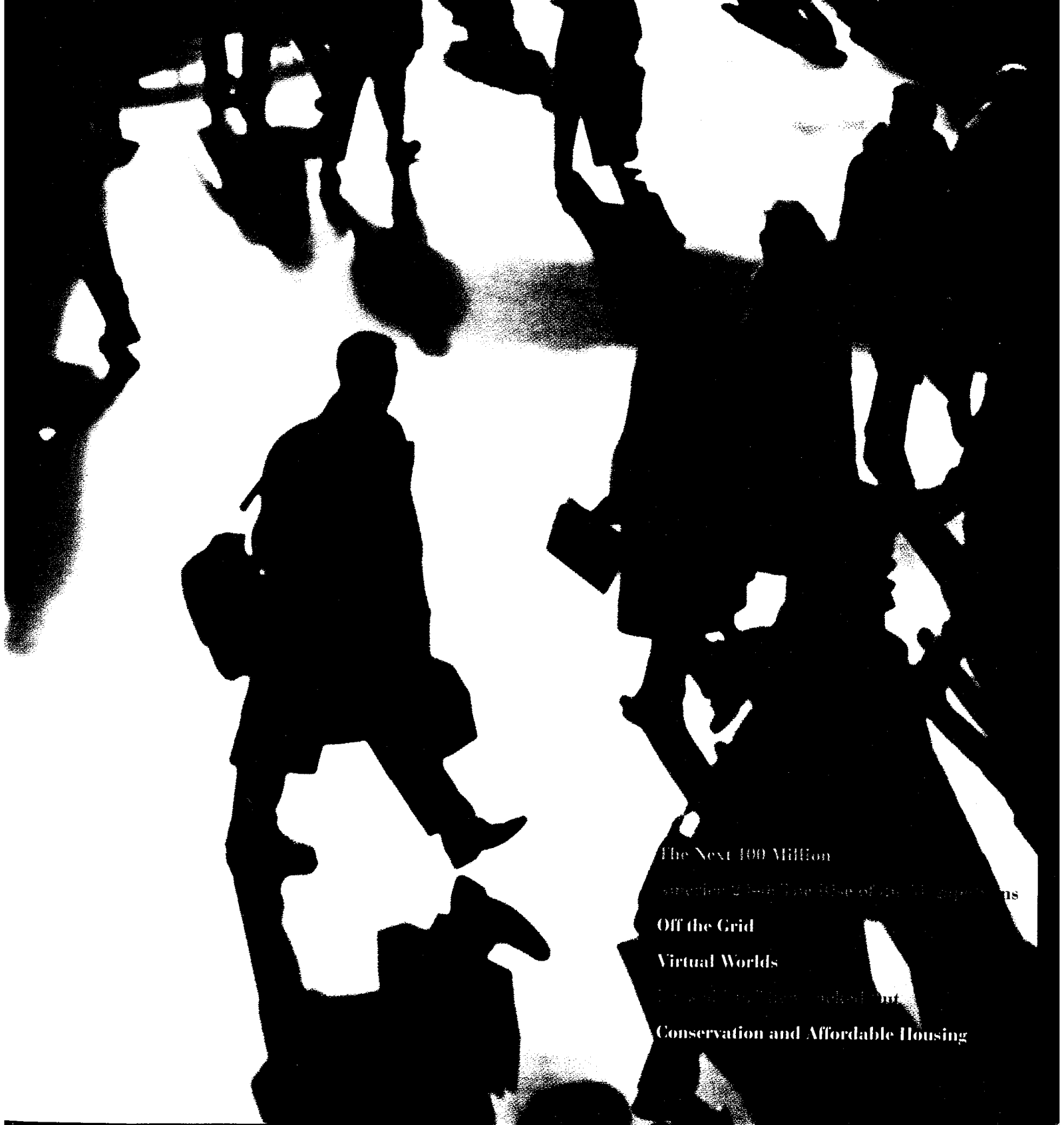
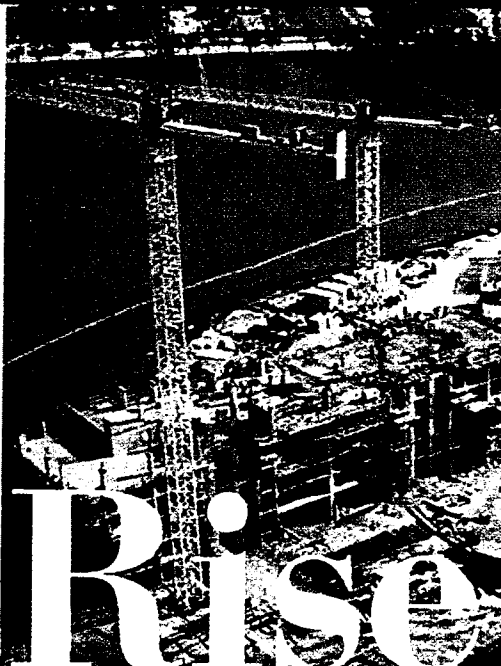


