

# Public Fleet Rule Public Workshop

December 2 and 3, 2003  
El Monte and Sacramento

California Environmental Protection Agency



**Air Resources Board**

# Outline of Today's Presentation

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- Background
- Proposed On-road Public Fleet Rule
- Public Fleets Survey
- ARB Temperature Exhaust Study
- Conclusion

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**BACKGROUND**

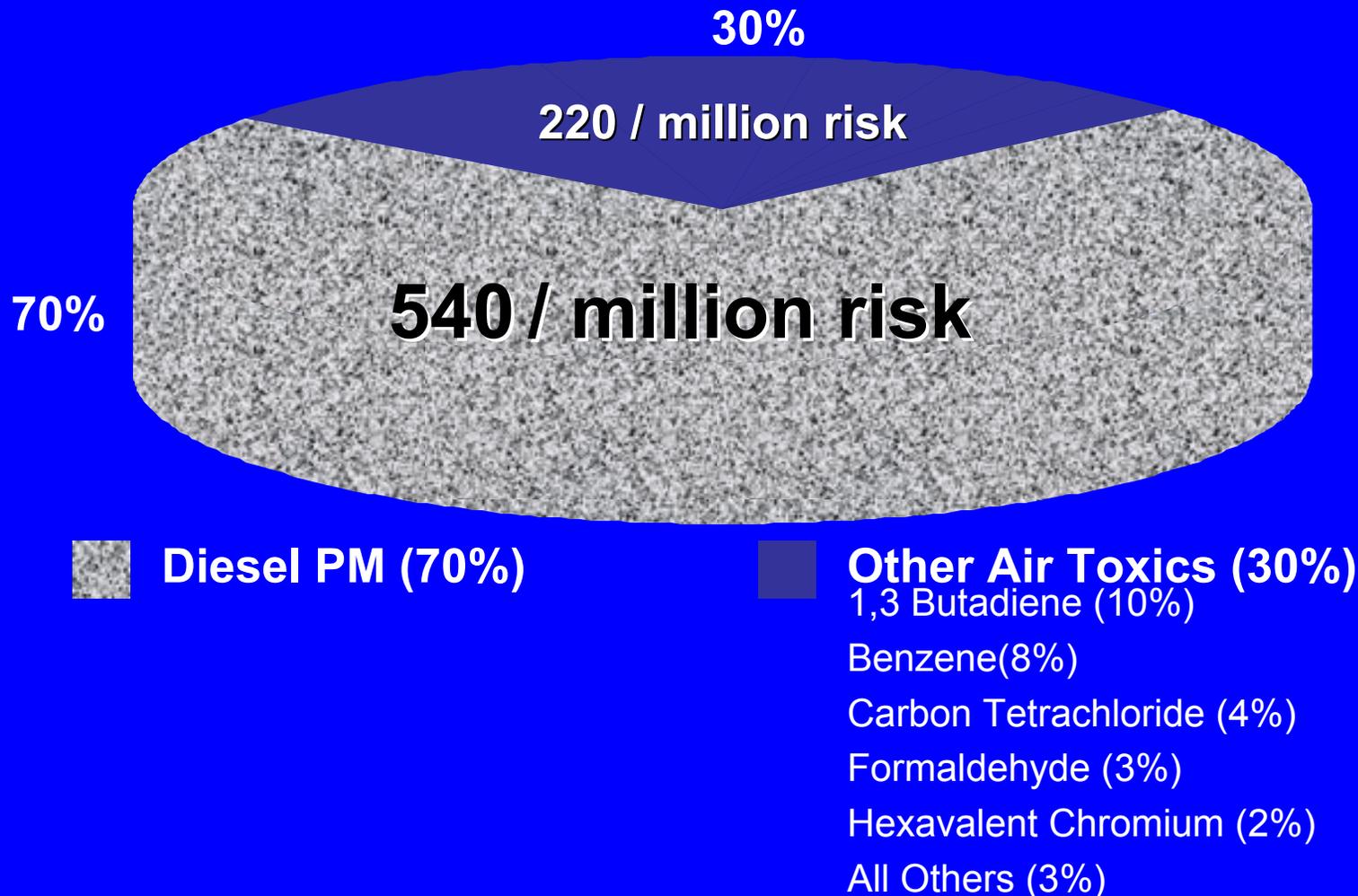
# Health Impacts of Diesels in California

