



Borough of Leonia

**Vehicle Emissions Reduction Education in Leonia
EPA Grant-funded Project**

January 11, 2012



AGENDA

- Introductions
- Why is it important to reduce vehicle emissions?
- Why is it important for kids to get more exercise?
- How can we work together to encourage walking and biking to school?

Why Reduce Vehicle Emissions?

Climate change

- About a third of NJ's carbon footprint comes from transportation
- Greenhouse gases in vehicle emissions contribute to global climate change
- Climate change threatens human health and safety
- Climate change jeopardizes the environment
- Climate change threatens property, quality of life and the economy



Why Reduce Vehicle Emissions?

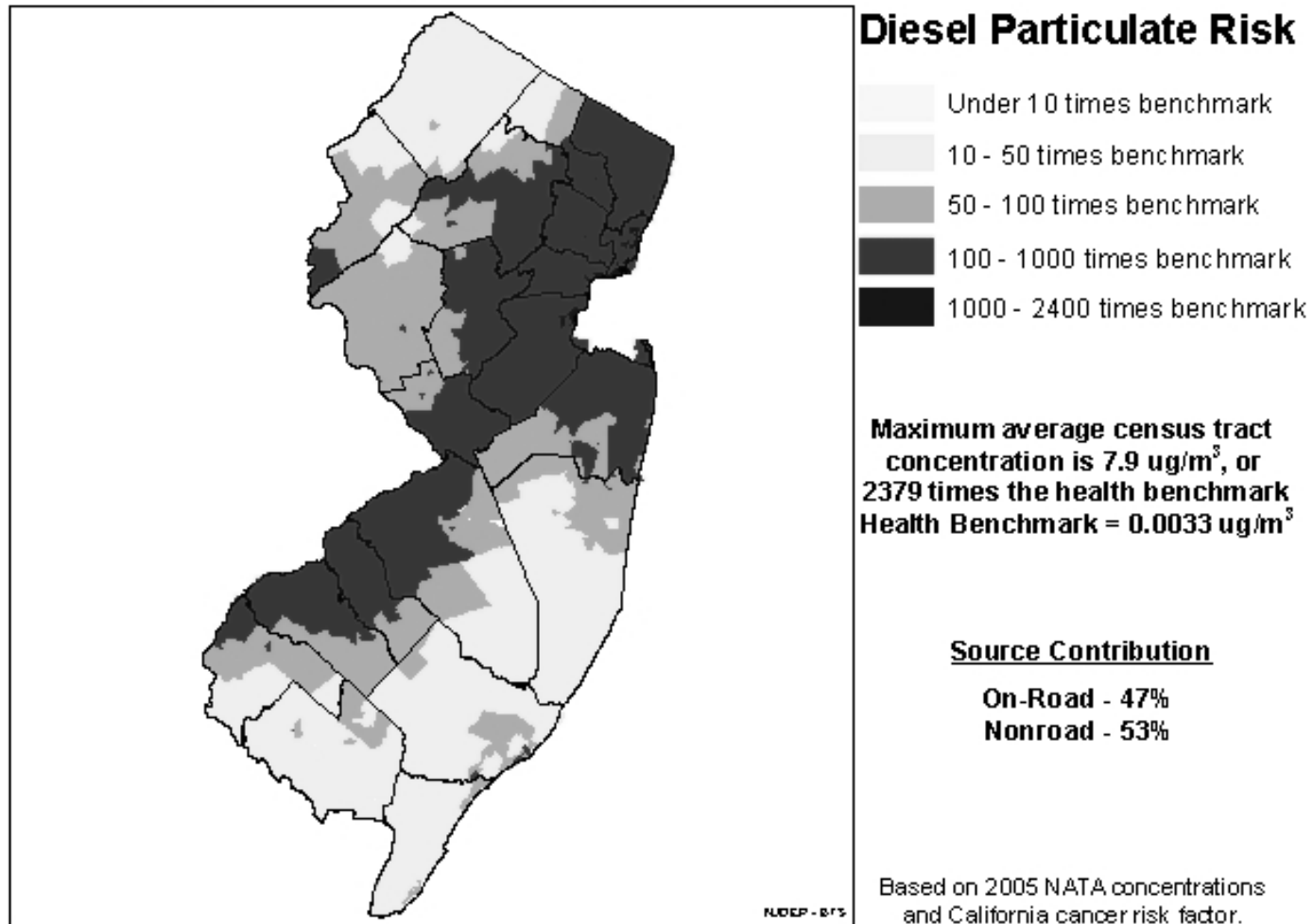
Health

- NJ ranks among the 5 smoggiest states in the US
- In NJ, fine particulate pollution may cause more premature deaths than homicides and car accidents combined.
- Breathing in fumes from heavy traffic can triple the risk of heart attack for up to an hour.
- Auto emissions result in 20,000-46,000 cases of chronic respiratory illness and 40,000 premature deaths each year nationwide.
- Children breathe up to 50% more air per pound of body weight than adults, making them more vulnerable to toxic effects of vehicle emissions.

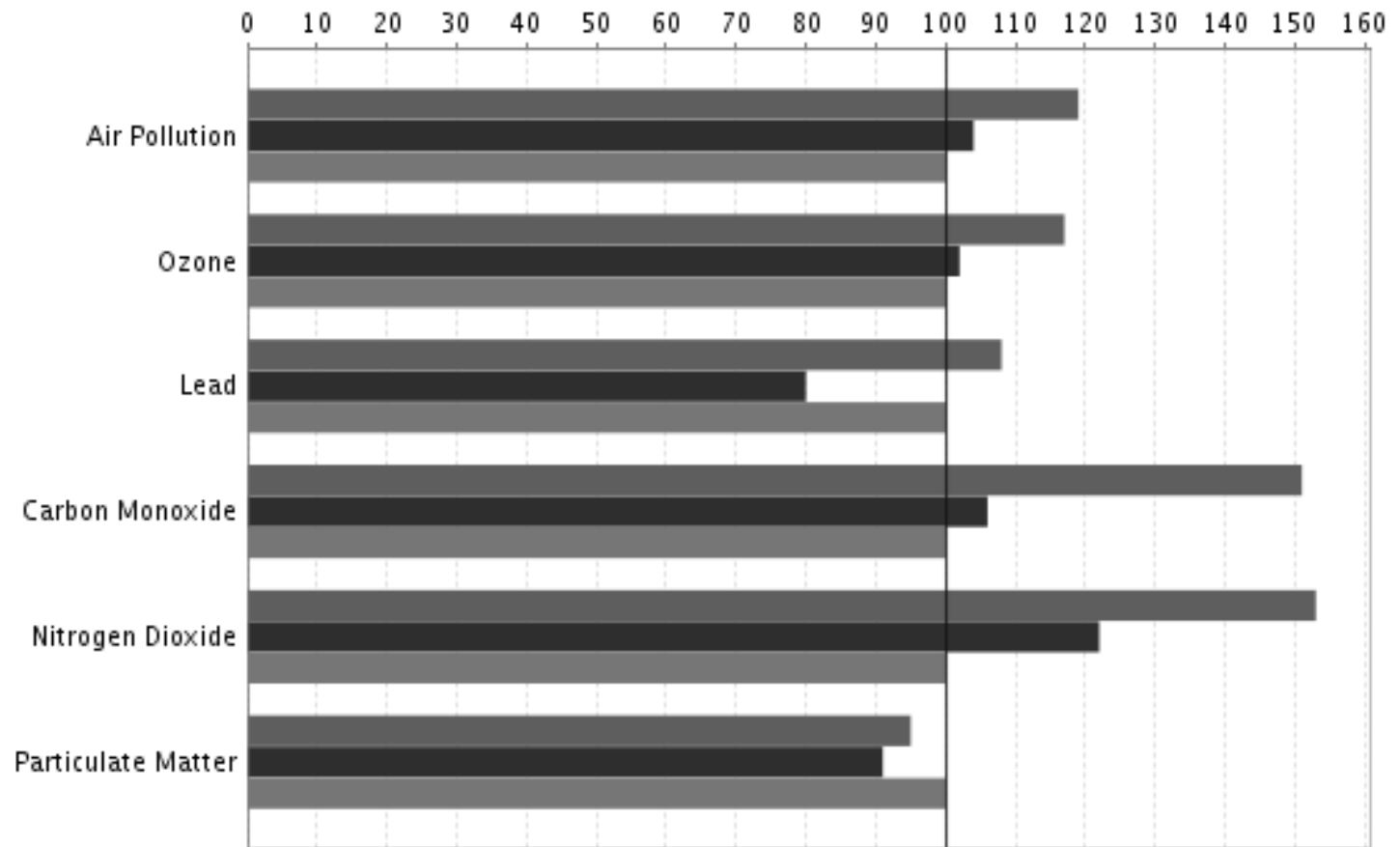


The International Agency for Research on Cancer (IARC) considers diesel engine exhaust to be "probably carcinogenic to humans."