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America 2040



The Rise of the Megapolitans

The U.S. is on track to add another 100 million residents by about 2040.

Where will all these people live?

By Robert E. Lang and Arthur C. Nelson, FAICP

The answer is in super regions that combine at least two, and often several, metropolitan areas. We call these regions “megapolitan areas” or “megas” for short.

Many of us sense that a large-scale metropolitan convergence is under way because we see metro areas that were once distinct places now merging into enormous urban complexes. Dallas and Fort Worth converged in the 1960s, as Washington and Baltimore did two decades later. Today, regions with multiple cities, like Phoenix and Tucson, Tampa and Orlando, and San Antonio and Austin, are exhibiting the same pattern, only on a more massive scale.

To drivers on Interstate 85, the entire North Carolina Piedmont

New housing at the edge of the Florida Everglades. Photo courtesy Weitzer Communities.

extending from Raleigh to Charlotte seems like one continuous suburb. Development in the now fully integrated Dallas–Fort Worth metroplex spills north along I-35 and will eventually reach Oklahoma City.

We have developed the megapolitan concept in part to depict where the next 100 million Americans will live. The analysis found 20 emerging megapolitan areas that are based on the U.S. Census Bureau's definition of a combined statistical area, or CSA. The 15 most populous metros are in megapolitan areas, as are 36 of the nation's 50 top metropolitan areas.

The megas we have identified are essentially the CSAs of 2040—derived by extending the census's current statistical methods several decades forward. The main criterion for a census-defined CSA is economic interdependence, as evidenced by overlapping commuting patterns. The same is true for megapolitans. Based on projections of commuting patterns, the 2010 census should find that Phoenix–Tucson and Washington–Baltimore–Richmond qualify as CSAs. In 2020, several more metropolitan areas will pass this threshold, and at mid-century all 20 megapolitan areas we have identified should officially be CSAs.

Organizations like the Lincoln Institute of Land Policy and the New York-based Regional Plan Association are also developing new regional models and planning strategies to manage future metropolitan expansion. Last year, those two organizations convened the National Committee for America 2050—a coalition of planners and civic leaders—to develop a framework for America's rapid population growth and the emergence of what they call "megaregions."

This new concept was explored in a University of Pennsylvania planning studio taught in 2005 by Armando Carbonell, AICP, cochair of the Lincoln Institute's department of planning and urban form, and Robert Yaro, president of the Regional Plan Association. Although the Penn megaregions do not account for overlapping commuter sheds, they nonetheless describe networks of mostly contiguous metropolitan areas.

Six of the Penn megaregions encompass two or more of the megapolitan areas we have identified, five of which lie east of the 100th meridian line—the nation's midpoint. The Texas Gulf, Texas Corridor, and Greater Metroplex form what Carbonell and Yaro call the Texas Triangle. When our megapolitan areas combine into even larger urban complexes, 10 megaregions result—five east and five west. Some megas, such as the Sun Corridor, are both megapolitan areas and stand-alone megaregions.

In contrast, the Texas Corridor megapolitan area (San Antonio–Austin) is one of three

Tao Condominiums, a luxury housing project, is being built in Sunrise, Florida, at the edge of the Everglades (below and on previous page). Surrounding Broward County—part of Florida's Treasure Coast—is one of the fastest growing areas in the U.S. A photo of the site in western Broward County (bottom).



