



MassDEP Diesel Efforts

Clean Construction Workshop

December 5, 2006

9:00 a.m. – 11:00 a.m.

One Winter Street, Boston, 2nd Floor

Christine Kirby

MassDEP



Health Effects of Diesel PM 2.5

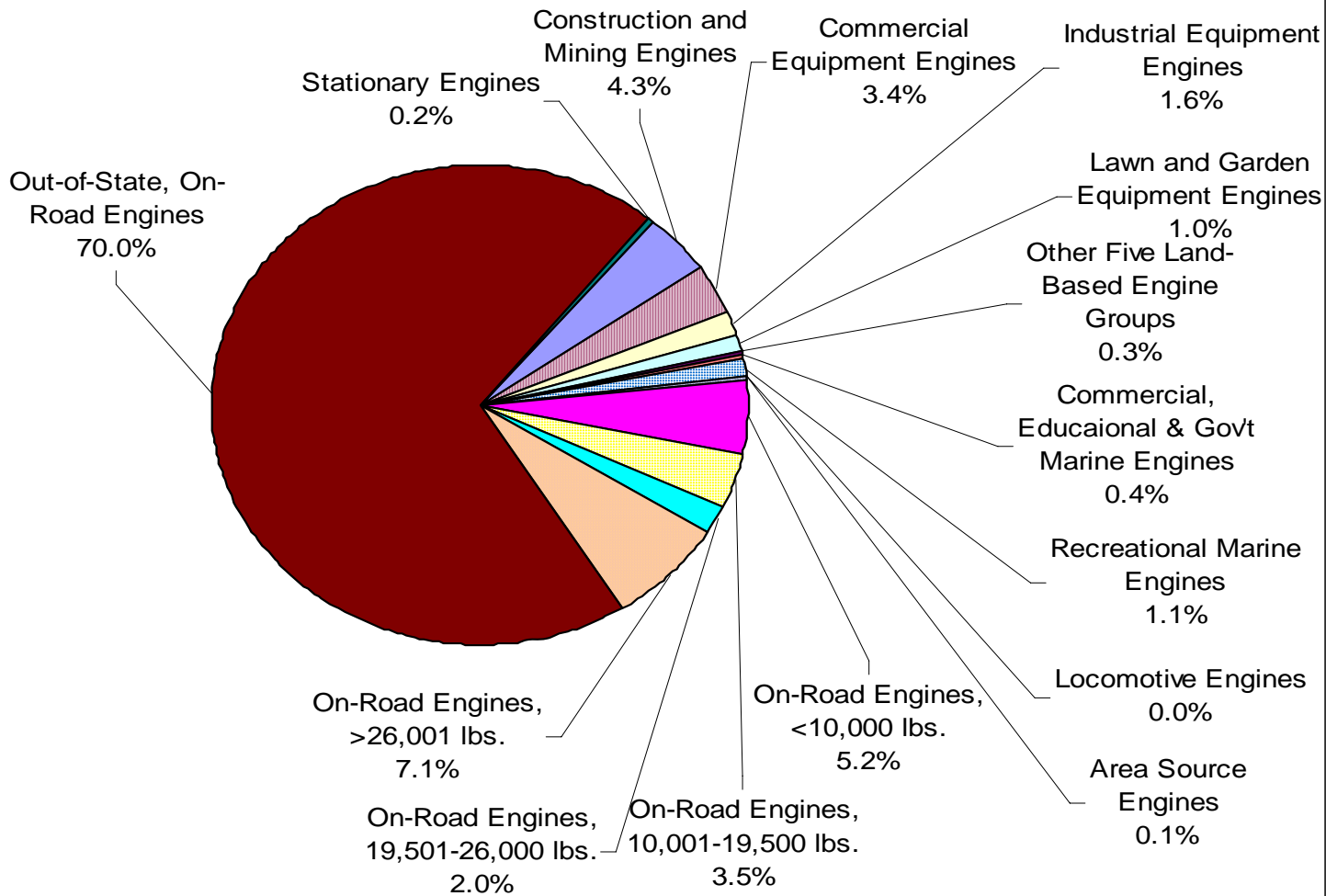
- Probable carcinogen (EPA designation)
- Toxic air contaminant (CARB)
- Causally linked to increased mortality from cardiopulmonary disease & lung cancer
- Associated w/respiratory stress & high rate of asthma in MA
- Exposure to even small amts. = health effects



