THE RUNAWAY AMERICAN DREAM

The Case for Smart Growth in America

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THE RUNAWAY AMERICAN DREAM: The Case for Smart Growth in America

By F. Kaid Benfield

In the opening line to his epic “Born to Run,” Bruce Springsteen rumbles the phrase “runaway American dream” to evoke a spirit of youthful restlessness and a yearning to escape one’s circumstances, to change. In a sense, Springsteen’s American dream is not all that different from the one that immigrants to America have long pursued, seeking and embracing the land of opportunity to improve their circumstances, to make progress. In the field of land development and planning, many writers invoke the phrase to include home ownership, and so it does for many of us, although owning one’s home is but one part of the larger vision of success and comfort. At its essence, the American Dream is about progress, improving one’s circumstances, about opportunity for succeeding generations to be more comfortable and more prosperous than their forebears.

Is that broader American Dream, the one of immigrants and new generations, running away from us? The quick answer might suggest that it is not, for the United States has always been and remains a nation of opportunity and of progress. While our progress has taken many forms, we have long been on a path of growth, of moving forward. Today, at the beginning of the 21st century, we have a larger population and a larger economy than ever before. By many measures, those of us fortunate to be alive now are enjoying a remarkable quality of life, one with substantially more comfort and opportunity than that experienced by our forebears.

Or are we? The fruits of progress have not been distributed evenly, as it turns out. Has progress for some come at others’ expense? And, even for those of us who have prospered, can our prosperity be sustained? Will our children be able to reap the benefits of the American Dream?

The answers to these questions are complex and elusive. Many, many factors contribute to our sense of well-being and our ability to remain strong as a
nation, as an economy, as a people. And more and more Americans are coming to challenge the assumption that our path of progress is inevitable, our manifest destiny. Many of us look around and are more unsettled than reassured by what we see, by the products of the changes we have wrought.

Unfortunately, we have good reason to be concerned. Indeed, the patterns and projections of growth are enough to give one pause even without adornment. But, when we examine them in the context of their consequences – of the facts and trends concerning the impacts of development patterns on our environment, economy, and society – it becomes clear that we can and must do better if we are to enjoy true progress and the benefits of a strong and sustainable society.

From sea to shining sea

In particular, as a nation we are not only rapidly growing in population but also developing land twice as rapidly as the pace of population growth nationally, much faster in some places. For example, from 1982-1996, metropolitan Pittsburgh and Boston grew six and five times faster, respectively, in developed land than they did in population; Chicago grew four times faster in developed land than in population. And metropolitan Detroit grew almost 20 percent in developed land even while losing population. Moreover, according to the Natural Resources Inventory of the United States Department of Agriculture, the already-rapid pace of land development has been accelerating, from 1.4 million acres per year in the 1980s to 2.1 million per year in the 1990s. The Inventory data disclose that an amazing 30 percent of all developed land in the U.S. was developed in just 19 recent years, from 1982-2001.

Population and land use trends also contain a number of important regional distinctions. In the past couple of decades, the West has been growing and sprawling but not sprawling quite as much as the national average; the Northeast and the Midwest have been sprawling but not growing much; and the South continues both to grow and to sprawl rapidly. This is summarized in the following graph from a recent study sponsored by the Brookings Institution:

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The cumulative impact of all this dispersal is that, as of the 2000 census, suburbs held over 60 percent of the U.S. metropolitan population. The average population density of all developed areas in 1920 was a little less than 10 persons per square acre; by 2000, the average had declined to only 3.75 people per acre. Under current trends, the decline will continue, since some four-fifths of the country’s growth in the coming decades is expected to locate in suburbs and other fringe locations that collectively spread development beyond the current outer reaches of our metro areas. Partly as a result, the Maryland Office of Planning has projected that, from 1995 to 2020, more land will be converted to housing in the Chesapeake Bay region than in the past three and one-half centuries.3

Workplace trends are just as dramatic as those for where we live, if not more so. The hundreds of “edge cities” of offices and shopping, located along freeways on the suburban fringe of our metropolitan areas, contained some two-thirds of all U.S. office space as of the mid-1990s, and the share has undoubtedly grown since then. Indeed, Henry Diamond and Patrick Noonan reported in their

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3Population is projected to grow by 39.6 percent over 25 years, while converted land is projected to grow by 104 percent. Moreover, of the 1.2 million new residents of central Maryland in the mid-1990s, about a third—some 425,000 persons—represented outmigration from nearby cities. See Karl Blankenship, “Chewing Up the Landscape,” Bay Journal, Baltimore: Chesapeake Bay Foundation, December 1995.
1996 book *Land Use in America* that an astonishing 95 percent of the new office jobs created in the latter part of the 20th century were located in low-density suburbs. 4 This reflects astounding job growth on the fringe; suburbs of all types held only 25 percent of the country’s office space as recently as 1970. (Some suburban job “growth” can be illusory when placed in a broader context; in fact, many “new” jobs are really only displaced from other locations.)

The pervasiveness of contemporary job dispersal is illustrated plainly in Los Angeles, where in the 1990s the 19 largest geographic job centers, even taken together and including Los Angeles’s downtown, held only between 17 and 18 percent of the region’s jobs. 5 Four of the six counties in the country that added the most jobs from 2003-2004 are in southern California: Orange County, south of Los Angeles (tops in the country, adding 49,900 jobs); Los Angeles County; and Riverside and San Bernardino Counties, east of Los Angeles. 6

For both residential and commercial development, the predominant pattern of recent growth has taken a strikingly different form from what our country has experienced throughout most of its history. Although American settlements have been growing and evolving since colonial times, until the middle of this century we tended to locate in recognizable cities and towns. Our changes were much more gradual and reflective of customary patterns of town layout and structure, with little significant departure from longstanding principles of lot size and street geometry. Today, despite the desire for strong local communities voiced by many Americans, the result is

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6 Mike Flagg and Neil Irwin, “Out Suburbs’ Job Boom,” *The Washington Post*, October 27, 2004 (citing data from the federal Labor Department). The top ten counties by job growth were overwhelmingly suburban and located either in the Southwest or Florida: in addition to those around Los Angeles, the list includes Clark in Nevada (Las Vegas), Maricopa in Arizona (outside Phoenix), Fairfax in Virginia (west of Washington), Hillsborough and Orange in Florida (outside Tampa and Orlando), and San Diego County in California.
likely to be much more chaotic. Urban writer Joel Garreau, for example, describes a typical edge city in New Jersey called “287 and 78” (named for the intersection of two Interstate highways). 287 and 78 has no political boundaries, no elected ruling structure, and no overall leader; instead, it is “governed” only by a patchwork of generally uncoordinated and conflicting zoning, planning, and county boards.\(^7\)

The diverse array of forms that dispersed land development takes, along with its geographic elusiveness, makes it hard to measure. But the nonprofit coalition Smart Growth America has recently undertaken an exhaustive study that compares regions on a number of indicators related to density, mix of land uses, and intra-regional connectedness and centeredness. The study found that the ten “most sprawling” metropolitan areas in America are within some of America’s best-known and fastest-growing regions: Riverside-San Bernardino and Oxnard-Ventura near Los Angeles in California; Atlanta and four other metropolitan regions in the Southeast; Ft. Worth-Arlington, Texas; Bridgeport-Stamford-Norwalk-Danbury, Connecticut; and West Palm Beach-Boca Raton-Delray Beach, Florida.\(^8\)

**Big, bigger, biggest**

As impressive as the data concerning population and job dispersal are, they mask an additional way in which we are spreading out as we grow: we are also constructing ever-larger buildings. In 1970, the average new single-family house was 1,400 square feet; today it’s 2,300, even though household size has been declining steadily. In 1950, each American claimed an average of 312 square feet of living space; by 1993, the amount had more than doubled, to 742 square feet.

