%</td>
<td>40%</td>
</tr>
<tr>
<td>90% NOx + 60% PM control</td>
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<td>25%</td>
<td>50%</td>
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<tr>
<td>Ships using shore-based power</td>
<td>20%</td>
<td>60%</td>
<td>80%</td>
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Commercial Harbor Craft

Key: Clean up existing vessels starting in 2010, set new engine standards and use shore based power

Cargo Handling Equipment

Key: Accelerate engine turnover to meet on-road engine standards

- New ARB rule for new/existing equipment
- 85% PM control on all engines by 2015
- Zero or near-zero emission equipment by 2020
Trucks
Key: Replace port trucks with 2003 or newer trucks by 2010 and retrofit pre-2007 trucks with diesel particulate filters

Locomotives
Key: Concentrate Tier 3 Locomotives in California and upgrade switcher engines

Clean Locomotives in California:
- 30% by 2015
- 90% by 2020
Other Strategies

- Operational efficiency
- Land use decisions
- Project and community specific mitigation
- Port programs

Draft Plan

Each $1 spent on controls saves $4-$8 in health costs
Draft Plan Review

- Peer review (health assessment, inventory methodology) completed
- Public comments due February 15
- Workshops in February

Next Steps

- Review public and industry comments
- Revised draft late March
- Board consideration April 20-21
Emission Reduction Plan Contacts

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➤ ARB website for meetings and documents:
   http://www.arb.ca.gov/planning/gmerp/gmerp.htm