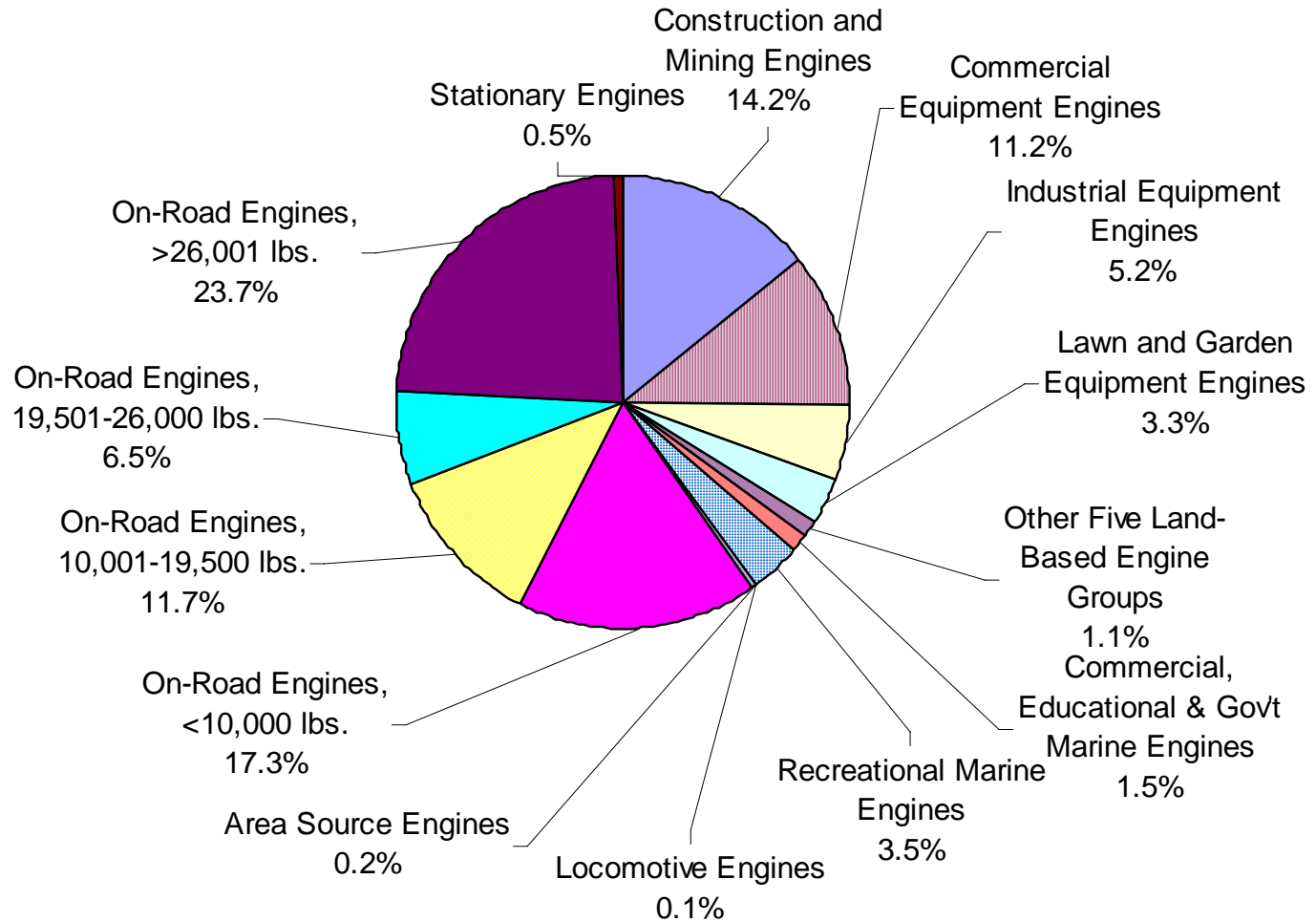
of Diesel Engines in MA

Out-of-State On-Road Engines	478,524
In-State On-Road Engines	121,476
Off-Road, Land-Based Engines	71,964
Marine Engines	10,288
Stationary Engines	1,081
Area Source Engines	379
Locomotive Engines	142
Total	683,854

