



Community Action to Promote Healthy Environments Diesel PM Exposure, Population Vulnerability & Mortality

Policy Recommendations to reduce exposure to diesel PM, with a focus on vulnerable populations include:

- **Control emissions on mobile sources** such as cars, trucks & heavy equipment (e.g., through retrofitting or replacing older diesel engines, reducing idling, & using clean fuels);
- **Plant and/or install buffers & barriers** between heavily trafficked roadways & people;
- **Increase monitoring of ambient air** to better understand air pollution levels & patterns.

Health Impacts, per year in Detroit, due to Near-Roadway Exposures.

- **Figure 1 shows census tracts with the highest levels of diesel PM exposure in the Detroit Metropolitan Area.**
- **Residents living in census tracts with the highest levels of exposure to diesel (levels 3-5) have a 12% increased likelihood of death due to cardiopulmonary (heart and lung) disease** compared to those living in census tracts with the lowest levels of air pollutants (levels 1-2) after controlling for individual risk factors such as education or smoking;
- **Residents of census tracts with the highest levels of diesel PM are significantly more likely to be Black or Latino, to have lower educational levels, & to live below the poverty line (Figure 2).**

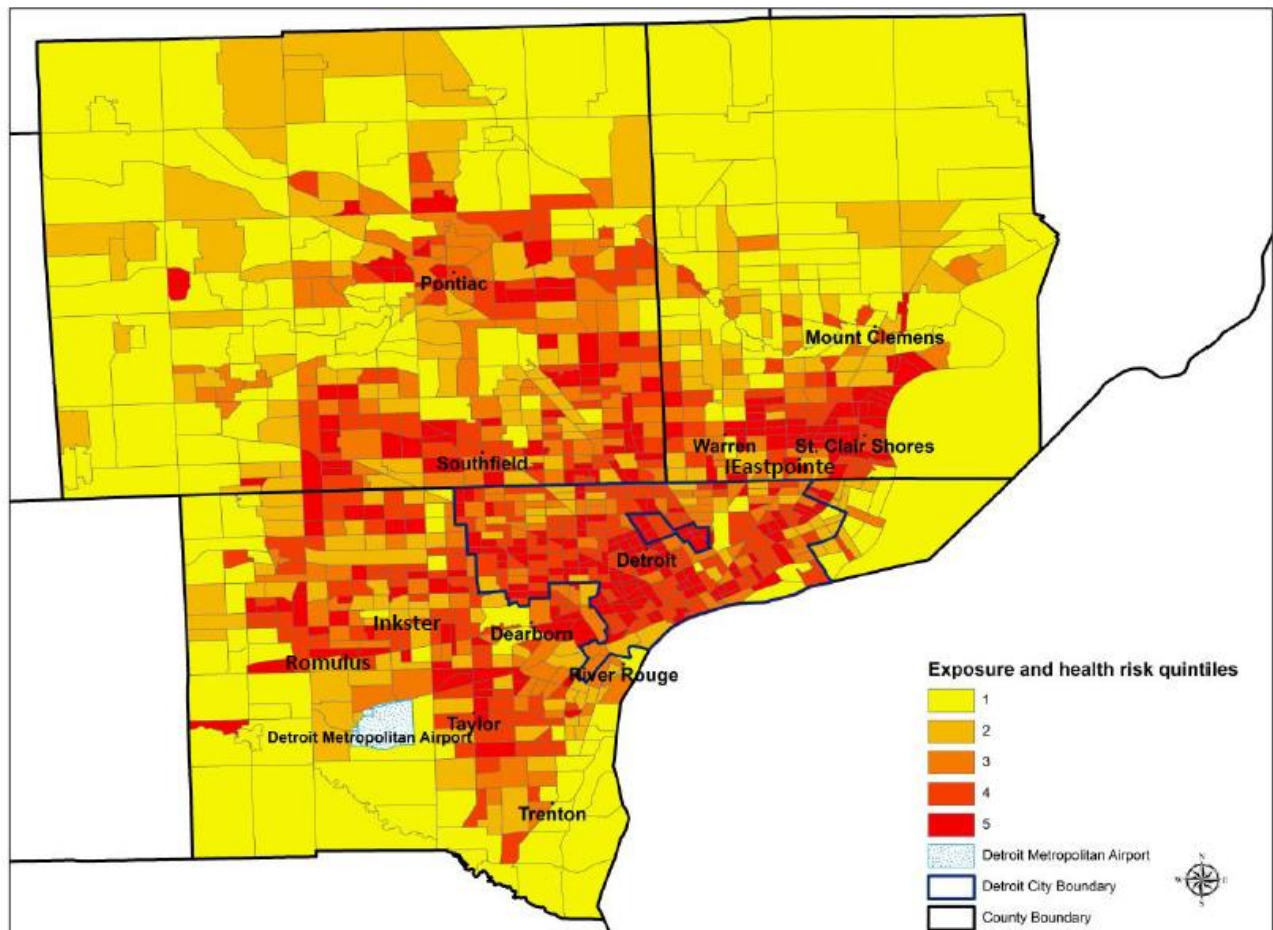


Figure 1: Diesel PM Exposure, Cancer and Respiratory Risk Attributable to Air Pollution in the Detroit Metropolitan Area

- Census tracts with the highest levels of diesel PM exposure are more likely to be below the age of 5 or over the age of 60: Both of these groups experience more adverse health effects of air pollution than adults less than 60 years of age;
- **Approximately 260 deaths due to cardiopulmonary disease would be averted each year** if census tracts with the highest levels of exposure (levels 3-5) were reduced to levels currently found in low exposure areas (levels 1-2). The majority (about 224) of these deaths would be among those who are most vulnerable.