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- Annual health impacts
  - 2,900 premature deaths
  - 3,600 hospital admissions
  - 240,000 asthma attacks/respiratory symptoms
  - 600,000 lost days of work
- By comparison
  - 3,700 deaths from car accidents
  - 2,000 homicides

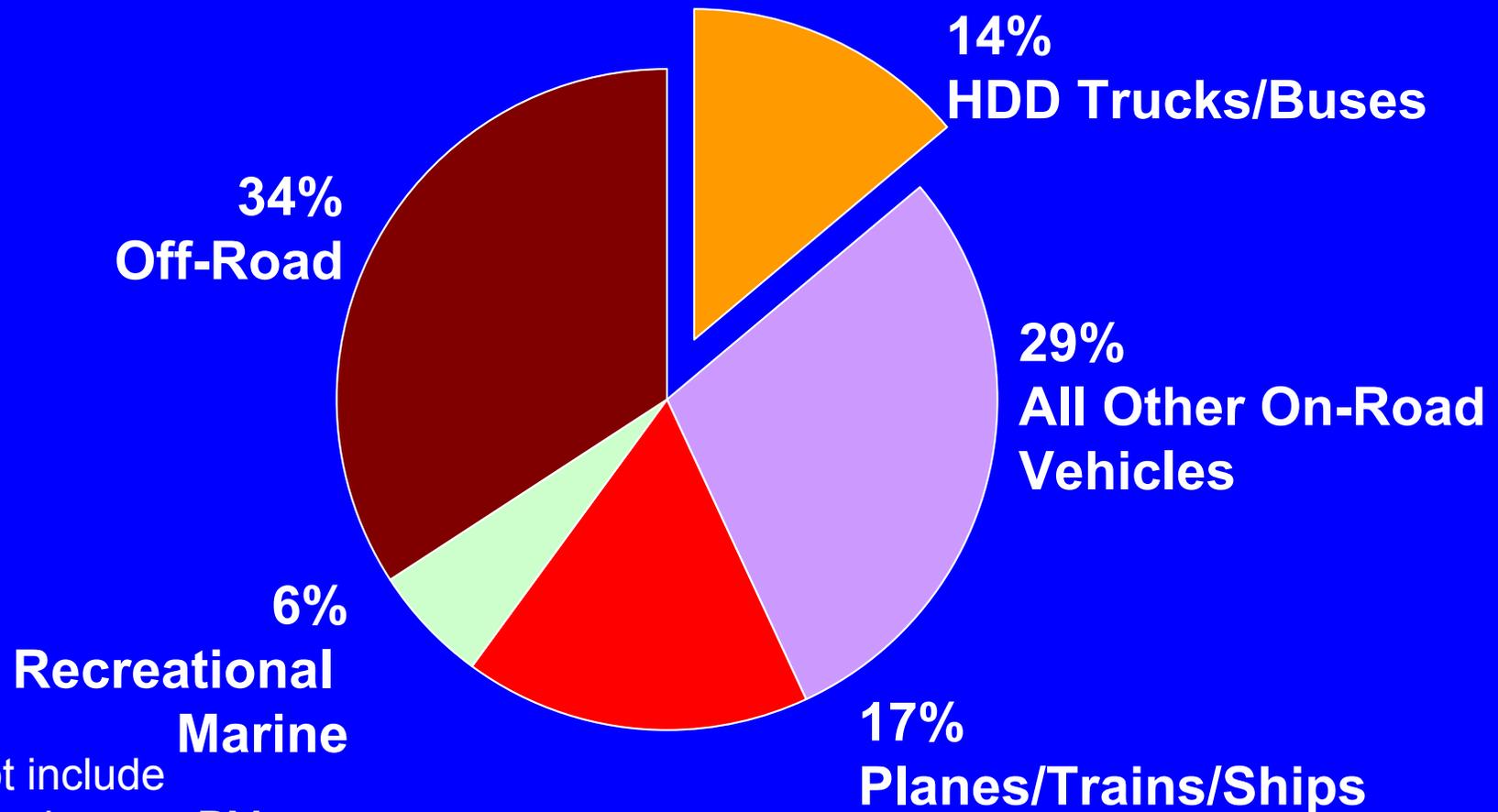
# 70% of Air Toxic Risk is From Diesels

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# Statewide Mobile Source PM10 Emissions - 2001

