



Cleaning Up Diesel Pollution



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Respiratory Health Association
of Metropolitan Chicago

Who are we?

Established in 1906,
RHAMC is a non-for-profit
organization dedicated to
promoting healthy lungs
and fighting lung disease
through research,
advocacy, and education



Who are we?

In 2007, RHAMC and Citizen Action/Illinois launched the “Illinois Campaign to Clean Up Diesel Pollution”



- Campaign goal: Significantly clean up diesel pollution in the state.
- Over 60 public health, community, labor, and environmental groups, along with 300 individuals have endorsed our campaign

Campaign Endorsers

**** Partial List ****

- American Cancer Society (Illinois)
- Illinois Public Health Association
- Illinois Maternal & Child Health Coalition
- Asian Health Coalition
- Chicago Asthma Consortium
- Oak Park Department of Public Health
- La Rabida Children's Hospital
- Addressing Asthma in Englewood Project
- West District Health Council
- Rogers Park Community Action Network
- South Austin Community Coalition
- Metro Seniors in Action
- Back of the Yards Neighborhood Council
- ATU Local 241
- Chicago Chapter of the Coalition of Labor Women
- Environmental Law and Policy Center
- Union of Concerned Scientists



Diesel Pollution

What's the problem?

- Diesel pollution is a serious health problem.
- Diesel exhaust contains over 40 toxic contaminants, carcinogens, ozone-forming compounds, and fine particulate matter (“soot”)
- Fine particle matter is considered one of most dangerous pollutants in diesel exhaust



