

# On-Road Heavy-Duty Diesel Emissions Control Measures



Faster Freight – Clean Air  
Feb 2007

California Environmental Protection Agency



**Air Resources Board**

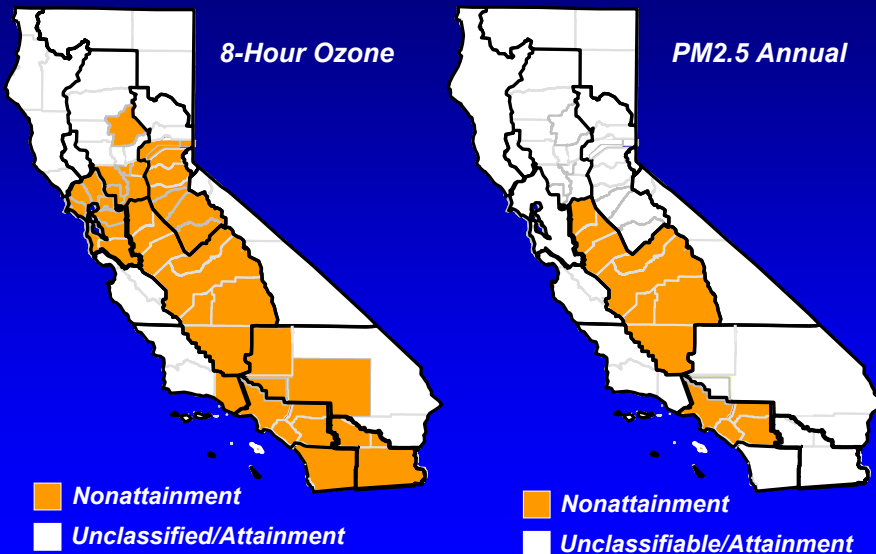
## Overview

- 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

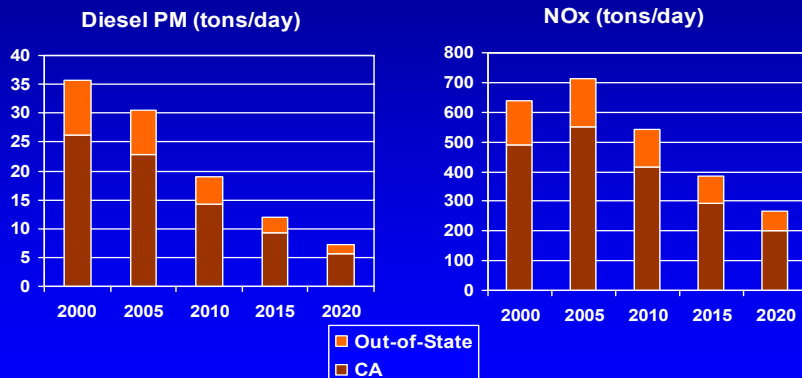
### Area Designations for National Ambient Air Quality Standards for Ozone and PM2.5



## 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



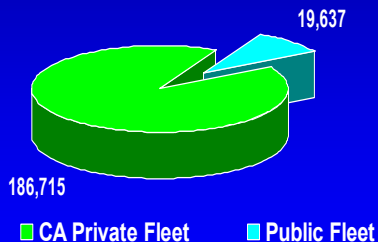
## 2008 Inventory by Model Year Heavy Duty Diesel Vehicles

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>

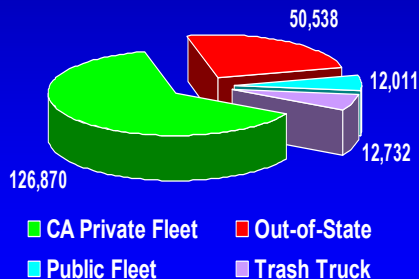
\* Does not include public fleets, urban buses, or solid waste collection vehicles.

## 2006 Heavy-Duty Diesel Truck Population Distribution

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

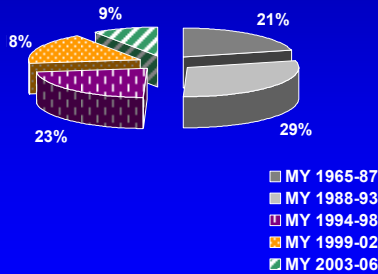


Heavy-Heavy Duty Diesel Trucks  
(>33,000 lbs)

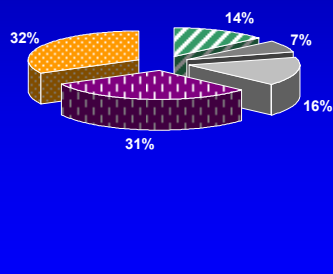


# 2006 Heavy Duty Diesel Emissions Inventory Distribution by Model Year

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

Erik White, Chief  
Heavy Duty Diesel In-Use  
Strategies Branch  
(916) 324-1362  
ewhite@arb.ca.gov

Tony Brasil, Manager  
In-Use Control Measures Section  
(916) 323-2927  
tbrasil@arb.ca.gov

## Port/Railyard Fleet Rule

Mike Tollstrup, Chief  
Project Assessment Branch  
(916) 322-6026  
mtollstr@arb.ca.gov

Michael Miguel, Manager  
Project Support Section  
(916) 445-4236  
mmiguel@arb.ca.gov