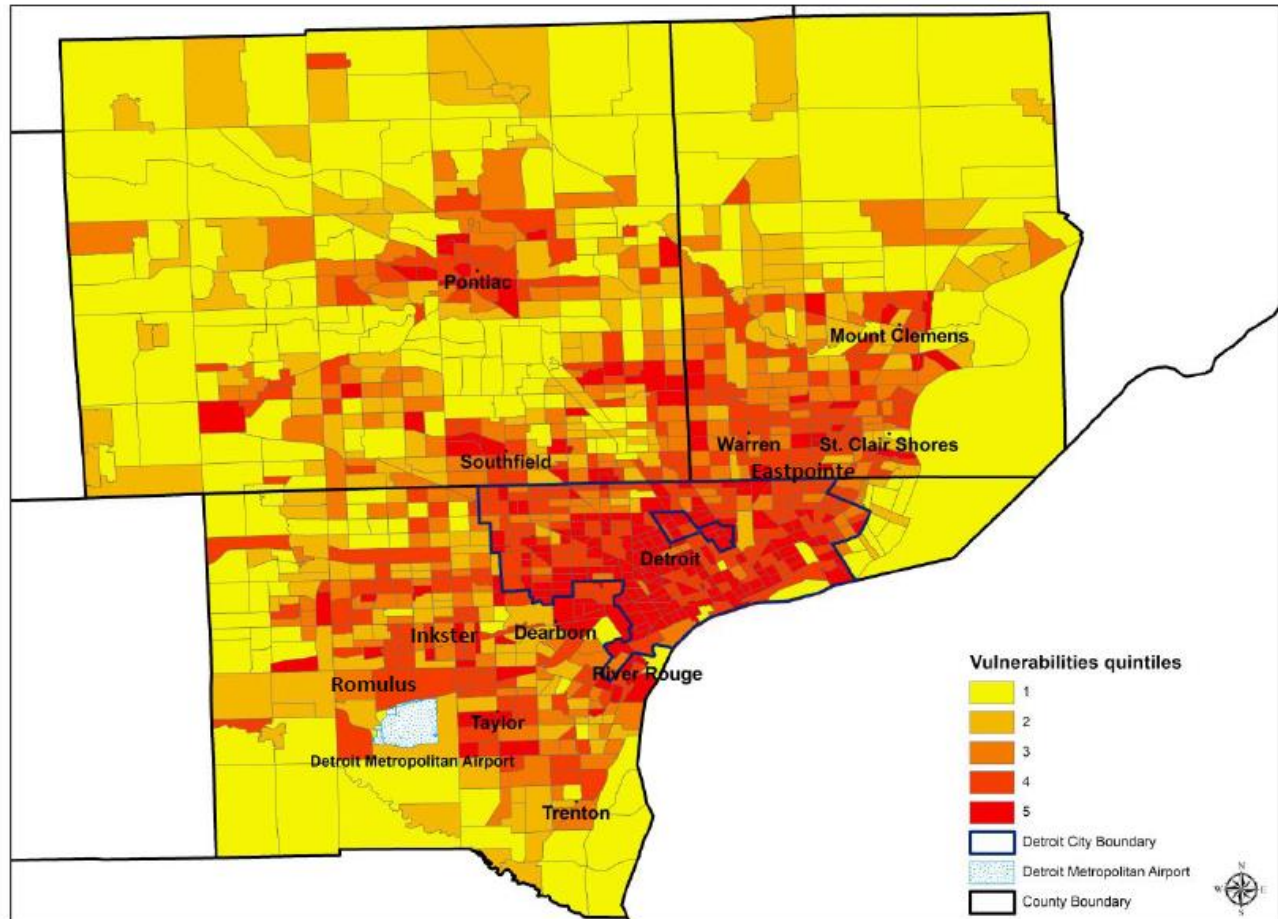


Figure 2: Population Vulnerability (below poverty, non-white, low education, age over 60 or under five) in the Detroit Metropolitan Area

Project Overview:

- Community Action to Promote Healthy Environments (CAPHE) is a community based participatory research partnership that has developed a **scientifically informed public health action plan** to reduce air pollutant exposures and improve health in Detroit.
- Partners include: Community Action Against Asthma, Community Member-at-Large Theresa Landrum, Detroit Community-Academic Urban Research Center, Detroit Health Department, Detroit Hispanic Development Corporation, Detroiters Working for Environmental Justice, Green Door Initiative, Healthy Environments Partnership, Michigan Department of Environment, Great Lakes, and Energy (EGLE), Sierra Club, Southwest Detroit Community Benefits Coalition, Southwest Detroit Environmental Vision, University of Michigan School of Public Health, Michigan Medicine, and Taubman College of Architecture and Urban Planning, University of Michigan-Dearborn, and University of Detroit Mercy School of Law



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