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This is 50-100 percent more than the space occupied by the average residents of over 50 nations surveyed by the World Bank in the 1990s.\textsuperscript{9}

Moreover, the size of some new commercial buildings would astound our grandparents. The Bishop Ranch development, thirty miles east of San Francisco, contains a “landscraper” three stories high and over half a mile long. The building that houses Ameritech’s headquarters, west of O’Hare Airport near Chicago, is also more than half a mile long. And cars can claim more space in such developments than people: a typical suburban office park might provide 1,400 square feet of parking, usually in surface lots, for every 1,000 square feet of floor space.

As for the places where we shop, the amount of total retail space per American doubled from 1960 to 1998.\textsuperscript{10} A new Wal-Mart “supercenter” can claim 200,000 square feet of indoor space, much larger than the 120,000 square feet occupied by the typical Wal-Mart of just ten years ago, and a staggering 30 times bigger than a typical Dollar General Store. Including its parking lot, a new Wal-Mart can occupy over 20 acres of land. These so-called “big-box” stores, “power centers” and the like represented more than 80 percent of all new shopping built in the 1990s.\textsuperscript{11}

And the new stores shape the landscape not only when they are thriving but perhaps even more so, unfortunately, when they are abandoned as decaying eyesores in communities left behind by investment flight to ever-newer areas. The problem is compounded by the changing nature of retailing in America, as continued growth in the share of mail-order and Internet sales threatens further inroads into superstores’ on-site business. Some analysts have predicted that as


\textsuperscript{10} See College of Business Administration, University of Cincinnati, Property Newsletter, September 2000.

\textsuperscript{11} See Frank Jossi, “Rewrapping the Big Box,” Planning, vol. 64, August 1998, p. 16.
many as 20 percent of today’s suburban shopping centers could be dead or dying within a decade.

Runaround Sue

There are a host of troubling consequences that attach to our current patterns of growth, many of them related to the increased automobile dependence that is associated with sprawl. As we spread ourselves farther and farther apart, it becomes inevitable that we must travel longer distances to work, shop, enjoy recreation, and visit family and friends. The convenience store and even the playground may no longer be within walking distance. Work may be on the other side of town or even in another town altogether. The bus stop may be farther away, too, even if we are fortunate enough to have a bus that goes anywhere close to our destination; in many places, there is no bus service at all.

The only good choice for most suburbanites is to drive, and to drive a lot. And that is exactly what we are doing. In particular, motor vehicle miles traveled in the United States have been on an upward trend for several decades. According to the federal Bureau of Transportation Statistics, vehicle use in America doubled from one to just over two trillion miles per year between 1970 and 1990, and had climbed further to over 2.8 trillion miles by 2002. Although growth in annual vehicle miles traveled slowed somewhat in the 1990s to around two percent per year, down from the three- and four-percent annual growth rates experienced in the 1980s, the numbers continue to go up. The rate grew 2.7 percent from 2001 to 2002, the last year for which incremental data are available.\(^{12}\)

A number of troubling additional trends are associated with the growth of vehicle use in recent decades, all pointing to increased inefficiency in travel patterns. These include an increase in average trip length, growth in the number of vehicle trips taken per person and per household per year, a decline in all modes of travel other than single-occupancy driving, and a decline in average vehicle occupancy.

While there are a number of possible reasons for the growth in automobile travel, there is little question that land development patterns constitute a substantial portion of the cause. Environmental researcher John Holtzclaw has been studying the relationships between vehicle use and neighborhood densities in a number of metropolitan regions, including San Francisco, Los Angeles and Chicago, for a decade. Holtzclaw’s work shows that vehicle use increases as neighborhoods become more spread out and, conversely, that use declines as neighborhoods become more compact and more typically urban. In particular, his analysis of travel data in a number of studies and communities indicates that, as residential density doubles, vehicle use declines some 20 to 40 percent. Vehicle trips per household, as well as vehicle mileage driven, decline with each incremental increase in density, and the basic conclusions hold true even when the analysis is controlled for such variables as household size and income. Other research has been generally consistent with the comprehensive work done by Holtzclaw.\(^\text{13}\)

Moreover, while spread-out development generates substantially more automobile and truck traffic than compact communities, this seems especially the case when low-density development is coupled with other neighborhood

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characteristics that also are frequently associated with current development patterns. These include the isolation of the various functions of community—housing, work, shopping, recreation, even education, and so forth—in single-use tracts, a lack of pedestrian amenities, and neighborhood location that fails to coordinate well with the rest of a metropolitan region. Unfortunately, we are not only sprawling out; we are doing so in a way that guarantees increased automobile dependence.

**Stuck in the middle with you**

It will come as no surprise to soccer moms and dads, delivery drivers, and suburban commuters that all this increased driving has brought substantially increased traffic congestion: Americans now spend roughly one of every eight waking hours in our cars. Seventy percent of peak-hour travel on urban Interstate highways now occurs on congested roads operating at more than 80 percent capacity. Average time of congestion daily on metropolitan roadways essentially doubled from two to three hours in 1982 to five to six hours by 1999. The Surface Transportation Policy Project, observing that American women, especially mothers, have become “the bus drivers of the 1990s,” reports that women now drive an average of 29 miles per day, spending more time in their cars than the average American spends in conversation.\(^\text{14}\)

According to the annual study of urban mobility and traffic congestion published by the Texas Transportation Institute, the impacts on drivers in fast-spreadiing metro regions are substantial indeed. Drivers in Los Angeles, for example, suffer an average of 93 hours per year lost to congestion-related delays; Orlando drivers lose 51 hours, and Atlanta drivers lose 60 hours. Average annual delays in Dallas have increased more than fourfold, from 13 hours in 1982 to 61

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hours in 2002. The Institute has concluded that congestion cost the American economy some $63 billion in lost productivity and wasted fuel in 2004.

Even when traffic congestion is viewed in isolation from related transportation impacts, there is no quick fix. For the latter half of the twentieth century, American planners, engineers, and decision makers relied mostly on the expansion of road system capacity to alleviate traffic congestion. As quoted in *Divided Highways*, historian Tom Lewis’s chronicle of the United States interstate highway system, even back in June 1969 President Nixon’s Transportation Secretary John Volpe lamented that “[t]he federal government spends as much money on highway construction in six weeks as it has put into urban transit in the last six years…Unless we intend to pave the entire surface of the country—and no one wants that—we have to stop this trend. We already have one mile of highway for every square mile of land area in the U.S.A.”

A little over three decades later, we now have two lane miles for every square mile of land.

Even if we wanted to, we could not afford to build enough additional expensive highway lane miles to keep pace with our burgeoning population and expansive land development. But, even if we could, it wouldn’t work. This is because new road capacity acts as a powerful magnet for drivers, inducing us to take more and longer trips than we otherwise would have, soon congesting the very roads we built to alleviate congestion. According to the growing academic literature on “induced travel,” as summarized in a 2000 presentation by Dr. Lewison Lee Lem of the U.S. Environmental Protection Agency, every ten percent increase in road capacity leads to two to five percent more driving in the short term and five to ten percent increases in the long term, essentially putting you right back where you started.

Some of this additional traffic is because the new road capacity also induces more land development. A recent study performed for the Brookings Institution by Marlon Boarnet found that highway investments shift economic development away from existing communities to newly-built areas. Just as empty roads and traffic lanes act as magnets for new driving, highway interchanges draw new development.

