



Mid-Michigan Health In All Project

# EXECUTIVE SUMMARY

## Health Impact Assessment of the Urban and Rural Services Management Policy

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## ACKNOWLEDGEMENT AND DISCLAIMER

The report is the result of a team effort developed at the Ingham County Health Department by the Community Health Assessment and Improvement Team. The Land Use and Health Resource Team members involved include the Tri-County Regional Planning Commission, Michigan

State University, the Urban and Rural Service Management Committee, and others listed in the appendix.

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*in this document are those of the authors and do not necessarily reflect the views of the Health Impact Project, the Robert Wood Johnson Foundation or The Pew Charitable Trusts.*

## HIA STAKEHOLDERS AND PARTNER ORGANIZATIONS

The Mid-Michigan Region Urban and Rural Service Management (URSM) Committee members and other stakeholders participating in the URSM Policy Health Impact Assessment (HIA) development process represented the following government, organizational, and the private sectors.

Tri-County Regional Planning Commission

Clinton County Board of Commissioners  
Mid-Michigan District Health Department  
Bath Charter Township  
Dallas Township  
DeWitt Charter Township  
Village of Fowler  
Watertown Charter Township

Eaton County Board of Commissioners  
Barry-Eaton District Health Department  
City of Charlotte  
Delta Charter Township  
Village of Dimondale  
City of Eaton Rapids,  
Eaton Township  
City of Grand Ledge  
Hamlin Township  
Oneida Charter Township  
Windsor Charter Township

Ingham County Board of Commissioners  
Ingham County Health Department  
Aleidon Charter Township

Delhi Charter Township  
City of Leslie  
Leslie Charter Township  
City of Mason  
Meridian Charter Township  
Vevay Charter Township  
City of Williamston  
Williamstown Charter Township

Michigan State University School of Planning,  
Design and Construction  
Michigan State University Institute of Water  
Research  
Michigan State University Extension  
Land Use and Health Resource Team





It is increasingly recognized that many programs and policies once considered incidental to (or even separate from) health can have profound health consequences for local populations.

The health impacts of decisions made by communities, government entities, and the private sector—such as community development, land use, housing, and transportation—go far beyond the basic safety concerns associated with each. For example, decisions on the expansion of urban services like public water and sewer into rural and undeveloped areas in the name of economic development may lead to uncontrolled growth, higher taxes, displacement of poor or elderly residents, and loss of productive farmland, open space, and natural areas. These land-use decisions may disproportionately

affect at-risk populations; adversely affect lifestyle and healthcare choices; expose populations to contaminated air, water, or soils; and ultimately lead to reduced quality of life for individuals or neighborhoods.

In 2006, the Tri-County Regional Planning Commission (TCRPC) released the Tri-County Regional *Growth Plan*, which recommended that growing communities in the region address the economic and environmental costs of uncontrolled growth—often referred to as sprawl—through the adoption of an urban services boundary or management area. An urban services boundary or management area can be a successful tool for managing urban sprawl by placing limits on the location and extent of public services such as water and sewer, telecommunications, and roads. Establishing service management areas may allow a unit

of government to publicly declare that a specific area surrounding a municipality will be the target for urban growth, and thus indicate that areas beyond that boundary will not be supported with public infrastructure services. Limiting water or sewer services, rather than extending them constantly to help support suburban development, typically enforces the boundary lines.

The *Growth Plan* recommended the establishment of an Urban and Rural Services Management (URSM) Policy as a means whereby communities in the mid-Michigan region (also known as the Tri-County Region) might continue to grow economically and provide reliable and sustainable public services such as water and sewer in the urbanized areas of cities, villages, and townships, while protecting farmlands, open spaces, and rural quality of life in undeveloped areas.



