

Chapter 2: General Land Use and Related Trends and Conditions in Michigan

The Michigan Land Use Leadership Council's charge, as defined by Executive Order 2003-4, was to identify the trends, causes, and consequences of unmanaged growth and development in Michigan and provide specific recommendations that address those issues. While there are numerous trends related to land use in Michigan that could be discussed, this chapter will present the *major* trends, causes, and consequences of recent land use patterns as they relate to development patterns, impacts on land-based industries, and urban impacts.

The information presented here is intended to provide a cursory overview of land use in Michigan and a sampling of information for a common backdrop, not an exhaustive list of data and information. As a part of the council's process, a website (www.michiganlanduse.org) was created that houses much reference and research material as well as links to other good land use resources from a variety of perspectives.

DEVELOPMENT PATTERNS

Michigan has nearly 37 million acres of land and 10 million inhabitants. On any globe or from any orbiting spaceship, Michigan's place on Earth is obvious: The Great Lakes vividly outline us. Those lakes contain 95 percent of the surface fresh water in the United States. We enjoy, too, more than 11,000 inland lakes and 36,000 miles of streams. Within our borders, major industry, magnificent forests, beautiful farms, livelihoods, residences, and recreation coexist and depend on each other.

The last time (1978) state land was comprehensively inventoried and classified, 37 percent of the state was upland forestland, 29 percent was agricultural, 17 percent was wetland/lowland forest, and 6 percent was in urban uses (Smyth 1995). Other smaller categories of use accounted for the balance.

Despite the lack of a comprehensive update, numerous studies have documented the changes in the landscape of Michigan since 1978, most notably spreading urbanization along with the out-migration from parts of many cities. According to one such study, if current land use patterns continue, between 1.5 and 2 million more acres of land area will be urbanized in 2020. This is a 63–87 percent increase over 1990 levels and is as much land as served 9.2 million residents in 1978 (MSPO, September 1995, *Demographics*).

The 2001 Michigan Land Resource Project study projected that if current land use patterns continue, by 2040—a generation from now—Michigan's built or developed areas will increase by 178 percent (PSC 2001). That would mean that 17 percent of Michigan would be developed, compared to the present 9 percent. At our expected growth rate, it may not take Michigan long to catch up to New Jersey, currently America's "most built" state with 26 percent developed area. Some of the most significant consequences of this phenomenon will be felt in the land resource-based industries and older urban areas.

Michigan’s population density is falling. Average population density was 3.8 persons per acre in the early 1980s and dropped to 2.8 persons per acre by the late 1990s (Norris and Soule 2003). This is most obvious when land consumption rates are compared to population change. Exhibit 1 shows this trend for several major Michigan cities.

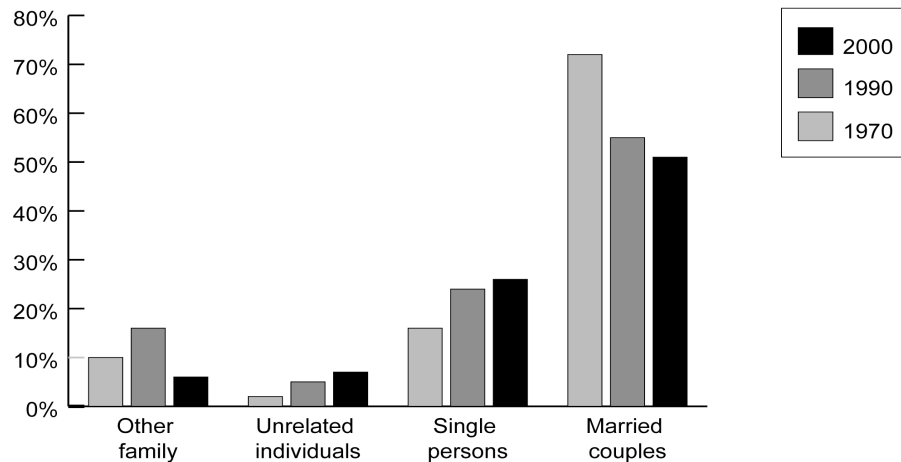
EXHIBIT 1
Land-to-Population Growth Ratios 1960–90

Ann Arbor: 2 to 1	Jackson: 10 to 1
Lansing: 2 to 1	Muskegon: 12 to 1
Kalamazoo: 2.5 to 1	Detroit: 13 to 1
Grand Rapids: 3 to 1	Saginaw: 14 to 1
Flint: 7 to 1	Bay City: 27 to 1

SOURCE: Prepared by Public Sector Consultants Inc. Figures are from various sources including U.S. Census data interpreted by David Rusk.