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Running on empty

These dramatic increases in motor vehicle travel cause a host of serious environmental problems, including increases in energy consumption, greenhouse gas emissions, and unhealthful air pollution. In particular, transportation is by far the largest consumer of petroleum products in the United States, accounting for some two-thirds of our overall oil consumption. Transportation alone consumes more oil than the United States produces, and also more oil than we import, each year. The Bureau of Transportation Statistics reports that, as of 2001, the U.S. was using around 13 million barrels of oil each day to support our transportation habits, up from 9.55 million in 1980. That is a 38 percent increase in only two decades. Slightly more than half of U.S. transportation energy is consumed by cars, SUVs and other personal vehicles, with heavier freight trucks accounting for around a fourth. Gasoline consumption in the United States alone accounts for 11 percent of world oil consumption.

![Energy Consumption by U.S. Transportation (quadrillion Btus per year)](image)

Figure 3: Increase in Energy Consumption by U.S. Transportation Sector, Data from US Department of Energy.

Our gluttonous appetite for oil is uniquely American, at least as a matter of degree. Long-term research on 48 cities around the world by Australian professors Peter Newman and Jeffrey Kenworthy indicates that, on average, residents of the U.S. consume four times as much gasoline per capita as do residents of Europe, and nine times as much as residents of Asian cities.
Even after correcting for economic factors such as income levels, gasoline prices, and fuel efficiencies, the authors have found that gasoline consumption and automobile usage is still significantly higher in the U.S. than in other parts of the world, on average. Automobile use per capita in the U.S. is 2.41 times that in Europe despite economic productivity per capita being only 0.85 that of Europe.\textsuperscript{16}

\textbf{Figure 4: Gasoline use per capita in the US, Canada, Europe, Australia and Asia. Newman and Kenworthy, Sustainability and Cities.}

This creates immense pressure to open up rich and pristine natural areas such as the Arctic National Wildlife Refuge and waters off the California coast to oil exploration, and it also contributes to international political anxiety. In a speech in Washington on October 15, 2004, Federal Reserve Chairman Greenspan gave expression to some of the concerns:

\[T\]he current situation reflects an increasing fear that existing reserves and productive crude oil capacity have become subject to potential geopolitical adversity. These anxieties patently are not frivolous given the stark realities evident in many areas of the world . . . [G]rowing uncertainties about the long-term security of world oil production, especially in the Middle East, have been pressing oil prices sharply higher. . . .\textsuperscript{17}

Greenspan went on to note that much of the capital infrastructure of the United States and elsewhere was built in anticipation of lower real oil prices than

currently prevail or are anticipated for the future, and that the situation will only be subject to additional pressures as China and India continue to industrialize and increase sharply their oil consumption. As oil and gasoline prices rise, the oil-and gasoline-intensive economy of the U.S. will only become increasingly burdened compared to those countries with more energy-efficient economies, and our patterns of land development, unless reversed, will make those burdens very difficult to address.

One inevitable by-product of all the fossil fuel consumption brought on by increasing automobile dependence is the emission of carbon dioxide, a potent greenhouse gas. According to data from the federal Departments of Transportation and Energy, transportation in the U.S. produces over 450 million metric tons of carbon dioxide each year, about a third of all U.S. carbon emissions. Total U.S. carbon emissions have been growing at an average rate of about one percent per year, with transportation sources growing around 20 percent faster than the total. Carbon emissions per capita in the United States are nearly double those in Europe.

So far, the effects on our quality of life and economy from rising accumulation of greenhouse gases in our atmosphere have not been dramatic. But they could become so. While it is beyond the scope of this report to document the likely patterns and consequences of global warming, the Intergovernmental Panel on Climate Change has developed a range of projections of future climate trends, all of them indicating that average rates of warming probably will be greater than any seen in the last 10,000 years. The IPCC’s mid-range, "best estimate" forecast is for an additional 2°C (3.6°Fahrenheit) warming in the 21st century. The "best estimate" scenario also forecasts an additional sea level rise of about 50 centimeters (20 inches) during the same time period.18

The resulting impacts on human health and ecosystems could be widespread and quite serious, ranging from sea level rise and flooding, to widespread transmission of vector-borne diseases. While the American responses to calls from the international community of nations to contain greenhouse gas emissions have been anything but clear or strong, under any scenario it will be difficult to address the issues if emissions from the our country’s transportation sector continue to rise so dramatically.

Every breath you take

The news on unhealthful air pollution from our sprawling driving patterns is only slightly more encouraging. A report from the federal Environmental Protection Agency summarizes the situation:

Despite considerable progress, the overall goal of clean and healthy air continues to elude much of the country. Unhealthy air pollution levels still plague virtually every major city in the United States. This is largely because development and urban sprawl have created new pollution sources and have contributed to a doubling of vehicle travel since 1970.\(^{19}\)

That is even clearer today than in 1994, when the report was written. In particular, cars and other highway vehicles continue to emit some 60 million tons of carbon monoxide per year, about 62 percent of our national inventory of that pollutant; cars and other highway vehicles continue to emit some seven million tons per year, almost 27 percent, of our volatile organic compounds (VOCs), which constitute a major precursor to ozone smog and they emit around eight million tons per year, about 37 percent, of our nitrogen oxides, another ozone precursor.\(^{20}\) Motor vehicles also emit as much as half of our carcinogenic and toxic air pollutants, such as benzene and formaldehyde. And heavy vehicles, particularly diesel-powered buses and freight trucks, constitute a significant source of soot and other unhealthful fine particles.

The transportation sector is responsible for more than half of the total emissions of federally regulated pollutants in a number of regions. Using 1999 data reported by the Surface Transportation Policy Project, examples include the


following: Fort Worth-Arlington (transportation responsible for 60.2 percent), San Antonio (57.1 percent), Los Angeles-Long Beach (56.9 percent), Austin-San Marcos (56.9 percent), Dallas (56.7 percent), Hartford (55.6 percent), New York (53.9 percent), Seattle-Bellevue-Everett (53.6 percent), Detroit (52.7 percent) and Raleigh-Durham-Chapel Hill (50.5 percent).  

EPA scientists believe that current trends in vehicle trips and miles driven, even with continuing incremental improvements in emission control systems, threaten to reverse the recent national trend of improving air quality by causing total emissions of carbon dioxide, sulfur dioxide and particulate matter to increase in the near future.  

Total nitrogen oxide emissions from motor vehicles already are at a higher level than they were two decades ago. As a result, the steady improvement nationally in ozone smog levels that had been experienced before the mid-1990s has essentially come to a halt, with smog no longer decreasing in most metropolitan areas. In 2002, Los Angeles experienced over 100 days with unhealthy air quality, as measured by the federal EPA. And Austin, Boston, Charlotte, Greensboro, and Orlando are among the cities that experienced over 50 percent increases in the number of unhealthy smog levels at the turn of the 21st century, compared with those experienced in the mid-1990s.

These numbers matter to our quality of life and our economy. Air pollution from tailpipe emissions is linked with a range of pulmonary, coronary, and neurological disease including asthma, cancer, heart disease, heart attacks, strokes, high blood pressure, birth defects, and brain damage. Asthma, in particular, has increased sharply in the last decade. Transportation-related public health costs from air pollution were estimated to be more than $1.5 billion in New York and Los Angeles, respectively, in 2001. The costs were high in other metro areas as well, approximately $1 billion in Chicago and $500-$600 million each in Atlanta, Dallas-Ft. Worth, Detroit, Houston, Philadelphia, San Francisco-Oakland and Washington, DC. And beyond its human health impacts, air pollution also is detrimental to ecosystem health, contributing to such recognized threats as acid rain and excess nitrogen loading to aquatic and terrestrial systems.