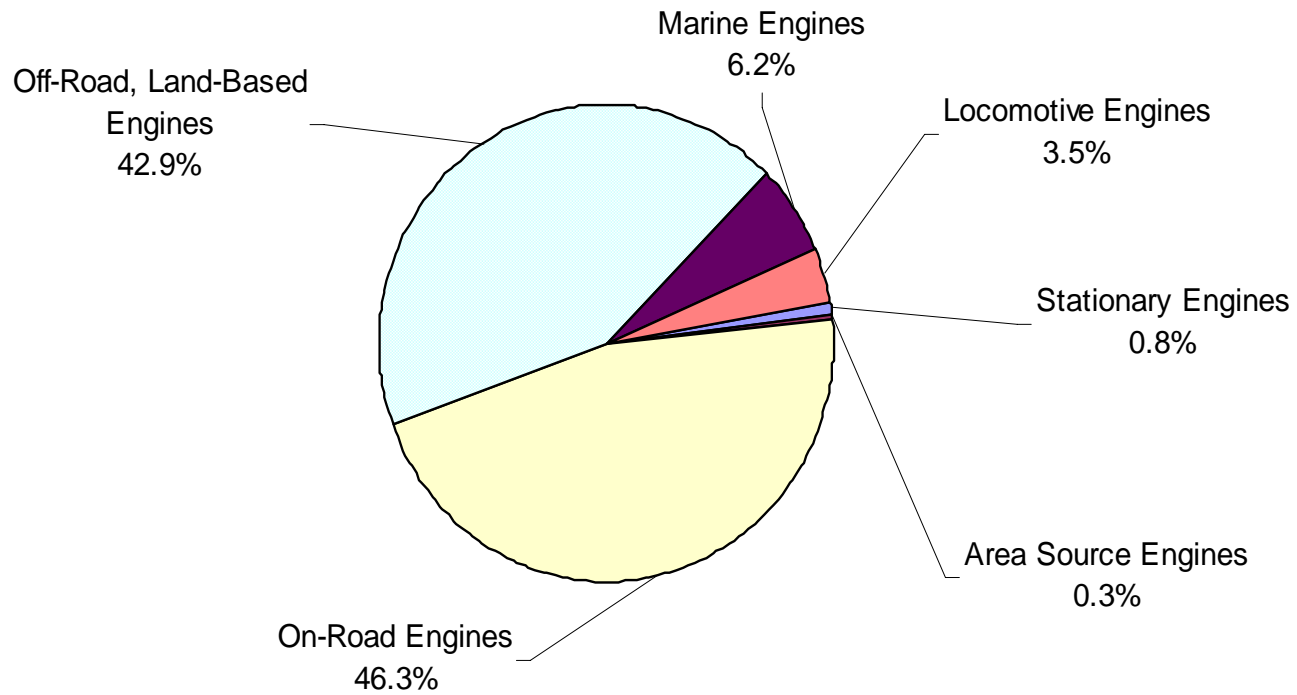
Number of Diesel Engines in Massachusetts (Including Out-of-State On-Road Engines)