On average, the state of Michigan develops its land eight times faster than its population grows. The number of new households continues to significantly outpace population growth. From 1970 to 2000, households in Michigan grew by 43 percent, while population grew by only 12 percent. At the same time, persons per household fell from 3.27 in 1970 to 2.66 in 2000 (U.S. Census Bureau 1990 and 2002). While the number of households continues to rise, there is a continuing shift away from traditional households, as shown in Exhibit 2.

EXHIBIT 2
Composition of Michigan Households



SOURCE: U.S. Census Bureau 2000, Table DP-1 and Pubic Sector Consultants 1997.

Changes in household composition can explain some, but not all, of the trend toward spreading across the landscape. The state’s development patterns, which exemplify both America and Michigan’s historic frontier mentality—the yearning by many to leave

congested areas and conquer wilderness—pervade every aspect of our lives, including the age of schools and school enrollment, the look of the environment, attractiveness to business and economic growth, and access to health care.

IMPACTS ON LAND-BASED INDUSTRY

In 2001, the Michigan Land Resource Project explored the future of Michigan’s land-based industries if current development trends continue. As stated above, the report shows that by 2040 the amount of developed land in Michigan will have increased by 178 percent, nearly three times that which currently is developed (PSC 2001). Exhibit 3 shows land use classifications with actual acreage for 1980 and projections to 2040.

EXHIBIT 3
Classes of Land Use, 1980 and Projections to 2040

Class of land use	1980 (millions of acres)	2040 (millions of acres)	Change	Percent
Agriculture	11.0	9.1	-1.9	-17%
Built	2.3	6.4	+4.1	+178%
Private forestland	18.2	16.9	-1.3	-8%
Other vegetation	2.9	2.2	-0.7	-24%
Wetland	1.8	1.7	-0.2	-10%

SOURCE: Public Sector Consultants, *Michigan Land Resource Project*, November 2001.

This trend has far-reaching consequences for such land-based industries as agriculture, forestry, mining, and natural resource–based recreation and tourism, which collectively account for 17 percent of Michigan’s total economy.

- Between 1982 and 1997, farmland acreage in Michigan decreased by almost 1.5 million acres or 13.3 percent (Norris and Soule 2003).
- Michigan’s agricultural products are the second most diverse in the nation, after California. Michigan is expected to lose a quarter of its fruit-growing land over the next 40 years (PSC 2001).
- The average age of farmers in Michigan in 1997 was 53 years (USDA 1997) and continues to climb.
- Land used for mining, agriculture, and forestry often cannot compete with the land’s value for other uses, and the large contiguous parcels that these industries need for their operations are being fragmented into smaller blocks, which are less economically viable for these industries. Despite continued downward trends in real net cash income per farm during the 1990s, farm real estate values per acre rose in real terms. By 2001, the average value of farm real estate reached \$2,250 per acre, nearly 60 percent higher than five years earlier and double the price of a decade earlier (PSC 2001). But these values are far less than the value of the land for large lot single-family development.

- Farmland typically is not immediately converted to a developed use; instead it is simply not tilled and planted for a few years. If this process continues, the vegetation naturally converts to forest. Despite these natural increases, data predict a 2 to 7 percent decrease in forestland by 2040 (PSC 2001).
- The production of sand and gravel and crushed stone depends on local economic patterns and will be highly influenced by urbanization and local land use patterns. Construction materials cannot be transported economically more than about 40 miles (PSC 2001). Current land use trends jeopardize the ready availability of cheap sand and gravel due to conflicts with low-density residential development.
- As people move to destination resort areas to take advantage of the amenities and views, those areas may lose the very character and quality that originally defined them as a destination if current development patterns continue (PSC 2001).