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24 Surface Transportation Policy Project, Clearing the Air, op. cit.
25 Ibid.
Sprawl-related automobile dependence is also becoming known as one of the factors contributing to a decline in walking and associated physical activity in our daily life, complicating efforts to address alarming rates of obesity and hypertension in America. Nearly 63 percent of Americans are overweight and nearly one in three is now classified as obese. The association of sprawling neighborhoods with expanding waistlines has now been documented by researchers at, among other places, Harvard and Emory Universities, the Centers for Disease Control, and Smart Growth America, whose 2003 comprehensive study of the available data indicates that those of us who live in the most sprawling areas are likely to walk 25-30 percent less than those of us in the least sprawling areas, and likely to weigh some six pounds more. An ongoing study in Atlanta is finding that, as housing density increases from 2 units per acre to 8 units per acre, the proportion of white men who are overweight drops from 68 percent to 50 percent and the proportion of obese men drops from 23 to 13 percent. These findings are holding true for other sectors of the population as well. Physical inactivity leads to over 200,000 premature deaths per year, and research also shows that people who walk regularly have half the number of sick days for colds and other respiratory infections that are suffered by those who do not.26

__Once there were greenfields__

Beyond the impacts related to traffic and mobility, sprawling land development is dramatically altering the character of our nation’s landscape and the resources it harbors. We can literally see the impacts to our working farms and our ecosystems, and to the once-familiar vistas that for generations have soothed our spirit and nourished our ever-more-tenuous connection as human beings to the mysteries of the natural world.

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In particular, while the U.S. continues to enjoy the appearance of abundant farmland, the best of that land is being lost permanently to development at an amazing rate. Drawing from exhaustive research on the subject, the American Farmland Trust concluded in its report *Farming On the Edge* that the nation’s inventory of cropland declined 12 percent in just two recent decades, from 420 million acres in 1982 to 368 million acres in 2002. Indeed, the rate of conversion to nonfarm uses accelerated in the last decade, with land used for farming and ranching declining 51% faster in the 1990s than in the 1980s. Several states saw more than a doubling of the rate of farmland loss in the years from 1992-1997 compared to the five previous years, including Illinois, New York, New Jersey, Maryland, and Connecticut. In those five years, the nation as a whole lost six million acres of farmland, an area the size of Maryland.\(^27\)

To make matters worse, most of the country’s prime farmland, the land with soil and climatic conditions best suited for growing crops, is located within the fast-expanding suburban and exurban counties of metropolitan areas. Such “urban-influenced” counties currently produce more than half the total value of U.S. farm production; counties with prime and unique farmland found by the Farmland Trust to be threatened by particularly high rates of current development collectively produce some 86 percent of our nation’s fruits and vegetables.

Poorly planned sprawl development also creates fragmented ecosystems that can no longer support the most imperiled wildlife species, which require large, undisturbed areas. In particular, so-called “leapfrog” or scattered development leaves only smaller, more isolated patches suited mainly for generalist species that are already abundant. These effects are cumulative and worsen over time so that, although the United States has enjoyed success through the federal Endangered Species Act and other efforts at meeting the needs of certain high-profile species in certain locations, we are witnessing a slow decline of others, especially songbirds and amphibians.

There is ample reason to take better care of our ecological resources. Research for the Biological Resources Division of the U.S. Geological Survey reports that 27 ecosystem types have declined by an alarming 98 percent or more since European settlement of North America. Over 500 species of plants and animals have become extinct in America since that time, and over twice that many are currently listed by the U.S. Fish and Wildlife Service as threatened or endangered. The Nature Conservancy, in a comprehensive assessment of some 20,000 species of plants and animals native to the United States, reports that current extinction rates are conservatively estimated to be at least 10,000 times greater than background levels, largely because of habitat degradation and destruction.

The loss of biologically rich wetlands is of particular concern. According to the Fish and Wildlife Service, the U.S. has lost some 117 million acres of wetlands, more than half the original base, since the first European settlement, and continues to lose 58,000 acres per year. The leading causes are urban and rural development, together accounting for 51 percent of the loss, outpacing agriculture (26 percent) and silviculture (23 percent).28

Ecosystem losses have been especially pronounced in some fast-growing areas of the country. California, for example, is estimated to have lost over 90 percent of its original wetland resource. California is also estimated to have lost over 90 percent of its native grassland, over 80 percent of its coastal redwoods, and over 70 percent of its coastal sage. The National Wildlife Federation identifies sprawl as the leading cause of overall species imperilment in California, contributing to the imperilment of 188 of the 286 California species listed as threatened or endangered under the Endangered Species Act.

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Six other states—Illinois, Indiana, Iowa, Kentucky, Missouri, and Ohio—have also lost more than 80 percent of their original wetlands. Dryland habitat is under siege, too: in fast-developing Florida, 15 of the state’s upland-community ecosystem types are said to be imperiled, some critically; Florida has lost over 80 percent of its longleaf and slash pine forests. In Pennsylvania, the Pocono till barrens and serpentine barrens, which hold that state’s two largest concentrations of land-based endangered species, are now under severe threat because they are being opened to suburban development.\(^\text{29}\)

Haphazard, low-density development also wreaks havoc on our nation’s water quality. Natural landscapes, such as forests, wetlands, and grasslands, are typically varied and porous. They trap rainwater and snowmelt and filter it into the ground slowly. When there is runoff, it tends to reach receiving waterways gradually. Developed areas, by contrast, are characterized by large paved or covered surfaces (think of a supermarket parking lot leading to a connecting road and to a freeway) that are impervious to rain. Instead of percolating slowly into the ground, storm water becomes trapped above these surfaces, accumulates, and runs off in large amounts into streams, lakes, and estuaries, picking up pollutants along the way. Along with increased water volume come changes in composition as contaminants, including sediment, pathogens, nutrients (such as nitrogen and phosphorous), heavy metals, pesticides, and nondegradable debris, are picked up. As a result, there is a strong correlation between the amount of imperviousness in a drainage basin and the health of its receiving stream.

Sprawling land development extends pavement and associated runoff pollution into more and more watersheds. On-site measures to assist water quality, such as maximizing natural ground cover in individual lots, are overwhelmed by the larger system of roadways and parking lots required to serve

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sprawl. Research shows that large-lot subdivisions increase imperviousness by 10 to 50 percent compared to cluster and traditional town developments with the same number of households, and that they deliver up to three times more sediment into waterways.

The consequences of watershed degradation from development have been felt across the country. In the Puget Sound region of Washington state, for example, major floods that were 25-year events now occur annually; “the sponge is full,” according to King County analyst Tom Kiney. Similarly, in Akron, Ohio, runoff from residential areas has been estimated at up to 10 times that of pre-development conditions, and runoff from commercial development has been estimated at 18 times that before development. In several Maryland, Pennsylvania, and Virginia watersheds that drain into the Chesapeake Bay, pollution from development has been found to exceed—in some cases dramatically—pollution from industry and agriculture. Even in counties that have enacted stormwater-management regulations, the pace of development is causing pollutant loads to increase.

**Brother, can you spare a dime?**

In addition to the environmental ramifications of sprawling land use, the economic impacts – and their potentially troubling implications for the sustainability of American competitiveness in the coming decades – are profound. The drain on the American economy is manifested in a number of ways, from strained municipal and household budgets to reduced worker productivity.