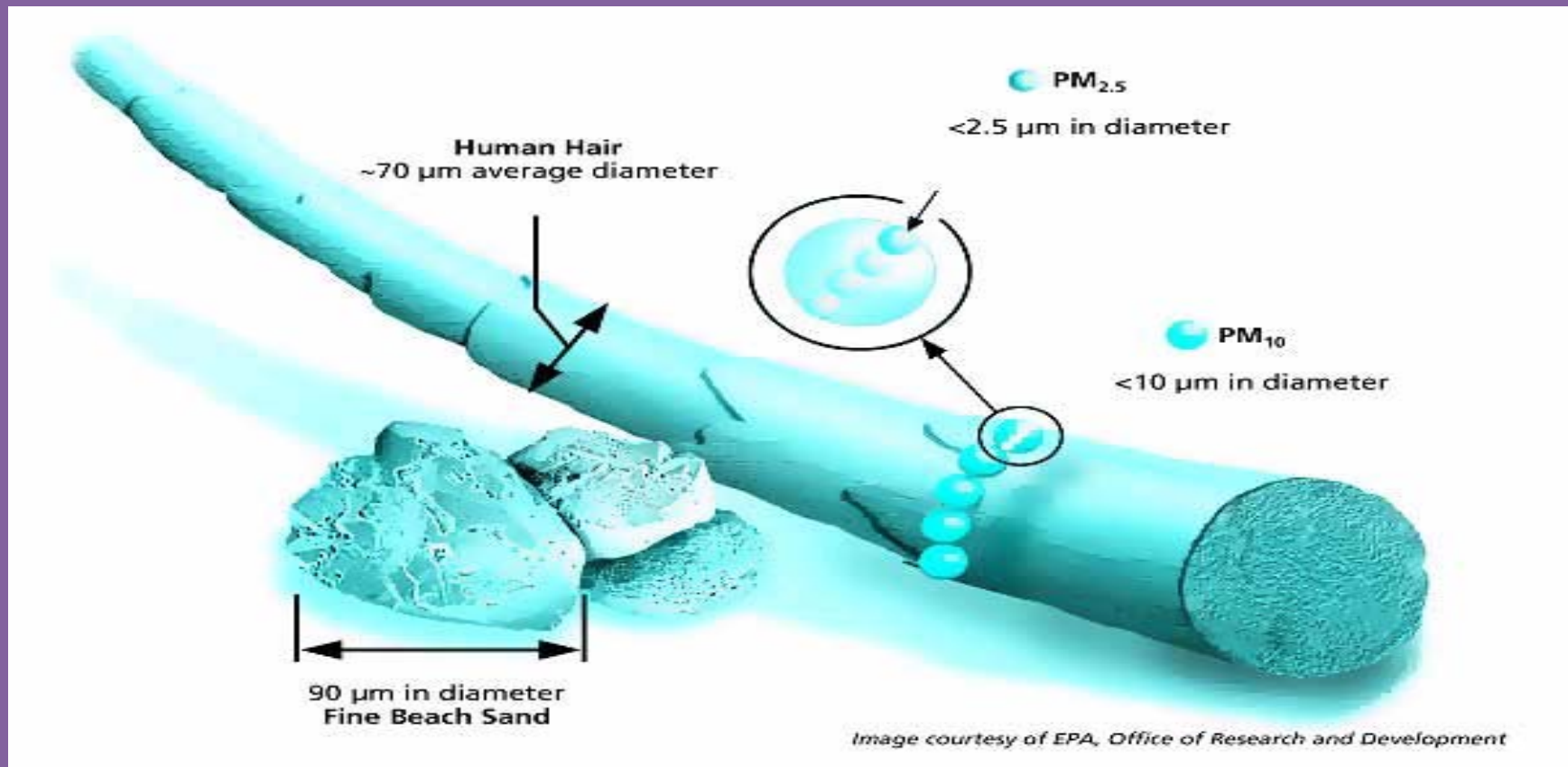
Diesel Pollution



- Fine particles have been associated with asthma attacks, heart attacks, lung cancers, strokes, and even premature deaths.
- Besides the chemical makeup of PM, what makes particle matter so harmful is the size of the particles

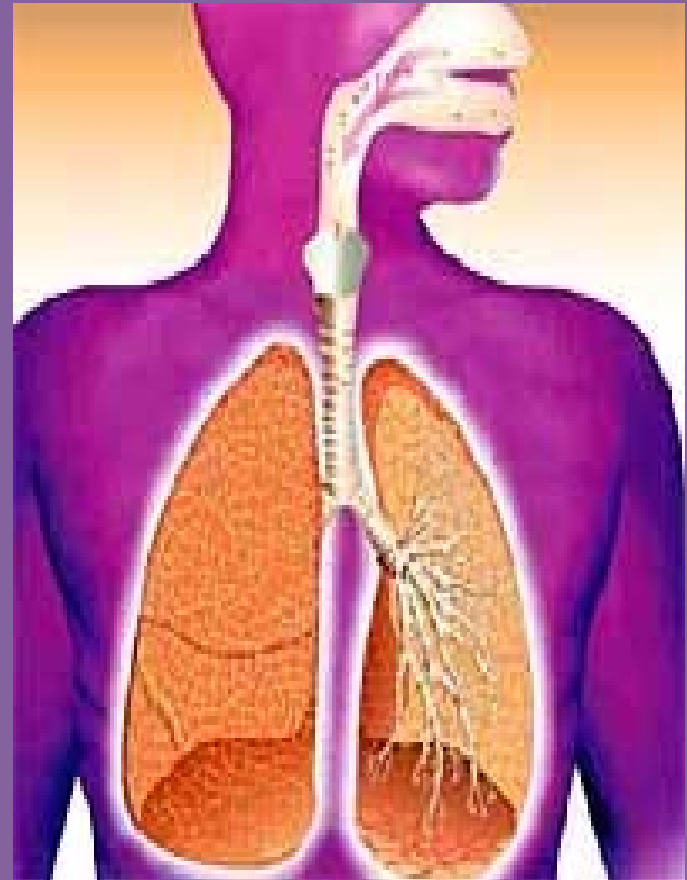
Diesel Pollution

Particulate matter can be 2.5 micrometers or smaller. How small is 2.5 micrometers? The average human hair is about 70 micrometers in diameter – making it 30 times larger than the largest fine particle.



Diesel Pollution

Because of their small size, fine particles evade the body's natural defenses, such as coughing and sneezing, and can penetrate deep into the lungs and enter the bloodstream adversely affecting the respiratory and cardiovascular system



Health Effects of Particulate Matter

Particulates have been associated with:

- Decreased lung function
- Increased respiratory disease (trigger asthma attacks and cause chronic lung diseases)
- Blood clotting, irregular heartbeats, increased blood pressure
- Heart attacks and stroke
- Increased risk of low birth weight and preterm birth
- Cancer
 - Nationally, diesel exhaust poses a cancer risk that is 7.5 times higher than the combined total cancer risk from all other air toxics combined.

Diesel Pollution



Nationwide, it is estimated that 21,000 people die prematurely each year due to diesel pollution.

In Illinois alone, it is estimated that diesel exhaust triggers over 19,000 asthma attacks, nearly 1,200 heart attacks, and 878 premature deaths each year.