123 tons per day\*



\*Does not include  
tire and brakewear PM

# Diesel PM is a Toxic Air Contaminant

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- Identification
  - August 1998
- Diesel Risk Reduction Plan
  - September 2000
- Airborne Toxic Control Measures
  - Ongoing



# DIESEL RISK REDUCTION PLAN - 2000

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- On-Road Measures
  - Solid Waste Collection Vehicles
  - Public HDV Fleets
  - Private HDV Fleets, incl. cargo fuel tankers
- Off-Road Measures
- Diesel PM Reduced 75% from 90% of Vehicles (Expected) by 2010

# SIP MEASURES: PM RETROFIT

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- ON-ROAD HVY-DUTY-3
  - Adopt 2003-2005; Implement 2004-2010
- OFF-ROAD CI-2
  - Adopt 2004-2008; Implement 2006-2010
- ROG and NOx Reductions Accompany PM Reductions

# Proposed Rulemaking Schedule - Mobile Sources

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- Board Adoption Dates:
  - Solid Waste Collection Vehicles: **Sept. 2003**
  - Transit Agencies, Non-Urban Buses: 2004
  - Public On- and Off-road Vehicles: 2004
  - Private On- and Off-road Vehicles: 2005

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**PROPOSED RULE:  
PUBLIC ON-ROAD  
FLEETS**

# Proposed Applicability

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- Municipal Active Fleet
  - Vehicles owned and operated by municipality
  - Includes leased vehicles operated by the municipality
  - Does not include contract fleets

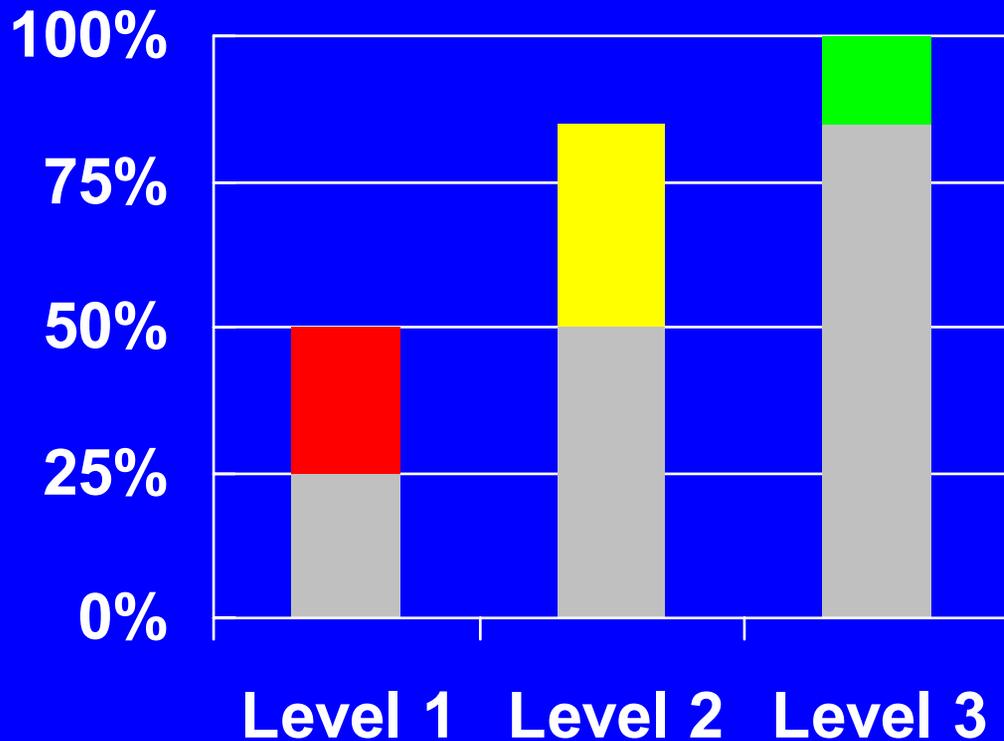
# **Proposed Best Available Control Technology (BACT)**

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- Engine Certified to 0.01 g/bhp-hr PM or 0.1 g/bhp-hr plus Retrofit with Highest Level Verified DECS
- Alternative-fuel, or Heavy-Duty Pilot Ignition Engine Certified to Lowest Optional PM Standard
- Retrofit with Highest Level Verified DECS
- Once in Compliance Always In Compliance