URBAN IMPACTS

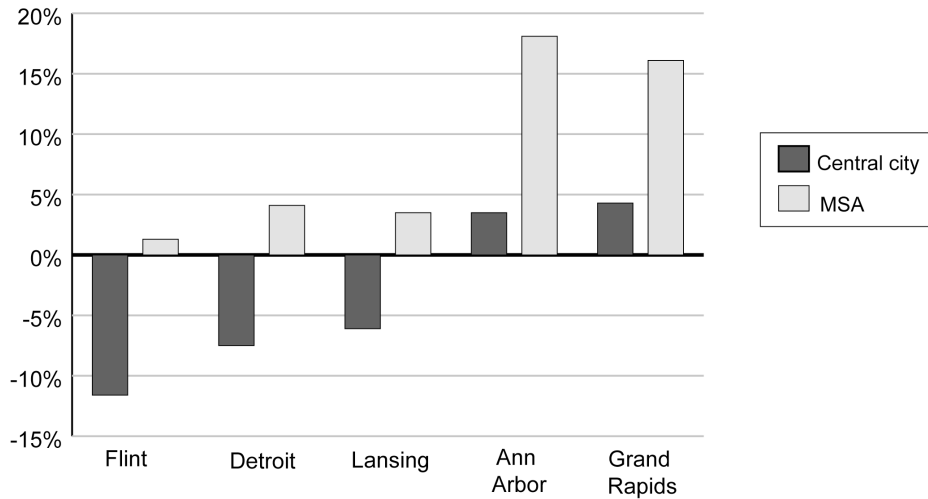
Also critical is the effect that land use patterns have on cities. When investment shifts from cities to the suburbs and beyond, (1) city property values decline; (2) city population dwindles, leaving behind a concentration of older, minority, and/or low-income populations who often cannot afford to move out; (3) the city's tax base shrinks; and (4) the city's roads, sewers, buildings, police and fire service, and public institutions deteriorate.

As shown in Exhibit 4, urban population continues to fall, both in absolute terms and relative to nonurban areas. This chart compares the central, core cities to their larger metropolitan statistical area (MSA) in terms of the percentage of population change between 1990 and 2000. MSAs are conglomerations of population that are based on counties, typically surrounding an urban area. From 1990 to 2000, the population in 13 representative Michigan cities¹ fell 4.3 percent, while during the same period the state population rose 6.9 percent. In 2000, the population of the 13 cities represented about 31 percent of the total surrounding counties, down from about 34 percent in 1990. Each of the 13 representative cities experienced out-migration from 1990 to 2000. Net out-migration was highest in Flint (28.9 percent of the 2000 population) and Saginaw (28.0 percent) and lowest in Wyoming (4.4 percent) (PSC, April 2002). More recent population estimates by the U.S. Census Bureau show declines since 2000 in all of Michigan's cities with populations greater than 100,000 persons except for Ann Arbor and Sterling Heights—including an estimated decline of 26,219 persons in Detroit, the largest decline in the nation.

A 1999 study of Michigan's cities found that concentrated poverty in urban areas increases as population declines and residents seek more updated services and open space in more rural areas. In 1990, 37 percent of the Detroit population lived in census tracts classified as extreme poverty areas, more than in New Orleans, Atlanta, or Miami (PSC 1999). Exhibit 5 illustrates concentrated poverty for selected Michigan cities. The Detroit metropolitan area has become one of the most racially segregated areas in the nation (Gerhart 1999).

¹Ann Arbor, Battle Creek, Detroit, Flint, Grand Rapids, Kalamazoo, Lansing, Muskegon, Pontiac, Saginaw, Traverse City, Warren, and Wyoming.

EXHIBIT 4
Selected Central City and MSA Populations, Percentage Change, 1990–2000



SOURCE: Public Sector Consultants Inc. Materials from the *Michigan Land Resource Project*, November 2001.

EXHIBIT 5
Trends in Racial Segregation and Poverty in Michigan’s Metro Areas, 1970–90

Metropolitan area	Housing segregation index in 1970*	Housing segregation index in 1990*	Metro poverty rate in 1970	Metro poverty rate in 1990
Ann Arbor	N/A	50	N/A	12.2%
Battle Creek	72	63	10.6%	14.3%
Benton Harbor	N/A	74	15.7%	14.7%
Detroit	88	88	8.5%	12.9%
Flint	N/A	81	N/A	16.5%
Grand Rapids	N/A	72	8.2%	8.3%
Jackson	N/A	70	N/A	12.0%
Kalamazoo	71	53	9.1%	13.5%
Lansing/East Lansing	65	57	8.8%	12.9%
Muskegon	N/A	77	10.0%	15.3%
Saginaw/Bay City/Midland	N/A	82	9.3%	14.8%

*Segregation index is based on a scale of 100, with 100 being total segregation and complete integration equal to 0.
 SOURCE: *Planning and Zoning News* 17 (May 1999): 10. Reprinted with permission.