Following the release of the *Growth Plan* with its recommendations on how to address sprawl, a number of communities in the mid-Michigan region (primarily those centered in the Greater Lansing area) formed a URSM Policy Committee (TCRPC, 2011). The mission of the committee, which is outlined in the URSM policy statement, is to support the establishment of an urban service management area policy by local communities in the region and provide these communities with tools and policies to:

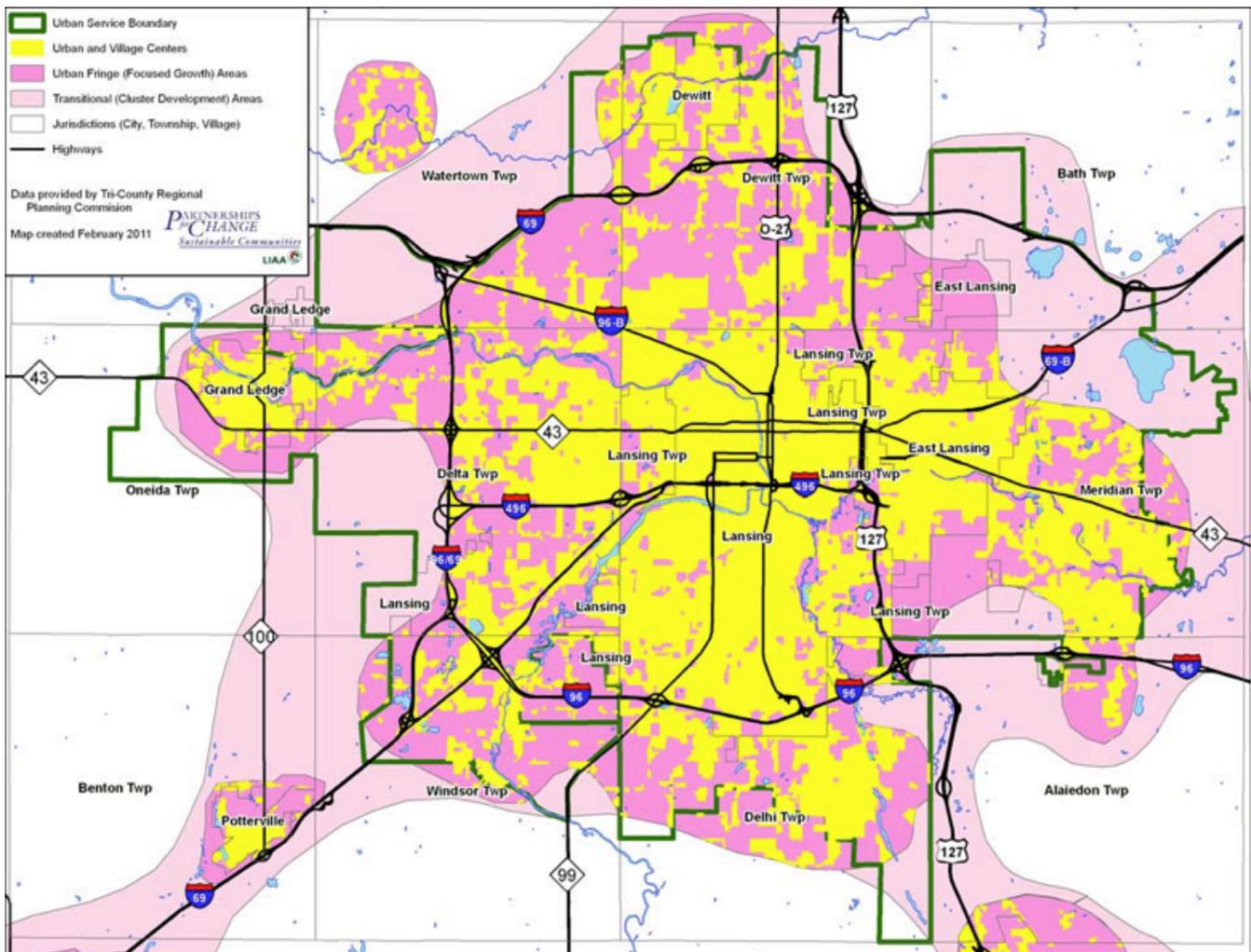
1. KEEP URBANIZED AREAS VIABLE.
2. PROTECT FARMLAND, OPEN SPACE, AND RURAL QUALITY OF LIFE.
3. PRESERVE PRIORITY CONSERVATION AREAS.
4. UTILIZE EXISTING INFRASTRUCTURE.
5. SAVE COSTS THROUGH INTERGOVERNMENTAL COOPERATION AND ADMINISTRATIVE EFFICIENCY.

