

# Through a Wider Lens:

## Re-envisioning the Great Lakes MegaRegion



Urban and Regional Planning Program  
The University of Michigan  
April 2006





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# Table of Contents

<b>List of Tables</b>	2
<b>List of Figures</b>	3
<b>Executive Summary</b>	4
<b>MegaRegion Planning</b>	6
What Is a MegaRegion?	
Why Plan on the MegaRegion Scale?	
Defining the Great Lakes MegaRegion	
Overview of the Great Lakes MegaRegion	
<b>State of the Region: Assets</b>	8
Manageable Population Growth	
Abundance of Natural Resources	
Abundance of Fertile Farmland	
Extensive Transportation System	
Emerging Industries	
Economic Specialization of Chicago, Indianapolis, and Columbus	
High Educational Attainment	
Strength of Research Universities	
<b>State of the Region: Challenges</b>	18
Loss of Share of Population and Gross Regional Product	
Decline in Manufacturing Employment	
Declining Percent of Immigrant Population in Region's Cities	
Inequity Among Metropolitan Areas	
Inequities Between Cities and Suburbs	
Persistent Racial Segregation	
Higher Housing Cost Burdens in Central Cities	
Out-Migration of Young, Single, and Educated Individuals	
Lack of Venture Capital	
Sprawling Urban Development	
Loss of Quality Farmland	
Over Dependence on Trucks and Automobiles	
<b>Land Use Change Scenarios</b>	34
Sprawl Growth	
Compact Growth	
<b>Goals</b>	36
<b>Strategies</b>	37
Emphasizing the Great Lakes as a Recreation Destination	
Capitalizing on All Transportation Options	
Building the Innovation Economy	
Focusing Growth in Existing Urbanized Areas	
Creating New Forms of Governance	
<b>Conclusion</b>	45

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## List of Tables

### State of the Region: Assets

---

Table 1. Largest Industries of the Great Lakes MegaRegion, 1998 and 2003	12
Table 2. Chicago's Industry Specialization	13
Table 3. Total 2005 Revenues for Fortune 500 Company Headquarters in Indianapolis	14
Table 4. Indianapolis's Industry Specialization	14
Table 5. Columbus's Industry Specialization	15
Table 6. Fortune 500 Company Headquarters, 2005 Revenues, and Rank in Columbus, Ohio	15

### State of the Region: Challenges

---

Table 7. 1999 Per Capita Income for Seven Metropolitan Areas of the Great Lakes MegaRegion	21
Table 8. City vs. Suburb Per Capita Income for Seven Metropolitan Areas of the Great Lakes MegaRegion, 1999	21
Table 9. Dissimilarity Index for African-Americans and Caucasians of Eight Metropolitan Areas of the Great Lakes MegaRegion	24
Table 10. Sprawl Index for Seven Metropolitan Areas of the Great Lakes MegaRegion	27
Table 11. Square Miles of Sprawl for Seven Urbanized Areas of the Great Lakes MegaRegion	27
Table 12. Change in Rate of Loss for Prime Farmland of States of the Great Lakes MegaRegion, 1992 – 1997	28
Table 13. Public Transit Use Indicators for Seven Cities in the United States	31
Table 14. Freight Modal Split for Two Core-Based Statistical Areas (CBSA) of the Great Lakes MegaRegion	32

### Land Use Change Scenarios

---

Table 15. Comparing Compact Growth to Sprawl Growth to 2050	34
Table 16. Counties Built-Out by Sprawl	35



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## List of Figures

### Executive Summary

---

Figure 1. Great Lakes MegaRegion Boundary 4

### MegaRegion Planning

---

Figure 2. Emerging U.S. MegaRegions 6

Figure 3. Great Lakes MegaRegion Boundary 7

Figure 4. Land, 2000 7

Figure 5. Population, 2000 7

Figure 6. Gross Domestic Product, 2000 7

### State of the Region: Assets

---

Figure 7. Population and Projected Growth to 2050 8

Figure 8. Major International Gateways of the Great Lakes MegaRegion 10

Figure 9. Great Lakes MegaRegion Employment Location Quotients, 2003 11

Figure 10. Industry Sectors with Greatest Employment Growth from 1998 to 2003 12

Figure 11. Educational Attainment of Residents over 25 Years of Age 16

Figure 12. Population Over 25 Years of Age with at Least a High School Diploma 16

### State of the Region: Challenges

---

Figure 13. Region's Share of Population and Gross Domestic Product 18

Figure 14. Decline in Manufacturing Employment 19

Figure 15. Auto Manufacturing Production in the MegaRegion and the United States 19

Figure 16. Immigrant Population in the Great Lakes MegaRegion Cities 20

Figure 17. Inequity Between Cities and Suburbs 22

Figure 18. Households Spending More than 30% of Household Income on Housing, 1999 25

Figure 19. Net Migration of Young, Single and Educated, 1995 – 2000 25

Figure 20. Venture Capital Disbursed per \$1,000 of Gross State Product, 2003 26

Figure 21. Change in Density and Urbanized Land for Metropolitan Areas of the Great Lakes MegaRegion, 1992 – 1997 28

Figure 22. Percentage Change of Farmland for the United States, the MegaRegion, and Metropolitan Areas of the Great Lakes MegaRegion, 1969 – 1997 29

Figure 23. Great Lakes MegaRegion Percent of Farmland Lost by County, 1969 – 1997 29

Figure 24. High-Quality Farmland in the Path of Development in the Great Lakes MegaRegion 29

Figure 25. Peak Driver Delays in the Great Lakes MegaRegion Cities vs. Other Cities 30

Figure 26. U.S. Truck Freight Flows, 1998 31

Figure 27. Estimated U.S. Truck Freight Flows, 2020 32

Figure 28. Truck Freight Contributes to Congestion Throughout the MegaRegion 33

### Land Use Change Scenarios

---

Figure 29. Scenario #1: The Current Path – Sprawl in the MegaRegion 34

Figure 30. Scenario #2: A Glimpse of Compact Development 35

### Strategies

---

Figure 31. Connections Between Goals and Strategies 37

Figure 32. Boating on the Great Lakes 38

Figure 33. Proposed Rail Connections 39

Figure 34. Realtime Traffic Analysis Allows for Better Routing 40

Figure 35. Location of SmartZones in Michigan 41

# Executive Summary

A MegaRegion is a set of interconnected metropolitan areas. Planning on a MegaRegion scale looks at the same issues that preoccupy planners at the metropolitan and local scales but from a wider perspective. The Great Lakes MegaRegion consists of 315 counties in 8 states that center around the region's most obvious asset – the Great Lakes. The Great Lakes MegaRegion is united by a shared history, environmental features, an extensive transportation network, and an interconnected economy. In addition to the Great Lakes, the region's industrial history is a critical defining feature, leaving many cities and small towns with a common set of challenges.

The challenges the region faces are formidable. Racial and economic divisions plague many of the region's major cities and suburbs. The region's share of national gross domestic product and population has fallen since the 1960s. These declines represent not only a loss of economic competitiveness, but also of political representation. The region has a number of world class universities but struggles to keep many of its students after they graduate. A dependence on the automobile for personal transportation and trucking for freight shipment creates a need for road capacity that is difficult to satisfy. The future of the manufacturing industry is uncertain. Though the region remains specialized in manufacturing, that industry continues to shed employees. High quality farmland, an abundant asset in the region, is being consumed by low density, sprawling development at alarming rates.

However, viewed from a different angle, many of the region's challenges are also important assets. Slow population growth allows for better management of development, land use and public services. The region has an extensive transportation system, which emerged to move goods and people to and from its historic industrial centers. With many small water bodies such as inland lakes and wetlands, and the Great Lakes, the region holds the country's largest fresh water source. Farmland makes up 25% of the region's total land, generating a significant portion of the nation's food supply. High educational attainment creates potential support for emerging or existing industries. The region is home to many of the country's leading research institutions, with the potential to create jobs, build new industries and position the Great Lakes as a hub of innovation and new ideas.

## Looking Towards the Future

To meet these challenges, collaboration at a new level – the MegaRegion – is essential. The following goals seek to build on the region's assets and confront its challenges at this scale:

1. Develop an identity built on the MegaRegion's unique assets  
The region should focus on creating a positive identity and leveraging the Great Lakes in

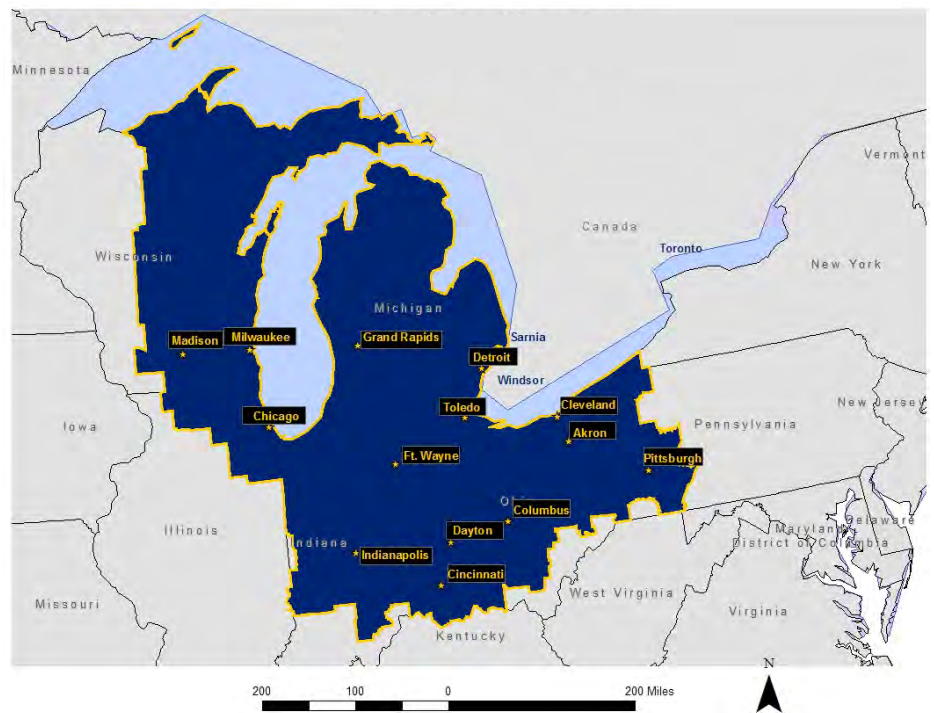


Figure 1. Great Lakes MegaRegion Boundary  
Source: U.S. Census 2000 and ESRI GIS data  
<[http://arcdata.esri.com/data/tiger2000/tiger\\_download.cfm](http://arcdata.esri.com/data/tiger2000/tiger_download.cfm)>

order to move away from the Rust Belt image.

2. Create economic growth

The region needs to transition to a new economic base that provides good jobs, attracts and retains educated workers, and supports and stimulates economic growth.

3. Protect and restore the natural environment

The region's natural resources are a significant competitive advantage that should be protected.

4. Strive towards eliminating segregation and inequality

Addressing the high levels of racial segregation and poverty is critical to creating a more equitable future.

The following set of strategies help to achieve these goals:

- Emphasizing the Great Lakes as a recreation destination – protecting the lakes while re-branding the region around its natural amenities. An emphasis on the Great Lakes will seek to protect and restore natural areas, create opportunities for economic growth, and develop a new positive identity.
- Capitalizing on all transportation options – decreasing the dependence on the automobile in favor of rail. The ability to capitalize on all transportation options will further all four goals of the plan, by increasing mobility and links to major cities across the United States, as well as increasing mobility within the region. These links will also contribute to building the innovation economy, creating opportunities for economic growth and establishing a new regional identity
- Building the innovation economy – moving the economy towards a new economic base. Bridging the gap between prospective investors and the talent, which exists in some of the world's finest research institutions, is critical in creating a climate and culture of innovation.
- Focusing growth in existing urbanized areas – reducing land consumption and reinvesting in neglected cities. Focusing growth also reduces the destruction of farmland and attracts growth to the region's most economically vulnerable metropolitan areas.
- Creating new forms of governance – tying all of these strategies together by developing the institutional framework for carrying these policies forward. Governance means creating the coalitions and structures that can implement policies on the MegaRegion scale.

Collaboration and cooperation are the keys to moving this agenda forward. By collectively pursuing the strategies outlined above, the Great Lakes MegaRegion will become a more economically competitive, sustainable, and just place.

# MegaRegion Planning

If current trends provide an accurate glimpse into the future, the Great Lakes MegaRegion will increase in population by almost 25% by 2050. The Regional Plan Association's (RPA) national campaign entitled "America 2050: A National Strategy for Global Competitiveness" is an attempt to create a national strategy for increasing America's competitiveness in the global economy and accommodating this level of growth in a planned fashion. This plan is one part of that effort.

## What Is a MegaRegion?

Jean Gottman in his 1961 book, *Megalopolis: The Urbanized Seaboard of the United States*, described the network of interconnected cities from Washington, D.C., to Boston along the Atlantic Coast. Gottman observed a new urban form that emerges when metropolitan areas blend into each other. Similarly, for decades European spatial planners have argued the importance of understanding and guiding population changes and economic flows occurring within Europe, without national boundaries' dictating the scope of study. Gottman and European spatial planners make a similar point – a new, larger unit of analysis is necessary for confronting economic, environmental, and demographic forces that observe few boundaries.

A MegaRegion is a set of interconnected metropolitan areas. In many ways, the most difficult concept related to MegaRegions is determining whether they exist and how to measure "interconnectedness." The indicators chosen surely affect the answer. While an exploration of commute sheds could reveal a distinct region of a hundred counties, an exploration of email exchanges may reveal no clear boundaries at all. In time, standards of measurement may emerge.

## Why Plan on the MegaRegion Scale?

Traditionally, planners have directed their focus towards the neighborhood, city, or metropolitan level. With the exception of transportation planning, rarely do planners grapple with larger areas. No political units exist to implement this kind of planning.

Planning on a MegaRegion scale is an experiment of looking at the same issues that preoccupy planners from a wider perspective. For natural resource protection, transportation planning, and economic development planning, a broader scale has a number of advantages. From an economic viewpoint, looking beyond the metropolitan vantage point affords the opportunity to address uneven development between metropolitan regions. In the context of this plan, this means examining how to learn from metropolitan areas that have successfully diversified their economies, such as Chicago, Indianapolis, or Columbus. This scale does not render local efforts unnecessary, but rather is useful for addressing issues that necessitate a larger geographic scope. Planning at this scale brings to bear

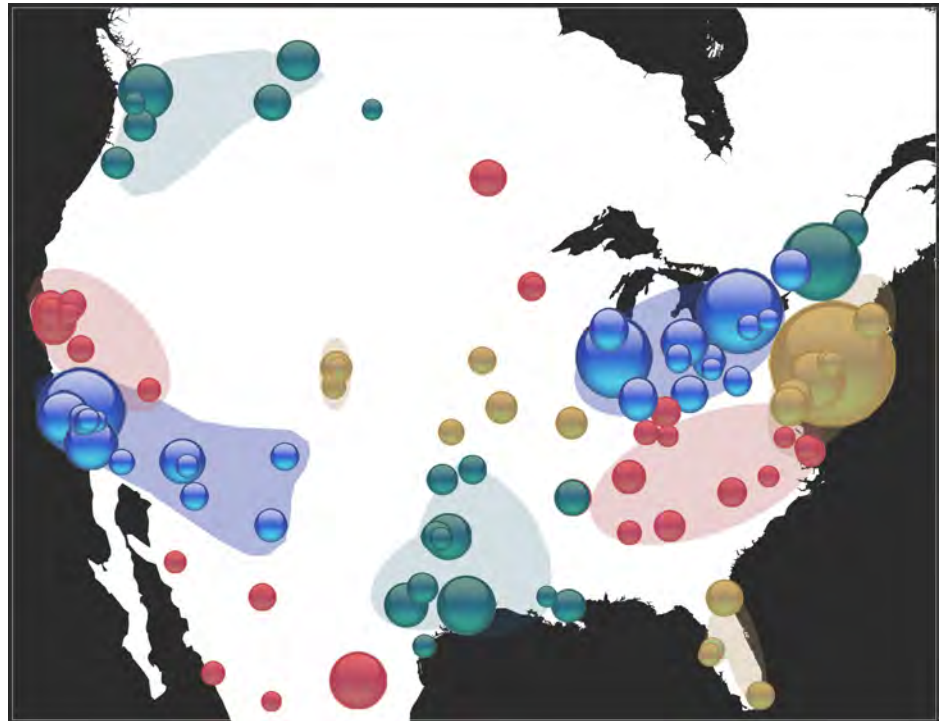


Figure 2. Emerging U.S. MegaRegions  
Source: U.S. Census Bureau 1990 and RPA,  
America 2050 < <http://www.america2050.org/mega-regions.html> >

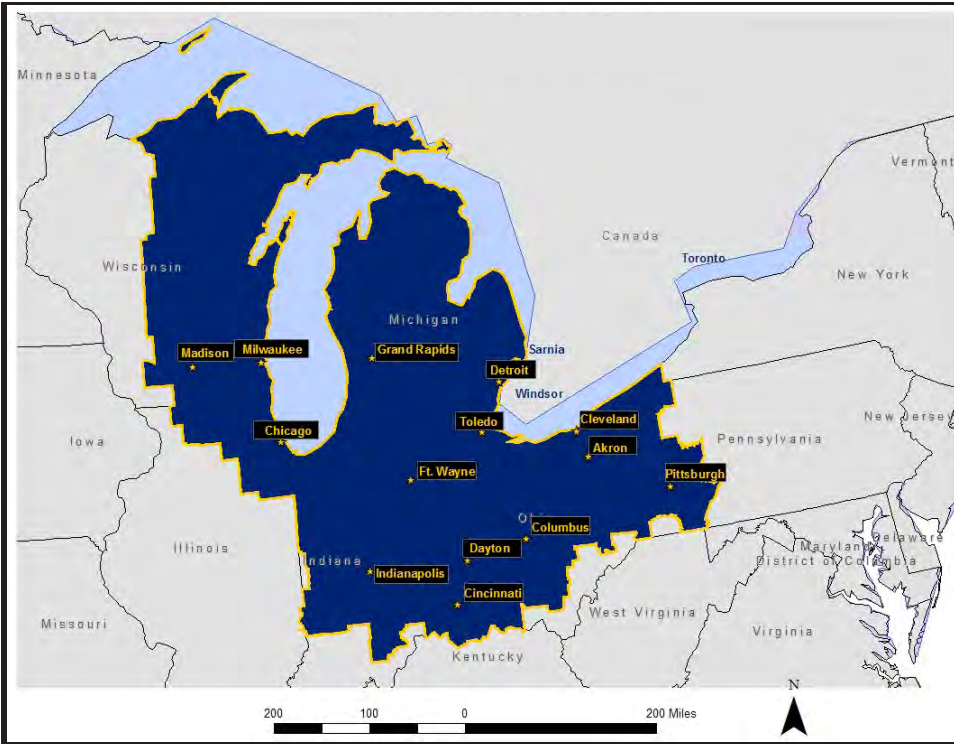


Figure 3. Great Lakes MegaRegion Boundary

Source: U.S. Census Bureau 2000 and ESRI GIS data  
 <[http://arcdata.esri.com/data/tiger2000/tiger\\_download.com](http://arcdata.esri.com/data/tiger2000/tiger_download.com)>

greater resources on problems, such as the decline of the manufacturing industry in the region, which cannot be handled effectively on the municipal level.

### Defining the Great Lakes MegaRegion<sup>1</sup>

MegaRegions share a set of defining characteristics that tie together cities, suburbs, and rural areas across state lines and even national borders. The following factors were critical in defining the region:

- A shared history that continues to influence development and identity;
- A common set of assets and challenges; and
- Economic and environmental connections that suggest interdependency.

A particularly important criterion in drawing the boundary for the Great Lakes MegaRegion is the industrial past of the

region. Many cities and small towns in the MegaRegion have inherited similar issues due to deindustrialization, which presents the MegaRegion with significant challenges to overcome. But these similar challenges may also suggest the potential for cooperation in the future.

### Overview of the Great Lakes MegaRegion

The Great Lakes MegaRegion occupies 4.9% of the United States' total land area. On this small percentage of land area, lives 15.3% of the nation's population. Additionally, this region generates 15.7% of the nation's Gross Domestic Product (GDP).