Regarding the former, there is no question that fiscal stress has been brewing in our cities and towns, in fast-growing jurisdictions on the fringe of metropolitan areas and in center cities alike. Every day, statements by public officials and local newspaper articles recount stories of the need to trim municipal budgets, cut services, and raise additional revenue. And our inefficient and costly growth patterns contribute substantially to the fiscal stress. As it was put in a 1998 Environmental Protection Agency report, “Many of America’s local governments are in the grip of a growing fiscal crisis… Although the details of the story differ, they are linked by one recurring theme: much of the fiscal crisis stems from growth and development that could no longer be sustained.”

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31 Office of Policy, Planning and Evaluation, U.S. Environmental Protection Agency, *Smart Investments for City and County Managers: Energy, Environment, and Community Development*,
In particular, as we build homes, workplaces, and shops, we must find or build a network of infrastructure to service them. In addition to the driveways and utility lines that are needed on each building site, there are a number of categories that are typically furnished by the community at large, frequently at public cost. These include neighborhood costs such as collector streets, water distribution lines, sewer collector lines, and recreational facilities; community costs such as roads, water and sewer trunk lines, electricity lines, telephone lines, schools, emergency services (police, fire, and rescue), libraries, and parks; and regional costs such as regional roads, central water and sewer treatment, solid waste disposal, and central electricity and telephone facilities. Sprawl development costs more across all categories because it requires more infrastructure and more travel for service per unit.

But the cost of building new infrastructure is only the beginning. The fiscal strain imposed by growth may only get worse for many jurisdictions due to the high costs of operation and maintenance. Across the country, we focused our resources for the last half-century (and, because of our development patterns, continue to focus them) on constructing a vast network of roads, sewers, schools, power lines, and other facilities necessary to accommodate growth without sufficiently preparing for the time when that network would need to be repaired or replaced. As this infrastructure inevitably ages and deteriorates, we must now pay in increasing amounts for maintaining it.

For example, in the 1990s planners for the Los Angeles region concluded that $37 billion is needed just for operation and maintenance of the area’s road network between 1996 and 2020.\footnote{Southern California Association of Governments, \textit{Preliminary Draft ‘97 Regional Transportation Plan}, Los Angeles: Southern California Association of Governments, 1997, p. 49.} That is more than $2000 for every man, woman and child in the region, reducing funds available for new and better transportation facilities. Similarly, in Kansas City, where in the mid-1990s there were more freeway miles per person than any in other major metropolitan area in

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the country, the Chamber of Commerce estimated that repairing neglected infrastructure will cost more than $2 billion. This is more than $1,250 for each person in the metropolitan area.\textsuperscript{33}

The costs of growth-related infrastructure are sometimes exposed as especially wasteful when viewed in the context of a region as a whole. This is because, as metropolitan areas expand, “new” suburban growth is not always new; substantial portions of it may instead just be displaced from other parts of the metropolitan area. For example, in Montgomery County, Maryland, even though the county-wide school population dropped by 10,000 pupils between 1980 and 1990, 70 new schools were built. During the same period, 68 others were abandoned.\textsuperscript{34} This has a damaging effect on a region’s economy in both old and new locations: cities and inner suburbs must repair and replace aging infrastructure with fewer taxpayers to cover the costs, while newer suburbs must find the resources to pay for costly new infrastructure to support growth. The result of displaced growth is a “lose-lose” combination for both types of jurisdictions.

The problem is particularly acute in many communities because sprawling developments rarely generate sufficient new revenues from taxes and traditional fees to cover the costs of providing infrastructure and services. Impact fees help to some degree but not enough. In the end, new growth is subsidized by a variety of sources, including taxpayers and other users of public services infrastructure, in the form of increased taxes and user fees.

Many jurisdictions respond by trying to attract commercial development – sometimes with aggressive tax benefits – to generate positive revenues. Such development, which is thought to require no school construction and a reduced amount of police, fire and other public services, is widely believed to be a revenue winner. But, in fact, commercial development often creates a demand for additional nearby residential development, bringing a fiscal drain that offsets the benefits. In response, local governments may seek to attract still more commercial development to offset the costs of providing public services to the just-attracted residential developments. The result is a vicious cycle whereby many jurisdictions are constantly failing in their attempt to pay for residential growth with nonresidential development.\textsuperscript{35}

\textsuperscript{34} Tom Horton, “A Fumbling Approach to Growth,” \textit{The Baltimore Sun}, December 8, 1995, p. 2C.
At the national level, the voluminous study *Costs of Sprawl-2000* by Rutgers University’s Robert Burchell and associates projects that current development trends will cost a whopping 25 percent more in public funds over 25 years than would a planned growth scenario that concentrated new development in and around existing communities. In particular, a business-as-usual approach would require, among other things, 188,300 more new lane-miles of road capacity at a cost of $110 billion, and 4.6 million more miles of additional water and sewer lines at a cost of $12.6 billion over the time period.\(^{36}\)

The costs of sprawl for households can be just as real as those for public entities. With the increased automobile dependence and longer trips required by spread-out development, Americans now spend more on transportation than on food, clothing, or health care. According the United States Department of Labor, as of 2001, 19.3 cents from every household dollar is spent on transportation, which is a close second only to housing in its claim on earnings. The share has grown from 14 cents in 1960 and from under ten cents in 1935.

Transportation expenses are an even greater burden for poorer families. According to the Surface Transportation Policy Project, the poorest 20 percent of American families spend 40 percent of their take-home pay on transportation, and the working poor spend nearly 10 percent of their income just getting to work. Those who drive to work spend 21 percent of their income commuting. The actual burden may now be even greater for both poor and average households, given that these calculations were based on data collected prior to the steady and steep increase in gasoline prices suffered by American consumers beginning in 2002. Chicago’s Center for Neighborhood Technology, which has spent over a decade researching the relationship between transportation costs and housing, has found that families that must spend a large share of their income on purchasing, operating and maintaining cars and trucks are often not able to save and invest for owning a home.

Places with more compact development patterns and more robust public transit systems can be kinder to household budgets. Newman and Kenworthy, the Australian researchers who study international transportation patterns, report that households in European and Asian cities spend only eight percent and five percent, respectively, of their incomes on transportation, despite higher fuel costs.

Looking only at the United States, and comparing metro areas to each other, the Surface Transportation Policy Project found that households in the most sprawling areas spend substantially more on transportation than households in the

least sprawling areas. In particular, in 1997 and 1998 households devoted the highest portion of their budget to transportation in sprawling Houston, Atlanta, Dallas-Fort Worth, Miami, and Detroit. The average Houston area household used 22 cents out of every dollar it spent on transportation, spending well over $8,800 each year to get around, or $2,528 more than the national average. The three least expensive (and, not coincidentally, among the less sprawling) metro areas in the survey, New York, Baltimore, and Honolulu, spent almost one-third less: Baltimore households used less than 15 cents out of every spending dollar on transportation, spending $5,236 annually, which translates to a savings of over $3000 per year compared to those in Houston.  

The European and Asian economies also benefit from lower rates of road accidents, which cost the U.S. some $150 billion dollars each year. Newman and Kenworthy report that European metro regions experience only 8.8 traffic fatalities annually per 100,000 people, as compared with 14.6 fatalities per year in the United States.

More surprising, perhaps, is that there is also now a growing body of evidence that sprawling land development is associated with an adverse impact on general economic efficiency and productivity. To the extent this is true, the implications for American competitiveness in a global economy are obvious. In an extensive review of the literature on the fiscal and competitive impacts of development patterns, researchers Mark Muro and Robert Puentes found for the Brookings Institution that the relationship can be seen from a variety of different measures with consistent conclusions. For example, research on communities within the greater San Francisco region has found that sprawling areas fared worse on a number of economic performance indicators than did more compactly developed areas.