Increased costs of providing public utility services, housing, and roads are consequences of development that accompany the population loss, declining employment opportunities, aging infrastructure, and declining schools of urban centers. The City of Detroit’s population has dropped from a high of about 1.8 million people in 1950 to under one million in 2000—the largest decrease of any American city. Between 1980 and 2000 Flint lost 22 percent of its population, Detroit lost 21 percent, and Lansing lost almost 8.5 percent. One in eight homes in Flint are vacant (Norris and Soule 2003). Detroit has more than 50,000 abandoned properties, fostering images of blight and criminal activity. In the 1950s, the city had an installed infrastructure sufficient to support a population of 2.2

million persons. Now, fewer than one million residents must pay the costs of that infrastructure (Gibson 1998). There has been improvement in the concentration of poverty, however, according to a recent report from the Brookings Institution Center on Urban and Metropolitan Policy released in May 2003. In the last decade, the number of people living in high-poverty neighborhoods in Detroit declined nearly 75 percent—the largest drop in the nation (Jargowsky 2003).

Part of the governor's charge to the council was to provide recommendations designed to promote urban revitalization and reinvestment, a topic that has received considerable attention in recent discussions about Michigan's future. The governor and others have envisioned "hip and cool" cities that attract entrepreneurial, creative, well-educated, artistic, and young people. Michigan Future—a statewide group of civic leaders—has documented why central cities matter and challenged the state's cities to embrace greater diversity, be welcoming to all—including immigrants, provide quality public services, be friendly to economic development, and develop strategies that promote mixed-income neighborhoods (Michigan Future, Inc. 2003).

It is important to recognize that urban revitalization and reinvestment are influenced by a number of "push" and "pull" factors. As Samuel R. Staley explained in his 1999 report, *"Urban Sprawl" and the Michigan Landscape: A Market-Oriented Approach*:

Pull factors are a particular community's characteristics that attract people to live in it. The possibility of a larger house on a plot of land might attract, or "pull," someone from a cramped city dwelling to a suburb or rural town. The proximity to cultural and entertainment events such as professional sports or the opera might pull others into downtown areas. Providing the kinds of neighborhoods and housing opportunities people want is critical for developing, redeveloping, and rejuvenating cities of all sizes. Large cities, for example, have a number of features that attract businesses and people: roads, cultural activities, diverse and inexpensive housing opportunities, and easy access to mass transit.

Equally important, however, are the push factors. Many cities suffer from poorly functioning school systems, high tax rates, anti-competitive regulations, and old and deteriorating housing stock. Cities may upgrade their housing stock, improve transit opportunities and decorate their downtowns with new sports stadiums and casinos, but if they do not address such basic push factors as poor schools, high taxes and crime, they will continue to stagnate and decline.

To help Michigan's central city neighborhoods compete with the "pull" of urban fringe and rural locations, it will be necessary to address the "push" factors related to the poor public services available in many central city neighborhoods, especially schools and public safety. Since deficiencies in each of these areas are significantly associated with the effects of concentrated poverty and social inequity, these root problems also must be addressed.

Protecting urban legacies that are both expensive to duplicate and, in many cases, irreplaceable are worthy goals. So, too, are protecting the environment and preserving farmland. So, too, is making smarter public investments—making better use of less. Not least as a goal is improving Michigan's economic competitiveness and job creation.

Achieving these goals, on which we measure the quality of our lives, necessarily requires hard work and facing up to broad, challenging, and controversial topics.

We need to alter the current dynamics: the understandable lure of open space, newer and more expansive homes, and better public services and the accompanying decline of cities. Former president of the Michigan Farm Bureau Jack Laurie put it succinctly: “We can’t save our farms until we save our cities.” Traveling the path of the last 30 years for the next 30 will diminish the quality of life for all.