# Diesel Emission Control Strategy Verification Levels

## PM Emission Reduction



Level 1



25 - 50% Reduction

Level 2



50 - 85 % Reduction

Level 3



≥ 85 % Reduction  
or ≤ 0.01 g/bhp-hr

# Proposed Implementation Schedule

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Group	Engine MY	% BACT	Dates
1	1960 – 1987	20	2005
		40	2006
		60	2007
		80	2008
		100	2009
2	1988 - 1993	20	2005
		40	2006
		60	2007
		80	2008
		100	2009
3	1994 -2002	20	2005
		40	2006
		60	2007
		80	2008
		100	2009
4	2003 - 2006	50	2009
		100	2010

# Proposed Fuel Requirement

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- Must use ultra-low sulfur diesel fuel one year earlier than mandated, or
  - May use fuel verified as a DECS
- Municipality with <15 active fleet vehicles and operating in a federal one-hr ozone attainment area may delay to 7/1/2006

# Proposed Compliance Extensions

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- No Verified DECS
  - Automatic if no DECS Verified for Engine Family ten months prior, or
  - May Apply for Exemption if no DECS Verified or Commercially Available 6 months prior
- 1-Hr Ozone Attainment Area Municipality May Delay to 100% Compliance Date

# Proposed Special Circumstances

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- DECS Failure
  - DECS Failure/Damage During Warranty
  - DECS Failure/Damage Outside Warranty
  - Repairable Malfunction
- Discontinuation of Fuel DECS
- Level 1 DECS Has Limited Life
- Engine Retirement within One Year
- Participation in Experiment/Demonstration

# Proposed Recordkeeping And Reporting

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- Records Kept Accessible at Vehicle Location
  - A list identifying vehicle type, engine manufacturer, engine model
  - The DECS installed for each vehicle
  - Maintenance records on DECS
  - Fuel purchase documentation (Fuel DECS)

# Proposed Recordkeeping And Reporting (cont.)

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- Records Kept in the Vehicle
  - Labeling requirement
  - Installation date of a DECS
  - Engine model year and planned compliance date
  - Exemption information (i.e., retirement date, experimental permit info, etc.)

# Still To Be Determined

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- Incentives for Early Compliance
  - 50% Early Compliance by One Year
  - Automatic Extension on Final Compliance Date
  - Considerations for Public Fleets?
- Low Usage Vehicles
  - Potential Exemption from BACT
  - How to Define?

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# **PUBLIC FLEETS**

# **SURVEY RESULTS**

# Public Fleets Survey

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- Purpose: To develop an inventory of vehicles and equipment used in California public fleets
- Contracted with TIAX (formerly Arthur D. Little)
- Over 575 fleets surveyed in 2002

# Survey Results

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- 57% Response Rate
- Collected Information
  - On-road vehicles and off-road equipment
  - Vehicle types, model year, GVWR, etc.
- Final Report March 2003

