Muskegon Area-wide Plan

Muskegon County Comprehensive Plan

2013

Prepared by

WMSRDC

WEST MICHIGAN SHORELINE
REGIONAL DEVELOPMENT COMMISSION

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Acknowledgements

Map Advisory Committee Members

Alcoa

City of Muskegon

City of Muskegon Heights

City of North Muskegon

City of Norton Shores

City of Whitehall

County of Muskegon – Board

County of Muskegon – Clerk

County of Muskegon – Community Development

County of Muskegon – Grants Coordinator

County of Muskegon – Public Health

County of Muskegon – Public Works/Sustainability

County of Muskegon – Wastewater Management

Grand Valley State University – Annis Water Resources Institute

Laketon Township

Muskegon Area First

Muskegon Community College

Muskegon County Road Commission

Muskegon Township

Senator Geoff Hansen's Office

United Way of Muskegon County

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Chapter 2:
Gaining a Feel for the Community

Gaining a Feel for the Community

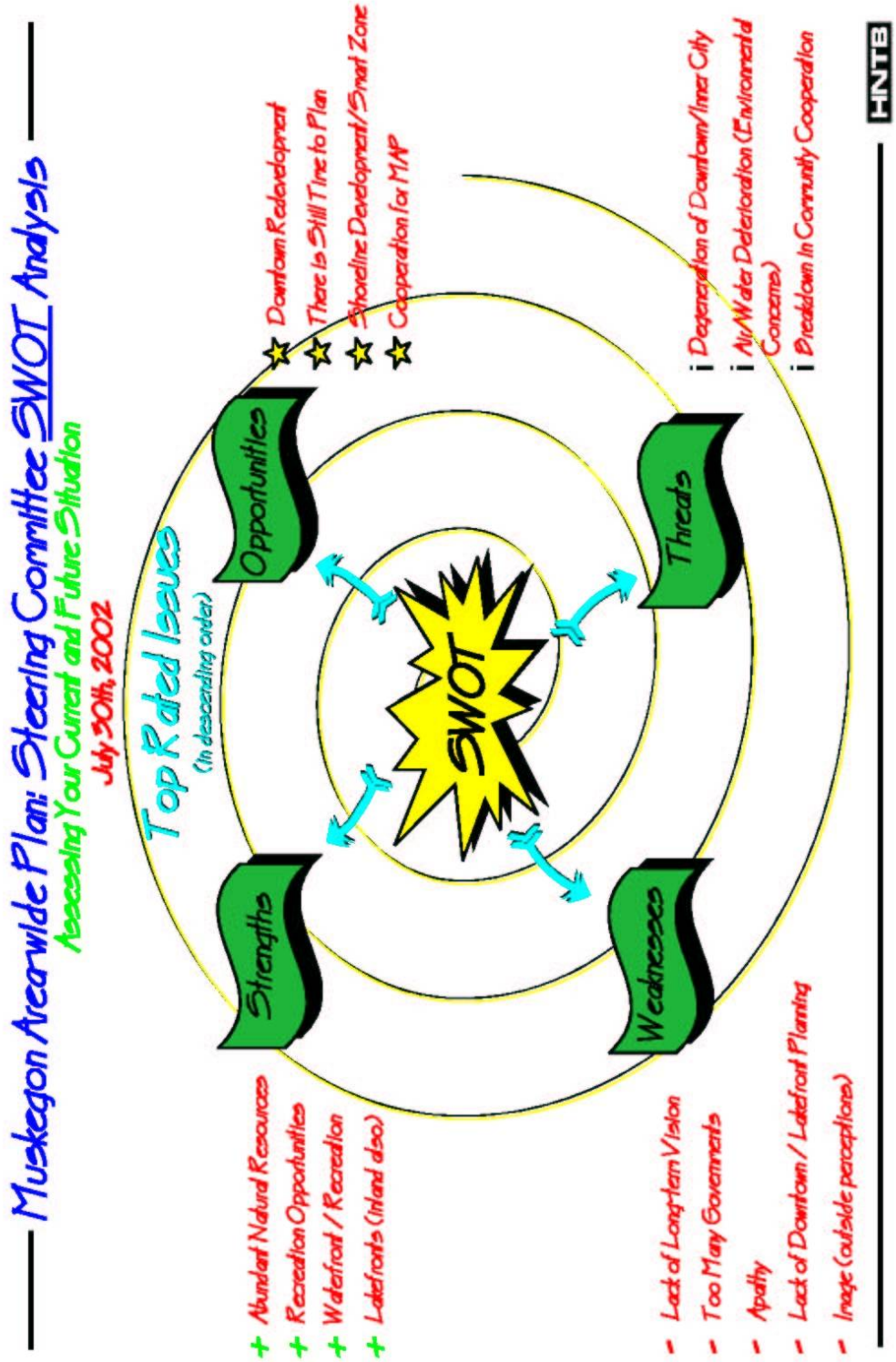
During the first phase of the MAP project, an extensive public participation program was conducted in order to gain an understanding of the community's perception about the past, present, and future of Muskegon County. A number of public involvement techniques were undertaken as a result. The techniques include the following activities:

- Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis,
- Stakeholder Interviews,
- Community Survey, and
- Community Forums.

The results of these public participation techniques are outlined below and summary reports are included in the Appendix. The results of the public participation efforts have had a tremendous effect on the formulation of the MAP Visions and Goals.

SWOT Analysis

During the summer of 2002, the MAP Steering Committee conducted a SWOT Analysis exercise to assess the existing and future conditions of Muskegon County. A Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis is a highly effective way to identify a community's existing conditions/attitudes and possible future direction, as well as assist a community to focus on the areas where it is strong and where its greatest opportunities lie. Following is a list of the top issues identified by the Steering Committee for each of the four SWOT Analysis categories. A complete report of the SWOT Analysis can be found in the Appendix.


Muskegon Areawide Plan: Steering Committee SWOT Analysis
Assessing Your Current and Future Situation
July 30th, 2002
Top Rated Issues
(In descending order)
Strengths
Opportunities
SWOT
Weaknesses
Threats
+ Abundant Natural Resources
+ Recreation Opportunities
+ Waterfront / Recreation
+ Lakefronts (inland also)
Downtown Redevelopment
There Is Still Time to Plan
Shoreline Development/Smart Zone
Cooperation for MAP
- Lack of Longterm Vision
- Too Many Governments
- Apathy
- Lack of Downtown / Lakefront Planning
- Image (outside perceptions)
Degeneration of Downtown/Inner City
Air/Water Deterioration (Environmental Concerns)
Breakdown In Community Cooperation
HNTB

Stakeholder Interviews

In August 2002, 19 persons who have a vested interest in the future of the Muskegon area were interviewed by HNTB Michigan Inc. The list of persons interviewed was generated and agreed upon by the MAP Steering Committee and includes individuals that have been highly involved in Muskegon County from both the public and private sectors. The purpose of the stakeholder interviews was to gain additional information about the area's history along with the existing conditions. The 19 stakeholders interviewed, collectively have 830 years of experience in the county and local knowledge of the Muskegon area. They were generous with their time and eager to see the potential of the Muskegon area be realized.

The majority of the stakeholders interviewed were aware that many planning studies have taken place, not only in Muskegon County, but also at the regional level. The stakeholders were eager to see the outcomes of these studies and plans, as well as the MAP project. For this reason, implementation became a primary focus of the MAP. The stakeholders also noted that there have been positive strides towards a collaborative atmosphere between the municipalities, but also noted that there is still room for improvement. Of all the issues identified during the interview process, the five that were heard most frequently are identified below, in no particular order. A complete report of the stakeholder interviews can be found in the Appendix.

Key Issues

What is the future of Downtown Muskegon?

What will become of the Muskegon Mall property?

The Muskegon area needs an identity that celebrates and encompasses all that Muskegon has to offer.

The quality of life in the Muskegon area is outstanding and therefore must be protected and enhanced in order to be recognized as a great place to visit, work, live, and play.

There is a necessity for a collaborative approach to this project – the entire community and all decision makers must take ownership in order to make the Muskegon Area-wide Plan a successful document that will lead to Muskegon's future identity and health.

Community Survey

A community phone survey was conducted in November 2002. The survey was prepared with assistance and final approval from the MAP Steering Committee. EPIC-MRA, a full service firm with expertise in public opinion research and analysis conducted the survey. A total of 302 adult residents of Muskegon County participated in the 20-minute phone survey. Respondents were selected utilizing an interval method of randomly selected records of households with publicly listed phone numbers. The sample was stratified so that every area of the county was represented in the sample, proportionate to its population within the county.

The results of the survey now serve as a clearing house for the concerns, likes, and dislikes of the residents of Muskegon County. This information is an invaluable source of data to help plan for future growth and development in the county. The following are some of the main results from the community survey.

When respondents were asked what they liked most about Muskegon County, 34 percent of respondents cited, "water" (the proximity of lakes, rivers, and activities related to them) as their top choice. In a related question, when asked what they disliked most about Muskegon County, 21 percent of respondents stated that there was, "nothing" they disliked about Muskegon, and 16 percent were undecided or did not know what they disliked about the county.

According to EPIC-MRA, it is indeed good news for Muskegon County to have one feature identified by more than one third of all respondents as something they liked, with no particular items jumping out as something they disliked about Muskegon County.

Results of the survey are summarized in the chart below. The Executive Summary and Demographic Analysis of the Community Survey can be found in Appendix C.

Survey Results

Why do you live in the community where you reside?

To live in a place that is quiet 88%

Safety from crime 79%

A strong sense of community 77%

Less traffic congestion 76%

The availability and quality of affordable housing 73%

Community issues of highest personal concern:

The out-migration of good paying jobs.. 79%

Water pollution 78%

The quality of schools in the area 73%

Air pollution 68%

Future planning and development of the downtown and lakefront areas 68%

The ability to expand and develop the existing manufacturing base 68%

Most important factors that would attract future development to the county:

Many beautiful beaches 94%

A skilled labor force 94%

Good retail opportunities 92%

People willing to work together 92%

Strong school system and opportunity for higher education 92%

Top policy goals identified by residents:

Encourage the creation and expansion of businesses and industries creating new jobs 96%

Continue to provide more investments in higher education and job training 91%

Provide tax and financial incentives for the reuse and redevelopment of the inner city areas 81%

Strengthen Muskegon County's image as a tourist attractions 81%

Community Forums (First Set)

A total of seven community forums were held through the duration of the MAP process. The first set of three community forums was held in January 2003, with approximately 175 community members attending. The forums were held in three different locations throughout the county which included Ravenna Township, Muskegon Township, and Whitehall Township. The purpose of the first set of forums was to gain additional knowledge and viewpoints of Muskegon County residents and to concentrate on establishing a vision for the future of Muskegon County. During the forums, attendees learned about past trends in Muskegon County and then participated in a highly effective mapping exercise. The map exercise was based on past trends and growth rates in which future development trends were projected. Attendees were informed that by the year 2020, an additional 20,500 acres of land was projected to be developed in Muskegon County, in three major land use categories:

Land Use Categories	
Residential Land	18,000 acres
Commercial Land	1,800 acres
Industrial Land	700 acres

Attendees, grouped into tables of between six and eight people, were given a map of Muskegon County with currently developed land identified and color-coded into land use categories. Participants were then given packages of Legos® in three different colors representing the projected residential, commercial, and industrial lands to be developed. With each round peg of a Lego® representing 40 acres, the groups were asked to place the Legos® on a map of Muskegon County where they believed the development should occur in the county. Once the exercise was completed, the attendees were asked to respond to the exercise by stating what they liked and disliked about how the map looked with the future development in place. Below are the top reactions from the map exercise:

Top Reactions

There is too much sprawl.

We need to preserve open space and farmland.

Density should be increased.

We need to redevelopment the inner cities.

What is the impact on existing infrastructure?

What is the cost of new infrastructure?

We need to develop around existing infrastructure

Upon the completion of the Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis; Stakeholder Interviews; Community Survey; and Community Forums, it was evident that the hundreds of participants who provided the valuable information have extremely strong opinions and ideas about the past, present, and future of Muskegon County. Some of the main underlying themes that arose during this process are the need to capitalize on the area's assets, including Muskegon County's proximity to water and its high quality of life, protection and preservation of the county's abundant natural resources, secure economic viability, and the creation of balance between development in urban and rural areas.

Defining the MAP Principles

The following graphic was created based upon the compiled information from the public participation process. It identifies the four MAP principles, the five visions areas, and key focus areas addressed in the objectives.

The four guiding principles encircling the outer ring of the graph serve as the framework and foundation for the visions and goals of the MAP. Every vision and goal was written with the idea of striving for each of the four guiding principles within Muskegon County.

GUIDING PRINCIPLES

Economic Viability

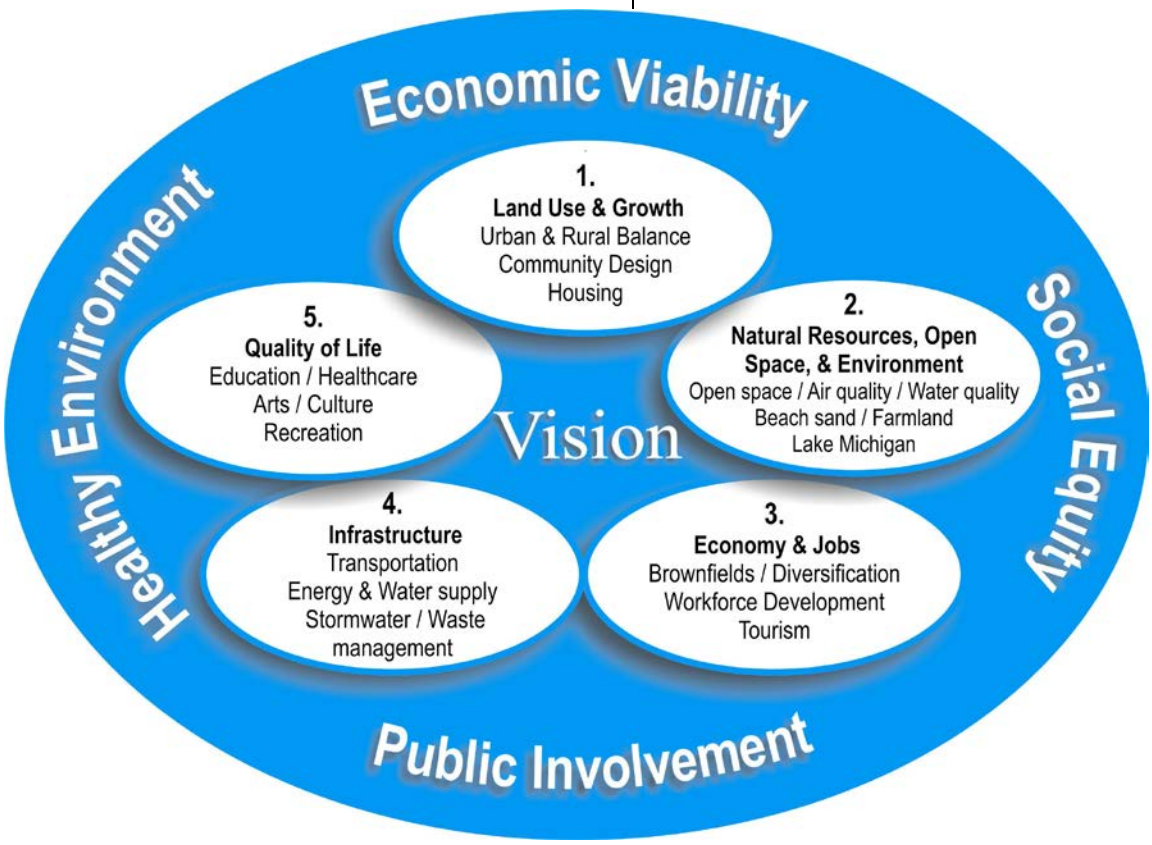
Muskegon County has rode on an economic roller coaster over the past few decades as have many counties across the United States. This is further described in Chapter 3, Trends and Analysis. In recent years, county and community leaders have made great strides to diversify the area's economy. However, in order to foster economic viability within Muskegon County, leaders should also provide better choices in transportation, housing, and jobs for all residents.

Social Equity

Muskegon County is blessed with ethnic and social diversity. In order to embrace and achieve social equity within Muskegon County, it is necessary to provide fair growth outcomes and shared benefits for all people.

Public Involvement

Public involvement is critical not only in creating a vision for Muskegon County, but also for making that vision a reality in the years to come. Therefore, greater citizen participation must be encouraged in local government and community planning.



Healthy Environment

Muskegon County's unique and abundant natural resources are one if its greatest assets. Because of this, it is crucial to protect and preserve the area's natural resources and provide livable, safe, and healthy communities.

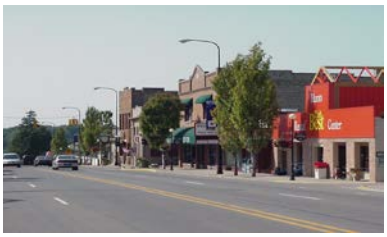
Creating a Vision and Identifying Goals

The five visions were established during the initial development of the MAP. The related goals were reestablished during the update process as a result of information gathered during the five community forums held during October 2012, and the input of the MAP Advisory Committee.

VISION 1: Land Use and Growth

Encourage and promote land use and growth patterns that sustain and improve quality of life in Muskegon County, while maintaining a strong sense of place, community, and responsibility.

Coordinating land-use planning poses challenges for both urban and rural communities alike. Small communities may lack the resources and urban communities may be overcome by development decisions and pressures by neighboring communities. The goals are designed to strengthen local land use planning by supporting coordination across political jurisdictions. New strategies such as open space preservation programs and in-fill redevelopment are promoted.



GOALS:

- Managing Future Development: encouraging development to occur in areas with existing infrastructure, being aware of environmental impacts, incorporating sustainable practices, and promoting public-private partnerships.
- Strengthening Downtowns: encourage mixed-use development, increase availability of healthy foods/grocery stores, and enhance arts/cultural activities.
- Planning & Zoning: improve intergovernmental cooperation, communication, and collaboration; education of local elected officials and planning commissioners; and minimize zoning impediments/encourage flexibility.
- Improve Community Image: including not only the county's physical appearance, but also the community's prevailing self-image.

VISION 2: Natural Resources, Open Space, and the Environment

Protect and preserve natural resources and continually improve the quality of air, water, and land resources found in Muskegon County.

Recognition and wise use of natural resources defines what many people value about Muskegon County. Each goal seeks to enhance development in local jurisdictions and quality of life for all residents. State, federal, and local programs will leverage coordination to achieve the goals. Best practices, such as conservation zones, would incorporate preservation and protection in new development. In addition, the protection and enhancement of both the quantity and quality of natural resources will be emphasized in the implementation strategies of the MAP.

GOALS:

- Brownfields: identify and remediate contaminated sites, extend infrastructure to areas of known contamination, and prepare sites for redevelopment.
- Green Infrastructure and Greenspace Protection: develop greenspace targets, encourage infill development to preserve greenspace, increase green infrastructure, and promote public access to public lands.
- Watershed and Habitat Protection/Restoration: increase collaboration, continues education on restoration activities, and continued habitat restoration
- Surface Water and Groundwater Quality: continued efforts to manage Nonpoint Source Pollution (NPS), promote groundwater protection efforts, and seek funding for sewer and water infrastructure.

VISION 3: Economy and Jobs

Promote economic development and diversity that ensures access to jobs, goods, and services throughout Muskegon County.

It is vital to create a healthy balance between development in urban and rural areas. Abandoned main streets and employment centers lead to dispersed development and community decline. To minimize sprawl and decline, urban communities will need to identify economic assets (land, skilled labor, etc.) to foster redevelopment and investment. By marketing historic, cultural, and natural resources attributes, rural areas can develop local strategies to strengthen economic opportunity.

GOALS:

- Workforce Development/Education: promote collaboration between educational providers and area business to provide an educated workforce, promote existing partnerships and programs, and develop life/critical thinking skills in our young people.
- Business Retention and Attraction: expand existing efforts, foster cooperation/collaboration, embrace and promote the agricultural industry.
- Environmental Revitalization: identify, prioritize, and remediate area brownfields; and continue environmental cleanup efforts.
- Infrastructure: develop a county-wide approach to improve and maintain infrastructure, promote the usage of the Port of Muskegon, provide multi-modal transportation options, and address water and sewer issues.
- Commercial Area and Neighborhood Revitalization: increase efforts to revitalize existing commercial and downtown areas, encourage development of sense of place, and continue neighborhood revitalization efforts.
- Tourism: continue to promote and market year-round tourism in Muskegon County.

VISION 4: Infrastructure

Develop a county-wide approach to improving and maintaining infrastructure, transportation, public facilities, and community services.

The quality and availability of existing infrastructure (water and sewer), transportation, public facilities, and services affects quality of life and determines where development occurs. As development continues in rural areas, greater and expanded services are expected by residents. New residents are often looking for a lifestyle that offers the best of both city and country living. Strategies to promote wise investment, planning, and land use will be encouraged to be utilized by local governments to control costs and minimize impacts to the environment.

GOALS:

- Intergovernmental Cooperation: increase intergovernmental cooperation for the improvement and maintenance of infrastructure.
- Non-Motorized or Multimodal Transportation: promote non-motorized and multi-modal transportation alternatives, and encourage Complete Streets to be implemented throughout the county.
- Port Development/Utilization: encourage public/private partnerships, as well as enhance both commercial and recreational port activities.
- Mass Transit: continue to expand the services of the Muskegon Area Transit System (MATS) and coordinate the efforts of all area transit providers.
- Water and Sewer Expansion: expand water and sewer infrastructure into developed areas with contamination issues, and encourage increased cooperation/collaboration.

VISION 5: Quality of Life

Promote high quality of life by recognizing Muskegon County for its diversity, environmental, educational, arts, cultural, and recreational assets.

Quality of life overlaps both individual and community needs and is closely intertwined with the first four visions. It is important to promote a high quality of life by providing a better understanding of the health, education, cultural assets, and needs for all citizens. Coordination between local agencies, non-profits, service providers, and local governments would be strengthened.

GOALS:

- New Downtown Development: encourage new development and start-up business in downtowns, and promote activities and businesses that draw young people.
- Adequate and Available Medical Care: attract and retain quality doctors to the area, and strive to improve the overall health of Muskegon County.
- Promotion of Muskegon County Wastewater System: promote the numerous recreational opportunities at the wastewater site.

- Educational Attainment: strive to improve the educational attainment level, encourage increased cooperation and collaboration.
- Healthy Lifestyles: education on healthy lifestyle choices and promote existing recreational opportunities.
- Bringing Young People to the Planning Table: encourage partnerships that incorporate youth with local government and planning efforts in the community and promote activities that engage children in the community planning process.

Update Process

During the MAP update, a set of five community forums were held to review and identify new implementation activities. Each forum focused on one of the five vision areas including Land Use and Growth, Natural Resources & Environment, Economy & Jobs, Infrastructure, and Quality of Life. The forums were held during the month of October 2012, and were held at various locations throughout Muskegon County. The original MAP visions did not change during the update, however, there were significant changes made to the goals and implementation strategies. These changes are reflected in this chapter, as well as in Chapter 6: Implementation and Chapter 7: Implementation & Evaluation.

Chapter 1:
Muskegon Area-Wide Plan

MAP Update

In 2011, the County of Muskegon received a Pollution Prevention (P2) grant from the Michigan Department of Environmental Quality (DEQ). The West Michigan Shoreline Regional Development Commission (WMSRDC) was a sub-recipient of the grant to update the Muskegon Area-wide Plan. Since the completion of the original MAP document in 2005, numerous changes had occurred in the county including the redevelopment of downtown Muskegon and the economic effects of the 2008 recession to name a few. In October 2011, WMSRDC with guidance from the MAP Advisory Committee, began the two year process of updating the document. The update was completed in September 2013.

What is the MAP?

The Muskegon Area-wide Plan (MAP) is a comprehensive county-wide process integrating land use and other regional concerns. The process is a true grassroots effort to develop a county-wide vision for Muskegon County. The process was initiated and is being lead by local units of government and community leaders. As a result, each city, township, village, and the county all have an equal voice in the development of the county-wide vision.

The mission of the Muskegon Area-wide Plan is to involve citizens in creating a shared vision for the future of Muskegon County.

The MAP establishes visions and goals for the county, based on analysis of existing data sources, extensive mapping, and public participation during the process. An implementation plan enhances the MAP process.

It is important to note that neither the MAP Steering Committee nor the County of Muskegon has the land use authority under Michigan law to implement the shared county-wide vision through zoning. However, the local jurisdictions who have been full participants in the planning process have that authority. Therefore, the implementation of land use policies will ultimately be under the control of the townships, cities and villages in Muskegon County. Other policies included in the MAP can be implemented through partnerships between a wide range of partners within the community.

How the MAP Project Began

The MAP project began in 1999 when the supervisors of Dalton, Laketon, and Muskegon Townships were discussing the updates of their existing comprehensive plans. During that conversation, it was suggested to include more communities and develop a regional plan. As the discussion continued, it was quickly decided to invite every unit of government in the County of Muskegon to participate in the process.

The three township supervisors then approached the West Michigan Shoreline Regional Development Commission (WMSRDC) for assistance in coordinating the effort. The WMSRDC is a regional planning agency that promotes and fosters regional development in West Michigan through cooperation amongst local governments. WMSRDC, under the direction of the three supervisors, called a multi-jurisdictional planning meeting with the 27 units of government plus the County of Muskegon to discuss the development of a county-wide plan in early 2000. The meeting was successful with overwhelming support for the idea. By the end of 2000, a 40-member steering committee was formed with each jurisdiction, as well as many community agencies and organizations,

appointing a member and alternate to serve on the committee. The MAP Steering Committee members are community leaders representing agriculture, environmental interests, business development, local government, education, and public interest groups.

Once the MAP Steering Committee was formed, WMSRDC was designated to coordinate the project and act as staff to the committee. After several months of organizational meetings and fundraising efforts, the project officially kicked off during the summer of 2002.

Why is the MAP Project Important?

The Muskegon area combines economic opportunity with an exceptional quality of life and unique natural resources. For generations, Muskegon County's inland lakes, miles of rivers, and spectacular Lake Michigan waterfront have attracted individuals from throughout the Midwest and beyond. Over the next 20 years, Muskegon County's population was expected to grow by 13.3 percent to nearly 195,064 people. Although this does not seem startling, the amount of land that is predicted to be developed during that same time period is alarming. The rate of land consumption in Muskegon County over the next 20 years is nearly 20,000 acres of land. This disproportional consumption of land in Muskegon County is much greater in comparison to the counties surrounding Muskegon County.

Muskegon County shares boarders with the fast-growing counties of Kent, Ottawa, and Newaygo. In addition, the past decade has been marked by growing public concern over increasing traffic congestion, air pollution, loss of farmland and green space, as well as infrastructure costs flowing from the current urban development patterns in Muskegon County. These development patterns are dominated by low-density single-use residential, business, and commercial development, usually on prime agricultural lands, with the automobile being the only viable means of transportation.

Muskegon County's urban areas struggle to attract residents and retain jobs. Township governments are challenged to finance public improvements and to provide services with limited resources. Sensitive environmental and agricultural lands are increasingly encroached upon. Resolving this problem requires a comprehensive approach: i.e., the MAP project. Simply expanding services such as roads and water and sewer lines is not feasible.

One obstacle to crafting effective solutions lies in the existing structure of our governments: most land use plans guiding future development are prepared and adopted by local units of government, while most transportation and infrastructure planning is conducted by the Metropolitan Planning Organization (MPO), which is the West Michigan Shoreline Regional Development Commission, and the County Wastewater Authority. The region needs to view new development, land use, transportation, and infrastructure systems at the same level to ensure any public investment

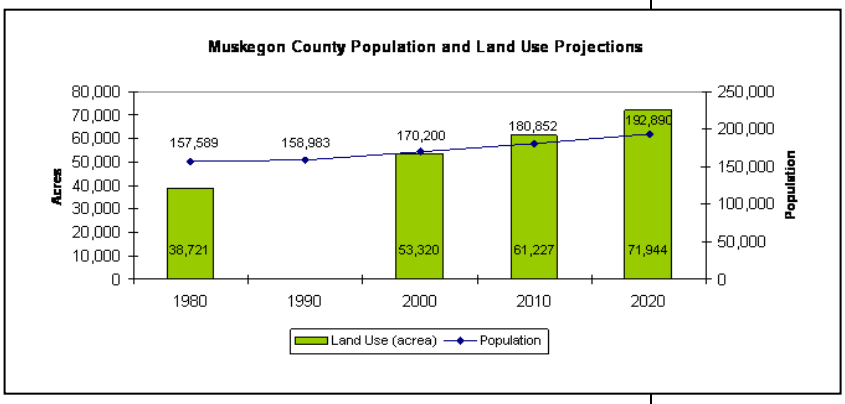


Figure 1.1: Muskegon County Population and Land Use Projections

decisions are smart decisions. In addition, such issues as the loss of open space and agricultural lands are directly affected by how and where Muskegon County grows.

The major challenges before Muskegon County are how to plan the best use of undeveloped and agricultural land, how to protect our natural environment, how to maximize urban redevelopment and infill opportunities, and how to coordinate these efforts throughout Muskegon County.

A History of Planning and Zoning in the State of Michigan

During the mid 1900s, the Michigan state legislature passed numerous acts granting counties, cities, townships, and villages the ability to regulate land use within their jurisdiction. These acts include the following:

- MCL 125.201 et seq. County Zoning Act
- MCL 125.101 et seq. County Planning Act
- MCL 125.31 et seq. Municipal Planning Act
- MCL 125.271 et seq. Township Zoning Act
- MCL 125.321 et seq. Township Planning Act

Currently under the above planning and zoning acts, Michigan townships, cities, and villages cannot practice exclusionary zoning. This means that each jurisdiction has to allow for a number of different land use categories including residential, commercial, industrial, and open space. For example, a jurisdiction, by law, is required to allow for industrial land within its borders, even if the residents do not wish to have that form of development in their community. This reality causes the biggest concern for the 1,241 townships in Michigan. In theory, based on current Michigan Law, townships have the potential to develop into cities, and many are over-zoned. The term over-zoned means that if a jurisdiction were to completely develop based on its current zoning ordinance, there would be more people and buildings than the existing infrastructure and land could handle.

Planning and Zoning in Muskegon County

Muskegon County was incorporated in 1859 with a total population of 3,947. At the time, the county was divided into six townships that consisted of Muskegon, Norton, Ravenna, White River, Dalton, and Oceana. Today, nearly 150 years later, Muskegon County consists of seven cities, four villages, and 16 townships totaling a population of more than 172,000.

All 27 local units of government in Muskegon County have an active Land Use/Master Plan and Zoning Ordinance in place as allowed by Michigan Law. However, local units of government are facing planning issues that cross jurisdictional boundaries including roads, water, sewer, air quality, school districts, etc. Until the development of the MAP in 2005, Muskegon County was the only county in western Michigan from the Traverse Bay area to the Indiana border that did not have an active county-wide comprehensive development plan as allowed by Michigan Law. Since 2005, local governments and community leaders have been attempting to work together to address these challenges through the MAP project, which will shape and direct the future of Muskegon County for the next 20 years.

Chapter 3:
Trends and Analysis

Location

Figure 3.1: Location Map

Muskegon County is located on the western side of Michigan, along the shoreline of Lake Michigan, midway up the state's Lower Peninsula. The county has 27 miles of Lake Michigan waterfront, 20 inland lakes and more than 400 miles of rivers.

In 2000, Muskegon County was designated by the US Census Bureau as a Metropolitan Statistical Area (MSA), the Muskegon-Norton Shores MSA. The county had previously been part of the Grand Rapids-Muskegon-Holland MSA in the 1990 Census.

Muskegon County is located 197 miles from Detroit, 153 miles from Flint, and 107 miles from the state capitol in Lansing. Additionally, it is 185 miles from Chicago, 276 miles (highway) from Milwaukee, and 224 miles from Toledo.

The county contains sixteen townships, four villages, and seven cities as defined by Michigan law. The county seat is Muskegon, which is also the largest city in the county.

The county is part of the West Michigan Shoreline Regional Development Commission (WMSRDC). The agency incorporates a five county area, including: Lake, Mason, Muskegon, Newaygo, and Oceana counties. WMSRDC serves as an Economic Development District for the region and as the Air Quality Planning Agency and Metropolitan Planning Organization for Muskegon County and northern Ottawa County, among other roles.

History

The earliest recorded history of the Muskegon area reflects that it was inhabited by the Ottawa and Pottawatomi tribes. The name "Muskegon" is derived from the Ottawa Indian term "Masquigon" meaning "marshy river" or "swamp." The "Masquigon" river is identified on French maps as early as the 17th century, suggesting that French explorers had reached Western Michigan by that time (Yakes).

The first known Frenchmen in the area were Father Jacques Marquette, who traveled through the area in 1675 on his way to St. Ignace and a party of French soldiers under LaSalle's lieutenant, Henry de Tonty, who passed through in 1679 (Yakes).

The earliest known resident of the county was a fur trader and trapper named Edward Fitzgerald, who settled in the area in 1748. Settlement of the area began in 1837 with the organization of Muskegon County from portions of Ottawa and Oceana Counties. At the time of its incorporation in 1859, Muskegon County had six townships (Muskegon, Norton, Ravenna, White River, Dalton, and Oceana) (Yakes).

The lumbering era put Muskegon County on the map, in economic terms. Ravenna was settled in 1844 when E.B. Bostwick built a sawmill. The city and township were named after Ravenna, Ohio, the hometown of the surveyor who platted the land. Norton Shores was settled by Colonel S. Norton in 1846. Casnovia was founded in 1850 by a tavern keeper named Lot Fulkerson. Montague was first settled in 1855 by Nat Sargent. Whitehall was platted in 1859 by Charles Mears and Giles B. Slocum. The town was originally named after Mears. In 1864 the Muskegon Log Booming Company

was formed to sort logs and raft them to the mills. In 1868, Fruitport, originally Crawville, was founded by Edward Craw. It was renamed a year later when the Pere Marquette Railroad built a station in the town that was a fertile fruit growing area and a port. In 1872 North Muskegon was recoded as Reedsville, named for the first settler, Archibald Reed. It was renamed in 1881 when it was incorporated as a village. North Muskegon was later incorporated as a city in 1891 (Multi-Mag Michigan).

1890 marked the end of the lumber boom in Muskegon County. Successful area industrialists formed the Muskegon Improvement Company to stimulate the economy as it lagged at the end of the lumber boom. The Muskegon Improvement Company purchased 1,000 acres and sold the lots in a lottery, using the proceeds to underwrite new businesses. The project was successful enough that a train station was located in the area (Muskegon Heights) in 1902 to serve the Chicago & West Michigan Railroad (Yakes).

The lumberman John Torrent built his 31-room mansion in 1881-1892. He also served the community as an alderman, a justice of the peace, and as mayor for three terms. In 1972 the city purchased the home to save it from demolition. Union Depot was opened in 1885 to serve the Chicago & West Michigan; Muskegon, Grand Rapids, & Indiana; and the Toledo, Saginaw & Muskegon railroads. It was designed by A.W. Rush & Son of Grand Rapids in the Richardsonian Romanesque style. The station was closed in 1971 until it was donated to the county in 1992, restored, and reopened as the visitor's center and museum (Historical Markers). Lakewood Club was formed as a resort association in 1912 by the Mayo brothers. It was popular enough by 1914 that a seasonal post office was set up, which became permanent in the 1940s (Multi-Mag Michigan).

The oil boom in Muskegon County was a distinct period during the city's industrial era. The oil was found by accident in 1869 when Gideon Truesdell was looking for salt. They had been drilling in various Muskegon County locations for salt between 1869 and 1886 but the salt they found was contaminated with petroleum. In 1922, Stanley Daniloff found oil seepage in the swampland near his home, within five years he had amassed enough funds to have the site drilled and a "gusher" was located in Muskegon Township in 1927. The price of crude oil fell with the depression in 1929 and the oil boom ended (Parrish).

During the world war period, Muskegon became an "Arsenal of Democracy." In the post war housing boom, Roosevelt Park was formed as a residential suburb in 1949 and named after Franklin Delano Roosevelt. The 1950s and 60s brought rough economic times to Muskegon County. Many workers were laid off and several local companies closed. In the 1960s and 70s, consolidation and mergers with national corporations left few locally-owned businesses in the county. The local economy has been struggling to diversify since that time (Yakes).

Population

Muskegon County was the 12th largest county in Michigan in 2010, with 172,188 residents. This population represented approximately 1.2 percent growth in population over 2000. Population growth in Muskegon County has not been constant over the past century. The county grew rapidly in the 1920s and 30s, and then again in the 1950s and 60s. Over the past thirty years, the county realized very little population change.

The largest age group in the county is the 50 to 54 year old age group. The age groups in early adulthood are smaller than the mid-

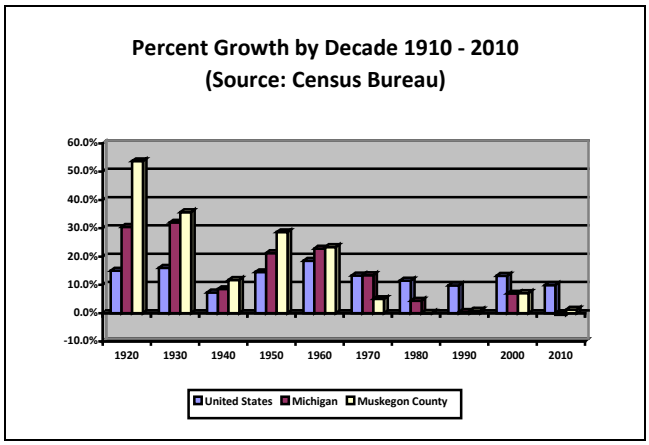


Figure 3.2: Percent Growth by Decade

career and youth groups. In terms of functional age groups, 24.8 percent of the county population is under age 18. A small percentage of the county is college-aged adults, only 9.0 percent. The younger working age (age 25 to 44) population makes up 24.8 percent of the population. The older workers (age 45 to 64) are another 27.7 percent of the population, and 13.6 percent of the county is older adults, over age 65.

The population of Muskegon County was primarily urban, inside urbanized areas in 2010, with nearly 70 percent of the population residing in urbanized areas. An additional five percent lived in urban clusters. Twenty-five percent of the county population lived in rural areas. This distribution is fairly consistent with the state average.

The Muskegon County population is expected to grow 1.8 percent by 2020. This represents approximately 0.6 percent growth every five years. The county population in 2025 is projected to be 175,214 (WMSRDC). The state of Michigan was the only state in the nation to have a population decrease between 2000 and 2010. Although the state population is expected to have growth in the future, the increases are expected to be minimal.

In 2010, 80 percent of the Muskegon County population identified themselves as white, 14.5 percent as black, and 2.8 percent as multi-racial. The remaining residents identified themselves as American Indian, Asian, or some other race not specified by the Census. In the State of Michigan, 78.9 percent of residents identified themselves as white, 14.2 percent as black, 2.4 percent as Asian, and 2.3 percent as multi-racial.

The Hispanic population in Muskegon County is 3.6 percent, the state average is 4.4 percent. Approximately 91.4 percent of the adult population statewide speaks only English, while 94.7 percent of Muskegon

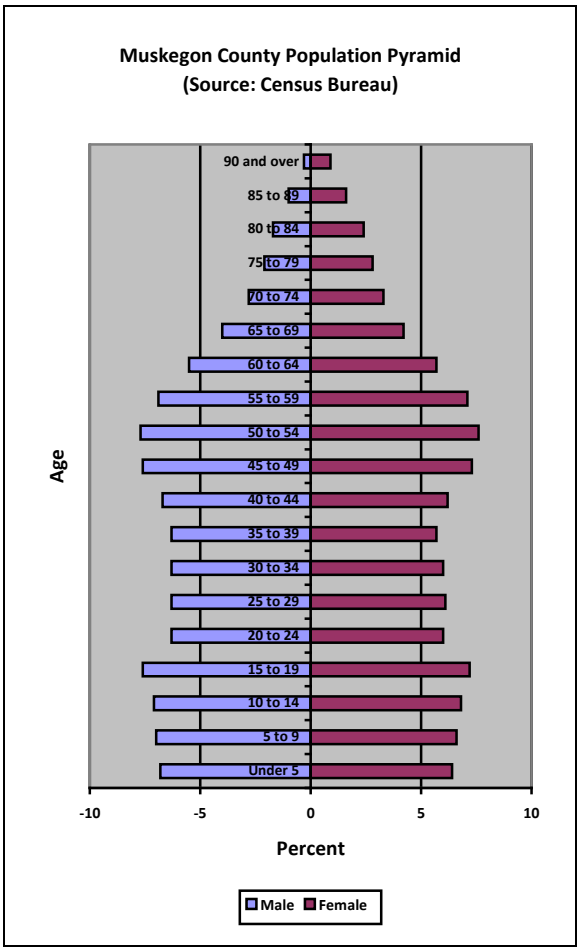


Figure 3.3: Population Pyramid

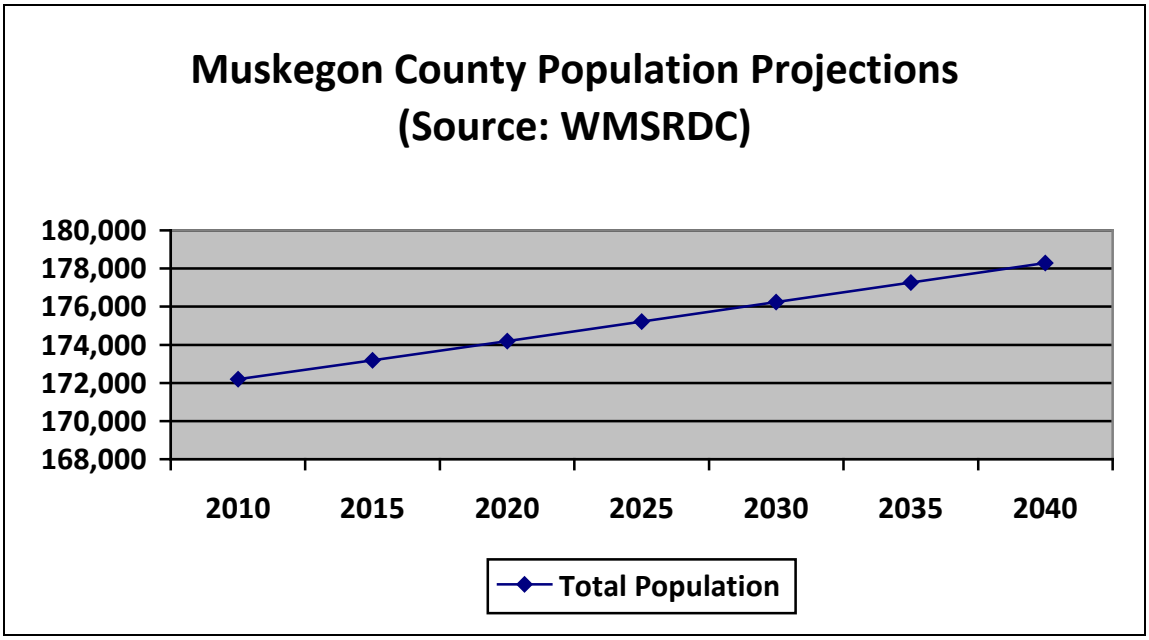


Figure 3.4: Population Projections

County residents speak only English. More than two percent of the adult population statewide and in the county speak Spanish, more than three percent of children ages 5 to 17 speak Spanish both statewide and in the county.

The black population in Muskegon County is heavily concentrated in the cities of Muskegon and Muskegon Heights. More than 34 percent of the population in the City of Muskegon is black and 78.3 percent of the population in Muskegon Heights is black.

Movement within the county was toward decentralization of the population away from the urban centers. The largest population increases in the county occurred in the Village of Lakewood Club with an increase of 28.3% between 2000 and 2010. Both Blue Lake and Dalton Townships also realized population growth of 20.5 and 15.6 percent respectively percent 2000 to 2010. However, Muskegon Heights lost 9.9 percent, Whitehall City lost 6.2 percent, and the City of North Muskegon lost 6.1 percent of its population. It is important to note that the City of Norton Shores was the only city in the county to realize a population increase between 2000 and 2010.

Households and Families

There were 65,616 households in Muskegon County in 2010. Approximately 68 percent were family households, with spouses, children under 18 years, or other relatives (persons of 60 years) living in the household. Nearly 12 percent of households

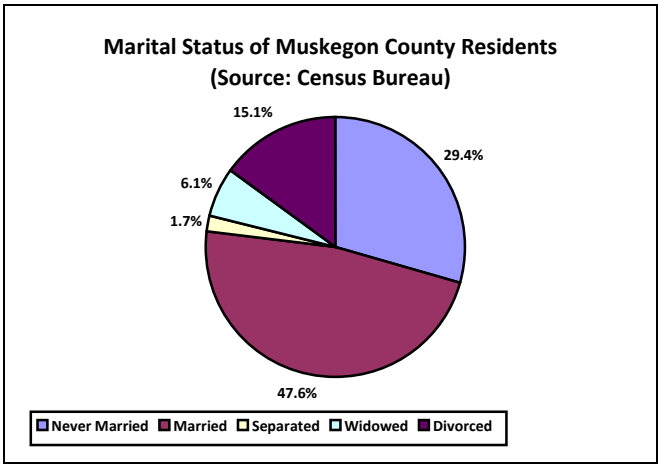


Figure 3.5: Marital Status

were males living alone, and 14.8 percent were females living alone. There was a slightly larger percentage of family households in Muskegon County than in the state or nation.

