

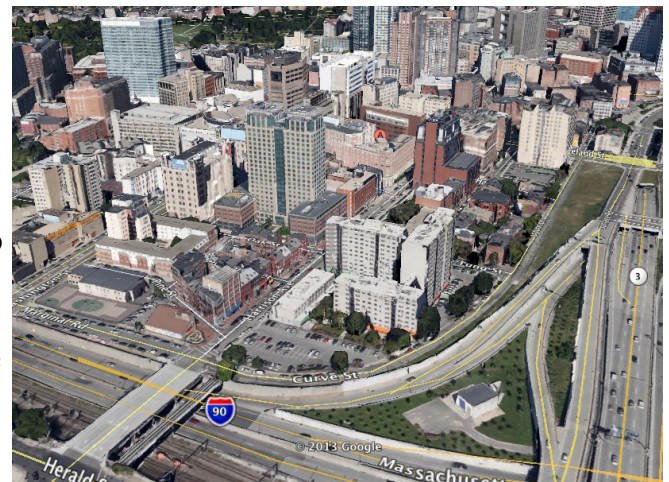


Improving the Health of Near Highway Communities

By: Oliver-John Bright

The correlation between fine particulate pollution and mortality is well established, and the US EPA regulates levels accordingly. However, health threats are also posed by much smaller particulate pollutants, ultrafine particles, which unfortunately are neither recognized to the same degree nor regulated. The levels of ultrafine particles are elevated alongside highways and busy roadways, with closer proximity to the highway being associated with higher levels of exposure. Lower income communities and communities of color, especially recent immigrants, are often located close to major roadways and heavy noxious industries due to a variety of economic and social factors that impact housing costs and where roadways and industries are located. This type of pollution therefore disproportionately poses a health threat to low-income and minority populations who are more likely to live in these locations. The target populations for the project are people living within 400 meters of the highways in Boston Chinatown and Somerville, MA. Without federal initiatives to regulate this problem, this project is inspired by successful local and regional efforts in Southern California to reduce exposure. As a progression of the CAFEH community-based participatory research (<http://sites.tufts.edu/cafeh/>), the project aims to use the expertise and analyses on ultrafine particles to enact positive changes at the community level and disseminate results regionally. We seek to undertake policy and practice changes, leading to the creation of healthier urban design and lifestyles.

Boston Chinatown is primarily populated by Chinese immigrants, has the lowest average income and the neighborhood has the least green space in the city. It is bounded by two major highways, I-90 and I-93, which have 300,000 motor vehicle trips each day. Substantial diesel passenger rail lines also runs through the community. Our goal is to influence the design of urban development projects and green space to reduce exposure residential exposure to ultrafine particle pollution.



Somerville is the most densely populated city in New England, has the most car and truck vehicle miles traveled per square mile and the most diesel commuter rail trains going through the city of any community in the state. The city's close proximity to Boston results in a large amount of rush-hour commuter traffic, as well as heavy daytime and evening traffic. Our goal is to influence municipal policy in the community in order to reduce exposure to ultrafine particles.

Our Partners:

- Chinese Progressive Association (CPA)
- Somerville Transportation Equity Partnership (STEP)
- Boston Public Health Commission (BPHC)
- Metropolitan Area Planning Council (MAPC)
- City of Somerville Housing Division
- Tufts University Schools of Engineering and Medicine

Phase 1: We will conduct an “expert elicitation” to facilitate discussion among experts from numerous backgrounds in order to consolidate evidence of the health risks posed by ultrafine particle pollution and options to address them in the target communities. The process of identifying target sites in Chinatown and policies in Somerville will begin as well during phase 1.

Phase 2: Using CPA’s experience influencing change in development, the project seeks to use public review procedures and an organizing and advocacy approach in Chinatown. Drawing on STEP and the City of Somerville’s experience leading grass root organizing efforts, the project will broadly educate the public and identify and attempt to modify City policy in protective ways.

Phase 3: We will assess the success of the attempts at influencing urban developments in Chinatown and policy in Somerville. Findings will be disseminated through popular and academic media with the goal of encouraging similar changes in other communities.



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