



Air Pollution and Health

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Community Action to Promote Healthy Environments

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Criteria pollutants emitted

Table A – Total Project Emissions

Pollutant	Estimated Emissions (tpy)
Particulate Matter (PM)	3.25
PM10	11.54
PM2.5	11.54
SO ₂	4.97
CO	90.47
NO _x	87.97
Volatile Organic Compounds (VOCs)	11.63
Greenhouse gases (GHG) as carbon dioxide equivalents (CO ₂ e)*	200,269

* A recent decision by the Supreme Court (*Utility Air Regulatory Group v. U.S. EPA*), No. 12-1146 (June 23, 2014)) determined that PSD review for GHGs is only required if one or more of the other regulated pollutants exceeds a PSD threshold.



Health effects of pollutants

	Respiratory, asthma, COPD	Cardio- vascular Risk	Central Nervous System	Prenatal Development/ Birth Outcomes	Death
PM2.5	X	X			X
SO2	X				
CO	x	X	x	x	X
NOx	X				
Ozone	X			x	

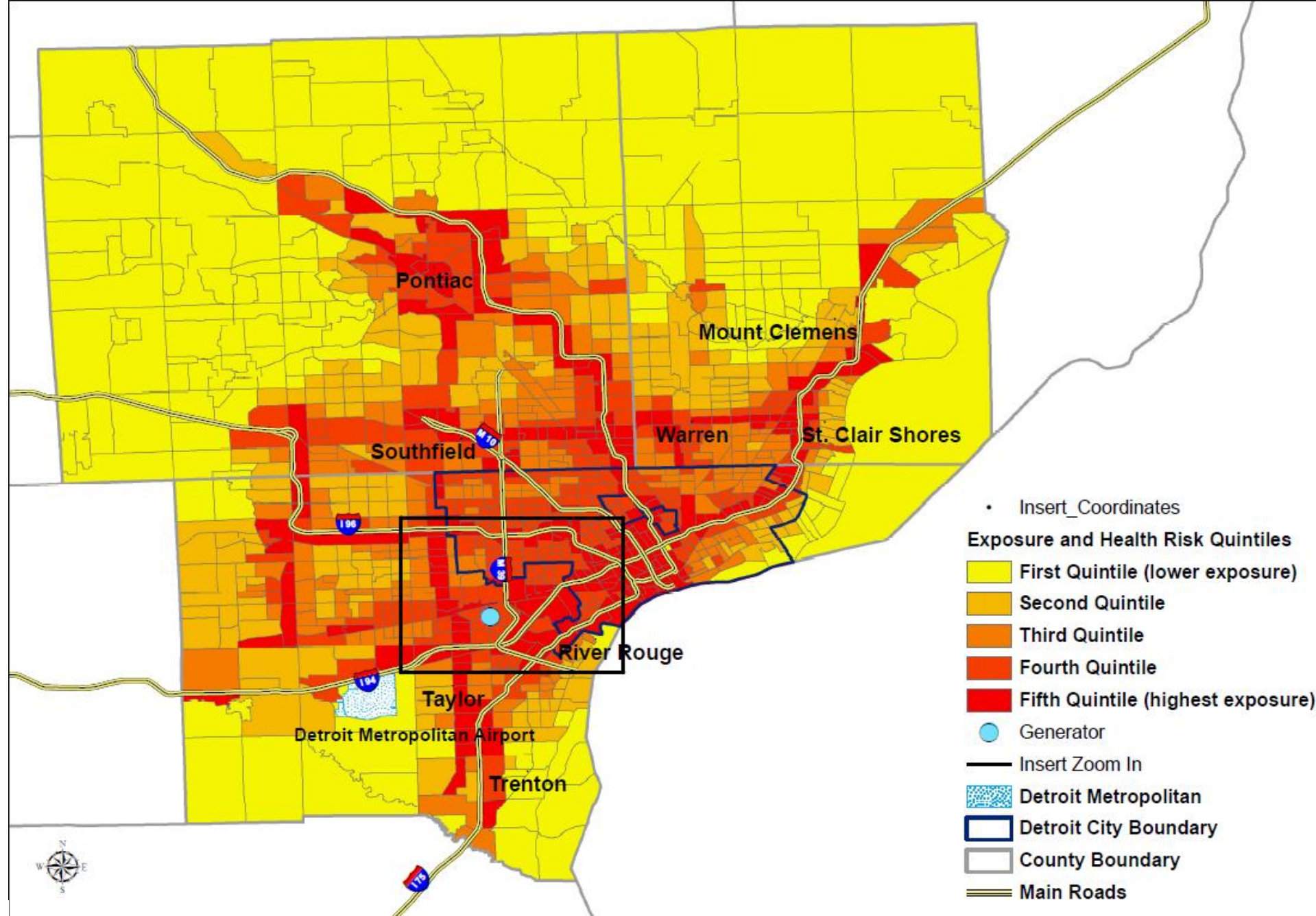
X = adequate evidence of health effect; x= suggestive evidence of health effect