More than 26 percent of households were people living alone in the county in the 2010 Census. Approximately another 37.6 were married couple families with their own children under 18 living at home.

In regards to marital status, 29.4 percent of Muskegon County residents over age 15 had never married as of 2010. Nearly half of county residents over age 15 were currently married, approximately six percent were widowed, and just over 15 percent were divorced. The county divorced population was somewhat higher than the state and national averages.

Housing Units

There were 73,515 housing units in Muskegon County in 2010. More than 89.6 percent of the units were occupied, a higher occupancy rate than either the state or the nation. Most townships and municipalities in the county also had high occupancy rates. Nearly three quarters of Muskegon County housing units were owner occupied in 2010, which is fairly consistent with the state. However, this number is considerably higher than the national figure. Exceptions to the high owner-occupancy rates were in the City of Muskegon, Muskegon Heights, Roosevelt Park, and Whitehall. Each of these communities had a higher average of occupied housing units being rented out. In Muskegon County, approximately 15,500 housing units were occupied by renters. The median monthly rent being paid for these units in 2010 was $642.

Nearly three-quarters of the housing units in Muskegon County were in urban areas, similar to the national and state average.

Like most homes in Michigan (72.8%), just over 76.1 percent of Muskegon County homes were single unit structures. Only a small percentage of the housing in the county is in multi-family units with greater than ten units. Approximately 6.6 percent of Muskegon County housing units were mobile homes, which is above the state average of 5.0 percent.

Housing units in Muskegon County are a little older, on average than in the state or nation. The average year built of the housing stock in 2010 was 1965 for the county, 1969 for the state, and 1975 nationally.

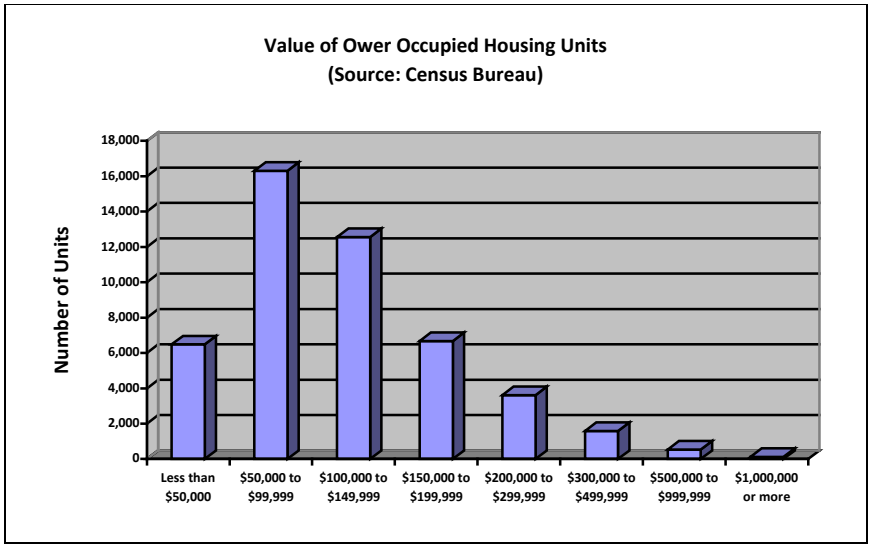


Figure 3.6: Value of Owner Occupied Housing Units

Owner occupied housing units in the county had a median value of $85,900, while the state and national values were $115,600 and $119,600 respectively. Most owner-occupied houses in Muskegon County had a value between $40,000 and $150,000 in 2010. Homes that were vacant because they were for sale had a median asking price of $64,700 in the county, compared to $88,400 statewide and $89,600 nationally. The largest number of units available was in the $100,000 to $124,999 range.

Housing affordability is related to household income. Household incomes are divided into five general classifications based on US Department of Housing and Urban Development (HUD) standards:

- Very low income (<30% of area median income)
- Low income (30-50% of area median income)
- Low/moderate income (50-80% of area median income)
- Moderate income (80-120% of area median income)
- Middle/high income (>120% of area median income)

Using these classifications for Muskegon County, very low income households earn less than $11,586 annually, low income households $11,586 to $19,310, low/moderate income households $19,310 to $30,897, moderate income households $30,897 to $46,345 and middle/upper income households earn more than $46,345.

These income levels translate into the ability to rent or buy housing. In terms of monthly payments, households in Muskegon County can afford the following (based on 34.2% housing expense to income ratio):

Affordable Rents	
Income Group	*Monthly Payments*
Very low income……...	**$330**
Low income……...	**$550**
Low/moderate income…….	**$880**
Moderate income……	**$1320**
Middle/upper income…..	**More than $1320**

Table 3.7: Affordable rents

For home ownership, other factors need to be considered including the required insurance, property taxes, and interest rates. Based on standard assumptions of zero monthly debt payments, 4.0% interest over 30 years, a 1.25% property tax rate, and 1% insurance, the following value homes are affordable in Muskegon County:

Affordable Home Values	
Income Group	***Home Value***
Very low income……..	**$53,650**
Low income……..	**$89,350**
Low/moderate income……..…	**$142,750**
Moderate income……..	**$214,400**
Middle/upper income……> $214.400	

Table 3.8: Affordable home values

Household projections were made based on the population projections and the average number of persons per household. The national, state, and local population per household in 2010 was 2.5 persons per household. This figure was used to project the number of households, which served as a proxy for the needed number of housing units.

The population in Muskegon County is expected to grow 1.8 percent by 2020. Based on 2.5 people per household, that would mean that more than 71,317 housing units would be needed in Muskegon County in 2040. This is an increase of 2,442 units over 2010. Meeting the projected housing need will require the construction of approximately 81 housing units per year.

Residential Building Permits

The number of residential building permits issued in Muskegon County decreased significantly in 2010 compared to the level of activity in 2000. County-wide, 69 permits were issued in 2010, compared to 760 in 2000.

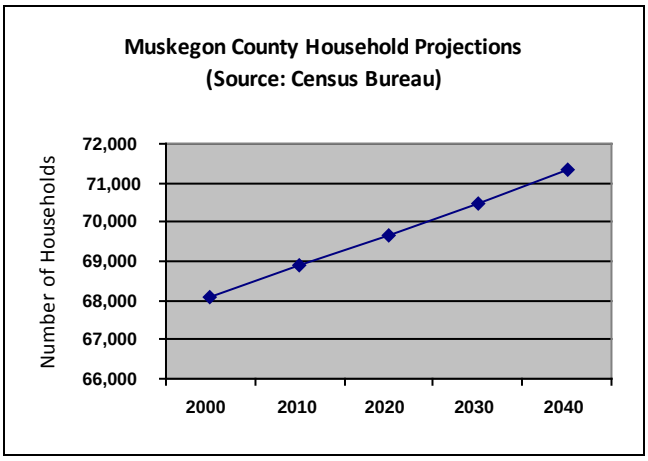


Figure 3.9: Household Projections

In 2010, 4 new multi-family permits were issued for a total of 12 units. These multi-family units accounted for 15.6 percent of the units in 2010. This was a significant increase from the previous years. For example, 31.4 percent of permits were for multi-family units in 2002.

Educational Attainment

Muskegon County young adults are pursuing higher education. In 2010, 38.8 percent of those county residents aged 18-24

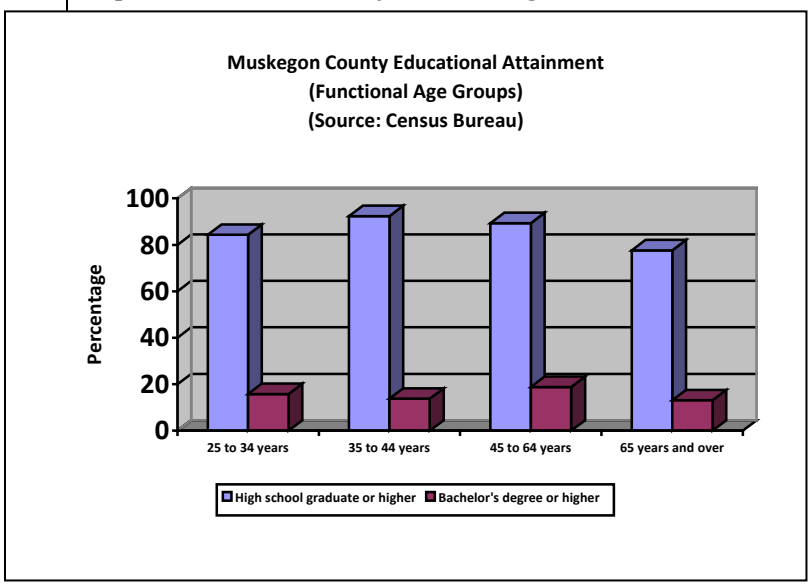


Figure 3.10: Educational Attainment

had completed some college or an associate degree and 4.6 percent had completed a bachelor degree. Of adults (over age 25) in Muskegon County, 86.6 percent had completed at least high school (or its equivalent) and nearly 16.1 percent had completed a bachelor's degree or higher. The county is comparable to the state in terms of the percentage of residents with a high school diploma, but lags the state in residents who have completed at least a bachelor's degree. It is important to note that the population over age 65 has a lower educational attainment than the working age adults, and this reduces the overall educational attainment level for the county and the state. More than 86 percent of adults between 25 and 64 have completed at least high school, compared to about 77.6 percent of residents over age 65. The same is true for bachelor's degrees, more than 16 percent of working age adults in the county have obtained a bachelor's degree while 13.1 percent of those over age 65 have obtained them. In the over 65 population, women have significantly lower educational attainment than men due to the opportunities available to them as young adults and the culture of the time.

However, in all age groups, Muskegon County lags significantly behind the state in the percentage of the population that has obtained at least a bachelor's degree. On average, only 16 percent of Muskegon County working age residents have obtained at least a bachelor's degree.

Labor Force

The labor force is defined as those who are employed or who are unemployed, but actively looking for work. The labor force is based on where people live, so it is those individuals who live in the county and are employed, regardless of whether they work in the county or elsewhere.

There is a labor force participation rate of 60.8 percent among adults age 16 and over in Muskegon County. Nearly 74 percent of women over age 16 are participating in the

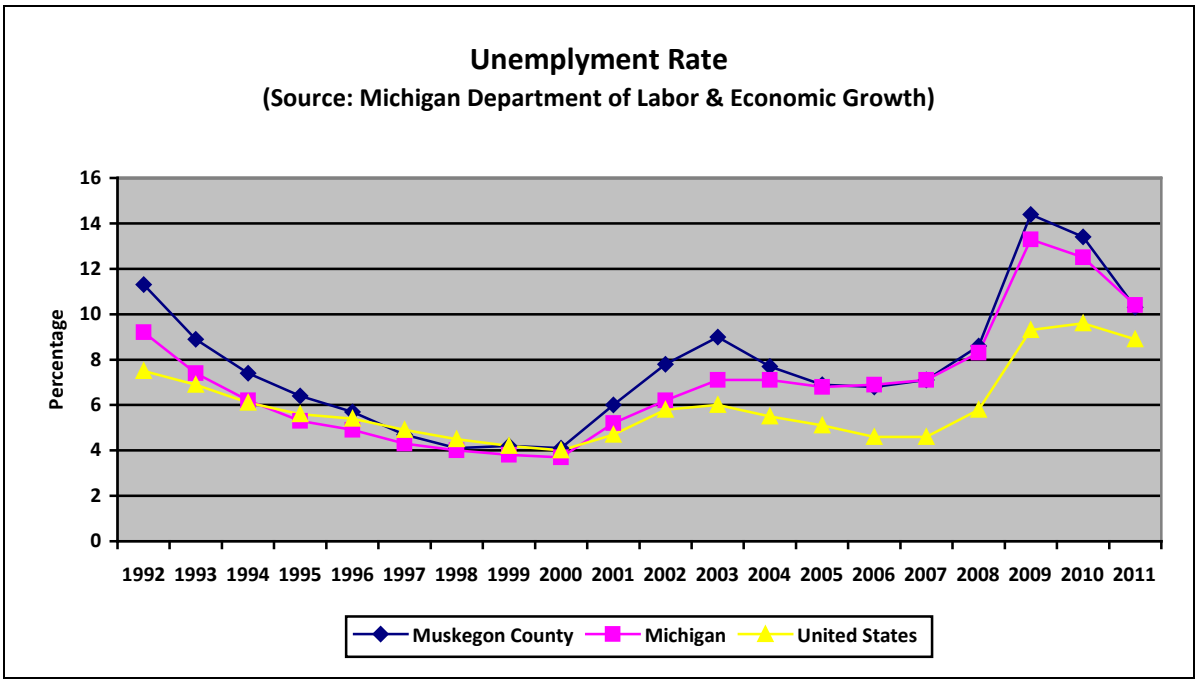


Figure 3.11: Unemployment Rate

labor force. While, 74.7 percent of Muskegon County males over age 16 are participating in the labor force. The largest age groups not participating in the labor force are, not surprisingly, 16 to 19 year olds and those over age 65. Over 20 percent of residents aged 65 to 74 are participating in the labor force and nearly four percent of those over age 75 are participating in the labor force. This is comparable with state labor force participation of older adults and somewhat lower than national participation rates.

Generally, Muskegon County has a higher unemployment rate than either the State of Michigan or the United States. The local unemployment rate does tend to trend with the national and state economies, however. When the economy is strong in the state and in the nation, it is strong in Muskegon County and vice versa. From 1991 to 1998, Muskegon County's unemployment rate declined from 11.2 percent to 4.4 percent. These were the best economic times in recent memory in Muskegon County. The worst times were in 1992, and between 2009 - 2011, unemployment rates ranging between 10.3 and 14.4 percent in those years.

The highest unemployment in the county corresponds with national recessions in the early 1990s and early 21st century that impacted manufacturing states like Michigan in particular. Unemployment in the state was at 3.7 percent in 2000, peaked (lowest employment) at 13.3 percent in 2009, and has gradually declined over the past two years. Nationally, the picture is similar. Unemployment was 4.0 percent in 2000, rose to 9.6 percent in 2010, and declined slightly in 2011. High unemployment tends to peak earlier in manufacturing dependent states than in the national economy as a whole, explaining why the worst unemployment in Michigan and Muskegon County occurred in 2009, while it didn't peak until 2010 nationally.

Unemployment is a major concern in some areas of Muskegon County. The older, more urban cities of Muskegon and Muskegon Heights, as well as Muskegon Township have experienced high unemployment from time to time. The City of Muskegon has consistently held a higher unemployment rate than Muskegon County, Michigan, and the United States. In 2000 unemployment was at 5.4 percent in the city, it reached 18.4 percent in 2009 and declined to 13.4 percent in 2011.

Unemployment Rates			
	High	Low	Recent (2011)
Muskegon City	18.4 (2009)	5.4 (2000)	13.4
Muskegon County	14.4 (2009)	4.1 (1998 & 2000)	10.3
Michigan	13.3 (2009)	3.7 (2000)	10.4
United States	9.6 (2010)	4.0 (2000)	8.9

Table 3.12: Community Unemployment Rates
Source: Michigan Labor Market Information

Employment by Major Industry

Muskegon County traditionally has been heavily dependent on manufacturing as a source of employment. Just over 13 percent of jobs in the county were in manufacturing in 2009, compared to 9.6 percent statewide and 7.1 percent nationally. These numbers have been steadily declining over the past several years.

Other significant employment sectors in Muskegon County include health care and social services (15.5 percent) and Retail Trade (15.8 percent). Muskegon County has

more employment in those sectors than the state or national average.

Muskegon County has not experienced the structural shift in the economy from a manufacturing economy to a service economy as intensely as the state or the nation. In the 1980s more than 20 percent of jobs in the United States were in manufacturing. Historically, in manufacturing dependent states like Michigan, nearly 30 percent of the jobs were in manufacturing as late as 1989. Industrial counties like Muskegon County had nearly 35 percent of their employment in manufacturing.

By 1997, the economy had shifted away from a manufacturing base to a service base. In the national economy, the service sector accounted for 21 percent of jobs in 1997, compared to 17.7 percent in manufacturing. Statewide manufacturing had declined to one quarter of jobs, while services grew from 27.8 percent to 32.5 percent. In Muskegon County there was a shift similar in magnitude to the statewide and national shift, but manufacturing was still the largest employment sector at 30.8 percent.

In 1997, the US federal government changed the way industries were classified, moving from the Standard Industrial Classification (SIC) system that had remained unchanged since 1987 (then only modified) to the new North American Industrial Classification System (NAICS). NAICS codes more accurately reflect the products and services available in the modern economy, but they do not correspond well with SIC codes. Therefore, a different system is used in measuring the continued economic shift.

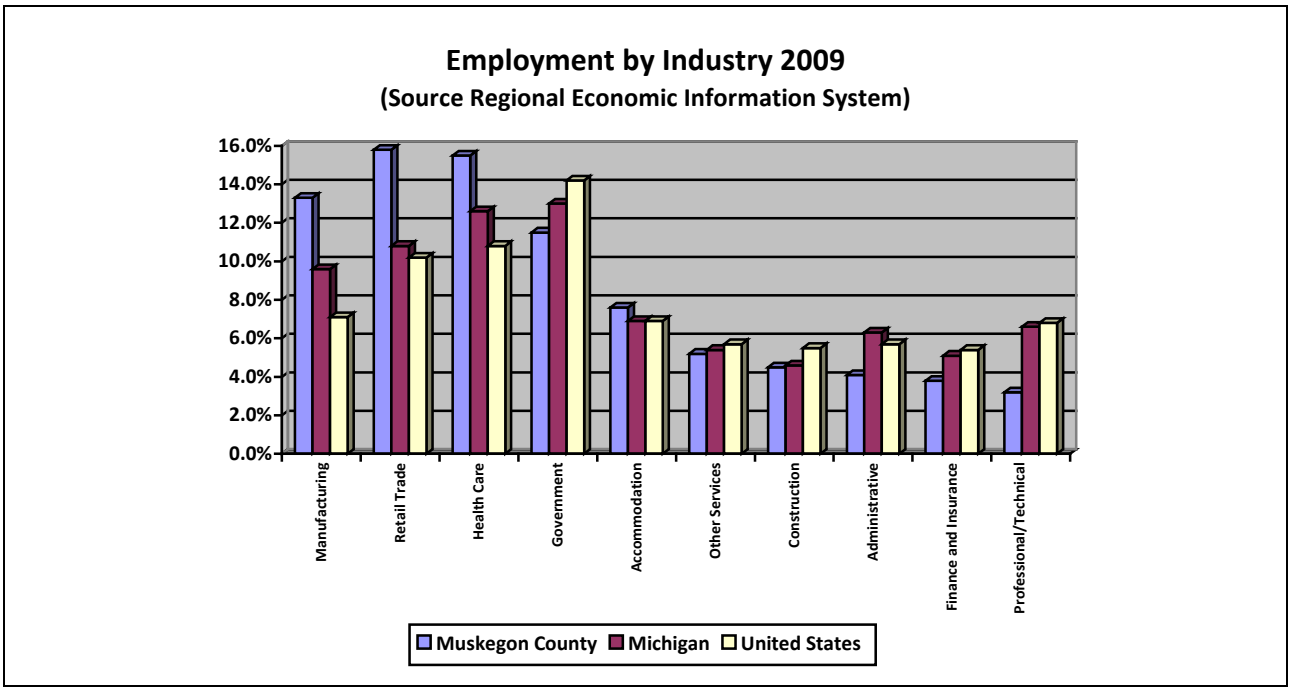


Table 3.13: Employment by Industry

In 2001 approximately 15.2 percent of jobs statewide were in manufacturing according to the Regional Economic Information System (REIS Data), compared with nearly 10.2 percent nationally. In Muskegon County 18.1 percent of jobs were in manufacturing.

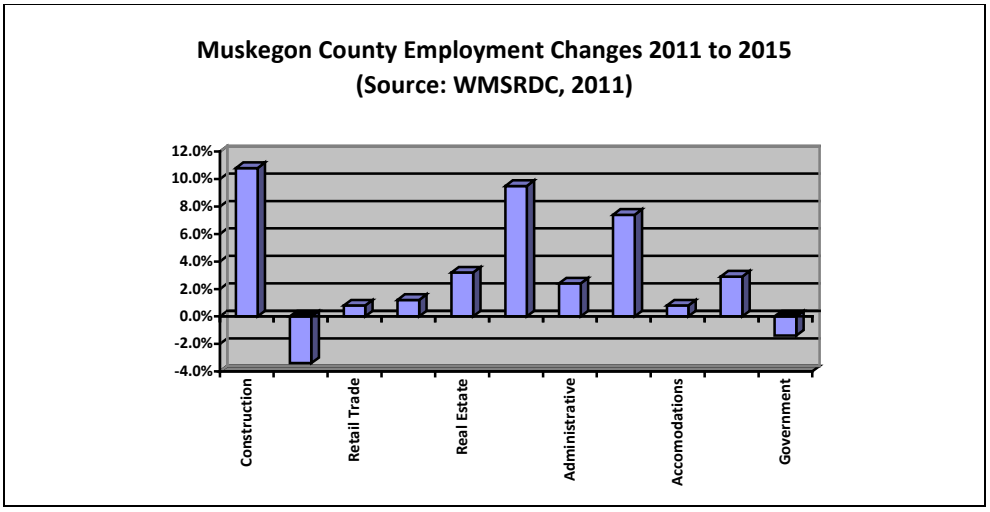


Figure 3.14: Employment Changes 2011 to 2015

By 2009, at the end of the last business cycle, manufacturing accounted for 13.3 percent of jobs in Muskegon County, compared to 9.6 percent statewide and 7.1 percent nationally.

Targeted industry analysis is a means of evaluating trends in the local economy to identify those industries that are current strengths, emerging strengths, high priority retention targets, and poor performers due to local factors or to limited overall prospects for the industry.

The major components of targeted industry analysis are location quotient and shift-share. Location quotients reveal whether an industry is a basic (exporting) industry in the local economy. The shift-share examines changed in local employment to determine how much of the change can be attributed to national trends, the industry itself, and local factors.

Due to the change in classification system, the 1989 through 2001 business cycle is analyzed in two periods, 1989-1997 and 1998-2001.

Of basic (exporting) industries in Muskegon County, five were manufacturing sectors that employed a large percentage of people in providing goods for export and were strong performers from 1989 to 1997. These industries were: primary metal industries, miscellaneous manufacturing industries, fabricated metal industries, chemicals and allied products, and rubber and miscellaneous plastics products. Two industries that usually serve only markets also had sufficient employment to be considered basic employers and were strong performers: general merchandise stores and holding/investment offices. Locally two basic manufacturing industries performed poorly from 1989 to 1997: industrial machinery and equipment, and furniture and fixtures. These are of concern because their poor performance is due to local weaknesses. Local industry specializations that lag in performance are considered high priority retention targets. Locally these included eating and drinking places, furniture and home furnishing stores, and health services.

The industries that are not current specializations but performed well are considered emerging strengths.

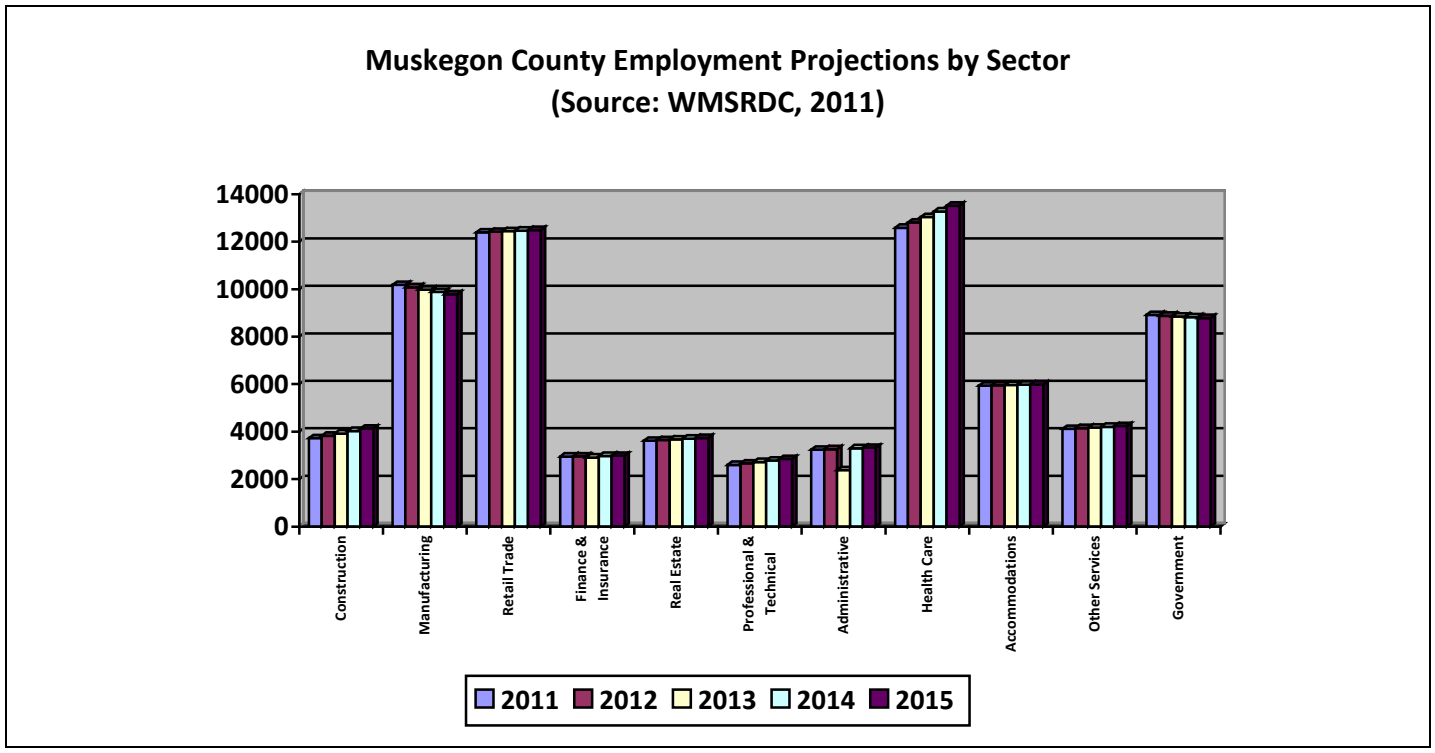


Figure 3.15: Employment Projections by Sector

Poor performance among industries that are not local specializations indicates structural problems in those industries nationally and they have limited prospects for employment growth.

More recently the local economy is evaluated in terms of NAICS classifications. This section of analysis covers 1998 to 2009. The economy was at its strongest between 1989 and 2001 before the recession that began in 2002.

Locally strong performers were found in most industries. Construction sectors were more than meeting local demand. Machinery manufacturing and electrical equipment, appliance, and component manufacturing performed well, as did miscellaneous manufacturing and nonmetallic mineral product manufacturing.

The local retail industry had strong employment performance in several sectors. Service industries including information, real estate, and health and social services also performed well. A high-priority retention target identified was the security and commodity contracts sector of the finance and insurance industry.

There were also a number of poor performers. It is likely that attention can better be targeted elsewhere unless these sectors are considered to be of overriding importance to the local economy.

Several sectors in transportation and other services showed promise as emerging industries including transportation support services and air transportation. Poor performers in these other local industries have limited prospects overall and should not be considered as employment targets.

It is important to remember that this analysis only studies the local economy in terms of employment. If a local business has invested in technology rather than employment then their strength will be discounted in this analysis.

Employment Projections

Employment projections illustrate further the direction of the local economy. WMSRDC prepares population projections for each county in their jurisdiction. The 2011-2015 projections were released in late 2011.

Total employment in the county is projected to grow 0.8 percent between 2011 and 2015, creating more than 600 new jobs in the local economy. Between 2010 and 2015, the population is expected to grow only 0.6 percent while 1.0 percent job growth is projected. This means that some Muskegon County residents who are unemployed or employed in other counties will likely be able to find work in Muskegon County over the coming years.

Manufacturing employment is expected to continue declining, while professional & technical services; health care & social assistance; and real estate, rental & leasing are expected to increase in employment levels. The construction sector is projected to grow approximately 10 percent by 2015.

In 2009, the Manufacturing sector accounted for the largest portion of Muskegon County's total payroll at 29.9 percent. Similar to the State of Michigan, payroll in this sector has been on the decline since 1980 when the percentage of total payroll was approximately 52 percent in Muskegon County.

The Health Care sector represented the second largest payroll sector in the county at 24.8 percent. Next, the Retail Trade sector which as been experiencing growth in total payroll since 1980, accounted for 9.5 percent of the payroll in the county. Finally, Wholesale Trade along with construction finished off the top five sectors at 5.2 and 4.6 percent respectively.

Number of Business Establishments in Muskegon County in 2009														
			Payroll (1,000)		Number of Establishments By Employment-Size Class									
NAICS Code	Industry	Number of Employees for week including March 12	First Quarter	Annual	Total Number of Establishments	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000 or more
	Total	49,479	389,504	1,616,223	3,406	1,702	744	468	318	99	56	14	2	3
11	F.F.H. & A. Support	0 – 19	S	508	5	3	2	--	--	--	--	--	--	--
21	Mining	20 – 99	D	D	1	--	--	--	1	--	--	--	--	--
22	Utilities	250 – 499	D	D	7	3	1	--	--	1	2	--	--	--
23	Construction	1,579	17,609	74,288	280	205	42	21	8	2	1	1	--	--
31	Manufacturing	11,045	124,032	481,772	263	72	49	47	46	22	18	7	1	1
42	Wholesale Trade	1,771	19,880	84,243	127	58	27	21	14	4	3	--	--	--
44	Retail Trade	7,581	36,626	154,181	586	256	169	78	62	11	5	5	--	--
48	Transportation	754	7,262	29,747	77	39	18	9	9	1	1	--	--	--
51	Information	678	10,152	29,264	59	27	14	9	6	2	1	--	--	--
52	Finance & Insurance	1,108	11,617	45,253	207	117	55	27	7	1	--	--	--	--
53	Real Estate	470	3,528	13,723	98	62	23	11	2	--	--	--	--	--
54	Professional Serv.	1,308	12,842	58,056	229	152	37	29	10	--	1	--	--	--
55	Management	406	6,458	27,612	20	4	6	4	3	3	--	--	--	--
56	Admin. Services	2,929	11,349	53,825	131	75	23	10	9	7	6	--	1	--
61	Education Services	652	4,045	15,295	33	18	5	6	2	1	--	1	--	--
62	Health Care	10,322	89,882	400,730	399	155	109	63	34	19	17	--	--	2
71	Arts, Ent., & Rec.	972	3,288	18,664	67	27	14	9	14	3	--	--	--	--
72	Accom. & Food Serv.	5,350	14,384	62,501	323	93	49	83	76	21	1	--	--	--
81	Other Services	2,103	9,778	40,261	403	245	101	41	15	1	--	--	--	--
99	Unclassified	20 – 99	S	333	91	91	--	--	--	--	--	--	--	--

Source: County Business Patterns D: Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
*Forestry, Fishing, Hunting, and Agriculture Support S: Withheld because estimate did not meet publication standards.

Table 3.16: Number of Business Establishment & Major Sector Payroll

Tax Rates

The General Property Tax Act of 1893 established property taxes as the main source of revenue for local government in Michigan. The basis for the tax is real and tangible personal property value that is not exempt. Exemptions include: property owned by religious and nonprofit organizations, educational institutions, government property, and certain agricultural property. Exempt personal property includes: inventories, special tools, and air and water pollution control equipment. Homestead property is exempt from the 18-mill basic local school district operating tax.

Beginning in 1995 the property tax base was changed from state equalized value (SEV, equal to 50 percent of the true cash value) to taxable value. The taxable value is capped at five percent growth per year, or the rate of inflation, whichever is less (unless the property is transferred). Once transferred a property's taxable value rises to its SEV. Beginning in 2001, the taxable value of agricultural land that remains in agricultural use after transfer remains capped.

In 1994, Proposal A brought sweeping changes to property tax law in Michigan. The effects of Proposal A include:

- Lower property tax rates on homestead and qualified agricultural land
- Restraints on growth of taxable value
- Reduced differences in school operating mileage rates across districts
- Divided property tax into two groups: homestead (and qualified agriculture) and non-homestead
- Eliminated locally levied school operating taxes on most homestead property
- Allowed school districts to levy up to 3 mills of "enhancement" mileage from 1994 to 1996.
- New 6 mill State Education Tax (SET) levied on all property

Between 1993 and 2001 non-school property taxes increased an average of three percent statewide, while total mills decreased nearly 30 percent. The local school operating and state education tax mileage was reduced by 57.9 percent during that period. The dramatic shift was caused by the changes to state tax law under Proposal A.

In Muskegon County the 1993 tax rate was 58.23 mills. In 2001 the rates were 30.68 mills for homestead property and 51.29 mills for non-homestead property. During the period from 1993 to 2001, homestead property mills decreased 47.3 percent in the county while non-homestead mills decreased nearly 12 percent.

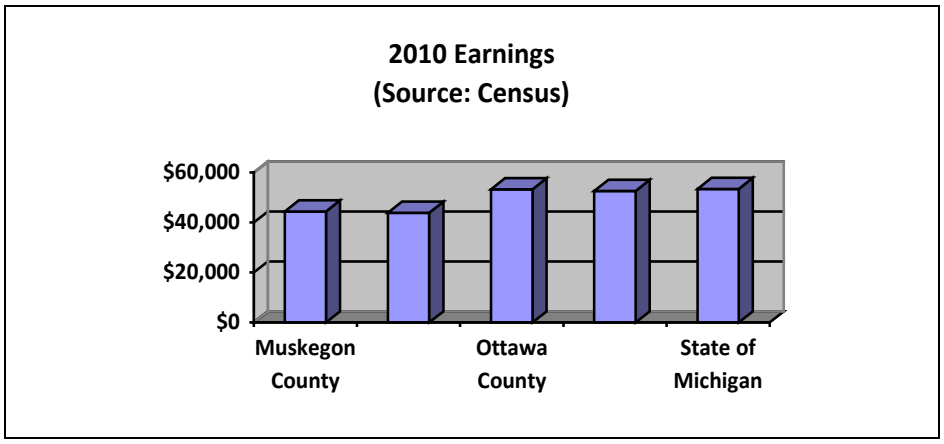


Figure 3.17: 2010 Earnings

The local millage rates for 2011 vary depending on a number of factors including the governmental unit and the school

district. The average tax rate for non-homestead property was 51.58 mills, while the average millage rate for homestead property was 33.56 mills.

Commuting Patterns

According to the 2010 Census of workers living in the county, 74.4 percent worked in the county. Also 25 percent of people living in Muskegon County worked outside the county.

Eighty three percent of workers in the county in 2010 drove a car, truck, or van alone to work. This group alone accounts for nearly 55,000 vehicles on the roads in Muskegon County per day for the purpose of getting to work. An additional 10 percent carpooled.

Most Muskegon County residents, more than 77%, enjoyed reasonable commute times of less than 30 minutes in 2010. Nearly 57% travel less than 20 minutes.

Income

The 2010 median household income for Muskegon County was $38,621, an increase of approximately 1.6 percent in real terms over 2000. This is less growth than the State of Michigan experienced. The state as a whole experienced a 9 percent increase in median household income between 2000 and 2010, with a 2010 median income of $48,669.

In Muskegon County, 47.1% of households had a median income of less than $35,000, while 28.4% of households had a median income of between $50,000 and $100,000 according to the 2010 census. Nearly 62 percent of all households in Muskegon County had income below $50,000 in 2010.

Cost of Living

In terms of cost of living, Muskegon County is more expensive than the Flint, Jackson, Kalamazoo, Lansing, and Saginaw areas. However, it is more affordable than the Ann

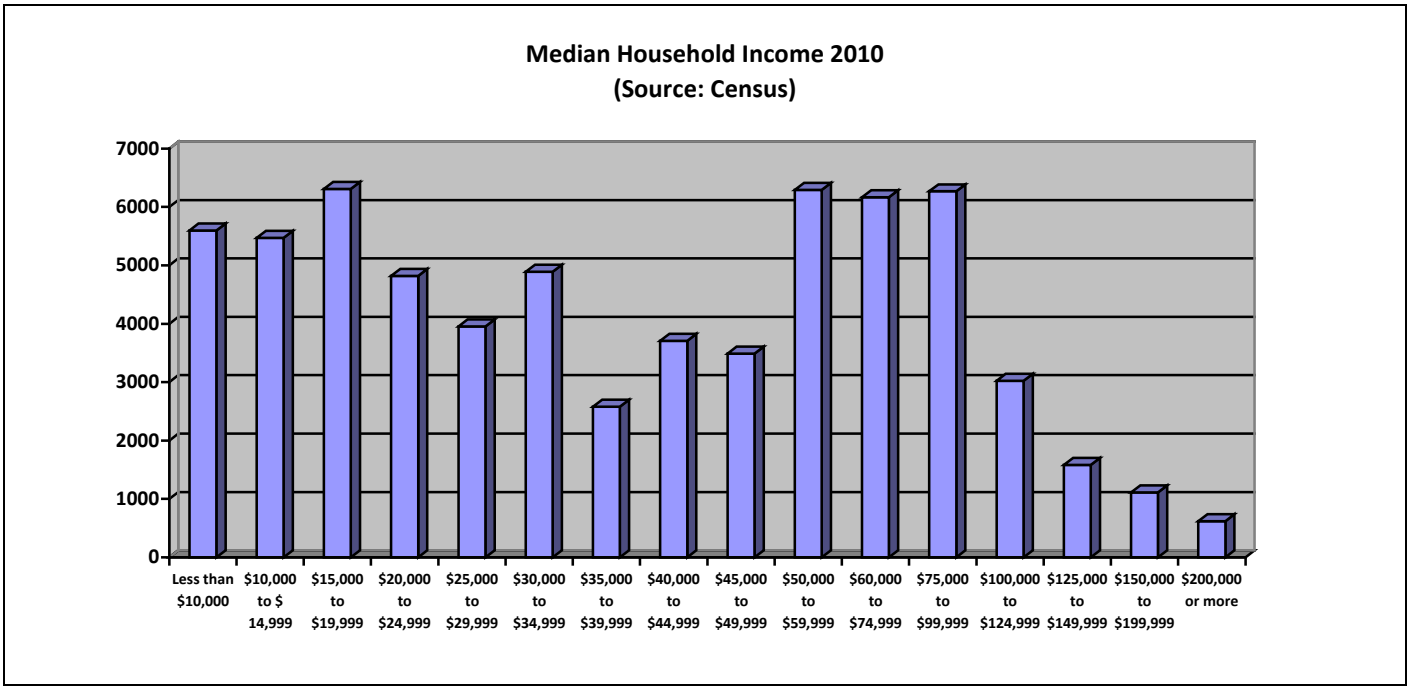


Figure 3.18: Median Income

Arbor, Benton Harbor, or Detroit areas in Michigan and the Chicago, Illinois or Milwaukee, Wisconsin area. The mean home purchase cost in 2009 was $124,047 in Muskegon County compared to $168,888 for the State of Michigan as a whole.

Tourism

Tourism has a long history of activity in Michigan, based on its abundant natural resources and recreational opportunities. The nation's first convention and visitors bureau was established in Detroit in 1896, and in the 1920's, the West Michigan Pike (current day US-31) was marketed as a quick and convenient way for Chicagoans to enjoy the beaches, dunes and the "Fruit Belt" of West Michigan.

Visitors to Muskegon County Events 2011	
Event	***Number of Visitors***
Summer Celebration……..…...	**88,500**
Parties in the Park…….……	**6,300**
Unity Christian Music Fest……..	**60,000**
Irish Music Fest…….……	**17,000**
WMUS "Moosefest"……...……...	**11,000**
MayFest…….……...	**3,000**
Miss Michigan Pageant……...	**4,000**
Fruitport Old Fashioned Days…...	**175,000**
Hot Rod Power Tour…….……...	**20,000**
Muskegon Bike Time……..……..	**90,000**
Total…….	**474,800**

Table 3.19: Events

Families (with children under 18) and corporate travelers are the primary tourists in Michigan. Lodging with friends or relatives remains the most popular form of accommodation statewide, and the state relies heavily on resident travel for tourism activities; however, the success of the state's Pure Michigan campaign, launched in 2006, has made headway in attracting new out-of-state visitors to Michigan. In 2010, out-of-state visitation was up 21.1% to $6.4 billion, the first year ever that non-resident leisure visitation exceeded resident leisure visitation. Visitor spending statewide was $17.2 billion in 2010, a $2.1 billion increase from 2009.

Why Muskegon County?

Muskegon County has 26 miles of Lake Michigan shoreline, 400 miles of rivers, and 11,400 acres of inland lakes for outdoor recreation and other activities. The Lake Michigan shoreline is accessible with eleven public parks along the lakefront.

Muskegon County is also home to a number of state parks, a state game area, and Manistee National Forest. The county offers year-round outdoor recreation opportunities with mild summers for water-based recreation, camping, and hiking, and an array of color in the fall, attracting fall color tour participants. Approximately 80 – 100

Table 3.20: Attractions

Visitors to Muskegon County Attractions	
Attraction	***Number of Visitors***
Muskegon State Park & Duck Lake State Park (day use & camping)	**958,970**
Michigan's Adventure	**850,000+**
P.J. Hoffmaster State Park & Gillette Visitor Center (day use & camping)	**425,406**
County Parks:	
Pioneer Park	**154,691**
Meinert Park	**43,800**
Twin lake Park	**22,582**
Blue Lake Park	**4,291**
Frauenthal Theater Center	**71,000**
Lakeshore Museum Center	
Museum	**39,000**
Hackley & Hume Historic Site	**7,500**
Fire Barn	**5,500**
Depression House	**4,000**
Muskegon Museum of Art	**30,053**
USS Silversides	**25,000**
LST393 Veteran's Museum	**30,000**
Blue Lake Fine Arts Camp	**18,000**
Total	**2,689,793**

inches of snow falls on Muskegon County, providing a myriad of winter outdoor recreational activities including cross country skiing, snowmobiling, sledding, skating, hockey, and ice fishing. The Muskegon Winter Sports Complex offers the United States' most publically accessible luge, plus lighted cross country skiing trails and a lighted skating trail through Muskegon State Park.

There are also a variety of man-made recreational and tourism destinations that make Muskegon County attractive to visitors. Michigan's Adventure Amusement Park is the largest amusement park in the state, and the county is home to the Blue Lake Fine Arts Camp, attracting young musicians from around the state and world each summer. The Frauenthal Theater hosts concerts, dance performances, and national tours of Broadway and off Broadway shows. It is also home to the Miss Michigan Pageant and associated events, generating significant tourism activities in the county.

The former Summer Celebration was a ten-day event that has developed a tradition of excellence in music performance and other entertainment. Summer Celebration ended in 2011, and a new festival titled Coast West was established in 2013. Similarly, the Unity Fest brings Christian musicians and the Moose Fest brings Country musicians to Heritage Landing each August. The Michigan Irish Music Festival closes out Heritage Landing's festival calendar in mid-September. Other destinations include the USS Silversides Museum and the Great Lakes Naval Memorial and Museum.

Visitors to Muskegon County

Events and attractions in the county bring a significant number of visitors during the year. In 2011, events and attractions brought more than 450,000 visitors to the county. The largest event was the Fruitport Old Fashioned Days, bringing 175,000 visitors to Muskegon County. In terms of attractions, Muskegon State Park has the largest number of visitors in 2011, with 958,970. Michigan's Adventure Amusement and Water Park (850,000+ visitors in 2010), P.J. Hoffmaster State Park (425,406 visitors in 2011), and the county parks (225,000), also attract significant numbers of visitors each year.

Visitor spending in Muskegon County in 2010 is estimated at $320,820,000. According to 2010 figures by the Michigan Economic Development Corporation, Muskegon County was ranked 13th in the state in visitor spending.

Economic Impact of Travel 2006 - 2010	
Muskegon County	Dollars in Millions
FY2006	$316.28
FY2007	$320.42
Fy2008	$300.79
FY2009	$284.77
FY2010	$320.82

Table 3.21: Economic Impact of Travel
Source: Michigan Economic Development Corporation/Travel Michigan

Benefits of Tourism to Muskegon County

The benefits of tourism to Muskegon County extend beyond the revenue generated by area businesses. There are jobs that are created due to tourist activity, and wages paid to those workers.

Additionally, the county collects a hotel/motel accommodations tax that benefits the county. The covered employment and wages for 2011 in the tourism related sectors of arts, entertainment, and recreation and the accommodations and food service sector provide an indicator of the impact of the tourism industry, even though all of the jobs are not solely dependent on visitors to the county (locals dine in restaurants and use entertainment venues as well as tourists).
Muskegon County is one of eight Michigan counties that can collect an excise tax of up to five percent on hotel/motel stays. The Accommodations Tax Rate for Muskegon County is five percent and it is collected on hotel and motel room fees. The revenues from the tax can be used for tourism operations and promotion. In fiscal year 2011, the local revenue from this tax was $854,447.

Financial Tourism Benefits	
Muskegon County	Local Hotel/Motel Tax Revenue
FY2005	$653,087
FY2006	$842,191
Fy2007	$840,309
FY2008	$829,904
FY2009	$746,819
FY2010	$841,503
FY2011	$854,447

Table 3.22: Hotel/Motel Tax Revenue
Source: Muskegon County

Seasonal homes

There is a significant amount of second home, seasonal home, recreational housing market in Muskegon County. According to the 2010 Census, 27 percent of the vacant housing units in the county were vacant for seasonal, recreational, or occasional use. The number of units specified in that category was 2,004.