2005 Predicted Diesel Particulate Risk in New Jersey from Mobile Sources



2010 Pollution Indexes



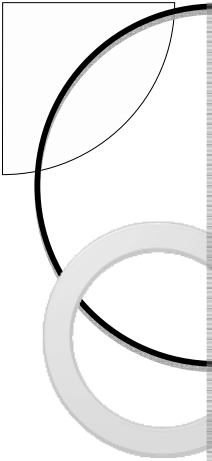
Provided by: CLRSearch.com

■ Leonia, NJ ■ New Jersey ■ United States

2010 Pollution Index	Leonia	NJ	US
Air Pollution Index	119	104	100
Ozone Index	117	102	100
Lead Index	108	80	100
Carbon Monoxide Index	151	106	100
Nitrogen Dioxide Index	153	122	100
Particulate Matter Index	95	91	100

Index Score: (100=National Average) for an area is compared to the national average of 100. A score of 200 indicates twice the national average, while 50 indicates half the national average.

- Leonia's air pollution index is 19% worse than the national average.
- Leonia's index for carbon monoxide is 51% worse than the nationwide average



POLLUTANT	HEALTH EFFECTS
Particulate Matter	<ul style="list-style-type: none">▪ Hospitalizations for worsened heart diseases▪ Emergency room visits for asthma▪ Premature death
Ozone (O₃)	<ul style="list-style-type: none">▪ Cough, chest tightness▪ Difficulty taking a deep breath▪ Worsened asthma symptoms▪ Lung inflammation
Carbon Monoxide (CO)	<ul style="list-style-type: none">▪ Chest pain in heart patients▪ Headaches, nausea▪ Reduced mental alertness▪ Death at very high levels
Nitrogen Dioxide (NO₂)	<ul style="list-style-type: none">▪ Increased response to allergens
Toxic Air Contaminants	<ul style="list-style-type: none">▪ Cancer▪ Chronic eye, lung or skin irritation▪ Neurological and reproductive disorders