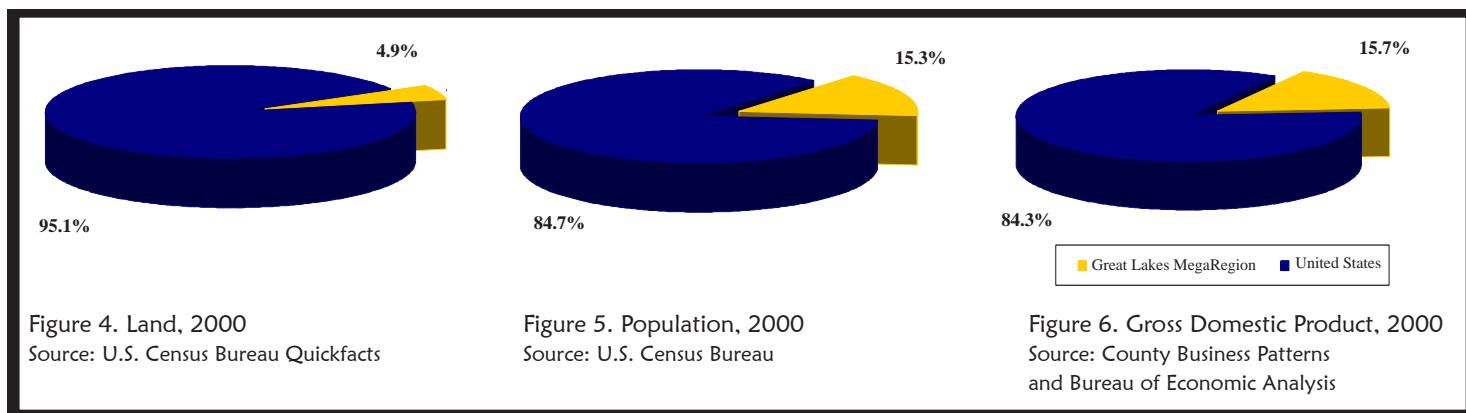


Figure 4. Land, 2000  
 Source: U.S. Census Bureau Quickfacts

Figure 5. Population, 2000  
 Source: U.S. Census Bureau

Figure 6. Gross Domestic Product, 2000  
 Source: County Business Patterns and Bureau of Economic Analysis

<sup>1</sup> Refer to [Methods for Planning the Great Lakes MegaRegion](#). "Defining the Great Lakes MegaRegion," for methodology. Apr. 2006.

# State of the Region: Assets

The Great Lakes MegaRegion has a number of assets, many of which stem from the historical development of the region. These assets help to create a connected region and are strengths upon which future prosperity can be built.

## Manageable Population Growth

By 2050, the region is expected to grow to 53.5 million residents, a 25% increase over current population levels. The United States' population is expected to grow by 40% by the year 2050.<sup>1</sup> While many parts of the country, such as the Piedmont-Atlantic Mega-Region, will continue to have rapid population growth, the Great Lakes MegaRegion will grow at a slower, more manageable pace.<sup>2</sup> A major advantage for this region is that it is growing – albeit slowly. This slow population growth will allow for better management of development, land use, public services and infrastructure.

In regions with a more rapid population growth, such as Atlanta in the Piedmont-Atlantic MegaRegion, new infrastructure, developments and services must be built quickly without much time to plan for the best possible development scenarios. The fact that the Great Lakes MegaRegion can carefully plan its new developments around a manageable population growth offers the prospect of a sustainable future.

## Abundance of Natural Resources

The flat and gently rolling landscape in the region includes a multitude of water bodies, such as inland lakes and wetlands, and the Great Lakes. The region has an abundance of fresh water for drinking, recreation, and energy production. This presence of fresh water gives the Great Lakes region advantages compared to some other parts of the country. For example, the area around Houston and Dallas, Texas, will run out of fresh water supply if current water consumption patterns continue.<sup>3</sup>

The many recreational activities along the Great Lakes include fishing, biking, camping, and hiking. The eight states that border the Great Lakes have approximately 3.7 million registered recreational boats, about one-third of the nation's total. The commercial and sport fishing industry is valued at more than \$4 billion annually.<sup>4</sup> These recreational activities allow both regional residents and tourists to enjoy the Great Lakes, while adding to the economy.

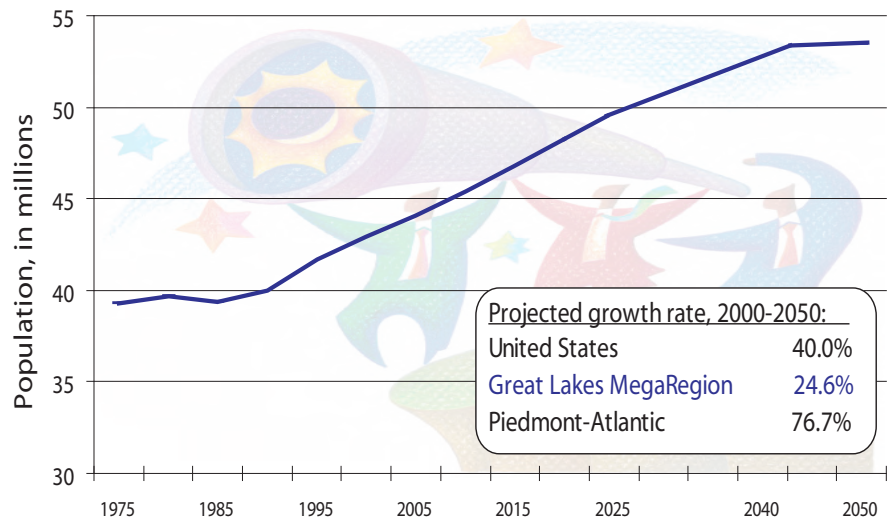


Figure 7. Population and Projected Population Growth to 2050  
Source: Woods and Poole Economics, Inc., 2004. "Population and Projections by County, 1975-2050." Obtained as part of the America 2050 project from the Regional Plan Association of New York/New Jersey/Connecticut. Refer also to [Methods for Planning the Great Lakes MegaRegion](#). "Calculating Population Growth to 2050." Apr. 2006.

1 Regional Plan Association. "America 2050: A National Strategy for Global Competitiveness – Concept Paper." June 2005. New York.  
2 Catherine Ross. "The Emerging SouthEast SuperCity." 8 Sept. 2005. PowerPoint presentation prepared for Defining Midwest MegaRegion and Fourth Annual Metropolitan Regions Forum: Chicago.  
3 University of Texas – Austin. Supercities Conference presentation. 10 Mar. 2006. Fundación Metrópoli. Madrid, Spain.  
4 Great Lakes Information Network. "Tourism in the Great Lakes Region." 27 Apr. 2006. <<http://www.great-lakes.net/tourism/>>

The Great Lakes also provide drinking water to all of the states in the region. For instance, Ohio uses 530 million gallons of water per day from Lake Erie as drinking water.<sup>5</sup> Fresh water is less costly and less difficult to treat for drinking water than salt water, which makes this large supply of fresh water invaluable to the region.

The Great Lakes, as well as the region's inland lakes and wetland areas, serve many ecological functions. The Great Lakes basin contains many species of plants and animals that exist primarily in this region. The Great Lakes shorelines and islands provide stopover sites for migratory birds, locations for fish spawning and nursery habitat, as well as critical breeding habitat for colonial water birds.<sup>6</sup>

Certain types of energy production use cool lake water. Water is used in the creation of electricity in a way that is very similar for nuclear-, coal-, and natural gas-powered energy production. Heating the water produces steam that drives the turbines to spin the generator that produces the power. Cooling towers use water during the energy production process to prevent overheating. Low-impact hydroelectric power operations use water to produce energy. These operations cost less than photovoltaic systems and produce more energy.<sup>7</sup>

### **Abundance of Fertile Farmland**

The topography of the Great Lakes MegaRegion is ideal for agricultural uses. Drainage and deforestation of the land have created high-quality farmland in much of the region. Agricultural land makes up close to 25% of the region's total land. Of the region's 172,803 square miles, 48,175 square miles are devoted to agricultural and farming uses.<sup>8</sup>

The region's farms generate a significant portion of the nation's food supply. According to the Economic Research Service of the United States Department of Agriculture, approximately 10% of all agriculture commodities are produced within the states of the region. Wisconsin is the second largest supplier of dairy products in the nation, producing 13.5% of the nation's dairy supply. Indiana leads the nation in raising poultry. Pennsylvania supplies the nation with 59% of its mushrooms. Illinois grows almost 20% of the nation's corn supply. Together, the states of the region support close to 30% of the national dairy production, 36% of corn, 11% of greenhouse and nursery goods, 35% of all soybeans, 59% of mushrooms and 11% of chicken and eggs.<sup>9</sup>

Farming is a source of jobs and income. Approximately 13% of the nation's net agricultural income is generated in the states that make up the Great Lakes MegaRegion.<sup>10</sup> Close to 17% of the nation's farm employment, including proprietors, and wage and salaried workers, is based in this region.<sup>11</sup> Each of the states of Illinois, Indiana, Ohio, Michigan, and Pennsylvania remain comparable to the nation in agriculture employment, with approximately 1 – 2% employment based on agriculture, while Wisconsin has nearly 3% employment in farming.<sup>12</sup>

5 Earth Systems Resource. "Drinking Water." 20 Apr. 2006. <<http://earthsys.ag.ohio-state.edu/project/GLwater/use/drinking/drinking.html>>

6 Northeast Midwest Institute. "Great Lakes Ecosystem." 15 Apr. 2006. <<http://www.nemw.org/greatlakes.htm>>

7 Green Energy Ohio. "Hydropower." 25 Mar. 2006. <<http://www.greenenergyohio.org/page.cfm?pageID=54>>

8 County and City Data Book, 2003. University of Virginia, Geospatial and Statistical Data Center. 3 Mar. 2006. <<http://fisher.lib.virginia.edu/collections/stats/ccdb/>>

9 U.S. Department of Agriculture. The Economic Research Service. 3 Mar. 2006. <<http://www.ers.usda.gov>>

10 Ibid.

11 Ibid.

12 Ibid.

## Extensive Transportation System

The Great Lakes MegaRegion boasts an extensive transportation system that emerged to move goods and people to and from its historic industrial centers. The area's airports, railways, highways, and maritime ports continue to make this region important for both international and domestic trade. Twice the value of goods is traded between the United States and Canada than between the United States and Mexico.<sup>13</sup> The Ambassador Bridge, which links Detroit to Windsor, Ontario, Canada, is the busiest border crossing in North America.<sup>14</sup> The nearby Windsor Tunnel also facilitates international travel and trade.

Together, these two connections to Canada make Detroit the most valuable land gateway in the United States. Gateways are corridors through which goods enter and exit the country.<sup>15</sup> The vast majority of freight shipments through Detroit in 2003 either started or ended outside Michigan. The city serves every state in the United States by providing access to Canada. In 2003, \$102 billion in trade passed through Detroit via the bridge and tunnel. This accounts for 18% of the value of United States' imports and exports over land and 5% of total United States international trade value by any mode. After the Port of Los Angeles and John F. Kennedy airport in New York, Detroit is the third most important gateway in terms of value of trade in the country.<sup>16</sup>

Maritime trade over the Great Lakes provides the region with a shipping mode for heavy cargo, unavailable in many other parts of the country. In 2003, vessels moved 85 million tons of goods domestically.<sup>17</sup> Additionally, vessels moved 25 million tons of goods between the United States and Canada that same year, about fifty times the international weight received and shipped by Chicago's O'Hare and Midway airports together.<sup>18</sup> Trade over the Great Lakes provides raw materials such as iron ore, coal, limestone, and cement to industries.

Intermodal facilities switch freight containers between modes to increase the efficiency of freight movement. A fifth of all Chicago shipments by value are multimodal.<sup>19</sup> An innovative local task force is exploring ways to increase this percentage.<sup>20</sup>

By 2020, experts predict the demand for freight will double around major ports and gate-



Figure 8. Major International Gateways of the Great Lakes MegaRegion  
Data Source: Bureau of Transportation Statistics. America's Freight Transportation Gateway. Image Sources: EPA, Interstateguide. <photography-plus.com>

13 U.S. Census Bureau. Foreign Trade Statistics. "Top Trading Partners." 18 Apr. 2006. <<http://www.census.gov/foreign-trade/statistics/highlights/top/index.html>>

14 U.S. Department of Transportation, Federal Highway Administration. "Freight Management and Operations." Ambassador Bridge Crossing Summary. 20 Apr. 2006. <[http://ops.fhwa.dot.gov/freight/freight\\_analysis/ambass\\_brdg/ambass\\_brdge\\_ovrvw.htm](http://ops.fhwa.dot.gov/freight/freight_analysis/ambass_brdg/ambass_brdge_ovrvw.htm)>

15 Bureau of Transportation Statistics. America's Freight Transportation Gateways. "Connecting Our Nation to Places and Nations Abroad." Introduction and Overview. 20 Apr. 2006.

<[http://www.bts.gov/publications/americas\\_freight\\_transportation\\_gateways/introduction\\_and\\_overview/index.html](http://www.bts.gov/publications/americas_freight_transportation_gateways/introduction_and_overview/index.html)>

16 Bureau of Transportation Statistics. America's Freight Transportation Gateways. "Detroit, Michigan—Land Gateway." 20 Apr. 2006. <[http://www.bts.gov/publications/americas\\_freight\\_transportation\\_gateways/highlights\\_of\\_top\\_25\\_freight\\_gateways\\_by\\_shipment\\_value/port\\_of\\_detroit/index.html](http://www.bts.gov/publications/americas_freight_transportation_gateways/highlights_of_top_25_freight_gateways_by_shipment_value/port_of_detroit/index.html)>

17 Domestic figures from, U.S. Department of Transportation Maritime Administration (MARAD). "Industry Survey Series: Great Lakes Operators, 2005." 20 Apr. 2006. <[http://www.marad.dot.gov/MARAD\\_statistics/2005%20STATISTICS/Great%20Lakes%20Operators%202005.pdf](http://www.marad.dot.gov/MARAD_statistics/2005%20STATISTICS/Great%20Lakes%20Operators%202005.pdf)>

18 International trade computed from, U.S. Department of Transportation Maritime Administration (MARAD). "U.S. Waterborne Trade by U.S. Custom Ports, 1997-2005." 20 Apr. 2006. <[http://www.marad.dot.gov/MARAD\\_statistics/2005%20STATISTICS/Total%20U.S.%20Custom%20Ports,%201997-2005.xls](http://www.marad.dot.gov/MARAD_statistics/2005%20STATISTICS/Total%20U.S.%20Custom%20Ports,%201997-2005.xls)>

Chicago airport data from, Bureau of Transportation Statistics. America's Freight Transportation Gateways. "Table 1. Value and Weight of U.S. International Merchandise Freight, 2003." 15 Mar. 2006. <[http://www.bts.gov/publications/americas\\_freight\\_transportation\\_gateways/highlights\\_of\\_top\\_25\\_freight\\_gateways\\_by\\_shipment\\_value/chicago/html/table\\_01.html](http://www.bts.gov/publications/americas_freight_transportation_gateways/highlights_of_top_25_freight_gateways_by_shipment_value/chicago/html/table_01.html)>

19 This is the percentage of freight not shipped or received by a single mode according to the Bureau of Transportation Statistics.

20 Intermodal Advisory Task Force. 10 Mar. 2006. <<http://www.catsiatf.com/DesktopDefault.aspx?tabindex=0&tabid=15>>



ways.<sup>21</sup> As a focal point of domestic and international freight activity and a home to a growing warehousing sector, the Great Lakes MegaRegion could gain economically from freight in the future.

Several Great Lakes metropolitan areas serve as regional hubs for many airlines, providing the MegaRegion with convenient air access to all parts of the country and much of the rest of the world and making the MegaRegion a good location for employers and people who need this access. O'Hare is the second busiest passenger airport in the country, after Atlanta. Detroit also ranks in the top ten, above New York, New Jersey, and Boston. In 2004, a total of 57 million people boarded planes at these two airports.<sup>22</sup>

### Emerging Industries

As shown in Figure 9, the Great Lakes MegaRegion has concentrations of manufacturing; management of companies and enterprises; and other services<sup>23</sup> as measured by the location quotient. A location quotient is the ratio of the share of regional employment in an industry sector to the share of national employment in that industry sector.

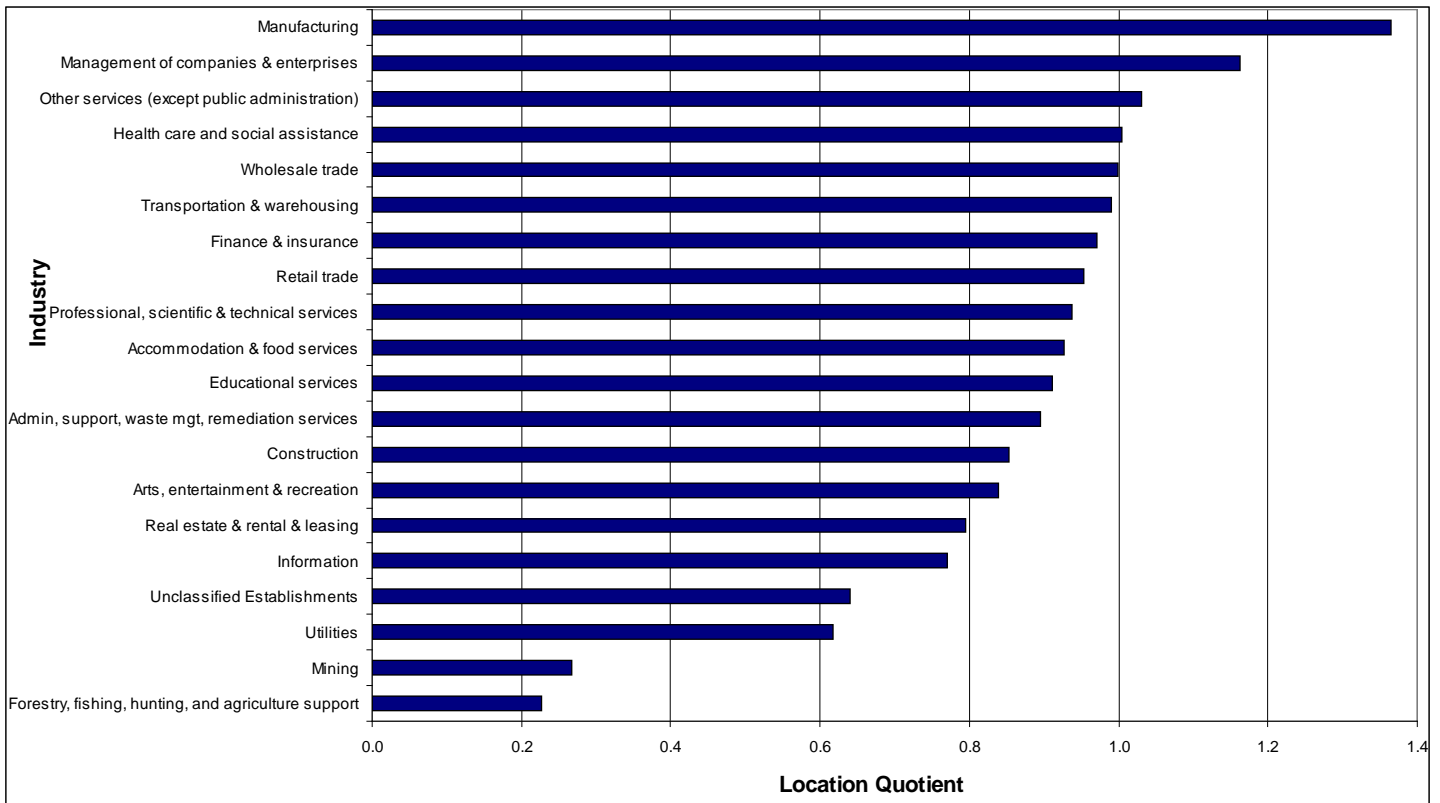


Figure 9. Great Lakes MegaRegion Employment Location Quotients, 2003  
Source: County Business Patterns

21 Robert Smith. "Freight Issues and Trends – An Upper Midwest Regional Perspective." 2002. Midwest Regional University Transportation Center. 22 Apr. 2006. <<http://www.mrutc.org/freight/workshop/files/Freight%20in%20the%20Upper%20Midwest.pdf>>

22 All airport data from Bureau for Transportation Statistics. *Pocket Guide to Transportation*. "Top 20 Passenger Airports." 20 Apr. 2006. <[http://www.bts.gov/publications/pocket\\_guide\\_to\\_transportation/2006/html/table\\_17.html](http://www.bts.gov/publications/pocket_guide_to_transportation/2006/html/table_17.html)>

23 Other services include establishments providing services not specifically provided for in other industry sectors. It includes equipment and machinery repairing, promoting or administering religious activities, grant making, advocacy, and providing dry cleaning and laundry services, personal care services, death care services, pet care services, photofinishing services, temporary parking services, and dating services. U.S. Census Bureau. "2002 NAICS Definitions." 20 Apr. 2006. <<http://www.census.gov/epcd/naics02/def/NDEF81.HTM#N81>>

In 1998, manufacturing represented the largest industry sector in the region accounting for more than 20% of the total employment in the region; it continues to be the largest industry, as defined by employment, in the region today. In 2003, manufacturing represented just over 17% of total employment in the region.<sup>24</sup>

The emerging industries of the region are health care and social assistance; professional, scientific & technical services; and transportation and warehousing. Figure 10 shows the emerging industries of the region based on employment growth from 1998 to 2003.