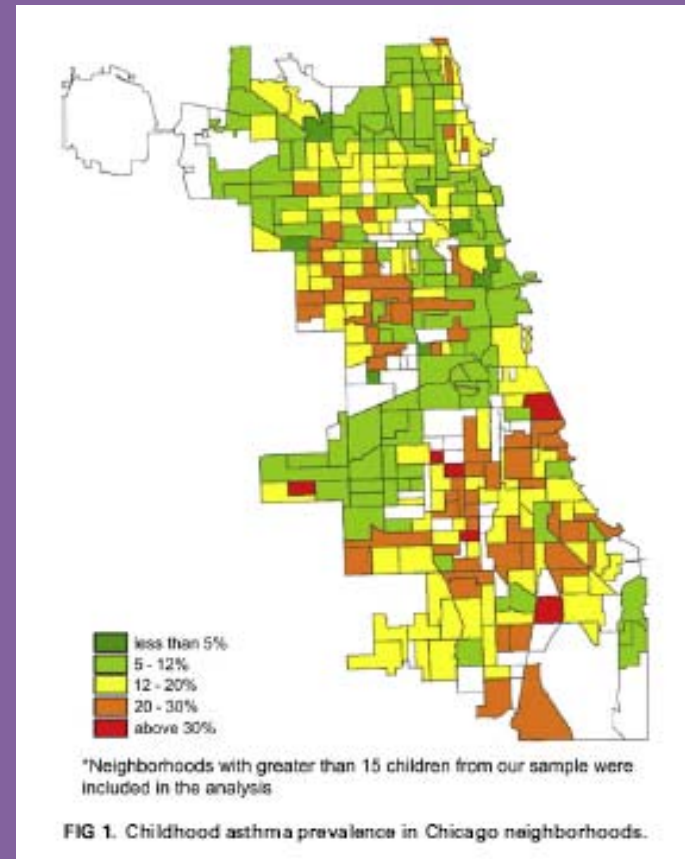
Who's at Risk?

- Although exposure to diesel exhaust is unhealthy for everyone, people with heart or lung diseases, children and the elderly are the most at risk to the health impacts of diesel pollution



Chicago Asthma Stats

- Chicago is known as the “epicenter” of asthma
- In Chicago, the hospitalization rate is nearly double than average
- In some neighborhoods, over 30% of children suffer from asthma



Who's at Risk?



- Children are particularly vulnerable to the health impacts of air pollution because their lungs are still developing.
- Children also breathe 50 percent more air per pound of body weight than do adults, which also makes them more vulnerable.

Who's at Risk?

Lifestyle Factors

- Driving frequently in areas with high congestion or riding on diesel transit buses, which lack pollution controls
- Working near diesel sources
 - A 2008 Harvard Study found odds of dying from heart disease are nearly 50 percent higher among truck drivers than the general U.S. population



Who's At Risk?

- **Living close to busy roads or highways**
 - 2007 study by German researchers found that living near an a highway or heavily traveled road is associated with increased risk of hardening of the arteries

Proximity to heavy traffic	Chance of high coronary artery calcification
Within 50 meters	63%
Between 51-100 meters	34%
Between 100-200 meters	8%

Solutions



- **Cleaner fuels and technologies are available today that can virtually eliminate diesel fine particles.**
- **Emission controls called diesel particulate filters (DPFs), combined with the use of ultra-low sulfur diesel fuel (ULSD), can eliminate over 90% of fine particles from a heavy-duty truck or bus**

