



Bridgeton Township Master Plan Update

Adopted June 2011



WMSRDC
WEST MICHIGAN SHORELINE
REGIONAL DEVELOPMENT COMMISSION

**WEST MICHIGAN SHORELINE
REGIONAL DEVELOPMENT COMMISSION
(WMSRDC)**

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**Bridgeton Township
Master Plan Update**

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Chapter I: Introduction

A. Executive Summary

This document, the Bridgeton Township Master Plan, is an update of the Bridgeton Township Land Use Plan of 2002. The name has been altered to reflect changes in state law, which identifies documents such as this as “Master Plans.” It is intended to serve as a guide for future Township actions and decisions pertaining to land use throughout its jurisdiction. It is not intended to establish precise boundaries for different types of land uses. Its function is to guide growth using long-range goals and objectives and to generally indicate the location of land uses. This plan represents the strong commitment of Bridgeton Township to retain and strengthen the local quality of life. This plan has provided opportunities for all citizens to play a key role in determining their community’s future by incorporating their recommendations and comments. This plan should be considered as the foundation for the regulations contained in the zoning ordinance. State law requires that the plan be reviewed and updated accordingly every five years.

The fundamental purpose of this plan is to enable Bridgeton Township to establish a foundation for the direction of the community’s future physical development. Through a thorough planning process, Bridgeton Township believes that they will be better prepared to proactively respond to changes and challenges through means in its best interest. This plan shall serve as a guide for the amendment of applicable Township ordinances governing land use.

The decisions and actions of a community must be made with the knowledge that their effects will be felt beyond the community’s immediate boundaries. When making land use decisions, it is not difficult to focus around current situations and individuals. However, it is imperative that decisions be based upon the community’s vision for the future. This will ensure that the decisions made will consider impacts on the Township as a whole for years to come. This plan is part of a comprehensive and continuing process, the purpose of which is to help public and private decision makers in Bridgeton Township arrive at decisions which promote the common good of society. This document outlines the preferred future for Bridgeton Township. The plan is appropriately general, recognizing that planning for the future is a delicate blend of art and science and that sufficient flexibility will be needed to respond to the challenges Bridgeton Township faces in the future.

Because of the constant changes in our social and economic structures and activities, this plan must be maintained through periodic review and revision so that it reflects the needs of Bridgetown Township while continuing to maintain its long-range goals. The plan will be successful to the extent that it:

- Reflects the needs and desires of the citizens of Bridgeton Township;
- Realistically interprets and reflects the conditions, trends and the economic and/or social pressures that are brought about by change; and
- Encourages consensus and support among public agencies, developers, and citizens toward achieving common goals established by the Township.

B. Purpose of the Plan

The goal of any master plan is to combine the needs and desires of the citizenry with the land's suitability and capability for sustaining those uses, according to the ability and desire of a unit of government to provide public services throughout its jurisdiction. Such planning will minimize the potential for land use conflicts and inappropriate uses of land, for the betterment of all residents.

When the Township of Bridgeton began the plan preparation process in the winter of 2002, it had several objectives. First, it was important to achieve an understanding of the likely future trend in the community and its surrounding areas. Second, Bridgeton sought to clearly define the community priorities with regard to growth, development, and land use. Third, the planning process was seen as an opportunity to build and strengthen a community consensus about the future land use patterns in the township. Finally, Bridgeton sought to address specific issues, land use challenges, and to develop realistic and effective mechanisms to achieve the plan's objectives.

This Plan Update accomplishes and maintains these objectives and will serve Bridgeton Township in the following ways:

1. The plan provides a means of integrating proposals that look years ahead to meet future needs regarding general and major aspects of the physical conservation and development throughout the township.
2. It serves as the official, advisory policy statement for encouraging orderly and efficient use of the land for residences, agriculture, businesses, and industry as well as coordinating these uses of land with each other, and with other necessary public facilities and services.
3. It creates a logical basis for zoning, subdivision design, public improvement plans, and for facilitating and guiding the work of the Planning Commission, Zoning Board of Appeals, the Township Board as well as other public and private endeavors dealing with the physical conservation and development of the township.
4. It provides a means for private organizations and individuals to determine how they may relate their building and development projects and policies to official township planning policies.
5. It offers a means of relating the plans of Bridgeton Township to the plans of other communities whose borders are adjacent and abutting those of the township.