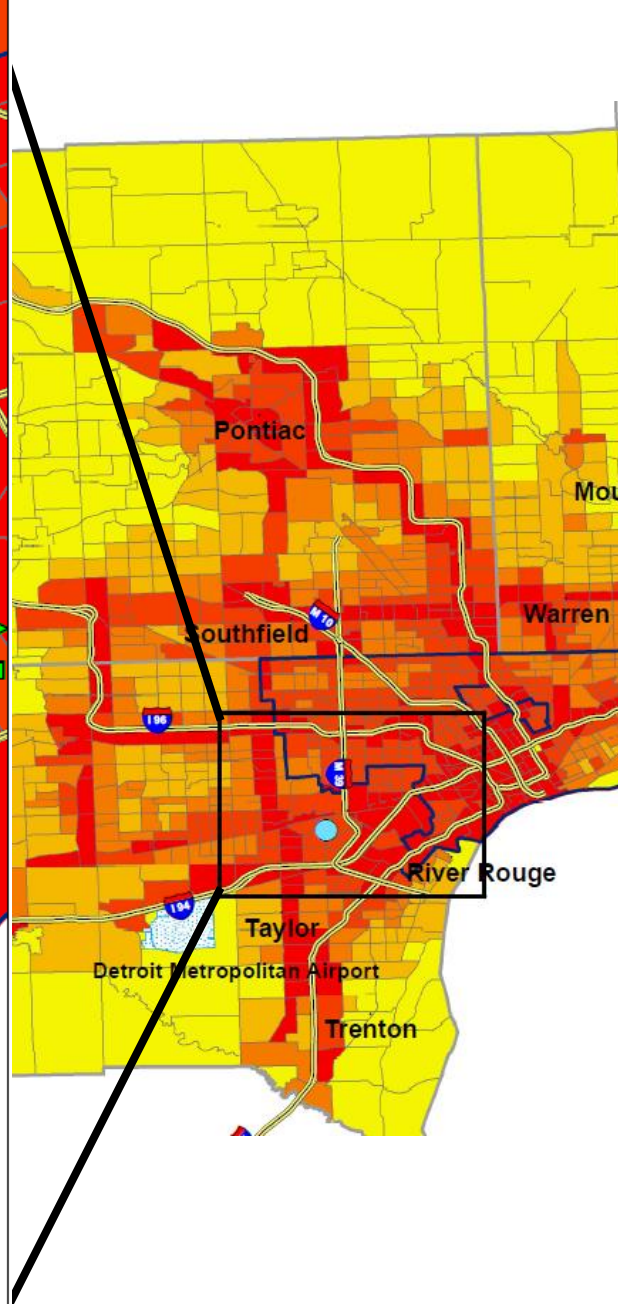
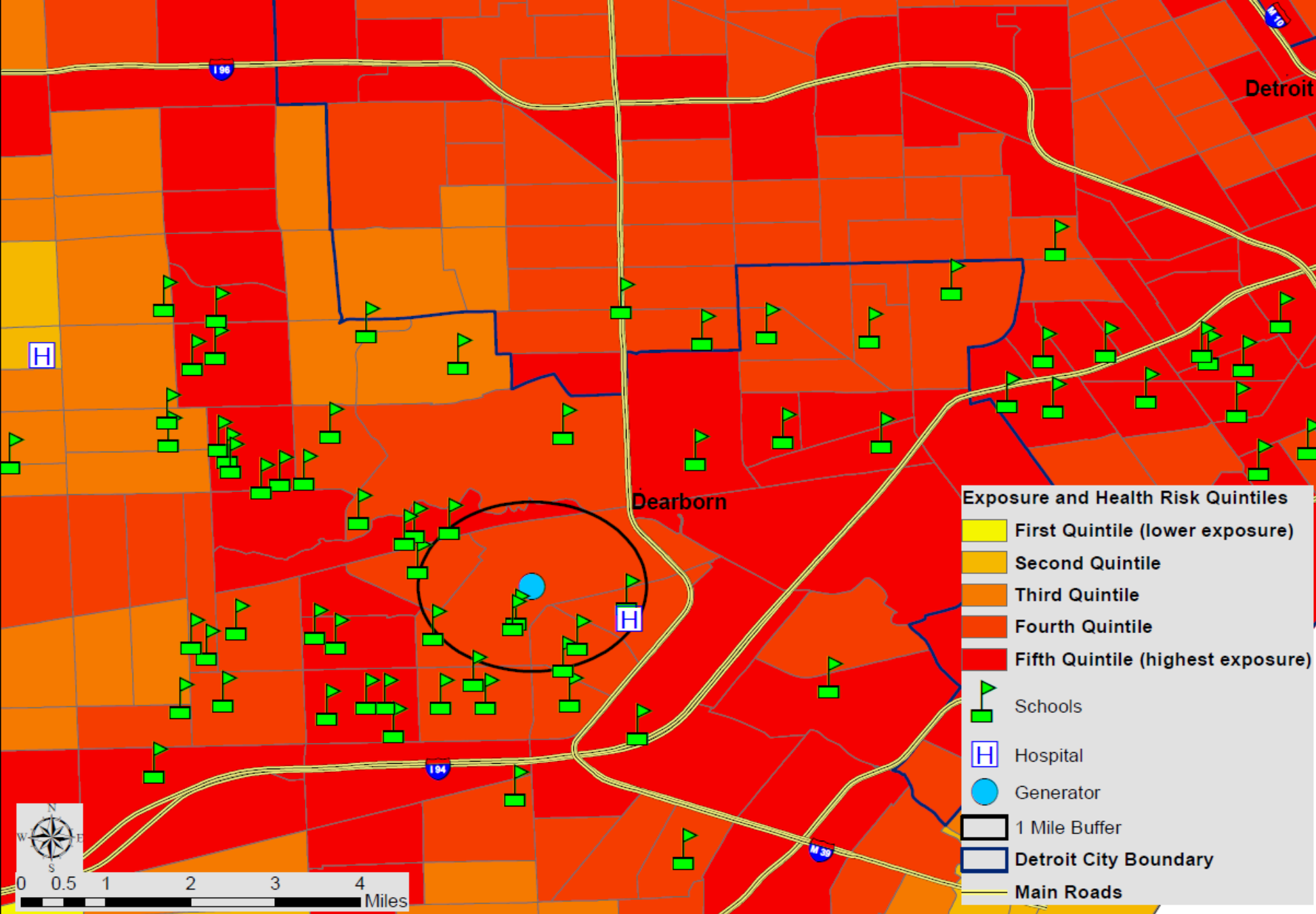
People who are particularly susceptible to adverse health effects

	People with asthma, COPD	Cardio-vascular Disease	Developing infants	Young children	Older people
PM2.5	X	X		X	X
SO2	X			X	
CO	x	X	x	x	x
NOx	X			X	X
Ozone	X		X	X	

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Cumulative impact polygons (CI) include: residential areas, child care facilities, health care facilities, schools and playgrounds. Exposure and Health risk include: 2011 NATA estimates of respiratory risk, cancer risk and diesel PM (non-cancer) concentration.



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Quantified Health Impacts

- **Each year** in the Detroit Metropolitan Area, air pollution is responsible for:
 - 690 deaths
 - 1800 hospitalizations and emergency room visits
 - Thousands of missed school and work days
- **Total monetized cost of \$6.9 billion per year**

These effects occur disproportionately in areas with higher exposures and more vulnerable residents

Natural Gas – Clean Fuel?





CAPHE Partners