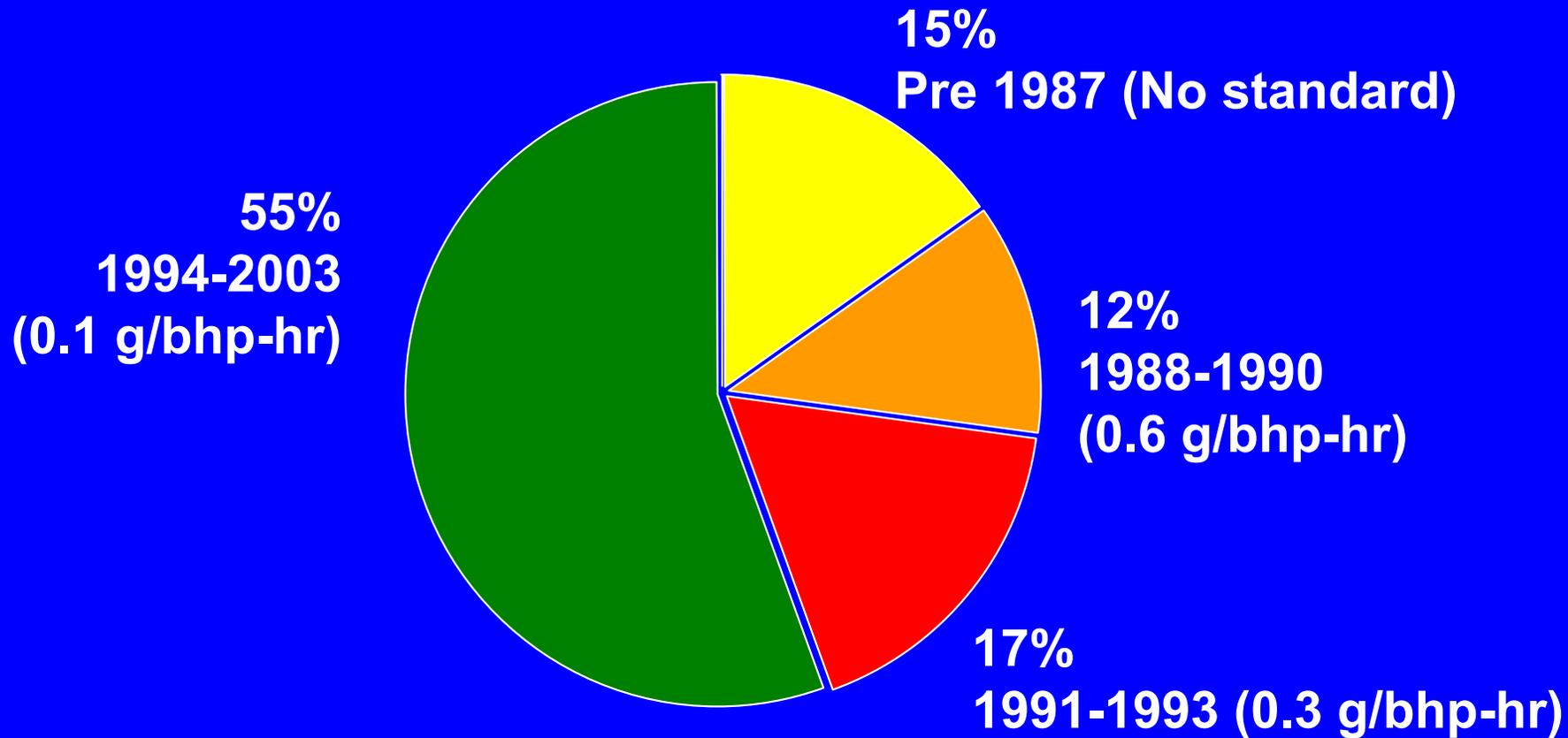
# Vehicles Types

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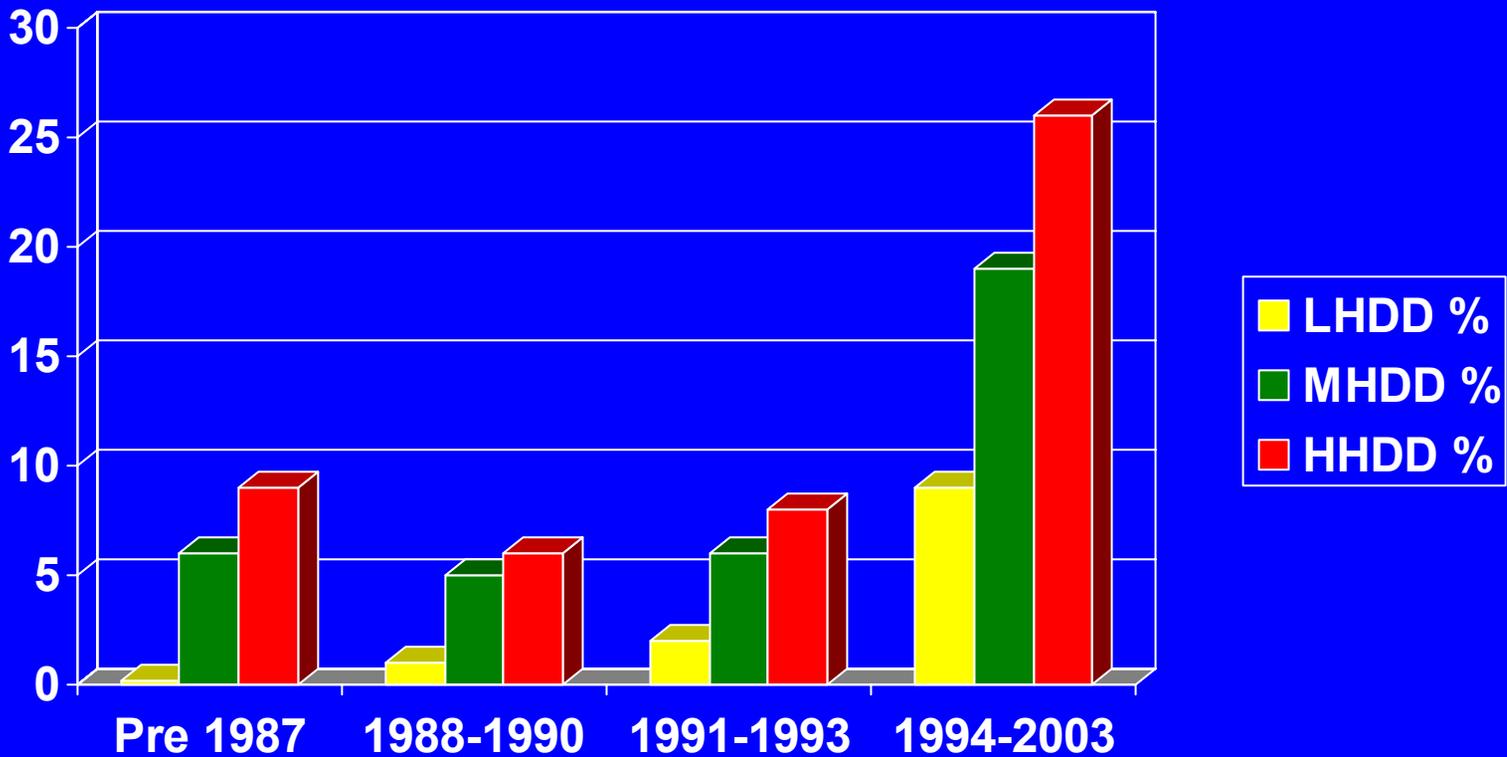
# Public Fleet: PM Standard & Model Year

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# Public Fleet: Vehicle Class & Model Year

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# Survey Request

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- We Need Additional Data
- More Accurate Data = Better Rule
- Download a survey at  
[www.arb.ca.gov/msprog/publicfleets/  
publicfleets.htm](http://www.arb.ca.gov/msprog/publicfleets/publicfleets.htm)

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# **TEMPERATURE EXHAUST STUDY ON- ROAD FLEETS**

# Temperature Exhaust Study

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## ➤ Goals:

- To determine an average temperature profile for various vehicle types
- To determine the percentage of fleet amenable to retrofit with a DPF

## ➤ Used to develop emission inventory predictions

# Test Plan Schedule

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- Contact Agencies: Oct 2003
- Instrument Vehicles and Collect Data:  
Nov to Jan 2003
- Analyze Data: Jan to Feb 2004
- Results Reported in Staff Report: April  
2004