The professional, scientific and technical region's economy is growing. From 1998 to 2003 total employment in this sector increased by approximately 216,000 jobs. Its location quotient increased from .91 in 1998 to .94 in 2003.

Transportation and warehousing gained nearly one percentage point share of the region's employment from 1998 to 2003. Total employment increased by nearly 103,000 jobs. The nation's largest warehousing and storage company, First Group America, Inc., is located in southern Ohio. In 2000, First Group grossed \$2.1 billion in sales.<sup>25</sup> In addition, eight of the nation's top 40 warehousing and storage companies are located in the region. In 2000, these eight firms had \$4.7 billion in total sales, representing 27% of total sales of the nation's top 40 firms in this industry.<sup>26</sup>

Table 1 shows the MegaRegion's four largest industries in 1998 and 2003, as measured by total employment in the region. Health care and social assistance has gained share of regional employment. From 1998 to 2003, it moved from the third largest industry in the region to the second largest. From 1998 to 2003, total health care employment increased more than 250,000 jobs, or 11.1%. The world's largest health care company, Cardinal Health Inc., ranked #19 among Fortune 500 companies in 2006, is located in central Ohio.<sup>27</sup>

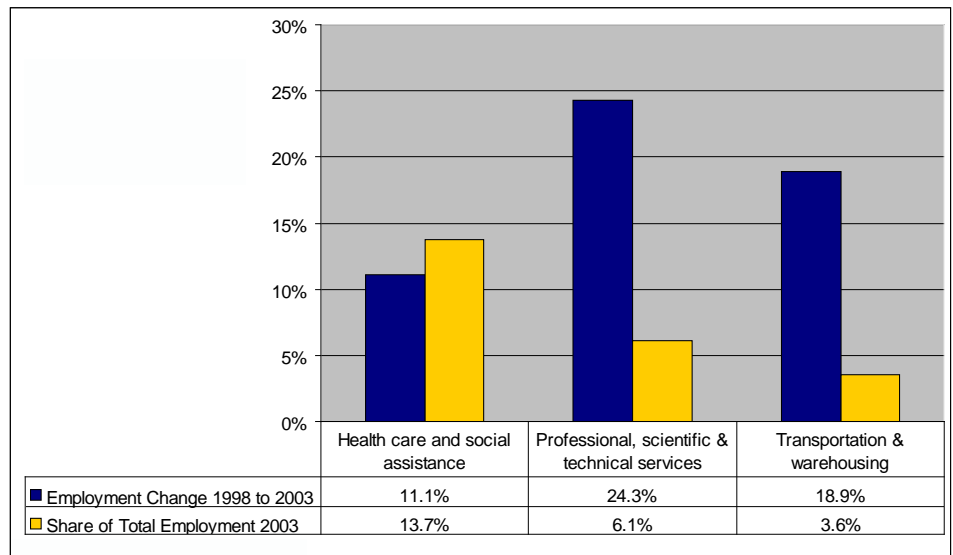


Figure 10. Industry Sectors with Greatest Employment Growth from 1998 to 2003  
Source: County Business Patterns

Table 1. Largest Industries of the Great Lakes MegaRegion, 1998 and 2003  
Source: County Business Patterns

	1998	2003
1	Manufacturing	Manufacturing
2	Retail Trade	Health Care and Social Assistance
3	Health Care and Social Assistance	Retail Trade
4	Accommodation & Food Services	Accommodation & Food Services

24 County Business Patterns. 1 Mar. 2006. <<http://www.census.gov/epcd/cbp/download/cbpdownload.html>>

25 Dunn & Bradshaw's Million Dollar Database. "Top 40 Warehousing and Storage Companies." 3 Apr. 2006. <<http://www.dnbmdd.com/mddi/>>

26 Ibid.

27 Fortune 500 Company list from Fortune 500 2006. 2 Apr. 2006. <[http://money.cnn.com/magazines/fortune/fortune500/full\\_list/](http://money.cnn.com/magazines/fortune/fortune500/full_list/)>

On the whole, the nation's economic base is shifting towards a service and knowledge oriented economy. The cities of the region have lost manufacturing since World War II as industrial production suburbanized. The region lost employment as auto manufacturing shifted to other places and became more productive in the region. Additionally, the region has a high representation of Fortune 500 companies compared to its share of the nation's population. In 2006, the Great Lakes MegaRegion was home to 104, or nearly 21%, of the Fortune 500 companies' headquarters.<sup>28</sup>

**Economic Specialization of Chicago, Indianapolis, and Columbus**

Several of the metropolitan areas within the MegaRegion have shifted successfully away from an industrial based economy. Cities, such as Chicago, Indianapolis, and Columbus, overcame the regional "rust belt" identity and have successfully attracted national and international companies helping to create a more diversified economy. Both the number of industries in high employment (at least five percent of the workforce) or number of industries with high location quotients signify the diversity of the economy.

**Chicago**

The City of Chicago has become a global business center and the control point for eleven of the most successful corporations in the world. Nearly 27% of the 104 Fortune 500 companies headquartered in the MegaRegion are located in the Chicago metropolitan area. These companies generated over \$443 billion revenues in 2005.<sup>29</sup> Also the Chicago CMSA boasts the highest per capita income in the MegaRegion.<sup>30</sup>

As Table 2 shows, the Chicago CMSA has location quotients greater than 1.2 in four industry sectors. In addition, professional, scientific and technical services; transportation and warehousing; and educational services all experienced more than a 10% increase in employment from 1998 to 2003.<sup>31</sup>

Industry Sector	Share of Metropolitan Chicago's Total Employment	Location Quotient 2003
Management of Companies & Enterprises	3.4%	1.34
Wholesale Trade	6.7%	1.30
Finance & Insurance	7.0%	1.23
Professional, Scientific & Technical Services	7.8%	1.20

Table 2. Chicago's Industry Specialization  
Source: County Business Patterns

<sup>28</sup> Fortune 500 Company list from Fortune 500 2006. 2 Apr. 2006. <[http://money.cnn.com/magazines/fortune/fortune500/full\\_list/](http://money.cnn.com/magazines/fortune/fortune500/full_list/)>

<sup>29</sup> Ibid.

<sup>30</sup> The city of Chicago's per capita income in 1999 was \$25,011. U.S. Census Bureau 2000.

<sup>31</sup> County Business Patterns. Each county of the Chicago CMSA was summed to determine Chicago's total metropolitan employment.

## Indianapolis

Indianapolis successfully implemented its redevelopment plans for its downtown in the 1990's. The Indianapolis Regional Center Plan 2020 is a comprehensive guide for continuing to build a strong downtown Indianapolis.<sup>32</sup> The city has three Fortune 500 companies' headquarters. In 2005, revenues of these Fortune 500 companies totaled over \$57 billion.<sup>33</sup>

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Fortune 500 Company	Total Revenues, 2005	Rank 2005
WellPoint, Inc.	\$45,136,000,000	38
Eli Lilly & Company	\$7,904,200,000	148
Conseco, Inc.	\$4,326,500,000	472
	\$57,366,700,000	

Table 3. Total 2005 Revenues for Fortune 500 Company Headquarters in Indianapolis  
Source: Fortune 500 2006. 2 Apr. 2006.  
<[http://money.cnn.com/magazines/fortune/fortune500/full\\_list/](http://money.cnn.com/magazines/fortune/fortune500/full_list/)>

Nine industry sectors in metropolitan Indianapolis have more than 5% share of total employment for the metropolitan area.<sup>34</sup> Several of these are also local specialties with location quotients above 1.05; with 1.54 as the highest, as shown in Table 4. Employment growth rates for both transportation and real estate (23% and 14%) are above the national average, 18% and 13%, respectively.

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Industry Sector	Share of Metropolitan Indianapolis' Total Employment	Location Quotient 2003
Transportation	5.5%	1.54
Other Services	5.7%	1.22
Finance & Insurance	6.6%	1.17
Real Estate	2.0%	1.13
Construction	5.9%	1.06
Management of Companies	2.6%	1.05

Table 4. Indianapolis's Industry Specialization  
Source: County Business Patterns

<sup>32</sup> Indianapolis Regional Center Plan 2020. "Building a World-Class Downtown." 22 Apr. 2006. <<http://www.indyrc2020.org/>>

<sup>33</sup> Fortune 500 Company list from Fortune 500 2006. 2 Apr. 2006. <[http://money.cnn.com/magazines/fortune/fortune500/full\\_list/](http://money.cnn.com/magazines/fortune/fortune500/full_list/)>

<sup>34</sup> County Business Patterns. Each county of the Indianapolis CMSA was summed to determine Indianapolis' total metropolitan employment.

• **Columbus**

• Columbus specializes in management; finance and insurance; and transportation (see Table 5). Five Fortune 500 companies are headquartered in Columbus, Ohio. Table 6 shows the 2005 revenues of these firms, as well as their rank among Fortune 500 companies in 2005. These five firms generated over \$52 billion total revenues in 2005.<sup>35</sup>

Table 5. Columbus's Industry Specialization  
Source: County Business Patterns

Industry Sector	Share of Metropolitan Columbus' Total Employment	Location Quotient, 2003
Management of Companies	5.6%	2.21
Finance & Insurance	9.1%	1.60
Transportation	4.9%	1.38
Wholesale	5.6%	1.09
Construction	5.4%	0.96
Health Care	12.4%	0.91

Table 6. Fortune 500 Company Headquarters, 2005 Revenues, and Rank in Columbus, Ohio  
Source: Fortune 500 2006. 2 Apr. 2006. <[http://money.cnn.com/magazines/fortune/fortune500/full\\_list/](http://money.cnn.com/magazines/fortune/fortune500/full_list/)>

Fortune 500 Company	Total Revenues 2005	Rank 2005
Big Lots	\$4,429,900,000	465
Hexion Specialty Chemicals	\$4,470,000,000	462
Limited Brands	\$9,699,000,000	246
American Electric Power	\$12,117,000,000	185
Nationwide	\$21,832,000,000	98
	\$52,547,900,000	

• The economic success of these metropolitan areas offers an insight as to how other parts of the MegaRegion can develop a new economic base. The MegaRegion will likely function more competitively when leaders find a way to knit these metropolitan areas into an even more cooperative whole.” The strengths of the MegaRegion also suggest ways to encourage more innovation in the economy and capitalize on transportation opportunities that can facilitate economic prosperity.

<sup>35</sup> Fortune 500 Company list from Fortune 500 2006. 2 Apr. 2006. <[http://money.cnn.com/magazines/fortune/fortune500/full\\_list/](http://money.cnn.com/magazines/fortune/fortune500/full_list/)>

## High Educational Attainment

Overall, the Great Lakes MegaRegion's educational attainment levels are higher than the U.S. national average. Figure 11 shows the educational attainment by achievement level for the United States and MegaRegion in 2000. Nearly 33% of the region's residents over 25 years of age have attained only a high school diploma, or equivalent, exceeding the national average of 28.6%.

Although the MegaRegion exceeds the national average in percentage of residents having only attained a high school diploma, distinct differences in educational attainment exist across the region. Figure 12 shows the percent of population having at least a high school diploma for all counties of the region in 2000.<sup>36</sup> Along the southern boundary of the region, the percent of residents with at least a high school diploma (50% – 70%) fall below the national average of 80.4%. Other pockets of below average educational attainment exist throughout the region, as indicated by the dark gray in Figure 12.

Counties with levels of educational attainment above the national average tend to be in the vicinity of top research universities. Examples include Madison, Wisconsin; Ann Arbor, Michigan; and Columbus, Ohio, where 90% to 95% of the population over 25 years of age has the equivalent of a high school diploma or greater.

A population with high levels of educational attainment creates a labor force that can support diverse kinds of work. This creates potential support for emerging or existing industries, such as professional, scientific, and technical services. The high percentage of residents with high school degrees also provides a foundation for residents to further their education and enhance future employment opportunities.

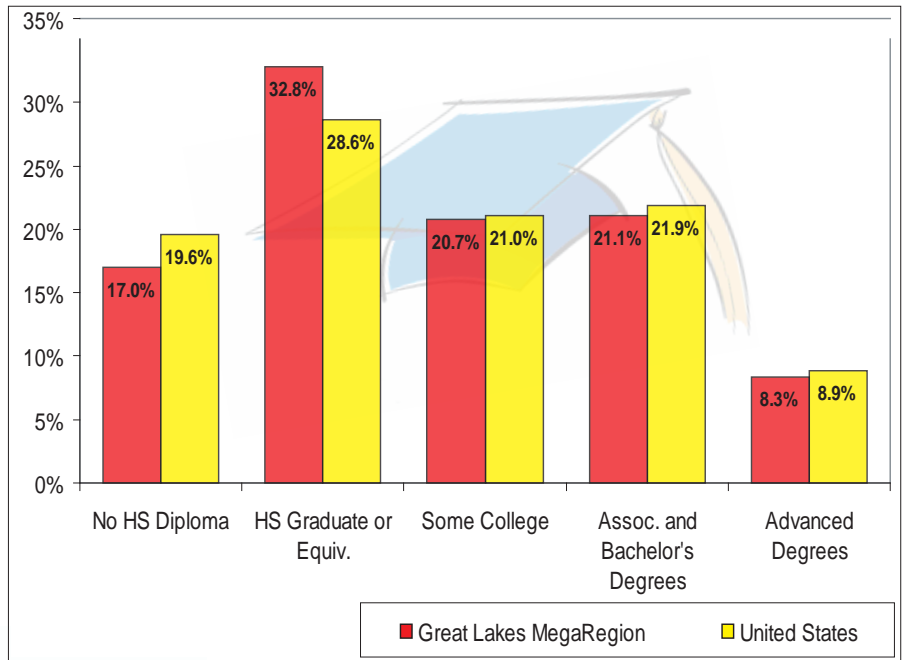


Figure 11. Educational Attainment of Residents over 25 Years of Age  
Source: U.S. Census Bureau 2000

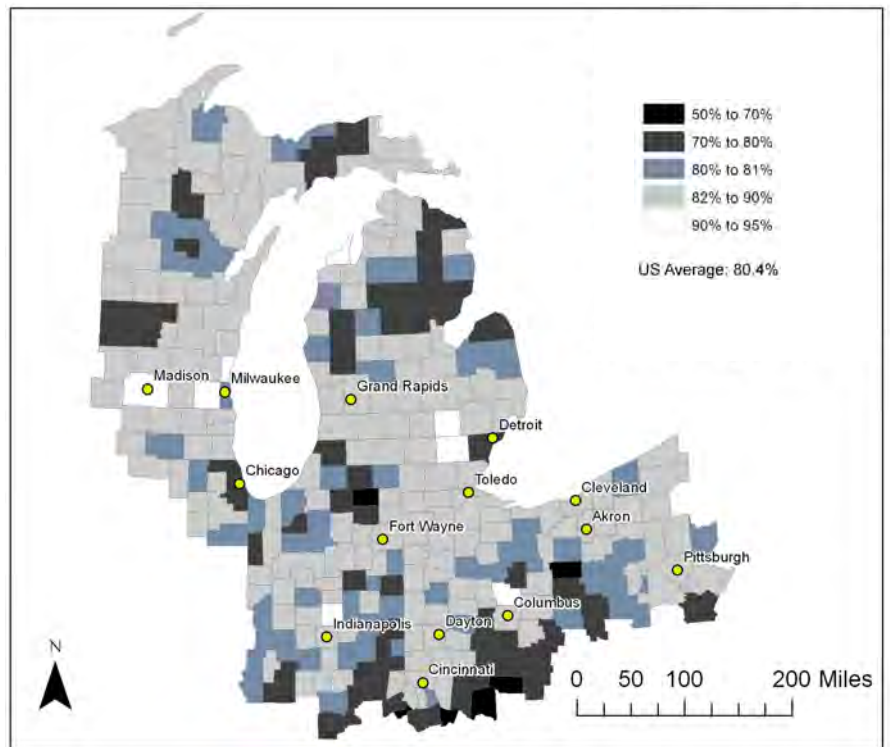


Figure 12. Population Over 25 Years of Age with at Least a High School Diploma  
Source: U.S. Census Bureau 2000 and ESRI GIS data  
<[http://arcdata.esri.com/data/tiger2000/tiger\\_download.cfm](http://arcdata.esri.com/data/tiger2000/tiger_download.cfm)>

<sup>36</sup> Population having "at least a high school diploma" is defined as the sum of population with "high school or equivalent," "some college," "associate and bachelor," and "advanced" degrees. U.S. Census Bureau 2000. 12 Feb. 2006. <<http://www.census.gov/>>

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## • **Strength of Research Universities**

• Universities generate economic, cultural, and intellectual activity. The universities in the  
• Great Lakes MegaRegion produce thousands of graduates every year, an important draw  
• for companies considering locating or expanding their operations within the region that  
• require a well-educated workforce. Not only do they graduate thousands of well-qualified  
• potential employees, they are significant employment centers themselves. The Ohio State  
• University, for example, employs over 34,000 people.<sup>37</sup> The creativity and talent that  
• is concentrated at the large research universities has the potential to generate additional  
• economic activity.

• The region has some of the largest research universities in the world. The number three  
• and four highest research and development spending universities in the nation are the  
• University of Michigan and the University of Wisconsin at Madison with combined total  
• R&D expenditures of over \$1.4 billion in 2003. Also, in the top 20 is The Ohio State Uni-  
• versity, with R&D expenditures of nearly \$500 million. The two universities close to the  
• MegaRegion are Pennsylvania State University and the University of Illinois at Urbana-  
• Champaign; together their R&D expenditures total more than \$1 billion.<sup>38</sup> In addition to  
• these universities, a number of other universities in the MegaRegion are key anchors for  
• their metropolitan areas and valuable sources of research output.

• Based on data collected by the Carnegie Foundation, the region has a disproportionate  
• share of universities granting master's degrees or PhDs. The MegaRegion has 23% of the  
• nation's universities that grant at least 20 master's degrees per year or 20 or more doctoral  
• degrees in at least three different disciplines.<sup>39</sup> The presence of these universities is one of  
• the advantages of the region and could be better utilized to develop and grow the region's  
• economy.

• The economic development impact of using the research generated from these institutions  
• in conjunction with venture capital available from either public or private sources has the  
• potential not only to create jobs and build new industries but more broadly to begin to  
• position the Great Lakes MegaRegion as a hub of innovation and new ideas.

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37 The Ohio State University. "About The Ohio State University." 16 Apr. 2006. <<http://hr.osu.edu/Aboutosu.htm>>

38 National Science Foundation. "Academic Research and Development Expenditures: Fiscal Year 2003." 14 Mar. 2006. <<http://www.nsf.gov/statistics/nsf05320/tables.htm>>

39 Carnegie Foundation. "Graduate Instructional Program Tables." 11 Apr. 2006. <<http://www.carnegiefoundation.org/classifications/index.asp?key=801>>

# State of the Region: Challenges

Challenges are obstacles for the Great Lakes MegaRegion to overcome in order to be competitive in the global market, to develop in environmentally sustainable ways, to address inequities, and to strengthen the region's transportation infrastructure. The region's assets can be leveraged to overcome its challenges.

## Loss of Share of Population and Gross Regional Product<sup>1</sup>

The region's share of gross domestic product declined from 1990 to 2004. In 1990, the region's gross product represented 15.8% of the gross domestic product. By 2000, the region's gross product had declined slightly to 15.7% of the nation's gross domestic product. During this same time period, the region's share of population decreased from 16.1% to 15.3%. By 2004, the region's share of gross product slipped to 14.9%.<sup>2</sup> These losses combined present several challenges, including a loss of economic competitiveness and a loss of political representation.

While other regions in the United States are growing in population and attracting new industries and employment centers, the Great Lakes MegaRegion is losing its share of the Gross Domestic Product. Also, as the region loses population, it loses national government representation. Allocation of Congressional seats is based on state population; as the share of population decreased in the MegaRegion, three states of the region have lost a total of 16 seats in the House of Representatives. The loss of political representation means less people in government to push forward the best interests of residents.