The Bridgeton Township Land Use Plan approved in 2002 was enabled by Michigan state law under the Township Planning Act, Public Act 168 of 1959. In 2008 however, this law was replaced by the Michigan Planning Enabling Act, P.A. 33. Therefore, an important objective of this Plan Update is to bring the document into compliance with recent changes in state law.

Another important purpose of updating the 2002 Land Use Plan is to improve documentation of Bridgeton Township's commitment to the protection of the area's natural features. More specifically, this Plan Update incorporates natural resource

master plan and zoning recommendations for environmental protection that came about as a direct result of the township's participation in the Muskegon River Watershed Education Project. This initiative is a cooperative planning effort between the Annis Water Resources Institute of Grand valley State University, the Muskegon River Watershed Assembly, and the Newaygo County townships of Bridgeton, Dayton, Garfield, and Sherman. The Project focuses on improving land use planning in the Muskegon River watershed, with the ultimate goal of implementing land use policies on an intergovernmental basis that will pro-actively manage growth and protect water quality.

C. Legal Basis

Although this plan is enabled by Michigan law, it does not have the force of statutory law or ordinance. Its development is guided by the Michigan Planning Enabling Act (P.A. 33 of 2008) which states, in part, that:

A plan comprehensive enough to meet the requirements of Sec. 7(2) must begin with an analysis of the area's existing conditions, facilities, natural resources, population characteristics, economy, environmental features, and land uses. Where appropriate, historical trends should be analyzed to assist in making predictions of future needs. It is also vital to encourage participation of a community throughout the development of a plan in order to ensure an accurate picture of the citizenry. In addition, the community should also engage the involvement of local, state, and federal organizations/agencies during the development of the plan, which will foster coordination, collaboration and potential partnerships, which will assist in the implementation of the completed master plan.

MICHIGAN PLANNING ENABLING ACT P.A. 33 of 2008

- Sec. 7 (2)** The general purpose of a master plan is to guide and accomplish, in the planning jurisdiction and its environs, development that satisfied all of the following criteria:
- (a) Is coordinated, adjusted, harmonious, efficient, and economical.
 - (b) Considers the character of the planning jurisdiction and its suitability for particular uses, judged in terms of such factors as trends in land and population development.
 - (c) Will, in accordance with present and future needs, best promote public health, safety, morals, order, convenience, prosperity, and general welfare.
 - (d) Includes, among other things, promotion of or adequate provision for 1 or more of the following:
 - (i) A system of transportation to lessen congestion on streets.
 - (ii) Safety from fire and other dangers.
 - (iii) Light and air.
 - (iv) Healthful and convenient distribution of population.
 - (v) Good civic design and arrangement and wise and efficient expenditure of public funds

D. Plan Formulation and Update

Being a Plan Update, the structure of this document is largely based upon the Bridgeton Township Land Use Plan of 2002. The original Land Use Plan was formulated around five inter-related phases:

Data analysis – Up to Date Appraisal

The first phase of the effort involved a summary review and analysis of available data gathered from local and regional sources. During the first phase,

demographic, economic, and land use data was gathered to support the Plan. The purpose of this effort was to develop a comprehensive impression of the patterns of growth and the challenges that will impact the township as growth and development continue.

Plan Preparation – Analysis of the Issues and Definition of the Preferred Future

The objective of the second phase involved drawing together the input and preparing a master plan. This process included a special public meeting to gather valuable input from the citizens of Bridgeton Township.

Goals and Objectives – Designing a Policy Basis

The third phase established a policy basis for the township's planning and land use regulations that are consistent with the desires of the community.

Implementation Strategies

The fourth phase provided techniques applicable for implementation of the Bridgeton Plan.