Community Facilities

Police, Fire, & Emergency Services

The Michigan State Police (MSP) is the state's leading law enforcement providing public safety and law enforcement services for Michigan's citizens. Along with the police counterparts at the local, county, and federal levels of government, the MSP assists in preventing crime, apprehending fugitives, improving traffic safety, ensuring homeland security, providing quality support services, pursue resources for expanded use of technology, and maintaining basic police services for local communities in Michigan. State Police law enforcement services for Muskegon County

are provided by MSP District #6 headquartered in Grand Rapids, MI. The nearest MSP Post is located in Grand Haven, MI, about five miles south of the county line.

Muskegon County is served by a county sheriff's department. The county sheriff is an elected every four years. The Department also has an Undersheriff, which is appointed by the Sheriff. The Patrol Division is the most visible branch of the Muskegon County Sheriff's Office. The Patrol Division provides law enforcement service to over 70,000 people living in unincorporated areas throughout the County. The division has 20 deputies, two shift commanders, and a division commander.

The Muskegon County Jail houses 370 inmates managed by 46 full time correction officers. The main jail houses the holding, minimum to maximum security, as well as female and juvenile inmates. The Ernest W. Heikkila addition houses work release and minimum security inmates. The jail has a redundant state-of-the-art surveillance and cell door locking system needed to maintain the many levels of security to ensure employee, public and inmate safety. The Marine Division patrols Lake Michigan and the inland waters during the summer months. The Marine Division handles search and rescues and recoveries in Muskegon County. The Division also teaches young people how to become safe boat operators. Classes are held during the school year in cooperation with local schools. The Division has a sergeant and four seasonal deputies. The fleet of the Marine Division is made up of 7 patrol boats and 1 jet ski including the new Pursuit Enforcement 2470cc. The Sheriff's Office provides security, swears warrants and serves subpoenas for the Muskegon County District, Circuit and Probate Courts. Court Services is responsible for providing inmates with their time in court. The division also transports inmates to the Michigan Department of Corrections.

Muskegon County Emergency Services is the coordinating agency for Muskegon County's preparedness and response to disasters and/or emergencies. Emergency Services directs the implementation of the Muskegon County disaster preparedness activity and is responsible for establishing and maintaining effective control and emergency services planning. Its mission, in cooperation with the Emergency Management Division of the Michigan State Police (EMD/MSP) and the Federal Emergency Management Agency (FEMA), is to save lives and protect property in this County. This will be accomplished by having an emergency plan and program that is developed and exercised according to State and Federal guidelines and which takes into account any unique circumstances within our County.
Muskegon County Emergency Services include:

- Muskegon County Local Emergency Planning Committee (LEPC)
- Muskegon County's Hazardous Materials Response Team (HAZMAT)

In cases where the situation is jurisdiction-wide or extremely severe, and Emergency Operations Center (EOC) will be activated. The EOC is capable of operating on a continuous or intermittent basis for as long as the situation requires. When a disaster or large-scale emergency occurs, a representative of each agency will be notified to report to the EOC. At that time, the entire EOC staff will be briefed on the incident. Those not immediately involved will be released on a stand-by basis.

EOC Locations	
Primary EOC Location	***Alternate EOC Locations***
Muskegon County Emergency Services 1611 Oak Ave., Muskegon, MI 49442	City of Whitehall Police/Fire Building Complex Muskegon County Road Commission Norton Shores City Hall

Figure 3.23: EOC Locations

Muskegon Central Dispatch 911, housed within the new fire station in Downtown Muskegon, dispatches all fire, police, and emergency calls for Muskegon County. Its mission is to serve, without prejudice or favoritism, all of Muskegon's citizens and visitors by providing prompt, accurate and reliable access to the county's public safety agencies.

The Muskegon Police Department is the local law enforcement arm in the city of Muskegon. In the spring of 2004, the Muskegon Fire Department, the Muskegon Police Department, and Muskegon Inspection Services were combined at the administrative level into the Muskegon Public Safety Department. This consolidation places the three departments under the supervision of the Director of Public Safety with a Deputy Director overseeing the daily operations of both fire and inspections.

The Police Services Division consists of the following Bureaus: Patrol, Investigations, and Administration. Each bureau encompasses units of related functions that contribute toward the division's overall goals accomplishment. Primary responsibilities of the division include law enforcement, investigations, and the maintenance of public records. The Police Services Division operates within the context of community policing i.e., forming community partnerships to reduce crime and enhance the quality of life within the city. The police department currently has 91 sworn positions and 11 non-sworn positions.

In addition to the City of Muskegon, the cities of Montague, Muskegon Heights, North Muskegon, Norton Shores, Roosevelt Park, Whitehall, and Muskegon Township all maintain their own police departments, although some of them utilize part-time personnel. These departments handle day to day emergencies, regularly patrol areas of the local jurisdictions to prevent crime, maintain public safety and order by enforcing local, state, and federal laws and ordinances, and provide other public services. In Spring 2012, the estimated total number of full time law enforcement officers in Muskegon County was 235.

Table 3.24: Emergency Services

Emergency Services	
Fire Departments	***Police Departments***
Blue Lake Township Fire Department # 1/2	Michigan State Police & WEMET
Casnovia Township Fire Department # 1/2	Muskegon County Sheriff's Department
Dalton Township Fire Department	City of North Muskegon Police Department
Egelston Township Fire Department	City of Montague Police Department
Fruitport Township Fire Department # 1/2	City of Muskegon Police Department
Holton Township Fire Department	City of Muskegon Heights Police Department
Montague Fire Authority	City of Roosevelt Park Police Department
Moorland Township Fire Department	City of Norton Shores Police Department
City of Muskegon Fire Department # 3/4/5	City of Whitehall Police Department
Muskegon Township Fire Department # 1/2	Fruitport Township Police Department
City of North Muskegon Fire Department	Muskegon Township Police Department
City of Norton Shores Fire Department # 1/2/3/4	***Other***
City of Muskegon Heights Fire Department	Muskegon Central Dispatch 911
Ravenna Fire Department	Pro-Med Ambulance Service
White Lake Fire Authority # 1/2	White Lake Ambulance Authority

Fire Protection Services & Emergency Medical Services

The City of Muskegon Fire Department is the largest single department in the County, The Muskegon Fire Department is charged with fire suppression, fire prevention, public fire safety education, medical first responder, confined space rescue, ice/water rescue, and hazardous materials incident response within the city limits of Muskegon and as an aid to other area departments. The Muskegon Fire Department provides these services through a balanced program of customer awareness, personnel training, and service delivery. Fire services for the rest of the county are provided by the cities of Muskegon Heights, North Muskegon, Norton Shores; the townships of Blue Lake, Casnovia, Dalton, Egelston, Fruitport, Holton, Moorland, Muskegon, and Ravenna; and Fire Authorities of White Lake and Montague.

In Spring of 2012, the estimated total number of firefighters in Muskegon County was 330.

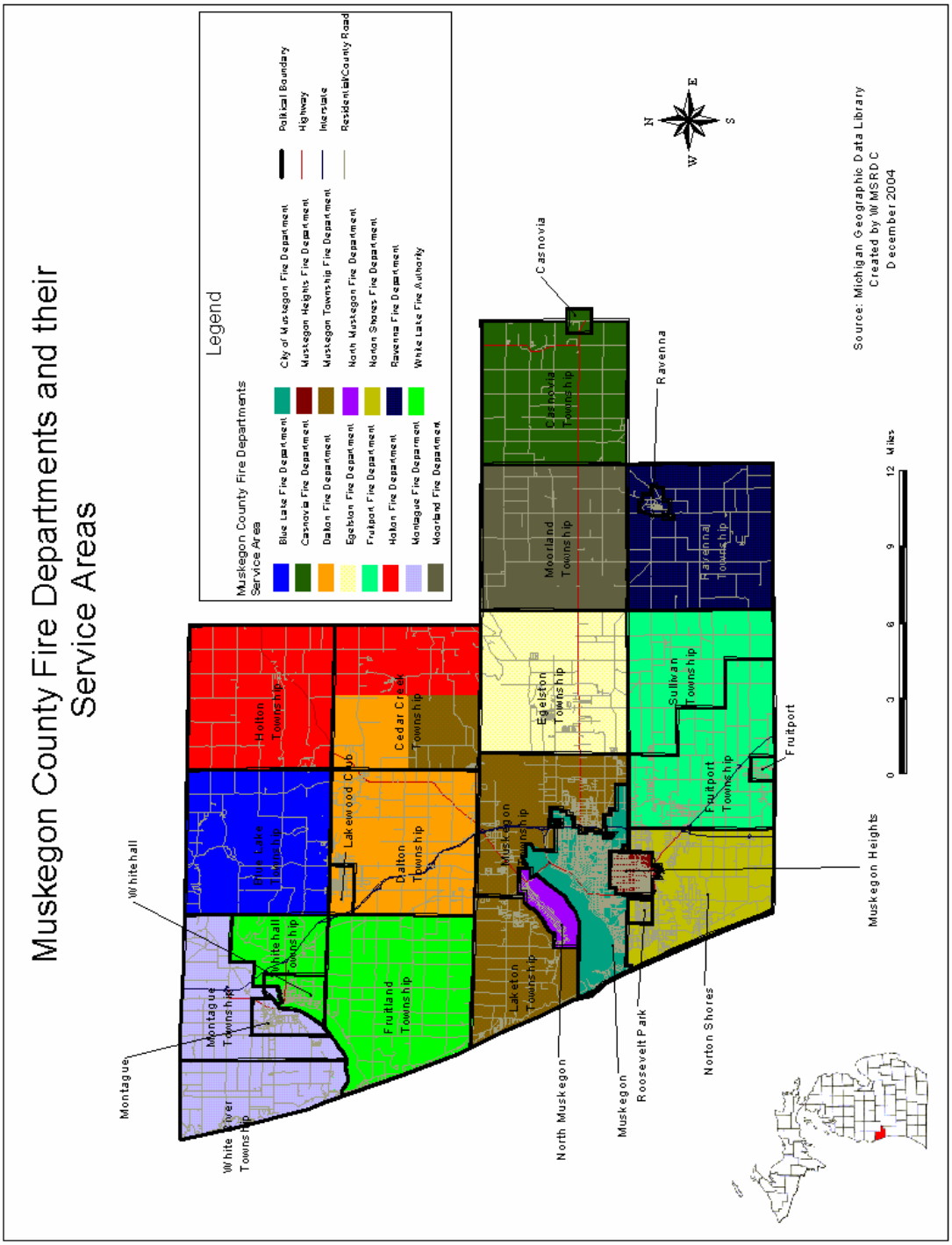
Emergency ambulance services are provided to Muskegon County by two services, Professional Med Team, Inc., (Pro Med) and White Lake Ambulance Authority. Pro Med is a not-for-profit advanced life support ambulance and health transportation service. It was founded in 1986 and offers advanced life support, basic life support, and non-emergent transportation services. Pro-Med is the medical communications provider for Muskegon County, responsible for dispatching ambulances in Muskegon County. The service responds to over 14,000 ambulance requests per year and provides over $55,000 annually in charitable care for patients who cannot afford to pay for service. Pro-Med receives no local government subsidies or local tax dollars for its service. Pro Med operates 15 ambulances and three wheel chair vans.

In addition to Pro Med, White Lake Ambulance Authority provides additional support for Muskegon County. It was formed in 1968 by seven municipalities: Whitehall and Montague cities, and Blue Lake, Fruitland, Montague, Whitehall and White River townships. White Lake Ambulance Authority provides four advanced life support ambulances and a mass casualty trailer. Two units are staffed at all times, while the other two units are staffed on an as needed basis.

Table 3.25: Fire Departments

Muskegon County Fire Department Average Response Time			
Department	**Average Response Time (minutes)**	**Department**	**Average Response Time (minutes)**
Blue Lake	6 – 10	City of Muskegon	3 – 4
Casnovia	3.67	Muskegon Heights	3
Dalton	7	Muskegon Township	3 – 5 Scenic Rd. area 7 – 8
Egelston	4 – 5	North Muskegon	4.48
Fruitport	3	Norton Shores	4
Holton		Ravenna	5
Montague	5.12	White Lake Fire Authority	5.49 – 8.39
Moorland			

Figure 3.26: Fire Department Service Areas



Medical/Health Facilities

Muskegon County's local hospital is Mercy Health partners which is the result of a 2008 merger of Hackley Health System and Mercy General Health Partners who joined forces to better serve the lakeshore communities. Today, Mercy Health Partners is a teaching hospital and the second largest health care organization in West Michigan. The system is the largest employer in Muskegon County, employing more than 4,000 associates.

Mercy Health partners has five main locations, including four hospitals, with approximately 21,000 inpatient discharges and 137,000 emergency/urgent care visits annually. Mercy Health partners is a unified system serving Muskegon and Oceana Counties and portions of Newaygo and North Ottawa Counties. Mercy Health Partners maintain the Well Centive patient registry, which contains medical information for 95% of the patients in Muskegon County. The organization employs over 400 physicians and offers a number of exclusive specialty physician care services for the region.

Mercy Health Partners hospital and ancillary service locations include:

- **Mercy Campus:** a 196-bed, full-service hospital in the City of Muskegon
- **Hackley Campus:** a 213-bed, full-service hospital in the City of Muskegon
- **Lakeshore Campus:** a 24-bed critical care hospital in rural Oceana County.
- **Lakes Village:** an urgent care facility with physician specialty offices in the City of Norton Shores.
- **General Campus:** a 25-bed critical care hospital and urgent care facility in Muskegon Township.
- **Lakeshore Medical Center:** an urgent care facility in the City of Whitehall.
- **Johnson Family Cancer Center:** located on the Mercy Campus.
- **Network of 10 laboratories:** including eight locations in the greater Muskegon Area, one in Whitehall, and one in Shelby, Oceana County.
- **Mercy VNS & Hospice Services:** part of Trinity Home Health Services located in downtown Muskegon.
- **Owned Physician Practices and Outpatient Departments:** including 400 primary care and specialty physicians.
- **Workplace Health Muskegon, Whitehall, and Grand Rapids:** providing occupational health services to area employers.

The Mercy Health Partners system also includes multiple subsidiaries including:

- **Hackley Professional Center:** a professional office building lease management company located on the Hackely Campus.
- **Hackley Professional Condos Co-Owners Association**: a management company for Hackley Professional Center.
- **Lakeshore Health Network**: A physicians' health organization.
- **Healthcare Equipment**: providing home medical equipment with timely response, technical support, and quality products.
- **Health Management**: a weight loss and nutrition company that sells products and offers medically supervised programs.

- **Life Counseling**: an accredited behavioral and mental health counseling practice.
- **Muskegon Community Health Project**: a non-profit company that provides community benefit services for Mercy Health Partners.
- **Pharmacies**: five locations in the City of Muskegon, City of Norton Shores, and Egelston Township.
- **Professional Med Team Ambulance**: a professional ambulance service.
- **West Shore Professional Building**: a professional office building located on the Mercy Campus.
- **Westshore Condo Association**: providing business management services for West Shore Professional Building.
- **Workplace Health of Grand Haven**: an occupational clinic, owned jointly with North Ottawa Community Hospital located in the City of Grand Haven.

Federally Qualified Health Centers

Muskegon County also has two Federally Qualified Health Centers which are local, non-profit, community-owned providers for quality primary and preventive health care. Each health clinic offers a full range of primary care services to families including immunizations and well-child care, pregnancy care and deliveries, family planning services and osteopathic manipulation. Primary medical care services are provided for people of all ages, accepting Medicare, all types of Medicaid, some private insurances and uninsured who are offered a sliding fee scale for services.

Established in 1992, Hackley Community Care Center is located in the City of Muskegon Heights. Muskegon Family Care, established in 2000, is located in the City of Muskegon.

Public Utilities

Public utilities play an important role in the growth and management of Muskegon County. Through the delivery of reliable and plentiful water, and the safe and efficient disposal of wastewater, communities in Muskegon County can achieve an improved quality of life for local residents. Utility systems have the potential to aid in the growth of a community by enabling greater densities in selected locations. In addition, and most importantly, public utility systems give the County and communities the ability to provide effective stewardship over such important natural features as surface water and groundwater features within the region.

Public Wastewater & Treatment Systems

The wastewater and treatment plant (WWTP) for the County is the Muskegon County Wastewater Management System (See Figure 18). There are sixteen communities in Muskegon County that send their wastewater to the Muskegon County Wastewater Management System (MCWMS). The MCWMS currently treats approximately 12 million gallons per day at an 11,000 acre site in Moorland and Egelston Township. The system design capacity is 43 million gallons per day (MGD) of wastewater, 73 tons per day of suspended solids, and 72 tons per day of biochemical oxygen demand. The site is also designed to receive industrial hauled waste and septic waste. The average hauled waste is between 3 and 4 million gallons per month.

At the WWTP site, the treated waste is collected by an extensive network of agricultural under drainage, with ultimate discharge to the Muskegon River. The collection and transportation network consists of sewers, force mains, pumping stations with generators and bypass pumping

capabilities at each pump station. There are access points at 16 different communities where the existing sewage system and water-using industries enter the County system. The main pump station has the capacity of 55.4 MGD that transport the combined wastewater 11 miles through a 60" diameter ductile iron pipe to the WWTP.

The Wastweater Department has recently completed $80 million in renovations on its collection system, main pump station, and new irrigation strainers.

The City of Roosevelt Park owns and operates a sewer collection system that serves the entire city for stormwater. The sewer collection system was installed in the 1940s and is in decent condition. The city recently made the necessary replacements, repairs, and relines of the sewer collection system. This process is ongoing. The City sends their wastewater to the Muskegon County Wastewater Management System. The City of Roosevelt Park treats approximately .75 MGD of the City's own wastewater.

The City of Norton Shores owns and operates a sewer collection system that serves the entire City for stormwater. The City sends their wastewater to the Muskegon County Wastewater Management System. The stormwater collection empties into Mona Lake or the County drain system, which empties into Black Lake, with the entire system ultimately discharging into Lake Michigan.

Figure 3.27: Muskegon County Sewer Network

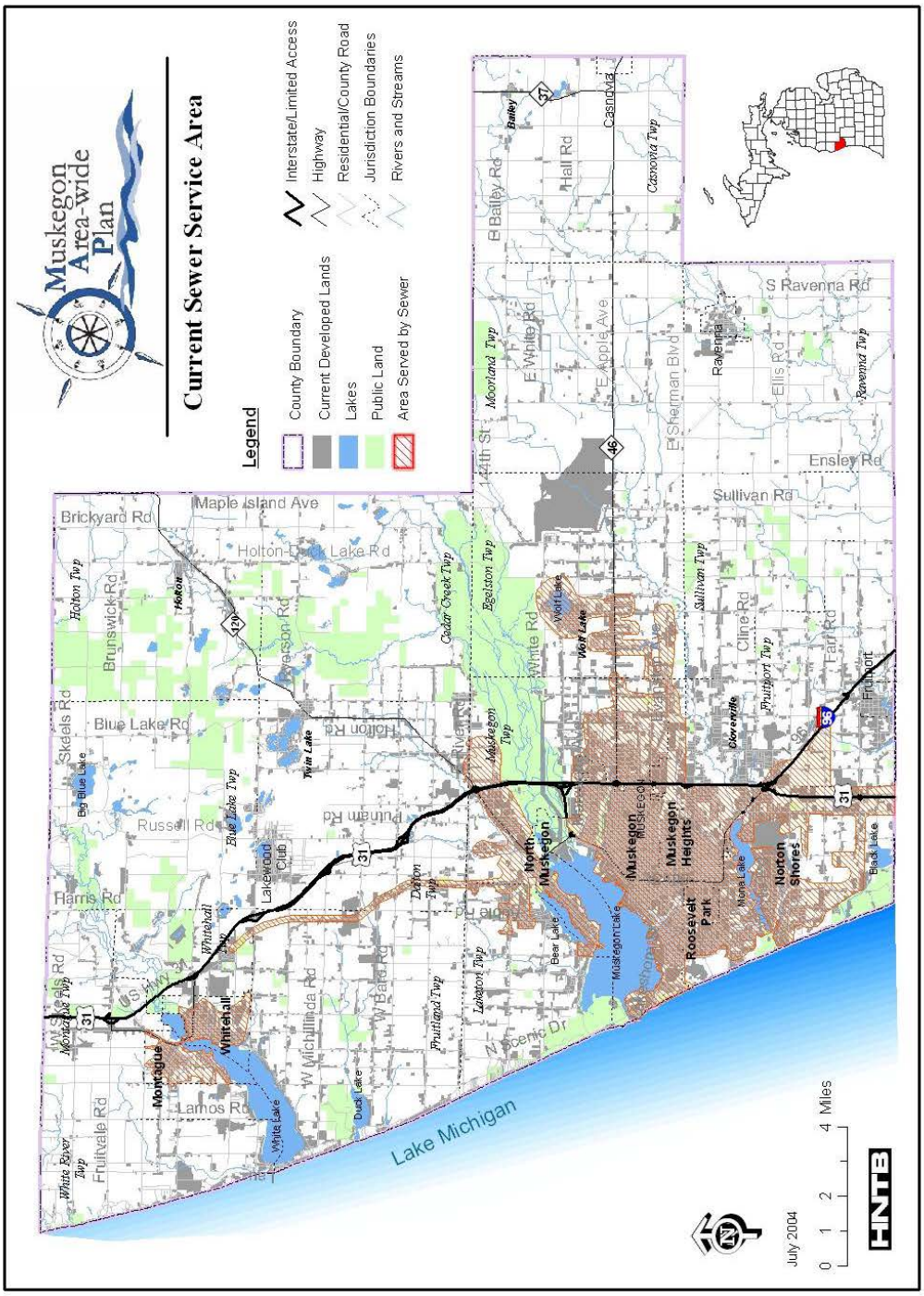
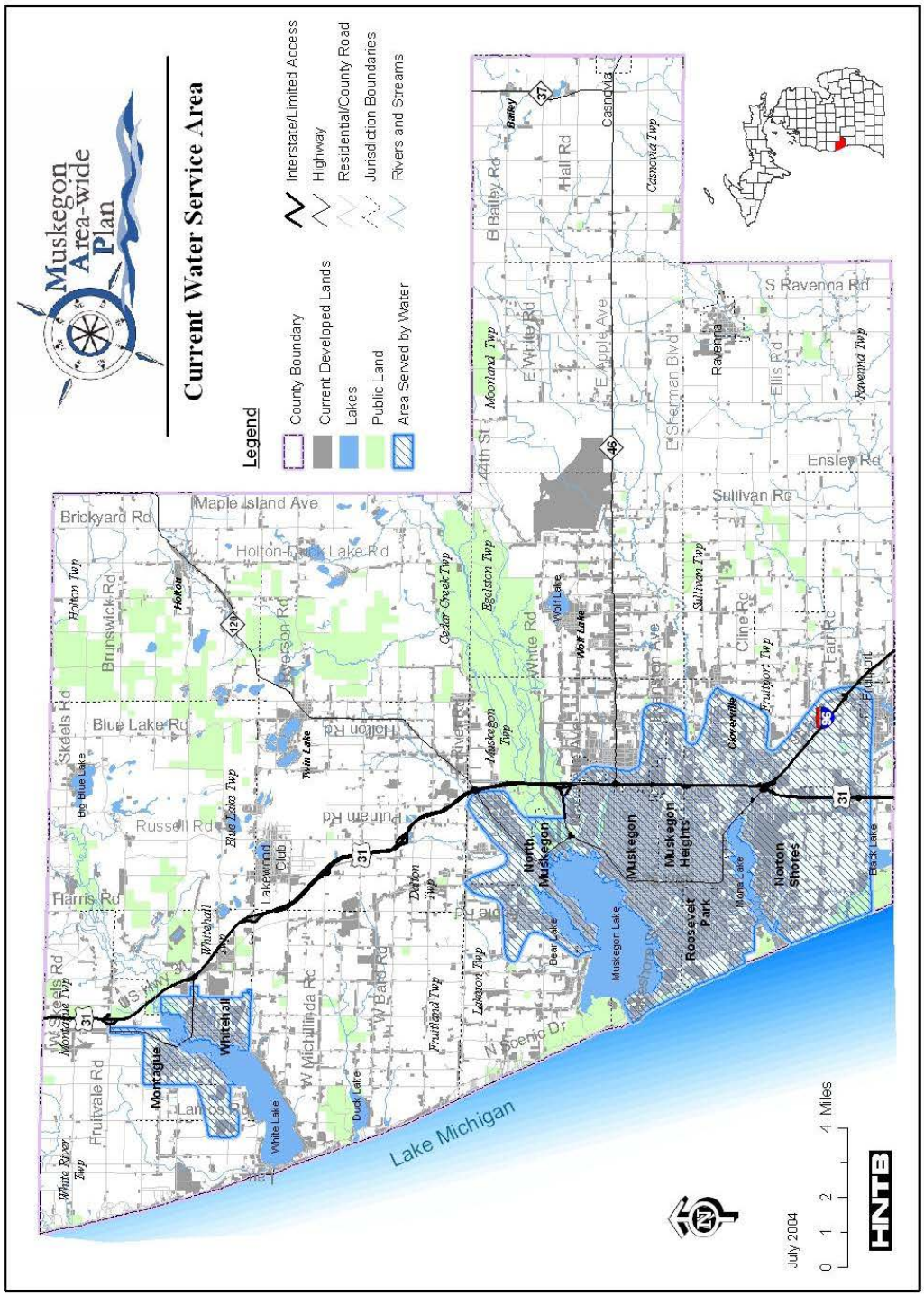


Figure 3.28: Water System



Public Water Supply Systems

Public water supply is the process of withdrawing, treating, and distributing water for a variety of residential, public, commercial, and industrial uses. Residential uses include water for drinking, household activities, and lawn and garden watering. Public uses include fire fighting, street washing, and supplying municipal parks, golf courses, and swimming pools. Commercial and industrial uses include providing water for hotels, restaurants, laundries, office buildings, manufacturers, and industrial complexes. Public water supply systems are the sole source of water for many of these facilities, while others use a combination of public and self-supplied water sources.

The Muskegon Water Filtration Plant is a conventional water treatment plant with a capacity of 40 million gallons per day (MGD). The average daily flow is 0.245 MGD and the peak daily flow is 20.744 MGD. Current excess capacity is 7.266 MGD (accounting for peak demand), and will be expanded to 19.266 MGD when the expansion was completed in 2005. Customers include not only the City of Muskegon, but also Muskegon Township, North Muskegon, Roosevelt Park and the County North side system. The system draws water from Lake Michigan and the intake pipe extends one mile out at a depth of forty feet.

The Muskegon Heights Filtration Plant is located at the end of Seminole Road in the City of North Shores. It has a capacity of 25.2 MGD. The average daily flow on an annual basis is 5.41 MGD. During the summer of 2012 (May – August) the plant treated 8.31 MGD, with a peak day of 17.262 (July 15). The average for the remainder of the year was 4.17 MGD with the lowest day being January 28 at 2.614 MGD. Current customers include the City of Muskegon Heights, City of Norton Shores and Fruitport Township. In recent years, there has been a dispute between the City of Muskegon Heights and the City of Norton Shores and Fruitport Township. Both the City of Norton Shores and Fruitport Township have signed an agreement with the City of Muskegon to be their water supply starting in 2015. Therefore, starting in 2015 these communities will no longer be customers of the Muskegon Heights water system.

The City of Roosevelt Park purchases its water from the City of Muskegon. The City of Roosevelt Park owns and operates a water distribution system that serves the entire City. The water system was installed in the 1940s and is in need of replacement. Last year the City completed a reliability study that recommended a 20 year replacement. The City adjusted the commodity rates accordingly and has begun this process. No significant capacity changes are needed other than increasing the minimum water main size, from 6” to 8”, and 12” trunk lines. The City pays the same rate as the Muskegon customers with a 1.35 multiplier. The City’s average daily demand is 0.455 MGD.

The cities of Whitehall and Montague have separate groundwater supplied water systems. In 1997 a water main was constructed under the White River to supply each other with water under emergency conditions.

The City of Montague has five wells, two elevated storage tanks, and 28 miles of water main. The City of Whitehall has five wells, two elevated storage tanks, and 32 miles of water main.

The City of Montague has a total capacity of 5.01 MGD with a firm capacity of 3.57 MGD. The City of Whitehall has 3.93

MGD total capacity, with a firm capacity of 1.99 MGD.

Both cities are exploring alternatives for expanding their capacity at the request of the Michigan Department of Environmental Quality (MDEQ). Alternatives studied by Prein & Newhof include groundwater wells east of US 31, surface water from Lake Michigan, and supply from the Muskegon County Northside System.

Schools

School performance is of interest to the County, not because of any great impact the plan has on the quality of schools, but because performance is a significant factor in residential location decisions. In addition, education typically represents the single-largest local public expenditure. People with children place a high priority on residing in a community with quality schools. Many would say that schools represent the most important community facility in terms of home or business relocation decisions. The magnitude and pattern of the County's growth directly impact school needs, including facility size and location, the number of staff needed, supplies, and the level of required investment for education. Muskegon County is broken up into 12 Constituent Districts, 3 Charter Schools and 9 Non-Public Schools.

Public Schools

Fruitport Community Schools

Fruitport Community Schools is a district located in both Muskegon and Ottawa counties and is near Hoffmaster State Park and the beautiful Lake Michigan Shoreline. The Village of Fruitport neighbors Muskegon, Spring Lake and Grand Haven. It is about 30 minutes from both Grand Rapids and Holland. A qualified and dedicated staff and faculty serve approximately 3,050 students with progressive educational programs and services. Known for outstanding academic and co-curricular programs, Fruitport Community Schools provide an environment that celebrates individuality, promotes problem solving through critical thinking and encourages students to fulfill their potential. Fruitport Community Schools consists of one high school building, one middle school building and three elementary schools; Beach Elementary, Edgewood Elementary and Shettler Elementary. There is also an Alternative High School, Adult Education program and an Early Childhood Center.

Holton Public Schools

Holton Public Schools is a pre K-12 rural public school district located in a close-knit community in the northeastern part of Muskegon County. It is known for its outstanding faculty, small class sizes, and quality facilities. The district operates one elementary building, one middle school, and one high school, all located on one campus. All schools are North Central Accredited. Studies are focused on four core areas: math, language arts, social studies, and science. Health education is delivered through the statewide Michigan Model lesson plans. Students at Holton are guided by a highly trained team of people who work together to identify and meet the needs of each child. Holton Public Schools have a proud past and a promising future.

Mona Shores Public Schools

Mona Shores Public Schools, Home of the Sailors, is a lighthouse school district located on the beautiful shores of Lake Michigan. The district serves the suburban cities of Norton Shores and Roosevelt Park, both acknowledged for their outstanding quality of life and commitment to education. The district operates four elementary buildings, one middle school, and one high school. Mona Shores has a highly

experienced Board of Education and have been recognized as a national leader in the areas of technology, facilities and architectural design, and performing arts. The district has also received state recognition in curricular offerings, academic achievement, athletics, and community services and support.

Montague Area Public Schools

The Montague Area Public School District encompasses 120 square miles and serves children from the City of Montague, Rothbury Village, Montague Township, White River Township and part of Grant, Otto, and Claybanks Townships. The district operates one elementary school, one middle school, and one high school, all located within the City of Montague. Opportunities for academic excellence and extracurricular programs abound in Montague Area Public Schools.

Beginning in 1992, Montague Area Public Schools have undergone a series of major improvements and additions. Achievement is enhanced when students experience high expectations, hands on learning in safe conditions and a quality environment.

Muskegon Public Schools

The Muskegon Public Schools, located in the City of Muskegon, encompasses an area approximately 19.3 square miles. It includes all of the City of Muskegon, as well as portions of the City of Norton Shores and Muskegon Township. The Muskegon Public School District consists of eight elementary buildings, two middle schools, one high school, one community education school, and other district buildings. The school district is unique in that it not only offers a comprehensive K-12 grade curriculum to its students, but it also operates the Muskegon Museum of Art and Muskegon Training and Education Center (MTEC). In addition, Muskegon Public Schools provides special education services for hearing impaired students from the other eleven school districts in Muskegon County, as well as a Vocational Consortium program which also serves the area.

Muskegon Heights Public Schools

Muskegon Heights Public Schools are located south of the City of Muskegon and north of the City of Norton Shores. The district operates six elementary schools, one middle school, and one high school. In 2001 the district embarked on a multi-phased enhancement project that included the construction of an award winning high school facility.

Muskegon Heights Public Schools have been wrestling with rising expenses, funding reductions, soaring health care and legacy costs, and declining enrollment which exhausted the district's fund balance and led to a deficit of $8.5 million as of June 30, 2011. On December 7, 2011, the Muskegon

School Districts and Charter Schools (2011-2012 School Year)	
School District	***# Students***
Fruitport	3,083
Holton	924
Mona Shores	3,801
Montague	1,488
Muskegon	4,932
Muskegon Heights	1,425
North Muskegon	1,048
Oakridge	1,892
Orchard View	2,749
Ravenna	1,067
Reeths Puffer	3,842
Whitehall	2,253
WayPoint	253
Three Oaks	296
Timberland	381
Source: Muskegon Intermediate School District	

Figure 3.29: School Districts

Heights Board of Education voted to officially request an Emergency Financial Manager (EFM) from the Superintendent of Instruction for the State of Michigan, Michael P. Flanagan. This request was granted by the Governor's office during the spring of 2012. The district was allowed to finish the school year. During the summer of 2012, The Muskegon Heights School District was the first district in the State of Michigan to become a charter school system. The district continues to be operated by the EFM. The Muskegon Heights Charter School is has entered its second year with the 2013/14 school year.

North Muskegon Public Schools

The North Muskegon Public Schools is the smallest district in the county and operates one elementary school, one middle school, and one high school, which was built in 1932. The community of North Muskegon has a long tradition of providing excellent education for its children. The small size of our school affords our students some very unique opportunities. Small class size enables teachers to monitor the success of their students more closely. Additionally, the size of the school district allows students to engage in a full range of sports and other extra-curricular activities.

Oakridge Public Schools

The Oakridge Public Schools operate two elementary schools, and one middle school, and one high school. Oakridge Public Schools is a comprehensive school district that provides programming and educational opportunities for all the district residents from pre-school age through adulthood. Oakridge Schools has an Early Childhood and Community Education Center, a Lower Elementary (grades 1-3), an Upper Elementary (grades 4-6), a Middle (grades 7-8) and High School (grades 9-12).

Orchard View Schools

Orchard View School District, with a population of approximately 17,000 residents is located adjacent to Muskegon and represents both rural and urban living. This Class B district serves over 2,800 students K -12th grade. The curriculum is progressive and is aligned with the Michigan Curriculum Frameworks and Grade Level Content Standards. School staff is dedicated to student learning and strives to provide quality instruction for all students. In fall 2006, the Orchard View School District opened a new state-of-the-art high school. The former high school was renovated and reopened as Cardinal Elementary. The Orchard View Public Schools operate one preschool/kindergarten school, two elementary schools, one middle school, and one high school.

Ravenna Public Schools

The Ravenna Public Schools operate one elementary school, one middle school, and one high school. Ravenna is a progressive community that values young people. The entire community strives to meet the educational, social and emotional needs of its students. The school district partners with community groups and units of government to provide social programs and safety-focused programs to better care for the changing needs of youngsters and their families. The entire core curriculum was revised to mirror the most recent state and federal mandates and guidelines. The community is small in size, but the citizens, in concert with the schools, have made a commitment to meet the needs of all students.

Reeths-Puffer Schools

The Reeths-Puffer Public Schools operate one preschool/kindergarten school, five elementary schools, one middle school, and one high school. In addition, the school district operates two alternative schools and

an adult education center. The mission of Reeths-Puffer Schools is to maximize the potential of all students and prepare them to compete and contribute as caring, knowledgeable citizens in the rapidly changing world. All schools in the district are accredited by the North Central Association. Students are provided a quality education and learning environment. Athletes compete in landmark facilities. Expansive fine arts offerings are demonstrated and celebrated in new state-of-the-art facilities. In the last five years, the band has consistently won state and national championships. Athletic, fine arts and vocational classes have also received state and local awards.

Whitehall District Schools

The Whitehall District Schools operate two elementary schools, one middle school, and one high school. Whitehall District Schools is located on the shores of Lake Michigan and White Lake in northern Muskegon County. It has a long tradition of excellence, working in partnership with a vibrant and supportive community. An elementary school with an early childhood education design was constructed in 1994, and a new state of the art high school opened in 2004. The high school is accredited through the North Central Association (NCA) and is committed to provide students with the best possible learning environment. White Lake Community Education, a comprehensive and award winning regional consortium, adds an array of enrichment courses and programs from birth to adulthood.

Charter Schools

Charter public schools, or public school academies, as they are known in Michigan, are independent public schools that operate under a performance contracted called a charter. Charter schools are made possible by a 1993 Michigan law. It empowers local and intermediate school districts, community colleges, and state universities to sign charters authorizing the schools. These contracts govern areas such as education goals, curriculum standards, assessment measures, governance, and funding.

There are two charter schools located in the region, and both are located in the City of Muskegon. They include: Three Oaks Public School serving kindergarten through fifth grade, and Timberland Academy serving kindergarten to 6th grade. WayPoint Academy, another charter school in Muskegon County closed its doors in June 2013. The school opened in 2001 and most recently served grades 6th through 12th.

Non-Public Schools

Private, or non-public schools, are schools which are owned and operated by an individual, a religious institution, a partnership, or a corporation other than the State, a subdivision of the State, or by the Federal government. They are usually supported primarily by other than public funds and teach the required subjects on each grade level for the same length of time as students must be taught in the public schools.

Within Muskegon County, there are 9 non-public schools. They are as follows:

- Greater Muskegon Catholic Schools
- Calvary Christian Schools
- Grace Christian Academy
- Michigan Dunes Montessori
- Muskegon Christian Elementary School
- St. Catherine's School
- Seventh Day Adventist School
- Western Michigan Christian High School
- West Shore Lutheran School

School Student Data

Muskegon City School District is considered to be a mid-sized city school district, while

there are six districts considered to be urban fringe districts and five that are rural districts inside the metropolitan area.

Enrollment in the county public schools was 28,512 students in the fall of 2011 according to the Muskegon Area Intermediate School District (MAISD). Over 40 percent of the students in the county are economically disadvantaged or eligible for free or reduced lunch. This is higher than the state average of 30.7 percent. More than fifteen percent of the public school students in the county are considered to be special education students.

The school personnel full time equivalent versus enrollment full time enrollment equivalent in Muskegon county schools ranges from eight in North Muskegon Schools to nearly eighteen in the Muskegon Heights School District. The statewide average student/teacher ratio is 17.6; five districts in the county have higher student/teacher ratios.

Standardized Test Scores

Standardized test scores are often used as indicators of school performance. The Michigan Education Assessment Program (MEAP), American College Test (ACT), and the Scholastic Aptitude Test (SAT) are standardized test scores that are collected and compared for Michigan school districts.

The MEAP test is given throughout the State of Michigan at various grade levels. It is used to judge the performance of students in reading and math at given intervals using the content standards prescribed by state educators. It was designed to assure that all students across the state received the same training and tested on the same subject matter. According to the Office of Educational Assessment, no other tests measure what Michigan students should know and be able to do against established Michigan content standards and performance standards. Michigan's MEAP tests are based on the Content Standards developed by Michigan educators and approved by the Michigan State Board of Education. The tests are criterion-reference, meaning that each student's results are judged and reported against a set performance standard. If a student meets the

Average Classroom Size by School District (2011-2012 School Year)

School District	*Elementary School*	*Middle School*	*High School*
Fruitport	22	27	28
Holton	19	21	19
Mona Shores	24	27	27
Montague	27	27	27
Muskegon	21	26	26
Muskegon Heights	24	20	23
North Muskegon	22	25	25
Oakridge	25	26	25
Orchard View	24	27	27
Ravenna	24	20	23
Reeths Puffer	22	27	28
Whitehall	24	26	26

Source: Muskegon Intermediate School District

Figure 3.30: Average Classroom Size by School District

standard, it means he/she meets expectations on recommended state curriculum. In theory, all students in the state could achieve the standard in every subject.

In terms of the 2011 MEAP proficiency rate for third graders, Muskegon County schools as a whole are at 63 percent proficiency rate in reading which is just over the state average of 62 percent proficiency rate for reading. Muskegon County Schools as a whole at 30 percent proficiency was below the state's average of 36 percent proficiency in mathematics.

In Michigan more students take the ACT than the SAT. ACT participation statewide averages 68 percent, while SAT participation is approximately eight percent. The ACT is graded on a 36 point scale. The statewide average score is 21. The average score for Muskegon county schools is comparable to the state average. Individual districts average scores vary considerably.

The County and the school districts should continue to coordinate long-range plans to select school sites, establish multiple-use facilities, and ensure that school facilities have adequate utilities, fire protection, police protection, street access and non-motorized access. As the population of the County continues to grow, coordination efforts will need to be continued in order to maintain a high standard and quality of school systems in Muskegon County.

Higher Education

The state of Michigan has fifteen public universities and twenty-eight public community colleges in addition to the numerous private institutions of higher education. Grand Valley State University (GVSU) in Allendale is the closest main campus for a public university to Muskegon County. GVSU has a 2011-2012 student enrollment of 24,662 of which 21,236 are undergraduates. Muskegon Community College, in the City of Muskegon, is one of the state's public community colleges. The College is home to award-winning faculty and a diverse community of more than 5,000 dedicated students, athletes, artists and community leaders.

Baker College is a private college also located in the City of Muskegon. It is the main campus for the Baker College System. 2011-2012 Baker College System enrollment is over 43,000 students on 9 campuses, 6 branch locations, and online worldwide. In 2009 the Baker College Culinary Institute of Michigan was built. It began in 1997 with just 40 students and has grown to become one of the top culinary arts colleges and includes the new 40,000-square-foot facility in downtown Muskegon with a full-service restaurant, pastry and coffee shop.

The Stevenson Center, formerly the Muskegon Center for Higher Education, is a 93,500 square foot building constructed on the picturesque campus of Muskegon Community College. The Center houses a unique academic consortium comprised of Muskegon Community College, Ferris State University, Grand Valley State University, and Western Michigan University. The Center contains 40 classrooms/conference rooms including a computer classroom and laboratory, a large conference room, a large lecture hall, and a science room. A catering kitchen on the second level accommodates food service needs for banquets, meetings, conferences, and receptions. Communication technology advancements allow for a variety of instructional delivery systems. Each room in the facility is wired for voice, video and data transmission. Teleconferencing and integrated distance learning technology is available as well. The Muskegon Community College Graphics Technology instruction and reproduction departments, Media Services

Department, and the Television Studio are all housed in the Stevenson Center.

Additionally, Grand Valley State University, Ferris State University, and Western Michigan University have campuses in Muskegon County.

Other colleges and universities within 100 miles include Aquinas College, Calvin College, Cornerstone College, Davenport College of Business, Grand Rapids Community College, ITT, Kendall College of Art and Design, the Reformed Bible College in Grand Rapids, as well as Central Michigan University in Mount Pleasant, Ferris State University in Big Rapids, Grand Valley State University in Allendale, Hope College in Holland, Kalamazoo College and Western Michigan University in Kalamazoo, Lake Michigan College in Benton Harbor, Montcalm Community College in Sidney, and Southwestern Michigan College in Dowagiac.

Libraries

The Muskegon Area District Library (MADL) has a collection of 230,000 books and periodicals; in addition, there are 4,800 CDs, records, cassettes and other audio materials, as well as over 2,000 video items, such as DVDs and VHS tapes. Internet terminals are available for use by the general public. MADL serves 21 local governmental units throughout Muskegon County. The residents are taxed .75 mills. Every resident in Muskegon County is welcome to use all of the MADL branches, though the millage does not include residents of the City of Muskegon and Muskegon Public School District, which are served by Hackley Public Library; and the City of Whitehall and the Whitehall Public School District, which are served by White Lake Community Library. The system comprises 10 branch libraries, plus one bookmobile. Branch libraries are located in Montague, Holton, Dalton, North Muskegon, Muskegon Township, Egelston Township, Muskegon Heights, Norton Shores, Ravenna, and Fruitport. Annual expenditures on the library collection total $220,000. Patrons make 330,000 visits annually, and check out materials 560,000 times. Thirty-two percent of all check-outs are children's materials.

Hackley Public Library, located in Muskegon, has a collection of 126,000 books and periodicals; in addition, there are over 2,000 CDs, records, cassettes and other audio materials, as well as over 300 video items, such as DVDs and VHS tapes. Internet terminals are available for use by the general public. Staffing consists of 19 employees, of whom 5 are fully accredited librarians, plus volunteers. Annual expenditures on the library collection total $75,000. Patrons make 88,000 visits annually, and check out materials 80,000 times. Twenty-nine percent of all check-outs are children's materials.

White Lake Community Library, located in the City of Whitehall, has a collection of 30,000 books and periodicals; in addition, there are 1,200 CDs, records, cassettes and other audio materials, as well as 660 video items, such as DVDs and VHS tapes. Internet terminals are available for use by the general public. Staffing consists of five employees, including one fully accredited librarian, and volunteers. Annual expenditures on the library collection total $17,600. Patrons make 66,000 visits annually, and check out materials 63,000 times. Fifteen percent of all check-outs are children's materials. Hundreds of people each day visit the library to utilize print and electronic reference resources, access the Internet through the library’s wi-fi service, or participate in or attend one of the Library’s many events.