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At the state level, workers in the ten states with the most spread-out populations produced 25 percent less economic value than workers in the 10 states with the densest populations. Areas that are more spread-out also produce fewer patents, which tend to rise 20 to 30 percent on average as population density doubles.

This undoubtedly is due in part to the costs of congestion and other transportation inefficiencies built in to the distribution of goods and services needed for American business and its consumers. As noted, these inefficiencies are likely to worsen as oil and gasoline costs rise. In their publication *Smart Growth Is Smart Business*, the National Association of Local Environmental Professionals and the Smart Growth Leadership Institute observed that, for example, the lack of nearby affordable housing in Howard County, Maryland means that businesses must fund shuttle buses to pick up workers in Baltimore and bring them to suburban malls 20 miles from the city. The report also noted the costs of lost productivity due to traffic congestion and to worker absenteeism due to the adverse health effects suffered in automobile-dependent communities.

Newman and Kenworthy observe that the United States spends 24 percent more of its gross economic product on trips to work than does Europe, which is more compactly developed, and that Europe has a higher rate of economic output per capita than does the United States, almost $5000 per person per year. Indeed, European business is stronger than ever: Europe leads the world in a number of industries from aerospace to insurance, and fourteen of the 20 largest commercial banks in the world are European. Sixty-one of the 140 biggest companies on the global Fortune 500 list are European, as compared with 50 American companies. And there are more poor people in the U.S. than in the combined 16 European countries for which data are available. While the inefficiencies associated with land development patterns may be but one factor among many behind these trends, the implications should be sobering for American business.

**Living just enough for the city**

All these serious problems aside, some of the most severe and troubling consequences of the way we are growing are those felt by populations left behind. In particular, the migration of residents, jobs, and economic investment to America’s sprawling outer suburbs has been devastating to many inner-city neighborhoods, including a disproportionate number of minority communities. The draining of wealth, resources, and spirit from these neighborhoods has meant

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that many of those who have remained have become isolated from mainstream society, making it increasingly difficult for them to have access to jobs, educational opportunities, medical services, and other prerequisites of the American Dream. In 1960, central cities contained one-third of the nation’s poor; by 1990, the central-city share had climbed to one-half, even though the central-city share of total population had declined to around 30 percent.

In many locations, the wave of suburbanization and road-building that characterized the last half-century (and continues to do so) destroyed communities in a quite literal way. Some 335,000 homes, mainly in inner cities, were razed during the first decade of Interstate highway construction. In Nashville, the construction of I-40 went straight through 80 percent of the city’s African-American businesses, while also demolishing 650 homes and 27 apartment buildings and creating a physical barrier separating its largest African-American universities from each other and from important parts of their community.  

The long-term effect of the transfer of economic activity and affluence to increasingly distant suburban locations has been a diminished tax base and a sustained cycle of decline in many older communities. The decline in the quality of amenities and services caused by a diminished tax base affects the communities’ ability to attract new residents and jobs, which only further diminishes the tax base and fiscal capacity to address the problems. Smaller towns, too, experience abandonment and disinvestment. Local “mom-and-pop” businesses have been seriously affected by the explosion of discount retailing that accompanies sprawl—superstores, commercial strips, and malls located along major roadways—taking advantage of cheap land, cheap energy, cheap labor, and generous local tax breaks and incentives. A 1996 article in the Kansas City Star discussed the ways in which Interstate 70 dramatically changed the character of small towns after malls and discount outlets

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40 See discussion and sources cited in Benfield et al., Once There Were Greenfields, op. cit., at pp. 121-122.
sprang up along its route. One long-time resident explained that “[the highway] killed our old downtown,” arguing that it lost grocery stores, a cobbler, the bank, and other businesses because of competition from these superstores.\(^{41}\)

Moreover, problems once regarded as “urban” have reached the suburbs, which are now experiencing their own cycle of decline and abandonment. In his book *Metropolitics*, Myron Orfield presents maps showing how living conditions have changed over time within sprawling metropolitan areas. In addition to showing the simple geographic progression of land development, the maps graphically document the spread of problems such as unemployment, poor educational performance, and crime from central city neighborhoods to inner-ring suburbs. With regard to Chicago, for example, Orfield notes that, as of the 1990s, nine suburbs had higher crime rates than that of Chicago proper, and 40 had rates above the regional average. In their analysis of the literature on fiscal and economic effects, Muro and Puentes observed that the impacts are felt well beyond those neighborhoods where they are obvious: “Urban decay can undercut the attractiveness of the entire region by harming its ability to maintain the physical infrastructure, reducing the number of regionally valued amenities, weakening its agglomeration economies, and imposing other social costs manifested by high crime, poor health, and unproductive workers.”\(^{42}\)

Even in crime-free, affluent suburbs – those to which the investment has fled – quality of life can suffer. The most common observation is that the design—and frequent chaos—of sprawl development discourages interaction among residents and forces people to go outside their communities even for the most basic shopping errands, social visits, and work. Since automobile travel is often the only means of achieving this, residents tend to interact with their neighbors mainly through their windshields—not the most social form of human interaction. And the additional time spent driving eats directly into leisure and professional time.

It does not help that many “edge cities” and other new, outer suburbs exhibit a striking lack of political or cultural coherence, with relatively few civic and cultural institutions to provide any sort of unifying force. Cul-de-sac street design also prevents individual developments from connecting with each other and, in some cases, walls and gates are erected for the very purpose of isolating developments from the outside world.


\(^{42}\) Muro and Puentes, op. cit.
The relative absence of pedestrian activity is often identified as a particular threat to community cohesion, because walking is conducive to chance encounters and the creation of informal relationships within communities. In much of new suburbia, unfortunately, nondrivers are particularly isolated, preventing them from experiencing a diversity of people, places, and activities, and dissociating them from much of mainstream society. The result for many living on the fringe is a decline in what we call “community,” a sense of belonging to a place.

Solving sprawl

The good news is that it does not have to be this way. We have choices and, being a nation of progress, we have innovation on our side. And good planners, architects, conservationists and policymakers are beginning to show us the way. There are better approaches that can secure a future with personal comfort and a high standard of living, as well as a high-quality environment for ourselves and our children. Although there is no firm set of guidelines to dictate precisely how we should build the more sustainable growth of the future, there is an emerging consensus over a number of key (if flexible) elements:

**Strengthening central cities and other traditional communities.**

One part of the solution is to strengthen central cities, inner suburbs, and other traditional communities, making better use of land available for development within them. With central cities and towns as hubs of economic and cultural activity, particularly when linked with strong inner residential neighborhoods, the need to drive long distances and claim new greenfields for development can be significantly reduced. The Maryland Office of Planning has reported, for example, that with careful location and development all of the 20 percent population growth projected for metropolitan Washington, DC by 2020 could be accommodated within the boundaries of existing developed areas.
An innovative new development in midtown Atlanta called Atlantic Station, for example, is bringing to that city a dramatic departure from the aggressive, sprawling consumption of land on the metropolitan fringe that has caused its workers to face the nation's longest average commute and some of its most polluted air. Traffic caused by Atlanta's rapidly expanding land base – cited by real estate analyst Christopher Leinberger as perhaps the fastest-developing human settlement in history – had become a major reason why the region suffered 60 ozone days of unhealthy air in 1999. By taking advantage of an abandoned, 128-acre industrial site in the central city, however, and building to urban densities that will accommodate over 3000 homes, over four million square feet of office space, and over a million square feet of shopping and entertainment facilities, along with parks, lakes, and other urban refuges, Jacoby Development has been able to help the city absorb growth that otherwise might have claimed several hundred acres or more of conventional sprawl development in the outer suburbs.