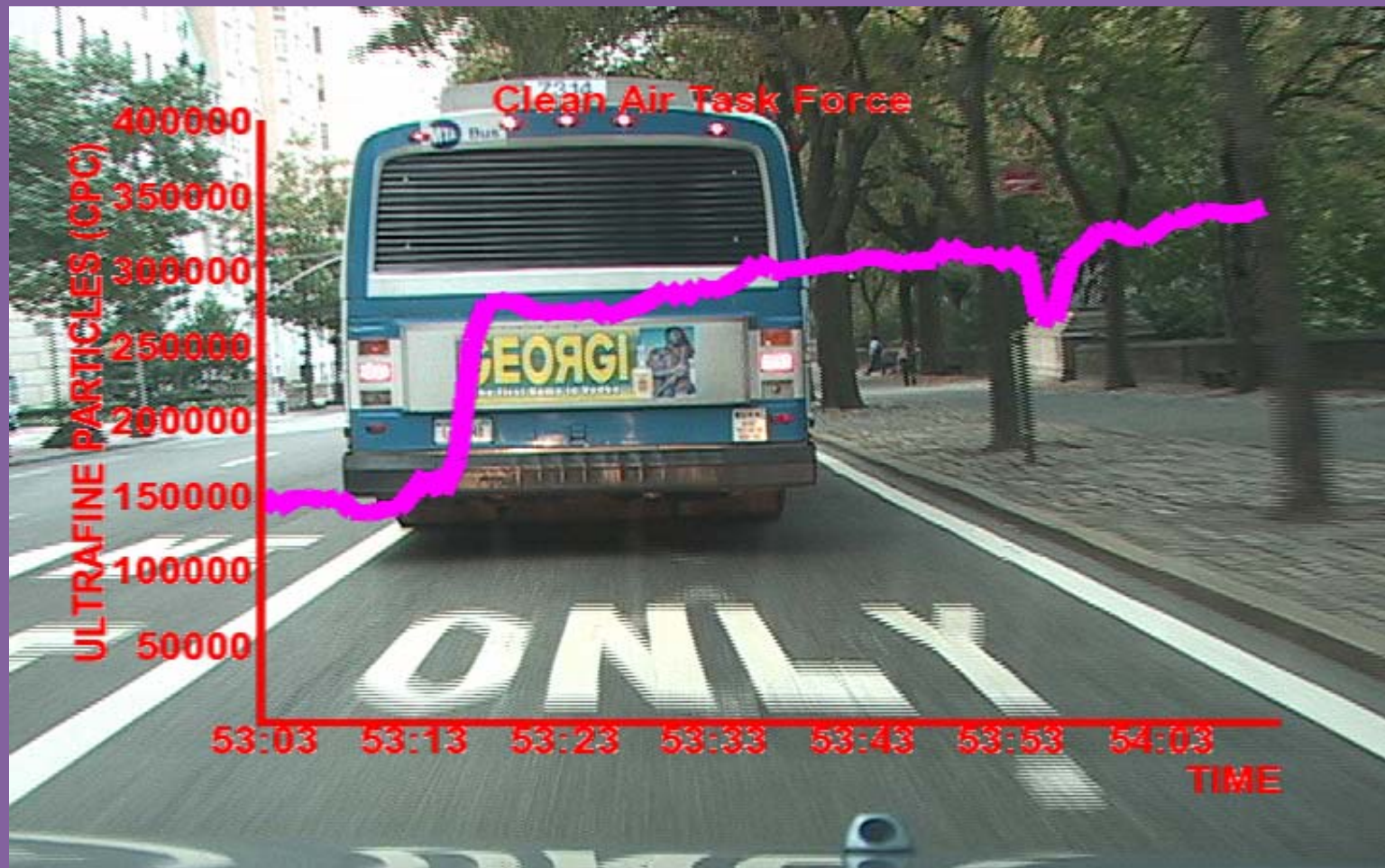
Solutions



Picture of a diesel particulate filter

- Federal rules now require all new diesel buses and trucks to use particulate filters. However, older models are not required to install these controls.
- Moreover, rules affecting other types of diesel engines will not take effect until years to come.

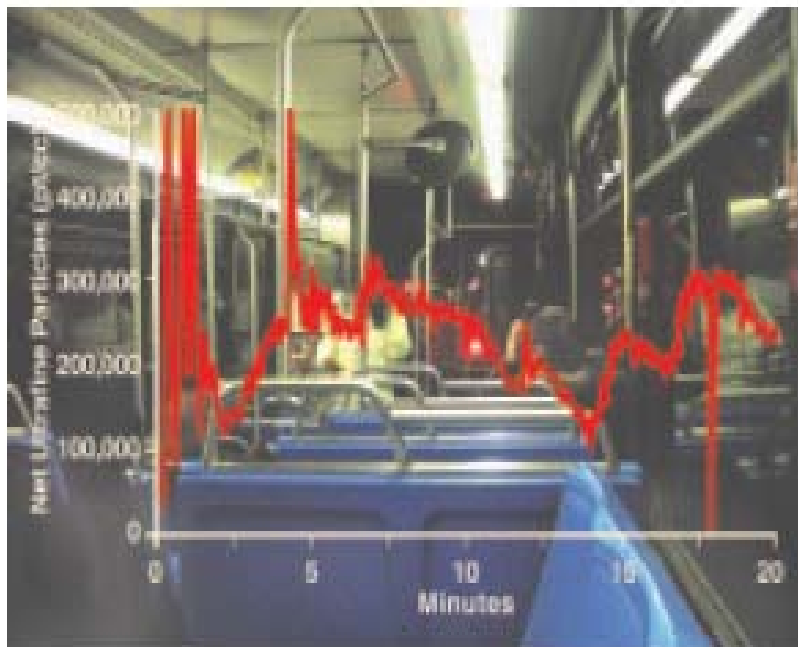
Diesel Exhaust Levels from a Bus Without a Particulate Filter



Diesel Exhaust Levels from a Bus With a Particulate Filter



Diesel exhaust levels inside the cabin with and without a particulate filter



CATF researchers measured high ultrafine particle levels on a conventional transit bus in Boston (left), while levels on a bus retrofitted with a particle filter were barely detectable (right).