Land Use

The primary authority to plan for land use and utilize zoning as a land use policy implementation tool lie at the township and municipal level in the state of Michigan. Until 2008, the legal authority for land use planning at the township level is established under the Township Planning Act 168 of 1959, and municipal planning authority was established under the Municipal Planning Act 285 of 1931. In 2008, the Michigan Planning Enabling Act, PA 33 (an amendment to the Michigan Zoning Enabling Act) was passed and signed into law. P.A. 33 replaced the three existing planning enabling acts in Michigan:

- Municipal Planning Act (being P.A. 285 of 1931, as amended, M.C.L. 125.31 *et seq.*)
- County Planning Act (being P.A. 282 of 1945, as amended, M.C.L. 125.101 *et seq.*)
- Township Planning Act (being P.A. 168 of 1959, as amended, M.C.L. 125.321 *et seq.*)

The Zoning authority for townships is established under the Township Zoning Act 184 of 1943. Zoning authority for cities and villages was established under the City and Village Zoning Act 207 of 1921.

State law does provide for regional planning. Under the Regional Planning Act 281 of 1945, "a regional planning commission may conduct all types of research studies, collect and analyze data, prepare maps, charts, and tables, and conduct all necessary studies for the accomplishment of its other duties; may make and coordinate the development of plans for the physical, social, and economic development of the region, and may adopt, by resolution of its governing body, a plan or the portion of a plan so prepared or any objective consistent with a plan as its official recommendation for the development of the region." It is in this context that land use will be discussed as a part of the Muskegon Area-wide Plan.

In Muskegon County, there are 27 planning and zoning jurisdictions. Each of the townships has planning and zoning jurisdiction. Additionally the cities of Montague, Muskegon, Muskegon Heights, North Muskegon, Norton Shores, Roosevelt Park, and Whitehall and the villages of Casnovia, Fruitport, Lakewood Club, and Ravenna have planning and zoning authority.

Muskegon County has a land area of 509 square miles, or 325,760 acres. The 2010 population density was 338 people per square mile. Muskegon County, like many areas in Michigan, has abundant inland water resources. The five largest named lakes in the county have a combined surface area of 5,102.5 acres, or 1.6 percent of the surface area of the county. The largest lake is Muskegon Lake, which has an area of 4,150 acres alone. Additionally, 12,500 acres of Muskegon County's area are controlled by the State of Michigan in the form of Duck Lake State Park, Muskegon State Park, Hoffmaster State Park (part in Ottawa County), and the Muskegon State Game Area (Muskegon County portion only).

The character of Muskegon County ranges from industrial urban areas to villages, shoreline areas, and rural areas. The urban areas have a rich industrial heritage, much of which was dependent on the county's location on Lake Michigan. Ravenna is a small agricultural community that also plays a role as a commuter city to both Grand Rapids and Muskegon. Casnovia is situated on top of a hill overlooking mid-west Michigan's beautiful orchard country. Lakewood Club is a quiet residential community situated around beautiful Fox

Lake. Fruitport is a scenic town including a park on the lake, adjacent to the center of town, where one can watch the boats coming to visit. The shoreline is changing along Muskegon Lake and White Lake. Much of the shoreline was once dominated by industrial activity, but recently there have been efforts to restore public access and beaches. Agriculture, particularly orchards, remains important to the character of rural Muskegon County.

The developed area of Muskegon County increased by 24 square miles, or 4.7 percent, between 1978 and 1998. While much of the new development occurred in the areas between existing urban areas, there was also significant new development in Fruitport, Dalton, and Mooreland townships. Map 3.32 highlights the decentralized nature of the new development.

Land uses are typically classified as agricultural, residential, commercial/office, industrial, public/semi-public, or recreational in nature. Residential uses include all types of structures where people live. Commercial/office space is used in the sale of goods or services and/or the production of service outputs. Industrial land uses are for the manufacture, assembly, and distribution of goods. Public and semi-public uses include government owned lands and schools.

There are 337,088 acres of land in Muskegon County. Of that, nearly 162,200 acres or 48 percent is in forest land. An additional 27 percent is in agricultural or open space uses. Water accounts for 3.7 percent of the surface area and wetlands account for 2.2 percent. These combined uses are more than 80 percent of the land in the county. Nearly 30 percent of the land is

Land Use by Category

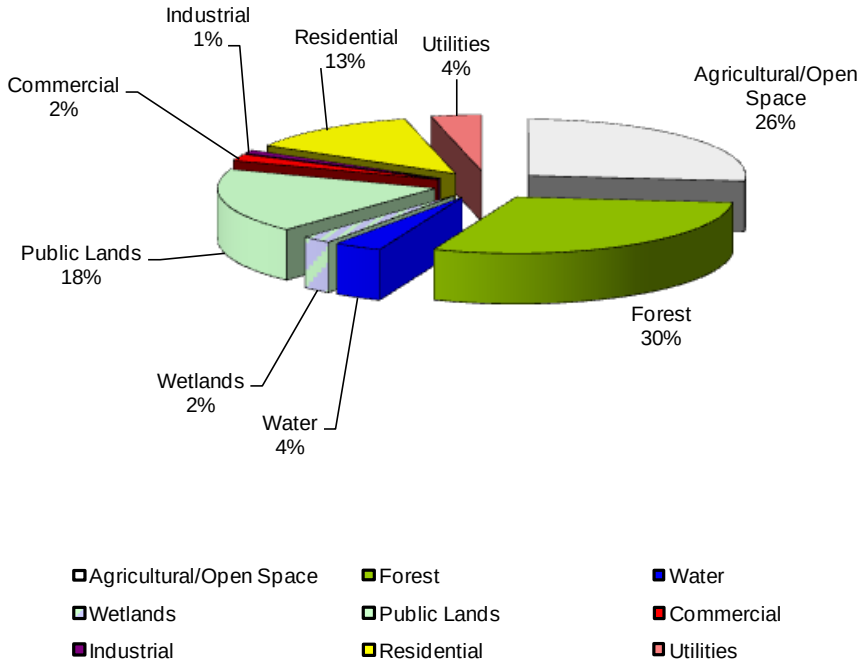
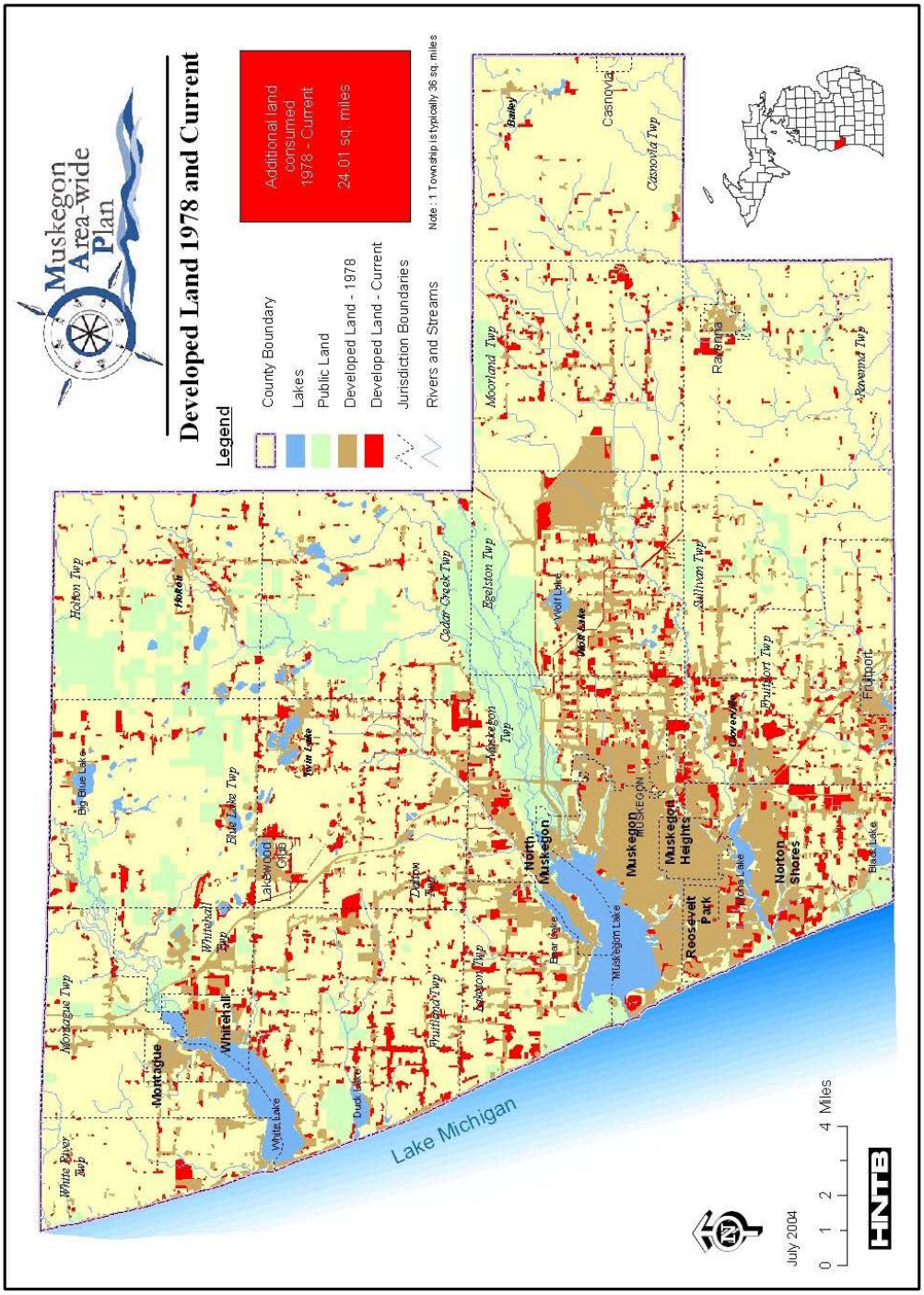


Chart 3.31: Land Use by Category

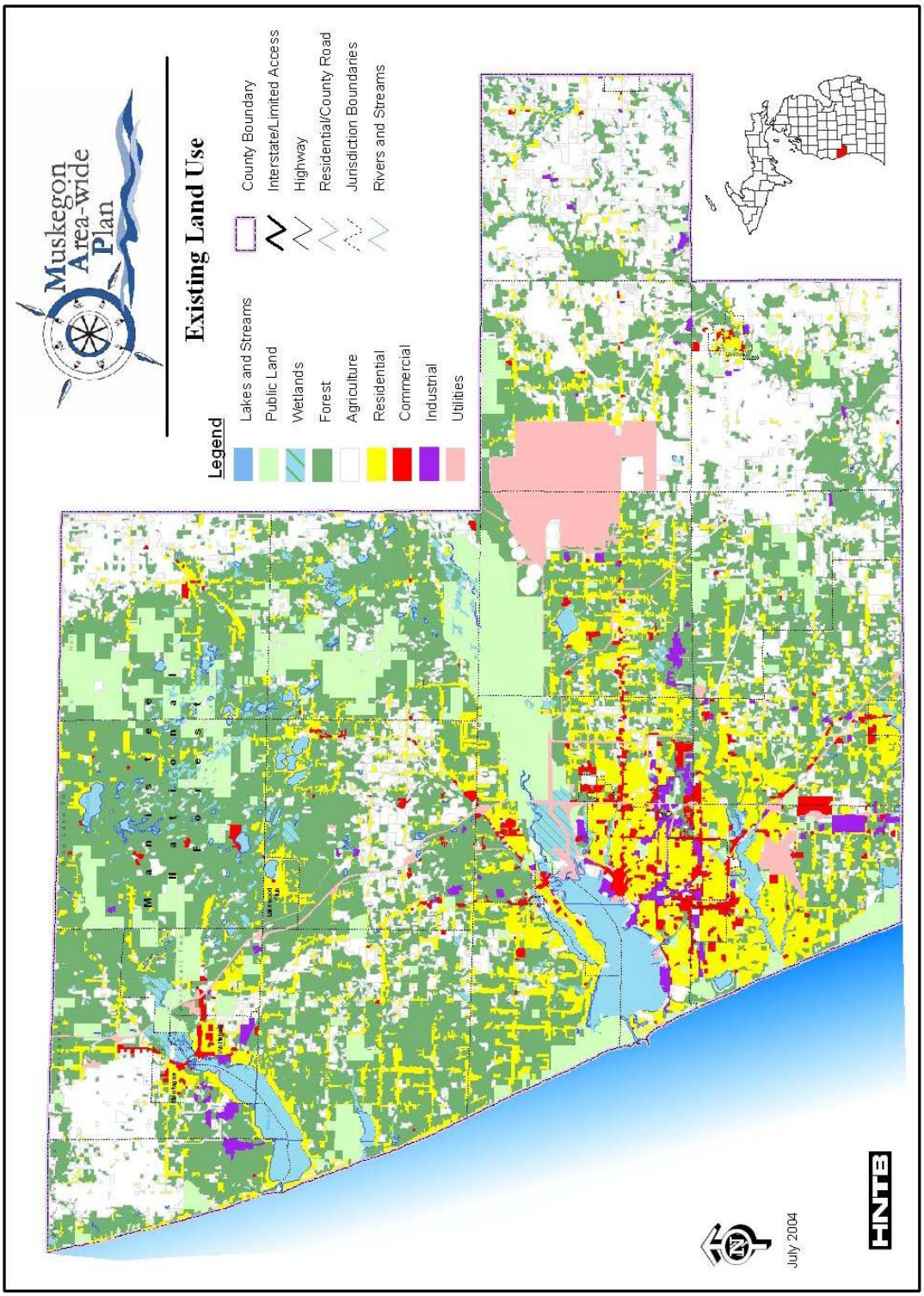
in uses such as forest, water, and state and federal lands that are not likely to be developed.

The largest urban land use in Muskegon County is residential uses, occupying more than 43,000 acres, or 12.9 percent of the land area. Commercial uses account for nearly two percent of the land area and industrial uses account for another one percent. Utilities account for 3.7 percent, largely due to the amount of land at the wastewater treatment facility. Urban land uses in Muskegon County are concentrated near Muskegon Lake and Mona Lake, and near White Lake.

Map 3.32: Developed Land, 1978 and Current



Map 3.33: Existing Land Use



Residential

The dominant land use in the county is residential uses, which account for 12.9 percent of all land uses. This is the dominant land use in the county other than agriculture, forest, water, wetlands, and open space. Residential uses include single-family homes, multi-family homes, and mobile homes. Multi-family residences account for one half of one percent of the land use in the county. There are a variety of housing types in the county including single family homes, mobile home parks, apartment buildings, loft apartments, senior communities, and condominium developments. The higher density residential areas are concentrated near the urban centers of Muskegon, Muskegon Heights, North Muskegon, Norton Shores, and Roosevelt Park. There are also higher density residential areas in Fruitport, Montague, Ravenna, Whitehall, and Wolf Lake.

Commercial/Office

Commercial land accounts for 1.9 percent of existing land uses in Muskegon County. Seven commercial corridors have been identified in Muskegon County:

- M 46/Apple Avenue
- Colby Road/Business US 31
- Henry Street
- M 120/Whitehall Road
- Sherman Boulevard
- Sternberg Road/Harvey Street

Commercial land also includes office spaces. The heaviest concentration of office space is in the Muskegon central business district. There is also a significant amount of office space located in Norton Shores. All together there is approximately 1,000,000 square feet of office space in Muskegon County, with an additional speculative office space anticipated. Most of the office space in the county is more than 15 years old and has physical signs of deterioration.

Retail is also a major commercial function. Some of the top shopping destinations in the Muskegon area are the Lakes Mall and Lakeshore Marketplace along the intersection of Sternberg Road and Harvey Street, Sherman Boulevard near US 31, Henry Street near Norton Avenue, and M120/Whitehall Road near US 31. Shopping out of town has declined since the construction of the Lakes Mall (Alexander).

Meijer is a major retail force in the Muskegon Area. It remains the top grocery location, with three stores in Muskegon County. Wal-Mart is another destination in the county for groceries with two stores in the county and another proposed store in northern Muskegon County, as well as Plumb's and Orchard Market with locations throughout Muskegon County. Meijer is also the major player in the home

improvement market, followed by Menards, Lowe's, and Home Depot.

Downtown Muskegon

Downtown Muskegon has been going through a transformation since the close of the downtown Muskegon Mall in 2002. The defunct 23 acre property was purchased by the Downtown Muskegon Development Corporation, a local group made up of the Community Foundation for Muskegon County, Paul C. Johnson Foundation, Lakeshore Chamber of Commerce, and the City of Muskegon. The mall was torn down a few years later and the original street grid replaced and readied for new development.

The 23 acre site and the surrounding downtown area look quite different and continue to transform. Some of the new construction recently completed in the downtown Muskegon area includes Baker College's Culinary Institute of Michigan (CIM); both the Hines and Sidock office buildings; Grand Valley State University's Annis Water Resources Institute (AWRI), AWRI Field Station, and Michigan Alternative & Renewable Energy Center (MAREC); the Social Security Building, Hot Rod Harley Davidson, and PNC Bank Building.

In addition to the new construction, several renovation projects have also been completed in the greater downtown area. Some of these projects include the Amazon Apartment Building, Fricano Center (formerly known as the Hartshorn Center), WaterMark Center, Artworks Building, the Century Club Building, Russell Block Market, and the United Way Building. Approximately $125 million worth of investment for both new construction and renovations have been completed in downtown Muskegon.

There are also a number of new projects either currently under or proposed totaling an addition $46 million in the downtown area. Some of the new projects including the relocation of the Muskegon Farmers Market, a new Transit Center/Facility, the High Point Flats (market rate apartments in the former Hackely Bank Building), and Terrace Point Landing a development of single family homes along the waterfront of Muskegon Lake.

Commercial Corridors

M46/Apple Avenue: Apple Avenue is a five lane corridor running east/west through the central portion of the county. It is lined with strip malls and restaurants. There is one big box business (Kmart) located along the corridor near the US 31 interchange.

Colby Road/Business 31: Colby Road is a local business route through northern Muskegon County's White Lake area. It is primarily a three lane corridor, although is five lanes near the US 31

interchange. The corridor is lined with local retail and commercial business.

Henry Street: Henry Street is a five lane corridor running north/south through the western portion of the county. The corridor is lined with strip malls, restaurants, and banks. It has two large retailers located near Norton Avenue including Meijer and Wal-Mart. There is also a big box vacant building which was formerly a Kmart.

Sherman Boulevard (Near US 31 interchange): Sherman Boulevard is a major corridor which experienced significant growth during the early 2000's. Although, in recent years, the area has experienced some vacant big box stores and strip malls due to the relocation of business to the Sternberg Road/Harvey Street corridor. However, it still remains one of the County's major retail areas with several big box developments including Wal-Mart, Sam's Club, and Lowe's. The corridor also has many smaller retail stores and restaurants including the most recent development of Panera Bread. All commercial and retail development is located east of the interchange. Immediately west of the interchange is the Mercy General Health Partners Mercy Campus surrounded by several related medical offices.

Sternberg Road/Harvey Street: This is a major retail area located in southern Muskegon County at the corner of Sternberg Road and Harvey Street. Development in this area includes The Lakes Mall, Kohl's, Lakeshore Market Place, Menard's, and many restaurants and smaller retail stores. Other development in the area includes apartment buildings, the Lakeshore Medical Center, condominiums and small office buildings.

M120/Whitehall Road: Whitehall Road is primarily a three lane corridor (five lane near US 31 interchange) running southwest/northeast through central Muskegon County. The corridor includes many strip malls with local retail and commercial establishments.

Industrial

Industrial land accounts for an additional one percent of the land in Muskegon County. There are several industrial areas in the county, though the largest industrial areas are near Muskegon Lake and in Muskegon Township.

Harbor 31 (Muskegon Lakeshore SmartZone)

Muskegon is one of eleven communities statewide that has partnered with the Michigan Economic Development Corporation to develop a university-supported technology park through the SmartZone program. Michigan SmartZones are collaborations between universities, industry, research organizations, government, and other community institutions intended to stimulate the growth of technology-based businesses and jobs by aiding in the creation of recognized clusters of new and emerging businesses, those primarily focused on commercializing ideas,

patents, and other opportunities surrounding corporate, university or private research institute R&D efforts. SmartZones provide distinct geographical locations where technology-based firms, entrepreneurs and researchers can locate in close proximity to all of the community assets that will assist in their endeavors. SmartZones coordinate all of the community assets and services necessary to support technology development in the knowledge based economy. Harbor 31 (the Muskegon SmartZone) includes Edison Landing which is a mixed-use development that combines university resources with new energy technologies, corporate offices, residential, and retail offerings. The Michigan Alternative & Renewable Energy Center is also in the SmartZone and is operated by Grand Valley State University. It includes a business incubator, research facility, and a conference center. Of the 34 total acres on the site, 26 are available. The site is zoned for convenience and comparison business.

Renaissance Zone Program

There are four Renaissance Zones and six subzones in Muskegon County. The Renaissance zones are: Muskegon County Business Park North, Muskegon Mall, Seaway Drive Industrial Park, and Shaw Walker. The subzones are: Hoyt Street Site, Mona View Development, Sanford Village, Seaway Drive, Western Avenue, and Whittaker Electric. Renaissance Zones are regions of the state set aside as virtually tax-free for any business or resident locating in or moving to one of the zones. This program is currently being phased out.

Evanston Avenue Industrial Park

The Evanston Avenue Industrial park is a heavy industrial park located in Egelston Township. The site is less than 45 acres and approximately 34 acres remain available.

John Wierengo Industrial Park

The John Wierengo Industrial Park is an 18 acre industrial park located in Muskegon Township. There are approximately seven acres that are unoccupied.

Medendorp Industrial Center

Located in the City of Muskegon, the 360 acres industrial center has 250 developed acres. All 250 acres are currently occupied.

Montague Industrial Park

The Montague Industrial Park is a 158 acre park in the City of Montague, with 31 acres available. The park is zoned for light industrial uses.

Muskegon County Business Parks

The Business Park East is located in Egelston and Moorland Townships with a total of 2,200 available acres; it is planned for large tenants that need 100 acres or more. The land will be rezoned from agricultural to general industrial, and currently is not accessible to potable water.

The Business Park North is located in Dalton Township and has 210 acres available. The zoning is for industrial uses. It was an abandoned industrial Superfund site that has been cleaned and redeveloped as a business park under the Renaissance Zone program.

Muskegon County Airport Business Park

The Airport Business Park is a 76 acre park located in the City of Norton Shores. Nearly 33 acres remain available. The site is zoned as a special use district with light industrial and office uses considered acceptable uses. The park is a Verizon Smart Park, which means it is wired with fiber optics and data-quality copper cables allowing for high-speed, reliable data, voice, and video transmission.

P. Don Aley Industrial Park

This 31 acre park is located in Muskegon Township. All 31 acres are available for light industrial uses.

Norton Industrial Center

This 137 acre center is located in the City of Norton Shores and has 16 acres available. The property is zoned for general industrial uses.

Port City Industrial Center

This 425 acre center is located in the City of Muskegon. 120 acres are available and the property is zoned for general industrial uses.

Porter Properties

This is a 38 acre site located in the City of Norton Shores. There is currently nine acres available with the property zoned as a PUD, light industrial/office.

Seaway Industrial Park

The Seaway Industrial Park is a 55 acre industrial park located in the City of Muskegon. Forty acres of the light industrial zoned land remain available.

Whitehall Industrial Park

This is a 345 acre industrial park with 65 acres available in the City of Whitehall. The land is zoned for light industrial uses.

Whitehall Township Business Park

This is a 40 acre industrial park in Whitehall Township. More than 13 acres remain available. The land is zoned for light industrial uses.

Public/Semi-Public

Public and semi-public uses include public buildings and facilities such as city halls or village halls, township halls, post offices, fire stations, police stations, and libraries. This category also includes public educational facilities. Public uses account for 1.1 percent of land uses in Muskegon County.

Government facilities

There are 28 jurisdictions in the MAP planning area. These jurisdictions include Muskegon County, the 16 townships in the county, seven cities (Muskegon, Muskegon Heights, Montague, North Muskegon, Norton Shores, Roosevelt Park, and Whitehall), and the villages of Fruitport, Lakewood Club, Ravenna, and Casnovia. The facilities of each of these jurisdictions are detailed elsewhere in the plan.

Schools

There are 38 public elementary schools, 13 public middle schools, and 12 public high schools in Muskegon County. Three Charter schools are located in the region, all located in the City of Muskegon. Also within Muskegon County, there are 14 non-public schools.

The Montague Area Public Schools district operates one elementary school, one middle school, and one high school, all located within the City of Montague.

The Whitehall District Schools operate two elementary schools, one middle school, and one high school.

The Holton Public School district operates one elementary school, one middle school,

and one high school, all located on one campus.

The Oakridge Public Schools operates two elementary schools, one middle school, and one high school.

The Reeths-Puffer Public Schools operates one preschool/kindergarten school, five elementary schools, one middle school, and one high school.

The Orchard View Public Schools operates one preschool/kindergarten school, two elementary schools, one middle school, and one high school.

The Muskegon Public Schools district operates 10 elementary schools, two middle schools, and one high school campus. It also operates the Muskegon Museum of Art and the Muskegon Training and Education Center (MTEC).

The Muskegon Heights Public Schools district operates six elementary schools, one middle school, and one high school.

The North Muskegon Public Schools operates one elementary school, and one middle school, and one high school.

The Fruitport Community School district operates three elementary schools, one middle school, and one high school.

The Mona Shores district operates four elementary buildings, one middle school, and one high school.

The Ravenna Public Schools operates one elementary school, one middle school, and one high school.

Churches

There are many churches in the county covering a range of denominations.

Recreation

Recreational uses cover approximately 25,000 acres and account for 7.4 percent of land in Muskegon County. There are over 20 jurisdictions that provide park and recreation opportunities in the county. The federal and state governments manage more than 23,000 acres of park and recreation land in the county.

The Manistee National Forest lies in northeast Muskegon County and covers approximately 12,500 acres. State parks account for more than 2,600 acres in Muskegon County. The facilities that are located in the county include Duck Lake State Park, Muskegon State Park, and Hoffmaster State Park (part in Ottawa County). The Muskegon State Game Area is a 14,000 acre facility, with 8,637 acres in Muskegon County and approximately 5,300 acres in Newaygo County.

There are more than 700 acres of county parks. The county parks include:

- Blue Lake County Park, located on Big Blue Lake north of Muskegon. This 25 acre park has nearly 600 feet of frontage along the southeast shore of the Lake.
- Deremo County Park is a paved launch that is maintained for boating, water-skiing and fishing on Big Blue Lake.
- Meinert County Park is located on Lake Michigan north of Montague. The Park is approximately 88 acres.

- Patterson Park is located on the Little Rio Grande Creek two miles southwest of Ravenna. The park is 28 acres on the river flood plain.
- Pioneer Park is a 145-acre park located on Lake Michigan north of Muskegon with over 2,000 feet of white sand beach frontage.
- Twin Lake County Park is located on Twin Lake north of Muskegon. Twin Lake Park is a 15-acre park.
- Half Moon Lake
- Moore County Park in Casnovia

The county also has the 11,700 acre wastewater facility that is considered recreation land.

There are also more than 1,600 acres that are controlled by the various municipalities in the county and nearly 800 acres controlled by townships, 837 acres by cities, and nearly 50 acres controlled by villages. Major parks in the City of Muskegon include Fisherman's Landing, McGraft Park, Pere Marquette Park, Bronson Park and Sheldon, Seyferth, and Beachwood Parks provide passive and active recreation opportunities to adjoining neighborhoods. The City of Montague owns and operates four community parks. The City of North Muskegon owns and operates five community parks and recreational facilities. The City of Roosevelt owns and operates eight community parks and recreational facilities.

Ten of the townships operate parks: Casnovia, Dalton, Egelston, Fruitland, Fruitport, Laketon, Muskegon, Sullivan, Whitehall, and White River. There are also fourteen golf courses in the county. Twelve of the courses are open to the public.

Three villages also operate parks: Fruitport, Lakewood Club, and Ravenna.

The county is also home to Michigan's Adventure Amusement Park, the largest amusement park in the state. The park features one of the world's longest wooden roller coasters.

Parks are discussed in more detail later in this chapter.

Agriculture

The unique geographic qualities of Michigan encourage the production of a wide variety of agriculture crops. Michigan has relatively high-quality soils and a range of microclimates created by glacial landforms and the surrounding Great Lakes (Wyant, 2003). Michigan agriculture is among the most diverse in the nation. Farmers in the state produce more than 125 agriculture products, second only to California in agriculture diversity (Wyant, 2003). Overall agriculture is the second largest industry in the state, contributing more than $37 billion to the economy (Wyant, 2003).

According to the 2007 US Census of Agriculture, livestock and crop sales in Michigan totaled $5.7 billion in 2007, a 53 percent increase from 2002. Michigan's farm economy produced higher sales in 2007 than five years earlier, with the only exception being in the sector of nursery and greenhouse sales. Nationally, the census showed that a growing number of farms are owned or operated by minorities and women. The number of Michigan farms operated by women increased 40 percent between 2002 and 2007. The sales of milk and other dairy products totaled $1.85 billion in 2007, ranking Michigan seventh nationally.

As for Muskegon County, farming is a significant component of the local economy, and the monetary value of the goods produced is an indication of the importance to society of those goods. Muskegon County supports the production of a wide variety of agriculture crops including corn, soybeans, hay-alfalfa, small grains, vegetables and fruit orchards. In addition to agriculture crops, dairy, cattle, sheep, and hog production facilities also contribute to the value of agriculture in the County. Of Michigan's top ten rankings, Muskegon County ranks #2 in number of turkeys, #8 in revenue from fruit, tree nuts, and berries, and #10 in number of food service establishments (745). Muskegon County also ranks second in the state in cucumbers. In 2002, there were 24 farms with 3,233 acres in cucumbers. By 2007, there were 16 farms with 2,414 acres in cucumbers. Muskegon County received $790,000 in federal commodity payments in 2007.

Farm Trends and Statistics

The total number of farms in Muskegon County is 525, with 79,663 acres in farm land (25.0% of total area). Pasture, forage and other non-crop farmland comprises 13,499 acres. The number of farms using organic production is 14, with eight certified organic farms and 231 acres of cropland in organic production. An additional 251 acres of cropland is in transition to organic. The total market value of agriculture production in Muskegon County is $91,176,000, with total crop sales at $40,327,000 and total livestock sales at $50,849,000. *(2007 Census and Michigan Department of Agriculture Food and Agricultural Systems Profile, 2009)*

Muskegon County grows 30,495 acres of corn, soy and wheat (38.3% of cropland) and 2,289 acres of vegetables (2.9% of cropland). Fruit and tree nuts comprise 3,736 acres. Revenue from fruits, tree nuts and berries is $14,651,000. There are 26 dairy farms in Muskegon County. Revenue from milk and other dairy is $22,394,000. There are 302 animal operations with a total of 23,563 animals. Locally important products include nursery, greenhouse, floriculture and sod with revenues of $12,300,000.

Currently, 238 Muskegon County farm operators list farming as their primary occupation, with a total of 525 farms using a total of 79,663 acres of land. The average farm size is 152 acres. In contrast, there were 289 farm operators who listed farming as their primary occupation in 2002, with a total of 545 farms using 73,918 acres. The average farm size was 136 acres. This represents an 18% reduction in farming as a primary occupation from 2002 - 2007/present.

The average size of a Muskegon County farm decreased more than 40 acres between 1997 and 2002. In 1997, more than 70 percent of the farms were between 10 and 180 acres in size. Thirty-five percent were small farms of 10 to 49 acres and an additional 35.1 percent were in mid-sized farms of 50 to 179 acres. Farm size did not significantly change from 1987 to 1997.

In 2002, more than half of Muskegon County farm operators listed something other than farming as their principal occupation and 44 percent worked more than 200 days of the year off farm. Three quarters of the farms were between 10 and 180 acres, with 45 percent between 10 and 49 acres. Of the 545 farms, 456 were devoted to cropland, totaling 49,139 acres. The remaining land was devoted to livestock and poultry purposes, with 154 cattle farms, 21 hog/pig operations, 22 sheep farms, and 52 poultry operations. The average value of agricultural products sold was $108,379 and average farm expenses totaled $83,991 per farm. The average net cash return to the farm was $24,468.

Muskegon County Special Crops

Muskegon County ranks fifth in the state of Michigan for blueberry production. It is one of five "blueberry counties" in the state, all of which are along the western shore of the Lower Peninsula. In 2000, there were 920 acres of blueberries grown in Muskegon County. This number has been decreasing over time. The number of blueberry farms has also decreased. In 1991 there were 35, by 2000 that number had declined to 25. Of the 920 acres in blueberry fields, 520 acres had overhead irrigation in 2000, and 200 acres had some other form of irrigation. However, blueberries are not the only fruit grown in Muskegon County. Muskegon is in the West Central fruit district for the state. There were a total of 44 fruit farms in Muskegon County in 2000, with 2,300 acres in apples, 170 acres in tart cherries, 95 acres in peaches, and 20 acres growing other fruits. In 1997 there were a total of 3,995 acres in fruit production, by 2000 that number had declined to 3,505, a 12 percent decline in acreage.

Local Food and Organic Farms

In 2009, there were 231 acres of cropland in organic production with 8 certified organic farms and an additional 6 farms producing products organically, without certification. An additional 251 acres of cropland were in transition to organic or becoming certified by the USDA.

The Sweetwater Market operates a year-round, organic farm market in Muskegon County, with vendors from Muskegon County and West Michigan providing local, farm-to-consumer, organic agricultural products, including meat, vegetables and

added-value products. There are four seasonally-operated Farmers Markets in Muskegon County, each offering a variety of local and organic products along with traditional farm and added-value farm products.

Agricultural Laws and Farmland Preservation in Muskegon County

Michigan is a Right to Farm state. In 1981 the Michigan Legislature passed PA 93 to provide farmers with protection from nuisance lawsuits. As a part of that legislation, the Michigan Department of Agriculture has created a series of Generally Accepted Agriculture & Management Principles (GAAMPs) that are voluntary practices for farmers.

The State of Michigan created a Farmland and Open Space Purchase of Development Rights (PDR) Program. The program has five methods for preserving farmland and open space: farmland development rights agreements, purchase of development rights, agricultural preservation fund, local open space easements, and designated open space easements. The purpose of the agricultural preservation fund is to provide grants to eligible local governments for purchase of conservation easements through local, state and federal PDR programs. Generally the program allows a farm owner to enter into an agreement with the state that ensures that the land remains in agricultural use for a minimum of ten years with a maximum enrollment of 90 years. The primary benefits of the program to farm owners are tax credits and special assessment of the farm land. Land owners may still sell their land when it is under a conservation easement, but the agreement runs with the land, not the owner.

The Muskegon County Board of Commissioners adopted the Muskegon County Farm Land Open Space (FLOS) Program and Ordinance in 2006 and established an Agricultural Board. The Muskegon County FLOS/PDR program needs an established source of non-federal funding to match federal PDR funds to protect the prime and locally important farmland in Muskegon County.

According to a recent study by the American Farmland Trust, Michigan grows more beans, blueberries, tart cherries, cucumbers, flowering hanging baskets, geraniums, Niagara grapes, hosta, and impatiens than any other state. It is ranked as the 9th most endangered farm state. The study found that the prime soil that is the most fertile is being lost to development, and that every state is losing some of its best food producing farmland.

Agriculture and Natural Resources

Farm land is often located in areas that include prior-converted wetland soils. Muskegon County farmers have the opportunity to take advantage of the Wetland Reserve Program (WRP) and the Conservation Reserve Program, both administered by the US Department of Agriculture (USDA) and the Natural Resources Conservation Service (NRCS). Landowners who choose to participate in WRP may sell a conservation easement or enter into a cost-share restoration agreement with USDA to restore and protect wetlands. The landowner voluntarily limits future use of the land, yet retains private ownership. The landowner and NRCS develop a plan for the restoration and maintenance of the wetland. The program offers landowners three options: permanent easements, 30-year easements, and restoration cost-share agreements of a minimum 10-year duration.

- *Permanent Easement:* This is a conservation easement in perpetuity.
- *30-Year Easement:* This is a conservation easement lasting 30 years. Easement payments are 75

percent of what would be paid for a permanent easement.

- *Restoration Cost-Share Agreement:* This is an agreement (generally for a minimum of 10 years in duration) to re-establish degraded or lost wetland habitat.

The Conservation Reserve Program (CRP) is another voluntary program for agricultural landowners. Through CRP, landowners can receive annual rental payments and cost-share assistance to establish long-term, resource conserving native plantings and buffer strips on eligible farmland.

Parks and Recreation

Manistee National Forest

The Huron-Manistee National Forests comprise almost a million acres of public lands extending across the northern lower peninsula of Michigan. The Huron-Manistee National Forests provide recreation opportunities for visitors, habitat for fish and wildlife, and resources for local industry.

The forests of northern Michigan are rich in history. In the late 1800s logging was at its peak and these forests were quickly cut and cleared. In 1909, the Huron National Forest was established and the Manistee National Forest was formed in 1938. In 1945, these two National Forests were administratively combined.

Muskegon State Park on Lake Michigan

Muskegon State Park is located four miles west of North Muskegon on the shore of Lake Michigan. With over two miles of shoreline on Lake Michigan and with over one mile on Muskegon Lake, this is one of the top recreational areas in the region. The park features 1,165 acres of land and recreational facilities include wildlife viewing, boating, fishing, swimming, picnic areas, playgrounds and a luge run is available for winter park visitors.

Duck Lake State Park

Duck Lake State Park is a 728 acre park, located in Muskegon County. The Park stretches from the northern shore of Duck Lake to Lake Michigan. The Park contains a mixture of open brush land to mature hardwood forest, with some pockets of open meadows mixed in. The Park features include hunting, swimming, fishing, picnic areas, hiking, boating and snowmobile areas.

Hoffmaster State Park on Lake Michigan

The Hoffmaster State Park is a 1,200 acre park featuring forest covered dunes along nearly three miles of Lake Michigan shore. Its sandy beach is one of the finest shores in the area and a focal point of the Park is the Gillette Visitor Center. The Gillette Visitor Center is located at the top of a large sand dune surrounded by a pristine wooded back-dune, the center features state-of-the-art exhibits to tell Michigan's unique sand dune story. With exhibits, interactive displays, multi-image slide shows, and other nature programs to orient visitors to Michigan's unique cultural and natural features, this attraction is one of the top attractions in the State. The center has a variety of programs to help visitors enjoy and understand the unique environment of the sand dunes of the Great Lakes.

The center features an exhibit hall depicting the ecological zones of the unique dune environment. Multimedia presentations on the dunes and seasonal nature subjects are shown in an 82-seat auditorium. In addition, the Center offers educational opportunities for students and families throughout the year.

Hart-Montague Trail State Park

The Hart-Montague Trail State Park is a paved, 22 mile trail passing through the rural

forested lands of the Park. Scenic overlooks and picnic areas are located along the route. The Park is approximately 22 acres in size and is accessible from the communities of Hart and Montague, as well as other communities between the two cities along US 31. Additional recreational amenities include wildlife viewing, fishing, biking, and snowmobile areas during the winter.

Blue Lake County Park

Blue Lake County Park is located on Big Blue Lake north of Muskegon. This 25 acre park has nearly 600 feet of frontage along the southeast shore of the Lake and provides water recreation activities including boating, fishing, waterskiing and swimming. In addition to these water activities, other features include picnicking, camping and hiking. The Park offers 25 modern campsites for recreational vehicles with open and shaded sites. All campsites offer water and electric hookups.

Deremo County Park

Deremo County Park is a paved launch that is maintained for boating, water-skiing and fishing. The Deremo access site is located on Fruitvale Road on the north side of Big Blue Lake. Deremo access site hours are from 6:00 a.m. to 11:00 p.m. and is open year-round with limited snow removal.

Meinert County Park

Meinert County Park is located on Lake Michigan north of Montague. The Park is approximately 88 acres with rolling dunes, including a large parabolic dune[1] and scenic overlooks that provide visitors a spectacular view of Little Flower Creek and Lake Michigan shoreline. The Park features picnicking, swimming, camping, hiking, and rental cottages.

Picnicking shelters are available for rent and seat approximately 40 people. The Park offers 67 modern campsites for recreational vehicles with open and shaded sites.

County Park Acreage	
Muskegon County Parks	**Acres**
Blue Lake	22
Deremo	10
Heritage Landing	7
Hilt's Landing	232
AC Fairchild	20
Meinert	54
Moore	36
Muskegon County Fairgrounds	160
Patterson	28
Pioneer	145
Twin Lakes	8
Veterans Memorial Park	19
Muskegon County Wastewater	11,700
Total	**12,441**

Table 3.34: County Parks

All campsites offer water, electrical, and sewer hookups. Rental cottages are offered for a family or group of six, on a weekly basis, Memorial weekend through Labor Day or on a weekly or daily basis before Memorial Day and after Labor Day. The cottages include 3 bedrooms, living room, kitchen and dinning room, and full bath.

Heritage Landing

During the summer, Heritage Landing provides the venue for the Summer Celebration, Michigan Irish Musical Festival, Christian Music Festival, and Lunch on the Landing, a free weekday lunch concert series. With carnival rides, music from popular musical performers, and fireworks displays, Heritage Landing brings

[1] Parabolic dunes, defined by their distinctive U-shape, are found only in moist environments where extensive vegetation cover often stabilizes the dunes. Parabolic dunes slowly move inland as sand is pushed over the crest and deposited on the leeward side.

excitement to the Muskegon Lake waterfront.

Patterson County Park

Patterson Park is located on the Little Rio Grande Creek two miles southwest of Ravenna. The park is 28 acres on the river flood plain with wooded and open areas. A variety of wild flowers bloom throughout the spring and summer offering the visitor the opportunity to view species not common to most areas in Muskegon County. The park is a quiet setting with restrooms, a small picnic shelter, grills and tables. Walking along the riverbank and sitting next to the small dam and spillway are picturesque and relaxing activities.

Pioneer Park

Pioneer Park is located on Lake Michigan north of Muskegon and has over 2,000 feet of white sand beach frontage. This popular 145-acre park offers camping, swimming, sunbathing, picnicking, tennis, softball, basketball and volleyball. The park is filled with a variety of mixed oak, maple, white pine and hemlock pine trees. This is the County's largest and most popular park.

A lodge building is available to rent for family reunions, company, church picnics, or other group activities where shelter is desired. The park offers 213 modern campsites for recreational vehicles, with open and shaded sites, and offer water and electric hookups. In addition, a group camping area is available for family, church groups, and camping clubs with up to 27 camping units.

Twin Lake County Park

Twin Lake County Park is located on Twin Lake north of Muskegon. Twin Lake Park is a 15-acre park with 800 feet of frontage on Twin Lake with shaded and open areas for family outdoor activities including picnicking, swimming, tennis, volleyball, and boating. The lodge building and two picnic shelters are available to rent for family reunions, company and church picnics, or other group activities where shelter is desired. Shelters offer seating for 60 people, a large park grill for cooking and electrical outlets.

City of Montague

The City of Montague owns and operates the two acre Maple Beach Park and eleven acres at Medbury Park.

Maple Beach Park has playground equipment, picnic facilities, beach area, and restrooms. Medbury Park has picnic tables, beach area, and a boardwalk.

Lake Front Park has a band shell and restrooms. It is adjacent to the Montague Boat Launch. Each area is approximately three acres.

Additional investment in Maple Beach Park is planned for 2006, with $250,000 to be invested in acquisition and development.

City of Muskegon

The City of Muskegon owns nearly 600 acres of parkland and open space. Major parks include Fisherman's Landing, McGraft Park, Pere Marquette Park, Bronson Park and Sheldon, Seyferth, and Beachwood Parks provide passive and active recreation opportunities to adjoining neighborhoods.

Other recreational facilities include special use facilities typically providing unique or unusual recreational opportunities. These facilities include Hackley Park (formal central City park dedicated in 1890, on National and State historic registers, strong, attractive, historic element), the Indian Cemetery (the oldest known Indian cemetery in the area, circa 1800s), L.C. Walker Arena/Convention Center (sporting and cultural events, public/private skating, banquets, flea markets and meetings), Hartshorn Marina (only municipal marina

on Muskegon Lake and home of the Port City Princess), the Kruse Park observation deck, and Jaycee's Launch Ramp (heavily used public launch ramp on west end of Muskegon Lake).

All schools in the Muskegon Public School District provide outdoor recreational facilities. Because schools are distributed throughout the City, their recreational facilities function as local neighborhood playgrounds used by school age children in surrounding neighborhoods.

City of Muskegon Heights

The City of Muskegon Heights has 87 acres of park and recreation land. Local parks include the Little Black Creek Major Park, Mona Lake City Park, West Heights Park, the Johnny O. Harris Playfield, War Memorial Park, and Rowan Park.

City of North Muskegon

The City of North Muskegon has more than 20 acres of park and recreation land in five locations.

City of Norton Shores

The City of Norton Shores has more than 230 acres of parkland. The majority of the parkland is at the Lake Harbor Park. The second largest park is Ross Park at 43 acres.