Recommendations

The final phase of the process involved identifying recommendations and specific strategies, tools, and techniques to carry out the plan. At the conclusion of the final phase, the Planning Commission held a public hearing on the plan and followed this by voting for adoption of the Plan.

This Plan Update did little to alter the format laid out in the 2002 document. Changes were made to the Plan, where appropriate, to improve the dialogue, update demographic information, or to bring the Plan into compliance with the state laws. One significant change is the addition of numerous maps and visual aids throughout the text.

E. The Planning Process

A master plan should always be consistent in maintaining the community's goals. The planning process strives to combine the needs and desires of the citizenry with the land's suitability and capability for sustaining those uses. It also balances the township's ability and desire to provide public services throughout its jurisdiction. This master plan, especially the Goals and Objectives, should be reviewed by the township on a regular basis. When appropriate, it should be modified to reflect changes of a physical nature or those of general public sentiment.

In early 2010, Bridgeton Township contracted with the West Michigan Shoreline Regional Development Commission to assist in the update of their Land Use Plan which was originally completed in September of 2002. Every effort has been made to present information that is both current and accurate. Bridgeton Township and the West Michigan Shoreline Regional Development Commission (WMSRDC) shall not be held liable for any errors and/or omissions that are related to this plan. This plan is a general document; therefore, a thorough investigation with original research materials should be undertaken before proceeding with any specific implementation decisions. These materials might include site plans, legal reviews, etc. and would vary by situation.

Citizen input was vital in identifying and discerning the issues facing local residents, as well as identifying a plan for a community's future. Therefore a random sample of Bridgeton Township residents was sent a mail-in survey in March of 2010. Additionally, all township residents were invited to participate at a public hearing on April 19, 2010. Bordering townships were also invited to the meeting. Notice of this meeting was published in the Fremont Times-Indicator newspaper. Input from this gathering strongly influenced the content of Chapter 3 – Goals and Objectives. The results of this meeting are discussed under “Township Visions” in that chapter.

It is also important to make note of the township's active participation in the Muskegon River Watershed Education Project. This has been an influential component of the planning process in Bridgeton. Through this participation, the township has received information related to the natural features, open space, and other aspects of the Bridgeton Township Land Use Plan. Additionally, Project meetings held with the Township Board and Planning Commission in the spring of 2007 helped educate local officials and contributed to the material provided within this document.

F. The Master Plan's Relationship with Zoning

The Bridgeton Township Master Plan is intended to function as a guide for directing and managing development within the township boundaries. This plan is not a zoning ordinance, which is a legally enforceable document. This plan is a policy-planning document that provides a legal rationale for zoning. Future zoning and/or development decisions for the township should be based on the data and information presented in this plan and should also be consistent with the goals and objectives established during the planning process.

While most understand that there is a relationship between a master (i.e. land use) plan (with its future land use map) and a zoning ordinance (with its zoning map), it is often misinterpreted and used inappropriately. The relationship is a very important one because you cannot appropriately utilize one without the other. Formally defined, a master plan is a policy document in which the zoning ordinance is a regulatory tool that is used to implement the goals and objectives of the master plan. In other words, the master plan and future land use map are designed to provide a glimpse of future conditions within a community, while a zoning ordinance and map provide the means to arrive there.

The master plan and future land use map are designed to provide a glimpse of future conditions within a community.

The primary difference between a future land use map and a zoning ordinance is timing. The land use map shows the intended use of land at the end of the planning period, which is usually 10 to 20 years in the future; the zoning map shows land as it is intended to be used today. Thus, the two maps will likely not be identical.

The ability to change a zoning ordinance or zoning map is a municipality's primary tool for land use regulation and change. The master plan and future land use map are used to guide and support that process of regulation and change. In other words, the master plan will be utilized to help determine and support what and where zoning changes will occur. An acceptable rezoning request should be consistent with the master plan, as it represents the community's desires for their future.

