

News from the *Journal of the American Planning Association (JAPA)*, Summer 2010

More Than Emissions Data Required to Plan Neighborhoods with Clean Air

A study in the latest issue of **JAPA**, *Neighborhood Air Quality, Respiratory Health, and Vulnerable Populations in Compact and Sprawled Regions*, concludes that contrary to received wisdom, exposure to poor air quality is higher in compact US regions than in sprawled.

Public health researchers have encouraged urban planners to reduce sprawl as part of addressing poor air quality and the impacts of climate change. Smarter, more compact development can reduce driving and thus levels of particulates and pollution.

Author Lisa Schweitzer, Associate Professor, School of Policy, Planning and Development, USC, argues the amount of pollution or driving in a region is only part of the story. In Los Angeles for example, compact developments have been built in order to ensure residents have environmentally smart transit access. But some of those apartment buildings have gone right next to freeways where pollutants can be at their peak. With multi-family housing and low-income residents, those developments earned the title 'Black Lung Lofts' from *LA Weekly*.

Schweitzer's study shows that this problem can be worse in compact regions than in sprawl. What's more, compact regions have higher exposures among impoverished seniors and children — two groups particularly vulnerable to air pollution. Context is critical to building healthy neighborhoods — human exposure should be the key metric, not just total pollution amounts.

Compact development or infill is still a good strategy, but the location matters. High population density isn't a problem if the air is, on average, as good as it is in Santa Monica, CA. It only becomes a problem when the air quality is already poor — high population density in a place like Long Beach will simply increase the number of people exposed to high concentrations of particulate matter. These are complex human-environment interactions and should be considered by planners.

Schweitzer argues that policy and planning needs to take note of recent studies in the fields of engineering and climate science, in order to get a better understanding of how pollution affects neighborhoods. Planners cannot treat compact development as a way to solve the respiratory health problems associated with poor air quality — as concentration and emissions go down with compactness, residential exposures go up. It's critical to take human exposure into account when planning new developments, not simply emissions reductions

Notes to Editors

1 Aside from emissions studies, little research has been done on the connections between urban form, ambient pollutant levels, and human exposures or how infill changes these.

2 Measures of *emissions* refer to the amount of pollutants released from a source, such as a tailpipe or smokestack. Measures of *concentrations* refer to the amount of ambient pollutants in the air in a particular location. Emissions disperse and react, so that even low emissions can produce high concentrations in particular places.

3 Higher densities of population can result in higher exposure to pollution, especially in vulnerable populations. The poor, the elderly and children are particularly at risk in compact cities. While particle concentrations are worse in Los Angeles, in New York about 1 million more people are aged over 65 and over, there are 0.5 million more asthmatics and children, and 1.6 million more people with cardiovascular disease exposed to these concentrations than in Los Angeles.

4 *LA Weekly* described developments close to the LA freeway with the term 'Black Lung Lofts' in an expose it did on the health problems of residents in a range of developments close to LA's freeways, such as Lincoln Heights. It can be seen at <http://www.laweekly.com/2010-03-06/news/black-lung-lofts/>

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