City of Whitehall

Funnell Field is a neighborhood park that has softball fields, tennis courts, basketball courts, Little League fields, playground equipment, restrooms, and picnic facilities. The Goodrich/White Lake Municipal Marina is a regional community park with a fifty slip marina, playground equipment, and restroom and picnic facilities. City Hall/Slocum Park has tennis courts and picnic amenities. Gee Park is a neighborhood park with playground equipment and picnic facilities.

Village of Fruitport

The Village of Fruitport has five parks and a bike path. Pomona Park has a playground, picnic shelter, and band shell. The other park sites are a boat launch site with access to Spring Lake, Grand River, and Lake Michigan; a handicap accessible fishing pier; and, two small area access sites. The bike path connects to Spring Lake, Ferrysburg, and Grand Haven.

Village of Ravenna

There are two public parks in the Village of Ravenna. Conklin Park has a number of recreation courts and fields, picnic tables and grills, restrooms and concession stands, and playground equipment. Thatcher Park has two pavilions with picnic tables, restrooms, and playground equipment.

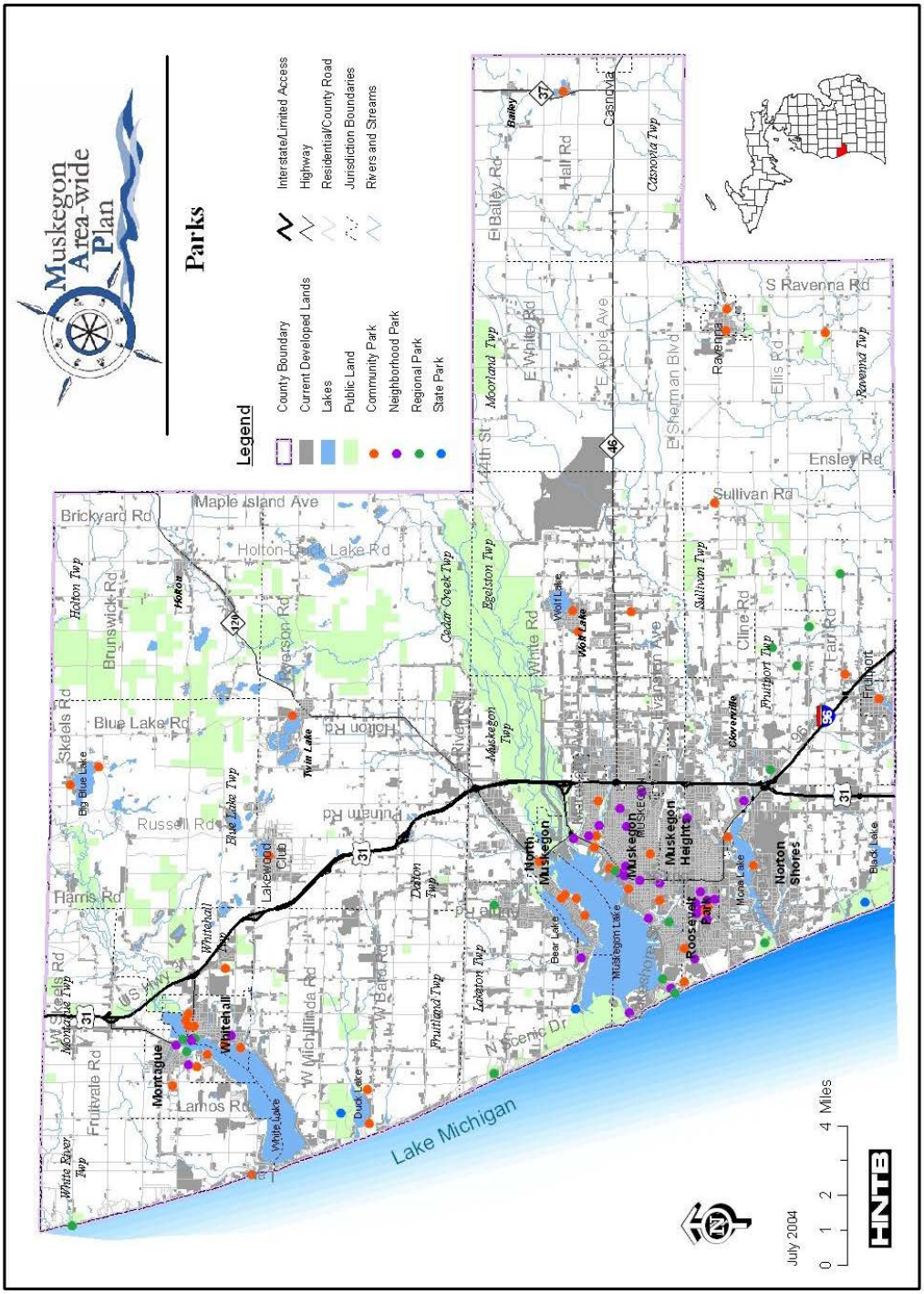
Village of Lakewood Club

The Village of Lakewood Club has a 9.5 acre park with a baseball field, playground, and a pavilion with a grill. The park was deeded to the village from Dalton Township, but can revert to the township if the village ceases to use the park for public purposes.

Local Pak Acreage	
Local Parks	**Acres**
City of Montague	
Cullen Athletic Field	10
Ellenwood Park	0.25
Koon Creek Park	2.75
Lake Front Park	3
Maple Beach Park	4.5
Medbury Park	6.5
Montague Boat Launch	3
City of Muskegon	
Aamodt Playground	2
Beachwood Playground	3
Beukema Playfield	10
Bronson Park	32
Campbell Playfield	10
Chase Hammond Golf Course	214
Cottage Grove Launch Ramp	
Curve Park	24
Gidding Street Launch Ramp	
Green Acres Playground	5
Hackley Park	2
Hartshorn Marina Launch Ramp	
Lake Michigan park	55
Marsh Playfield	6
McCrea Playfield	9
McGraft Park	92
Pere Marquette Boat Launch	
Pere Marquette Park	32
Reese Playfield	13
Richards Park - Boat Launch	7
Ryerson Valley Park	72
Seyferth Playfield	16
Sheldon Playfield	6
Smith Playfield	23
Yacht Club Mooring Basin	
City of Muskegon Heights	
Johnny O. Harris Playfield	11
Little Black Creek Major Park	20
Mona Lake City Park	47
Rowan Park	2
War Memorial Park	2
West Heights Park	5
City of North Muskegon	
Bear Lake Park	7
Block 58 - Lakefront Sports Park	7
Causeway Memorial Park	4
Custer Park	0.5
East End Park	0.75
Ruddiman Overlook	1
Walker Park	1
West End Park	4
City of Norton Shores	
Avondale Park	2
Chapman-Veurink Park	2
Hidden Cove Park	20
Lake Harbor Park	184
New Development	1
Ross Park	43
City of Roosevelt Park	
Community Recreation Center	4
Delmar Playfield	5
Germaine Road Park	0.5
Hubert D. Carsell Park	0.5
James Davies Park	1
James V. Wells Park	0.5
Leon Lambert Park	1
Post Road Park	0.5
Princeton Road Playground	0.5
Tennis Courts	0.5
City of Whitehall	
City Hall/Slocum Park	2.5
Covell Park	4
Funnell Field	12.5
Gee Park	1.5
Goodrich Park	8.5
Lions Park	3.5
Mill Pond Peninsula	4.5
Norman Park	1
Svensson Park	4
Veteran's Memorial	0.5
Village of Fruitport	
Pomona Park	2
Village of Lakewood Club	9.5
Village of Ravenna	
Conklin Park	10
Thatcher Park	2
Total	1107.25

Table 3.35: Local Parks

Map 3.36: Parks



Chapter 4:
Alternative Development Scenarios

Alternative Development Scenarios

Muskegon County enjoys a rich industrial and agricultural heritage, and its development has been related to the industries, crops, and tourism activities that have developed as the economic life of the county. The ability to maintain rural, recreational, and other open space areas for agricultural and tourism uses and to redevelop industrial areas in ways that support existing, new, and emerging industries is critical to the future of Muskegon County. The Muskegon Area-wide Plan (MAP) is a vision for that prosperous Muskegon County future.

As a means of developing a plan for obtaining this future vision, alternative scenarios were developed for evaluation by the citizens of Muskegon County. Scenario building provides an opportunity to consider what might happen in the community under various policy conditions.

The purpose of considering alternative scenarios is to understand the policy choices, educate local officials and the public about the implications of policy choices, and evaluate which policy choices are right for Muskegon County. Understanding the policy choices and their implications forces trade-offs between conflicting goals. These alternatives are general in nature and have been prepared to illustrate and explore distinct potential future development patterns for the planning area.

As a means of developing the alternative scenarios, regional opportunities and threats were considered along with projected area trends, existing conditions including transportation infrastructure and utility service capabilities, sound planning principles, and public opinion. The opportunities considered include:

- Diversifying economy
- Community character
- Precedents for regional cooperation
- Natural resources
- Growing public awareness/concerns regarding growth
- Destination tours

The threats outlined include:

- Lack of coordinated land use planning
- Lack of shared vision
- Household decentralization
- Increasing decline in the urban centers
- Loss of farm/open space
- Threats to environmental quality

The MAP project is intended to overcome the threats and take advantage of regional opportunities.

The current distribution of land uses as represented by acreage of the total county is as follows:

- 12.9% residential
- 1.9% commercial
- 1.0% industrial
- 4.8% public lands and utilities
- 79.5% agriculture, open space, forest, water, and wetlands

Other important trends that were considered in the development of scenarios include:

- Continued decentralization
    - Growth in Fruitport Township
    - Growth in southeast Muskegon Township and southwest Egelston Township
    - Growth along corridors in Moorland Township
    - Growth along corridors in Egelston Township

  - Growth along corridors in Fruitland Township
  - Growth in Blue Lake Township
  - Between 1970 and 2000, development occurred in a sprawling pattern that "stripped out" residential lots along county roads. These lots were predominately low density.
- Loss of farm/open space
  - Between 1992 and 1997, 0.7 percent of the county's farmland was lost to development
  - Between 1987 and 1992 there was a loss of 10.4 percent of farmland
  - Only 429 of 73,113 acres under formal farmland protection programs
  - Michigan ranked as 9th most endangered farm state by the American Farmland Trust
- Conflicts between new residential development and agricultural uses
  - 30 percent of housing units in Blue Lake Township built after 1995
  - 20 percent of housing stock in Egelston Township built after 1995
  - Development conflicts between residential/commercial developers and citizens concerned about protecting environmentally sensitive areas
- Residential land uses expanding
  - More than 700 building permits issued countywide in each of the last three years
  - Only 7.8 percent of permits issued in City of Muskegon
- More and longer car trips
  - 25 percent of Muskegon County residents worked outside Muskegon County in 2000
  - 17 percent of those who work in Muskegon County do not live in the county
  - More than 30,000 people enter or leave Muskegon County for work each day
  - 84 percent of workers drove a car, truck, or van alone to work in 2000
- Minority populations disproportionately located in Muskegon County urban areas
  - Sixteen percent of the county population is minority, more than 30 percent of Muskegon is African-American and more than three quarters of Muskegon Heights is African-American

Under these circumstances three scenarios, or development alternatives, were considered. The Business as Usual scenario is the baseline scenario which continues existing market and demographic trends. The Zoning Build-out scenario shows how the region would develop if local governments followed the existing zoning ordinances and new development followed the existing land use patterns. The Smart Growth scenario policies encourage infill development in urban areas, suburban areas, and rural centers. Some infill may also occur in mature corridors that connect centers or along transportation corridors.

The Business as Usual and Smart Growth scenarios were developed using a 2020 target year. Using this target, the population is expected to grow thirteen percent, or by 23,000 people. Residential land uses are expected to increase 38 percent and

consume an additional 17,000 acres of land. Commercial uses are expected to grow 29 percent and consume 1,700 additional acres, and industrial land uses are expected to grow 21 percent, consuming an additional 700 acres. Land consumption is projected to outpace population growth between 2000 and 2020. The same assumptions were used in each scenario for gross density and the number of persons per household, the difference in the scenarios is where the growth occurs.

In the Zoning Build-out scenario, the scenario shows all of the areas that are currently zoned for development using the existing zoning maps for all of the jurisdictions in the county (the Villages of Casnovia and Fruitport were not available). This scenario does not reflect a 2020 base year, but rather the build out of all of the land currently zoned for development.

In each case, the scenarios include recommendations for public improvements such as new or improved transportation facilities that would help attract and support the desired development pattern. The next chapter will add detail to the preferred scenario, based on public input.

The scenarios represent distinct ideas that respond to one or more of the visions or goals expressed by the Steering Committee. These alternatives have been created to generate specific discussion as to what can be supported locally and what elements cannot.

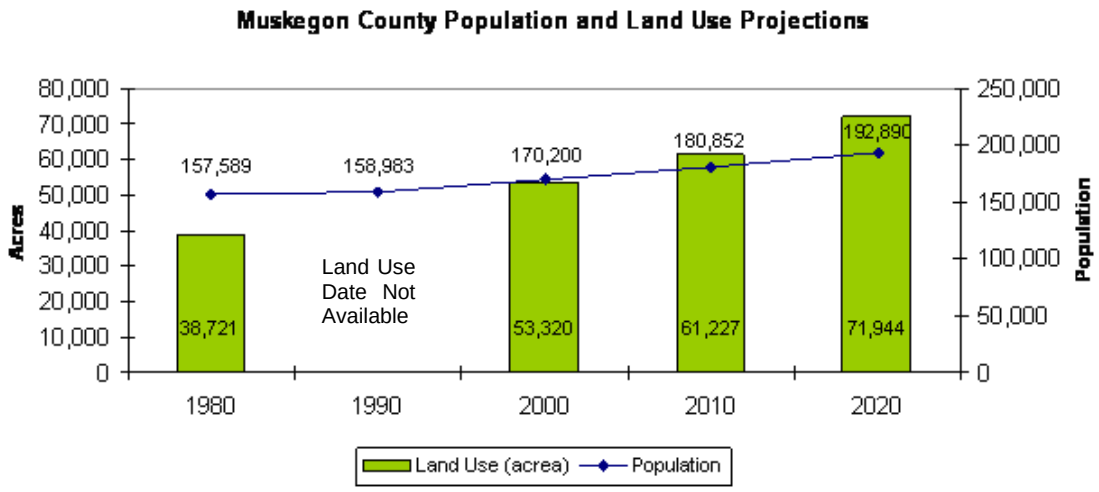


Figure 4.1: Population and Land Consumption Projections

Business as Usual

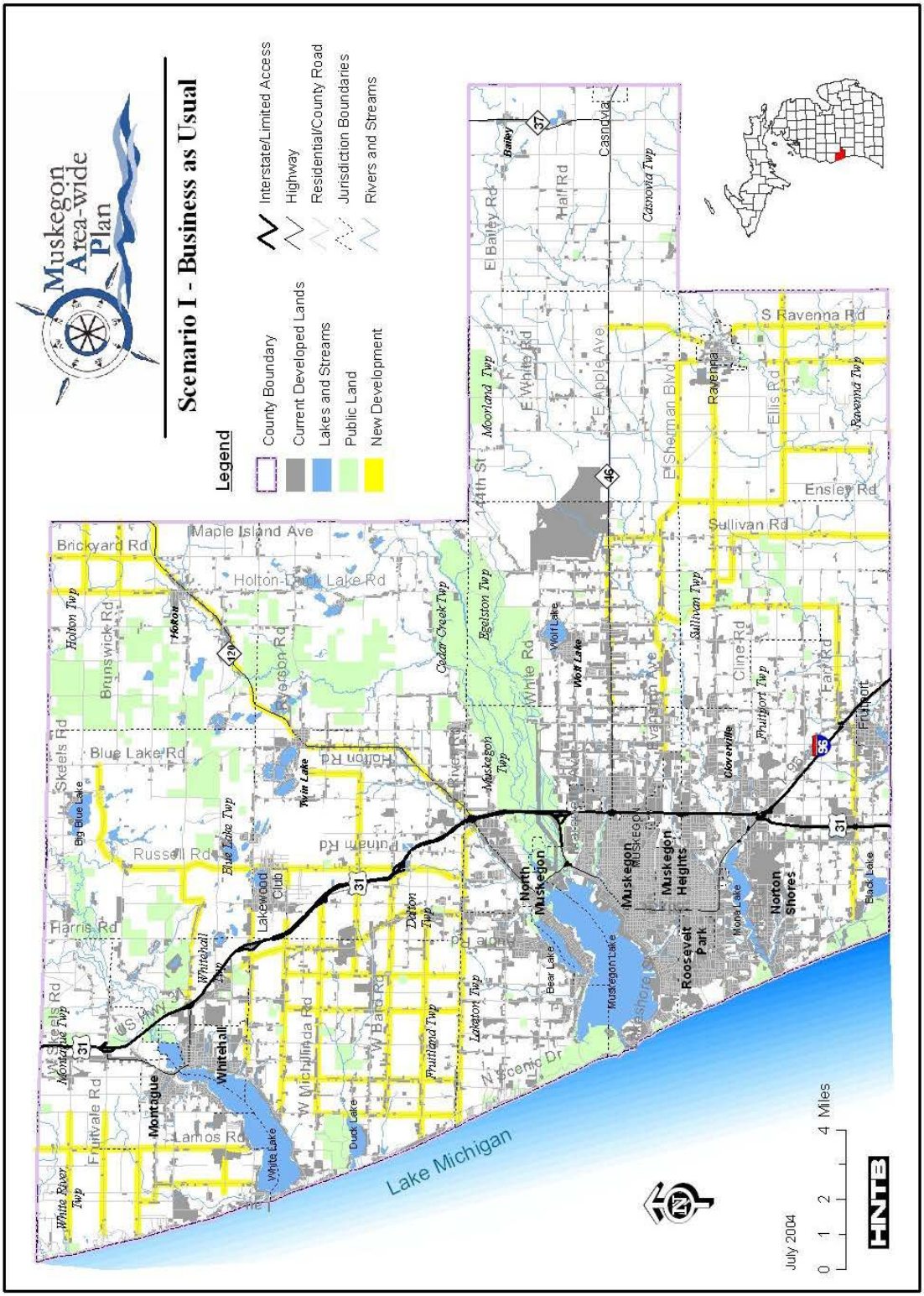
The Business as Usual scenario is the baseline scenario in the sense that it assumes continuation of the existing market and demographic trends. Future trends follow the past trends in terms of urbanization and land consumption. This scenario assumes that the current land use policies remain in place and allows maximum flexibility and independence for the local jurisdictions in development decisions. It relies on cooperation among localities on most development issues such as watershed protection, land use planning, natural area conservation and economic development. Under this scenario, each community bears the burden of its own growth-related costs.

The following principles apply to the Business as Usual scenario:

- Average lot sizes and the distance between homes increase
- Most new residential development would be single family homes on large lots
- Residential growth would continue to cause a reduction in agricultural and open space lands
- Transportation and other infrastructure (water, sewer, and utilities) costs would increase
- Construction and maintenance cost of transportation links would increase over time

Under this scenario, the growth would continue the pattern that emerged during the 1980s and 1990s of "stripping out" land along transportation corridors for residential and commercial development. The majority of this growth would occur in the southeast townships and in the northwest corner of the county.

Map 4.2: Scenario I – Business as Usual



Land use

This distribution of land uses would effectively be the same as the existing land use distribution.

Agricultural land and open space is threatened along corridors throughout the county in the Business as Usual scenario. One land use concern associated with this development pattern is that some agricultural land could become unusable for production due to access constraints. More than 8,500 acres of farmland and open space is consumed under this scenario.

Forest land is least threatened under this scenario as the development occurs in narrow strips along corridors and doesn't require removal of significant stands of trees. Under the Business as Usual scenario, approximately 8,600 acres of forested land is lost to development.

Transportation

Transportation corridors would likely become increasingly congested during peak travel times as people commute farther to jobs in the urban area and other counties. The commute times in the outer townships, if they continue at the 1990-2000 rate of change, would be more than thirty minutes by 2020. This includes; Casnovia, Egelston, Fruitland, Holton, Montague, Mooreland, and Ravenna townships.

This scenario has the highest number of road miles to maintain, and generates the most traffic, more than 450,000 vehicle miles traveled (VMT) per day. Due to the dispersed development pattern, the opportunities for transit would be limited under this development pattern.

Emergency services

Under the Business as Usual scenario, 15 percent of the new development occurs outside of an eight minute response time (based on an average speed of 30 mph and using "crow flies" distances).

Fruitport Township would experience a significant portion of the growth outside of the service areas. Currently Fruitport Township has an Insurance Standards Organization (ISO) rating of 5 (scale of 1 to 10, 1 being the highest). However, significant portions of Fruitport Township are not within an eight minute response area for fire fighting, particularly the southeast portions of the township. Not being able to meet the eight minute standard 90 percent of the time affects the department's ISO rating, raising the cost of homeowners and business insurance. As development continues in Fruitport Township, another station may be needed to cover the southeastern portion of the township if the development pattern follows the Business as Usual scenario. Also, in order to meet the eight minute response standard, a fire station would be needed in northwestern White River Township.

A 6,000 square foot fire station with three bays, a kitchen, and training areas costs approximately $800,000. A 2,000 gallon pumper truck costs approximately $175,000. Therefore, the two new fire stations needed under the Business as Usual scenario would cost approximately $1,950,000.

Staffing for fire departments is determined on their ability to meet response standards. It costs approximately $2,000 to outfit a firefighter with the needed equipment. If additional staffing is needed for the new fire stations, or existing fire stations, the approximate cost would be $2,000 per year per firefighter in addition to any labor related costs.

Water

Water service in the county is provided by four systems, Montague, Whitehall, Muskegon, and Muskegon Heights. The

Whitehall system serves the city and a commercial area along Colby Road. Planned expansions include the Colby corridor near the US 31 interchange, Whitehall Road from Colby to White Lake Drive, and White Lake Road near the industrial park and the US 31 interchange. The Montague system serves the city and a commercial area along Business 31, as well as a residential area that had contaminated wells southwest of the city. Muskegon customers include the City of Muskegon, Muskegon Township, North Muskegon, Roosevelt Park and the County North side system. The Muskegon Heights system serves Muskegon Heights, Norton Shores, and Fruitport Charter Township.

The existing total capacity for the county's water treatment facilities is approximately 60 million gallons per day (MGD). Currently only about 17 MGD of that capacity is being used on an average daily flow basis.

Under the Business as Usual scenario, 65 percent of the new development would be outside of the planned future service area. This would result in an additional 5,936 households using private wells, the equivalent of 1.48 MGD in water flow.

In order to serve all of the new development under the Business as Usual scenario with water, 150 miles of additional water mains would need to be extended at a cost of $67,320,000 (rough estimate).

Wastewater

The county is served by a single wastewater treatment system. The Montague-Whitehall system and the Metro system were combined in May 2003. The average daily flow for the system is 24.4 MGD, with a maximum daily flow of 28.2 MGD. More than 60 percent of the average daily flow is from industrial users, with a single user who contributes 12.8 MGD to the total. The population that is on sewer is 115,000.

There are $37.3 million worth of improvements planned for the wastewater treatment plant. Phase I improvements include replacing pump stations, eliminating pump stations and replacing with a central pump station, upgrading and rehabilitating pump stations, and a new force main. Phase II improvements include constructing a new pump station, optimizing the existing wastewater treatment facility, and headworks improvements.

Under this scenario, 65 percent of the new development would fall outside of the planned sewer service area. This would result in 5,054 additional households using septic systems, or the equivalent of 1.49 MGD of effluent entering the ground rather than a wastewater treatment facility.

In order to serve all of the new development under the Business as Usual scenario with sewer, 150 miles of additional sewer mains would need to be extended at a cost of $178,200,000 rough estimate.

Parks

Residents would continue to enjoy abundant park and recreation land in the national forest, state owned lands, county, township, and local parks under the Business as Usual scenario. The amount of park land per 1,000 people far exceeds any national standards in aggregate. On the county, township, and local level additional park acreage would be needed to provide recreation opportunities for children in the form of parks that can be accessed without cars and playground equipment and recreation fields. The additional acreage needed for the parks systems are:

Providing this additional acreage in locations where it efficiently serves the local

Additional Park Acreage Needed	
Government Level	Acres
County	108
Township	43
Local	162

Table 4.1:Additional Park Acreage Needed

park function would be difficult since the development is not concentrated.

In workshops, citizens noted the following likes regarding the Business as Usual scenario:

- Promotes rapid development – realtors and developers enjoy rapid profits
- Sprawl is reality
- It's the direction of current development
- There is freedom, no regulation
- Allows local flexibility
- We are accustomed to this growth
- Freedom of choice
- Works for developers and land owners
- No conflict/individual freedom
- Driven by market forces
- Requires no effort
- Local control

Citizens also suggested the following changes to the Business as Usual scenario:

- Continue growth south – saturation
- Bring communities together with congruent zoning
- Open space

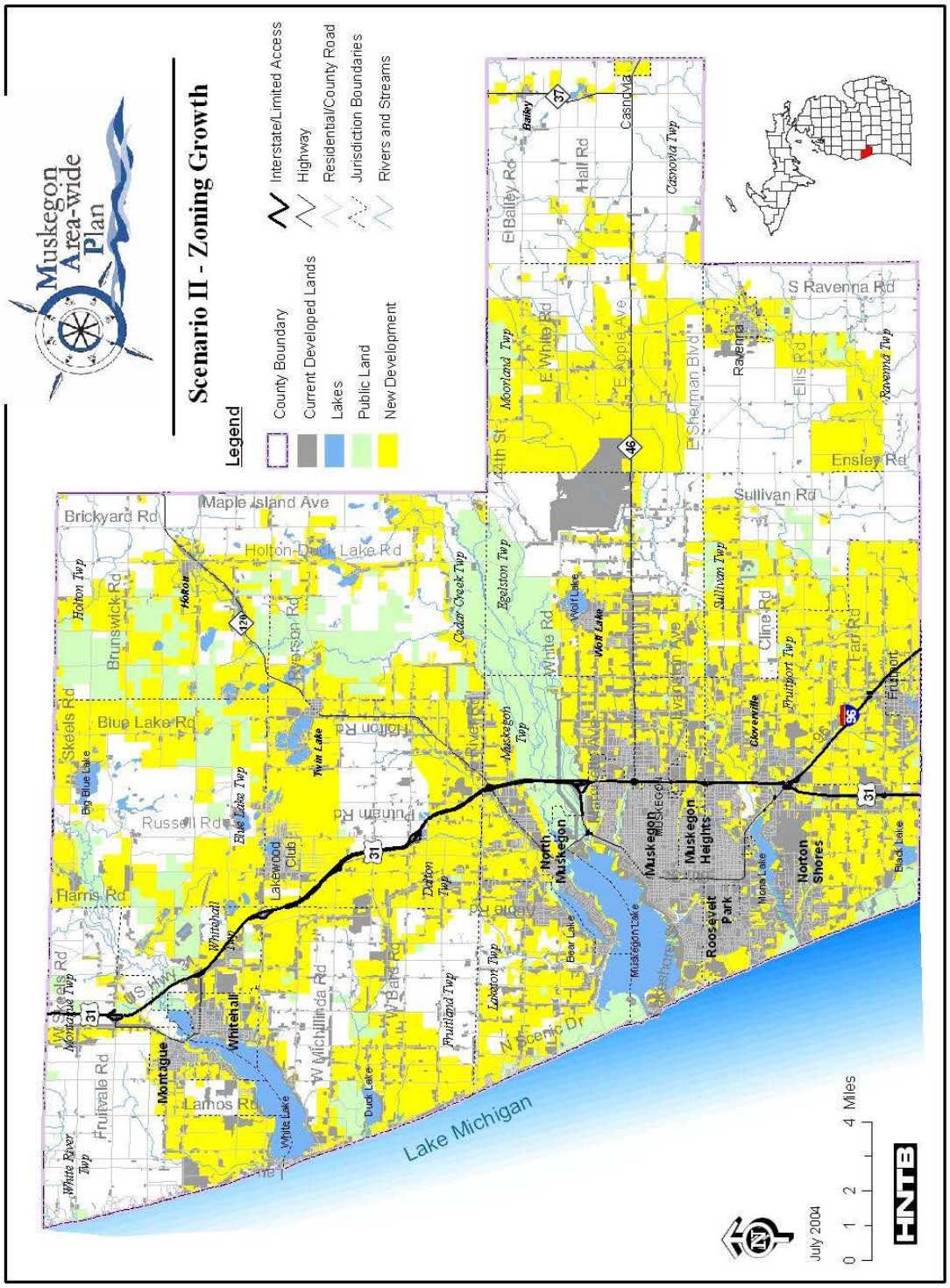
Zoning Build-Out Scenario

The Zoning Build-out scenario shows how the region would develop if local governments follow their existing zoning and new development followed existing development patterns. In order to construct this scenario, a composite zoning base map was created based on the existing local zoning maps.

In the Zoning Build-out scenario, the growth is distributed throughout the county. Much of the growth will occur in the metro area, Moorland Township, near Ravenna, in the Duck Lake area, in Dalton Township, Blue Lake Township, and western Holton Township.

Land left undeveloped would include the federal and state lands, and portions of Casnovia, Ravenna, Sullivan, Egelston, Fruitland, White River, eastern Holton, and Cedar Creek Townships.

Map 4.3: Scenario II – Zoning Build Out



Land use

In this scenario, residential development continues to occur at existing zoned densities, expanding infrastructure needs, consuming agricultural land and fragmenting open space and forest lands.

Build-out calculations were completed using information from the local zoning ordinances about the minimum lot size allowable in each residential and agricultural zone. This information, along with the amount of land zoned for each use (in each jurisdiction) in the composite zoning map was used to calculate a build-out population, based on a population of 2.5 persons per household. Further the WMSRDC population projections were extended to determine the year at which build-out would be achieved.

Including agricultural lands, the build-out population would be at least 875,000 (data not available for all jurisdictions). Without further development in agricultural areas, as permitted under the existing zoning ordinances, the build-out population would be nearly 790,000. Neither of the calculations includes residential development that may occur in Planned Unit Developments or Mixed-Use Developments with higher densities allowed.

Based on the WMSRDC population projections assuming 3.3 percent growth for every five year increment, it would roughly be the year 2240 before the residential zones alone reached build-out and 2255 before the residential and agricultural zones reached their build-out population. **Hence, the county is zoned for much more growth than it anticipates in the next twenty years.** Having excessive land zoned for residential uses encourages development to occur outside of existing service areas and in a lower density, less efficient pattern than if the appropriate amount of land was zoned for a reasonable planning horizon. In effect the zoning pattern is giving very little direction to the prioritization of desired development sites.

Open space is threatened in the Zoning Build-out scenario. Most of the undeveloped area of the county would be in the environmentally sensitive areas of the national forest, state game area, and state lands. Areas zoned for agriculture would also remain undeveloped.

Under this scenario, 75 percent of the new development occurs in forested land, consuming 52 percent (87,043 acres) of the county's forest resources. More than 25,000 acres of agricultural land and open space are consumed for development under this scenario.

Transportation

Under the Zoning Build-out scenario there would be fewer "spot" projects and more "system" projects than in the business as usual scenario. Since development would be more compact than under the Business as Usual scenario there would be a more moderate number of road miles to maintain and some improved efficiencies for snow removal.

The operations impacts such as regional travel time and distance would be moderate as would fuel usage.

The multi-modal opportunities are moderate for transit services and there are improved options for non-motorized transportation compared to the Business as Usual scenario.

This scenario leads to predictable patterns for long range transportation planning.

Emergency services

Under the Zoning Build-out scenario 85 percent of the new development is within an eight minute response time for fire fighting. Areas in Fruitport Township and in the

Cedar Creek and Moorland Township area would not be served within this response time without the construction of new fire stations.

The development in Cedar Creek and Moorland Townships is in the eight minute response time for the DNR fire station, but that staff generally does not fight structural fires.

The cost of a new fire station in Fruitport Township would be approximately $975,000 based on a three-bay station with a kitchen and training areas and a pumper truck. The same costs would apply to a new fire station in Cedar Creek or Moorland Township to service new development in that area.

Water

Under the Zoning Build-out scenario, 51 percent of the new development is outside of the planned future water service area.

New development outside of the water service area would be on private wells. There would be 24,970 new households using wells; the equivalent of 6.24 million gallons per day (MGD) of water flow.

Expanding the water treatment system to the planned service area from the current area would require $3 to $25.1 million worth of investments based on estimates for the White Lake Water Authority from the engineering consulting firm of Prein & Newhof.

Wastewater

In the Zoning Build-out scenario, not all of the growth occurs within the future sewer service area and areas that are served by sewer are left undeveloped. Development in Mooreland, Sullivan, Fruitland, Holton, and Blue Lake Townships is not served by sewer. This can be a concern when septic fields are built too close together and fail. Further, the public investment in wastewater treatment infrastructure is not maximized when development does not occur in areas where sewer is available.

Specifically, 56 percent of the Build-out development would occur outside of the sewer service area. Under the Zoning Build-out scenario, the county population is approaching 875,000. If this entire population were on sewer, using the planning standard of 250 gallons per household per day and 2.5 persons per household, the treatment plant would need to have a capacity of 87.5 MGD, or 45.5 MGD additional capacity just to serve residential customers.

Parks

While Muskegon County has abundant land for recreation in the form of the national forest, state parks, the state game area, and county, township, and local parks, those facilities were not planned to accommodate a Muskegon County population in excess of 875,000 people. If no additional park land were developed by the build-out year of 2255, the level of service for county, township, and local parks would be reduced to 2 acres per 1,000 people and the overall parks level of service (including federal and state lands) would be reduced to 50 acres per 1,000 people. As mentioned earlier, federal and state lands do not necessarily meet the same recreation needs as county, township, and local parks. Therefore, to meet the 2000 level of service of 4 acres of county parks, 2 acres of township parks, and 7 acres of local parks per 1,000 residents, the following number of acres of park land would be needed:

Additional Park Acreage Needed Government Level	Acres
County	3,120
Township	1,229
Local	4,661

Table 4.2:Additional Park Acreage Needed to Meet 2000 Level of Service

Public Comments

In workshops, citizens liked the following about the zoning build-out scenario:

- Supports current zoning master plans
- Allows more space for building and growth
- More realistic unless there is collaboration/consensus on issues
- More closely represents what is likely to occur
- Creates alternatives for people willing to move to the area
- Local input
- Works for local governments
- Respects individual property rights
- Attracts more opportunities to the area
- Concentrates housing
- Local control
- Less density

Citizens also recommended the following changes to the zoning build-out scenario:

- Work together between the townships
- Restrict future development or infrastructure/services costs will be astronomical
- Listen to communities

Smart Growth Scenario

Generally, "smart growth refers to an overall set of broad policies designed to counteract sprawl. These usually include: (1) limiting outward expansion, (2) encouraging higher density development, (3) encouraging mixed-used zoning as distinct from fully segregating land uses, (4) reducing travel time by private vehicles, (5) revitalizing older areas, and (6) preserving open space" (Muro and Puentes, March 2004). In this scenario, policies are intended to encourage infill in developed urban, suburban, and rural centers. Infill of mature corridors that connect centers or are along transportation corridors may also occur. The policies provide for limited growth at low densities in clustered settings, which is assumed to occur in areas outside existing urban, suburban, and rural centers. The majority of the development is assumed to occur where public water and sewer are available. Smart Growth policies also encourage investment in quality of life, or livability factors.

The principles that apply to the Smart Growth scenario include:

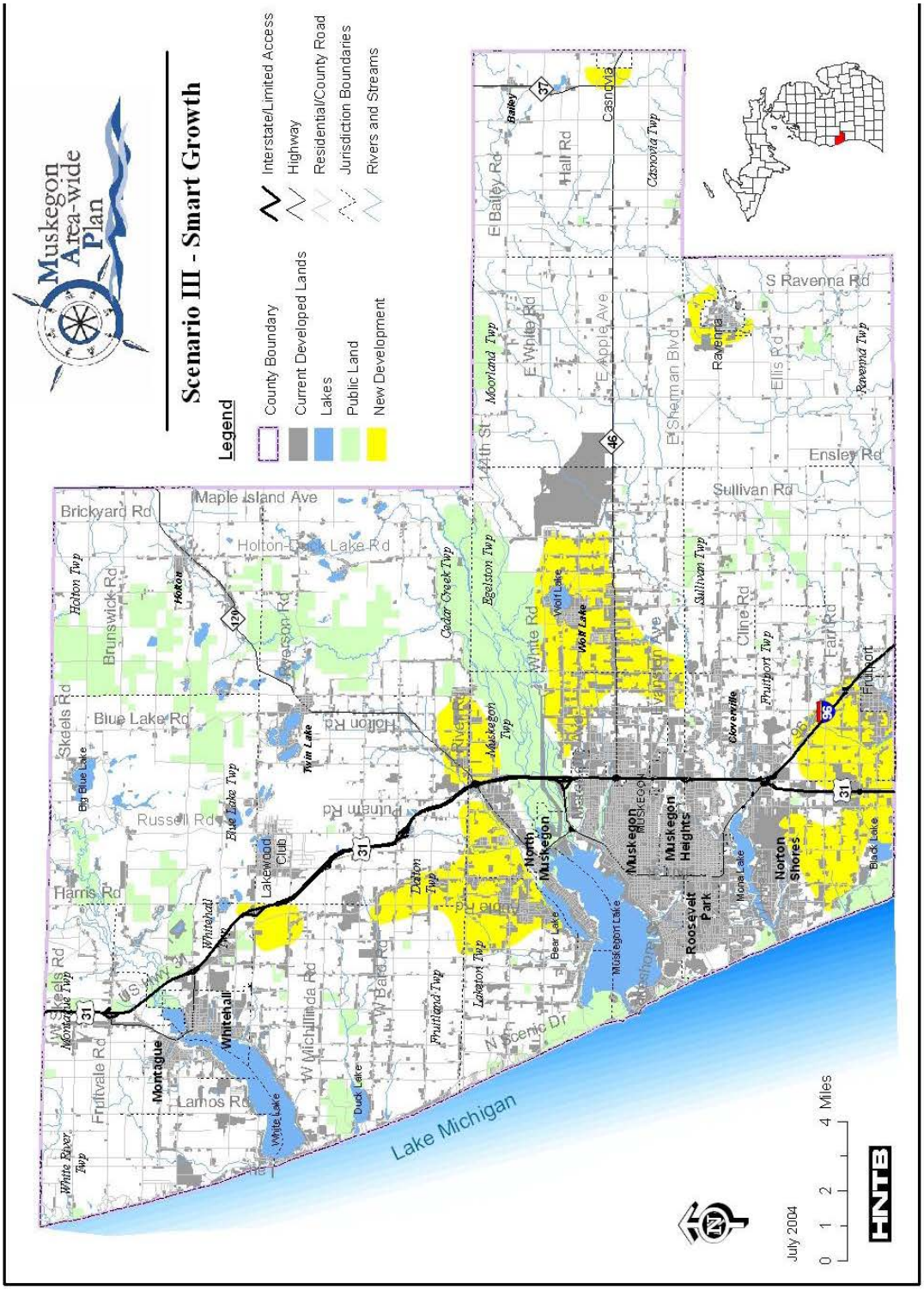
- Development locating near existing communities providing opportunity for the sharing of services
- Commercial and retail services would be located within short distance of residential areas, and provide walking and biking opportunities
- Less open space and agricultural land would be lost to development in this scenario
- Encourage the adoption of new regulations for planned unit developments (PUD), cluster development, and open space in communities
- Increase investment in non-motorized transportation linkages such as trails, pathways, and open space corridors
- Average lot sizes would be smaller, with increased diversity of housing types and prices
- Smaller lots would consume less land over time, resulting in lower infrastructure costs than the business as usual scenario
- Transportation investments would focus on improvements and transit

In this scenario, new development is concentrated in Laketon, Muskegon, Egelston, and Fruitport Townships, near existing communities. There are also development areas surrounding Montague and Whitehall, Casnovia, and Ravenna.

Smart Growth Principles:

- Create a Range of Housing Opportunities and Choices
- Create Walkable Neighborhoods
- Encourage Community and Stakeholder Collaboration
- Foster Distinctive, Attractive Communities with a Strong Sense of Place
- Make Development Decisions Predictable, Fair and Cost Effective
- Mix Land Uses
- Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas
- Provide a Variety of Transportation Choices
- Strengthen and Direct Development Towards Existing Communities
- Take Advantage of Compact Building Design

Map 4.4: Scenario III – Smart Growth



Land use

The Smart Growth scenario development pattern addresses concerns related to farmland protection, average lot sizes, and infrastructure development by concentrating growth near existing urban areas and rural villages. These shifts would be accomplished through policy changes that require the development and adoption of new zoning ordinances and Planned Unit Development ordinances that allow for smaller lot sizes, encourage cluster development, and provide for non-motorized transportation linkages.

In this scenario, development would occur near existing development in the Townships of Muskegon, Laketon and Dalton, the Wolf Lake area and the villages of Lakewood Club, Ravenna, and Casnovia.

Open space is preserved in the Smart Growth scenario by directing growth toward existing urbanized areas and away from environmentally sensitive lands and prime farmland. The open space areas include protected federal and state lands, and rural areas in the outlying townships. Under this scenario, 13,808 acres of forest land would be lost to new development. However, only 4,195 acres of farmland/open space would be consumed by new development. Since much of the land in Muskegon County is forested, it would be impossible to plan for growth in serviced areas without losing forest resources. By concentrating the area of development, larger tracts of habitat are left intact.

Transportation

The Smart Growth scenario has the most limited number of miles of roads to construct and maintain. It provides for "system" improvements to better service local needs. This development scenario is also the most efficient of the three for snow removal.

The Smart Growth scenario involves a savings of 62 percent of vehicle miles traveled per day over the business as usual scenario. It also provides for the lowest total regional travel time, lowest total regional fuel usage (saving $6 million per year in fuel costs) and has the fewest air pollution impacts from mobile sources.

The Smart Growth scenario also provides for the greatest opportunity for providing transportation choice in terms of transit and non-motorized options. It provides a predictable growth pattern that facilitates long range transportation improvement planning.

Emergency services

Only two percent of the new development in the Smart Growth scenario lies outside of the current eight minute fire response time. Since nearly all of the new development is within an existing service area, no new stations would be needed – no capital investment would be needed. Compared to the Business as Usual scenario local governments would save $1,950,000 in fire station construction and equipment. This saves townships from investing or having to seek grant funding for that amount. It would save taxpayers (if shared by all county taxpayers) $0.04 per $100 of County Equalized Value (CEV) or approximately $35 for the average household.

Water

Under the Smart Growth scenario only six percent of the new development is outside of the planned future service area.

This would result in the equivalent of 570 households on private wells, or .14 MGD of water flow that could be on municipal water. While wells do not create some of the health and environmental hazards that septic systems create, there are still public health issues with wells related to the potential for well contamination.

The Smart Growth scenario would eliminate the need to construct 150 miles of water lines over the Business as Usual scenario, at a cost of $67,320,000 (rough estimate), if all new development were to be served with water.

Expanding the water treatment system to the planned service area from the current area would require $3 to $25.1 million worth of investments based on estimates for the White Lake Water Authority from Prein & Newhof.

Wastewater

In the Smart Growth scenario only five percent of new development would be outside of the planned sewer service area.

This level of development outside the service area would result in 532 households using septic systems, putting .13 MGD of septic effluent in the ground.

According to a 2004 Prein & Newhof study, the 2020 estimated daily flow is 35.3 million gallons for the whole county.

Parks

Residents would continue to enjoy abundant park and recreation land in the national forest, state owned lands, county, township, and local parks. The amount of park land per 1,000 people far exceeds any national standards in aggregate. On the township and local level, additional park acreage would be needed to provide recreation opportunities for children in the form of parks that can be accessed without cars and playground equipment and recreation fields. Providing this additional acreage in locations where it efficiently serves the local park function would be possible since the growth is concentrated in the existing urbanized area and new development can have parks incorporated into the overall development plan to serve the new households.

Quality of life is generally considered an important focus of a Smart Growth scenario. Muskegon County residents defined quality of life using the following terms:

- small town atmosphere
- rural character
- quiet
- safe
- family
- sense of community
- water resources
- arts, cultural, and educational opportunities
- greenway
- parks and recreation
- events
- quality healthcare

Through policies that focus growth in urban areas and around small towns, Smart Growth promotes maintenance of rural and small town character. A focus on non-motorized transportation places priority on linkages such as greenways to connect points of community interest such as beaches, parks, schools, and government buildings. Open space preservation allows for active and passive recreation opportunities, in both structured and unstructured open spaces.

In workshops, citizens noted the following likes about the Smart Growth scenario:

- Preserves private ownership rights
- Conserves land uses
- Concentrates growth
- Keeps major roadway undeveloped
- Creates open space development
- More visually appealing
- Better way to develop small community atmosphere
- Limits growth in rural areas
- Preservation of farmland/open space

- Continued development of urban areas
- It is contained, leaving plenty of room for agriculture
- Greater density
- Less sprawl
- Less pollution
- Conserves lakeshore and prime farmland
- Considers outcome, collaboration
- Planned
- Local governments working together
- Less impact on the environment
- Will facilitate redevelopment of brownfield sites
- Benefits the entire community
- Better use of infrastructure

Citizens also made the following suggestions for change to the scenario:

- Should be an emphasis on greenway & green infrastructure as an integrated part of Smart Growth
- Acknowledge some strip development will occur
- Somewhat bigger lots
- Listen to existing communities

Table 4.5: Comparison of Development Scenario Impacts

Factor	*Scenario I: Business as Usual*	*Scenario II: Zoning Build-out*	*Scenario III: Smart Growth*
Acres of forest consumed	8,612	84,658	13,808
Acres of agricultural land/open space consumed	8,563	25,056	4,195
Percent of development outside 8-minute fire response	15%	15%	2%
Number of needed fire stations	2	1 (or 2)	0
Cost of new fire stations (capital)	$1,950,000	$975,000	$0
Percent of new development outside water service area	65%	51%	6%
Number of new private wells	5,936	24,970	570
Water flow from wells	1.48 MGD	6.24 MGD	.14 MGD
Percent of new development outside of sewer service area	65%	56%	5%
Number of new septic systems	5,054	33,999	532
Septic flows	1.49 MGD	8.49 MGD	.13 MGD
Both water and sewer calculations are based on 2.05 acres per household (average for new development), 100 gallons of water/sewage per person per day and 2.5 persons per household.			

