

The Limits of Sprawl

Urban sprawl began more than fifty years ago, when post-war suburbia was built around the automobile. But it cannot continue another fifty years.

Until recently, developed land was a small percentage of the country's land. Though sprawl created traffic problems and ate up open space that was easily accessible to the cities, it was not a real threat to the nation's vast supply of forest, farmland, and pastureland.

But the recent National Resources Inventory, which reviews all the nation's private land, shows that we have reached the point where sprawl will consume a sizable fraction of the nation's land in a few decades if it continues at recent rates.

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Postwar Suburbia

After World War II, Americans moved *en masse* from older neighborhoods to suburbia. By the 1960s, planners were documenting how much land this process wasted.

Most older American neighborhoods were the "streetcar suburbs" built before World War I, made up of free-standing houses, with adequate backyards, small front yards, and front porches. Streetcars were used for commuting to work and for occasional trips to other parts of town, and everyone lived within walking distance of a neighborhood shopping street. Houses were generally built on one-tenth acre lots, and there were also apartments above the shops on the main streets. Overall density was typically 15 people to the acre.

After World War II, Americans moved to modern suburbs with much lower densities. Houses were typically on quarter-acre lots, and large tracts of land were occupied by freeways, parking lots, and landscaping designed to buffer people from traffic. Overall density was as low as 2 people to the acre. This type of housing has become so dominant today that the entire metropolitan area of Atlanta, GA has a density of 2 people per acre, and some American metropolitan areas have even lower densities.

Many studies have shown how much land sprawl consumes in individual metropolitan areas. For example, Figure 1 shows that, even in metropolitan areas whose population was not growing, the area of developed land increased dramatically between 1970 and 1990.

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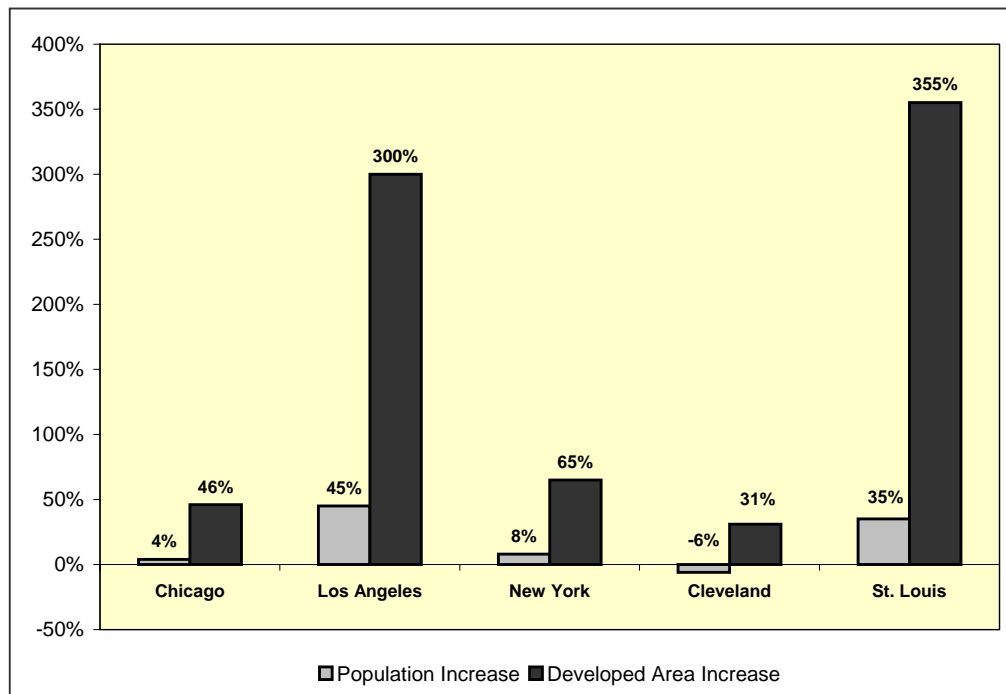


Figure 1: Increase in Population and Developed Land Area in Metropolitan Areas, 1970-1990
(Source: Surface Transportation Policy Project)

Sprawl and Land Resources

Though American cities spread rapidly after World War II, they took up so little land initially that they did not have a large effect on national land resources. But the Department of Agriculture's inventory of national land uses, conducted every five years between 1982 and 1997 shows that we have now reached a point where development has a significant impact on the nation's total land.

This land inventory shows that 29.9 million acres of land were developed between 1982 and 1997. During that period development has had a significant effect on:

- **Forests:** Of the 399 million acres of forest land in the United States, 11.7 million were developed – about 3 percent – but because land was also reforested, there was a small net gain in forest land.
- **Farmland:** Of the 375 million acres of cropland in the United States, there was a net loss of 13 million acres – about 3.5 percent.
- **Pastureland:** Of the 120 million acres of pastureland in the United States, there was a net loss of 14 million acres – well over 10 percent.

This study found that development now has a significant impact on land resources and also that developed land area grew much more quickly between 1992 and 1997 than it did between 1982 and 1992, as shown in Figure 2. Between 1982 and 1992, 1.4 million acres per year were developed, but between 1992 and 1997, 3.2 million acres per year were developed.