EFFECTS OF PUBLIC POLICY AND INSTITUTIONAL FRAMEWORKS

Increasingly, the land use dialogue has turned to an examination of the causal role public policy plays in shaping land use decisions and patterns. The current preference of Michigan citizens for new homes on large country lots is an expression of personal choice, but choice depends on available options and cost. To some extent, these choices are driven by public policy at all levels of government (federal, state, and local). Some examples of these public policies include:

- Zoning land for single-family use at one unit per acre or greater and land divisions in ten-acre parcels results in very low-density scattered land use patterns that, over time, contribute to a reduction in the economic viability of farms and forests.
- The process for clearing a title in urban areas is so cumbersome and lengthy that it discourages redevelopment and land assembly efforts in urban areas.
- Government spending patterns can encourage the use of greenfields over brownfields.
- More than 1,800 units of local government have legal authority to engage in land use planning and/or zoning in Michigan. Moreover, there is little planning coordination between units of government. This lack of coordination across jurisdiction and between governmental entities encourages a checkerboard pattern of development across the state.

RESOURCE MATERIALS

A number of studies, reports, and other resources have been important to informing the growing dialogue on planning and development issues in recent years. While the following list is not exhaustive, it does provide some of the major resources including publications, websites, and organizations.

- In July 1992, the Michigan Department of Natural Resources (DNR) released *Michigan’s Environment and Relative Risk* (Lansing, Mich.: DNR). This report to then Governor Engler, prepared by the Michigan Environmental Science Board with staff assistance from Public Sector Consultants Inc., ranked environmental risks. The report identified the lack of land use planning in consideration of ecosystem integrity and the degradation of urban environments as two of the greatest risks to the state’s environment. This report brought the issue to the forefront of dialogue, validated what was only anecdotal evidence up to then, and spawned a flurry of research on land use.

- The *Status and Potential of Michigan Natural Resources* was released in March 1994 (East Lansing, Mich.: Michigan Agricultural Experiment Station, Michigan State University). It is a collection of 16 special reports on various natural resource topics such as land resources, population dynamics, wildlife, water quality, etc.
- The Michigan Society of Planning Officials (MSPO) released a study in September 1995 that resulted in 11 volumes and more than 1,700 pages documenting land use and related trends in Michigan over the past 50 years and projections for the next 30. It culminated in *Patterns on the Land: Our Choices—Our Future* (Rochester, Mich.: MSPO). This research was largely conducted by the Planning & Zoning Center Inc.
- An important follow-up study to *Patterns on the Land* was released in November 2001. The *Michigan Land Resource Project* was prepared by Public Sector Consultants Inc. (PSC) for the Frey Foundation and the W. K. Kellogg Foundation on behalf of the Michigan Economic and Environmental Roundtable (Lansing, Mich.: PSC). This was the first study to use a geographic information system (GIS) and forecasting methods to project land use to 2040 based on current land use trends. This project examined the implications, both social and economic, of those patterns on the land-based industries of agriculture, forestry, mining, and tourism. GIS work was performed by researchers at Michigan State University and the analysis of the results by associated faculty with Michigan State University, the University of Michigan, and Michigan Technological University.

There is an increasing number of valuable websites posted by organizations that represent various viewpoints engaged in the land use discussion. The following list provides a sampling of information.

- Brookings Institution Center on Urban and Metropolitan Policy at <http://www.brookings.org/es/urban/urban.htm>
- Center for Livable Communities at <http://www.lgc.org/center/index.html>
- Funders Network for Smart Growth and Livable Communities at <http://www.fundersnetwork.org/>
- Mackinac Center for Public Policy at <http://www.mackinac.org/>
- Michigan Department of Management and Budget provides demographic information at <http://www.michigan.gov/dmb/>
- Michigan Land Use Institute at <http://www.mlui.org/>
- Michigan Society of Planning at <http://www.planningmi.org/default.htm>
- Smart Growth Network at <http://www.smartgrowth.org/default.asp>
- Southeast Michigan Council of Governments at <http://www.semcong.org/>