Chapter 2: Community Profile

A. Geographic Context

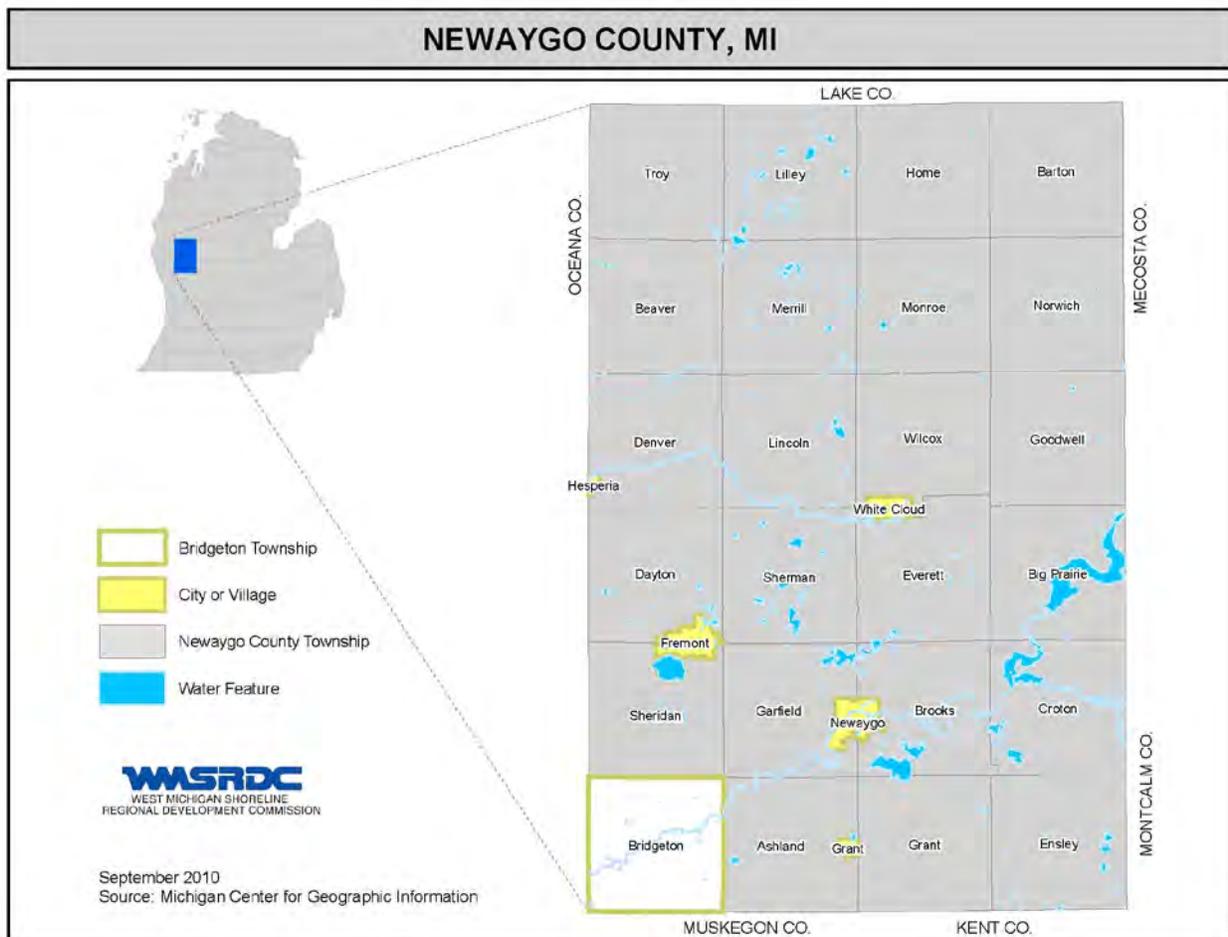
Bridgeton Township is located in the southwest corner of Newaygo County, and borders Muskegon County. Newaygo County is situated approximately halfway between Traverse City, Michigan and the Michigan/Indiana, and Bridgeton is about 20 miles southwest of the county seat, the City of White Cloud. The total area of Bridgeton Township is 36 square miles, of which 35.5 square miles are land and 0.5 is water. Townships adjacent to Bridgeton include Sheridan to the north, Garfield to the northeast, Ashland to the east, Moorland to the south, Egelston to the southwest, Cedar Creek to the west, and Holton to the northwest. Table 1 identifies approximate driving distances from the Bridgeton Township Hall to a number of regionally significant locations.