Rendering by Weitzel Communities





Phoenix (above) and Tucson—more than 100 miles away—will merge together to create a megapolitan, the authors say. By 2040 two of every three Americans will live in one of 20 megapolitans.

megapolitans in the Texas Triangle megaregion. Likewise, the Willamette Valley is one of two megapolitans (along with the Puget Sound) that form the Cascadia megaregion.

More than six out of every 10 Americans, or 181 million people, lived in the nation's 20 megapolitan areas in 2005. Yet megas account for only a tenth of the nation's land area. This yields a density over 500 people per square mile, or the bottom threshold of what the Census Bureau defines as "urbanized areas." Megapolitan population density reaches about half that of Japan and exceeds the figure for the European Union (both of which are expected to lose more than 15 million people by mid-century). The rise of megapolitans refutes the notion that Americans live in mostly wide open spaces when compared to Europe and Japan. While decentralization may have occurred at the metropolitan scale, a settlement concentration is under way for the U.S. as a whole.

Another 60 million residents could pour into this relatively limited megapolitan land area by 2040. In other words, America is on track to see significant density gains. This does not mean the end of suburbia, or even large-lot subdivisions at the metropolitan fringe. But it does hint that more people will locate in already built-up places.

This is not a new trend. Just over a century ago, the U.S. officially closed its original settlement frontier. By the 1920s, over half the population lived in urban areas. The 2000 census found that over half the nation's land fell in what it awkwardly labeled "core-based statistical areas" (metropolitan and micropolitan areas). The emergence of megas continues this pattern. By 2040, two of every three Americans will live in 20 megapolitan areas, or just 10 megaregions.

Megapolitan areas represent an even greater concentration of the nation's wealth and productive capacity. The 10 most affluent major metropolitan areas lie in megas, as do most of the nation's busiest air and sea ports. The megas are the key zones by which the U.S. integrates into the global economy. It is almost impossible to fly overseas without first stopping in a megapolitan area.

Megas account for nearly 70 percent of U.S. gross domestic product. Within their space lie the nation's leading office markets and its high-tech heartlands, including Boston's Route 128, the Bay Area's Silicon Valley, Northern Virginia's Dulles Toll Road, and Austin's Silicon Prairie. And the megapolitan economic dominance should only intensify by 2040.

Sun Belt vs. Frost Belt

While megapolitans as a whole will boom, some



Courtesy of Rancho Cucamonga



Santiago Street Lofts rendering and photos courtesy of Hong Park and WHIA Architects

Wave of the future? At Victoria Gardens, being built in Rancho Cucamonga, California, attached housing is part of the plan. Above: interior of the Lewis Family Playhouse at Victoria Gardens Cultural Center.



The Santiago Street Lofts (above and right) in Santa Ana, California, is a transit-oriented redevelopment project involving 20 buildings. Each contains a retail/office ground floor and a two-story residence above.