# Municipalities Retrofit In-Use Experiences

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- Public Agencies Have Received Public Funds for Retrofits
- Information on Experience is Needed
- More Data = Better Rule!
- Survey can be downloaded at:  
[www.arb.ca.gov/msprog/publicfleets/  
publicfleets.htm](http://www.arb.ca.gov/msprog/publicfleets/publicfleets.htm)

# NEXT STEPS

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- Public Workshops December 2-3, 2003
- Comments Requested by January 16, 2004
- Staff Report Published May 7, 2004
- Board Hearing June 24, 2004

# COMMENTS REQUESTED

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- By Email: [sclemieu@arb.ca.gov](mailto:sclemieu@arb.ca.gov)
- By Mail:
  - Air Resources Board
  - Attention: Sharon Lemieux
  - 9528 Telstar Avenue, Annex II
  - P.O. Box 8001, El Monte, CA 91731
- By Fax: (626) 450-4480

# Our Goals: Clean Air

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## And Healthy Citizens

# Questions

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- Sharon Lemieux, P.E.
  - Lead Staff
  - Phone: (626) 575-7067
  - Email: [sclemieu@arb.ca.gov](mailto:sclemieu@arb.ca.gov)
- Dr. Nancy Steele, Manager
  - Retrofit Implementation Section
  - Phone: (626) 350-6598
  - Email: [nsteele@arb.ca.gov](mailto:nsteele@arb.ca.gov)