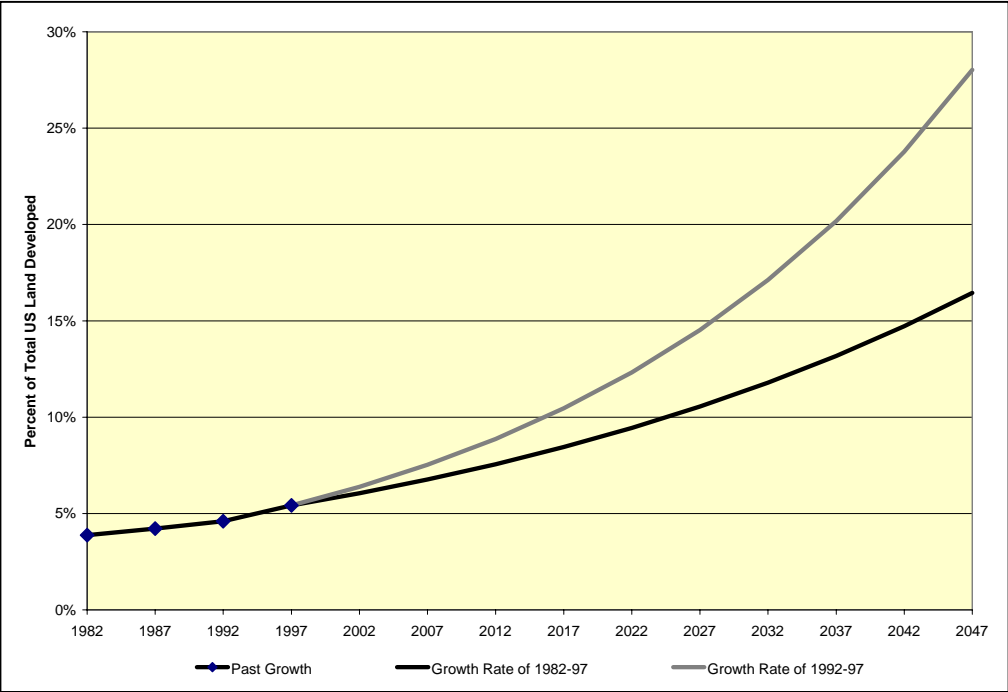
	1982	1987	1992	1997
Developed Land Area (thousands of acres)	75,519.0	82,010.4	89,403.1	105,369.1
Percent of US Land Developed	3.88%	4.22%	4.60%	5.42%
Annual Growth of Developed Area		1.66%	1.74%	3.34%

Figure 2: Developed Land in the United States (Source: US Dept. of Agriculture)

It is unsettling to project those growth rates into the future. Figure 3 shows that, if developed land area continues to grow at the rate of 1992 to 1997 or even at the slower overall rate of 1982-1997, it will occupy a large percentage of the nation's total land area in a few decades.

Of course, most of the developable land is outside of commuting range of major cities, but the Dept. of Agriculture study found that sprawl is no longer confined to major metropolitan areas: the same pattern of suburbanization is also spreading around small towns all over the country.

New technology makes it possible to spread production geographically. For example, if high-tech firms find that it hard to attract workers to the congestion of Silicon Valley, they could easily relocate their customer support and quality assurance departments to small cities in the American heartland; employees could be connected with the main office by teleconferencing and e-mail. Less skilled work can also be spread out: for example, telemarketing call centers can be located anywhere.



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Figure 3: Percent of Total US Land Developed if Sprawl Continues at Recent Rates (projection based on US Dept. of Agriculture figures)

The retired population is also growing rapidly, and it will explode when the baby-boom generation retires after 2010. If past behavior is any indication, many of them will move to very low-density "leisure living" developments.

A recent Census Bureau study found that relatively small cities are the fastest growing Metropolitan areas in America. As Figure 4 shows, the five fastest growing metropolitan areas include Las Vegas, which has very low density, and 4 small cities, where there is room to build at even lower densities. Also among the top ten were Phoenix, Ariz. and Austin, Tex., which have very low densities, and the metropolitan areas of Fayetteville, Ark., Wilmington, NC, and Provo-Orem, Utah, small cities.

Metropolitan Area	Population (1998)	Population Growth (1990-98)
Las Vegas, NV	1,321,546	55.0%
Laredo, TX	188,166	41.2%
McAllen-Edinburg-Mission, TX	522,204	36.2%
Boise, ID	395,953	33.8%
Naples, FL	199,436	31.1%

Figure 4: Fastest Growing Metropolitan Areas: 1990-1998
(Source: Census Bureau)

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This Census Bureau study also found that suburbs are growing more rapidly than central cities throughout the nation, with an average growth rate of 3.5 percent in central cities and 12.5 percent in the suburbs.

It is plausible that sprawl will continue, as people within each metropolitan area move to low-density "edge cities" and people move from older, higher-density metropolitan areas to lower density metropolitan areas such as Las Vegas and Phoenix and to small metropolitan areas such as Laredo and Boise, to newly developed houses on one or two acre lots.

But if sprawl does continue, it will eat up a significant portion of the country's open land. At the growth rate of 1982 to 1997, the area of developed land doubles in about 30 years. The nation seemed vast in the post war decades, when developed land doubled from 1% to 2% to 4% of our total land area. But it will seem much more cramped in coming decades if developed land area keeps doubling to 8% and 16% of our total land area. We are reaching the limits of sprawl.