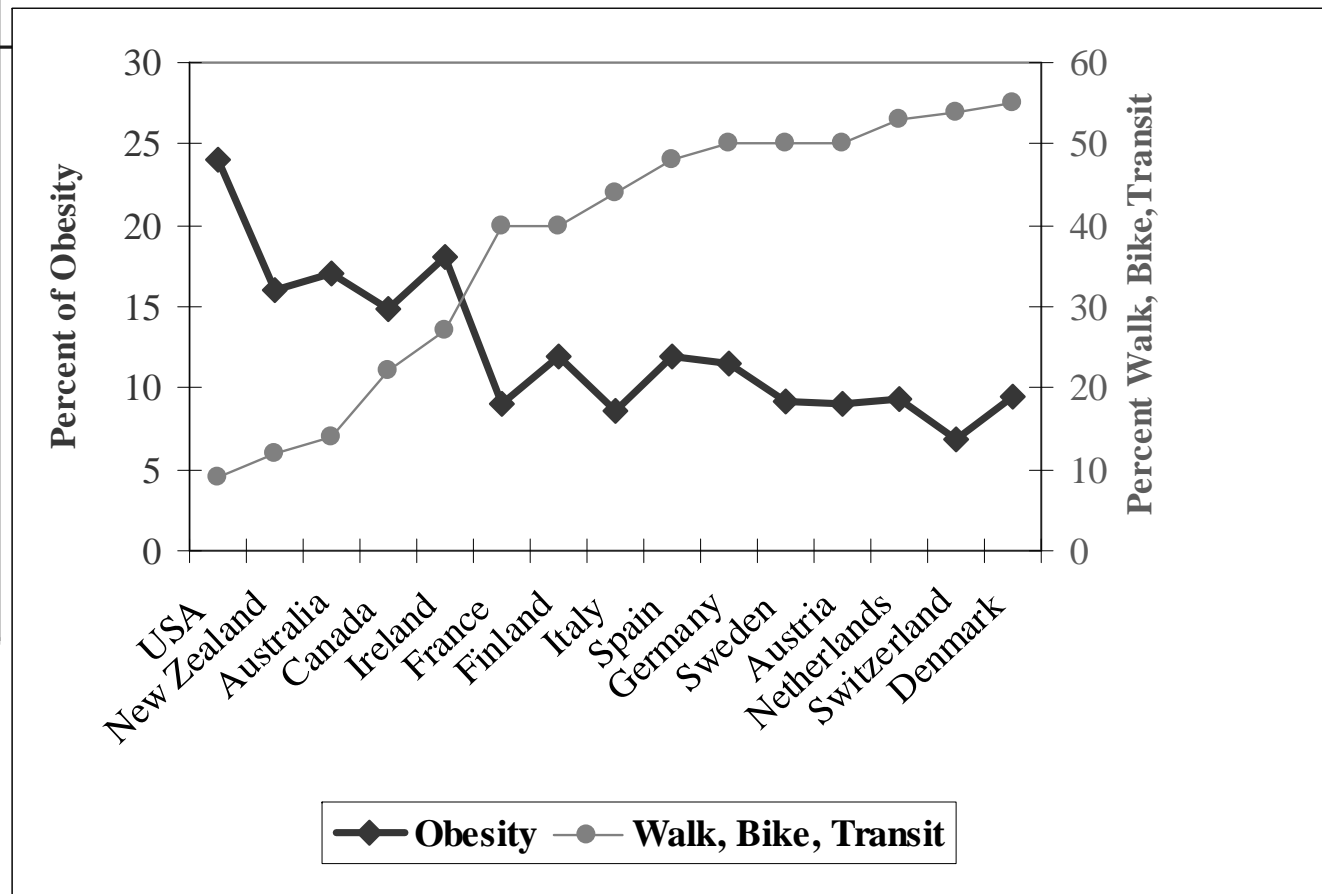
Less driving = healthier children



- 35% of youngsters do not participate in regular vigorous physical activity.
- Over the past 3 decades, prevalence of overweight children tripled to 17% of the population.
- US childhood asthma prevalence has surged to almost 10%, and more so in urban areas. (Vehicle emissions can exacerbate asthma.)

Link between exercise and vehicle emissions

Does auto-dependency make us fat? Obesity falls sharply with increased walking, cycling, and transit use!



Source: John Pucher, Walking and Cycling for Health



Why drive less in Leonia?

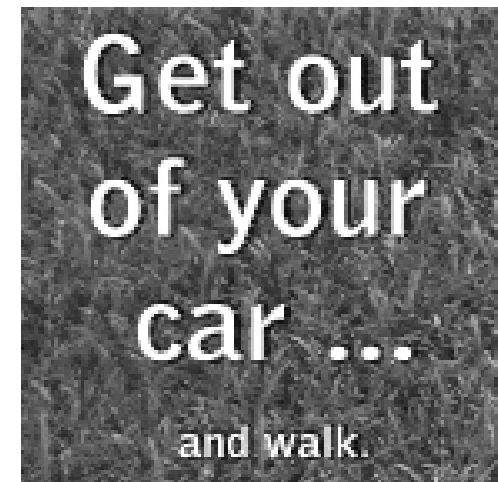
- Reduce greenhouse gas emissions that contribute to global climate change
- Reduce vehicle exhaust that contributes to cancer, respiratory disease and other life-threatening diseases
- Promote health and reduce obesity due to lack of exercise
- Decrease local traffic volumes to reduce risk of injury and death and improve quality of life

Fun facts

- 20 billion extra pounds of CO₂ are released annually due to overweight and obesity in the US.
- You could produce 5 pounds of CO₂ in the 10 minutes it takes to find a parking space.

A head start in Leonia

- Leonia Energy Challenge
- Anti-idling ordinance
- Police officers on bikes
- **W**alk **A**round **L**eonias **K**ids campaign in 1999
- 2011 Health Fair –
“Get Out of Your Car!”



Ideas for Leonia schools:

- Walking school bus
- Bike-to-school events
- Preferential staff parking for hybrid vehicles and carpoolers
- No-Idling campaign
- Emission reduction element in curriculum
- Competition to save the most emissions
- Others?



Reflection



Let's Capture Our Ideas!





Next Steps?
Time Frames?
Who's Interested?

THANK YOU!!