Our Environment
Our Health

Capital Area Land Use and Health Resource Team Regional Update

Local and Regional Teams Networking to Make Our Communities Stronger

2005
2005 Report Update

Our Environment, Our Health

There is a growing body of evidence that design of the built environment influences water and air quality, physical activity and safety, social capital and health equity, and consequently the physical and mental health of residents. The Capital Area of Michigan is a tri-county region of nearly 500,000 people in Ingham, Eaton and Clinton counties. In this area, population growth and development has shifted over the years from urban centers to rural farmlands. This relocation of our population has resulted in land use changes with health consequences for urban and suburban/rural residents. The purpose of “Our Environment, Our Health” is to improve our understanding of land use and health relationships, increase community understanding and engagement, and facilitate positive change.

“Our Environment, Our Health” was made possible through the generous support of the Ingham County Board of Commissioners. The Board continuously endeavors to meet the challenge of the Michigan Public Health Code to promote and protect the health of the people of Ingham County. A PDF version of this report may be downloaded for print on demand at the following website:

www.CACVoices.org/environment
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Trends in the Capital Area

Where are we building?
Between 1978 and 2000, the Capital Area of Michigan has converted rural to urban land at a growth rate that is twice its population growth. Most of our new growth could be described as sprawl - that is low-density, automobile dependent development at the fringe of existing urban areas.

Source: Tri-County Regional Planning Commission

Population

Where are people moving to live?
Increasingly, the Capital area population is shifting to outside the urban districts; there is evidence that such growth can be damaging to our natural environment and community health. While sprawl is often recognized to be a drain on economic resources, it is equally important to study the impact of sprawl on the natural, physical and social environments.

What can you do?
Read the pocket edition of the The Regional Growth Plan project at www.tri-co.org

Population Shifts

Legend
- Boundaries
- Roads
- Water

Tracts
Population Change
- 10% or greater loss
- 0-9% or greater loss
- 1-10% gain
- 11% or higher gain


People are moving out of already developed areas, not only in Lansing but also in East Lansing, Mason and Charlotte.

Source: US census, aggregated by census tract
**Land Use**

**Physical Activity**

**Can you access services by walking or biking?**

The rising rate of overweight and obesity across the nation has stimulated wide discussions on possible causes of this epidemic. One recent research focus is environmental conditions and their impact upon human behavior and health. Specifically land use and transportation patterns have been linked to public health in a number of recent studies. Studies suggest that an automobile-dependent land use pattern damages human physical health because it promotes car dependence and sedentary lifestyles. Newly developed residential areas are mostly isolated in disconnected subdivisions and built too distant from service destinations, like grocery stores, schools and work locations. In the Capital Area, the urban center of Lansing and East Lansing is much more conducive to walking to work than rural areas.

Like the nation as a whole, many of Michigan residents are sedentary. In the US 38% of Americans and 40% of Michigan residents didn’t achieve the recommended minimum 30 minutes of physical activity per day in 2003 according to US physical activity statistics, Centers for Disease Control and Prevention. Michigan leads the nation in obesity and overweight rates. In the Capital area, the medical costs of obesity-related illnesses are estimated to be $130 million per year. When accounting for the additional costs in lost productivity and workers’ compensation, the economic result of a sedentary lifestyle in this region triples to $390 million.

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4 Russmen, Ben et al., US Department of Transportation, 2004: Annotated bibliography on health and physical activity in health and transportation planning.
Physical Safety

How safe is your daily commute?
In addition to obesity, the street safety is another concern related to the built environment and land use. The rate of pedestrian fatalities in the Capital Area is almost twice the 2010 national target rate. Senior citizens and youths are the two age groups most at risk of pedestrian death.

As for car crashes, in the period between 1990 to 2002 almost twice as many deaths happened in car crashes in rural areas than in the urban core of the Capital Area. When combining crashes and homicide death, urban areas in this region seem safer to live in than rural areas.

Deaths in the Capital Area 1990-2002

What can you do?
Engage your neighborhood in developing a safe route map where you could safely walk and bike to various places in town.

• Ask your local planning department to include safe pathways and sidewalks when planning new streets or improving existing streets.

• Participate in smart commute to work week as an employer or employee http://www.midmeac.org/smartcommute

Source: Ingham County Health Department.
Land Use and Society

How does economic segregation influence community health?

Over the last 30 years, land use trends have resulted in ever increasing economic segregation of Ingham County’s urban and non-urban residents. There is a growing concentration of poverty in Lansing. In the Capital Area, and elsewhere in this country, poverty is associated with poor health. A disproportionate percentage of our African American, Hispanic and other ethnic residents are low income. Numerous studies have shown there are measurable benefits for the entire community when these disparities are reduced. Those benefits accrue to upper income residents as well as to lower income residents.

Source: US Census
Source: US Census and Our Health is in Our Hands 2004.

\[\text{Median Household Income}
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\[
\begin{align*}
\text{Central City of Lansing vs. Suburbs} \\
\end{align*}
\]

\[
\begin{align*}
\text{Capital Area Segregation Index} \\
\text{(City Schools Are More Integrated)} \\
\end{align*}
\]

Source: US Census

\[\text{Source: US CensusSource: US Census and Our Health is in Our Hands 2004.}\]
What can you do?
Educate yourself and others about the value of living in a culturally and income diverse neighborhood for a more integrated Capital Area community.