## Decline in Manufacturing Employment

The manufacturing industry is the primary economic base for the Great Lakes MegaRegion as determined by the location quotient of 1.36; the highest in the region.<sup>3</sup> This industry currently accounts for nearly one-fifth of the region's employment, but has declined significantly over the last 25 years. In 1980, the manufacturing industry accounted for over 35% of the region's employment, while it was only 23% of total employment in the United States.<sup>4</sup>

From 1980 to 1997, total employment in the region increased at a slower rate than that of the entire United States. While total employment in the region increased by only 29%, employment increased nationally by 40%. The decline of manufacturing employment is

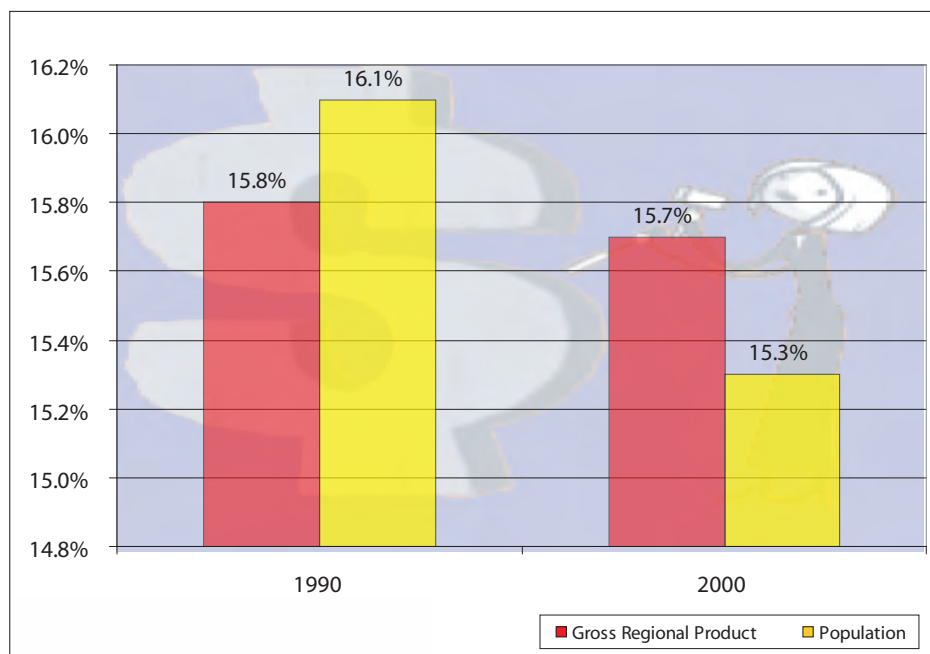


Figure 13. Region's Share of Population and Gross Domestic Product  
Source: U.S. Census Bureau, County Business Patterns, and Bureau of Economic Analysis

<sup>1</sup> Refer to *Methods for Planning the Great Lakes MegaRegion*. "Calculating Regional Domestic Product" for calculation method. Apr. 2006.

<sup>2</sup> Regional Gross Product estimated using payroll data from County Business Patterns. 9 Mar. 2006. <<http://www.census.gov/epcd/cbp/view/cbpview.html>> and Gross State Product data from, Bureau of Economic Analysis. 9 Mar. 2006. <<http://www.bea.gov/bea/regional/gsp.htm>>

<sup>3</sup> County Business Patterns. 1 Mar. 2006. <<http://www.census.gov/epcd/cbp/download/cbpdownload.html>>

<sup>4</sup> Ibid.



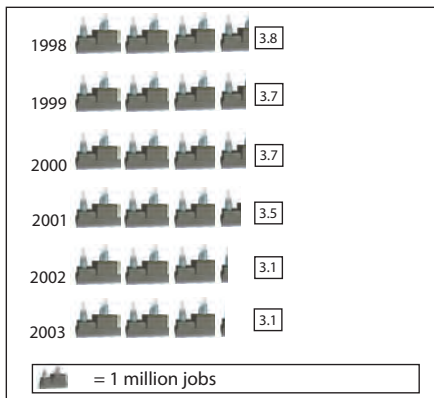


Figure 14. Decline in Manufacturing Employment  
Source: County Business Patterns

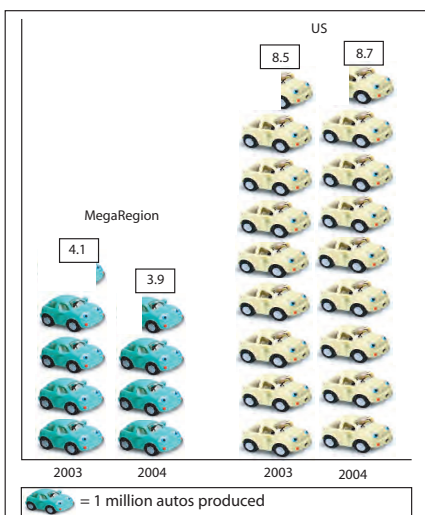


Figure 15. Auto Manufacturing Production in the MegaRegion and the United States  
Source: 2005 Market Data Book. Automotive News, 27 March 2006. <<http://www.auto-news.com/apps/pbcs.dll/article?AID=/20050523/DATACENTER/51027001&SearchID=73239664340534>>

one of the primary reasons for this slow growth. Due to increased productivity and plant closures, manufacturing employment in the region declined 15% during this same period, while only declining 12% in the United States.<sup>5</sup> This decline notwithstanding, manufacturing remains the largest employment base and supports the region's largest payroll, \$134 billion in annual payroll in 2003.<sup>6</sup>

The following example illustrates the increase in manufacturing productivity in spite of employment loss due to new plant technology. From 1995 to 2000, Navistar International invested \$285 million in new technologies and plant upgrades to their engine plant in Indianapolis. The net result was a seven-fold increase in engine production, from 175 engines per 900 workers per day in 1994 to 1400 engines per 900 workers per day in 2002.<sup>7</sup> Also, total national corporate profits from manufacturing increased 167% from \$78.3 billion in 1980 to \$209 billion in 1997, while employment decreased 12% during the same period.<sup>8</sup>

The decline of manufacturing industry has caused the region job loss and high unemployment. Due to high manufacturing labor costs in the region and the existence of locations with better access to major markets, companies have opened new production plants outside the region, often in southern states and foreign countries. This has contributed to manufacturing employment decline of over 625,000 jobs from 1998 to 2003 (see Figure 14).<sup>9</sup>

The recent decline of the automobile-related manufacturing industry in the region, compared to the national increase, is perhaps the most notable. Figure 15 shows automobile production in 2003 and 2004 for the region and the United States. In 2003, 4.1 million cars and light trucks were produced in the region. By 2004, this production decreased by 215,000 units, a decline of over 5%. In contrast, automobile manufacturing production in the United States increased 220,000 units or 2.6% from 2003 to 2004. From 1998 to 2003, two important automotive industry supply sectors, fabricated metal product manufacturing and machinery manufacturing, declined by 17% and 26%, respectively.<sup>10</sup> These two industry sectors accounted for over 4% of total employment in the region in 2003. In the nation as a whole, fabricated metal product manufacturing declined 16%, and machinery manufacturing declined by 22%, while the two sectors make up just over 2% of the nation's employment.

In spite of the decline of auto industry, the MegaRegion continues to dominate passenger car production of the United States. The American automobile industry began in Michigan more than 100 years ago. From 1975 to 1996, the manufacturing plants in Michigan alone produced approximately 30% of the total United States' passenger car output. In 1975, automobile manufacturing plants located in the MegaRegion produced 3.6 million passenger cars, compared to 6.6 million produced nationally, accounting for 54% of total production.<sup>11</sup> In 1996, nearly 62% of the nation's passenger cars were produced in the region.<sup>12</sup>

The specialization in manufacturing coupled with the decline of manufacturing has burdened the region with employment loss. From 1998 to 2003, the Great Lakes MegaRegion experienced a 0.34% total employment decrease, while the United States' employment increased 4.88%.<sup>13</sup>

5 County Business Patterns. 5 Apr. 2006. <<http://www.census.gov/epcd/cbp/download/cbpdownload.html>>  
6 Ibid.

7 New Economy Index. "The 2002 State New Economy Index." 10 Apr. 2006. <<http://www.neweconomyindex.org/states/2002/introduction.html>>

8 Economic Report of the President. "Table B-92.--Corporate profits of manufacturing industries, 1959-2005." 15 Apr. 2006. <<http://www.gpoaccess.gov/eop/>> p. 389.

9 County Business Patterns. 5 Apr. 2006. <<http://www.census.gov/epcd/cbp/download/cbpdownload.html>>  
10 Ibid.

11 MVMA Motor Vehicle Facts & Figures, 1976. Motor Vehicle Manufacturers Association: Detroit. p. 21.

12 MVMA Motor Vehicle Facts & Figures 1997. Motor Vehicle Manufacturers Association: Detroit. p. 9.

13 County Business Patterns. 5 Apr. 2006. <<http://www.census.gov/epcd/cbp/download/cbpdownload.html>>

## Declining Percent of Immigrant Population in Region's Cities

Historically, America's major cities have received large numbers of immigrants. Figure 16 shows the percentage of the population that was foreign born living in four major cities of the region over the 20th century. From 1910 to 1990, the percentage of foreign-born population decreased significantly. There was a slight increase from 1990 to 2000 in all four cities; this is especially evident for Milwaukee and Detroit which experienced an increase of 2% and 1.7%, respectively. Comparatively, Chicago experienced 5% growth of foreign-born population from 1990 to 2000.<sup>14</sup>

During the turn of the twentieth century, immigration to the United States was particularly important because of its volume and because the national origins of the immigrant streams were undergoing a marked transition.<sup>15</sup> Yet, in the same time period immigrants in the region had declined. Since before the 1800s, immigrants came to the region in search of prosperity. They contributed largely to the economy, especially as steel workers and package warehouse workers (such is the case in Pittsburgh).<sup>16</sup> Historically and currently, immigrants contribute a hard-working, entrepreneurial spirit important for economic growth in the region.

## Inequity Among Metropolitan Areas

The seven largest metropolitan areas in the MegaRegion have different levels of per capita income. This difference in income status may interfere with policy makers' seeing advantages to working on common challenges.

As shown in Table 7, the 1999 per capita income of metropolitan Chicago's residents was the highest among the seven metropolitan areas; 19% higher than that of the Pittsburgh metropolitan area, the lowest per capita income. The per capita income of Pittsburgh metropolitan area residents was lower than the United States average. Cleveland, the next poorest metropolitan area, had a per capita income 12% lower than that of Chicago.

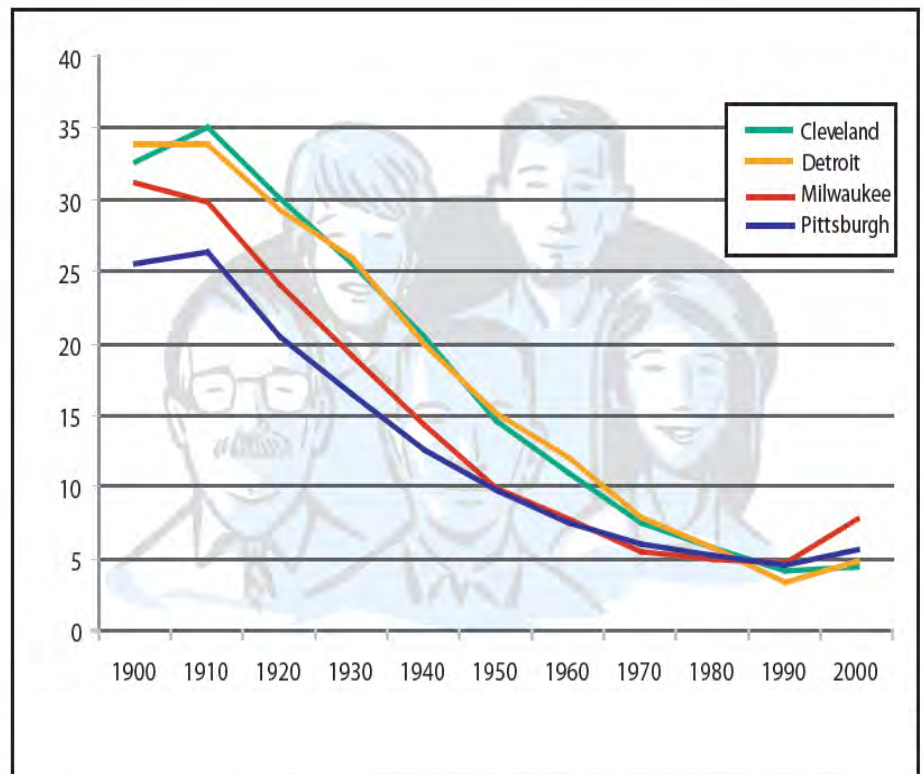


Figure 16. Immigrant Population in the Great Lakes MegaRegion Cities  
Source: John Austin. "Great Lakes Initiatives: Defining the Midwest Mega-Region Discussion." PowerPoint Presentation. Chicago. 8 Sept. 2005; Audrey Singer. "The Rise of New Immigrant Gateways." Living Cities/Census Series: Brookings Institution. Feb. 2004.

<sup>14</sup> John Austin. "Great Lakes Initiatives: Defining the Midwest Mega-Region Discussion." PowerPoint Presentation. Chicago. 8 Sept. 2005; Audrey Singer. "The Rise of New Immigrant Gateways." Living Cities/Census Series: Brookings Institution. Feb. 2004.

<sup>15</sup> Nancy Landale and Avery M. Guest. "Generation, Ethnicity and Occupational Opportunity in Late 19th Century America." *American Sociological Review*. 1990. Volume 55: p. 280 – 296.

<sup>16</sup> Katie Beaver. "Persecution and Assimilation: Immigrants in Pittsburgh, 1900-1930." Unpublished. 2002. 13 Apr. 2006. <<http://www.elon.edu/factstaff/dcopeland/fourth%20hour/katie%20oral%history.pdf>>

Table 7. 1999 Per Capita Income for Seven Metropolitan Areas of the Great Lakes MegaRegion  
Source: U.S. Census Bureau 2000

Metropolitan Area	Per Capita Income in 1999
Chicago, Illinois PMSA	\$25,011
Detroit, Michigan PMSA	\$24,354
Indianapolis, Indiana MSA	\$23,198
Milwaukee, Wisconsin PMSA	\$23,158
Columbus, Ohio MSA	\$23,020
Cleveland, Ohio PMSA	\$22,321
Pittsburgh, Pennsylvania MSA	\$20,935

### • Inequities Between Cities and Suburbs

• Economic disparities exist between central cities and surrounding suburban areas within the MegaRegion. Table 8 shows that suburban residents have higher per capita income than central city residents within each metropolitan area of the region. This difference is most pronounced within the Detroit metropolitan region, where the city residents' per capita income is 55% of suburban residents' per capita income. The Milwaukee and Cleveland metropolitan areas have a similar income disparity, with suburban residents' per capita income 71% higher than city residents' per capita income. Although the differences are less pronounced, per capita income is not equitably distributed within the metropolitan areas of Chicago, Indianapolis, Columbus, or Pittsburgh.

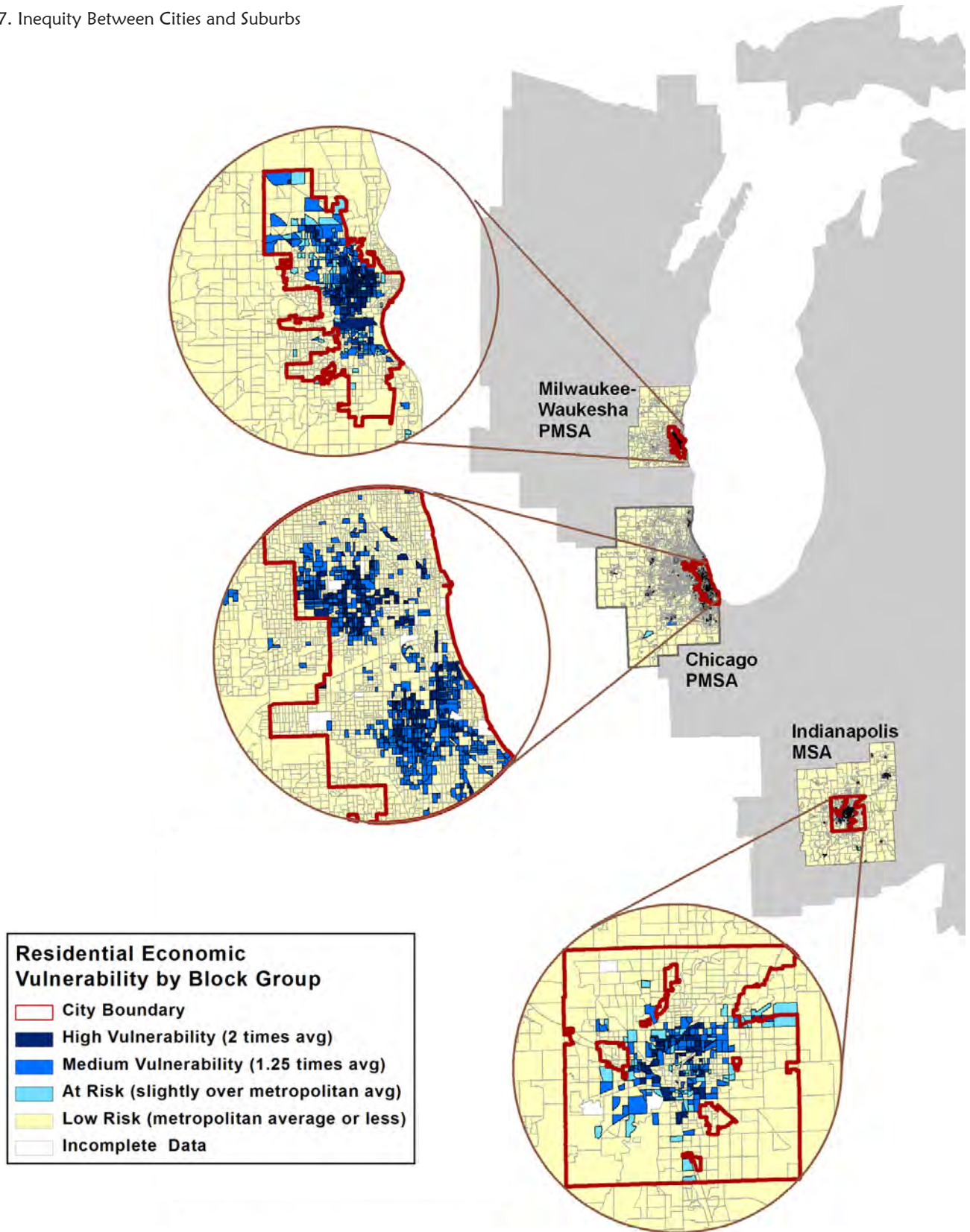
Table 8. City vs. Suburb Per Capita Income for Seven Metropolitan Areas of the Great Lakes MegaRegion, 1999  
Source: U.S. Census Bureau 2000

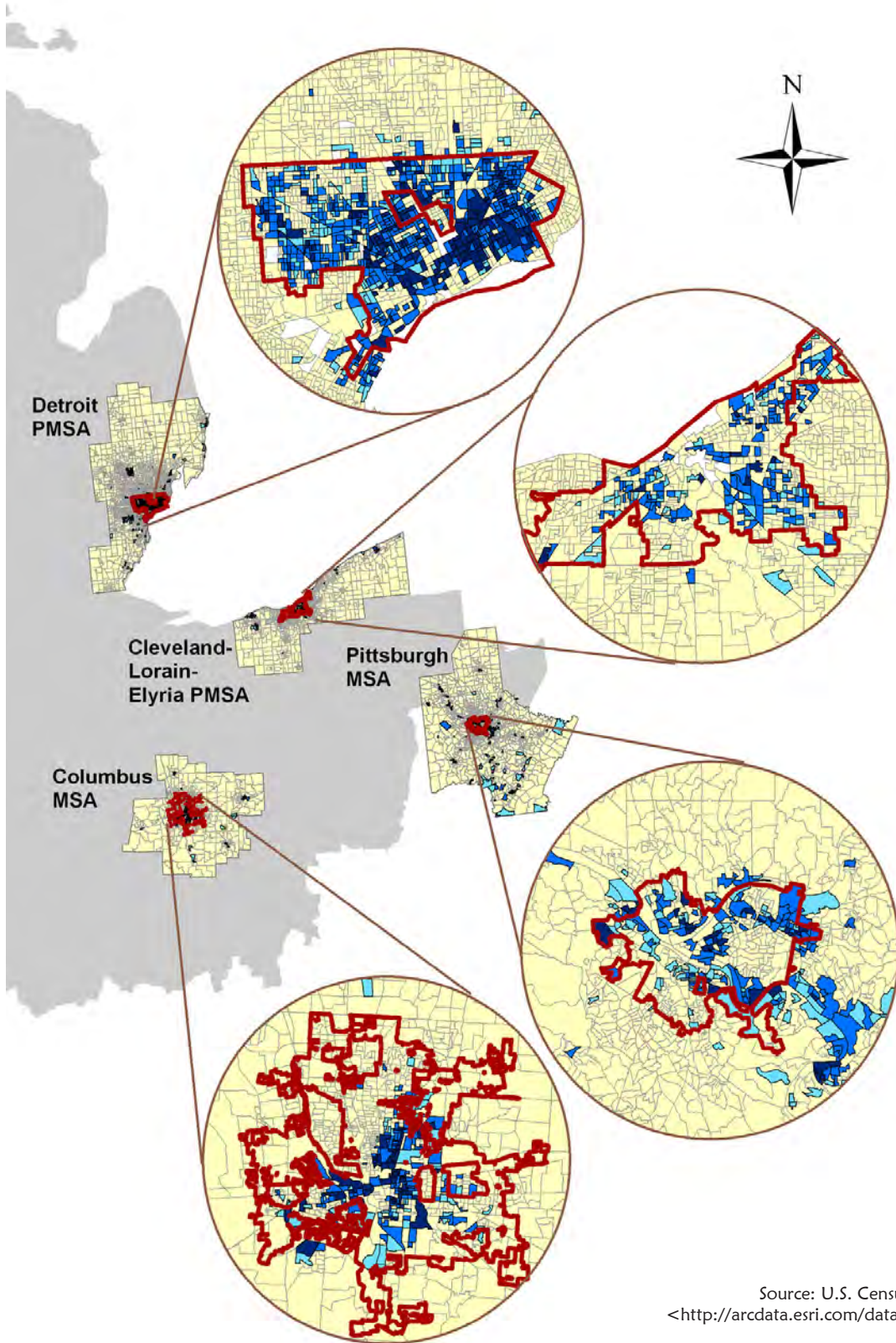
Metropolitan Area	Per Capita Income, City	Per Capita Income, Suburb	Percent Difference City vs. Suburb
Chicago, Illinois, PMSA	\$20,175	\$27,616	36.90%
Cleveland, Ohio, PMSA	\$14,291	\$24,488	71.40%
Columbus, Ohio, MSA	\$20,450	\$25,227	23.40%
Detroit, Michigan, PMSA	\$14,717	\$26,981	83.30%
Indianapolis, Indiana, MSA	\$21,640	\$24,675	14.00%
Milwaukee, Wisconsin, PMSA	\$16,181	\$27,766	71.60%
Pittsburgh, Pennsylvania, MSA	\$18,816	\$21,285	13.10%

• In addition to differences in per capita income, the MegaRegion's major cities differ from suburban districts in "residential economic vulnerability."<sup>17</sup> Areas with high residential economic vulnerability have concentrations of residents who fall below the poverty level or who could easily find themselves below this level due to slight changes in life circumstances. For this plan, indicators for poverty status, educational attainment, employment, and single-mother families together form the basis of the residential economic vulnerability ranking. "High Vulnerability" block groups have at least twice the metropolitan area percentage of people in poverty, twice the percentage of people who are unemployed, twice the percentage of people without high school degrees, and twice the percentage of female householders with children than the metropolitan average. "Medium Vulnerability" block groups have at least one indicator below twice but all indicators above 1.25 times the metropolitan average. "At Risk" block groups have at least one indicator below 1.25 times but all indicators above the metropolitan average.