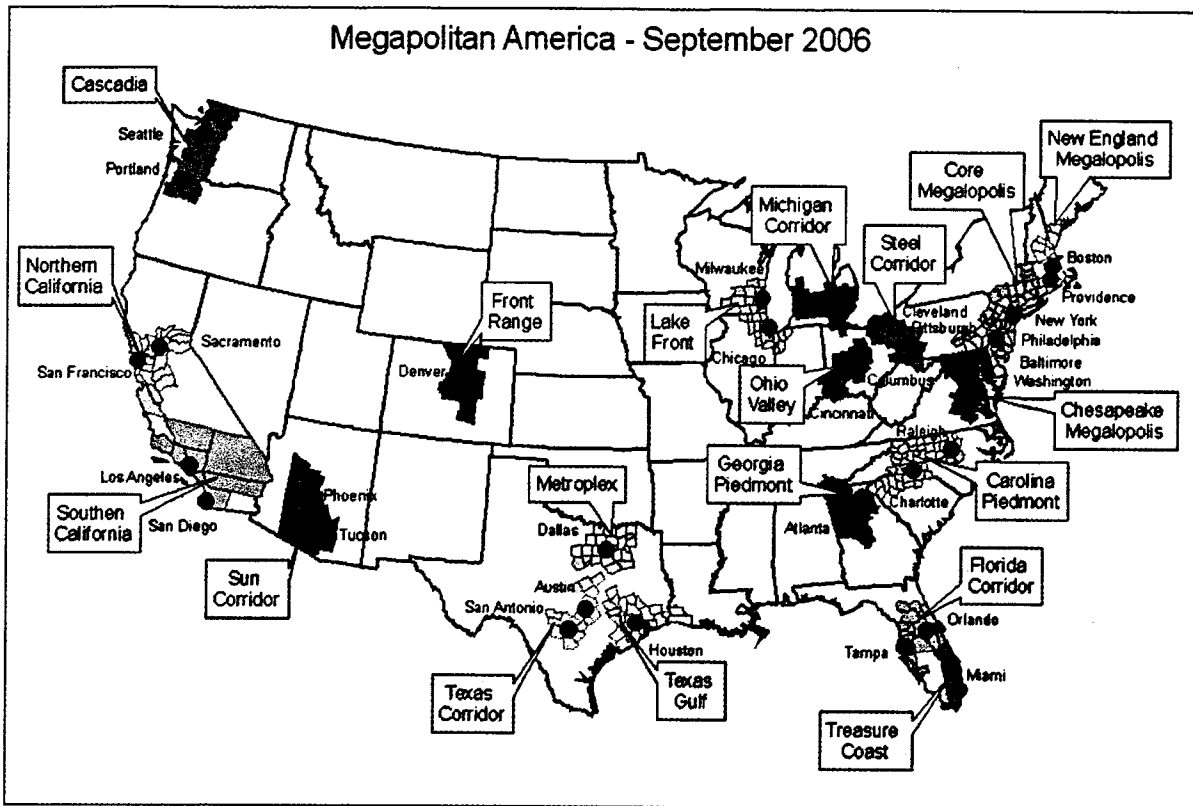
Megapolitan Areas and Megaregions	Anchor Metro(s)	2005 Population
Northeast		51,601,118
New England	Boston/Providence	8,276,116
Mid-Atlantic	New York/Philadelphia	33,527,905
Chesapeake	Washington/Baltimore/Richmond	9,797,097
Great Lakes		34,267,189
Steel Corridor	Cleveland/Pittsburgh	7,067,896
Ohio Valley	Cincinnati/Columbus	5,344,052
Michigan Corridor	Detroit	8,969,861
Lakefront	Chicago/Milwaukee	12,885,380
Piedmont		13,953,787
Carolina Piedmont	Charlotte/Raleigh	7,012,769
Georgia Piedmont	Atlanta	6,941,018
Florida		13,823,188
Florida Corridor	Tampa/Orlando	7,851,525
Treasure Coast	Miami	5,971,663
Texas Triangle		18,187,772
Texas Gulf	Houston	6,247,170
Texas Corridor	San Antonio/Austin	3,965,018
Greater Metroplex	Dallas-Ft Worth/Oklahoma City	7,975,584
Front Range		3,880,126
Sun Corridor		4,988,564
Cascadia		7,350,438
Puget Sound	Seattle	4,106,956
Willamette Valley	Portland	3,243,482
Northern California		11,288,313
Southern California		21,720,656
Megapolitan Totals		181,061,151
US Total		296,410,404

Note: Megaregions are shown in bold; Anchor Metros rank in the top 50 US Metropolitan Areas
 Source: Metropolitan Institute at Virginia Tech, US Bureau of the Census

individual ones may see more modest growth. Megas in the Northeast and Great Lakes will add population at the slowest rate. However, some of these places are already so big that even slow growth will result in millions more residents. The Mid-Atlantic megapolitan area, anchored by the converging New York and Philadelphia metropolitan areas, could jump from 34 million residents today to over 40 million by 2040. The region should easily retain its status as the nation's largest megapolitan area. By contrast, the Northeast's southern section, or the Chesapeake megapolitan area, will see much faster growth, although it will add two million fewer residents.

Overall, the four megapolitan areas that comprise the Great Lakes megaregion will have the slowest growth over the next few decades. However, only one megapolitan—the Steel Corridor running from Cleveland to Pittsburgh—will increase by less than 10 percent by 2040. The Ohio Valley (anchored by Columbus and Cincinnati) and Lakefront (with Chicago as its center) are projected to almost match the national growth rate over the next three decades.

Megapolitan America - September 2006



Americans are clustering together into super regions—and are likely to continue doing so as the population increases.