In developing the URSM policy, the committee considered the environmental, social, and economic costs of sprawl. Neither the *Growth Plan* nor the URSM policy statement specifically addressed the potential health impacts and prospective health goals of the establishment of service

management areas. As the policy evolved, the committee increasingly became concerned about health issues related to each of the policy elements. The URSM Committee, which includes representatives from municipal and township governments, non-governmental organizations and other local stakeholders, and TCRPC joined with the health departments of Clinton, Eaton, and Ingham counties and Michigan State University in the development of a Health Impact Assessment (HIA) of the URSM Policy.

The *Growth Plan* included a proposed boundary, shown in the map on page 5, which was adopted by the committee as part of the URSM Policy recommendations.

# GROWTH PLAN PROPOSED BOUNDARY





**ABOUT THE HEALTH IMPACT ASSESSMENT**

An HIA has been described as “a structured process that uses scientific data, professional expertise, and stakeholder input to identify and evaluate public-health consequences of proposals and suggests actions that could be taken to minimize adverse health impacts and optimize beneficial ones” (National Research Council, *Improving Health in the United States*, 2011). The World Health Organization (1985, 1986) and the Asian Development Bank (Konradsen et al., 1992) were among the first organizations to stress the importance of health-impact considerations in project planning. Since then, governments and non-governmental organizations (NGOs) around the world have used HIA to evaluate the health consequences of proposed policies, programs, projects, and plans, often integrating it into an environmental assessment process.

In the United States, the assessment of health effects on individual and community health and wellbeing is in contrast with the assessment of environmental, socioeconomic, and health risk assessments that have been conducted under the National

Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq., January 1, 1970). Many aspects of a NEPA-based assessment have been adopted into the practice of HIA. Thus, HIA has become an increasingly popular tool for anticipating the results of a proposed project, both intended and unintended, and ensuring that the health of the entire population potentially affected will be taken into account by decision makers, who otherwise might not have access to health-related data and expertise as well as stakeholder input from potentially-affected communities, when making their decisions.

**CONNECTING TRI-COUNTY'S URSM POLICIES AND HEALTH**

The goal of this HIA was to better understand the health impacts of adopting a URSM policy. There were three main objectives considered in the development of the HIA:

1. To consider health-related issues potentially resulting from the URSM policy;
2. To assess specific health impacts from extending water and sewer services into rural areas and evaluate health outcomes that would

lead to healthy and sustainable communities; and

3. To promote a Health In All Policy to county health departments, local decision makers, and local planning and public services departments.

The impact assessment focused on how the five key elements addressed in the URSM policy (viable urban areas; protected farmland, open space, and rural life; preserved conservation areas; utilization of existing infrastructure; and cost-savings from cooperation and efficiency). In order to address the potential health effects of these elements, the HIA was divided into four priority areas: (1) expanding public water and sewer infrastructure and services in rural and undeveloped areas, (2) maintaining water resources and quality, (3) preserving agriculture and open space, and (4) encouraging URSM policy development and implementation and a regional vision. The HIA examined how these elements could affect the health and wellbeing of residents, particularly on vulnerable populations, as well as the likelihood and severity of health impacts.

# KEY FINDINGS

The HIA finds that the proposed URSM policy would have significant positive impacts on human health, community health, and wellbeing.

In all, eight general findings of the HIA are listed below. The full HIA report provides more detailed information in the findings, including:

1. Costs to expand water and sewer infrastructure place a burden on community resources that would otherwise be available to maintain existing systems, in addition to providing other public services for disadvantaged populations.
2. Additional property taxes to support expansion of water and sewer infrastructure may adversely affect household budgets at the expense of health care affordability.
3. Urban development or land-use change in rural areas resulting from expansion of water and sewer infrastructure may result in loss of productive farmland, recreational opportunities, sensitive natural areas, and sense of wellbeing. These effects may lead to increasing stress and anxiety to residents and family-owned agricultural businesses in rural areas and eliminate a rural lifestyle choice.
4. Urban development or land-use change in rural areas resulting from expansion of water and sewer infrastructure could reduce the availability of healthy locally grown food, which could lead people to substitute unhealthy food options or spend more money to travel and purchase healthy food, potentially impacting obesity rates or household budgets, leading to stress and decreased access to health care.
5. Land-use conflicts and declines in capital improvement budgets create stress and place additional financial burdens on populations least able to adapt to changing growth and development policies in a community. Disadvantaged populations can become economically marginalized and may be forced to relocate.
6. Communities with a mix of urban and rural land uses may have to prioritize between new greenfield development versus redevelopment or infill opportunities, new subdivisions versus preservation of farmland and open space, and so on.
7. Annexation of township land by municipalities may result in conflict between jurisdictions, changes in development priorities and revenue generation, and dramatically increased tax rates for businesses and homeowners. Small businesses and vulnerable populations are often at the greatest risk in annexation proposals.