Atlantic Station's offices, parks, shops, and homes are all within easy walking distance of each other and public transportation, and the development's location permits shorter driving distances for most of those who do drive. As a result, when the U.S. Environmental Protection Agency modeled Atlantic Station's likely emissions against two suburban developments, the comparisons showed that Atlantic Station would likely produce only half the driving -- and in turn much lower emissions of nitrogen oxides and volatile organic compounds, the precursors of ozone smog, as well as of carbon dioxide, the main gas that causes global warming. When the development was proposed, Atlanta Mayor Bill Campbell said, "This is the most important development project in Atlanta in the last 50 years, bar none."

And it is not just shiny new development that can reinvigorate America's central cities. Two decades ago, Boston's Dudley Street neighborhood -- one of the city's (and the state's) poorest -- was lined with shuttered buildings and vacant lots. It had become an all too striking example of what can happen when inner-city neighborhoods are forgotten as economic investment leaves for the suburbs. Today, however, thanks to a resident-led program, Dudley Street's new affordable homes, community center, pocket parks, train station and farmers' market bustle with activity.

The reason for the transformation is the Dudley Street Neighborhood Initiative, a program built by a grassroots coalition that reflects the community's diversity. With help from foundations, DNSI first closed down the illegal dumps and hazardous waste sites that had plagued the neighborhood. The group then transformed 600 abandoned parcels into homes, gardens and public spaces. The new affordable housing developments include homes in clusters to make the most
of available space, front porches that invite gathering, classic city sidewalks that encourage walking, and narrow streets that keep traffic at safe speeds. The initiative also successfully campaigned to reopen the local train station, which had closed in 1986. Now the residents have the link they need between their burgeoning community and the rest of the city.

**Smarter suburban development.**

How and what we build is just as important as where we build. We need to use our land more efficiently and sensibly, with a more diverse mix of housing and lot types in walkable, accessible neighborhoods. And we need to have our businesses and amenities as conveniently located as possible, integrated within rather than cut off and inaccessible from our homes.

By doing this with the right design, we need sacrifice none of the popular community attributes sometimes mistakenly thought of as inherently “suburban,” such as privacy, safety, convenience, and open space. Nor need we “cram everyone into high-rise buildings,” as some alarmists cynically contend that progressive planners advocate, or disavow larger homes on ample lots, for those who seek and can afford them. The key is to build variety, arranged so that the neighborhood as a whole makes more efficient use of land. Ed Risse of Synergy Planning, Inc. estimated in 2001 that if the metropolitan Washington, DC region were to adopt the suburb of Reston, Virginia’s average density of 9-10 people per acre (the national average in 1920), the region would be able to accommodate 25 years of demand for development on vacant and underutilized land within a twenty-mile radius of the region’s center. But Reston is only compact relative to other segments of suburbia -- it remains a quiet, leafy community thanks in part to the 1300 acres of green spaces it has permanently set aside.

A great local example of smart suburban design can be found – if somewhat improbably – in California’s Silicon Valley, infamous for housing shortages and an inordinate amount of time spent behind the wheel. The town of Mountain View decided to address both problems. Working with innovative architect Peter Calthorpe, the city and TPG Development launched The Crossings,
a cluster of 300 homes built adjacent to a new commuter train station and located within walking distance of shops, offices, and open space. Even better, the development was built on reclaimed land, an abandoned shopping center. (Abandoned shopping centers, sometimes called “grayfields,” may constitute the suburban analog to abandoned urban industrial “brownfield” sites like that used for Atlantic Station.)

The Crossings is compactly built, with an average density of 22 units per acre. But thanks to careful planning, great design, and a comfortable mix of large and small single-family homes and multi-family apartments, set among playgrounds, community parks and green space, a café and some small offices, residents say this density does not feel confining. Instead, they report that the wide sidewalks, lush landscaping, playgrounds, parks, and pleasant streets create a feeling of spaciousness and gentility and that they value the convenience of walking to shops, nearby offices, or the train station. The Center for Livable Communities reports that The Crossings has had some of the fastest selling homes in the region.

Another example is the now-classic new urbanist community of Kentlands, located in Gaithersburg, Maryland, like Reston within the outer suburbs of Washington, DC. Designed in 1988, Kentlands contains six highly walkable mixed-use neighborhoods, each combining residential, office, civic, cultural and retail usage, with the neighborhoods separated from each other by a network of abundant natural green space with walking trails. The community offers a range of housing types and sizes to encourage diversity in age and income level, along with a variety of civic facilities and public open spaces.

All told, the 352-acre Kentlands site contains 1600 dwelling units, including a mixture of large and moderately sized homes, a million square feet of office space, and 1.2 million square feet of commercial space.
served by rail transit, but there is frequent bus service, a shuttle to Washington’s Metrorail system, and a light rail line planned for the future.  

*Smart conservation.*

At the same time that we develop land more sensibly, we must also conserve for future generations the best of our natural areas and working agricultural land. Building a more sustainable future is also about deciding where *not* to develop—about deciding what in our landscape and our heritage must be preserved for future generations. It is about thoughtfully respecting nature instead of ruthlessly (or inadvertently) obliterating it.

A variety of tools exist for protecting farmland, wildlife habitat, watersheds, and scenic vistas on a large scale. These include a statewide network of forest and farm zones, such as those pioneered in Oregon; statewide rural preservation incentive programs, such as those enacted in Maryland in the 1990s; large regional habitat conservation plans that restrict development, such as the one in Clark County, Nevada (outside Las Vegas), designed to address the needs of some 79 species; and ambitious programs to purchase land or conservation easements, such as the multi-million program to save New Jersey farmland through purchase and easement acquisition launched originally by Governor Christine Todd Whitman, also in the 1990s.

There are also some great examples of smart conservation on a more local scale, none more impressive than the now-two-decades-old program of farmland conservation in Montgomery County, Maryland, which also contains Kentlands, discussed above. By 1980, Montgomery was quickly being enveloped into the expanding Washington, DC metropolis; however, the county’s western and northern parts remained predominantly rural and, by and large, unchanged from earlier times. Here, family farms still dominated, and crop production was diversified, providing county residents with a variety of local products, as well as an important source of income—up to 23 million dollars in annual total gross productivity.

Fortunately, Montgomery’s planners had the foresight to recognize that an important resource was threatened and the wisdom, with help from a little trial and error, to save it. Today, the county—notwithstanding a population of over

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43 Although it is difficult to fault the exemplary design of Kentlands, the new community has been criticized for its location on what was once farmland in an outer suburb, away from rail transit service. This criticism had merit when the development was proposed but, today, the rapid, sprawling growth of the metro Washington region has been such that Kentlands is no longer isolated but surrounded by development, most of it sprawling and decidedly inferior. If the proposed light rail line is built, it will become transit-oriented.
900,000 people and a shared border with the city of Washington—boasts the nation’s largest farmland conservation program. In particular, Montgomery has legally protected more than half of its farmland through an innovative and mutually reinforcing combination of conservation easements (by which owners donate or sell development rights to a land trust) and transfer of development rights (by which owners sell the rights to owners seeking to build in parts of the county targeted for growth), and has instituted 25-acre agricultural zoning throughout an “agricultural reserve” of 93,252 acres.