REFERENCES

- Gerhart, Andrea. 1999. David Rusk's Message: Sprawl and Race Shaping the Land. *Planning and Zoning News* 17 (7), May: 10. Lansing, Mich.: Planning and Zoning Center Inc.
- Gibson, Campbell. June 1998. *Population of the 100 Largest Cities and Other Urban Places in the United States: 1790 to 1990*. U.S. Working Paper No. 27. Washington, D.C.: Bureau of the Census, Population Division. [Online, cited 2/28/03.] Available: <http://www.census.gov/population/www/documentation/twps0027.html>.
- Jargowsky, Paul. May 2003. *Stunning Progress, Hidden Problems: The Dramatic Decline of Concentrated Poverty in the 1990s*. [Online, cited 8/6/03.] Available: <http://www.brook.edu/dybdocroot/es/urban/publications/jargowskypoverty.pdf>.
- Michigan Future, Inc. March 2003. *Revitalizing Michigan's Central Cities: A Vision and Framework for Action*. Ann Arbor, Mich.: Michigan Future, Inc. Available: <http://www.publicpolicy.com/reports/urbanrel.pdf>.
- Michigan Society of Planning Officials (MSPO). 1995. *Patterns on the Land: Our Choices—Our Future*. Prepared by Planning & Zoning Center Inc. Rochester, Mich.: MSPO.
- . September 1995. *Trend Future Project: Demographics Trends Brochure*. Prepared by Planning & Zoning Center Inc., Lansing, Mich. Rochester, Mich.: MSPO.
- Norris, Patricia E., and Judy Soule. 2003. Managing Land Use Change and Michigan's Future. In *Michigan's Opportunities and Challenges, Michigan State University Faculty Perspectives*. [Online, cited 2/17/03.] Available: <http://www.msue.msu.edu/msue/iac/transition/papers/index.html>.
- Public Sector Consultants Inc. (PSC). August 1999. *Status of Michigan Cities: An Index of Urban Well-Being*. Prepared for the Michigan Bipartisan Urban Caucus and the Michigan Economic and Environmental Roundtable. Lansing, Mich.: PSC.
- . November 2001. *Michigan Land Resource Project*. Prepared for the Frey Foundation and the W. K. Kellogg Foundation on behalf of the Michigan Economic and Environmental Roundtable. Lansing, Mich.: PSC. [Online, cited 2/25/03.] Available: <http://www.pscinc.com/Documents/lbilu/index.htm>.
- . April 2002. *Status of Michigan Cities: An Index of Urban Well-Being*. Prepared for the Michigan Bipartisan Urban Caucus and the Michigan Economic and Environmental Roundtable. Lansing, Mich.: PSC. [Online, cited 2/25/03.] Available: <http://www.pscinc.com/Documents/urbanstatus/2002/index.htm>.
- Smyth, Paul. September 1995. *Patterns on the Land: Our Choices—Our Future*. Prepared for the Planning and Zoning Center on behalf of the Michigan Society of Planning Officials. Rochester, Mich.: MSPO.
- Staley, Samuel R. September 1999. *"Urban Sprawl" and the Michigan Landscape: A Market-Oriented Approach*. 2d ed. Midland, Mich.: Mackinac Center for Public

- Policy and Reason Public Policy Institute. [Online, cited 7/21/03.] Available: <http://www.mackinac.org/archives/1998/s1998-06.pdf>.
- U.S. Census Bureau. 1990. 1990 Census Population and Housing. [Online, cited 2/28/03.] Available: <http://www.census.gov/prod/cen1990/cph2/cph-2-1-1.pdf>.
- . 2000. Table DP-1: Profile of General Demographic Characteristics: 2000. [Online, cited 2/27/03.] Available: <http://factfinder.census.gov/servlet/BasicFactsServlet>. Click on 2000 Summary File 1; click on QuickTables; select Michigan, Add, Next; select DP-1: Profile of General Demographic Characteristics: 2000, Add, Show Table.
- . September 24, 2002. *Michigan QuickFacts*. [Online, cited 2/28/03.] Available: <http://quickfacts.census.gov/qfd/states/26000.html>.
- U.S. Department of Agriculture (USDA), National Agricultural Statistics Services. 1997. *1997 Census of Agriculture—State Data. Table 16—Tenure and Characteristics of Operator and Type of Organization for All Farms and Farms Operated by Black and Other Races: 1997, 1992, and 1987*. N.d. [Online, cited 2/27/03.] Available: http://www.nass.usda.gov/census/census97/volume1/mi-22/mi1_16.pdf.