But the really big gains will come in the Sun Belt. The highest flyer of all should be the Sun Corridor, home to the rapidly merging Phoenix and Tucson metropolitan areas. The Sun Corridor could actually double in population by 2040.

Following the Sun Corridor are several other Sun Belt megapolitans that will add over 70 percent more people in the coming decades. The list includes the Front Range, anchored by metropolitan Denver, both Florida megapolitans, and the Texas Corridor and Greater Megaplex. Not far behind these booming megas will be the Georgia and Carolina Piedmont. It's interesting to note that Southern California, the quintessential Sun Belt metropolis, is projected to add residents at the same pace as the national growth rate—but no faster.

The new center point

In 1870, U.S. census director Francis Walker invented what he called the center-of-population statistic to give Americans a vivid sense of how fast the West was being settled. In that year, the population center was in Ohio; in 1790, it was just outside Baltimore. In

2000, the U.S. center of population reached southern Missouri, and by 2040 it should be in Oklahoma.

That means that by mid-century the center of U.S. population will lie near the geographic midpoint of the nation. The U.S. population will be evenly divided between East and West.

One twist not anticipated by Francis Walker and other 19th-century demographers is how far south the center of population will drift by the middle of the 21st century. If the more northern balanced settlement pattern that began in 1800 held steady to 2040, the center of U.S. population could very well have wound up in Kansas, or near the geographic center of the Lower 48 states.

In the 1840s, the main U.S. settlement push was north and west—reflecting a decade that saw the California gold rush, travel on the Oregon Trail, and the acquisition of vast new southern lands after the Mexican-American War. A century later, Los Angeles, once a small town compared to San Francisco, emerged as the West's dominant city. In the second half of the 20th century, some of the West

Coast growth boomeranged east and helped to transform the sleepy cities of Las Vegas and Phoenix into mini L.A.s. The old South, which declined after the Civil War, rose again after World War II thanks to air conditioning, the interstate highways, and northern industries seeking cheaper land and labor.

The West's settlement was expected in the 19th century—even demanded under the principle of manifest destiny—but the rush southward is more recent. Population trends begun over 60 years ago will continue to draw the center of U.S. population along the path of the now defunct U.S. Route 66. The Mother Road, made famous by 1930s dust bowl refugees heading to California, makes a beeline from the Midwest to the Southwest. Apparently, so will many Americans.

Build out vs. sprawl out

Any discussion of megapolitans must take account of land scarcity. Consider Florida's megapolitan Treasure Coast. The Everglades have been so invaded by urban growth that this area can no longer push west.

Broward County, which is part of the Treasure

Coast, has been one of the fastest growing areas in the U.S. over the past few decades. County officials estimate that less than 10 percent of its land area is available for future development. In response, the county upzoned much of the remaining open space. Broward expects its last greenfield subdivision to be built in the next few years. After that, the county will become one large infill project.

The same is true throughout much of the Treasure Coast. Given that the region could add over 70 percent more people by 2040, there remains only one option—denser growth. This is already happening. Miami now has a forest of high-rise residences along its waterfront, and towers are under construction in booming suburbs like Sunrise and Coral Springs in western Broward County.

South Florida has significant reserves of grayfield space in the form of old malls and warehouse districts. Given the region's land constraints, new construction in this redeveloped space will be much denser and could include more mixed uses than prevailing patterns. By 2040, the Treasure Coast will be transformed into an urban archipelago, where new cities arise among a sea of older low-rise subdivisions.

Denser development is already the norm in Southern California. One of the more hotly debated topics in recent discussions of sprawl is the finding that Los Angeles has the highest population density of the census's "urbanized areas"—exceeding even New York in this measure. San Diego, a region now merging with L.A., is not far behind. The reality is that Southern California is nearly out of developable land.

The area called the Inland Empire—east of coastal L.A.—still booms with greenfield growth, but even in this once wide open space, lot sizes have shrunk to postage stamps. New projects, such as Dos Lagos in the city of Corona, feature detached single-family houses on lots so small that driveways must be shared. At Victoria Gardens, a mixed use project in one of the last remaining undeveloped patches of Rancho Cucamonga, attached residences are common. In even more built-out Orange County, there are now mixed use lofts in Santa Ana, high rises near the entrance to Disneyland

in Anaheim, and transit-oriented development in downtown Fullerton.