<sup>17</sup> Please refer to the section on Residential Economic Vulnerability in Methods for Planning the Great Lakes MegaRegion, Apr. 2006.

Figure 17. Inequity Between Cities and Suburbs





Source: U.S. Census Bureau 2000 and ESRI GIS data  
<[http://arcdata.esri.com/data/tiger2000/tiger\\_download.cfm](http://arcdata.esri.com/data/tiger2000/tiger_download.cfm)>

The spatial distribution of residential economic vulnerability in the major cities and their surrounding suburbs shows the disproportionate concentration of the vulnerable block groups within city boundaries (see Figure 17).

A number of city block groups face high levels of residential economic vulnerability. For instance, Detroit has the highest percentage of central city population living in areas of high residential economic vulnerability. Milwaukee ranks second in percentage of central city population residing within highly vulnerable block groups.

### Persistent Racial Segregation

Segregation is a major challenge facing the Great Lakes MegaRegion. Five of the 10 most segregated metropolitan areas in the United States are located within the Great Lakes MegaRegion.<sup>18</sup> Table 9 shows the Dissimilarity Index in 1990 and 2000 for eight metropolitan areas of the MegaRegion.<sup>19</sup> The dissimilarity index for all eight of these metropolitan areas decreased from 1990 to 2000. However, this decline does not diminish the persistent segregation of the region as indicated by the high indices.

Metropolitan Area	1990 Dissimilarity Index	2000 Dissimilarity Index	2000 Rank
Chicago	0.838	0.797	5
Cincinnati	0.761	0.739	8
Cleveland	0.824	0.768	6
Columbus	0.673	0.616	28
Detroit	0.874	0.846	1
Indianapolis	0.746	0.704	13
Milwaukee	0.826	0.818	2
Pittsburgh	0.707	0.671	18

Table 9. Dissimilarity Index for African-Americans and Caucasians of Eight Metropolitan Areas of the Great Lakes MegaRegion  
 Source: John Iceland and Daniel H. Weinberg with Erika Steinmetz. "Racial and Ethnic Residential Segregation in the United States: 1980-2000." Aug. 2002. U.S. Census Bureau 2000 Special Reports.

The Great Lakes MegaRegion's African-American population is highly concentrated in the region's largest cities. The population of the Great Lakes MegaRegion is 12.5% African American; this is slightly higher than the national average. Yet, African-Americans represent more than 41% of the major cities' total population. In contrast, the population in the suburbs of these cities is 8.1% African-American and 85.3% Caucasian.

The high segregation levels in the region perpetuate inequality through unequal access to quality housing, jobs, education, public transportation, and public services. The spatial isolation of some groups created by segregation threatens the economic success of entire metropolitan areas.

<sup>18</sup> Ranking based on Dissimilarity Index in 2000. Segregation is least when majority and minority populations are evenly distributed. The most widely used measure of evenness is the Dissimilarity Index. This index measures the percentage of a group's population that would have to change residence for each census tract to have the same percentage of that group as the metropolitan area overall. The index ranges from 0.0 (complete integration) to 1.0 (complete segregation). John Iceland and Daniel H. Weinberg with Erika Steinmetz. "Racial and Ethnic Residential Segregation in the United States: 1980-2000." Aug. 2002. U.S. Census Bureau 2000 Special Reports.

<sup>19</sup> As opposed to other analysis within this plan, the Cincinnati metropolitan area was included with the major metropolitan areas in Table 9. Cincinnati was included because it is among the nation's top ten in highest Dissimilarity Index rankings.

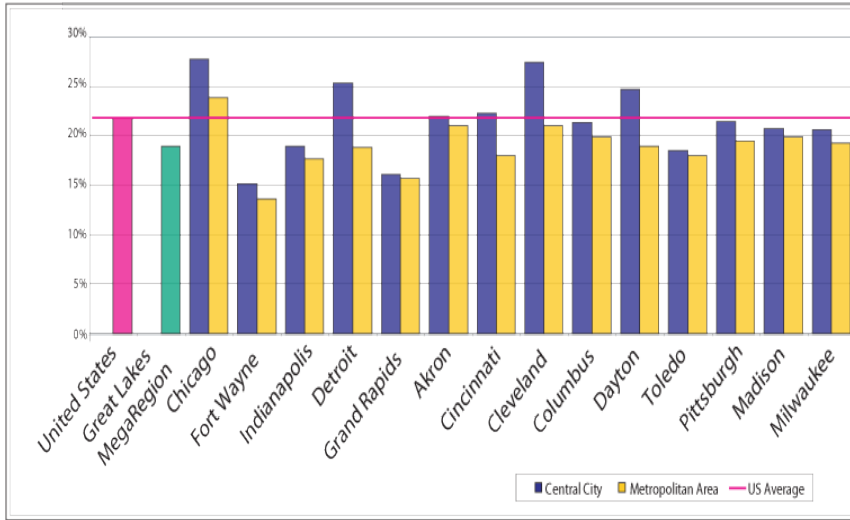


Figure 18. Households Spending More than 30% of Household Income on Housing, 1999  
Source: U.S. Census Bureau 2000

### Higher Housing Cost Burdens in Central Cities

Although the MegaRegion as a whole has a lower cost of living than many other parts of the United States, a significant concern is the high housing cost burden for many central city residents in relation to the surrounding suburbs.

Figure 18 shows the percentage of households spending more than 30% of household income on housing in 1999. Most evident is that all central cities have a higher percentage of households that paid a larger share of their income for housing than their total metropolitan areas paid. Considerably more households in four central cities, Chicago, Detroit, Cleveland, and Dayton, paid more than 30% of income for housing. Also, the proportion of households with high housing cost burden varies widely among the

- metropolitan areas of the MegaRegion. For instance, Fort Wayne and Grand Rapids have a low percentage of households that paid more than 30% of income for housing.
- Seven metropolitan areas have more households with a high housing cost burden than the MegaRegion’s average of 19% of households. The Chicago metro politan area has the highest percentage of households, nearly 24%, paying more than 30% of household income for housing costs.

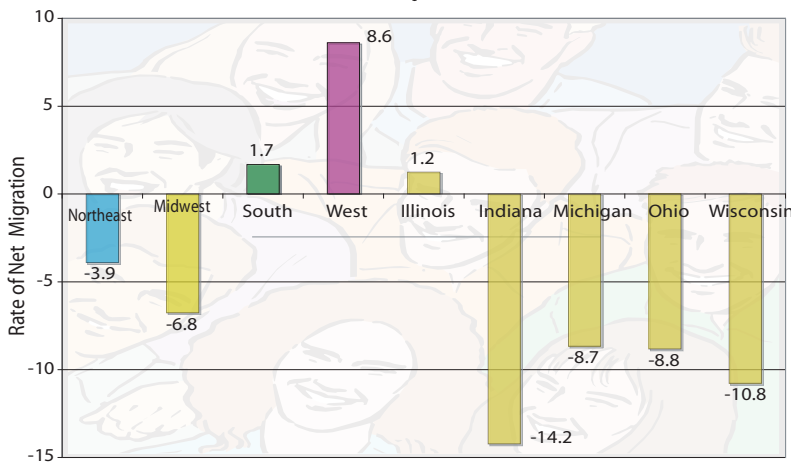


Figure 19. Net Migration of Young, Single and Educated, 1995– 2000  
Source: U.S. Census Bureau 2000. “Migration for the Young, Single, and College Educated for the United States, Regions, States, and Metropolitan Areas: 2000.” 2 Feb. 2006. <<http://www.census.gov/population/www/cen2000/phc-t34.html>>

### Out-Migration of Young, Single and Educated Individuals

The Great Lakes MegaRegion has lost nearly 7% of its young, single and educated residents due to net out-migration.<sup>20</sup> From 1995 to 2000, Illinois gained more than 1% young and educated persons, mostly attributed to the presence of Chicago as a magnet for talent. In contrast, the states of Indiana and Wisconsin have lost more than 10% of this population group.

According to the United States Census, this group provides “a measure of economic opportunity in an area, while simultaneously serving to raise the area’s stock of human capital.”<sup>21</sup> Young people are the most mobile; migrating to places where they can find opportunities and desired lifestyles.

- A negative net migration of young, single, and educated persons indicates diminished talent in the region. Additionally, the departure of this population takes away the labor force on which some growing industries depend. Richard Florida explains the retention and attraction of young talent as a dichotomy of the “chicken or the egg.”<sup>22</sup> The presence of

<sup>20</sup> The young are defined as those between the ages of 25 and 39 in 2000; the single are defined as those who were never married, or were widowed or divorced in 2000; and college educated are defined as those who attained at least a bachelor’s degree by 2000. U.S. Census Bureau 2000.  
<sup>21</sup> Rachel S. Franklin. *Migration of Young, Single, and College Educated: 1995 to 2000*. Nov. 2003. U.S. Census Bureau 2000 Special Reports.  
<sup>22</sup> Richard Florida. “Revenge of the Squelchers: the Great Creative Class Debate.” Apr. 2004. 2 Apr. 2006. <[http://www.creativeclass.org/acrobat/squelchers\\_document050204.pdf](http://www.creativeclass.org/acrobat/squelchers_document050204.pdf)>

these workers attracts jobs, but jobs and diversity also attract and retain young, well educated people, including the students educated at the region's universities. The ability to retain these workers improves the labor force for some businesses and also makes the area more attractive for other young, educated people.<sup>23</sup>

### Lack of Venture Capital

Venture capital is a critical component in the startup of new, innovative businesses, providing financing for firms in the early-stages of formation. Venture capitalists invest in firms now that have the potential for large financial returns after the company stabilizes. Venture capital comes from many sources, including the private market, state government policy initiatives authorizing the use of public monies to serve economic growth goals, and private community development endeavors that seek financial returns while achieving socially responsible goals.<sup>24</sup> As many small entrepreneurs do not have access to large amounts of equity, venture capital becomes a critical financing tool to enable new business startups.

Technology-intensive industries rely heavily on access to venture capital to begin and grow new businesses. Pharmaceuticals, office and computing machines, communication and electronic equipment, and professional and scientific instruments have historically received most of their startup funds from venture capitalists. More recently, venture capital money has financed information technology startups, including hardware, software, and service providers.<sup>25</sup>

The states of the MegaRegion attract considerably less venture capital than other states in the nation. Figure 20 shows venture capital disbursed per \$1,000 gross state product for the top 10 states as well as the states that make up the MegaRegion.<sup>26</sup> Massachusetts and California have the highest venture capital investment amounts, both per \$1,000 of gross state product and per capita. In 2003, California startups received the most venture capital, \$8.2 billion, compared to Massachusetts' businesses that received \$2.6 billion. In contrast, new business ventures in Michigan, Ohio, Wisconsin, and Indiana collectively, received less than \$250 million venture capital funds in 2003. Pennsylvania and Illinois startups receive more venture capital than startups in any other state of the region, \$560 million and \$380 million respectively, yet still fall short of the national average of \$1.7 per \$1,000 GSP.

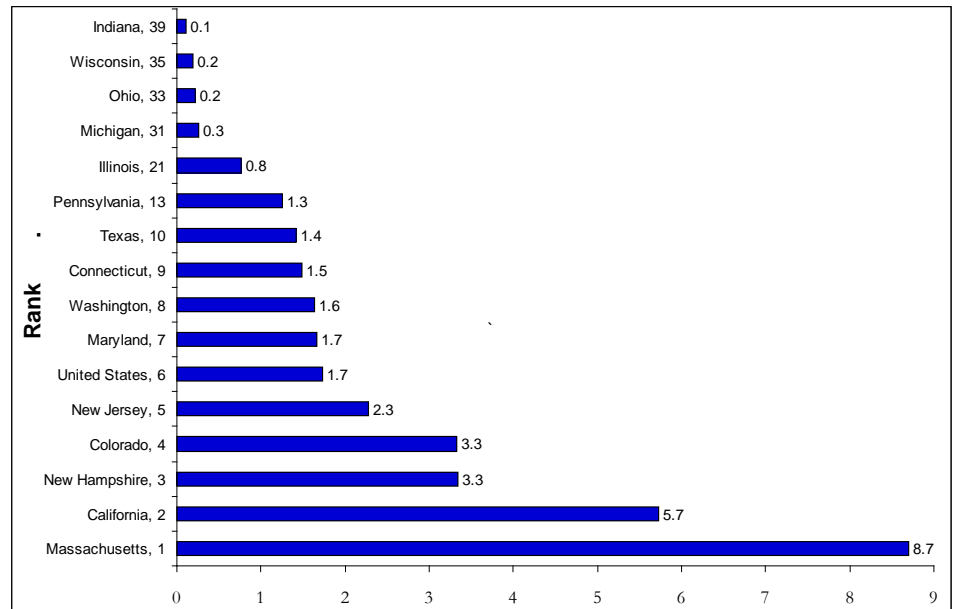


Figure 20. Venture Capital Disbursed per \$1,000 of Gross State Product, 2003  
 Source: National Science Foundation. "Science and Engineering Indicators 2006." 11 Apr. 2006. <<http://www.nsf.gov/statistics/seind06/c8/c8.cfm?opt=6>>

<sup>23</sup> Ibid.  
<sup>24</sup> Karl F. Seidman. *Economic Development Finance*. Sage: 2005. Chap. 11.  
<sup>25</sup> Ibid. p. 244.  
<sup>26</sup> National Science Foundation. "Science and Engineering Indicators 2006." 11 Apr. 2006. <<http://www.nsf.gov/statistics/seind06/c8/c8.cfm?opt=6>>



## Sprawling Urban Development

Sprawl is low-density, uncontrolled growth of urban development into previously rural areas. Sprawl contributes to traffic congestion, long commute times, loss of open space, pollution, and a decline in public health. Rural land in the Great Lakes MegaRegion urbanized at a rate of about 2.2 million acres per year.<sup>27</sup> Table 10 shows the sprawl levels for seven metropolitan areas in the region. Metropolitan areas with lower numbers are considered to be sprawling at a higher rate. The United States national average is 100.<sup>28</sup>

Table 10. Sprawl Index for Seven Metropolitan Areas of the Great Lakes MegaRegion  
Source: Reid Ewing, Rolf Pendall, and Don Chen. *Measuring sprawl and its Impact*. 3 Mar. 2006. <[www.smartgrowthamerica.com/sprawlinde/sprawlinde.html](http://www.smartgrowthamerica.com/sprawlinde/sprawlinde.html)>

Metropolitan Area	Sprawl Score
Detroit, Michigan, PMSA	79.5
Cleveland, Ohio, PMSA	91.8
Indianapolis, Indiana, MSA	93.7
Cincinnati, Ohio, PMSA	96.0
Pittsburgh, Pennsylvania, PMSA	105.9
Milwaukee, Wisconsin, PMSA	117.3
Chicago, Illinois, PMSA	121.2

Table 11. Square Miles of Sprawl for Seven Urbanized Areas of the Great Lakes MegaRegion  
Source: Sprawl City. "100 Largest U.S. Urbanized Areas Ranked by Square Miles of Sprawl (1970-1990)." 16 Mar. 2006. <<http://www.sprawlcity.org/hbis/index.html>>

Urbanized Area (ranked by amount of sprawl)	Square Miles of Sprawl (growth in land area)
13. Chicago, Illinois - Northwest Indiana	307.3
18. Detroit, Michigan	247.4
24. Pittsburgh, Pennsylvania	181.7
25. Cincinnati, Ohio - Kentucky	176.6
59. Indianapolis, Indiana	87.7
76. Milwaukee, Wisconsin	55.5
100. Cleveland, Ohio	-10.2

The cities of Pittsburgh, Milwaukee, and Chicago rank above the national average, which implies that they are sprawling less than the average for the rest of the country. Other studies, using different definitions and measures of sprawl, have ranked the metropolitan areas differently. Table 11 lists seven metropolitan areas, in order of their growth in land area.<sup>29</sup>

<sup>27</sup> Roy Beck, Leon Kolankiewicz, and Steven A. Camarota. *Outsmarting Smart Growth*. Center for Immigration Studies, 2003. p. 19.  
<sup>28</sup> Reid Ewing, Rolf Pendall, and Don Chen. *Measuring sprawl and its Impact*. 3 Mar. 2006. <[www.smartgrowthamerica.com/sprawlinde/sprawlinde.html](http://www.smartgrowthamerica.com/sprawlinde/sprawlinde.html)> p. 3.  
<sup>29</sup> Sprawl City. "100 Largest U.S. Urbanized Areas Ranked by Square Miles of Sprawl (1970-1990)." 16 Mar. 2006. <<http://www.sprawlcity.org/hbis/index.html>>

Another method to determine sprawl is to compare growth in population density to the growth in urbanized land. Comparing population to land use in this manner shows that as urbanized land increases faster than the change in population density, rural areas become urbanized by low-density development patterns. This development style harms natural areas, as it consumes more land necessary. Many Midwestern metropolitan areas, like those in the Great Lakes MegaRegion, experienced population density loss while the metropolitan area's urbanized land increased, as evidenced in Figure 21.<sup>30</sup> For example, Pittsburgh's metropolitan area lost 8% of its population but its urbanized land increased by 42% from 1982 to 1997.