# ADOPT AN URBAN SERVICE/GROWTH MANAGEMENT AREA OR BOUNDARY POLICY

The table on page 9 is a summary of the findings regarding the potential health effects of a region-wide policy establishing an urban and rural services boundary as described in detail in the Impact Assessment sections of the full URSM HIA. The summary table also indicates the relative availability of supporting research and additional sources of information. The quality/

strength of evidence used in the summary table follows the format and content guidelines provided in the Human Impact Partners 2010 HIA Report Guide. The description of the quality/strength of evidence found in the literature is qualitative and is discussed in more detail in the HIA. The tables provided in the individual sections of the impact assessment

show the applicable health-related references, which were not repeated in the summary table. The summary table also refers to the substantial body of literature on the environmental and socioeconomic effects of land-use change that were not referenced in this executive summary.

## SUMMARY OF HIA FINDINGS—POLICY: ADOPT AN URBAN SERVICE/GROWTH MANAGEMENT AREA OR BOUNDARY

Determinant	Impact/Health Outcome	Direction	Impact Likelihood	Magnitude/Severity on People	Distribution (Populations Most Affected)	Quality of Evidence
Maintain existing water & sewer and discourage expansion of services into rural areas.	Exposure to waste, sewage & infectious diseases; stress.	Decrease.	High impact on moderate number.	Possible.	Residents in areas with deteriorating water & sewer system.	Many strong studies available.
Preservation of farmland & open space.	Access to healthy, locally grown food.	Increase.	High impact on many.	Likely.	General population.	Good studies generally consistent with principles of public health.
	Rural lifestyle and sense of place.	Increase.	High impact on moderate number.	Likely.	Rural residents and general population.	Good studies available.
	Land-use conflict.	Decrease.	High impact on many.	Likely.	General population.	Many strong studies available.
	Healthy lifestyle.	Increase.	High impact on many.	Possible.	Rural residents and general population.	Good studies available.
	Access to recreation.	Increase.	Moderate-high impact on many.	Likely.	General population.	Good studies available.
	Open space & natural areas.	Increase.	High impact on moderate number.	Likely.	General population.	Good studies available.
Access to clean surface & ground water.	Exposure to contaminants & infectious diseases.	Decrease.	High impact on many.	Possible.	General population.	Many strong studies available.
	Overall water quality.	Increase.	High impact on many.	Likely.	General population.	Many strong studies available.
Property values & taxes.	Property values.	Increase.	High impact on high number.	Likely.	All residents.	Good studies available.
	Health care access.	Increase.	High impact on moderate number.	Possible.	Low-income residents.	Many strong studies.
Local government investment in built areas & local business development.	Sense of place & wellbeing.	Increase.	High impact on many.	Possible.	Rural residents and general population.	Good studies and generally consistent with principles of public health.
	Building densities in urban areas.	Increase.	High impact on moderate number.	Possible.	Low-income residents.	Many strong studies available.
Intergovernmental cooperation.	Shared services.	Increase.	High impact on many.	Possible.	All residents.	Good studies available.
	Annexation.	Decrease.	High impact on high number.	Possible.	Low-income residents; small businesses.	Many strong studies available.
Affordable housing & lifestyles.	Social, economic & age discrimination.	Decrease.	High impact on moderate number.	Possible.	Low-income and elderly residents.	Many strong studies available.

# RECOMMENDATIONS

Based on this analysis, recommendations to address the potential health effects include the following:

## **1: ESTABLISH BOUNDARIES**

Responsible, environmentally sound, and socially and economically equitable growth should be a continuing goal of every community. Communities in the mid-Michigan region are encouraged to establish service boundaries or service management areas. The URSM policy provides guidelines and support to communities that desire to manage growth within their jurisdictions.