Pictures courtesy of the Clean Air Task Force

Cleaning Up Diesel Pollution

Cities can work to clean up diesel

Pollution by:

1. Starting a retrofit program (school and transit buses, construction equipment, locomotive engines)
2. Pass diesel pollution ordinances
3. Promote No-Idling practices and enforce state's No-Idling Law
4. Endorse the Illinois Campaign to Clean Up Diesel Pollution

Diesel Retrofits



Funding is available to help cities pay for diesel retrofits

- Illinois EPA Clean School Bus Program
- Congestion Mitigation and Air Quality (CMAQ) Funding
- EPA Clean Diesel Initiative
- Metropolitan Mayors Caucus/Clean Air Counts

Diesel Retrofit Funding

- **Illinois EPA Clean School Bus Program**
 - Over 700 school buses have been retrofitted to date
 - Deadline to apply for funding: On-going
 - For more information:
<http://www.epa.state.il.us/air/cleanbus/resources.html>
- **Chicago Mitigation and Air Quality (CMAQ)**
 - CMAQ provides funding for projects in the Chicago metro area that improve congestion and/or mitigate air pollution.
 - In FY 2008, \$54 million was given in the Chicago metropolitan area for CMAQ projects. In the past, the City of Chicago, as well as other cities have applied and successfully received money for diesel retrofits.
 - Deadline to apply for funding: Early February
 - http://www.cmap.illinois.gov/cmaq/fy2009_cmaq.aspx

Diesel Retrofit Funding

- **Midwest Clean Diesel Initiative**
 - For fiscal year 2008, EPA's Midwest Clean Diesel Initiative, was awarded approximately \$5 million to distribute for diesel retrofits
 - Deadline to apply: June (dependent on federal appropriation)
 - <http://www.epa.gov/midwestcleandiesel/grants/mcdirfp08.html>
- **Metropolitan Mayors Caucus/Clean Air Counts**
 - Provides periodic grants for diesel retrofits

Cleaning Up Diesel Pollution



Cities can combat pollution by passing local diesel ordinances

- **Clean construction**
 - Various cities and counties have adopted clean construction specs, which require cleaner fuels and equipment to be used on their projects
 - O'Hare Modernization Program, Dan Ryan Rebuild, IDOT, Illinois Highway Department have adopted clean construction specs

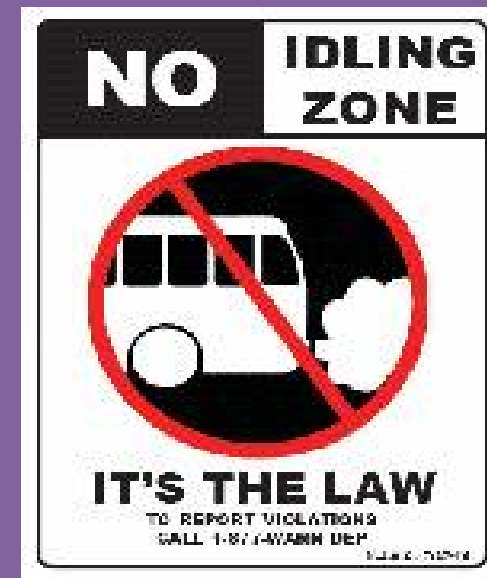
Cleaning Up Diesel Pollution



- **Garbage trucks**
 - Important to clean up as they emit pollution in close proximity to homes
 - NYC and New Jersey require their contractors to use trucks with controls

Cleaning Up Diesel Pollution

- In 2006, the Illinois General Assembly passed HB 4782, which limits idling of diesel vehicles
- Limits idling of diesel vehicles to 10 minutes in the Chicago metro and St. Louis areas (with some exemptions)



Cleaning Up Diesel Pollution

ILLINOIS CAMPAIGN
TO CLEAN UP
D I E S E L
POLLUTION



- **Join the movement to clean up diesel pollution. Endorse the Illinois Campaign to Clean Up Diesel Pollution!**
- **See Ashley Collins, RHAMC, for an endorsement form**



Questions?

For more information, please log onto our website at www.lungchicago.org