This development pattern is likely to continue as the Southern California megapolitan area squeezes millions of new residents into the urban space that exists today. Southern California, once the poster child for sprawl, is being remade into a vast quasi-urban complex that mixes densities and land uses in a way that resembles neither traditional cities nor suburbs.

In contrast to these areas are places like the Greater Metroplex and the Carolina Piedmont, where growth potential is virtually unlimited and greenfields could be developed all the way to mid-century. Will that happen?

We argue elsewhere in this issue that changing market and demographic realities will greatly

suburb that promotes diverse housing and shopping options, nearby exurbs such as Frisco and McKinney eagerly cater to households still seeking elbow room. In the Greater Metroplex, where everything is bigger, a regional preference for more space should keep adding new exurban rings north of Dallas until development reaches Oklahoma.

Beyond the megas: boom and bust

Twenty years ago, *Planning* ran a notable article by Frank and Deborah Popper titled "The Great Plains: From Dust to Dust" (December 1987), which chronicled that region's decades-long population decline. The Poppers promoted the idea of a "Buffalo Commons" that would shift those parts of the plains suffering the steepest population loss to a more sustainable economy based on buffalo ranching and ecotourism. The article sparked considerable controversy, but much of what the Poppers predicted has come to pass.

A little noticed dimension of the Poppers' analysis was the finding that even as the U.S. boomed overall, vast areas could face decline. In fact, much of the American West beyond the Great Plains still remains wide open. In 2000, *USA Today* reported that nearly half the country west of the 100th meridian had fewer than six residents per square mile—the statistic used to define the 19th century settlement frontier. Most of this space will probably remain frontier in 2040, including patches of the Southwest between the megapolitans.

What will the nation look like with 400 million people? Its metropolitan space will be transformed by denser development, but most places beyond the megas will look the same as they do today. The image of a nation paved over from coast to coast is false. If anything, parts of the Great Plains and northern Rockies could be even less populated than they are now.

By mid-century, most Americans will still take comfort in the notion that elbow room remains in some remote corner of the nation, if not in their own backyards. The unfinished business of settling the remaining frontier lands—the great national project of previous generations—may serve as a giant release valve in the collective consciousness of 21st-century Americans who never fully warm to the idea of being more built up than Old Europe.

Robert Lang and Arthur C. Nelson are codirectors of the Metropolitan Institute at Virginia Tech in Alexandria, Virginia. They thank the Lincoln Institute of Land Policy for its support.

Types	Descriptions	Examples
Metropolitan Statistical Area	An "urbanized area" or "principal city" with at least 50,000 people plus surrounding counties with a 25% "Employment Interchange Measure" (EIM) in 2000	Pittsburgh, Denver
Combined Statistical Area	Two or more adjacent micro and metropolitan areas that have an EIM of at least 15% in 2000	Washington/Baltimore, Cleveland/Akron
Megapolitan Area—Defined by Virginia Tech Metropolitan Institute	Two or more metropolitan areas with anchor principal cities between 50 and 200 miles apart that will have an EIM of 15% by 2040 based on projection	Sun Corridor (Phoenix/Tucson), Northern California (Bay Area/Sacramento)
Mega-Region Defined by RPA and Lincoln Institute	Large, connected networks of metropolitan areas that maintain environmental, cultural, and functional linkages	Piedmont, Texas Triangle

reduce the amount of exurban development in the coming decades—even in places where no barriers to such growth exist. Still, some outward momentum could well remain, especially in places that can still easily accommodate such growth.

The middle section of the Greater Metroplex, between Dallas and Oklahoma City, is one place where land availability and local tastes may continue to fuel exurban expansion. Of course, some places within this zone, such as north Dallas, will not see the transformations that sweep denser and more built-out megapolitan areas along the coasts. However, the once low-density suburb of Plano, Texas, already has denser transit-oriented development at its station on the Dallas Area Rapid Transit system.

As Plano remakes itself into a more mature

Resources

Glossary. Learn more about the concept of megaregions—and about a similar concept, multicity regions—in *Smart Growth in a Changing World*, an upcoming book by APA's Planners Press (edited by Jonathan Barnett).