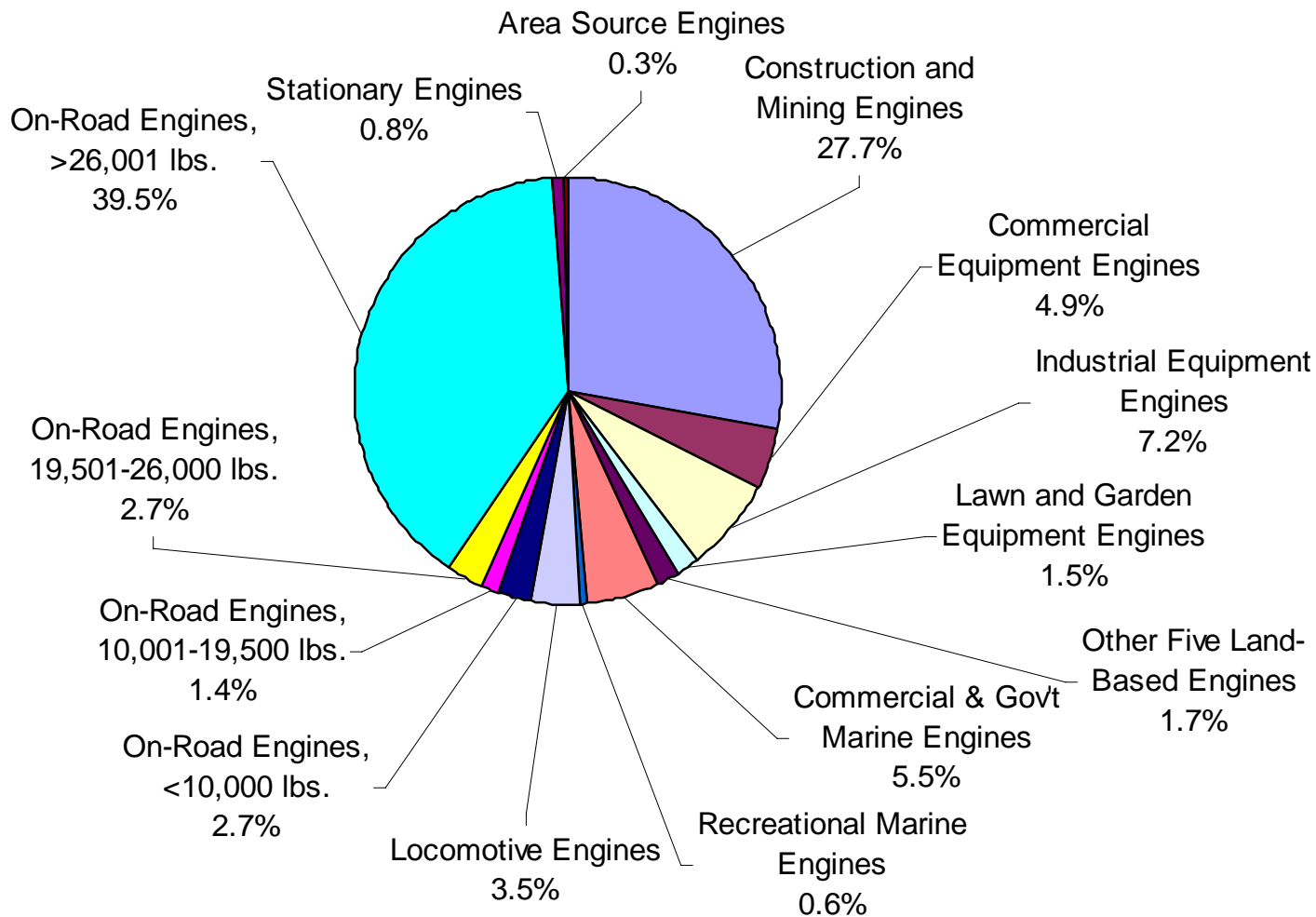
Number of Diesel Engines in Massachusetts (Excluding Out-Of-State On-Road Engines)




