

Is the US starting to turn the corner on urban sprawl?

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Credit: MRSC

Once the signature of an era of pell-mell development, American sprawl has slowed to a crawl in recent years, a new study finds.

New streets in metro areas are being built more densely packed and less spread out, according to a study in the journal *Proceedings of the*

National Academy of Sciences that looked at a nearly century of sprawl in U.S. street [construction](#). Researchers from Canada and California found sprawl steadily increased in new street construction from 1920 until it peaked in 1994 and has dropped 9 percent since.

Christopher Barrington-Leigh of McGill University in Montreal measured sprawl by looking at construction of streets and how many roads meet at intersections to form corners or nodes. If an intersection had four nodes, essentially two streets in a traditional cross, that would be more dense than a dead end three-node intersection or a cul-de-sac with only node. The lower the node number, the more the sprawl, or as Barrington-Leigh called it, "cul-de-sac hell."

For more than 200 counties—about one third of all the U.S. urban counties—Barrington-Leigh and co-author Adam Millard-Ball traced the history of when every street was built, going back as far as 1720. Then they looked at maps, old and new, for the entire country to take an even bigger look.

Overall, sprawl reached its heights in around 1990 when the average road had 2.6 nodes, but in 2012 the number of corners was up to 2.83, so sprawl had decreased by about 9 percent, putting it at around mid-1960s level, Barrington-Leigh said. This only measures new construction; what's already built is still as spread out as before, he said. He said this is likely the result of actions taken by government officials to control sprawl.

Barrington-Leigh said sprawl contributes to more driving and more pollution, especially heat-trapping gases.

"It shows there is hope," Barrington-Leigh said. "We would like to slam the breaks on bad development."

The five counties that Barrington-Leigh found to be controlling sprawl the most since the mid-1990s are Travis County, Texas; Mecklenburg County, North Carolina; Alachua County, Florida; Iredell County, North Carolina; and Franklin County, Ohio. He found the Austin region's new construction has cut sprawl by nearly one-quarter in that time.

Sprawl has increased the most in Manatee and Indian River counties in Florida, the study found.

Reid Ewing, director of the metropolitan research center at the University of Utah, faulted Barrington-Leigh for just using just street connectivity to measure sprawl. Ewing measures sprawl by measuring development density, land use, and how the population and jobs are centered.

Using those metrics, Ewing found that sprawl was marginally worse in 2010 than 2000, but seems to be slowing down. He said it hasn't reversed itself yet.

More information: A century of sprawl in the United States, www.pnas.org/cgi/doi/10.1073/pnas.1504033112

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