Table 4.6: Comparison of Development Impacts on Transportation

Scenario I: Business as Usual	*Scenario II: Zoning Build-out*	*Scenario III: Smart Growth*
Construction Highest road miles to construct Large number of "spot" intersection projects	**Construction** Moderate (planned) road miles to construct Fewer "spot" projects/more "system" improvements	**Construction** Most limited new road miles to construct "System" improvements better serve local needs
Maintenance Highest road miles to maintain Highest snow removal costs	**Maintenance** Moderate (planned) road miles to maintain Improved efficiency for snow removal	**Maintenance** Most limited new road miles to maintain Most efficient snow removal plan
Operations Highest total regional travel distance Highest total regional travel time	**Operations** Moderate total regional travel distance Moderate total regional travel time	**Operations** Lowest total regional travel distance Lowest total regional travel time
Environment Highest total regional fuel usage Most air pollution impacts for mobile sources	**Environment** Moderate total regional fuel usage Moderate air pollution impacts for mobile sources	**Environment** Lowest total regional fuel usage Least air pollution impacts for mobile sources
Multi-Modal Opportunities Inefficient and costly transit service/low ridership Limits non-motorized options (due to distances)	**Multi-Modal Opportunities** Moderate/reasonable transit service opportunities Improves non-motorized options	**Multi-Modal Opportunities** Designed to optimize transit service & ridership Optimizes non-motorized options
Other Public Priorities Least predictable long range improvement plan Increased emergency response times	**Other Public Priorities** Predictable long range improvement plan Moderate/reasonable emergency response times	**Other Public Priorities** Most predictable long range improvement plan Improved emergency response times

Transportation Network

The West Michigan Shoreline Regional Development Commission (WMSRDC) serves as the Metropolitan Planning Organization (MPO) for Muskegon County and northern Ottawa County. As the designated MPO, operating under the name of the West Michigan Metropolitan Transportation Planning Program (WestPlan), the WMSRDC undertakes a comprehensive transportation planning program to maintain the eligibility of local governments in the area to receive federal and state transportation funds for street and road improvements, as well as subsidies for mass transit.

The County is well served by a series of freeways, state highways (trunklines), major roads and local roads. The County's primary link to other metropolitan areas in Michigan is by Interstate 96 which terminates as it enters the City of Norton Shores. Westbound I-96 merges into Business 31 and becomes Seaway Drive, which provides the most direct route to the downtown center of the Muskegon Metropolitan Area. The major trunkline roads in Muskegon County provide easy connections to Interstate 96 and 31 and Interstate 131 via Rt. 46. U.S. 31, which is the primary north-south limited access highway for communities along the coast of Lake Michigan, extends the entire length of Muskegon County, providing access to communities along the entire route. Muskegon County is served by three major M-route state trunk lines: M-46 (Apple Avenue), M-120 (Holton Road), and M-37. M-46 and M-37 both have regional significance, connecting to other major routes throughout the state. M-46 traverses in an east-west direction, the entire width of the state, and M-37 traverses a majority of the length of the state in a north-south direction. All of these routes provide access to municipalities throughout the county and beyond into neighboring communities. M-120 serves as a major north-south route for Muskegon, Oceana, and Newaygo Counties. M-120 begins in the City of North Muskegon and terminates in Hesperia on the Oceana and Newaygo county line at M-20. These major highway connections link Muskegon to Grand Rapids, Holland, Detroit, and Chicago.

There are a total of 614 miles of Federal Aid Eligible Roads in Muskegon County. A total of 1163 miles of roads are maintained by the Muskegon County Road Commission, of which 374 miles are primary roads. There are 513 miles of local roads within the jurisdictions of the cities and villages of Muskegon County. See Figure 3.37 for the major road network.

The Muskegon Area Transit System (MATS) was originally formed in 1969 as the Muskegon County Metropolitan Transportation System (MCMTS). In 1972, MCMTS absorbed the operation of another public transit organization, the Muskegon Area Transit Authority (MTA), and became the Muskegon Area Transit System. MATS is a Department within Muskegon County Government and is authorized to provide public mass transportation services within the County. MATS currently operates service on nine year-round fixed-routes and two seasonal routes with a 100 percent wheelchair accessible fleet utilizing 12 buses during maximum peak service and serving the urbanized areas of Muskegon, Muskegon Heights, Roosevelt Park and Norton Shores and Muskegon Township. MATS also provides paratransit services to meet the public demand county-wide.

MATS has a total of 24 vehicles and employs 52 people. According to the Michigan Department of Transportation, for the fiscal year of 2011, MATS traveled approximately 695,000 miles, served

approximately 739,000 passengers and had over 49,000 vehicle hours. The hours of operation are Monday through Friday, 6:30 am to 10:40 pm and Saturdays 9:30 am to 6:00 pm.

Greyhound operates out of the MATS terminal on Morris Avenue in Muskegon. The terminal is open Monday through Saturday, but closed Sundays and holidays. Service is available to a variety of cities. Muskegon is part of the Greyhound Great Lakes region.

Pioneer Resources is a non-profit organization that provides a variety of services to people with disabilities in order to increase their independence and community participation. One of their services is transportation for people with mobility impairments, developmental disorders, special education students, and senior citizens. Their fleet includes lift equipped transit buses, school buses, suburbans and vans. They also provide MedTrans service, a non-emergency service to transport disabled individuals to medical appointments and clinics.

Rail based transportation does not play a significant role in Muskegon County (from a regional perspective). All of the current lines in the county serve freight and cargo, with no passenger rail available at this time. There are several spurs that pass through the county that are owned by CSX Transportation and the Michigan Shoreline Railroad, which is a CSX partner. There are still some small-scale freight services available from Muskegon and Muskegon Heights, as well as some bulk freight.

Muskegon Lake serves as the port for the greater West Michigan Region for commercial and recreation traffic, as well as educational and environmental research. It is one of the deepest ports on the Great Lakes at a depth 29 feet or more, which designates Muskegon Lake as a Deep Draft Commercial Harbor. The port provides intermodal connections to air, rail, and highway systems. The Muskegon Harbor is home to the National Oceanic and Atmospheric Administration (NOAA) Great Lakes Environmental Research Laboratory Lake Michigan Field Station, Grand Valley State University Annis Water Resources Institute and the Michigan Alternative and Renewal Energy Center.

For recreational boaters, there are ten private marinas on Muskegon Lake with more than 1,000 boat slips. The City of Muskegon maintains one public marina and five public launches with an additional 275 boat slips. In addition, Muskegon State Park, Laketon Township, and the City of North Muskegon each maintain public boat launch facilities.

Commercial port operators along Muskegon Lake include West Michigan Dock and Market (Mart Dock), The Lafarge Corp., Canonie Dock, Great Lakes & Verplank (GL&V) Lakeside Dock, Cobb Dock, Lake Express, and Greenfield Terminal. The five year average (2006 – 2010) tonnage is 1.9 million tons of material shipped and received annually. Muskegon Lake receives 1,000-foot freighters on a regular basis. At this point, all of the materials shipped into Muskegon Lake consist of bulk materials such as salt, aggregates, and coal. In recent years, the West Michigan Port Operators group has formed with a mission of expanding port activities in the lake and

region as a whole. The County of Muskegon has also formed a Port Advisory Committee comprised of public and private individuals with the mission to coordinate appropriate services, anticipate future needs, provide marketing assistance, and develop long-term strategies for economic growth and environmental sustainability at the Port of Muskegon. The location of the port makes it an ideal candidate for expansion, with the depths, the access to all modes of transportation, and available land along the lakeshore.

Muskegon Lake also provides a terminal for the Lake Express cross-Lake car ferry. The terminal is located at the Great Lakes Marina, 1920 Lakeshore Drive, The ferry runs from Muskegon to Milwaukee during the months of late April/early May and October. The Lake Express began service in 2004, and offers passengers a two and one half hour ride across Lake Michgian, which is much faster than driving around Chicago. The ferry can hold 46 vehicles and 12 motorcycles for each trip across Lake Michigan.

Muskegon County Airport (MKG) is a modern, all weather commercial service airport serving the air transportation needs of the West Michigan shoreline. The airport encompasses over 1,000 acres within the City of Norton Shores and has a total employment of 165 and a direct economic impact in excess of $54,000,000 per year. Commercial airline service is available on SkyWest Airlines, operating as United Airlines, with 50 passenger jet service to Chicago O'Hare, providing one-stop service to most of the world. Muskegon County Airport also has a significant amount of general aviation activity. Executive Air Transport, Inc. is the airport's full service Fixed Based Operator, provides line services such as fuel (Jet A and 100LL), avionics repair and maintenance, and flight training. Muskegon County Airport is also home to the West Michigan Flying Club, U.S. Coast Guard 9th District Search and Rescue Facility, Baker College Flight School, and considered a base for numerous local businesses. Nearly 100 aircraft are based at the airport, and the airport experiences an average of 150 daily aircraft takeoffs and landings.

Muskegon County also has many non-motorized transportation facilities. Non-motorized facilities include, trails, sidewalks, bike lanes, and greenways. Efforts have been focused on creating safe and easy to follow routes throughout the area, as well as connecting to other regional facilities. Many of the non-motorized facilities have been designed to interact with the local transit system. In Muskegon County, the major established trail networks include the Lakeshore Trail System, which is approximately 13 miles in length and winds throughout the City of Muskegon. The Musketawa Trail system contains 26 miles of trail, and extends into the neighboring Ottawa County, and eventually east to Kent County where it connects up with other regional trails. The Hart-Montague Trail is a 22 mile trail. At the south end of the trail, the City of Whitehall has created a 2.2 mile extension called the White Lake Pathway. Another extension, the Fred Meijer/Berry Junction Trail, was built in 2010 that extends the trail south for another nine miles, into Dalton Township. Phase II of the Fred Meijer/Berry Junction

Trail is in the planning stages and will eventually connect to the Lakeshore Trail and the Muskatawa Trail in Muskegon.

Air Quality Designation

A designation is the term the Environmental Protection Agency (EPA) uses to describe the air quality in a given area for any six common pollutants known as criteria pollutants. Muskegon County is monitored and given air quality designation on ground-level ozone and fine particulate matter which are unhealthy to breathe at certain levels.

Ground Level Ozone

EPA designates an area as non-attainment if it has violated or has contributed to violations of the National Ambient Air Quality Standards (NAAQS) 8-hour ozone standard over a three-year period. EPA also may designate an area as attainment/ unclassifiable if it has: 1) monitored air quality data showing that area has not violated the ozone standard over a three year period; or if 2) there is not enough information to determine the air quality in the area.

The designations process plays an important role in informing and educating the public if air quality in a given area is healthy. Once designations take effect, they also become an important component of state, tribal and local governments' efforts to control ground-level ozone and small particulate matter.

Many areas have been categorized as basic non-attainment areas. They will have to comply with the more general non-attainment requirements of the Clean Air Act. EPA classifies ozone and fine particulate matter non-attainment areas based on the severity of their ozone and fine particulate levels. Classified areas fall into six categories: basic, marginal, moderate, serious, severe or extreme.

In April 2004, several counties in West Michigan were classified as non-attainment for ozone by the Environmental Protection Agency (EPA). Kent, Allegan, Ottawa and Mason counties were classified as basic while Muskegon County was classified in the higher moderate category. Later, Muskegon County was "bumped down" to the lesser category of marginal. This was announced in September 2004 during a visit to Muskegon County by the former EPA Director Michael Leavitt.

Overall ground level ozone has since improved in West Michigan, and in response to requests by the Michigan Department of Environmental Quality (MDEQ), EPA has re-designated Kent, Ottawa, Muskegon, and Allegan Counties as attainment for the 1997 8-hour ozone standard.

NAAQS for particulate matter were first set in 1971. Total suspended particulate (TSP) was the first indicator used to represent suspended particles in the ambient air. There were secondary standards, which were welfare standards, and primary standards, which were public health standards. An area in Kent County was designated nonattainment of the secondary TSP standard in 1978. An area in Muskegon County was also designated as exceeding the secondary standard in 1978, with a correction in 1981.

In 1987, the standard was changed to PM10, or particulate matter with an aerodynamic diameter less than 10 microns. There were no nonattainment areas in West Michigan for this standard.

In 1997, the EPA established an annual standard and a 24-hour standard for PM2.5, or particulate matter with an aerodynamic diameter less than 2.5 microns. The PM10 standard remained in place. The first

nonattainment designations for the 1997 standard were made in 2005. No areas in West Michigan were in nonattainment.

In 2006, the EPA revised the 24-hour PM2.5 standard and retained the existing annual PM2.5 standard. As of 2012, the Muskegon County monitor is in compliance with the revised standard.

Recent Revisions of the National Ambient Air Quality Standards (NAAQS)

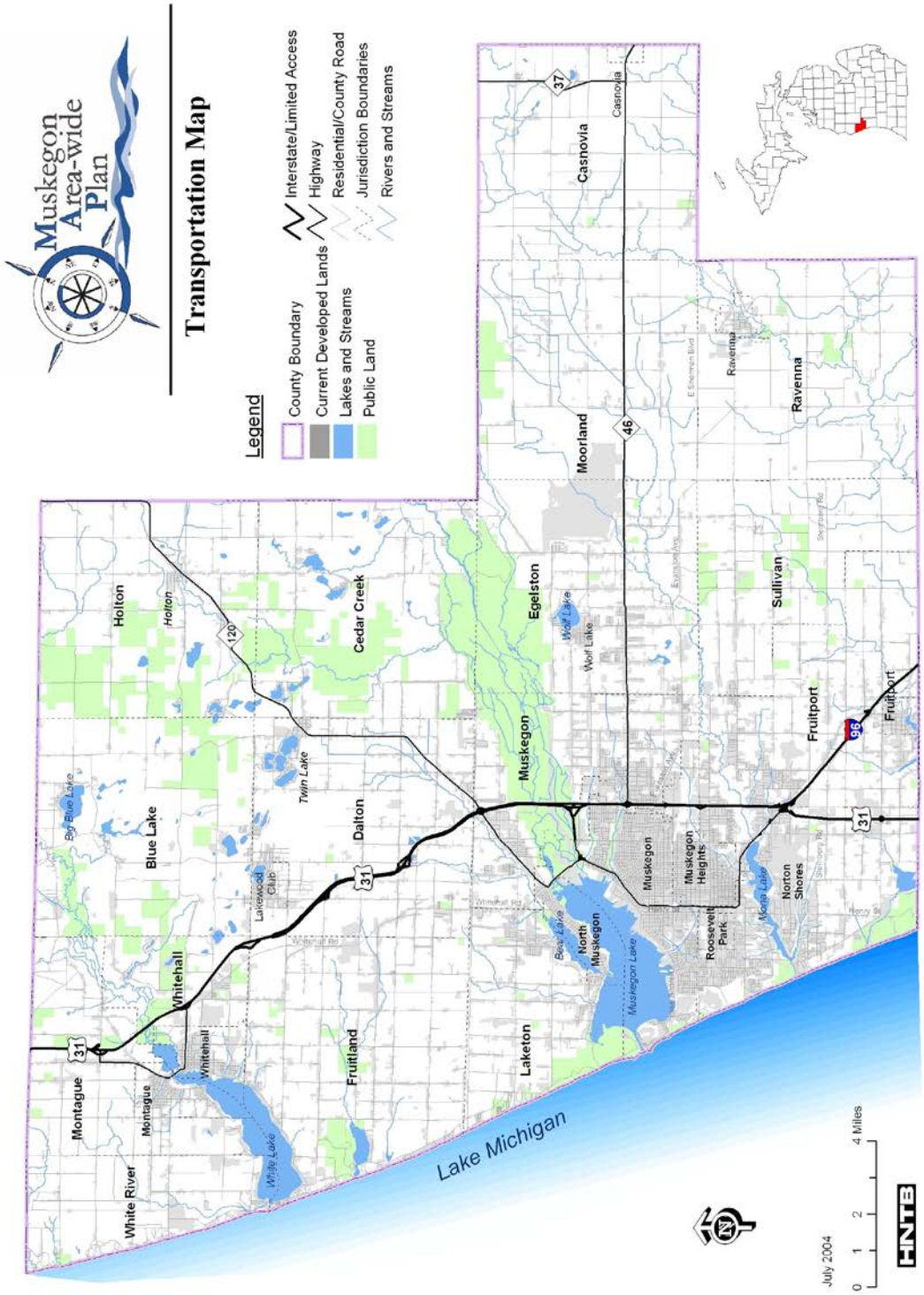
In March of 2008, the Environmental Protection Agency significantly strengthened the NAAQS for ground-level ozone. This revision reflects new scientific evidence reviewed by the Clean Air Scientific Advisory Committee about ozone and its effects on public health and the environment. The EPA's 1997 ozone standard was set at 0.08 ppm (parts-per-million) which was effectively 0.084 ppm due to rounding over an 8-hour period. The new strengthened NAAQS standard for ground-level ozone has been set at 0.075 ppm for an 8-hour period. The EPA also specified the level of the standard to the nearest thousandth of a ppm (aka the "third decimal place"), which eliminates the need for rounding under the new standard. The current NAAQS 24-hour standard for fine particulate matter was established by the EPA in 2006 and is 35 $\mu g/m^3$. The previous 24-hour standard of 65 $\mu g/m^3$ was established in July of 1997. The annual standard for particulate matter of 15 $\mu g/m^3$ was established in 1997 and remains in effect today.

A network of air quality monitors are located in the West Michigan counties. Ozone monitors operate from April through September because ozone formation is associated with hot summer weather conditions. The DEQ also operates monitors to measure fine particulate matter levels and other pollutants year-round.

The Clean Air Act of 1970 (CAA) and its Amendments require that the federal government review all transportation plans to assure air quality conformity. These conformity requirements, first introduced in the 1977 CAA Amendments, prohibited federal approvals of actions that did not concur with state government's State Implementation Plan (SIP) for air quality improvements. These requirements were further expanded in the 1990 Amendments, which require transportation plans to conform to the SIP's expressed purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards, and achieving expeditious attainment of such standards (WMSRDC, 2001).

The Muskegon area and the State of Michigan are operating under the State Implementation Plan adopted for 2011-2014. This plan identifies how air quality will be protected and improved in the State. The processes for reviewing and approving long range plans and projects are outlined in the SIP and will be followed in the development of transportation plans statewide. One of the most successful efforts for improving air quality in the Muskegon area is the ongoing Clean Air Action Program, formerly known as the Ozone Action Program. The program has promoted voluntary air pollution reduction strategies on targeted days since 1995 (WMSRDC, 2001).

Map 3.37: Transportation



Chapter 5:
Smart Growth – the Preferred Scenario

The strategy chosen for the future development of Muskegon County was the Smart Growth scenario. This scenario was chosen based on public comments that the business as usual scenario continued inefficient development in the community and the perception that the zoning build out scenario allowed for "too much" development. More specifically, participants supported the Smart Growth scenario because it:

- Preserves rural character and limits sprawl
- Emphasizes cooperation
- Uses existing infrastructure
- Protects open space
- Emphasizes urban redevelopment

The selection of the Smart Growth scenario reflects the public's desire to make the best use of existing infrastructure, plan for limited infrastructure expansion in order to minimize utility costs, and preserve agricultural and open space lands.

Preferred Scenario: Smart Growth

Urban sprawl is a concern in Muskegon County. When asked if their community "has sprawl" participants responded that it does:

- 70% of Fruitport Township respondents felt their community has sprawl
- 52% of Norton Shores respondents indicated the same
- Half of the participants who have lived in the area from 11 to 20 years responded that their community "has sprawl"

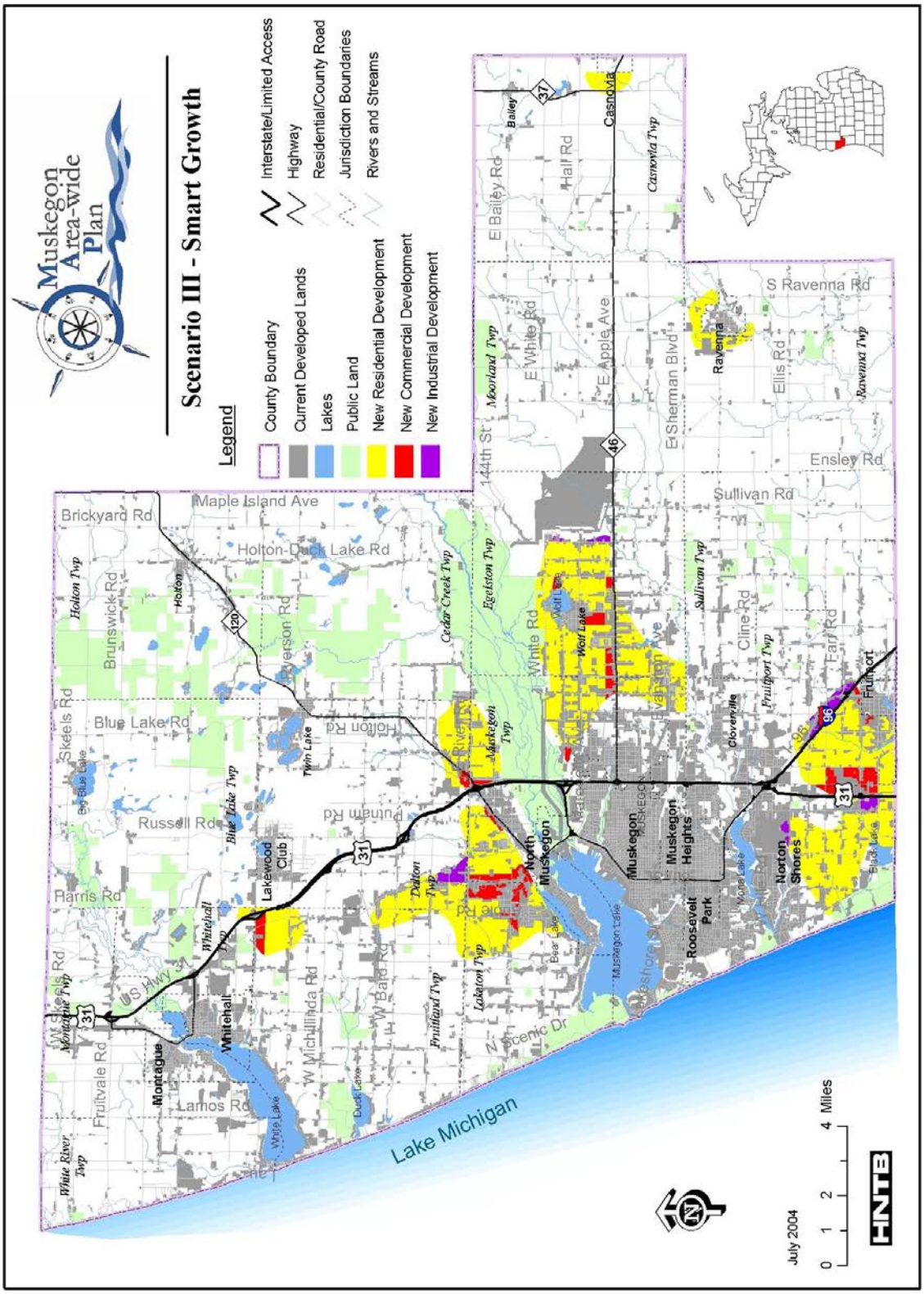
The combined reactions from the Community Forums indicated that:

- There was too much sprawl
- There was a need to preserve open space and farmland
- Increased densities were needed
- Redevelopment of existing areas was needed
- There was a need to develop around existing infrastructure due to the impacts to existing infrastructure of sprawling development and the cost of new infrastructure.

When asked if density should be higher than what the current trends have been, 43 percent agreed that density should be higher, with 22 percent strongly agreeing.

Under the Smart Growth scenario, 18,356 acres of land are developed (new development). Residential uses account for 88 percent of the new development, or 16,153 acres. Commercial uses are 1,652 acres and industrial uses 550 acres. Map 5.1 shows the planned pattern of residential, commercial, and industrial development.

Map 5.1: Smart Growth Scenario



The existing infrastructure has capacity to accommodate growth within existing service areas. The County-owned wastewater treatment plant currently operates at 76 percent of capacity. The City of Muskegon water treatment plant currently operates at 33 percent of its 28 million gallons per day (MGD) capacity (average flow), with plans to expand to 40 MGD capacity. At peak daily flow, the plant reaches 74 percent of its capacity currently. Muskegon Heights also maintains a water treatment and distribution system, their system has an average daily flow of 3 MGD.

Some infrastructure improvements are already planned. Upgrading the City of Muskegon water treatment facility to a capacity of 40 MGD is one planned infrastructure improvement. In the transportation realm, infrastructure improvements to 2015 include:

- US 31 project to add a west bound to south bound loop ramp
- Grand Haven Road reconstruction with drainage improvements, widening from two to three lanes
- Shoreline Drive East project to create a new four lane divided roadway
- Harvey Street reconstruction with drainage improvements, widening from two to five lanes
- Giles Road resurfacing, adding a center turn lane and drainage improvements
- Pontaluna Road reconstruction with drainage improvements, widening from two to four lanes
- Grand Haven Road reconstruction from three to five lanes
- Whitehall Road reconstruction, widening from two to five lanes north of Giles Road

Another issue related to smart growth is the retention of agricultural land, parks, and open space. The value of the agricultural land in the county can be measured in terms of the farm revenues produced in the county. Muskegon County ranks second in the state in cucumber production and fifth in the state in blueberries. The market value of agricultural products sold in the county was $46,301,000 according to the 2002 Census of Agriculture. The net cash income from farming activities in the county was $7,040,000. The harvested acres of berries in the county grew from 56 acres in 1997 to 94 acres in 2002, showcasing the popularity and importance of berry farms to the county.

More generally, the following findings have been made in studies documenting the value of agricultural lands, parks, and open space:

- Corporate CEOs say quality of life for employees is the third-most important factor in locating a business, behind only access to domestic markets and availability of skilled labor.
- Across the nation, parks, protected rivers, scenic lands, wildlife habitat, and recreational open space help support a $502-billion tourism industry.

Smart Growth background

"Smart growth" means different things to different people. There is no single definition of smart growth; its meaning depends on context, perspective and timeframe. The common thread among different views of smart growth is development that revitalizes central cities and older suburbs, supports and enhances public transit, promotes walking and bicycling, and preserves open spaces and agricultural lands.

Smart growth does not mean no growth; rather, it seeks to revitalize the already-built

environment, fosters efficient development at the edges of the region while creating more livable communities.

Smart growth meets the key goals of sustainable development through community design. Focusing new housing and commercial development within already developed areas requires less public investment in new roads, utilities and amenities. Investment in the urban core can reduce crime, promote affordable housing and create vibrant central cities and small towns.

By coordinating job growth with housing growth, and ensuring a good match between income levels and housing prices, Smart Growth aims to reverse the trend of longer commutes, particularly to bedroom communities beyond the region's boundaries. People who live within easy walking distance of shops, schools, parks and public transit have the option to reduce their driving and therefore, pollute less than those living in car-dependent neighborhoods (Association of Bay Area Governments).

"Smart Growth means using comprehensive planning to guide, design, develop, revitalize and build communities for all that: have a unique sense of community and place; preserve and enhance valuable natural and cultural resources; equitably distribute the costs and benefits of development; expand the range of transportation, employment and housing choices in a fiscally responsible manner; value long-range, regional considerations of sustainability over short term incremental geographically isolated actions; and promote public health and healthy communities" (APA).

Smart Growth is seen as the antidote to sprawl, which is defined to include:

- Low density/Floor Area Ratio (FAR)
- Unlimited outward extension
- Skipped-over (leapfrog) development
- No attempt at clustering, mixing of uses, or center establishment
- Resource-consumptive development
- Automobile-dominated transportation (Burchell 1998)

Smart Growth is pro-business, pro-equity, pro-environment, and pro-quality of life. These are, in sum, bipartisan issues (Michigan Land Use Institute).

Figure 5.2: Traditional Development Pattern

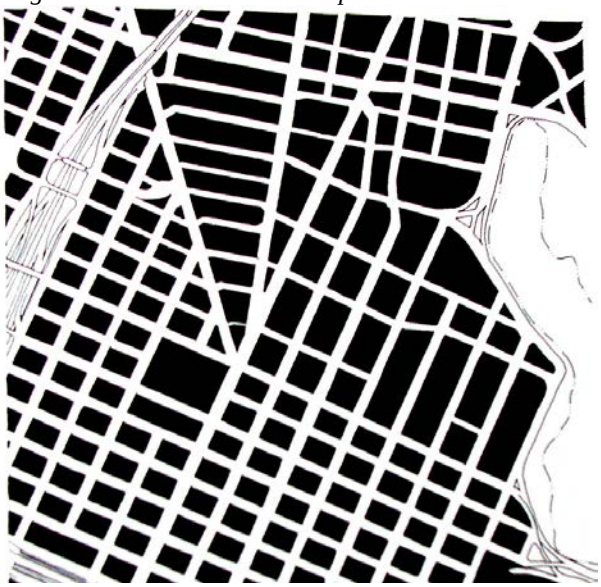


Figure 5.3: Suburban Sprawl Development Pattern

Sprawl occurs as personal choices are made based on apparent benefits. The combined effect of these choices is often self-defeating and contrary to their original purpose. Nevertheless, it is useful to list the apparent "benefits" of sprawl as perceived by some individuals as the make these personal decisions. Some of the apparent benefits of sprawl are as follows:

- Allows unlimited use of the automobile
- Relieves inner-suburban and urban congestion
- Reduces suburban-to-suburban travel times
- Provides physical distance from urban problems
- Guarantees increasing property values and good public services (Burchell 2001)

The Smart Growth movement is not just about fighting sprawl, but also proposing development that better utilizes existing infrastructure and is environmentally responsible, fiscally sound, and socially equitable. Smart Growth provides a new opportunity to address persistent challenges facing low income inner-city neighborhoods and older suburbs by redirecting growth and investment back into existing communities (Betty Weiss 2001)

The principles of Smart Growth include:

- Create a range of housing opportunities and choices
- Create walkable neighborhoods
- Encourage community and stakeholder collaboration
- Foster distinctive, attractive places with a strong sense of place
- Make development decisions predictable, fair, and cost effective
- Mix land uses
- Preserve open space, farmland, natural beauty and critical environmental areas
- Provide a variety of transportation choices
- Strengthen and direct development towards existing communities
- Take advantage of compact building design

(Smart Growth Network)

Disagreement, Partial Agreement, and Agreement

There are some Smart Growth elements that provoke disagreement, some which can garner partial agreement among interest groups, and some elements on which there is a general consensus. Table 5.4 summarizes these elements.

Table 5.4: Smart Growth Concepts: Areas of Disagreement, Partial Agreement, and Agreement

Disagreement	***Partial Agreement/Disagreement***	***Agreement***
Placing limits on the outward extension of further growth.	Promoting compact, mixed-use development.	Preserving large amounts of open space and protecting the quality of the environment.
Financing the additional infrastructure needed to deal with growth and maintain existing systems properly.	Creating significant financial incentives for local governments to adopt "Smart Growth" planning.	Redeveloping inner-core areas and developing infill sites.
Reducing dependency on private automotive vehicles, especially one-person cars.	Adopting fiscal resource sharing among localities.	Removing barriers to urban design innovation in both cities and new suburban areas.
	Deciding who should control land-use decisions.	Creating a greater sense of community within individual localities and neighborhoods and a greater recognition of regional interdependence and solidarity.
	Adopting faster project application approval processes, providing developers with greater certainty and lower project carrying costs.	
	Creating more affordable housing in outlying new-growth areas.	
	Developing a public-private consensus-building process.	

(Anthony Downs, 2001)

Fiscal Benefits

In numerous studies, planners and engineers have hypothesized that there are two related ways in which urban form can influence the public capital and service-delivery costs associated with development, economies of scale and economies of geographic scope. These theories, when combined, suggest that more compact development can reduce the costs of capital and operations for government (Muro and Puentes, March 2004).

Research by the Real Estate Research Corporation, and others, documents that compact growth can be as much as 70 percent cheaper for governments than equivalent volumes of scattered growth. It simply costs less to provide infrastructure (such as streets, schools, flood control or sewers) and often services (such as police or fire protection) to denser, more contiguous households than to far-flung, low-density communities (Katz, 2003)

At the regional scale, cooperative growth management can encourage more compact development patterns, protecting farmland and open space from sprawl (APA, 1998).

Locally, the fiscal impacts can be measured in terms of the cost savings of the Smart Growth scenario over the Business as Usual scenario. The Smart Growth scenario has the potential to save $5.18 per $100 of County Equalized Value (CEV) for Muskegon County taxpayers. This would save the average homeowner $4,450 over the 20 year planning period, or $220 per year in taxes to pay for the improvements to water, sewer, roads, and fire protection. Additionally, householders could experience savings of $100 per year in fuel expenses due to reduced vehicle miles traveled. The fiscal impacts are further discussed later in this chapter.

Estimated Annual Fiscal Benefits to Muskegon County Taxpayers

County Equalized Value $4,840,137,970

	Potential Savings	Potential Savings per $100 CEV
Water	$67,320,000	$1.39
Sewer	$178,200,000	$3.68
Roads	$3,200,000	$0.07
Fire service	$1,950,000	$0.04
TOTAL	$250,670,000	**$5.18**

The first barrier to implementation is often local regulations that do not permit mixed uses, provide for transportation options, or allow small lots or upper story residential uses. Other barriers can include market conditions, development and process costs, financing, and [lack of] community involvement (APA, 1998).

There are solutions to the obstacles to implementation of Smart Growth strategies. Table 5.5 summarizes some of those solutions.

"***Communities should be shaped by choice, not by chance. We can keep on accepting the kind of communities we get, or we can learn how to get the kind of communities we want***" – Richard Moe

Table 5.5: Smart Growth Concepts: Strategies, Obstacles, and Solutions

Strategy	***Obstacle***	***Solution***
Efficient Use of Land Resources	Excessive lot-area dimensions	Revise setback requirements; minimum lot sizes
Small-lot infill development Infill development on large lots	Inflexible subdivision and lot-area requirements	Average lot size for whole development, allow flexibility to preserve natural features
Coordinated development	Coordinated development not addressed	Specific development plans; master plans
Better use of deep lots	Excessive frontage and multiple access requirements	Midblock lanes; interior block cluster development; flag lots
Less land for streets	Excessive street design standards	Adopt "skinny" street standards
More efficient use of parking areas	Excessive parking requirements	Reduce minimum parking ratios; set parking ratio maximums; acknowledge on-street parking; encourage shared parking
Full Use of Urban Services		
Achieving planned densities	Underbuilding; no support for density goals	Minimum density standards
Attached units	Lot sizes not in proportion to unit sizes	Reduce lot-size requirements; allow single-family attached in all residential zones
Attached units	Lot-area dimension requirements	Revise setback requirements
Accessory units	Excessive minimum unit size; density maximums too low	Allow accessory units
Mixed Use		
Mixed-use buildings	Single-use zoning; separation of uses	Allow home occupations and live/work units; density bonus for mixed-use commercial/residential buildings
Mixed-use neighborhoods	Single-use zoning; separation of uses	Limited commercial in residential zones; allow multi-family residential in commercial zones; limited retail in industrial zones
Healthy commercial districts	Single-use zoning; proximity	Community shopping centers with street connectivity; main street districts
Transportation Options		
Multimodal streets	Street design standards overemphasize autos	Revise street standards; promote "skinny" streets

Transit, bike, and pedestrian connectivity	***Physical barriers or out-of-direction travel***	***Cul-de-sac and block-length maximums; internal connectivity standards; sidewalk requirements***
Transit-supportive development	Transit-supportive development not addressed	Mandate transit-oriented development along transit corridor
Detailed, Human-Scale Design		
Compatibly designed buildings	Too abrupt transitions between zones	Density transitioning; mid-block zoning district lines; building height limits
Compatibly designed buildings	No design guidelines for new buildings	Incorporate compatibility guidelines for new infill construction
Pedestrian-friendly streetscapes (commercial)	Street standards emphasize cars; design discourages walking	Building orientation; parking lot placement; allow shared access; 50%80% frontage rule; etc.
Pedestrian-friendly streetscapes (residential)	Street standards emphasize cars; design discourages walking	Require sidewalks; limit setbacks; garage placement; lighting; utility placement; etc.
Quality architectural design	No incentives to provide amenities	Density bonuses for amenities
Implementation		
Examining the development review process	Onerous procedures for variances, conditional uses	Allow administrative approval for minor adjustments
Examining the Planned Unit Development (PUD) process	Onerous PUD requirements	Improved PUD regulations
Flexibility in the design review process	Discretionary design review process; vague standards	Dual-track design review process

Without updating planning requirements and providing a certain amount of coordination and guidance among local jurisdictions, achieving any level of smart growth is next to impossible. This is particularly true in states with strong home-rule governments and different local planning requirements, as in Michigan, Connecticut, and Massachusetts. (APA, 2002).

Smart Growth in Michigan

In Michigan, Governor Jennifer Granholm created a land use leadership council based in part on the premise that rapid metropolitan decentralization "is hampering the ability of this state and its local governments to finance public facilities and service improvements" and is "creating a strain on the efficient provision of public services" (Executive Order No. 2003-4, February 27, 2003).

The Michigan Land Use Leadership Council was comprised of state representatives and senators, local government officials, homebuilders, business leaders, citizens, environmentalists, land-based industry representatives, social justice advocates, real estate agents, and others. The directors of state departments such as agriculture, consumer and industry services, environmental quality, natural resources, history, arts, and library, and transportation served on the Council as non-voting members (Michigan Land Use Leadership Council, 2003).

The purpose of the Council was to:

1. Identify the trends, causes, and consequences of unmanaged growth and development
2. Provide recommendations to the governor and the legislature regarding ways to minimize the negative economic, environmental, and social impacts of current land use trends; promote urban revitalization and reinvestment; foster intergovernmental and public-private partnerships; identify growth and development opportunities; protect the state's natural resources; and, better manage the cost of public investments in infrastructure (Michigan Land Use Leadership Council, 2003).

The key recommendations to emerge from the Council were aligned with the Smart Growth Principles outlined by the Smart Growth Network, which have been referenced throughout the Muskegon Area-wide Plan (Michigan Land Use Leadership Council, 2003).

These recommendations have broad support as indicated by a survey conducted statewide in 2003 by Michigan State University. The survey demonstrated that nearly 60 percent of Michigan residents supported increased land use planning and regulation. Also, three quarters of residents are very or somewhat concerned about local urban sprawl. The study further went to find that 92 percent agreed the state should encourage local governments to work together to manage growth, 86 percent supported restricting development to protect farmland, and 86 percent supported restricting development to protect environmentally sensitive areas (Michigan Land Use Leadership Council, 2003).

The availability of tools for implementing Smart Growth is critical to the success of the community's efforts. Tools provided at the state and federal level often involve policies, tax incentives, and grant programs. The following programs are among the tools for implementing Smart Growth in Michigan:

Brownfields Redevelopment

In 1995, Michigan passed a law that limited the liability for brownfields clean-up only to those parties responsible for contamination.

Three years later, then Governor Engler passed the Clean Michigan Initiative, a $675 million environmental bond that facilitated redevelopment. In 2000, the state passed tax credits and additional proposals to ease brownfields redevelopment.

Tax-Free Renaissance Zones

Michigan has thirty-four Renaissance Zones (comprising 164 geographic areas) around the state designated as virtually tax free for any business or resident presently in, or moving into, a zone. They are designed to provide selected communities with the most powerful market-based incentive—no taxes—to spur new jobs and investment. The zones range in size from five to 3,000 acres.

The taxes affected by the program include nearly all the state and local taxes levied on business activity: Single Business Tax (SBT), state personal income tax, six-mill state education tax, local personal property tax, local real property tax, local income tax and utility users tax.

The duration of the zone designation ranges from 10 to 15 years, starting from January 1, 1997. In all cases, the tax relief will be phased out in 25% increments over the last three years of the program.

Right to Farm Act

The Michigan Right to Farm Act, P.A. 93, was enacted in 1981 to provide farmers with protection from nuisance lawsuits. This state statute authorizes the Michigan Commission of Agriculture to develop and adopt Generally Accepted Agricultural and Management Practices (GAAMPs) for farms and farm operations in Michigan. These voluntary practices are based on available technology and scientific research to promote sound environmental stewardship and help maintain a farmer's right to farm.

Farmland and Open Space Preservation Act

The Farmland and Open Space Preservation Act enables a farm owner to voluntarily enter into a development rights agreement with the State. The agreement is designed to ensure that the land remains in an agricultural use for a minimum of 10 years and ensures that the land is not developed in a non-agricultural use. In return for maintaining the land in an agricultural use, the land owner may be entitled to certain income tax benefits, and the land is not subject to special assessments for sanitary sewer, water, lights or non-farm drain projects.

Smart Growth in Muskegon County

Certain principles of Smart Growth are already under way in Muskegon County, particularly in terms of urban infill and redevelopment projects. These initiatives meet the principle of directing development toward existing communities and in terms of farmland protection efforts that meet the principle of preserving open space, farmland, natural beauty, and critical environmental areas.

Renaissance Zones are one of the tools being used in Muskegon County to direct development toward existing communities. As described previously, Renaissance Zones are areas in the cities of Muskegon and Muskegon Heights designated as virtually tax free. The tax relief will be phased out in 25% increments over the last three years of the program.

Several infill development and building conversion projects are planned, under way, or completed in Muskegon County:

- Amazon Building: Conversion to apartments
- Conversion of the Shaw Walker Building into the Watermark Lofts
- Muskegon Boiler Works (pending): convert Boiler Works building to artist's lofts
- City of Whitehall considering moving city services into the heart of downtown to preserve the Whitehall Bank Building and increase foot traffic downtown
- Redevelopment of the Muskegon Mall into a mixed-use combination of residential, office, and retail developments in a city center or historic "main street" design

Another local initiative has been the establishment of the Muskegon County Farmland/Open Space Preservation Program which would work to voluntarily protect local farmland using state and federal grant money. The program has the eventual goal of purchasing the development rights of 35,000 acres (about half the farmland in the county) so that the prime agricultural soils are preserved for food production and open/green space.

How Far?

At the public meeting in September, 2004 members of the steering committee and general public participated in a visual choice survey. The purpose of the survey was to determine the level to which residents of Muskegon County wished to implement various Smart Growth principles. This choices poll was intended to:

- Develop an understanding of how much participants supported the concept of each principle
- Develop a consensus on the intensity of the principles as applied to Muskegon County
- Introduce innovative development solutions from other areas

Participants were asked to select their preference for the degree to which a concept is implemented as presented on each slide, basing their response to the concept presented in each image, not the policy ramifications or cost. Each slide was presented from a minimal approach through moderate approach, to an aggressive approach for implementation. Preferences were selected using an electronic voting system.

The results of the survey helped determine the extent to which Smart Growth principles would be integrated into the implementation strategies.

Generally residents voted for a moderate level of implementation. In terms of

housing choice, or the range of housing options that should be available in Muskegon County, the participants believed that housing choice should occur at the township level. This means that each township should have a range of housing options available, rather than having certain types of housing available only in particular areas of the county. Participants felt that walkability was important to connect subdivisions to schools, retail areas, and employment areas in the rural parts of the county and that it was important to be able to walk to the grocery store, pharmacy, video store, corner store or a place of worship in the cities and villages.

Most participants felt that the various jurisdictions in the county partner effectively on low level issues, or issues that lack significant importance or commitment of resources. The participants felt, however, that it is important for the jurisdictions to change their zoning and subdivision regulations to encourage the use of Smart Growth principles. This will require significant collaboration among jurisdictions. Participants also felt that local governments should have standards which encourage the development of distinct areas with a sense of place, but they do not support development of strict architectural controls or establishing architectural review.

Participants felt that it was most appropriate to mix land uses in suburban areas to give those areas more character and access to services. They felt that development should occur in mixed-use cluster developments.

Participants were very supportive of initiatives that protect farmland. They indicated that they would support an increase in mileage to preserve natural resources and agricultural areas. They also believed that development should not occur in rural natural resource areas. This suggests that stringent farmland and natural resource protections regulations and programs would be acceptable locally.

Participants indicted that in both rural and suburban/urban areas they would be willing to use multiple forms of transportation if they were available in the county including walking, biking, carpooling, and taking the bus. Alternative forms of transportation should be incorporated into the transportation plans for the county.