Early Death Concentrated In Core Cities of The Capital Area

Source: MDCH Vital statistics aggregated to census tract.
Land Use

Water and Air

How changing land use changes the water and air

Water and air pollution and resulting contamination and respiratory diseases are health concerns associated with land use. Over the past 10 years, a number of land use-related projects in the Capital Area resulted in better water quality in rivers and lakes.

As for air pollution, mobile source emissions, mainly from automobiles, are the primary source of outdoor air pollution in this area. Recently the Capital Area has fallen into non-compliance with federal regulations for air quality according to Michigan Department of Environmental Quality.

What can you do?

Join the smart commute week or non-motorized transportation committees to create an awareness campaign where people get educated and practice alternative ways to get to work. Call Mid-Michigan Environmental Action Council or visit: http://www.midmeac.org/smartcommute

Surface Water in The Capital Area

Capital Area Ozone Levels Compared to Other Cities

Reference: Smartgrowthamerica.com/sprawlindex.

Source: Ingham County Health Department.

Recreation standard for E. Coli <300ppm.

\(^4\) E. Coli results are 3 years rolling average from 1997-2003.
Where do we go from here?
Including health in land use decisions is crucial to the well-being of our community. The Land Use and Health Resource Team joined the “Regional Growth: Choices for Our Future” project to promote wise growth within and outside traditional core cities. Often residents of inner cities are not able to ensure that redevelopment plans in their neighborhoods are well designed and implemented to preserve their health and safety. Therefore, the current focus of this team is to add local initiatives to existing regional initiatives.

“Moving Our Community Toward Health” is a new project that helps fulfill this need. It is funded by Michigan Department of Community Health to emphasize prevention of cardiovascular disease through policy and environmental changes. It recognizes that change in the physical environment for better health should happen simultaneously at the regional level in the Capital Area as well as at the local level. The following are examples of initiatives promoted through this project. While the current local focus is on three neighborhoods in Lansing, other residents are encouraged to develop similar initiatives in their own towns and neighborhoods.

1. Regional Initiatives
   - Health Impact Assessment tools
   - Pedestrian/Non-motorized committees
   - Smart Commute Week
   - Safe Route Identification Mapping

2. Neighborhood Initiatives
   - Sidewalks and pathways initiatives
   - Bus shelter plans
   - Hoop house, garden projects and farmers’ market

3. If you’d like to learn more or participate in any component of this project visit:
   - Visit the Regional Growth Project: [www.tri-co.org](http://www.tri-co.org)
   - Moving Our Community Toward Health: [www.cacvoices.org/mocth](http://www.cacvoices.org/mocth)
   - Healthy Communities Tools: [www.mihealthtools.org](http://www.mihealthtools.org)
   - Healthy Impact Assessment Tools: [www.cacvoices.org/environment](http://www.cacvoices.org/environment)
   - Michigan Rails to Trails and Bike Paths: [www.a1trails.com/rail/trailsmi.html](http://www.a1trails.com/rail/trailsmi.html)
   - League of Michigan Bicyclists: [www.lmb.org](http://www.lmb.org)

[www.CACVoices.org/environment](http://www.CACVoices.org/environment)
Current Members:
The Land Use and Health Team is an informal advisory body supported by the Ingham County Health Department, Tri-County Regional Planning Commission, and Michigan State University.

Bob Glandon, Janine Sinno, Jim Wilson, Ingham County Health Department: www.ingham.org

Jon Coleman, Tri-County Regional Planning Commission (TCRPC) Regional Growth project: www.tri-co.org

Ellen Bassett, John Melcher, Mike Thomas, Michigan State University: www.msu.edu

Randy Bell, Ingham County Extension Director: http://www.ingham.org/ce/home.htm

LeRoy Harvey, Moving Our Community Toward Health: www.cacvoices.org/motch


Donna Wynant, City of Lansing Planning Department: http://plandev.cityoflansingmi.com/

Mark Kieselbach, Meridian Township: http://www.meridian.mi.us/

Rex Hoyt, Mid Michigan District Health Department; http://www.clinton-county.org/other/health_dept.htm

Robin Palmer, Michigan Department of Community Health: http://www.michigan.gov/mdch

Kay Palinski, Eyde Company: www.eyde.com

Additional Resources:

Our Health is in Our Hands, A Report on the Health Status of Ingham County, 2004 (A companion document)

U.S. Census: www.census.gov

Behavior Risk Factor Surveys, Capital Area, 2000-2003: www.cacvoices.org, click Data & GIS

Centers for Disease Control and Prevention: www.cdc.gov

National Association of County and City Health Officials: www.naccho.org

Tri-County Regional Planning Commission; the Regional Growth Project Pocket Edition is now available online at: www.tri-co.org

Power of We: Strengthening Community Connections for Action: www.PowerofWe.org

Ingham County Health Department pages on the environment: www.cacvoices.org/environment for the following publications:
- Ingham County’s Surface and Ground Water Resources, 2001
- Outdoor Air in Ingham County, 2003
- Our Health is in Our Hands: A report on the Health Status of Ingham County 2004

www.cacvoices.org/motch

www.ingham.org/hd/ENVHLTH/eh.htm

Ingham County Bureau of Environmental Health: http://www.ingham.org/hd/ENVHLTH/eh.htm

Michigan Health Tools: www.mihealthtools.org/

Safe Routes to School: www.saferoutesmichigan.org
Our Environment
Our Health

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