A different kind of conservation success is the Mountains to Sound Greenway in Washington state. When Interstate 90 was widened in the 1980s, the drive from Seattle to the Cascade Mountains dropped from one hour to 30 minutes. Seattle’s eastern suburbs began crawling up the mountains, and soon the highway was carrying tens of millions of people through the highly scenic and once-remote forests, farmlands, salmon spawning grounds, and mountain lion habitat that stretch from the mountains to the city. Thanks to a group of dedicated hikers who formed the Mountains to Sound Greenway Trust, this vibrant corridor is now protected from haphazard development.

In particular, in the 1990s the Trust began creating a protected corridor of scenic rural landscape from the eastern foothills of the Cascade Mountains to the shores of Puget Sound. The trust never attempted to purchase the greenway properties, which would have been prohibitively expensive. Instead, it facilitated land swaps with government agencies and pressed for sound management on private land. Since continued growth was inevitable, the group shaped a strategy that also allowed some development in designated areas along the greenway. Today, the greenway runs for 105 miles, and contains more than 50,000 protected acres of private farms, forests, and other green space.

Supportive public policy.
It is beyond the scope of this report to present a detailed policy agenda to replace America’s current unsustainable path with more Atlantic Stations, more suburban development like The Crossings, and more farmland programs like Montgomery County’s. But it bears mention that there is a lot that we can and must do. By way of a very brief summary, the national coalition Smart Growth America urges the following:

• **Local governments** should rewrite local growth plans and zoning ordinances to channel development more sensibly and deliberately; strive to provide a range of transportation choices for their citizens; locate schools within existing communities rather than outside; provide more
affordable housing; and adopt smart building codes that facilitate rather than discourage the rehabilitation of older properties.

- **State governments** should focus state spending on existing communities; enact state growth management plans; provide adequate funding in their transportation investments for alternatives to driving; adopt programs to protect open space; and use tax credits and other incentives within state law to protect historic properties and districts.

- **The federal government** should provide more balance in its transportation policy, shifting the emphasis away from new highway construction to maintenance of existing facilities and transit; support brownfield redevelopment with policy and funding; support housing programs with tax credits and affordable housing trust funds; and adopt tax incentives that support transit-oriented development and reinvestment in distressed communities.

**Taking care of business.**

Beyond government policy, there is also much that business can and should do with private-sector initiatives in order to help curb the waste associated with sprawl development and seize the efficiencies of smart growth that can free up economic resources for better productivity and competitiveness. Two promising programs in which business is cooperating with nonprofit organizations, for example, are the promotion of location-efficient mortgages and the extension of the “LEED” green building rating system to identify and reward smart-growth development. The mortgage programs, already enjoying success in some locations, use research on travel patterns in order to calculate the likely savings on transportation costs enjoyed by prospective homeowners who live in walkable neighborhoods near good transit service. Those savings are then taken into account in calculating the monthly income available to spend on a mortgage, creating an incentive for strengthening transit-rich neighborhoods.

The LEED (Leadership in Energy and Environmental Design) program is administered by the U.S. Green Building Council, a consortium of building industry and environmental organizations, to provide recognition to new buildings that save resources and avoid pollution through innovative design. LEED is in the
process of being expanded to include a new program that will provide similar recognition to entire smart-growth developments that can be expected on the basis of research and experience to provide environmental benefits when compared to conventional development.

By way of further examples, the Smart Growth Leadership Institute (the brainchild of former Maryland governor Parris Glendening) and the National Association of Local Government Environmental Professionals have recently documented a range of practices that individual businesses have found it in their interest to undertake in support of smart growth: These include, among others, the following:

- In California, the Bay Area Council, a group of 275 major employers in the San Francisco area, set up a fund to invest in smart-growth projects in order to create places that will attract workers and make business more globally competitive. The Council has designated target areas for growth and promotes only mixed-use projects.
- The Silicon Valley Manufacturing Group, representing 180 companies and 225,000 employees, has been advocating extending a local sales tax in order to build transit and make road improvements to reduce wasted employee time in traffic. The group also encourages the development of affordable housing.
- Business leaders in Stamford, Connecticut have paired with the local government to expand public transit service because of concern that increasing traffic will make them globally less competitive as employees waste time commuting.
- BellSouth decided to scrap a plan for new facilities on the fringe of Atlanta and instead merged three offices into one location near public transit in a downtown area. The company invested in parking at transit centers rather than at its office locations, giving employees greater choice in how they commute. BellSouth also designed its facilities to connect with communities to increase the ability of employees to walk to work and to engage with local neighborhoods.
- Bank of America’s new campus in Charlotte, North Carolina is itself an example of mixing retail and residential uses and public green space within walking distance of an elementary school and Charlotte’s central business district.\(^{44}\)

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We can work it out

Among local governments that have pursued smart-growth measures, none is more celebrated than Portland, Oregon. Utilizing a combination of innovative land-use measures, public transit investments, and smart-growth neighborhood design, Portland is achieving considerable success. In contrast to most metropolitan regions where the growth in developed land has outpaced the growth in population many times over, Portland has accommodated a 50 percent increase in population since the early 1970s with only a two percent increase in its land base. As a result, the density of metropolitan Portland has actually been increasing, the opposite of the experience in most regions. Moreover, the share of regional employment in Portland’s lively downtown has held steady, despite booming growth in the region as a whole. A recent analysis published in the *Journal of the American Planning Association* found that, while “Portland’s war on sprawl is not yet won,” much progress has been made, particularly with regard to walkability and transit access.⁴⁵

A recent study by Georgia Tech Professor Arthur Nelson, reported by Smart Growth America, compares Portland’s experience to that of metropolitan Atlanta, which in recent years has built highways and developed land at an especially rapid pace. To summarize the results, commute times during the study period (mid-1980s to mid-1990s) in Portland declined, while in Atlanta they worsened. The number of days of air quality violation declined in Portland while they rose in Atlanta. Portland also outpaced Atlanta on a number of other telling indicators, including the rate of job growth, growth in personal income, and reduced energy consumption. And most Portland residents surveyed said that the quality of their neighborhoods had improved while most residents of Atlanta said that the quality of their communities had declined.

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It is becoming increasingly clear that many Americans are clamoring for the kinds of changes in our development patterns that we require for environmental, economic and social sustainability. A 2004 nationwide public opinion poll conducted for the National Association of Realtors and Smart Growth America shows decisively that, while many of us continue to want single-family homes on green lots, we do not want them in a sprawling form. According to the opinion research firm Belden Russanello & Stewart, the 1130 survey respondents voiced three main points:

- Americans favor smart growth communities with shorter commute times, sidewalks, and places to walk more than sprawling communities.
- The length of their commute to work holds a dominant place in Americans’ decisions about where to live. Americans place a high value on limiting their commute times and they are more likely to see improved public transportation and changing patterns of housing development as the solutions to longer commutes than increasing road capacities.
- Americans want government and business to be investing in existing communities before putting resources into newer communities farther out from cities and older suburbs. The public’s priorities for development include more housing for people with moderate and low incomes and slowing the rate of development of open space. Many Americans also express the desire for more places to walk or bike in their communities.\(^{46}\)

Many communities and businesses are showing the way, as we have noted. Fortunately for us, the American Dream need not become a runaway, and we need not flee our circumstances. We must, however, heed them. We could do a lot worse than to follow the eloquent admonition of Tony Hiss, in his wonderful book *The Experience of Place*:

> Make sure that when we change a place, the change agreed upon nurtures our growth as capable and responsible people while also protecting the natural environment and developing jobs and homes enough for all.\(^{47}\)

We in the community of Americans can do that, and we can adopt a system of policies and practices to put it into effect. Indeed, we must.

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