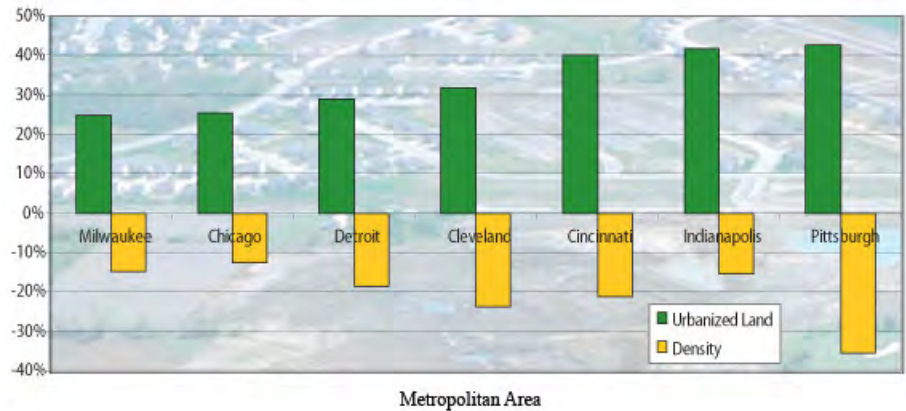


Figure 21. Change in Density and Urbanized Land for Metropolitan Areas of the Great Lakes MegaRegion, 1992 - 1997  
 Source: William Fulton, Rolf Pendall, Mai Nguyen, and Alicia Harrison. "Who Sprawls Most?" The Brookings Institution. July 2001. 9 Mar. 2006. <<http://www.brookings.edu/es/urban/publications/fulton.pdf>>

### Loss of Quality Farmland

Table 12 summarizes the change in the rate of loss of prime farmland acreage in the states that make up the Great Lakes MegaRegion from 1992 to 1997. For example, from 1992 to 1997, Illinois lost 137% more farmland than it did from 1987 to 1992.<sup>31</sup> Prime farmland is "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops and that is available for these uses."<sup>32</sup>

States Losing Farmland, 1992 to 1997		
State	Prime Acres Lost	Change in Rate of Loss
Ohio	212,200	45%
Illinois	160,900	137%
Pennsylvania	134,900	23%
Indiana	124,200	65%
Michigan	121,400	67%
Wisconsin	91,900	70%

Table 12. Change in Rate of Loss for Prime Farmland of States of the Great Lakes MegaRegion, 1992 - 1997  
 Source: American Farmland Trust. 22 Apr. 2006. "Farming on the Edge." <<http://www.farmland.org/resources/fote/states/allStates.asp>>

The MegaRegion lost farmland at almost twice the national rate. Figure 22 shows the percentage change of farmland from 1969 to 1997.<sup>33</sup> The MegaRegion experienced a significant decline of farmland. However, the farmland loss within the region's fourteen largest metropolitan areas (Madison, Milwaukee, Chicago, Grand Rapids, Detroit, Indianapolis, Fort Wayne, Columbus, Cleveland, Akron, Cincinnati, Columbus, Toledo, and Pittsburgh) is even greater.

<sup>30</sup> William Fulton, Rolf Pendall, Mai Nguyen, and Alicia Harrison. "Who Sprawls Most?" The Brookings Institution. July 2001. 9 Mar. 2006. <<http://www.brookings.edu/es/urban/publications/fulton.pdf>> p. 8.

<sup>31</sup> American Farmland Trust. 22 Apr. 2006. "Farming on the Edge." <<http://www.farmland.org/resources/fote/states/allStates.asp>>

<sup>32</sup> Ibid.

<sup>33</sup> County and City Data Book, 2003. University of Virginia, Geospatial and Statistical Data Center. 3 Mar. 2006.

<<http://fisher.lib.virginia.edu/collections/stats/ccdb/>>

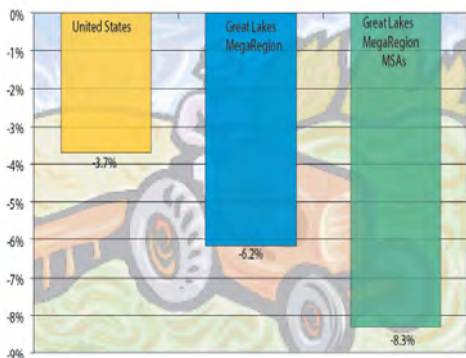
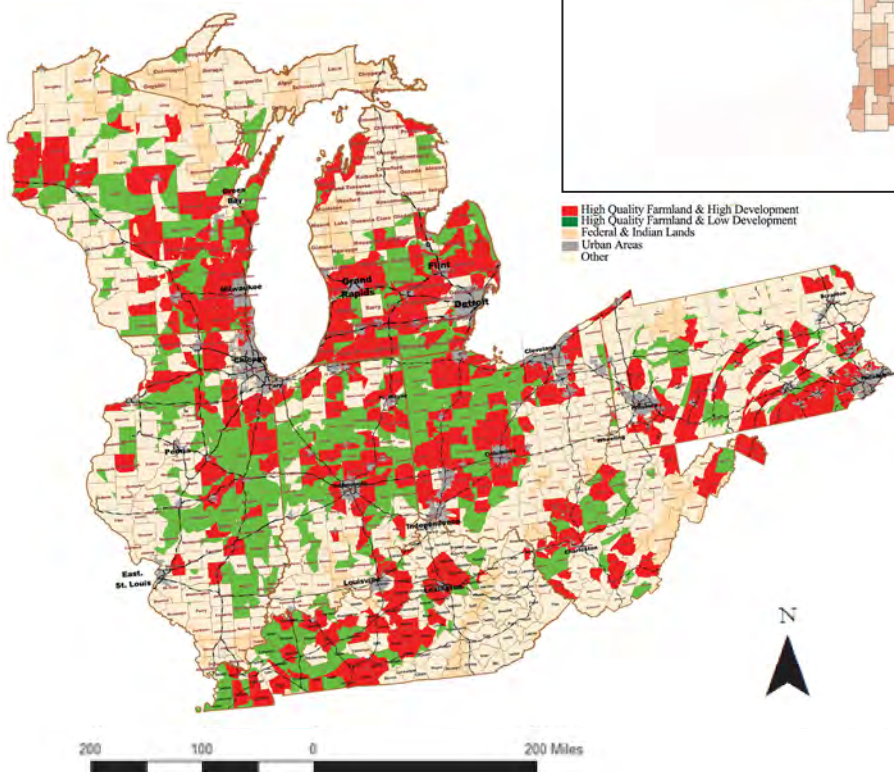


Figure 22. Percentage Change of Farmland for the United States, the MegaRegion, and Metropolitan Areas of the Great Lakes MegaRegion, 1969 – 1997  
 Source: County and City Data Book, 2003. University of Virginia, Geospatial and Statistical Data Center. 3 Mar. 2006.  
<http://fisher.lib.virginia.edu/collections/stats/ccdb/>

Figure 23 shows the farmland loss by county within the MegaRegion between 1969 and 1997.<sup>34</sup> With the exception of Madison, Wisconsin, with its Dane County preservation programs, many of these urbanized areas lack plans to contain and control growth.

Figure 24 shows development pressure on farmlands. High-quality farmlands are defined as areas that “have relatively large amounts of prime or unique farmland” when compared to the states’ average.<sup>35</sup> These are the lands that are in need of protection. The high development areas, in red, are areas that have a rate of development (changes in urban, built-up and rural transportation land) greater than their statewide average rate, while also having urban conversion, between 1992 and 1997, of at least 1,000 acres. The areas with low development pressures, green in color, are less threatened high-quality farmland acres.<sup>36</sup>



<sup>34</sup> County and City Data Book, 2003. University of Virginia, Geospatial and Statistical Data Center. 3 Mar. 2006.

<http://fisher.lib.virginia.edu/collections/stats/ccdb/>

<sup>35</sup> American Farmland Trust. 22 Apr. 2006. “Farming on the Edge.” <http://www.farmland.org/resources/fote/states/default.asp>

<sup>36</sup> Ibid.

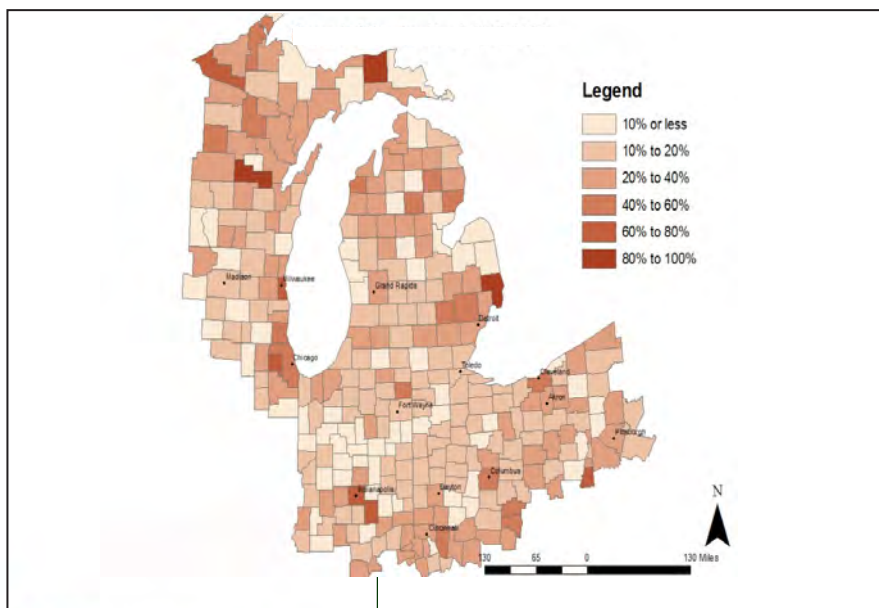


Figure 23. Great Lakes MegaRegion Percent of Farmland Lost by County, 1969 – 1997  
 Source: County and City Data Book, 2003. University of Virginia, Geospatial and Statistical Data Center. 3 Mar. 2006  
<http://fisher.lib.virginia.edu/collections/stats/ccdb/>

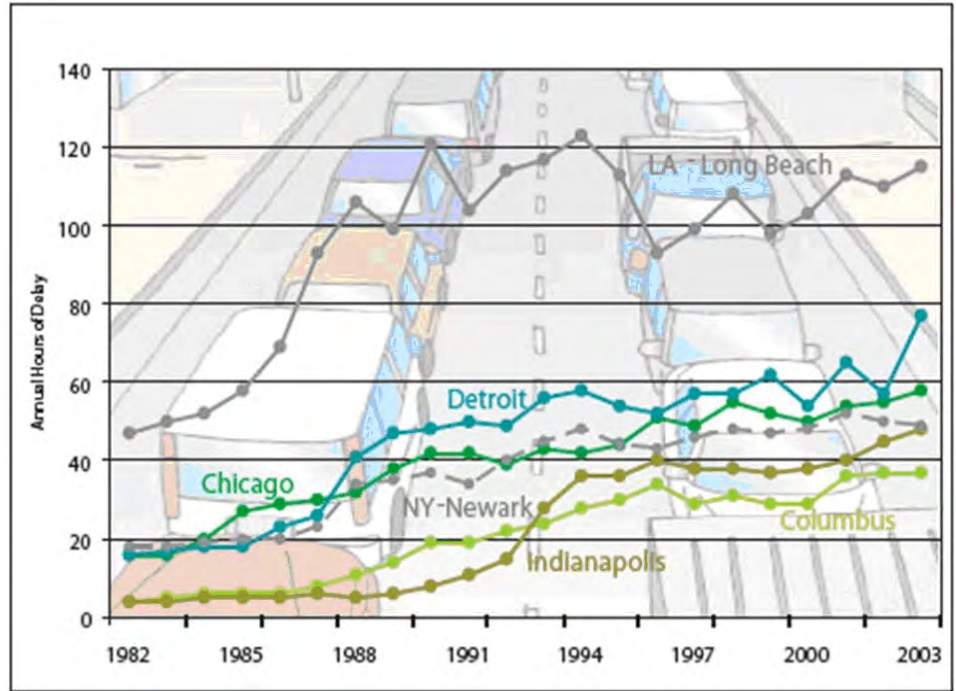
Figure 24. High-Quality or Unthreatened Farmland in the Path of Development in the Great Lakes MegaRegion  
 Source: American Farmland Trust. 22 April. 2006. “Farming on the Edge”  
<https://farmland.org/resources/fote/states/default.asp>

## Over Dependence on Trucks and Automobiles

Two interrelated transportation challenges in the Great Lakes MegaRegion exist because available infrastructure options are not fully utilized. The first is controlling peak hour congestion in the region's major cities. The second is ensuring that the MegaRegion is capable of meeting future freight demand.

### Controlling Peak Hour Congestion

Congestion is a growing problem across the Great Lakes MegaRegion, but delays are not distributed uniformly. In 2003, the Texas Transportation Institute determined that congestion delays caused a 37% increase in travel time during peak periods versus in free flowing periods nationwide.<sup>37</sup> Many areas of the MegaRegion experienced shorter delays, but Chicago and Detroit experienced longer delays than even New York-Newark. In 2003, congestion cost the largest Great Lakes MegaRegion cities a total of \$8.5 billion, 75% of which can be attributed to Chicago and Detroit alone.<sup>38</sup> As Figure 25 indicates, traffic in all the metropolitan areas has been increasing for twenty years. Reliance on the private automobile for personal travel and on trucking for freight shipments are two significant factors contributing to congestion.



Public transit statistics reveal a reliance on the private automobile in the Great Lakes MegaRegion.<sup>39</sup> New York's public transit system reduces total congestion by 94%, Washington, D.C.'s system by 44% – and Detroit's by only 5% (see Table 13). Furthermore, while annual Amtrak ridership in Chicago is 86% of the total population size, roughly comparable to New York's 105%, annual ridership in Detroit is only 6% of population and in Indianapolis – only 3%. Public transit is an accepted part of daily life in other parts of the country, but in the Great Lakes MegaRegion many see it as a service for the elderly, handicapped, and poor.

Figure 25. Peak Driver Delays in the Great Lakes MegaRegion Cities vs. Other Cities  
Source: Texas Transportation Institute. 2005 Urban Mobility Study. "Base Statistics for the 85 Urban Areas." 22 Apr. 2006. <[http://mobility.tamu.edu/ums/congestion\\_data/tables/complete\\_data.xls](http://mobility.tamu.edu/ums/congestion_data/tables/complete_data.xls)>

37 Texas Transportation Institute. 2005 Urban Mobility Study. "How Congested are the roads? Are they getting worse?" 22 Apr. 2006. <[http://mobility.tamu.edu/ums/report/how\\_congested.pdf](http://mobility.tamu.edu/ums/report/how_congested.pdf)>

38 Computed from the table, "Base Statistics for the 85 Urban Areas," using data for Akron, Chicago, Cincinnati, Cleveland, Columbus, Dayton, Detroit, Grand Rapids, Indianapolis, Milwaukee, Pittsburgh, and Toledo. Texas Transportation Institute. 2005 Urban Mobility Study. 22 Apr. 2006. <[http://mobility.tamu.edu/ums/congestion\\_data/tables/complete\\_data.xls](http://mobility.tamu.edu/ums/congestion_data/tables/complete_data.xls)>

39 Texas Transportation Institute. 2005 Urban Mobility Study. "Base Statistics for the 85 Urban Areas." 22 Apr. 2006. <[http://mobility.tamu.edu/ums/congestion\\_data/tables/complete\\_data.xls](http://mobility.tamu.edu/ums/congestion_data/tables/complete_data.xls)>; Amtrak State Fact Sheets 2005. 20 Apr. 2006. <[http://www.amtrak.com/servlet/ContentServlet?pagename=Amtrak/am2Copy/Title\\_Image\\_Copy\\_Page&c=am2Copy&cid=1081794201496&ssid=235](http://www.amtrak.com/servlet/ContentServlet?pagename=Amtrak/am2Copy/Title_Image_Copy_Page&c=am2Copy&cid=1081794201496&ssid=235)>

Table 13. Public Transit Use Indicators for Seven Cities in the United States

Notes and Sources: Residents in locations with low values for both indicators likely rely heavily on the private automobile.

(a) This ratio is the total annual hours saved by transit divided by the total annual hours of congestion in select urban areas (UA). Both elements of the ratio come from the Texas Transportation Institute. 2005 Urban Mobility Study. "Base Statistics for the 85 Urban Areas." 22 Apr. 2006. <[http://mobility.tamu.edu/ums/congestion\\_data/tables/complete\\_data.xls](http://mobility.tamu.edu/ums/congestion_data/tables/complete_data.xls)> Information about UAs is available from the U.S. Census Bureau <<http://www.census.gov/geo/www/ua/uaucinfo.html#lists>>

(b) This ratio is the Amtrak total boardings and alightings divided by city population according to the U.S. Census Bureau data for geographic places in 2004. More information is available from Amtrak State Fact Sheets 2004. 20 Apr. 2006. <[http://www.amtrak.com/servlet/ContentServer?pagename=Amtrak/am2Copy/Title\\_Image\\_Copy\\_Page&c=am2Copy&cid=1081794201496&ssid=235](http://www.amtrak.com/servlet/ContentServer?pagename=Amtrak/am2Copy/Title_Image_Copy_Page&c=am2Copy&cid=1081794201496&ssid=235)> and U.S. Census Bureau Population Finder. 20 Apr. 2006. <<http://www.census.gov/>>

Location	Transit / Traffic Ratio (a)	Amtrak Usage / Population Ratio (b)
Chicago	.33	.81
Washington, D.C.	.44	6.76
Detroit	.05	.06
Indianapolis	.03	.03
Los Angeles	.20	.33
New York	.94	1.08
Pittsburgh	.26	.38



Figure 26. U.S. Truck Freight Flows, 1998

Source: U.S. Department of Transportation. "Freight Analysis Framework (FAF)."

Note: Freight measure in tons for 2020.

In the Great Lakes MegaRegion, freight shipments frequently cross state lines as in the rest of the United States but also transcend international boundaries – extending into Canada.<sup>40</sup> Current shipments already contribute to higher congestion levels, and demand for freight is expected to double in the next twenty years.<sup>41</sup> Figure 26 and 27 illustrate the estimated change in truck freight levels from 1998 to 2020. While the region has a multimodal transportation system with intermodal facilities, the vast majority of goods are shipped via a single mode – truck. As Table 14 shows, 81% of the value shipped through Detroit moves by truck alone.

40 Seventy-three percent of U.S. freight crosses state lines as discussed in Robert Smith. "Freight Issues and Trends – An Upper Midwest Regional Perspective." 2002. Midwest Regional University Transportation Center. 8 May 2006.

<<http://www.mrutc.org/freight/workshop/files/Freight%20in%20the%20Upper%20Midwest.pdf>> Flows into Canada are illustrated on maps produced by the U.S. Department of Transportation. "Freight Analysis Framework (FAF)." 8 May 2006.

<[http://www.ops.fhwa.dot.gov/freight/freight\\_analysis/state\\_info/state\\_flow.htm](http://www.ops.fhwa.dot.gov/freight/freight_analysis/state_info/state_flow.htm)>

41 Robert Smith. "Freight Issues and Trends – An Upper Midwest Regional Perspective." 2002. Midwest Regional University Transportation Center. 22 Apr. 2006. <<http://www.mrutc.org/freight/workshop/files/Freight%20in%20the%20Upper%20Midwest.pdf>>

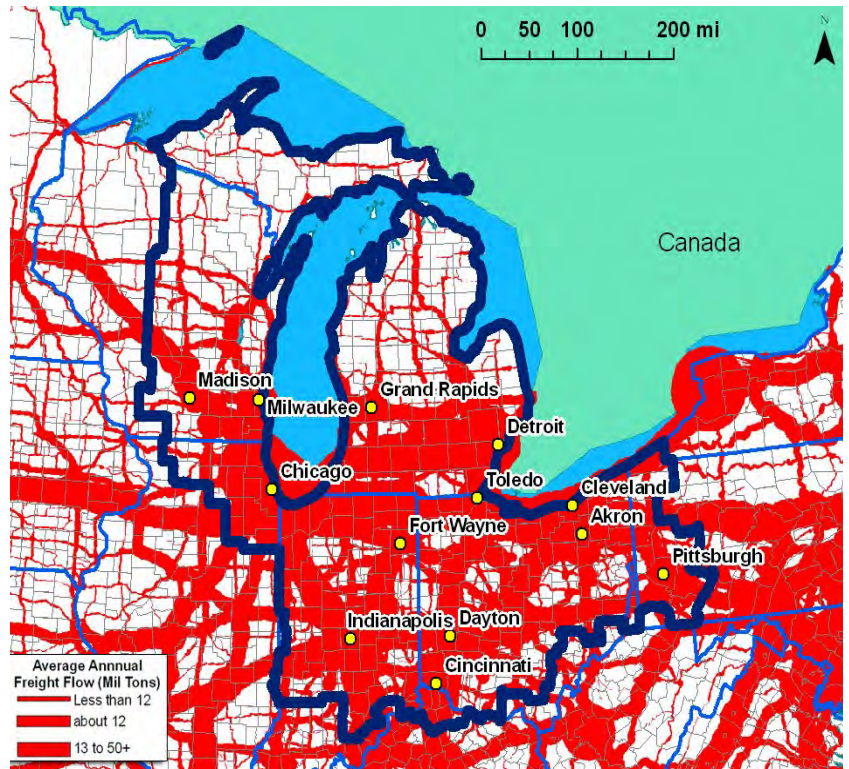


Figure 27. U.S. Truck Freight Flows, 2020  
 Source: U.S. Department of Transportation.  
 "Freight Analysis Framework (FAF)."  
 Note: Estimated freight measure in tons for 2020.

Core-Based Statistical Areas <sup>1</sup>	2002 Total Value Shipped & Received (in Billion USD)	Percent Single Mode	Percent Truck Only	Percent Rail Only	Percent Other Single Mode
Detroit-Warren-Flint	499.3	88%	81%	4%	4%
Chicago-Naperville-Michigan City <sup>2</sup>	587.0	80%	73%	3%	4%

**Note:** Rounding prevents breakdown percents from summing to Single Mode percent.

Table 14. Freight Modal Split for Two Core-Based Statistical Areas (CBSA) of the Great Lakes MegaRegion  
 Notes: (1.) The term "core-based statistical area" (CBSA), introduced in 2000, refers collectively to metropolitan statistical areas (50,000+ people) and micropolitan statistical areas (10,000 to 50,000 people). More information about these definitions can be found at <<http://www.census.gov/population/www/estimates/about-metro.html>> 20 Apr 2006.  
 (2.) This only covers the part of the Combined Statistical Area (CSA) in Illinois.