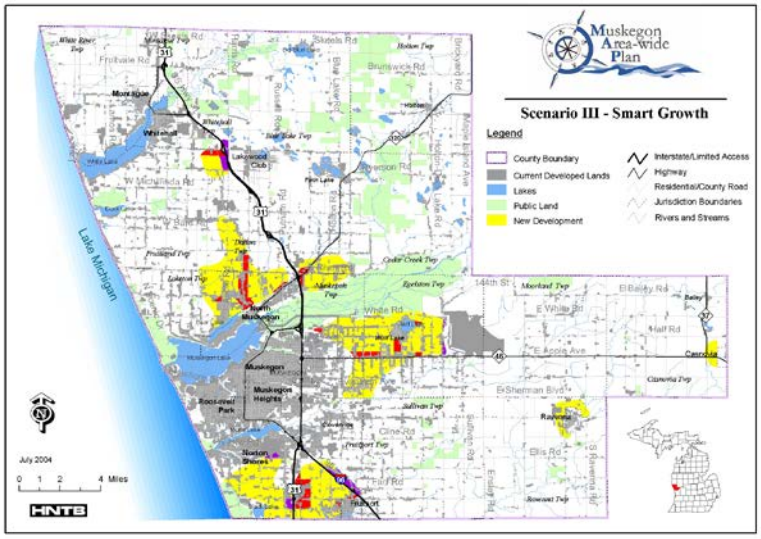
In terms of directing development toward existing communities, participants believed that there should be a county-wide coordinated plan to steer growth to areas with existing utilities and community facilities. They also believed that new growth should be precluded unless it is served by utilities and community facilities.

Smart Growth Implications for Muskegon County

The potential impacts of the Smart Growth scenario were evaluated in the areas of land use, transportation, fire services, water treatment, wastewater treatment, and parks.

Land Use

The Smart Growth scenario development pattern would address concerns related to farmland protection, average lot sizes, and



Map 5.6: Smart Growth Scenario

infrastructure development by concentrating growth near existing urban areas and rural villages. These shifts would be accomplished through policy changes that would require the development and adoption of new zoning ordinances and Planned Unit Development (PUD) ordinances that allow for smaller lot sizes, encourage cluster development, and provide for non-motorized transportation linkages.

The development would occur near existing development in the Townships of Muskegon, Laketon and Dalton, the Wolf Lake area, and the villages of Lakewood Club, Ravenna, and Casnovia.

Open space is preserved in the Smart Growth scenario by directing growth toward existing urbanized areas and away from environmentally sensitive lands and prime farmland. The open space areas include protected federal and state lands, and rural areas in the outlying townships.

Any type of development will consume either agricultural land or forested land in Muskegon County. Development that is clustered rather than stripped out along roadways may consume more agricultural land or forested land, but will ultimately provide greater protection of biodiversity by not segmenting habitats and preserving tracts of farmland that are viable for agricultural production. Stripped out development often threatens the viability of habitats and farmland production. Under this scenario, 13,808 acres of forested land are converted for development. Agricultural lands and open space would also be affected, though to a lesser extent. Approximately 4,200 acres of farmland and open space would be converted to development under this scenario.

The calculations presented assume the same density that Muskegon County has currently. It is only the location of development that is altered to provide for smarter growth. The amount of impacted forest and farmland could be minimized if policies that increase density in development and in redevelopment areas are implemented.

Transportation

The transportation system is especially sensitive to the geographical spread and spatial relationship of development areas. Low density developments spaced far apart present the illusion of reduced traffic congestion, but that is true only for the most local of streets. Generally, traffic congestion is an issue on arterials and major collector roadways, and these facilities are not affected by local street conditions. In other words, the congestion on major roadways is unchanged, but people have driven further (expending more time, fuel and resources) to get to them.

Taking these factors into account, the Smart Growth scenario involves a savings of 62 percent of vehicle miles traveled per day over the Business as Usual scenario. Under the Business as Usual scenario, Muskegon County would witness an increase in vehicle miles traveled of 900,000, whereas under the Smart Growth scenario the number of additional vehicle miles traveled is 557,000. It also provides for the lowest total regional travel time, lowest total regional fuel usage (saving $6 million per year in fuel costs) and has the fewest air pollution impacts from mobile sources. The fuel savings amount to approximately $100 per household per year.

The Smart Growth scenario benefits public investment levels since it has the most limited number of miles of roads to construct and maintain. It provides for "system" improvements to better service local needs. This development scenario is also the most efficient of the three for snow removal.

The Smart Growth scenario also provides for the greatest opportunity for providing transportation choice in terms of transit and non-motorized options. It provides a predictable growth pattern that facilitates long range transportation improvement planning. Bus routes have a greater potential for success in terms of ridership if there is a density capable of supporting the service.

Fire Service

There are fifteen fire departments in Muskegon County, served by 21 fire stations. One of those departments is the DNR fire station, which does not, as a rule, fight structural fires.

The standards for fire departments depend on whether the department is staffed with career fire fighters or volunteers. The National Fire Protection Association has developed standards for both types of departments. Career departments have both time and staffing objectives. The first engine company of the fire department should arrive within four minutes and/or the first full alarm assignment should arrive within eight minutes. While the four minute standard may not always be achievable, the eight minute standard must be met. A first responder should arrive on the scene within four minutes at an emergency medical incident. The fire department is expected to meet these standards 90 percent of the time.

Engine companies should be staffed with a minimum of four on-duty personnel at all times. Tactical hazard units (in jurisdictions with such units), should be staffed with five to six on-duty members. Ladder or truck companies should be staffed with a minimum of four on-duty personnel at all times. A first responder (EMT) with an automatic external defibrillator should arrive within four minutes 90 percent of the time. For departments with Advanced Life Support (ALS) units, the ALS Company should arrive within eight minutes 90 percent of the time.

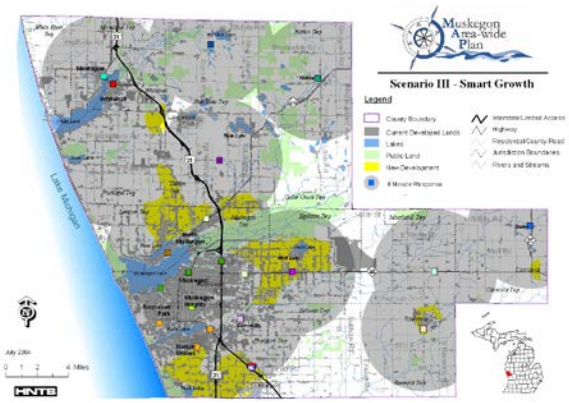
Most of the career departments in Muskegon County have an average response time between three and five minutes. The City of Muskegon, Norton Shores, and Fruitport departments report average response times of four minutes or less. These departments meet the response time standard. Norton Shores has the best Insurance Standards Organization (ISO) rating of the county departments. Its rating was recently upgraded to 4. The City of Muskegon department has an ISO rating of 9, the City of Muskegon Heights has a rating of 6, and Fruitport has a rating of 5. ISO ratings are on a scale of 1 to 10, with 1 being the best rating possible.

Map 5.7 shows the areas that are within eight minutes of a fire station, assuming 30 mph average travel speed and “crow flies” travel routes. Only two percent of the new development in the Smart Growth scenario lies outside of an eight minute fire response time. Since nearly all of the new development is within an existing service area, no new stations would be needed – no capital investment would be needed. This saves $1,950,000 in capital costs associated with fire station construction and fire trucks that would be needed under the Business as Usual scenario.

Compliance with staffing standards is more difficult to determine for a specific department since the required number of firefighters and companies is determined by what the local department needs to meet the time standard. Engine companies should have four on-duty personnel at all times. Assuming an eight-hour shift, this would mean each station needed 12 staff members to cover a day. Most likely, the existing fire departments, between full time and part time staff, are appropriately staffed to handle the

growth. However, adequate staffing needs to be determined locally.

Map 5.7: Fire Response



Water Treatment

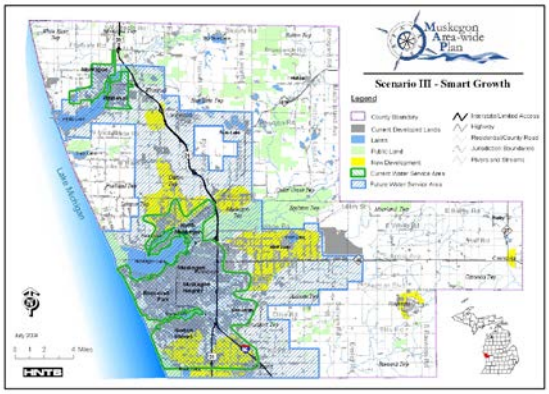
Under the Smart Growth scenario only six percent of the new development is outside of the planned future service area.

This would result in the equivalent of 570 households on private wells, or the equivalent of 0.14 million gallons per day (MGD) of water flow. While private wells do not pose the public health risks that septic systems can pose, there is still concern about the potential for contamination of individual wells. Having city water also brings the ability to have fire hydrants located near development, providing additional public safety.

The Smart Growth scenario would eliminate the need to construct 150 miles of water lines over the Business as Usual scenario, for a cost savings of $67,320,000 (rough estimate), assuming all new developments were to be served with water.

Expanding the water treatment system to the planned service area from the current area would require $3 to $25.1 million, based on estimates for the White Lake Water Authority from Prein & Newhof. The Montague/Whitehall system is planning to add capacity to meet the projected 2025 demand of 5.33 MGD. The three alternatives under consideration include groundwater wells east of US 31, surface water from Lake Michigan, or connecting to the Muskegon County Northside System. The Muskegon County system is planning expansions north along Whitehall Road from River Road to Riley-Thompson Road. These system expansions will allow for most of the development in this scenario to be on municipal water, rather than on private wells.

Map 5.8: Water Service Area



Wastewater Treatment

In the Smart Growth scenario only five percent of new development would be outside of the planned sewer service area.

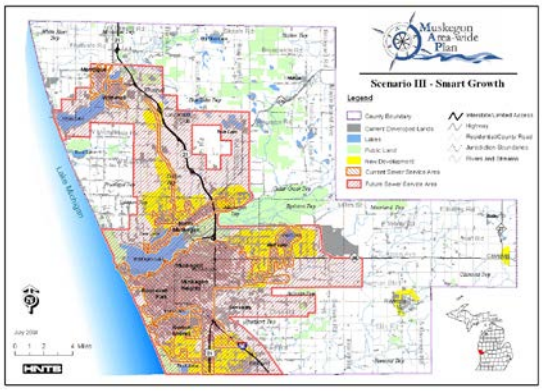
This level of development outside the service area would result in 532 households using septic systems, putting .13 MGD of septic effluent in the ground. In order to service all new development with sewer under the Business as Usual scenario, investments of $178,200,000 (rough estimate) would be needed. This expenditure is saved by concentrating development into the planned sewer area and investing a more modest amount into improvements to the existing system.

According to a 2004 Prein & Newhof study, the 2020 estimated daily flow is 35.3 million gallons. This is based on the West Michigan Shoreline Regional Development Commission (WMSRDC) population projections and a planning standard of 100 gallons per person per day. It also accounts for Sappi Fine Papers increasing their flow from 13 MGD currently to 17 MGD.

The planned sewer network will provide service to most of the new development; however, there are significant issues to be addressed within the current distribution system in existing parts of the developed area. The planned improvements total $37.2 million. Phase I improvements include replacing pump stations, eliminating pump stations and providing a central pump station, upgrading and rehabilitating pump stations, and a new force main. Phase II improvements include constructing a new pump station, optimizing the existing wastewater treatment facility, and headworks improvements.

Septic system failure is a significant concern because the effluent can contaminate private wells and pose public health risks. Generally, it is preferable for urban density development to occur in sewer serviced areas.

Figure 5.9: Sewer Service Area



Parks

Muskegon County is blessed with abundant parks and natural areas. The county has 12,500 acres of federal lands in the Manistee National Forest.

The county also has more than 2,600 acres of state land in three state parks and the Hart-Montague Trail State Park. The Hart-Montague Trail is a paved 22-mile path with scenic overlooks and picnic areas. The park portion of the trail is approximately 22 acres. The county is also home to a large portion of the Muskegon State Game Area, with 8,600 acres in the county. With state park lands included (but not the State Game Area), there are 25 acres of park land in Muskegon County for every 1,000 residents. With the State Game Area, there are 71 acres of park and recreation land for every 1,000 residents of Muskegon County.

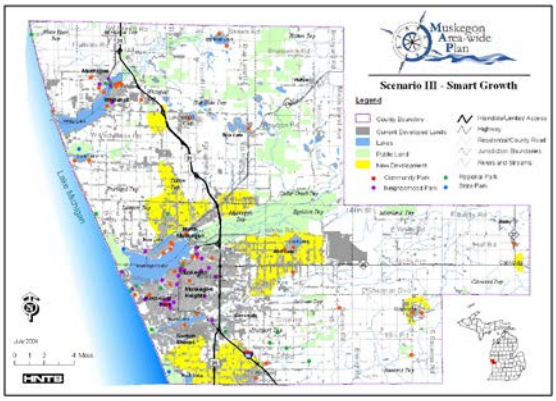
County parks are also abundant in Muskegon County. There are 12 county parks encompassing more than 740 acres, not including the Muskegon County Wastewater Treatment facility lands which are used for recreation purposes. This translates to four acres of county park land for every 1,000 residents of Muskegon County. If Muskegon County did not have the wealth of state and federal parks and recreational areas, the county would likely need to add approximately 100 acres of park land by 2020 to accommodate population growth at the same level of service of four acres per 1,000 people. However, since there are ample recreation opportunities in the county, the need to provide for additional opportunities is unlikely.

Eight of the townships operate parks: Egelston, Muskegon, Fruitport, Laketon, Casnovia, White River, Fruitland, and Holton.

Local parks are also available in most Muskegon County cities and villages. Local

parks account for more than 875 acres in the county. This translates to a level of service of five acres per 1,000 people in the county. To maintain this level of service for the 2020 population, an additional 128 acres of park land would be needed. While there are abundant park and recreation opportunities in the county, local parks fulfill needs that state and federal lands typically do not, such as parks that are accessible to children and teens without adult transportation and recreation equipment such as playgrounds and athletic fields for children. Therefore, some additional local park land may be needed to accommodate the growing needs of the areas that experience population gain.

Figure 5.10: Parks



Applying Smart Growth to the MAP Goals

The vision and goals of the Muskegon Area-wide Plan (MAP) can be achieved through the application of Smart Growth principles. In the remainder of the section, each vision and its goals are related to the Smart Growth principles that achieve the vision or goal.

Land Use and Growth

Vision 1:

Encourage and promote land use and growth patterns that sustain and improve quality of life in Muskegon County, while maintaining a strong sense of place, community, and responsibility.

Goals:

- Develop integrated and coordinated land use planning in rural areas to revitalize small towns, link natural resource protection with residential development and maintain working landscapes *(agricultural, natural resource tourism, forestry etc.).*
- Develop policies to ensure land is available to provide employment opportunities, variety of housing types, open space and natural areas, and access to goods and services based on future projected needs.
- Limit adverse impacts on environmentally sensitive lands by encouraging redevelopment and by increasing densities in cities, where necessary and desired.
- Identify strategies that will manage growth and support reinvestment in urban areas and promote rural viability.
- Encourage compatible land use plans between adjacent jurisdictions by updating land use plans, zoning ordinances and regulations.

These goals relate to the following Smart Growth principles:

- **Create a range of housing opportunities and choices:** Policies that encourage a variety of housing types provide opportunity and choice for a variety of needs and populations.
- **Preserve open space, farmland, natural beauty, and critical environmental areas:** Preserving open spaces and natural areas by ensuring land is available for open space and limiting the adverse impacts on environmentally sensitive lands by encouraging redevelopment achieves this principle.
- **Strengthen and direct development towards existing communities:** Encouraging redevelopment and managing growth in a manner that supports reinvestment in urban areas will shift the development focus toward existing communities, strengthening them and preserving rural areas for agriculture and open space uses.
- **Encourage community and stakeholder collaboration**: Achieving the plan goal of encouraging compatible land use plans between adjacent jurisdictions will require collaboration between the municipalities, the county, WMSRDC, and the residents of the communities.

Natural Resources, Open Space and the Environment

Vision 2:

Protect and preserve natural, resources and continually improve the quality air, water, and land resources found in Muskegon County.

Goals:

- Protect and valuable farm and forest lands, wetlands, surface and ground water resources, wildlife habitat, and opportunities for passive and active recreation.
- Develop polices and regulations to address the quantity and quality of water resources.
- Link natural resource protection with development to reduce the loss of important natural resources and open spaces in urban and rural areas.
- Mitigate environmental and human health impacts to important natural resources.
- Foster increased environmental sensitivity and voluntary stewardship through public-private partnerships, federal-state-local cooperation, and public education and outreach.
- Protect the watershed and shoreline of Lake Michigan; inland lakes of Muskegon County.

These goals relate to the following Smart Growth principles:

- **Preserve open space, farmland, natural beauty, and critical environmental areas:** Protecting environmentally sensitive areas and farmland will achieve this Smart Growth principle.

- **Encourage community and stakeholder collaboration:** Policy and regulation development will require partnerships at the local, regional, and state level to be able to improve the local water quality. Stewardship efforts will require significant collaboration to coordinate and implement across the county.
- **Foster distinctive, attractive places with a strong sense of place:** The Lake Michigan shoreline, inland lakes, and public lands provide Muskegon County with a unique local character. Initiatives that protect those natural resources will ensure the continued appeal of Muskegon County to future generations.

Economy and Jobs

Vision 3:

Promote economic development and diversity that ensures access to jobs, goods, and services throughout the Muskegon County.

Goals:

- Encourage partnerships with government, local organizations and businesses to help achieve local and regional economic development goals.
- Work collaboratively to encourage economic diversity throughout the region and reduce competition between communities.
- Enhance and retain "human capital" in the region, fostering a skilled, educated labor force.
- Develop strategies for the redevelopment of brownfields, adaptive reuse of existing structures and in-fill development in urban and rural areas.
- Retain and expand existing agriculture businesses to maintain synergy and a diversified economy.
- Promote natural resource based tourism and the county's quality of life as an economic development tool.
- Infrastructure
- Develop a county-wide approach to improving and maintaining infrastructure, transportation, public facilities and community services.

These goals relate to the following Smart Growth principles:

- **Encourage community and stakeholder collaboration:** Partnerships between government, business, and organizations encourage broad participation in the development of the community.
- **Foster distinctive, attractive places with a strong sense of place:** Reducing the competition between communities and encouraging diversity will help to create unique communities within Muskegon County, strengthening the county's unique character as a place to live, work, or visit.
- **Make development decisions predictable, fair, and cost**

effective: Brownfields redevelopment and infill development are easier for developers and more likely to occur when the developers know what to expect in terms of permitting, requirements, and other matters. Time is money and reducing the amount of time needed to process developments through the regulatory process can increase the likelihood of quality development in urban areas.

- **Mix land uses:** Brownfields redevelopment and infill development can be quality mixed use developments that encourage 24 hour use of areas of the community. In order to make this type of development possible, it may be necessary for jurisdictions to revise their zoning codes to encourage, or even allow, mixed use development.
- **Preserve open space, farmland, natural beauty, and critical environmental areas:** Adding value to the local forested, open, and agricultural lands through tourism and agribusiness help to make them financially sustainable without being sold for development. This form of "home grown" economic development can also create jobs for people with a variety of skills. Using a county-wide approach to infrastructure, transportation, and public facilities will encourage development in the existing urbanized areas, rather than sprawling development that consumes farmland and open space. Brownfields redevelopment and infill development also encourage farmland and open space protection by bringing new development into existing urban areas.
- **Strengthen and direct development towards existing communities:** Redevelopment of brownfields and infill development, along with using a county-wide approach to infrastructure, transportation, and public facilities will direct development into the existing urbanized areas, and existing communities because those are the locations that have infill opportunities, likely brownfields, and existing services.

Infrastructure

Vision 4:

Develop a county-wide approach to improving and maintaining infrastructure, transportation, public facilities and community services.

Goals:

- Prioritize water and wastewater facility improvements consistent with the distribution of the region's population and employment while emphasizing water conservation and re-use.
- Provide safe and efficient alternate modes of transportation to reduce auto dependence and promote high air quality.
- Maintain and improve the exiting transportation system to provide

safe and efficient mobility and access.

- Provide infrastructure systems in both urban and rural communities utilizing existing infrastructure capacity where it exists before developing new infrastructure.

These goals relate to the following Smart Growth principles:

- **Encourage community and stakeholder collaboration:** In order to accomplish the infrastructure goals, coordination and collaboration will be needed between the municipalities, county, state, utility companies, and property owners throughout the county.
- **Preserve open space, farmland, natural beauty, and critical environmental areas:** Directing development toward existing infrastructure will allow for appropriate urban and rural land uses, allowing for the protection of prime farmland, valuable open spaces, and natural areas such as forests, wetlands, and recreation areas.
- **Provide a variety of transportation choices:** By providing safe and efficient alternative modes of transportation in an effort to improve the local air quality, the county will have a greater variety of viable transportation choices including pedestrian and bike options, and bus service.
- **Strengthen and direct development towards existing communities:** Focusing development where infrastructure such as water, sewer, and transportation corridors exist directs development into existing communities where those services are available.
- **Take advantage of compact building design:** Utilizing infrastructure capacity where it currently exists works to encourage compact building design because it enables more development to occur in the area that is served rather than extending utilities to allow growth outside of the currently developed area. Alternative modes of transportation allow people to live in more compact areas when less land is consumed for roadways and parking.

Quality of Life

Vision 5:

Promote high quality of life by recognizing Muskegon County for its diversity, environmental, educational, arts, cultural and recreational assets.

Goals:

- Promote coordination and enhancement of arts, cultural, recreational and historic resources in the county.
- Develop a regional strategy to improve and maintain access to high quality educational services throughout the county, including

elementary, secondary and alternative schools.

- Develop partnerships between government and non-government organizations to improving the health of the environment and individuals
- Improve access to healthcare services and develop strategies to maintain Muskegon County as a regional healthcare provider.

These goals relate to the following Smart Growth principles:

- **Encourage community and stakeholder collaboration:** Community collaboration will be reinforced through efforts to coordinate and enhance arts, cultural, recreational, and historic activities in the county. A regional strategy for educational services will also encourage collaboration beyond the Intermediate School District. Partnerships for environmental and individual health will also reinforce the principle of collaboration.
- **Foster distinctive, attractive places with a strong sense of place:** Muskegon County's natural, cultural, and recreational resources are what make it a unique and special place. Coordinating and enhancing the resources in the county will further develop that sense of place and encourage support for the distinctive places that make Muskegon County special.

Chapter 6:
Implementation Strategies

Vision & Implementation Strategies

In the early 2000's when the Muskegon Area-wide Plan (MAP) was developed, an extensive public participation program was conducted. More than 1,000 people participated in the process and provided valuable community input that remains relevant today. The four guiding principles of the plan are Economic Viability, Social Equity, Public Involvement, and Healthy Environment. From these four principles, the community embraced five vision areas.

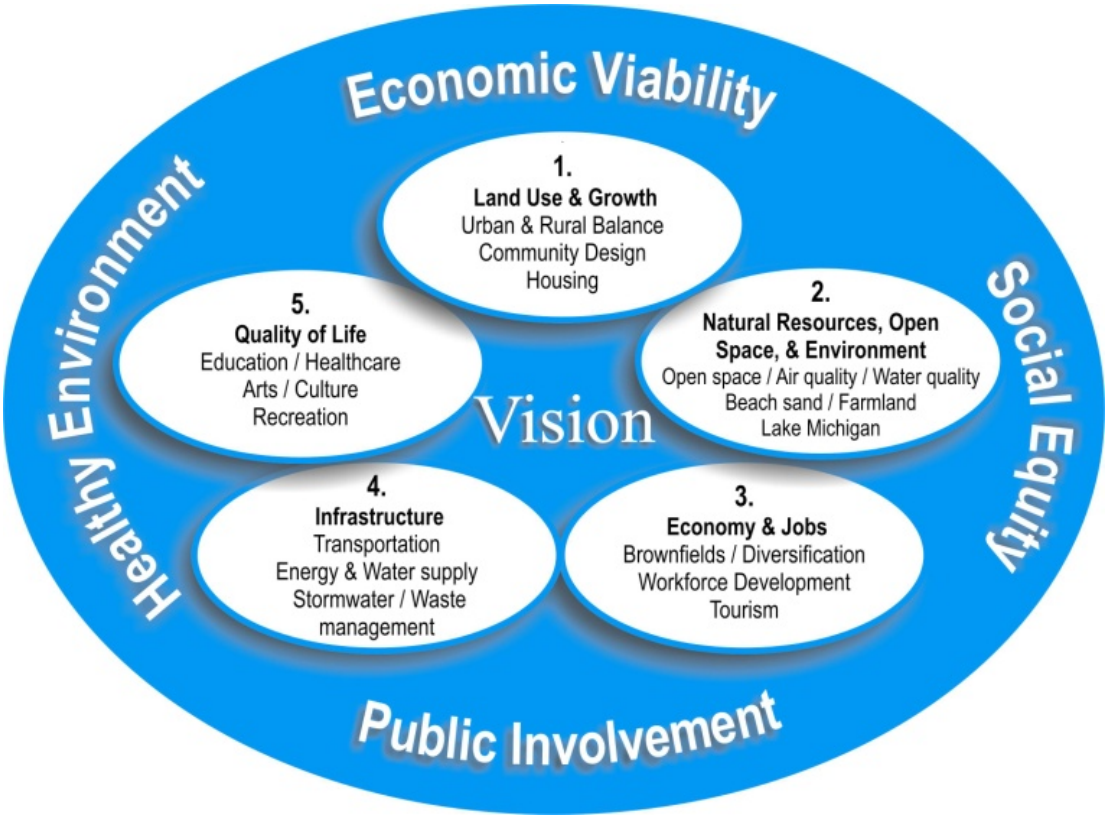
Vision #1: Land Use & Growth:
Encourage and promote land use and growth patterns that sustain and improve quality of life in Muskegon County, while maintaining a strong sense of place, community, and responsibility.

Vision #2: Natural Resources & Environment:
Protect and preserve natural resources and continually improve the quality of air, water, and land resources found in Muskegon County.

Vision #3: Economy & Jobs:
Promote economic development and diversity that ensures access to jobs, goods, and services throughout Muskegon County.

Vision #4: Infrastructure:
Develop a county-wide approach to improving and maintaining infrastructure, transportation, public facilities, and community services.

Vision #5: Quality of Life:
Promote high quality of life by recognizing Muskegon County for its diversity, environmental, education, arts, cultural, and recreational assets.



When the MAP update began in 2011, it was recognized that the pre-established principles and visions remain appropriate and equally as important today as they were ten years ago. Therefore, the vision areas remain the same. The focus of the update process was concentrated on the MAP implementation strategies. During five well attended community forums (each focusing on one of the five vision areas), participants reviewed the implementation strategies and answered three questions to help identify new implementation strategies.

1. What should be done to accomplish the vision?
2. Who should be responsible for/involved in accomplishing the task?
3. When should the task be completed?

The pages that follow provide a synopsis of the five community forums. Identified are the main themes that arose at each forum through the group discussions as participants answered the three above questions. It is important to note that the MAP is a county-wide vision created by the citizens of Muskegon County. The MAP Advisory Committee does not hold the authority to implement the MAP. Implementation of the MAP should be accomplished through collaborative efforts amongst a wide variety of partners. Implementation partners will also vary between the MAP vision areas, as well as between specified strategies. Potential implementation partners have been identified for each of the five vision areas. In addition, many of the implementation strategies identified should occur as ongoing activities or accomplished upon the availability of funds for a specified task.

Vision #1: Land Use & Growth

> *Encourage and promote land use and growth patterns that sustain and improve quality of life in Muskegon County, while maintaining a strong sense of place, community, and responsibility.*

The Land Use & Growth forum, held on October 4th at the Norton Shores Public Library, featured an array of spirited discussions that touched every aspect of this MAP Vision. With more than 60 individuals attending, four distinct yet interrelated themes arose during the forum: Future Development, Planning & Zoning, and Community Image.

Future Development:

Given the topic of this forum, it should be no surprise that the most common theme was "Future Development." There was a strong consensus among the group that development within Muskegon County should be encouraged in areas with existing infrastructure, and should seek to preserve or re-use existing structures, especially in downtowns and core areas. Other views pertaining to development included awareness of environmental impacts, incorporating elements of walk-ability and bike-ability, and utilization of public-private partnerships. Potential implementation partners include townships, cities, villages, Muskegon County, WMSRDC, economic development agencies, environmental groups, state and federal agencies, and the private sector.

<u>Implementation Strategies:</u>

- Encourage local governments to adopt Smart Growth Principles by resolution in order to help guide land use decisions.

- Continually encourage new development and redevelopment to occur in areas with existing

infrastructure, as well as those areas identified in the MAP Smart Growth Scenario map.

- Conduct a comprehensive inventory of developable space, industrial parks, commercial space, and brownfields.

- Recruit ambassadors to champion the MAP, its implementation strategies, and Smart Growth Principles to Muskegon County communities and organizations.

- Identify and promote successful community development programs/strategies within Muskegon County in addition to areas beyond the county's borders.

- Identify opportunities for expanding and improving non-motorized facilities in future development projects.

- Encourage environmental protection measures to be incorporated into new development and redevelopment projects by partnering with property owners.

- Promote strategies to reduce stormwater runoff in the initial phase of future development projects.

Downtowns:

Discussion of downtown areas was another prominent topic of the forum. The group favored utilization of mixed-use development to increase population, commerce, and employment in downtown areas. There was an expressed need for greater availability of grocery markets in core areas, as well as a desire for an increased presence of arts and educational institutions. Potential implementation partners include townships, cities, villages, Muskegon County, WMSRDC, economic development agencies, educational institutions, cultural institutions, community based organization, state and federal agencies, and the private sector.

Implementation Strategies:

- Enhance uniformity and develop a defined sense of place in downtown areas throughout Muskegon County by developing examples of form-based zoning and design standards to be utilized by local units of government.

- Work to eliminate food deserts within Muskegon County by conducting an analysis of availability and accessibility to fresh foods, as well as identifying priority areas such as downtown Muskegon.

- Encourage local governments to partner with educational and cultural institutions to establish goals and benchmarks that will support existing and develop additional arts and cultural amenities within downtown areas of the county.

- Promote mixed use developments with incorporation of Complete Streets principles within downtown areas throughout Muskegon County.

Planning & Zoning:

With regards to Planning & Zoning, there was a strong desire to improve communication, coordination, and collaboration between municipalities, as well as educate local leaders through land use seminars and ambassador programs. In addition, there were several zoning

impediments noted during the forum. For example, it was suggested that zoning flexibility is needed in rural areas to allow for greenspace used and preservation. Overall, there was strong support for local zoning and planning documents to be reviewed and updated, incorporating municipal coordination, as well as revising zoning language to not only promote modern planning techniques, but also to reduce development impediments. Potential implementation partners include townships, cities, villages, Muskegon County, and WMSRDC.

Implementation Strategies:

- Continue to convene the County-wide Planning Commission meetings regularly and invite representatives from each municipality in the county.

- Encourage coordinated planning efforts throughout Muskegon County in addition to identifying critical areas along jurisdictional boundaries where coordination between local planning documents and regulations are needed.

- Establish a platform for zoning administrators in the county to network, share information, and exchange ideas on a regular basis.

- Establish an online planning document library/repository for sharing local planning documents and ordinances between communities within the county.

- Establish a process to educate newly elected/appointed officials about the MAP and Smart Growth principles, as well as foster relationships and provide opportunities for networking with other officials from throughout the county.

- Utilize the Muskegon County Sustainability Plan as a model to be duplicated, modified, and incorporated by local units of government and organizations throughout Muskegon County for the purpose of reducing waste before it is created.

Community Image:

Finally, "Community Image" was frequently referenced during the forum as an obstacle to growth and development. This included not only the county's physical appearance, but also the community's prevailing self-image. Suggestions to improve appearances generally included establishing a measure of uniformity within distinct areas to enhance their aesthetic qualities, as well as the implementation of branded countywide signage. It was commonly believed that Muskegon County has a poor self-image. Suggestions to address this included enhancing citizen-government relations and communication, utilizing schools to build community pride and educate on land-use issues, and conducting an exercise to identify the community's identity. Potential implementation partners include townships, cities, villages, Muskegon County, Convention & Visitors Bureau, WMSRDC, recreation providers, economic development agencies, community based organizations, educational institutions, private sector, and area residents.

Implementation Strategies:

- Embrace the diverse nature of Muskegon County by defining unique areas and promoting the distinctive assets that characterize those areas.

- Engage Muskegon County residents, as well as the West Michigan region in a process to rebrand Muskegon County and its identity.

- Identify a process to bring together local governments, private business, community based organization, volunteer groups, non-profits, and educational institutions with the purpose of raising awareness of Muskegon County history and address current issues in order to build community pride.

- Promote successful intergovernmental cooperation and public/private partnership efforts within the county and encourage additional opportunities for communication and cooperation.

- Beautify and provide uniformity to corridors and entryways into the Muskegon Community.

Vision #2: Natural Resources & Environment

Protect and preserve natural resources and continually improve the quality of air, water, and land resources found in Muskegon County.

The Natural Resources & Environment forum was held on Tuesday, October 9 at Muskegon Community College. Nearly 45 people attended the forum and provided valuable input regarding several topics which are identified below.

Brownfields:

The group discussed in depth the numerous brownfields within the county and the need to remediate contaminated sites. The group focused on the former paper mill property, the need to be proactive about the property dispositions of BC Cobb after closure, and recommended to extend water and infrastructure to area of known contamination and abandoned oil fields, as well as to remediate areas impacted by oil wells. The group identified the need to update the WMSRDC Brownfields Inventory and GIS mapping. Potential implementation partners include townships, cities, villages, Muskegon County, WMSRDC, economic development agencies, environmental and watershed groups, and state and federal agencies.

<u>Implementation Strategies:</u>

- Update the existing West Michigan Brownfields Inventory (2006) and include maps of parcel boundaries for priority brownfield redevelopment sites.

- Update the existing Muskegon County Strategic Infrastructure Plan (2006) to focus redevelopment in and near areas where adequate infrastructure exists.

- Seek opportunities to remediate contaminated brownfields for redevelopment.

- Extend water and sewer infrastructure to areas of known contamination and abandoned oil fields or relocate residents in heavily contaminated areas.

Green Infrastructure and Greenspace Protection:

Discussions suggested activities that included development of green space targets or goals based on per capita measurement for healthy communities, advocating for more green infrastructure, including private

lands and amenities that are open to the public as part of Blueways/Greenways plans, and identification of all important green infrastructure properties (public and privately owned) to encourage acquisition and protection by local governments. Related to this was the suggestion to use the recreation potential of green spaces. Smart Growth recommendations included an update of the Muskegon County Strategic Infrastructure Plan to focus redevelopment into existing infrastructure areas. A "recycling" program for vacant parcels was suggested to reinvest in all neighborhoods to prevent sprawl into greenspace and to re-build communities. Potential implementation partners include townships, cities, villages, Muskegon County, WMSRDC, environmental and watershed groups, community based organization, state and federal agencies, and area residents.

Implementation Strategies:

- "Recycle" Vacant Parcels by reinvesting in existing neighborhoods to prevent sprawl into greenspace and re-build communities.

- Expand upon the Muskegon County Blueways and Greenways Plan and Green Infrastructure Inventory (2010), as well as other existing documents to include private lands and amenities that are open to the public, e.g., marinas, golf courses, campgrounds. The plan should also identify priority properties for potential public acquisition and/or preservation.

- Advocate for addition green infrastructure within Muskegon County through preservation and in site plans for new developments and retrofits.

- Develop green space targets based on a per capita measurement for healthy communities.

- Seek out opportunities to increase public access in existing public lands, brownfield redevelopments and new development site plans.

- Support local recycling and waste reduction efforts that strive to minimize the amount of waste and hazardous material entering area landfills and wastewater systems.

Watershed and Habitat Protection/Restoration:

Watershed protection and restoration was recommended with collaboration amongst a variety of organizations. Education on how to restore the Great Lakes in Muskegon County was recommended. Recommendations for habitat included better, proactive management of invasive species, dune preservation, streambank and riverbank protection and addressing Asian Carp. Potential implementation partners include townships, cities, villages, Muskegon County, environmental and watershed groups, WMSRDC, Grand Valley State University Annis Water Resources Institute (GVSU-AWRI), Drain Commissioner, state and federal agencies, and "other Great Lakes partners."

Implementation Strategies:

- Develop strategies to more pro-actively manage invasive species, including Phragmites, Tartarian Honeysuckle, Eurasian Water Milfoil and Asian Carp.

- Provide increased education opportunities about the values of sand dunes to diverse audiences and stakeholders, and provide technical

support and assistance to local governments.

- Conduct surveys of local streams for erosion and degradation caused by non-point source pollution and illegal dumping.

Surface Water and Groundwater Quality:

Nonpoint Source Pollution (NPS) was discussed by the group with recommendations including cleaning up lakes and streams, regulating Concentrated Animal Feeding Operations (CAFO), reducing fertilizer by riparians, reducing NPS pollution through permeable parking lots, retention basins and rain gardens; addressing agricultural pollution and urban runoff, as well as cross connections and stormwater discharges. Groundwater protection for drinking water supplies was also recommended. Funding for sewer and water infrastructure and for the Great Lakes Legacy Act and Great Lakes Restoration Initiative was another recommended. Potential implementation partners include townships, cities, villages, Muskegon County, Drain Commissioner, WMSRDC, environmental and watershed groups, GVSU-AWRI, state and federal agencies

Implementation Strategies:

- Continue to clean up toxic sediment in lakes and streams.

- Minimize agricultural pollution and ensure adequate regulation, monitoring and enforcement of CAFOs.

- Reduce phosphorous fertilizer use by riparian property owners through education and by monitoring and enforcing the State-wide phosphorous fertilizer ban.

- Reduce non point source pollution through the use of permeable parking lots, retention basins, and rain gardens.

- Prevent Urban Stormwater Pollution Runoff through municipal stormwater regulations and voluntary actions, including the development and adoption of jurisdictional, regional or county-wide post-construction stormwater programs and ordinances.

- Identify illicit connections in storm drains and sanitary sewers by identifying and sampling discharge points, and monitoring storm drain systems for E.Coli, PAHs and/or other pollutants.

- Require buffers along riparian areas to prevent water quality degradation.

- Protect groundwater for public and private drinking water supplies through source water and wellhead protection programs and identification of groundwater recharge areas.

Vision #3: Economy & Jobs

Promote economic development and diversity that ensures access to jobs, goods, and services throughout Muskegon County.

Workforce Development/Education:

Perhaps the most commonly heard concern of those participating in the Economy and Jobs forum was the need for an educated workforce. Schools, especially local colleges, need to partner with business to

create training programs that are relevant to available jobs in the County. Schools and businesses need to create apprenticeship programs which can lead to jobs. Also, action needs to be taken to elevate the quality of underperforming schools. Potential implementation partners include Muskegon County, Workforce Development Board, WMSRDC, economic development agencies, educational institutions, private sector, and state and federal agencies.

Implementation Strategies:

- Develop a process/platform to continually identify and assess the workforce development, educational and training needs of area employers.

- Improve the perception that the workforce development process in Muskegon County is fractured and agencies are not working together. Promote local successes and ongoing coordination efforts, as well as continually seeking additional opportunities for coordination and collaboration.

- Develop workforce readiness/transitional apprenticeships for graduates with no experience in the workplace. Inventory volunteer opportunities provided by employers & encourage educators to incorporate internship opportunities in their degree/certificate programs.

- Continue efforts to retrain displaced workers especially for jobs in growth industries.

- Continue and expand efforts to expose middle and high school students to careers and educational opportunities in growth industries.

- Develop an incentive program to provide scholarships and/or loans for students who remain and gain employment in the region upon graduation.

- Strive to incorporate "life skills" and "critical thinking" into local curriculum at all teaching levels.

Business Retention and Attraction:

Expand on existing retention and attraction efforts. More coordination and cooperation between local governments, economic development agencies, State of Michigan, and schools was a major topic of discussion. Also, there is a need for rural economic development, specifically an Agricultural Development Plan. Potential implementation partners include townships, cities, villages, Muskegon County, Workforce Development Board, WMSRDC, economic development agencies, educational institutions, private sector, and state and federal agencies.

Implementation Strategies:

- Create an Agricultural Development Plan focusing on the retention and expansion of the agricultural industry in Muskegon County. Use existing resources such as existing industrial parks and excess wastewater capacity.

- Utilize the Comprehensive Economic Development Strategy (CEDS) document to continually analyze trends and identify emerging industries that can help diversify the local economy.

- Continue to promote and expand existing efforts/programs to promote entrepreneurialism and small

business development in Muskegon County.

- Continue to have business retention as a high priority in Muskegon County. Maintain existing business retention efforts, as well as explore additional opportunities to coordinate efforts and built partnerships.

- Work collaboratively to fill vacant parcels within the various industrial parks throughout the county.

Environmental Revitalization:

Promote economic development through the continued environmental revitalization of Muskegon County. Prioritize brownfield redevelopment. Continue environmental cleanup efforts. Potential implementation partners include township, cities, villages, Muskegon County, WMSRDC, economic development agencies, environmental and watershed groups, private sector, and state and federal agencies.

Implementation Strategies:

- Update the West Michigan Shoreline Brownfields Inventory and Plan for Implementation (2006) in order to expand and revise the inventory, as well as prioritize sites for redevelopment.

- Continually work to clean contaminated sites throughout Muskegon County. Utilize the West Michigan Shoreline Brownfield Inventory to assist in this effort.

- Support and promote the Materials & Resources Exchange West Michigan program that promotes the exchange of reusable items from businesses, municipalities, and non-profit organizations.

Infrastructure:

Develop a county-wide approach to improving and maintaining infrastructure, transportation, public facilities, and community services. Work cooperatively to address infrastructure needs in Muskegon County. Port development of Muskegon Lake was identified as a high priority. Also, provide for multi modal transportation options to link airport, rail, highways, and port. Continue to work on water and sewer issues in the county. Potential implementation partners include townships, cities, villages, Muskegon County, WMSRDC, economic development agencies, private sector, West Michigan Metropolitan Transportation Planning Program, transportation agencies, and state and federal agencies.

Implementation Strategies:

- Utilize the CEDS document to identify regionally significant economic development infrastructure projects for Muskegon County and the region.

- Support the recent efforts of the West Michigan Port Operators group and strive to develop a strong public/private partnership to promote the commercial and recreational assets of the Port of Muskegon.

- Continue efforts to bring additional capacity to the Muskegon County Wastewater System in addition to promoting economic development on the excess wastewater property, and work towards expanding municipal water to the wastewater site.

- Update the West Michigan Industrial Park and Sites Study (2003).

- Coordinate efforts to ensure Muskegon County has adequate transportation infrastructure in place to meet current and future economic development needs including roadways, rail, airport access, and port capacity.

Commercial Area and Neighborhood Revitalization:

Encourage businesses by stepping up efforts to revitalize existing commercial areas. Continue the redevelopment efforts of downtown areas in Muskegon County. Encourage development of a sense of place. Continue efforts to revitalize neighborhoods. Potential implementation partners include townships, cities, villages, Muskegon County, WMSRDC, economic development agencies, private sector, and state and federal agencies.

Implementation Strategies:

- Utilize local master plans and zoning ordinances to promote redevelopment of existing urbanized and commercial areas, which will take advantage of existing utilities, provide jobs to nearby neighborhoods, and improve the local tax base.

- Incorporate opportunities for mixed use developments into local master plans and zoning ordinances to increase property values, make transit alternatives more viable, and increase business traffic to nearby residents.

- Promote and implement Complete Streets principles where possible in Muskegon County. Complete streets take into consideration all modes of transportation such as bicycles, pedestrians, transit, as well as automobiles.

- Development a Sense of Place within communities throughout the county utilizing design standards for development that encourage re-use and preservation of existing buildings, and new buildings which are distinctive and of quality construction.

Tourism:

Encourage economic development by promoting tourism in Muskegon County. Potential implementation partners include townships, cities, villages, Muskegon County, WMSRDC, convention and visitors bureau, recreation providers, private sector, economic development agencies, and area residents.

Implementation Strategies:

- Market Muskegon County as a tourism destination by promoting the unique resources and assets of the region through coordinated efforts.

Vision #4: Infrastructure

Develop a county-wide approach to improving and maintaining infrastructure, transportation, public facilities, and community services

During the Infrastructure Community Forum held on October 18 at the Muskegon Area Transit System, Louis A. McMurray

Conference Center, the focus of the discussion was on the traditional topics of roads, water, sewer, utilities and essential services. However, with the recent recession and a decline in development, other factors related to infrastructure have also become topics of discussion. The following is a list of the most commonly discussed issues:

Intergovernmental Cooperation:

With trends of transportation and infrastructure funding reductions at federal, state, and local levels, the importance of expanding ideas on a regional basis and promoting intergovernmental cooperation has become a topic of discussion. During the MAP Infrastructure forum, intergovernmental cooperation was discussed more frequently than any other feedback topic. The group felt that many aspects of infrastructure, including roads, water, sewer, and cable/internet, could be dealt with from a regional perspective. This would allow for larger scale projects to happen at a more reasonable cost to the individual municipalities and agencies. It would also allow the adjoining communities to have input and support for these projects. Some felt that creative and innovative projects may be held up due to lack of cooperation and leadership at the local level. Potential implementation partners include townships, cities, villages, Muskegon County, WMSRDC, West Michigan Transportation Planning Program, Road Commission, environmental and watershed groups, Drain Commissioner, economic development agencies, and state and federal agencies.