Diesel PM2.5 Emissions in MA, All Sources



Diesel PM2.5 Emissions in MA, All Sources, Detail

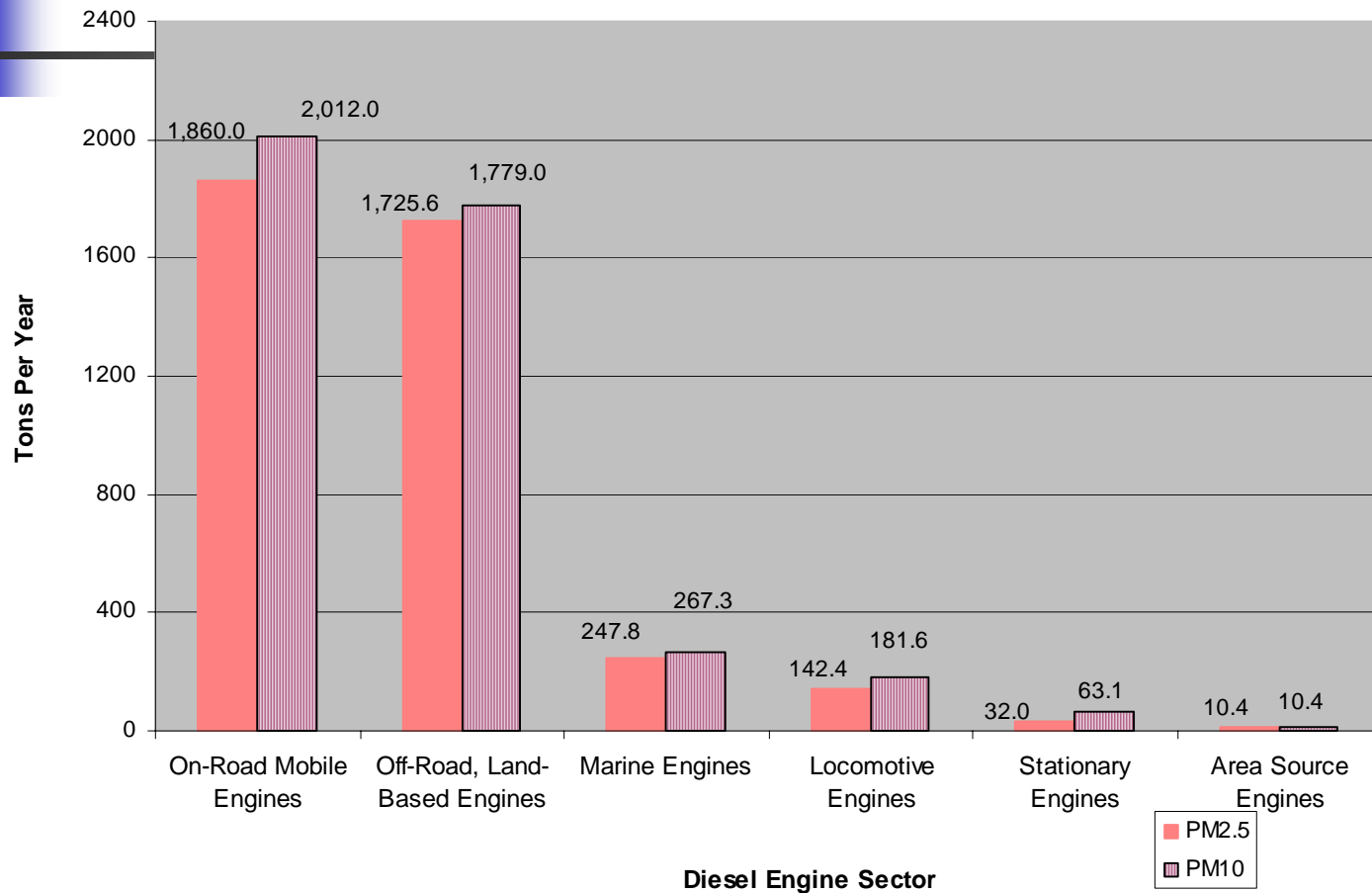


Diesel PM 2.5 Emissions



On-Road Engines 26,000 lbs. and over	1,587.0
Construction & Mining Engines	1,112.9
Industrial Equipment Engines	289.6
Commercial Marine Engines	216.5
Commercial Equipment Engines	198.0
Locomotive Engines	142.4
On-Road Engines >19,500 to 26,000 lbs.	110.0
On-Road Engines <10,000 lbs.	107.0
Other 5 Off-Road, Land-Based Equipment Groups	66.5
School Buses	65.0
Commercial Lawn & Garden Equipment	59.6
On-Road Engines >10,000 and <19,500 lbs.	56.0
Transit Buses	44.0
Stationary Source Engines	32.0
Recreational Marine Engines	25.4
Area Source Engines	10.4
Government Marine Engines	5.9

Diesel PM2.5 Emissions, As a Part of Total PM10



MassDEP Diesel Programs



- Statewide Focus with goal of reducing diesel emissions from in-use vehicles
- Inspection of heavy-duty diesel vehicles for excess smoke
- Idling Reduction – ongoing enforcement efforts and idling reduction toolkits granted to municipalities



MassDEP Diesel Programs

- Retrofits

- Central Artery/Tunnel Project
- MBTA Construction Projects
- MHD Construction Projects
- State Revolving Fund for Water and Sewer Projects
- Landfills
- MEPA Project Recommendations



Contract Specifications

- Contract Specification for SRF projects
 - 50% of construction equip. retrofit in CY 2001
 - 100% of construction equip. retrofit in CY 2002
- Contract Specification for MHD projects
 - Off-road construction equipment >50 HP



Program Support

- Retrofit Vendors on State Contract
- ULSD on State Contract