

On-Road Heavy-Duty Diesel Emissions Control Measures



Faster Freight – Clean Air
Feb 2007

California Environmental Protection Agency



Air Resources Board

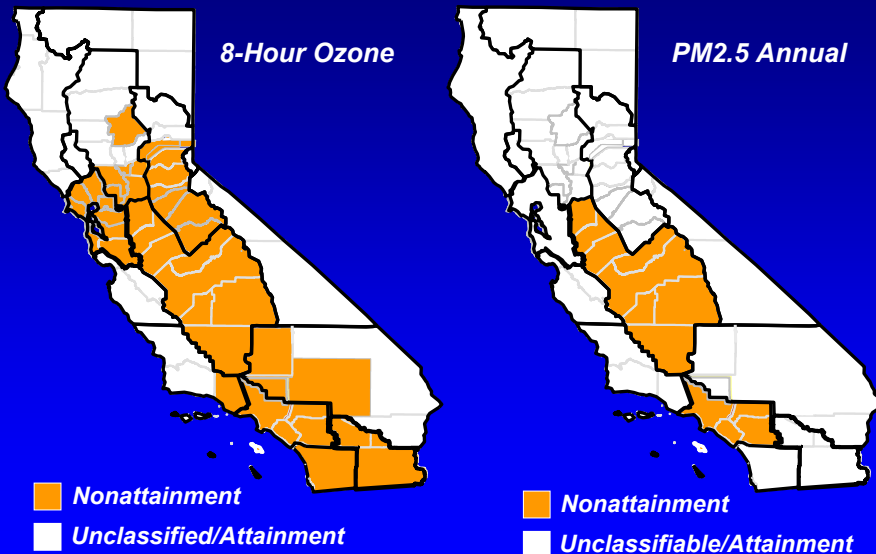
Overview

- Part of Statewide Effort
- Emissions/Populations
- Scope
- Concepts
- Next Steps

Part of Statewide Effort

- Diesel Risk Reduction Plan
 - 85% Reduction in diesel PM by 2020
- Goods Movement Action Plan
 - ARB's emission reduction plan – 2006
- State Implementation Plan (SIP)
 - 15 local areas violate the federal 8-hour ozone standard
 - 2 areas violate the federal annual PM2.5 standard

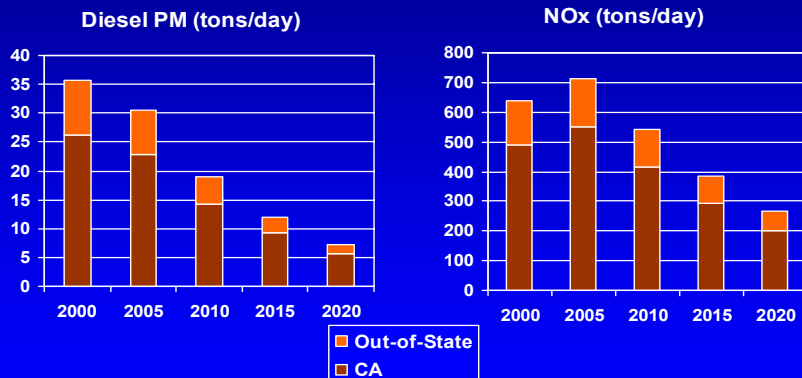
Area Designations for National Ambient Air Quality Standards for Ozone and PM2.5



SIP Strategy

- ARB will work with local districts and federal government to achieve reductions
- New reductions will be needed from all sources:
 - Consumer products
 - Stationary sources
 - Goods movement
 - Evaporative emissions
 - Mobile sources
 - On-road and off-road

2006 On-Road Heavy-Duty Diesel Emissions Inventory



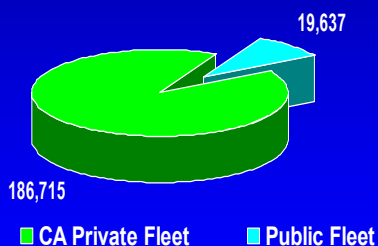
2008 Inventory by Model Year Heavy Duty Diesel Vehicles

| Group | Model Year | Number of CA Registered Class 8 Trucks | Number of CA Registered Class 4-7 Trucks |
|--------------|------------|--|--|
| 1 | 1965-87 | 16,810 | 18,386 |
| 2 | 1988-93 | 22,011 | 26,296 |
| 3 | 1994-98 | 35,092 | 35,253 |
| 4 | 1999-02 | 25,007 | 45,358 |
| 5 | 2003-06 | 17,272 | 43,699 |
| 6 | 2007+ | 11,021 | 22,873 |
| <i>Total</i> | | <i>127,213</i> | <i>191,865</i> |