<u>Implementation Strategies:</u>

- Continue the collaborative efforts of the West Michigan Metropolitan Transportation Planning Program to provide adequate transportation infrastructure within the Metropolitan area.

- Encourage communities that have adopted Smart Growth Principles to incorporate those principles into their master plans and zoning ordinances.

- Continue to seek opportunities for cooperation and collaboration among local governments for shared services.

- Continually address and update county-wide plans such as the MAP, CEDS, transportation plans, and other related infrastructure plans.

- Implement a process to allow for efficient planning that will address critical infrastructure needs and impacts prior to implementation of development projects.

- Address current and future storm water management needs, and coordinate them with surrounding governmental agencies. Plan for inclusion of green infrastructure opportunities in watershed areas.

- Work together to increase access to and affordability of cell phone coverage and internet access.

Non-Motorized or Multimodal Transportation:

Another topic of discussion was the idea of non-motorized and multi-modal transportation. Again, economic times have shifted the thought process of many county residents, and the importance of alternative and non-motorized transportation has become an important element of transportation. These types of facilities can

include biking or walking trails, transit connections and facilities, sidewalks, and rideshare lots. The forum attendees felt that it was important for the community to plan for these types of facilities to allow for other modes of transportation that may be more economical and less harmful to the environment. The ability to tie all modes of transportation together into a regional "package" where they all complement each other and allow for safe and efficient travel throughout the community is important. Potential implementation partners include townships, cities, villages, Muskegon County, WMSRDC, West Michigan Transportation Planning Program, local trail groups, Road Commission, and state and federal agencies.

Implementation Strategies:

- Integrate multimodal transportation into future plans at the local, state and federal levels of government for the county and region.

- Strive to complete existing trails, networks, and other related non-motorized facilities before work begins on new projects. Plan for inter-connecting these facilities to address multi-modes of transportation with regional and statewide perspectives in mind.

- As infrastructure is built and replaced, plan to incorporate walkable communities in designs and add Complete Streets concepts to the plans.

- Complete and implement a region wide non-motorized trail plan that will identify linkages and connections to larger regional trail networks. The plan should also identify the location of future trails and allow for addition planning when making potential trail connections.

Port Development/Utilization:

There was an in depth discussion regarding the Port of Muskegon and encouraging private and public cooperation to enhance both commercial and recreational port activities. There was also support to create a port association. The port topic needs to be addressed very strategically, with all potential "players" at the table from day one. These players include private and public interests, as both will play an integral role in port development. Also important, will be economic development agencies and other state and federal agencies that will provide access to different marketing and funding opportunities. Potential implementation partners include port property owners, City of Muskegon, Muskegon County, WMSRDC, West Michigan Transportation Planning Program, private sector, economic development agencies, and state and federal agencies.

Implementation Strategies:

- Work with the West Michigan Port Operators group to determine the needs/benefits of establishing an organized association based on the needs and goals of the group.

- Establish a plan to address infrastructure inventories and needs as they pertain to creating and expanding port activities including an inventory of roads, rail, water access, airport access, etc.

- Create a countywide transportation map/plan identifying specific details related to access and shipping to and from the port including routes that are sufficient to handle height and turning requirements that may come

with unique shipments such as wind turbine parts.

Mass Transit:

The group also discussed the need for the Muskegon Area Transit System (MATS) to expand the services, hours, and provide more facilities. There was also much praise given to the recent MATS expansion efforts and improvements. There are many transit agencies in the region that play major roles to the area. All of these agencies should be looked at when planning for future expansion and planning for mass transit. Most of the agencies receive some form of federal funding, and all serve different roles in the county. Potential implementation partners include Muskegon Area Transit System, townships, cities, villages, Muskegon County, West Michigan Transportation Planning Program, WMSRDC, community based organizations, state and federal agencies, and area residents.

Implementation Strategies:

- Increase access to public transit through agreements with other regional agencies in the West Michigan region. Increase routes and destinations to better serve these areas and other regional and statewide destinations.

- Develop plans to review shared or duplicated services in order to create a more efficient system that serves the needs of Muskegon County.

- Continue to improve services to rural areas of the county through expanded serves and additional buses.

- Explore options to provide better access to local routes and expanded hours for services.

- Continue pursuing environmentally sound options for alternative fuels and service stations. Look at electric and consolidated natural gas as potential options for buses and other equipment.

- Continue to pursue centralized locations for MATS facilities based on public and government input.

Water and Sewer Expansion:

The group also discussed the need to expand water and sewer into developed areas, as well as areas with contamination issues. Potential implementation partners include townships, cities, villages, Muskegon County, WMSRDC, environmental and watershed groups, state and federal agencies, and area residents.

Implementation Strategies:

- Develop a county-wide plan that inventories the entire network of sewer and water in the county, as well as possible connections to outlying counties. This plan should be updated on a regular basis and should detail the condition of infrastructure including age, size of pipes, etc.

- Continue to encourage dialogue and cooperation/collaboration amongst local governments for the distribution of water and wastewater throughout the county.

- Extend infrastructure including sewer and water lines, to areas that have been identified as

contaminated and have non-potable water.

- Explore the possibility of regional utilities that expand beyond local boundaries and allow for cost savings to local users and municipalities.

Vision #5: Quality of Life

Promote high quality of life by recognizing Muskegon County for its diversity, environmental, education, arts, cultural, and recreational assets.

The Quality of Life forum was held on Wednesday, October 24 at the White Lake Library and included approximately 45 participants. In order to promote the quality of life in Muskegon County, forum participants recognized the need to focus on new downtown development, available public transit, adequate and available medical care, promotion of the Muskegon County Wastewater System, education, arts, and a healthy lifestyle through the expansion of recreational opportunities, access to parks, etc. Participants agreed that this could be achieved by working together utilizing the expertise and knowledge of many and by including young people and their perspectives at the table early on in any planning process or discussions.

New Downtown Development:

Forum participants agreed that new development in downtowns need to take place, start-up businesses need to be encouraged, and downtowns need a draw for young people to utilize on a regular basis and become more of a nucleus for night life. Potential implementation partners include townships, cities, villages, Muskegon County, WMSRDC, economic development agencies, private sector, convention and visitors bureau, state and federal agencies, and area residents.

Implementation Strategies:

- Continue to seek opportunities that encourage and facilitate a wide range of growth initiatives in downtown areas which will maintain a healthy economic mix, improve real estate in downtown areas, increase the tax base, and create jobs.

- Strive to achieve full occupancy of existing commercial and residential space, as well as infill of existing vacant and abandoned buildings in downtown areas.

- Encourage physical and institutional improvements in the downtown environment that will encompass the preservation of historic character, revitalize significant old buildings, beautify streets and buildings, update public utilities, provide adequate parking, ensure public safety, and defend the area's quality of life.

- Promote the unique attractions of the county's downtown areas and their importance to the region's economy. Include opportunities and amenities that draw interest from all age groups.

Adequate and Available Medical Care:

Participants were concerned that in the future, Muskegon County may have inadequate medical care. It was mentioned that six primary care doctors have recently retired in the area with no replacements. Muskegon County needs to begin attracting and retaining quality doctors and medical

care for its residents. Potential implementation partners include Muskegon County, health care providers, community based organization, and area residents.

Implementation Strategies:

- Seek opportunities to encourage medical schools and residencies to provide courses, clerkships and longitudinal experiences in smaller urban areas like Muskegon County that may be approaching being underserved.

- Strive to maintain Muskegon County's high level of clinical care.

- Continue current cooperative and collaborative efforts to improve Muskegon County's health ranking overall in the State of Michigan.

Promotion of Muskegon County Wastewater System:

Promote the property as an ecosystem/recreation area to be used as a possible airfield, as well as an area for wildlife observation, hunting, snowmobile trails, motocross, and many educational opportunities. Potential implementation partners include Muskegon County, townships, cities, villages, economic development agencies, WMSRDC, state and federal agencies, and area residents.

Implementation Strategies:

- Continue and expand efforts to promote the use of the Muskegon County Wastewater Management System for recreational uses such hunting/trapping, an observatory campus for Muskegon Community College, snowmobile trails, bird watching, and a variety of other events.

Educational Attainment:

Forum participants strongly agreed that Muskegon County needs to increase the educational attainment levels of residents. A major component of a successful community is education. In addition to improving education attainment levels, work needs to be done to bring employers, as well as educational and training institutions together to plan for the needs of Muskegon County. Potential implementation partners include educational institutions, community based organizations, Muskegon County, WMSRDC, private sector, workforce development, economic development agencies, area residents, and state and federal agencies.

Implementation Strategies:

- Make educational attainment a priority in Muskegon County. Seek partnerships and opportunities to coordinate efforts that will raise the level of educational attainment in Muskegon County.

- Support existing partnerships and encourage new collaborative efforts that will align educations programs with the skills in demand by area businesses and manufacturers.

- Build linkages and encourage additional partnerships between strategic economic development planning and workforce development training.

Healthy Lifestyles:

Inform Muskegon County residents about ways to pursue a healthy lifestyle through existing health focused groups and access to quality parks, bike/walking trails, and other recreational opportunities, encourage

employers to offer green spaces for their employees, and evaluate the usage of parks. Potential Implementation partners include health care providers, Muskegon County, community based organization, private sector, education institutions, WMSRDC, area residents, townships, cities, villages, state and federal agencies.

Implementation Strategies:

- Promote and support an environment that fosters healthy eating habits among the population. Actions will focus on working with groups regarding food production, processing, distribution, and safety.

- Strive to eliminate food deserts within the area and make healthy food choices available to all residents in Muskegon County.

- Develop environments and educational opportunities that encourage a physically active lifestyle for residents of all ages, as well as social and economic backgrounds.

- Promote positive social norms. Implement social campaigns and foster changes in social norms in order to promote a healthy lifestyle (healthy eating habits and a physically active lifestyle) and a healthy attitude toward diverse body shapes and sizes.

- Encourage local efforts to reduce, reuse, and recycle through the numerous programs offered throughout Muskegon County.

Bring Young People to the Planning Table:

Work with middle schools, high schools, community colleges, and local organizations in order to make them an integral part of the planning process regarding quality of life related task forces, events, activities, etc. Potential implementation partners include townships, cities, villages, Muskegon County, WMSRDC, education institutions, community based organizations, area residents (youth).

Implementation Strategies:

- Encourage local governments to reach out to youth through the use of social media such as Facebook, Twitter, YouTube, etc.

- Forge and encourage partnerships that support youth involvement in the local community.

- Establish opportunities for local governments to work with educational institutions to provide internships for area youth in an effort to increase their involvement in the community.

- Partner with local educational institutions to promote the MAP, its implementation strategies, and Smart Growth Principles.

Chapter 7:
Implementation & Evaluation

Implementation

As has been noted elsewhere in the document, the Muskegon Area-wide Plan is more than a traditional master plan for the county; it is a vision for the future of Muskegon County by the people of the county. In Michigan, under state law, counties do not have jurisdiction over land use and zoning; which falls under the jurisdiction of cities, villages and townships. Similarly, implementation tools for the other vision areas of the MAP, like the environment, economy and jobs, quality of life and infrastructure are spread over a wide spectrum of agencies and authorities. While this makes implementation of a county-wide vision more challenging, an overview of tools and organizations available to implement the MAP implementation strategies will be helpful. WMSRDC, the keeper and home for the MAP, will work with these groups, identified below, to implement the MAP.

Land Use & Growth

When it comes to land use and growth decisions in the State of Michigan, authority lies with local units of government including townships, cities, and villages. Michigan is a Home Rule state which allows townships, cities, and villages to govern themselves through a local charter and ordinances. However, there are also other organizations that can assist in local land use and growth decisions.

Local Governments: According to state law, local governments in Muskegon County including townships, cities, and villages have the sole authority to implement land use and growth decisions through local charters and zoning ordinances. Some of the cities in the county have professional planning staff to assist in the decision making and enforcement of local ordinances developed by elected officials and planning commissioners. Each of the 16 townships, seven (7) cities, and four (4) villages in Muskegon County exercise their right to plan and enforce ordinances within their jurisdiction.

County of Muskegon: Although the County of Muskegon does not have land use planning and zoning jurisdiction, the Muskegon Area-wide Plan is a county-wide vision. Muskegon County's main link to land use and growth is its ownership of various facilities including numerous industrial parks, the Muskegon County Airport, the Muskegon County Wastewater Management System, and the Muskegon County Solid Waste Facility. All of these facilities have a direct relationship to various aspects of the land use and growth in Muskegon County.

West Michigan Shoreline Regional Development Commission (WMSRDC): Among other designations, WMSRDC was created in 1970 under PA 281 of 1945 (Regional Planning Commission). WMSRDC currently serves five counties including 127 local units of government administering several programs areas and providing technical assistance to local governments in the west Michigan region. WMSRDC strives to be a source of information and expertise for local governments with respect to land use and growth tools and techniques. WMSRDC holds several regional forums per year in an attempt to educate local officials on a variety of planning topics. In addition, WMSRDC will assist one or two local governments per year in the development or update of community planning documents.

State and National Associations: Local governments in the west Michigan area have the option of belonging to

numerous associations such as the Michigan Municipal League, Michigan Township Association, and the National League of Cities. These and other associations can be another valuable source of information regarding planning and zoning tools and techniques.

The main responsibility for implementing the MAP Land Use and Growth vision lies with the local units of government in Muskegon County. The other organizations should be used by the local units of governments as sources of information. With dwindling resources at the local level, it will be important for local units of government to explore options for intergovernmental cooperation to provide services to area residents and implement the Land Use and Growth vision.

Natural Resources & Environment

There are numerous local, state, and national organizations working towards the protection and preservation of the valuable natural resources and fragile environment of the west Michigan region. Listed below are a few of the organizations and major tools used in this effort.

Local Watershed Groups and Environmental Organizations: Local watershed groups have been extremely active and successful in Muskegon County. Many of their members are concerned citizens living within the watershed with a passion to preserve and protect the precious natural resources in their community. They have prepared watershed management plans, forged successful partnerships, implemented local projects, and provided valuable educational opportunities to area residents. Watershed organizations that are active in Muskegon County include the Duck Creek Watershed Partnership, Lower Grand River Organizations of Watersheds, Mona Lake Watershed Council, Muskegon Lake Watershed Partnership, Muskegon River Watershed Assembly, White Lake Public Advisory Council and the White River Watershed Partnership. In addition, the Muskegon Area Sustainability Coalition and the Muskegon County Environmental Coordinating Council hold regular meetings and provide opportunities for sharing information and forging new partnerships. The Land Conservancy of West Michigan is another active organization and vital partner in the area.

Local Units of Government: As stated in the Land Use and Growth section, local units of government including townships, cities, and villages have planning and zoning authority. How a community plans and its zoning regulations have a tremendous impact on the environment. Local units of government should remain informed about grant and loan opportunities to improve and protect natural resources and remain educated on how the environment may be impacted based on the planning and zoning decisions they make. Local governments own land and many natural areas contain important green infrastructure features that, if protected, can protect environmental quality and help reduce costs that communities face with the maintenance of traditional storm water systems and other infrastructure related to sprawl.

WMSRDC: The Regional Commission has been involved with natural resources and water quality planning since its inception in 1970. The Commission is the federally designated area-wide water quality management planning agency for the region, as provided for under the

Clean Water Act. WMSRDC works closely with local watershed groups, local governments, and other local, state, and federal partners to assist in the implementation of and provide technical assistance in local watershed projects. WMSRDC also maintains a strong working relationship with state and federal funding agencies in order to remain educated regarding existing and new funding opportunities and programs that may assist in local projects.

Conservation District: The Muskegon Conservation District is a unique governmental subdivision of the state created to serve as stewards of our natural resources. The guiding philosophy is that local people should make decisions on conservation issues at the local level, with technical assistance provided by local resource professionals. District projects and programs are as diverse as the landscape and are continually changing to meet the environmental challenges in local communities. The Muskegon Conservation District serves as a valuable partner and resource to local watershed groups, land owners, and others interested parties.

Grand Valley State University Annis Water Resources Institute (AWRI): AWRI's mission is to integrate research, education, and outreach to enhance and preserve freshwater resources through three program areas including an ecological research program, information services center, and education and outreach programs. AWRI is an asset to the Muskegon community being located directly on Muskegon Lake in the City of Muskegon.

State of Michigan: The State of Michigan administers and oversees environmental protection programs and regulations to preserve and protect wetlands, water quality and natural resources. The Department of Environmental Quality, Department of Natural Resources, Michigan Department of Agriculture and the Coastal Zone Management Programs provide communities, watershed groups and landowners with technical assistance and resources through programs and state and federal grants, including the State Clean Water Revolving Fund and grants that pass through federal funds from the federal Great Lakes Restoration Initiative and Section 319 of the Clean Water Act.

Federal Government: The US EPA administers the Great Lakes Restoration Initiative (GLRI) and the Great Lakes Legacy Act (GLLA). The EPA maintains and updates the Great Lake Restoration Action Plan to guide the coordination and distribution of federal funds to other federal organizations and state agencies working cooperatively with local communities to remediate, restore and protect the Great Lakes ecosystem. The National Oceanic and Atmospheric Administration is an important partner in the protection of natural resources. The NOAA Great Lakes Environmental Research Laboratory (GLERL) is located on Lake Michigan at the Muskegon Lake navigational channel. GLERL is an important research partner in the areas of water quality and invasive species throughout the Great Lakes. The NOAA Restoration Center, with its Great Lakes offices located in Ann Arbor, Michigan is an important partner with local, large-scale fish and wildlife habitat restoration and land acquisition efforts in the Muskegon Lake Area of Concern shoreline and watershed.

Great Lakes Commission: The Great Lakes Commission is an interstate compact agency that promotes the orderly, integrated and comprehensive development, use and conservation of the water and related natural resources of the Great Lakes basin and St. Lawrence River. The GLC partners with regional organizations on large-scale watershed protection programs and they administer several small grant programs to improve water quality throughout the Great Lakes.

There is an incredible amount of cooperation and coordination amongst the above mentioned groups to preserve and protect the natural resources and environment in west Michigan. A continued partnership is recommended in order to leverage tools, programs and funding to continue implementation of the Natural Resources & Environment vision of the MAP.

Economy & Jobs

There are a number of organizations and tools available to implement the MAP's Economy and Jobs vision area. The major ones and the tools available are described below:

WMSRDC: WMSRDC is designated by the U.S. Department of Commerce, Economic Development Administration, as an Economic Development District (EDD), or a regional economic development agency for West Michigan. WMSRDC is primarily responsible for strategic economic development planning and the provision of assistance to local governments in developing their economic development infrastructure with federal and local resources. On an annual basis the WMSRDC prepares the federally mandated Comprehensive Economic Development Strategy (CEDS), which is a blueprint for the economic development of West Michigan, including Muskegon County. The CEDS annually lists up to ten regionally significant economic development projects for implementation with federal, local or private funds. Almost the entire economic development infrastructure of West Michigan was developed through this planning and implementation process.

Muskegon Area First (MAF): The Muskegon Area First is a county level, local economic development agency, loosely affiliated with the Lakeshore Chamber of Commerce. MAF's primary mission is new business attraction and retention of existing businesses. WMSRDC and MAF work closely together in advancing economic development in Muskegon County, especially when it involves economic development infrastructure projects.

Michigan Economic Development Corporation (MEDC): The Michigan Economic Development Corporation is the State of Michigan's economic development agency. The MEDC administers a number of programs, and has authority over a number of economic development tools, for business attraction and retention. MEDC also administers the Small Cities Community Development Block Grant (CDBG) program, the majority of which is allocated by the state to economic development. A more complete description of the tools are available on MEDC's website at michiganadvantage.org.

Local Governments: Several of the local governments in Muskegon County have professional staff involved in planning and economic development, including the County of Muskegon.

Local governments in Muskegon County play a key role in furthering the MAP vision area of economy and jobs. They also have at their disposal many economic development tools to promote and foster economic development, like Brownfied Authorities, Tax Increment Financing, tax abetments etc.

Chambers of Commerce: Muskegon County is also home to many chambers of commerce, the largest one being the Lakeshore Chamber of Commerce. The chambers of Commerce are also involved in working closely with the business community and promoting their interests. The chambers of commerce also provide vital services to their members in the form of training and information.

Educational Institutions: The Muskegon County area is blessed with outstanding educational institutions including K-12, as well as post secondary education. The Muskegon Area Intermediate School District (MAISD) is a strong regional education service agency serving the public schools of west Michigan. The MAISD's primary mission is to provide leadership and services that enhance the delivery of instruction for the 12 constituent school districts and assisting other public and parochial schools. In addition, Muskegon Community College (MCC), Grand Valley State University (GVSU), and Baker College of Muskegon have a strong presence in the county. These institutions will play a major role in preparing, educating and retraining the current and future workforce in Muskegon County.

Work Force Development: Michigan Works! is a unified workforce development system with 25 agencies state-wide. The mission of the local Michigan Works! agency is to assist job seekers and employers in the west Michigan community. The agency is locally driven and provides access to a full range of core employment-related services to help businesses find the skilled workers they need, and help job seekers find satisfying careers. The Michigan Works! agency has a number of economic development tools available to assist the local community in meeting their goals.

The WMSRDC, MAF, MEDC, local governments, chambers of commerce and other organizations work closely together to further the goals of economic development in Muskegon County. These organizations will also be primarily responsible for implementing the economy and jobs vision of the MAP.

Infrastructure

The infrastructure network in Muskegon County is managed by local, state, and federal agencies, as well as some private sector agencies. Listed below are some of the organizations and their roles with respect to infrastructure within the county.

WMSRDC/WestPlan MPO: In 1973, WMSRDC organized the Muskegon Area Transportation Planning Program as the Metropolitan Transportation Planning Organization (MPO) Policy Committee. In 2003, when the U.S. Census Bureau expanded the Muskegon Urbanized Area to include northern Ottawa County, WMSRDC, working with the Michigan Department of Transportation, realigned the Metropolitan Area Boundary (MAB) of the MPO and organized the West Michigan Metropolitan Transportation Planning Program (WestPlan). WMSRDC has staffed the MPO since

1973. WMSRDC undertakes a comprehensive transportation planning program to maintain the eligibility of local governments in the area to receive federal and state transportation funds for street and road improvements, as well as subsidies for mass transit.

Michigan Department of Transportation (MDOT): The Michigan Department of Transportation (MDOT) is the State of Michigan's transportation agency which administers numerous programs. The agency also has authority over various tools for transportation related activities. MDOT works closely with local governments and road agencies, as well as the Federal Highway Administration to implement various transportation related tools and programs. A more detailed description of the tools are available on the MDOT website at michigan.gov/MDOT.

Federal Highway Administration (FHWA): The Federal Highway Administration (FHWA) provides stewardship over the construction, maintenance and preservation of the Nation's highways, bridges and tunnels. FHWA also conducts research and provides technical assistance to state and local agencies in an effort to improve safety, mobility, and livability, and to encourage innovation.

Muskegon County Road Commission: The Muskegon County Road Commission (MCRC) has jurisdiction of all Non-Trunkline roads located outside of any city or village limits, generally the roads that are in townships. MCRC is dedicated to keeping those roads improved for vehicular travel, reasonably safe and convenient for the motoring public, and to be firm, but flexible in their dedication to cooperatively and responsibly work with others in the public's interest. The MCRC works closely with WMSRDC/MPO and other local road agencies to maintain and improve the counties road network.

Local Units of Government: The seven (7) cities and four (4) villages in Muskegon County maintain and operate their own road systems and work closely with WMSRDC/MPO, as well as MDOT. In addition, many of the local communities maintain other infrastructure including water and sewer lines/systems. The City of Muskegon and Muskegon Heights own and operate their own municipal water filtration plans, which service not only the cities, but also several of the surrounding communities. The Cities of Whitehall and Montague jointly own and operate a municipal well system, and the Village of Ravenna also owns and maintains a municipal well system.

County of Muskegon: The County of Muskegon is a major contributor to infrastructure within the county. Although the county is not a road agency, the county does own and operate the Muskegon Area Transit System, which is the primary provider of mass transportation in the county. The agency also provides paratransit service, as well as trolley service within the county. Muskegon County also owns and operates the Muskegon County Airport, which is a commercial air facility servicing the west Michigan area with regional air service provided by SkyWest Airlines operating as United Airlines with 50-passanger service to Chicago O'Hare. Muskegon County also owns and operates the Muskegon County Wastewater Treatment Facility located in eastern Muskegon County and services much of the county. In addition, the county also

owns and maintains in partnership with various communities the northside water system. The county also owns and maintains the Muskegon County Solid Waste Management Facility also located in eastern Muskegon County.

The above mentioned organizations play major roles in the operation, maintenance and future expansion of infrastructure within Muskegon County. It is most important for these agencies to work together and forge partnerships in order to implement the MAP Infrastructure implementation Strategies.

Quality of Life

Quality of life is a very subjective vision area of the MAP. There are numerous organizations that can have an impact on the quality of live in Muskegon County. Listed below are a few organizations that are directly related to the implementation strategies identified under the quality of life vision area.

Local Units of Government: Local units of government have a large impact on the quality of life within a community based on their authority to plan for and implement land use decisions which create a sense of place. There are several tools available for local units of government to utilize when trying to improve the quality of life for area residents. These tools include planning documents and zoning ordinances. Additionally, local units of government can seek financial assistance through various programs offered by state and federal agencies to improve the local quality of life.

Local Medical Providers: Muskegon County has a top ranking in the State of Michigan for its high level of clinical care. However, Muskegon County's overall health ranking in the state is lacking. Therefore, it is important to provide quality local health care with access to specialists, technology, and cutting-edge treatments throughout the region. It is also equally important to improve the overall health of county residents by utilizing tools and technique available through local healthcare providers.

Educational Institutions: Educational attainment is a major priority of the MAP. The Muskegon area is blessed with higher educational opportunities including Muskegon Community College, Grand Valley State University, and Baker College of Muskegon. Muskegon Community College, an associate degree-granting institution of higher education, is a center for lifelong learning which provides persons the opportunity to attain their educational goals by offering programs that respond to individual, community and global needs. Grand Valley State University educates students to shape their lives, their professions, and their societies. The university contributes to the enrichment of society through excellent teaching, active scholarship, and public service. Also, the mission of Baker College is to provide quality higher education and training which enable graduates to be successful throughout challenging and rewarding careers.

Community Based Organizations: Community based organizations are vital in improving a region's quality of life. Community based organization, public or private nonprofit (including a church or religious entity) are representative of a community or a significant segment of a community, and are engaged in meeting human, educational, environmental, or public safety community needs. Muskegon County has numerous community based

organizations with varying missions. They offer valuable resources to the local community in implementing the MAP Quality of Life vision.

Community Foundation for Muskegon County: The mission of the Community Foundation *for* Muskegon County is to build community endowment, effect positive change through grantmaking and provide leadership on key community issues, all to serve donors' desires to enhance the quality of life for the people of our region, now and for generations to come. The Community Foundation for Muskegon County has been a local leader in improving the quality of life in the county with its vast resources and generosity.

As mentioned previously there are numerous agencies and organizations that may have an impact on the quality of life in Muskegon County. These organizations will have a direct impact in executing the MAP Quality of Life implementation strategies.

Evaluation

In order to evaluate and measure the implementation activities of the MAP, the MAP Advisory Committee with assistance from the WMSRDC, will host an annual community form. The purpose of the forum will be to bring the community together to discuss the MAP implementation activities undertaken during the previous year. In addition, attendees of the community forum will use electronic voting equipment to complete a survey/questionnaire measuring their knowledge of the MAP and ongoing implementation activities.

An annual report will then be produced based on the results of the community forum and survey. A copy of the survey/questionnaire is located in the Appendix.

Chapter 8: Sustainability

Creating a Sustainable Community

According to the United States Environmental Protection Agency, "Sustainability is based on a simple principle: Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. Sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations.

Sustainability is important to making sure that we have and will continue to have, the water, materials, and resources to protect human health and our environment."

Muskegon County is engaged in several activities to promote sustainable practices and waste reduction. The Muskegon County Environmental Coordinating Council and the Muskegon Area Sustainability Coalition are just two volunteer organizations that are striving to create a sustainable community.

The mission of the Muskegon County Environmental Coordinating Council (MCECC) is to advance the environmental well being of the Muskegon Region by providing opportunities for collaboration, education and stewardship. The MCECC was formed in 1991 to promote cooperation between governments, community groups, regulators and local business throughout the County. Over the years, the MCECC has played, and continues to play, an important role in the promotion of environmental health education and pollution prevention throughout the West Michigan region.

In June 2006, members of the Muskegon Area Sustainability Coalition came together as a body of community leaders with a common goal of advancing the principles of Sustainability throughout Muskegon County. The intent of the group is to strengthen community efforts such as the Muskegon Area-wide Plan through the promotion of Sustainability as a community value that influences all community endeavors.

Recycling & Disposal

Muskegon County is another active partner is fostering a sustainable ecology, economy and community. In 2012, the Muskegon County Department of Public Works (Sustainability Office) in partnership with various sponsors developed the Muskegon County Household Recycling & Disposal Guide. The guide provides information on how to recycle or dispose of everything from antifreeze to yard waste, identified tips for conserving energy, and shares listings for disposal and recycling facilities. The promotion of the principles of Reduce, Reuse, and Recycle (in that order) is promoted in the document in the belief that doing so can curb energy and raw material consumption in the face of growing demand on our natural resources.

A copy of the Muskegon County Household Recycling & Disposal Guide can be downloaded from the MCECC website at www.mcecc.org, or for additional resources, contact the Muskegon County Sustainability Office online at www.co.muskegon.mi.us/sustainability.

Muskegon County Sustainability Plan

Thank You

The team would like to thank all who have served on the SSC, and to those who have provided the County Government support that was so critical to this process:

Sustainability Steering Committee

Sara Damm	Muskegon County Sustainability Coordinator
Steve Fink	Department of Public Works
Kristen Knop	Convention & Visitors Bureau
Brittany Lenertz	Department of Employment and Training
Jill Montgomery-Kwast	Public Health
Sheryl Moss	Equalization
Andrea Nichols	Juvenile Transition Center
Dave Parnin	Community Mental Health
Melissa Ostrom	Muskegon Area Transit System
Mary Villanueva	Administration/ Equal Employment Opportunity
Leslee Rohs	Former County Sustainability Coordinator (now with the Frye Foundation)
Michele Buckler	FTC&H
Wendy Ogilvie	FTC&H

Sustainability Leadership Group

Donna VanderVries	Director, Equalization
Martin Rosenfeld	Administrator, Brookhaven Medical Care Facility
Vernon Oard	Youth Services Director, Juvenile Transition Center
John Warner	Director, Public Works
Ken Kraus	Director/Health Officer, Public Health
Bonnie Hammersley	Asministrator, Muskegon County

Additional Support

Laura Rauwerda	Michigan Department of Environmental Quality
Lisa Sabourin	Employers Association of West Michigan
Erin Kuhn	West Michigan Shoreline Regional Development Commission

For More Information Contact:
Sara Damm, Sustainability Coordinator
131 E. Apple Ave.
Muskegon, Michigan 49442
(231) 724-8846

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For the full report, please visit www.co.muskegon.mi.us/sustainability/

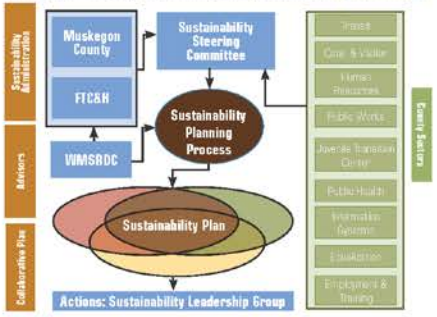
Design courtesy of:
fitch Fishbeck, Thompson, Carr & Huber, Inc. engineers | scientists | architects | constructors

Definitions

Vision	An image or description of what the community desires to become in the future.
Focus Areas	Three broad categories – Social Equity, Economic Prosperity, and Environmental Integrity.
Outcomes	A measurable, standardized value that accurately measures progress toward Outcomes.
Indicators	A measurable, standardized value that accurately measures progress toward Outcomes.
Actions	Projects, plans, or activities that are accomplished in order to achieve a stated Outcome.
Targets	Specific, measurable goal for change from the baseline indicator measurement.
Stakeholders	People and organizations who are responsible for planning and implementing Actions.
Life Cycle Cost	Full cost accounting which includes capital, maintenance, operations, and disposal (or end of life treatment) for life of equipment, project, materials, etc.

Focus Area	Outcome
Economic Prosperity	My County Government is fiscally sustainable.
	My County Government provides efficient, high-quality services and maintains high-quality infrastructure at a fair tax rate.
Social Equity	My County Government employees have the necessary education and skills.
Environmental Integrity	My County Government has excellent air and water quality.
	My County Government has strong green infrastructure, natural resource networks, and recreational assets.
	My County Government conserves energy and resources and is energy-efficient.
	My County Government recycles and reduces waste generation.

Muskegon County Governmental Sustainability Planning:



Muskegon County Sustainability Plan

The sustainability planning for Muskegon County included a process that took the best practices and lessons learned from similar efforts and completed it in an accelerated fashion to maintain momentum and keep the participants engaged. The County focused on the challenges facing its governmental operations and the actions it could take to confront those challenges in the three Focus Areas: social equity, economic prosperity, and environmental integrity. To facilitate success, the County wanted to ensure that each Focus Area supported the overall mission of the County's governmental operations.

The sustainability planning process began in winter 2012 and was completed in summer 2013. This project was funded by a grant from the Michigan Department of Environmental Quality (MDEQ) under its Community Pollution Prevention Grants Program (P2 grant).

Vision

The Muskegon County developed a collective vision that supports sustainability:

To provide the citizens of Muskegon County the highest quality of life by promoting: economic development; culture and diversity; health, public safety and education; and preservation of natural resources.

Sustainability Planning

Sustainability prepares people and communities to thrive now and in the future by balancing the Triple Bottom Line of environmental, economic, and society values.

The Process

Muskegon County focused on the challenges faced in its governmental operations and the actions it can take to confront their unique sustainability challenges: social equity, economic prosperity, and environmental integrity.

The process included articulation of a vision, goals, and outcomes for sustainability. A set of quantitative indicators were identified to measure baseline and progress for these goals into the future. Finally, the county identified current and future actions that will move the needle on sustainability.

The planning process pulled together a variety of stakeholders and supports from Muskegon County including:

- Sustainability Steering Committee: Representatives from selected County departments.
- Survey. A comprehensive survey was sent to County employees to gauge knowledge of behaviors and knowledge related to sustainability.

Muskegon County Sustainability Action Plan

	Outcome	Actions	Indicator	Indicator 2	Indicator	Timeframe	Lead
My County Government...	Muskegon County is fiscally sustainable	Develop paper printing policy	Pounds (LB) of paper purchased per full-time equivalent employee (FTE)	Cost of paper purchased per FTE	# of printers that print duplex	Medium	Sustainability, Administration
		Develop robust surplus/obsolete equipment policy	$ revenue generated from sales	Inventory of surplus/ obsolete items	Average hold time per item	Ongoing	Sustainability, Purchasing, Facilities, IS
		Develop electronic record keeping program	% of departments offering electronic record keeping programs	LB of paper purchased per FTE	Cost of paper purchased per FTE	Ongoing	Administration
		Capture methane from landfill and sell for energy generation	% of methane captured	MMBTU captured/sold		Ongoing	Solid Waste
		Develop full-cost (life cycle) financial analysis into all capital planning and budget processes	% of capital spending that includes a full-cost analysis			Short	Administration, Purchasing
	Muskegon County provides efficient, high-quality services and maintains high-quality infrastructure at a fair tax rate	Develop and conduct survey of County residents	% of satisfied residents			Long	Clerk, Possible university collaboration
		Identify key County services	$ spent per resident for County services			Short	Administration, Clerk
		Develop full-cost (life cycle) financial analysis into all capital planning and budget processes	% of capital spending that includes a full-cost analysis			Short	Administration
	Muskegon County employees have the necessary education and skills	Develop and offer computer skills program	# of computer skills programs	# of participants		Ongoing	HR, IS, Possible collaboration with MCC classes
		Develop and offer training on sustainability program	# of sustainability programs	# of participants		Ongoing	Sustainability, HR
		Track and increase internship recruitment and participation	# of internships filled	# of interns returning for full-time employment		Short	HR, EEO
		Offer continuous education training to all employees in the respective fields	# of hours of CEU earned/ employee			Ongoing	Respective departments, HR
		Energy and resource conservation training program for County employees	# of conservation programs	# of participants		Short	Sustainability, HR
	Muskegon County has excellent air and water quality	Alternative fuel vehicles (AFVs).	# of alternative fuel vehicles	Fuel use per employee mile		Medium	Purchasing, all departments with fleet vehicles
		Water conservation for irrigation	% Reduction of irrigation used			Short	Sustainability, Facilities
		Retrofit faucets and toilets	# of fixtures retrofitted	Water use per FTE	Sewer generation per FTE	Ongoing	DPW, Facilities
		Update plumbing in priority areas to reduce excessive water use	# of fixtures updated	Water use per FTE	Sewer generation per FTE	Short	DPW, Facilities
		Renewable power purchase contracts	% of renewable energy purchased by County			Medium	Purchasing
		Capture methane from landfill and sell for energy generation	% of methane captured	MMBTU captured/sold		Ongoing	Solid Waste
		Reduce turf to areas with functional use only (ball fields, play areas, etc)	Acres of turf reduced			Medium	Facilities, Parks, DPW
		Reduce pesticides, herbicides, and fertizer (P,H&F) use for landscape and green areas	Pounds of PH&F applied per acre	# of "toxic" products replaced		Short	Facilities, Wastewater
	Muskegon County has strong green infrastructure, natural resource networks, and recreational assets	Low-Impact Development (LID) requirements for all new or redeveloped County infrastructure	% of facilities with LID			Medium	Purchasing, Sustainability, Appointed committee
		Use native plants for County landscaping	% of area using native plants			Ongoing	Sustainability, Facilities
		Wetlands	% of wetlands maintained			Ongoing	Wastewater, Parks, Road Commission, Land Bank?
		Increase parkland	# acres of parkland per County resident			Ongoing	Parks, DPW
		Reduce turf to areas with functional use only (ball fields, play areas, etc)	# acres of turf reduced			Medium	Facilities, Parks, DPW
	Muskegon County conserves energy and resources and is energy efficient	Energy audits for all County buildings	% Buildings audited	Reduction of energy consumption per County building		Ongoing	Purchasing, Honeywell
		Energy and resource conservation training program for County employees	# of energy/resource conservation programs	# of program participants		Short	Sustainability, HR
		LED light replacements	% County buildings retrofitted with LED bulbs	% reduction= [total wattage new bulbs/total wattage old bulbs] * 100		Ongoing	Sustainability, DPW, Facilities
		Green Driving Practices educational program for County employees	% reduction in fuel usage	Fuel use per vehicle mile traveled	# of program participants	Ongoing	Purchasing, all departments with fleet vehicles
		Alternative fuel vehicles (AFVs)	% of AFVs within County fleet	Fuel use per vehicle mile traveled		Short	Sustainability, all departments with fleet vehicles
		Incentives for employee's healthy behavior	% of County employees carpooling to work	% of County employees using public transporation	% weight loss	Ongoing	Public Health, Human Resources, Sustainability
		Green Building Policy for new and renovated buildings	% of building (or floor space) meeting Energy Star or LEED requirements	% of materials that meet green or LEED requirements		Short	Administration, Sustainability, DPW, Purchasing
		Capture methane from landfill and sell for energy generation	% of methane captured	MWh generated		Ongoing	Solid Waste
	Muskegon County recycles and reduces waste generation	Paper recycling program	% County buildings with Paper Recycling Program	Development of Paper Recycling Program training program and website	Number of paper recycling bins	Ongoing	By department, Sustainability, Custodial Staff Facilities
		Plastic recycling program	% of County buildings with plastic recycling program	Development of plastic recycling training program and website	Number of plastic recycling bins	Ongoing	By department, Sustainability, Custodial Staff Facilities
		Waste food/organics composting program	% of County facilities participating	Tons of compost generated	Development of composting training program and website	Short	Sustainability, Custodial staff Facilities
		Waste reduction/diversion program	Pounds of waste per FTE	Ratio of waste to recycled material collected		Short	Solid Waste, Sustainability, DPW
		Reduce printing - encourage electronic files	Pounds of paper purchased per FTE	% of departments implementing ECM program		Short	All SSC members, All County Champions, Administration with ECM
		Switch to compostable paper/plastic food serving materials	% of compostable food serving materials purchased (vs. non-compostable)			Short	Pioneer Resources, Sustainability, Facilities
		Develop robust surplus/obsolete equipment policy	Dollars of revenue generated	% of items reused	% of items recycled	Ongoing	Sustainability, DPW, Facilities, IS
		Develop administrative guidelines for "green" procurement	# of "green" products purchased	% of products purchased that are "green"		Short	Administration, Purchasing, Sustainability
		Require all paper purchased to be 100% post-consumer recycled	% of post-consumer recycled paper purchased			Short	Purchasing, Administration, Sustainability

The Muskegon County Sustainability Plan was also developed as part of Muskegon County's Pollution Prevention Grant from the Michigan Department of Environmental Quality. This is the same grant that made the MAP update possible. Muskegon County's purpose for the grant was to develop a Sustainability Plan for its governmental operations. The effort was undertaken by the Muskegon County Department of Public Works.

Muskegon County's Public Works staff worked collaboratively with internal partners and stakeholders throughout the course of the grant. These partners included representatives from various county departments, elected officials, and county employees. The process identified and prioritized existing and potential actions that add to the sustainability of the county. The complete Muskegon County Sustainability Plan available in the appendix of the MAP

The process of developing the plan and resulting collaboration resulted in a framework that can be used by the county as it incorporates sustainable practices into its operations. The three legs of sustainability include social, economic, and environment were incorporated into the plan in order to operate and live in a more sustainable way.

It is the hope of the Muskegon County Public Works staff that the Muskegon County Sustainability plan will be utilized as a guide and incorporated by other municipalities and organizations toward the development of their own sustainability plans and guides for operation.

Exchange West Michigan

As part of the Muskegon County Pollution Prevention Grant, which helped fund the Muskegon Area-wide Plan update, the Employers Association of West Michigan developed a Universal Waste Management and Materials Exchange Forum. The purpose of the Forum is to increase and build efficiency into commercial recycling and proper management of Universal Waste, specifically, cardboard, office paper, and plastics, scrap metal, fluorescent lamps, and batteries, as well as to facilitate materials/by-product exchange through the facilitation and creation of an online forum. Users can post items or view listings of items from other users.

The web based service for the exchange of reusable items from business, municipalities, and non-profit organizations is located at www.exchangewestmi.com.

Muskegon County Solid Waste Management Plan Update

The Michigan Department of Environmental Quality (DEQ) requires each county in Michigan to have a solid waste management plan. The Muskegon County Solid Waste Management Plan was last updated in 2000. The plan reviews current waste disposal operations and facilities, analyzes historical, current and projected population demographics, waste generation volumes and waste diversions via recycling

enterprises. The plan also identified goals and objectives to assist in developing a general policy framework in which to identify alternatives to meet current and future solid waste management issues.

The Muskegon County Solid Waste Planning Committee is initiating the process of updating the County's Solid Waste Management Plan. Based on discussions of the Solid Waste Planning Committee, the updated plan will help to develop and strategize future recycling efforts in Muskegon County.

Prosperity Index

The Prosperity Index, developed by the Muskegon Area Sustainability Coalition, began as a method to define and measure sustainability by condensing volumes of data and presenting it in a simple and easy to understand format. The Index was designed as a tool to track progress and guide actions. The purpose for the index is to help Muskegon County develop a more cohesive response to challenges and opportunities, while ensuring that the county is a thriving area and is enjoyed by current and future generations.

The summary report of the Prosperity Index for Muskegon County has been produced annually since 2007 and calculates scores and trends in three categories including Social Equity, Environmental Integrity, Economic Prosperity, as well as provides an overall average for the county. The report also compares Muskegon County numbers to West Michigan (Muskegon, Kent, Ottawa), Michigan, and the United States.

The numbers in Muskegon County are consistent to that of the West Michigan, Michigan, and the United States with Social Equity, Economic Prosperity, and the Overall Average declining. Environmental Integrity was the only category for each area to post a rising score. This category promotes the concept of reduce, reuse, and recycle; as well as the conservation of energy and water. This category measures a 3.3 score for Muskegon County indicating a sustainable level has been achieved. Environmental Integrity indicators have continued to improve each year since 2007.

Chapter 9: Conclusions

Conclusions

The Muskegon Area-wide Plan (MAP), which began in the fall of 1998, has brought the citizens of Muskegon County through the process of identifying a common vision for the future of the community. Through the involvement of nearly one thousand participants in the project over the past few years, visions and goals were established, a development scenario was chosen, and implementation strategies were created.

The MAP Steering Committee, community leaders, and the public have continually shown their support and commitment to the success of this most important project. Many of the individuals, organizations, and local governments involved in the MAP have also made a pledge to continue their participation in the project in order to carry out the vision established through the detailed process of creating the Muskegon Area-wide Plan.

The update of the MAP began in 2011. During the two year update process, many of the same strategies were utilized to engage the community and strengthen support of the MAP. New implementation strategies were developed and evaluation criteria established.

The MAP Advisory Committee, WMSRDC, and numerous local organizations will strive to implement the strategies identified in the MAP and follow the Smart Growth Principles.