Chicago utilizes more multimodal shipping than nearby cities, but nearly three-fourths of the value still moves by truck. Maritime capacity is also underutilized. Concerns from vessel operators about insufficient harbor depth may be symptomatic of the general emphasis on trucking, which prevents proper investment in other modes and limits their effectiveness.<sup>42</sup>

<sup>42</sup> U.S. Department of Transportation Maritime Administration (MARAD). "Industry Survey Series: Great Lakes Operators, 2005." 20 Apr. 2006. <[http://www.marad.dot.gov/MARAD\\_statistics/2005%20STATISTICS/Great%20Lakes%20Operators%202005.pdf](http://www.marad.dot.gov/MARAD_statistics/2005%20STATISTICS/Great%20Lakes%20Operators%202005.pdf)>



Figure 28. Truck Freight Contributes to Congestion Throughout the MegaRegion  
 Source: Intermodal Advisory Task Force,  
 Photo Gallery: 28 Apr. 2006 <<http://www.catsiatf.com/linkfiles/gall/photohome.htm>> photo by Mark Thomas

Focus on a single mode of transportation will likely not allow the MegaRegion to meet future transportation demands. Continuing dependence on trucking will create a need for road capacity that is difficult to satisfy in urban areas due to existing development.<sup>43</sup> Increased traffic congestion could encourage some firms to relocate to less congested parts of the country, resulting in a loss of regional revenue and jobs. Longer commute delays mean less time with family, higher household fuel bills, and more air pollution. A total of 304 million gallons of gasoline in 2003 were burned in the twelve largest urban areas in the MegaRegion due to congestion delays. This waste of resources released 5.9 million tons of CO<sub>2</sub> into the environment.<sup>44</sup> Simply building more roads will not likely address transportation infrastructure challenges effectively. Focusing on increasing mobility by adding more lanes can actually trigger more road-based traffic. This solution can also spur development further away from existing urban centers, consuming more farmland – and making even more automobile commuting necessary.<sup>45</sup>

43 Robert Smith. "Freight Issues and Trends – An Upper Midwest Regional Perspective." 2002. Midwest Regional University Transportation Center. 22 Apr. 2006. <<http://www.mrutc.org/freight/workshop/files/Freight%20in%20the%20Upper%20Midwest.pdf>>

44 Fuel Consumption Rates from, Texas Transportation Institute. Urban Mobility Study 2005. Converted to tons of CO<sub>2</sub> at 19.564 lbs. per gallon of gasoline as suggested by the DOE, Energy Information, Administration in, "Voluntary Reporting of Greenhouse Gases Program." <<http://www.eia.doe.gov/oiaf/1605/coefficients.html>>. Computed only from the following cities: Data for Akron, Chicago, Cincinnati, Cleveland, Columbus, Dayton, Detroit, Grand Rapids, Indianapolis, Milwaukee, Pittsburgh, and Toledo.

45 For more information about the problems of standard congestion solutions, please see [Stuck in Traffic Coping with Peak-Hour Traffic Congestion](#). 1992. Anthony Downs. Also, Jonathan Levine and Yaakov Garb discuss the difference between access and mobility based transportation solutions in "Congestion pricing's conditional promise: promotion of accessibility or mobility?" *Transport Policy* 9 (2002) 179-188.

# Land Use Change Scenarios

Future land use will have a major impact on the quality of life in the Great Lakes Mega-Region. The scenarios presented here suggest two different potential realities.<sup>1</sup> In the first model, average per capita land consumption in the MegaRegion continues to rise, from an average of .37 acres/person in 1997 to an estimated .58 acres/person in 2050.<sup>2</sup> Without explicit protections, the current process of low-density development can encroach upon wildlife areas and sensitive ecosystems. Figure 29 depicts how this path may unfold, converting 6.2 million acres of outlying areas into sprawling suburbs dependent upon the private automobile. Nine counties in five states actually exploit all available land, as presented in Table 16.

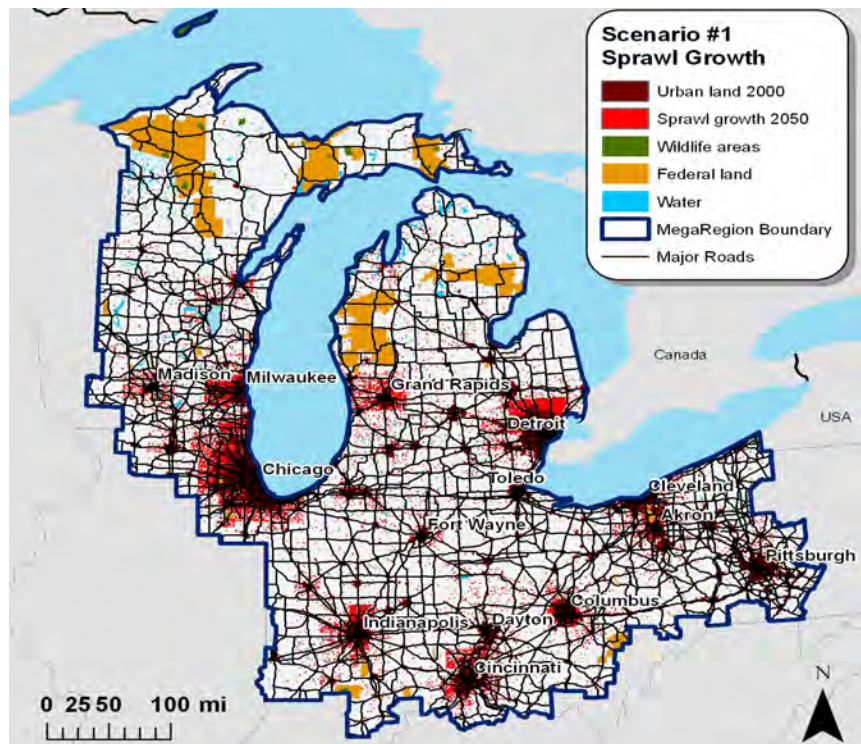


Figure 29. Scenario #1: The Current Path – Sprawl in the MegaRegion  
 Source: Custom software simulation using U.S. Census Bureau 2000 shapefiles, Woods & Poole county level population projections, and U.S. Department of Agriculture land consumption estimates to 1997. Menominee County, Wisconsin, is excluded from the projection due to lack of data. Refer to [Methods for Planning the Great Lakes MegaRegion](#). “Scenarios: Land-Use Change” for methodology and detailed discussion. Apr. 2006.

Table 15. Comparing Compact Growth to Sprawl Growth to 2050  
 Source: Custom software simulation using U.S. Census Bureau 2000 shapefiles, Woods & Poole county-level population projections, and U.S. Department of Agriculture land consumption estimates to 1997. Menominee County, Wisconsin, is excluded from the projection due to lack of data.

	Compact Growth	Sprawl Growth
Increase in urbanized land	30.8%	66.3%
Total land consumption (acres)	2,927,654	6,210,557

<sup>1</sup> The software used in these scenarios, designed in MATLAB, is discussed in more detail in [Methods for Planning the Great Lakes MegaRegion](#). “Scenarios: Land-Use Change.” Apr. 2006.

<sup>2</sup> Estimates based on a least squared error linear fit of state-level data for 1982, 1987, 1992, and 1997. U.S. Department of Agriculture. Natural Resources Conservation Service. 28 Apr. 2006. <<http://www.nrcs.usda.gov/TECHNICAL/land/meta/t5846.html>>

<sup>3</sup> The method employed in this simulation extrapolates future land usage from the year 2000 based on statewide trends and does not take into account policies in each individual county. Using a resolution of one square mile and considering major transportation corridors as already developed likely resulted in some land being overlooked. Refer to [Methods for Planning the Great Lakes MegaRegion](#). “Scenarios: Land-Use Change” for details on the simulation. Apr. 2006.



Table 16. Counties Built-Out by Sprawl  
 Source: Custom software simulation using U.S. Census Bureau 2000 shapefiles, Woods & Poole county-level population projections, and U.S. Department of Agriculture land consumption estimates to 1997. Menominee County, Wisconsin, is excluded from the projection due to lack of data.

County	State	Sprawl Growth Year Built-Out	Compact Growth Year Built-Out
Du Page <sup>3</sup>	Illinois	2002	2002
Marion	Indiana	2012	2017
Lake	Illinois	2013	2019
Cook	Illinois	2017	2027
Franklin	Ohio	2022	2048
Oakland	Michigan	2036	Still Space Available
Waukesha	Wisconsin	2043	
Kenosha	Wisconsin	2046	
Macomb	Michigan	2046	

- In the second model, planning policies curb outward growth and revitalize city centers, achieving an average per capita land use of .14 acres/person by 2050. Many counties in the Great Lakes MegaRegion, returning from a population loss, can renovate existing infrastructure for future use without urbanizing surrounding agricultural and forested land. The resulting urban form uses only 47% of the space required in the sprawl model (see Figure 30).

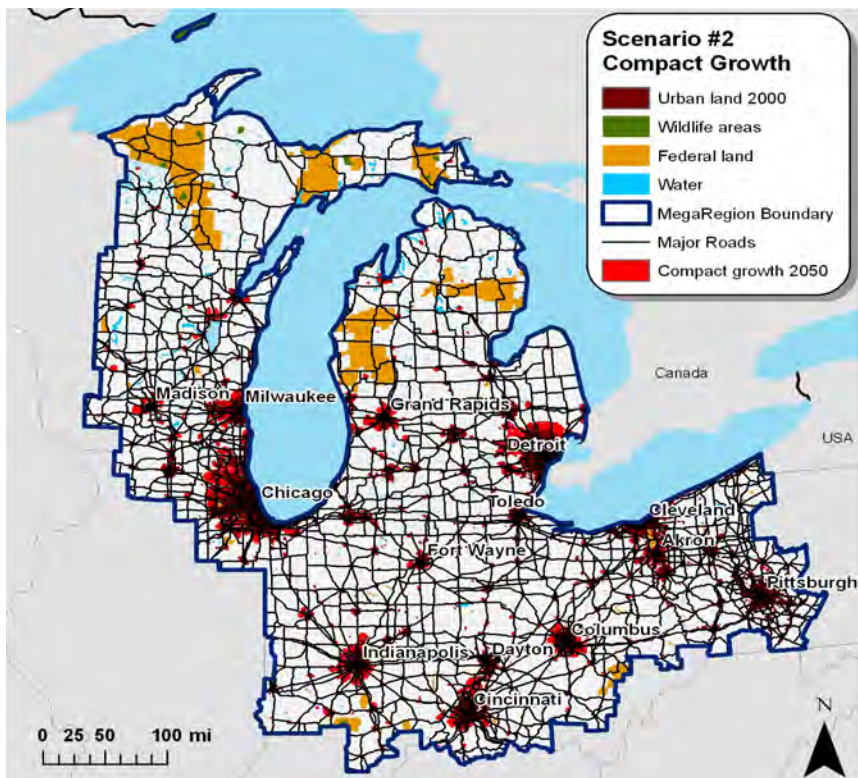


Figure 30. Scenario #2: A Glimpse of Compact Development

Source: Custom software simulation using U.S. Census Bureau 2000 shapefiles, Woods & Poole county-level population projections, and U.S. Department of Agriculture land consumption estimates to 1997. Menominee County, Wisconsin, is excluded from the projection due to lack of data. Refer to [Methods for Planning the Great Lakes MegaRegion](#). “Scenarios: Land-Use Change” for methodology and detailed discussion. Apr. 2006.

- The figures above illustrate the importance of land use decisions. They demonstrate the need for a wide look at development practices in the Great Lakes MegaRegion because traffic congestion and resource depletion caused by sprawl will affect everyone. Making urban living more attractive by revitalizing city centers may help to lower per capita land use to more sustainable levels.

# Goals

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The scenarios presented above, in particular the land use sprawl scenario, provide clear reasons for a shift in direction. If the future of the Great Lakes MegaRegion is to be more just, sustainable, and economically competitive, the region cannot continue to isolate and segregate poverty, consume land, and fail to invest in its urban centers. The following goals provide direction for moving towards a more hopeful future.

## **Develop an identity built on the MegaRegion's unique assets**

Moving beyond the association of the MegaRegion with the Rust Belt requires finding a new identity to replace the Rust Belt stigma. This identity needs to come from the region's distinguishing features.

## **Create economic growth**

Instead of lavishing incentives on particular companies or industries, the region should focus on creating the conditions needed for business startup and growth. The region needs to transition to a new economic base that provides good jobs, attracts and retains educated workers, and supports and stimulates economic growth.

## **Protect and restore the natural environment**

At the center of creating interesting places and building a new identity for the region is the protection of natural resources – especially the Great Lakes. Natural resources are one of the significant competitive advantages of the region.

## **Strive towards eliminating segregation and inequality**

The MegaRegion has high levels of racial segregation in metropolitan areas and high poverty rates in cities and rural areas. Not only will pursuing this goal make the region a more just and equitable place; but it will also enable more people to make a significant contribution to the region's economy.

# Strategies

- Identifying and acting on the following strategies can begin to accomplish the four goals.
- Each strategy supports multiple goals. For instance, the strategy to emphasize the Great Lakes as an important natural amenity not only helps to invest resources in environmental protection, but also helps to retain and attract businesses by nurturing a quality of place that helps businesses attract employees. Also, emphasizing the Great Lakes as a recreation destination helps to unify the region around shared natural features and fosters an identity that moves beyond the rust belt image towards something more positive. Collectively, these strategies do not represent a complete policy approach, but instead, are a number of important points of intervention.

## Goals and Strategies for the Great Lakes MegaRegion

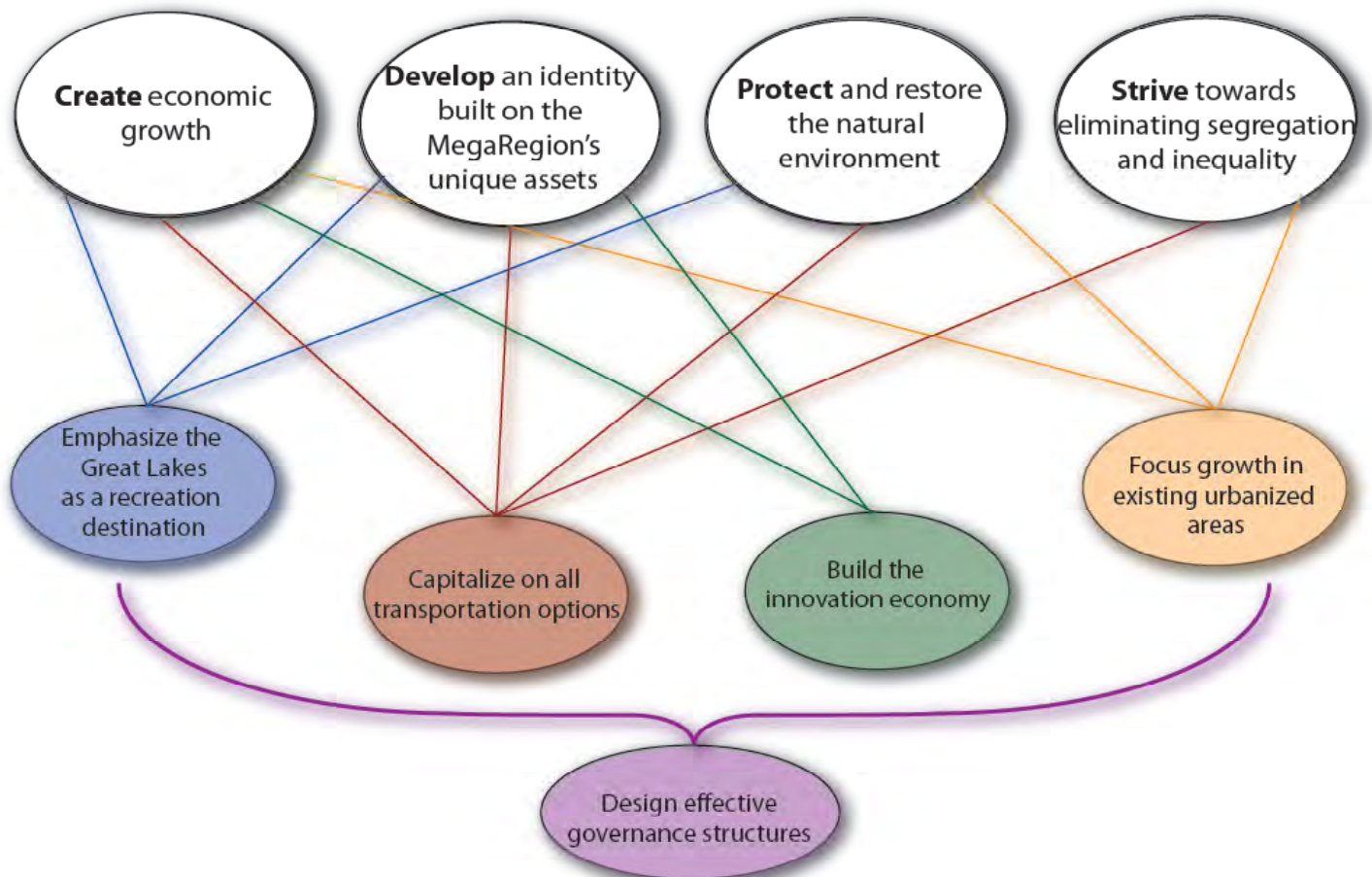


Figure 31. Connections Between Goals and Strategies

## Emphasizing the Great Lakes as a Recreation Destination

Emphasizing the Great Lakes as a recreation destination addresses the goals of creating opportunities for economic growth, developing a new identity, and protecting and restoring natural areas. By thinking more creatively about how to reconnect many urban areas to the waterfront, cities can add recreational space and enhance their community's desirability as places to live and work. Collectively, a concerted effort to protect and restore the waterfront and redevelop it where appropriate will create one of the key distinguishing features that helps to forge a new identity for the region.

The Great Lakes are a plentiful source of fresh water, as well as an important recreation destination for thousands of people. The Great Lakes have thousands of miles of shoreline. In order to protect portions of the region that have particular natural or recreational value, the establishment of a Great Lakes Land Trust would be a far-sighted initiative on the part of state and local governments. This land trust could focus its efforts on purchasing land that is threatened by development along the Great Lakes, especially near urban centers like Chicago or Cleveland, providing recreational opportunities to millions of people.

Emphasizing the Great Lakes also requires allowing better access to waterfront areas and embracing waterfront locations as central to creating the quality of life that will help attract employers and employees. Also, improved waterfront access can assist in building a positive waterfront destination identity. One such project underway in Detroit is the construction of a riverfront promenade along the water's edge. The harbor portion of the new Tri-Centennial State Park and Harbor opened in May 2004; this represents the first phase of Michigan's first urban state park. This park opens an area of the waterfront to the public for use year round.<sup>1</sup>



Figure 32. Boating on the Great Lakes  
Source: Bryan Hein

### Trails in Traverse City, Michigan

Traverse City, Michigan, is a popular summer resort town in Northern Michigan that sought to increase tourism in the winter months. Prior to opening its first ski trails in the 1950s, Traverse City coped with slow winter seasons.<sup>1</sup> Hundreds of miles of trails exist today to be used year-round for both motorized and non-motorized recreation. As a result of these efforts, large numbers of visitors who cannot go skiing or snowmobiling at home come to Traverse City to recreate. The addition of winter activities has made Traverse City a recreation destination for all seasons.

Trails are just one element of a visitor experience; providing other opportunities (both recreational and non-recreational) draws a more diverse group of visitors. In turn, this allows for a greater variety of businesses. Year-round activity is crucial to the survival of many recreation destinations. Even if some of the recreational uses in the area are seasonal, communities can provide off-season attractions that provide offer multiple experiences and serve to attract tourists year-round.

<sup>1</sup> Iowa Trails 2000. "Case Study Traverse City, Michigan." 27 Mar. 2006. <<http://www.iowabikes.com/trails/EconHandbook/TraverseCityCS.html>>

On a MegaRegion level, leveraging place means protecting the Great Lakes from development that threatens open access and stable environmental quality. Many efforts to protect the Great Lakes are already underway. For example, in 2003 the governors of the Great Lakes states identified nine priorities for Great Lakes restoration and protection. Since their release, these priorities have been adopted by the mayors of the Great Lakes states, the Great Lakes Commission and other Great Lakes leaders.<sup>2</sup>

<sup>1</sup> Detroit Riverfront Conservancy. "Riverfront efforts are progressing." 5 Apr. 2006.