## **2: USE EXISTING INFRASTRUCTURE**

Communities in the mid-Michigan region are encouraged to locate development within areas that can accommodate growth with existing infrastructure (e.g., water and sewer, roads, etc.) with minimal effect on non-compatible uses. It includes safeguarding sensitive areas such as riparian buffers, wetlands, and critical habitat from development pressures; directing new development to infill, brownfield, and greyfield sites to take

advantage of existing infrastructure and preserve green space; and putting homes, workplaces, and services close to each other in convenient, accessible locations.

## **3: ENCOURAGE HEALTHY PRACTICES**

Communities in the mid-Michigan region are encouraged to consider practices and technologies in which the built environment can protect and enhance health and the quality of life for all residents. In addition to providing safe and cost-effective public services like water and sewer, communities can encourage walkability and bikeability; public open spaces; safe routes to schools and public places; and buildings that are low-impact, energy efficient, and make maximum use of sustainable materials in all new developments within their jurisdictions.

## **4: MINIMIZE ENVIRONMENTAL IMPACTS**

Communities in the mid-Michigan region that are currently growing or likely to grow in the future should consider adopting a policy of directing potential growth into areas within their jurisdictions that can accommodate growth while minimizing adverse impacts to sensitive natural areas and open space, productive agricultural lands, and recreation areas.

## **5: ADOPT A HEALTH IN ALL POLICY**

Communities are encouraged to adopt a Health In All Policy, generally defined as a collaborative approach across all levels and all sectors involved in decision making as a means of ensuring that the health effects of a land-use decision are considered equally with economic, fiscal, and engineering considerations of a proposed development.



## NEXT STEPS

The HIA, and its findings and recommendations, is being provided to all communities in the mid-Michigan region via the HIA Toolkit, accessible to the public via the Mid-Michigan Program for Greater Sustainability (MMPGS) Portal at [www.midmichigansustainability.org](http://www.midmichigansustainability.org) and the Tri-County Regional Planning Commission.

The HIA has identified communities in the mid-Michigan region that have adopted a service management policy. These communities have indicated

their willingness to provide guidance to neighboring communities. In addition, the URSM Committee will continue to assist local communities that have adopted the policy or are considering adopting the policy in the future. TCRPC staff will continue to provide information and education to local communities on adopting recommendations provided in the URSM HIA, as well as general information on adopting a Health In All Policy, integrating health considerations in planning decisions, and conducting local HIAs.

The HIA also includes a monitoring plan to help communities assess the effectiveness of the HIA in informing local planning and decision making regarding health considerations in governance. TCRPC will continue working with the county health departments through the Land Use and Health Resource Team (LUHRT) to monitor the effectiveness of the URSM Policy.



To Learn More:  
[midmihealthycommunities.org](http://midmihealthycommunities.org)

Project Partners:



Funding Provided By:



**REFERENCES**

Human Impact Partners. (2014) "HIA Tools and Resources." (<http://www.humanimpact.org/capacity-building/hia-tools-and-resources/>) (accessed in 2014).

Konradsen, F., M. Chimbari, P. Furu, M.H. Birley, and N.O. Christensen (1992; accessed in 2014). The Use of Health Impact Assessment in Water Resources Development: A Case Study from Zimbabwe. Professional Practice, Asian Development Bank. <http://www.hardystevenson.com/Articles/THE%20J%20S%20E%20OF%20HEALTH%20IMPACT%20ASSESSMENTS%20IN%20WATER%20RESOURCES%20DEVELOPMENT%20A%20CASE%20STUDY%20FROM%20ZIMBABWE.pdf>

Tri-County Regional Planning Commission (2005). *Tri-County's Regional Growth: Choices for Our Future Project*. ([http://www.mtcrpc.org/TRANSPORTATION%20PLANNING/Final%202035%20LRP/FINAL\\_2035%20Plan%20Individual%20Chapters/Chapter%202%202035\\_FINAL\\_1-29-10.pdf](http://www.mtcrpc.org/TRANSPORTATION%20PLANNING/Final%202035%20LRP/FINAL_2035%20Plan%20Individual%20Chapters/Chapter%202%202035_FINAL_1-29-10.pdf))

Tri-County Regional Planning Commission (2011). *Urban Service Management Study*. Lansing, MI: TCRPC.

World Health Organization (1985; 1986) "Environmental Health Impact Assessment of Urban Development Projects." June 1985. "Health and Safety Component of Environmental Impact Assessment," report on a WHO meeting, Feb .24-28, 1986. WHO Regional Office for Europe, Copenhagen.