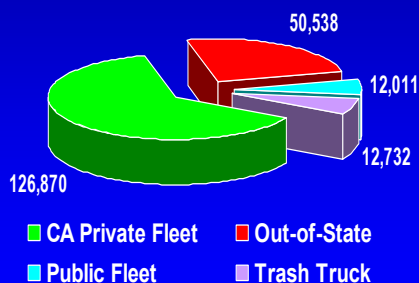
* Does not include public fleets, urban buses, or solid waste collection vehicles.

2006 Heavy-Duty Diesel Truck Population Distribution

Medium-Heavy Duty Diesel Trucks
(33,000 lbs > GVW > 14,000 lbs)

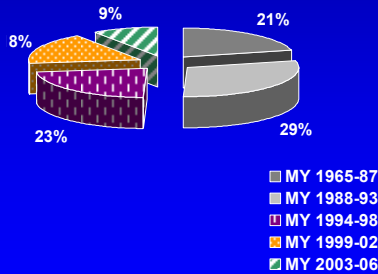


Heavy-Heavy Duty Diesel Trucks
(>33,000 lbs)

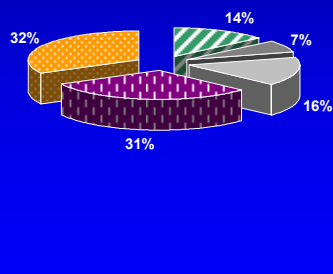


2006 Heavy Duty Diesel Emissions Inventory Distribution by Model Year

Diesel PM (28 tons / day)



NOx (680 tons / day)



*Includes out-of-state and CA registered

Scope of Regulations

Scope of Regulations

- Reduce emissions of diesel particulate matter (PM) and oxides of nitrogen (NOx)
- Will apply equally to all heavy-duty diesel vehicles traveling in California including:
 - Out of state vehicles
 - International vehicles
 - California vehicles
- Achieve SIP, Diesel Risk Reduction Plan and Goods Movement commitments

Regulatory Concepts

Private Fleet Preliminary Regulatory Concept

- Heavy-Duty Diesel GVWR > 14,000 lbs
- BACT (Best Available Control Technology)
 - Retrofit
 - Repower with cleaner engine
 - Replace with newer vehicle
- Grouped by Model Year
 - Compliance deadlines would begin with vehicle groups.
 - Starting 2009
 - No requirements for 2007 or newer model year vehicles
 - Phase out uncontrolled vehicles older than 15 years
- All Vehicles not Covered Under a Current ARB Regulation for Heavy-Duty Diesel-Fueled Vehicles

Port/Railyard Fleet Preliminary Regulatory Concept

- Heavy-Duty Diesel GVWR > 33,000 lbs
- Minimum Reduction Standards
 - Retrofit
 - Replace with newer vehicle
- Grouped by Model Year
 - Compliance deadlines use populations/model year groupings and available control technologies (2008 – 2011)
 - No requirements for 2007 or newer model year vehicles
 - Phase out pre-1994 vehicles

Port/Railyard Fleet Preliminary Regulatory Concept

Responsibilities

- Truck Owner
 - Responsible for modernization of vehicle
- Motor Carrier
 - Ensure only compliant trucks enter port
- Motor Carrier Contractor (Shipping Lines)
 - Only contract with 'approved' motor carriers
- Terminal/Railyards
 - Report all trucks entering facilities
- ARB/Ports
 - Implementation and enforcement

Next Steps

Private Fleet & Port/Rail Fleet Regulations

- Workgroup/Stakeholder Meetings
- Public Workshops
- Statement of Reasons
- ARB Board Meeting
 - Late 2007/Early 2008

Contacts

Private Fleet Rule

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