<<http://www.detroitriverfront.org/index.asp?news=32&item=347&site=5>>

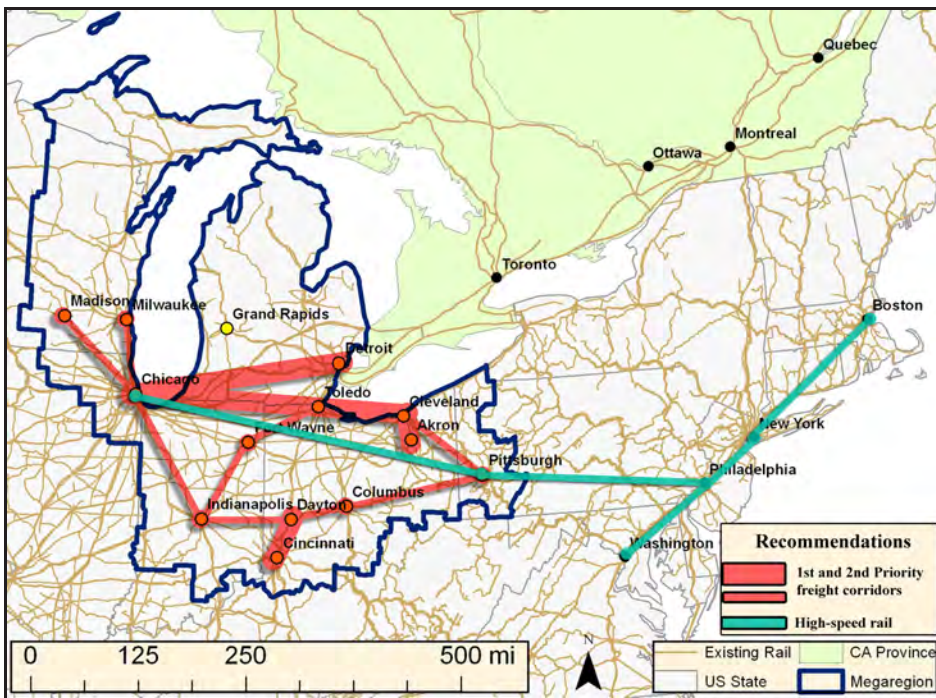
<sup>2</sup> U.S. Environmental Protection Agency. "Regional Collaboration: Making the Great Lakes Greater." 12 Apr. 2006.

<<http://www.epa.gov/greatlakes/collaboration/>>

## Capitalizing on All Transportation Options

Better utilizing existing transportation capacity furthers all four goals of the MegaRegion plan. It will speed the movement of goods and people, enabling companies to be more productive. It affords individuals who cannot access a car or are unable to drive additional mobility. Distributing traffic over rail, in particular, reduces pollution and land consumption associated with dependence on the automobile. Currently, people and goods move along an overburdened road system. The needs of individuals and freight create a derived demand for movement by the default modal choice – private car (or truck). Distributing this demand across multiple modal options could lead to increased access to destinations and markets.

Making passenger rail and bus viable options for work commutes will reduce traffic congestion, especially in the Detroit area where reliance on the private car is high. Improving multimodal options would give the MegaRegion an identity as a transit-friendly region. It allows people without access to a car the choice of alternative transportation options. Amtrak connections exist between the major cities in the MegaRegion and could be integrated with bus transportation to provide an alternative to driving.



Extending a northeast high-speed rail corridor through Pittsburgh to Chicago would lay the foundation for a national high-speed rail system and could open the Great Lakes MegaRegion to greater tourism and investment (see Figure 33).<sup>3</sup> Even at a slow average speed of 150 miles per hour, such a link would reach Pittsburgh from Philadelphia in less than two hours.<sup>4</sup> Such a train could travel from Philadelphia to Chicago in under five hours.

Balancing freight demand among all available modes of transportation improves the MegaRegion's economic competitiveness by reducing inefficiencies caused by road traffic. Such a system requires intermodal facilities to switch freight containers between modes, usually to or from trucks because the road system provides a necessary link between maritime ports, airports, rail stations, firms, and customers. Intermodal freight, therefore, remains vulnerable to

Figure 33. Proposed Rail Connections  
Source: National Atlas of the United States, U.S. Department of Transportation, and ESRI GIS data

congestion delays but also works to prevent such delays. Depending on the nature of the shipment, a single freight train can handle the load of 280 to 500 trucks, reducing the need for road-based delivery.<sup>5</sup> Extending freight rail to waterfronts and airports would further reduce truck dependency.

Increasing rail usage for shipping could further environmental goals. In 2002, railroads, on average, moved one ton of freight 440 miles per gallon of fuel, making them about

<sup>3</sup> Premised on the transportation solution proposed in *Reinventing Megalopolis* by students at the University of Pennsylvania School of Design, Spring 2005.

<sup>4</sup> Japanese high-speed trains already reach top speeds of 300 km per hour (186 mph), and higher speed trains exist in Europe. Japan Railways Group. "Shinkansen (Bullet Train)." 2 May 2006. <[http://www.japanrail.com/JR\\_shinkansen.html](http://www.japanrail.com/JR_shinkansen.html)>

<sup>5</sup> U.S. Department of the Interior. National Atlas of the United States. "Overview of U.S. Freight Railroads." 22 Apr. 2006. <[http://www.nationalatlas.gov/articles/transportation/a\\_freightr.html](http://www.nationalatlas.gov/articles/transportation/a_freightr.html)>

three times more efficient than trucks. The EPA estimates that reliance on rail for the bulk of an intermodal trip over 1,000 miles results in a 65% reduction in fuel consumption and greenhouse gas emissions.<sup>6</sup>

Improving the existing freight-rail network in corridors of anticipated high future volumes would allow the system to mitigate highway congestion.<sup>7</sup> This would entail first reinforcing the system's most heavily traveled routes, Akron-Cleveland-Toledo-Chicago and Detroit-Chicago, with additional lines and intermodal links. Adding another key link from Cincinnati to Dayton, may help to create a new centrally located hub in the south of the MegaRegion. These recommendations and the location of secondary rail supports are illustrated in Figure 33.

Additionally, the region could use the lakes for more local shipping to avoid road congestion during one leg of long trips. Operators have reported increasing harbor depth as a necessary step toward strengthening water transport.<sup>8</sup> This likely represents one of many improvements necessary to making the ports along the Great Lakes more competitive and integrating them more fully into the freight network.

Intelligent Transportation Systems (ITS) like the Gary-Chicago-Milwaukee (GCM) Corridor use sensors and cameras to monitor real-time traffic on the road system and provide information to the public online. This helps trucking companies route services away from areas of high congestion. This technology could be extended to include all modal options and switching points, allowing commercial enterprises to compare several intermodal routes.

Intergovernmental agencies, trade and industry organizations, and other associations are active in planning for improved transportation options for the Great Lakes region. For example, the Great Lakes Trade Corridor Association is a bilateral initiative created to facilitate cooperation between public and private interests in Lower Canada and the Midwest.<sup>9</sup> The Association is developing a comprehensive plan to identify the best use of resources for an intermodal network connecting Great Lakes communities in Canada and Michigan, Illinois, Indiana and other states. Examples from other parts of the country that involve international cooperation include the Portland/Vancouver I-5 Transportation and Trade Partnership, the CANAMEX Corridor, and the Ports-to-Plains Trade Corridor.

### Building the Innovation Economy

Building the innovation economy supports the goals of creating opportunities for economic growth and establishing a new regional identity. Not only does this new economy provide additional employment, it begins to craft an economic identity based on ingenuity and creativity.

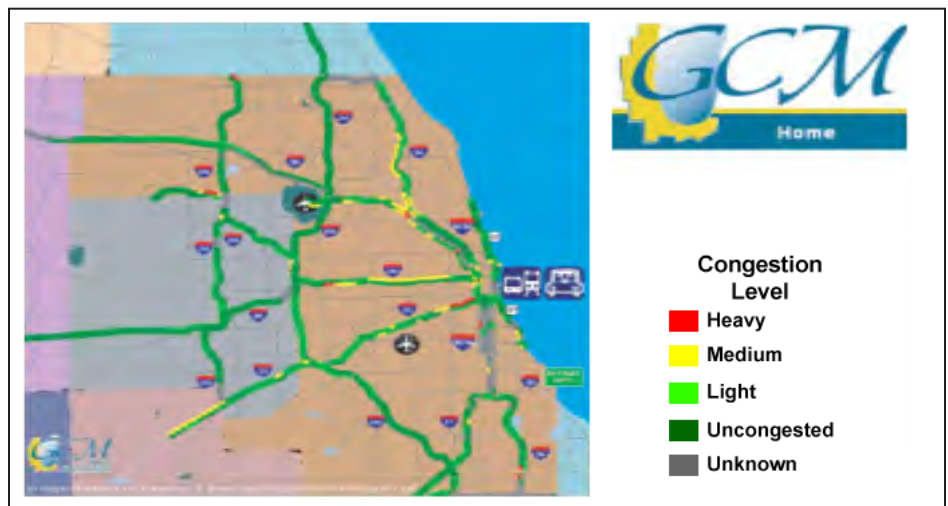


Figure 34. Realtime Traffic Analysis Allows for Better Routing  
Source: GCM Travel. 20 Feb. 2006. <[http://www.gcmtravel.com/gcm/maps\\_chicago.jsp](http://www.gcmtravel.com/gcm/maps_chicago.jsp)>

<sup>6</sup> Environmental Protection Agency. "Smartway Transport Partnership." 22 Apr. 2006. <<http://www.epa.gov/smartway/>>

<sup>7</sup> Anticipated tonnage based on U.S. Department of Transportation estimates for truck freight in 2020 from Figure 31 in Challenges Section.

<sup>8</sup> U.S. Department of Transportation Maritime Administration (MARAD). "Industry Survey Series: Great Lakes Operators, 2005." 20 Apr. 2006. <[http://www.marad.dot.gov/MARAD\\_statistics/2005%20STATISTICS/Great%20Lakes%20Operators%202005.pdf](http://www.marad.dot.gov/MARAD_statistics/2005%20STATISTICS/Great%20Lakes%20Operators%202005.pdf)>

<sup>9</sup> Great Lakes Trade Corridor Association. 1 Apr. 2006. <<http://www.gltca.org>>

While the Great Lakes MegaRegion has some of the finest research universities in the world, the states within the MegaRegion attract less venture capital than most other parts of the country. Building the bridge between prospective investors and the talent that exists is critical in pushing innovation forward to create a new economic base. At the center of this link between investment dollars and marketable ideas are the research universities. Using the research universities as agents of economic change allows the Great Lakes to establish an identity as a center of educational, and ultimately economic, resources.

One approach to better utilize the strength of the research universities within the MegaRegion is to reach out to venture capitalists in order to create business incubators on campuses. Staffed by students and professors, a network of these incubators could provide a better link between the capital required to start businesses and the talent required to grow them. Focusing on building these relationships and the institutions required to nurture them is a central prong in developing a new economic base. Not only will these centers be hubs of research activity, they will help to produce the kinds of jobs that keep the young and educated in the Great Lakes.



One example of an economic development approach centered on universities is SPARK; a public-private partnership whose focus is supporting entrepreneurship and innovation in the greater Ann Arbor, Michigan, region. Members of the partnership include the University of Michigan and Eastern Michigan University in addition to local government, businesses, and community leaders. SPARK provides a number of critical services:

- Funding promising ideas in the very early stages;
- Marketing Ann Arbor as a national center of innovation;
- Creating a place where ideas can meet the capital to fund them;
- Supporting cultural & artistic activities that help to attract entrepreneurs.

SPARK is an example of a project focused on a particular city, but the Michigan SmartZones policy attempts to create these centers across the state of Michigan and to build the infrastructure and support networks for innovation.

Figure 35. Location of SmartZones in Michigan

Source: Michigan's Official Economic Development and Travel Site. "Program Description." 1 Apr. 2006. <<http://www.michigan.org/medc/smartzones/index.asp#map>>

A broader MegaRegion agenda focused on creating these kinds of geographic cluster of innovation is important for developing new ideas, products, and companies and helping to create a culture of entrepreneurship.

## Michigan SmartZones

Michigan SmartZones are collaborations between universities, industry, research organizations, government, and other community institutions. The locations of the Michigan SmartZones are in areas that have a critical mass of services, including the presence of universities, corporate R&D facilities, cultural amenities, and IT infrastructure. By creating clusters of new and emerging businesses SmartZones provide locations where entrepreneurs can thrive in a climate that supports business creation and development.

The SmartZone toolkit includes:

- Business Services: access to a network of financial, legal, business and marketing consultants and service providers at reduced rates;
- Student Programs: entrepreneurial internships that provide meaningful experiences for students and inexpensive employment options for entrepreneurs;
- Incubators: flexible leases and shared office equipment and services to reduce costs;
- Business Development: programs like investment forums, educational workshops, and networking events; and
- Marketing: advertising to prospective funders about the presence of marketable ideas and emerging companies.

## Focusing Growth in Existing Urbanized Areas

Focusing growth in existing urbanized areas supports the goals of reducing segregation, protecting natural areas, and creating economic opportunities. The diversity of new residents in existing urban areas will begin to reduce the racial and economic divisions within many of the cities. Population growth will bring an increased demand for services and housing, which will help to generate economic growth.

The implementation of smart growth policies in the Great Lakes MegaRegion will assist in curbing sprawl and revitalizing the region's central cities. Reducing urban sprawl protects open spaces and natural areas. Growth policies recommended by Smart Growth America include mixing land uses, using compact building design, creating a range of housing choices, fostering neighborhoods with a sense of place, and preserving open space.<sup>10</sup> Providing tax incentives for infill development and rehabilitation of existing structures, as well as instituting a regional tax-base sharing program, can attract growth into urbanized areas. Additionally, cities can provide grants, low-cost loans, tax abatements, or other incentives to homeowners to assist in property rehabilitation.<sup>11</sup>

## Infill Development in Verona, Wisconsin

When Brunzell Lumber & Millwork company left downtown Verona, Wisconsin, it left behind vacant industrial buildings along a former railroad line in the city.<sup>1</sup> The City of Verona established a tax increment financing (TIF) district to purchase the property and remediate contamination. The site was targeted for redevelopment as a mixed-use residential and retail project. The City Council approved a plan in 2002 for 26 condominiums and 8,000 square feet of retail space fronting Main Street. At the ground breaking for the project in 2003, Dane County, Wisconsin, Executive Kathleen Falk, said, "[the project] is something that people will invest in and really love." This project inspired the city to invest further in its downtown by locating a new senior center about one block from the redevelopment site.

<sup>1</sup> BUILD Dane County. "Downtown Mixed-Use Infill Development." 10 Apr. 2006. <[http://www.countyofdane.com/plandev/community/build/project\\_verona.asp](http://www.countyofdane.com/plandev/community/build/project_verona.asp)>

A regional tax-base sharing program allows tax revenues to be distributed both to the locality where they are generated and to other areas of the region to help eliminate fiscal inequalities.<sup>12</sup> Programs like this one help to eliminate competition between municipalities within a region, promote a unified identity, create equal economic opportunities, and

<sup>10</sup> Smart Growth Online. "Principles of Smart Growth." 12 Mar. 2006.

<<http://www.smartgrowth.org/about/principles/default.asp>>

<sup>11</sup> Smart Growth Online. "Getting to Smart Growth: 100 Policies for Implementation." 10 Mar. 2006.

<<http://www.smartgrowth.org/pdf/gettosg.pdf>>

<sup>12</sup> Smart Growth Online. "Getting to Smart Growth: 100 Policies for Implementation." 10 Mar. 2006.

<<http://www.smartgrowth.org/pdf/gettosg.pdf>>



## **Tax-Base Sharing in Minnesota** allow areas to support public services.

In 1971, the Minneapolis-St. Paul metropolitan area implemented a tax-base sharing program. In this program, each community in the region contributes 40% of the growth of its commercial and industrial property tax base to a common pool. The funds are then redistributed to municipalities based on a per capita real property valuation. This program has reduced tax-base disparities from a ratio of 50:1 to a ratio of 12:1.<sup>1</sup>

The tax-base sharing program has helped the Twin Cities reduce economic inequities in the area. For example, St. Paul has an aging business core and receives close to \$30 million each year as a result of the program. If it were not for the revenue sharing program, St. Paul would either have to reduce its expenditures by \$8.5 million or raise the property tax rate by 16% for its residents. As a result of this program, St. Paul has gone 14 years without an increase in its property tax levy, allowing the city to become more competitive with the suburbs.<sup>2</sup>

<sup>1</sup> New Rules. "Minnesota's Metropolitan Revenue Distribution." 10 Apr. 2006. <<http://www.newrules.org/retail/taxbasesharing.html>>

<sup>2</sup> Bill Tolland. "A blueprint for tax sharing: In Minnesota, dividing the spoils helps cities and suburbs." *Pittsburgh Post-Gazette*. February 14, 2004. 10 Apr. 2006. <<http://www.post-gazette.com/pg/04046/273339.stm>>

• Pursuing strategies for repopulating city districts and improving the quality of life for existing city residents can help to reverse this trend. Attracting new growth to already populated areas and focusing reinvestment in a specific district may serve to revitalize surrounding city areas as well. A general strategy should involve attracting growth to the region's most economically vulnerable metropolitan areas through tax abatements and incentives, revitalization, and infrastructure improvement.

### **Creating New Forms of Governance**

• Units of government currently do not exist to plan and implement strategies for the Great Lakes MegaRegion. However, what is needed to tackle many of these challenges is not necessarily new units of government, but rather new kinds of governance. "Governance" means building alliances among units of government, institutions, non-profits, and the private sector concerned with a related set of issues. A number of examples of these supra-regional governance structures are already in place in the Great Lakes.

• One such initiative is the Great Lakes Commission, a binational public agency focused on the use, management and protection of the natural resources of the Great Lakes-St. Lawrence system. Broadly, their focus is to apply sustainable development principles in order to address issues of resource management, environmental protection, and transportation. The Commission produces reports, serves as a forum for developing and coordinating policy, and is a unified voice to advocate for member interests. Founded in both state and U.S. federal law and benefiting from a unique, binational partnership with Ontario and Québec, it is well suited to promoting a coordinated approach to issues associated with the Great Lakes.

• Another organization that crosses international jurisdictions is the International Joint Commission (IJC). The mission of this organization is to "prevent and resolve disputes between the United States of America and Canada under the *1909 Boundary Waters Treaty* and pursue the common good of both countries as an independent and objective advisor to the two governments."<sup>13</sup> It facilitates collaboration between the governments of the United States and Canada in resolving many types of Great Lakes issues including threats to the two country's shared watersheds and air quality sheds.

<sup>13</sup> International Joint Commission Mission Statement. 8 Mar. 2006. <[http://www.ijc.org/en/home/main\\_accueil.htm](http://www.ijc.org/en/home/main_accueil.htm)>

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A transportation model of governance is the Upper Midwest Regional Freight Corridor Study, whose contributions included Department of Transportation officials from Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, and Wisconsin, as well as transportation officials from the Canadian provinces of Manitoba and Ontario. This document referenced findings of the I-95 Corridor Coalition, the National I-10 Freight Corridor Study and the Latin America Trade and Transportation Study. Moving forward, a coalition of the metropolitan planning organizations throughout the region can address increasing congestions and inadequate public transportation infrastructure as one approach to tackling the region's pressing transportation challenges.

Other examples of governance could include a coalition of tourism boards with state chambers of commerce working together to craft a unified marketing message and therefore more likely to reach and connect with more potential tourists. As emphasized previously, universities are vital to the future success of the regional economy and a partnership – a Great Lakes University Alliance – to help strengthen the economy is one approach. Collaborations of universities, the Big Ten universities for instance, now work together on a variety of initiatives. Additionally, state universities in the region could grant in-state tuition to residents of other Great Lakes states, such as the Eastern Michigan University policy offering Michigan resident tuition rates to Ohio residents. This effort may entice students to remain in the region and continue to build the broader MegaRegion identity.

Advancing the set of strategies put forward in this plan does not require the creation of new political units, but it does require thinking creatively about what kind of alliances and coalitions can be built. These alliances are essential for pursuing the goals outlined in this plan on the MegaRegion level.

# Conclusion

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• The region has a number of significant advantages – the Great Lakes, strong research  
• universities, large amounts of farmland, established urban areas, among others. However,  
• the region faces a number of significant challenges. Persistent segregation, a declining  
• manufacturing economy, over-reliance on the automobile, and the flight of some of the  
• region's most talented plague many parts of the region.

• A MegaRegion approach is essential for addressing many of these problems that, because  
• of their geographic extent, cannot be handled solely at the local or state level. Addition-  
• ally, by bringing a more comprehensive strategy to bear, a MegaRegion view offers the  
• promise of more effective solutions. Moving forward, however, requires a belief that the  
• future of individual communities and states are intimately tied to one another and that  
• much can be gained through cooperation.

• Historically, the region developed together. If the communities within the region embrace  
• a collaborative approach, the year 2050 promises to be more economically vibrant, envi-  
• ronmentally sustainable, and socially equitable than the present.