Table 1

Driving Distance* from Bridgeton Township	
Muskegon	20 mi
Grand Rapids	35 mi
Traverse City	115 mi
Lansing	100 mi
Detroit	190 mi
Chicago	200 mi

**Distances approximated with Google Maps*

MAP 1



B. Community History

The following history was taken from "Newaygo White Pine Heritage," a book written by Robert Thompson published in 1976:

Issac D. Merrill selected the wilderness area at the junction of Sand Creek and the Muskegon River for his future home. He came to Grand Rapids, Michigan in 1839 from Maine and lumbered in Grand Rapids for roughly five years. He then renewed his wanderings by taking an old Indian Trail to Newaygo, a small settlement by the river. Merrill entered into a contract to finish a double sawmill with Brooks and to operate it. After completing this contract in 1845, Merrill made his way down the river to the place he planned to make his permanent home. Merrill became a merchant and turned to politics and was the first elected supervisor of the newly formed Bridgeton Township in 1852, he continued in office for several years. He was then commissioned by the state, along with two other gentlemen (Stearns and Brooks), to lay out and build the first state road between the mouth of Muskegon Lake and the Forks on the Muskegon River.

Merrill's closest neighbor was the Indian fur trader Joseph Troutier (Truckee). Troutier kept accounting books using a picture system he had developed, for he was neither able to read nor write but he was able to print figures, i.e. a knife and fork represented a meal.

A story is told by Charles Hills, partner of Ryerson, on how he bought supplies of Troutier for his logging camps near Maple Island.

At the settlement of the account in the spring, Hills noted an "o" circle on the bill and inquired, "What was that?"

"Zat? Zat?" replied Truckee, "Vy Zat mus' be vun sheesse."

"Oh, no, Truckee, you are mistaken," said Hills. "We never feed our men cheese in our lumber camps."

"Vhy Meestaire Hills, zot mus' be vun sheese. I nevaire make a meestake an' zat is my mark for sheese."

Mr. Hills scratched his head and examined the bill again. Finally he replied, "Well, Truckee, I've caught you in a mistake this time. We bought something you don't have charged."

"Vy, what is zat?" excitedly inquired Truckee.

"It was a grind stone," said Hills.

"Oh, zat's eet," said Truckee. "I forgot to put zee hole in zee middle."

Truckee sold a part of his lot to Samuel L. Sandford and Stephen Wood. The purchasers built a steam saw mill. Later the ownership changed several times. A settlement grew up around the mill and it was called "Damascus." It was located north of Troutier Lake and east of Maple Island.

Merrill lumbered off the timber located on the south side of the river, about 120 acres according to the 1880 Newaygo County atlas. Later this property was sold to H.D. Woodward. The Muskegon Boom Co. had a lease on some river frontage for use as a holding pen for logs destined for the mills along Muskegon Lake. Usually the river drivers were laid off work and paid off at this point.

John Chidester built the first log bridge across the river at Bridgeton. In 1851, the Board of Supervisors authorized a sum of \$100 to be spent for repairs to the Chidester Bridge; and also voted \$300 for a new bridge located on the line between Sections 13 and 14.

Other early settlers in Bridgeton Township were Calvin Sutliff, Amos Slater, and Henry D. Woodward. Woodward was first a lumberman, then later was elected Judge of Probate and served many years, following the career of Judge Barton of Big Prairie. He was instrumental in establishing the First State Bank of Newaygo.

The early legislative bodies, both state and county, recognized the needs for roads to open the timbered areas for settlement and authorized a road (Stage lines) connecting Muskegon-Bridgeton-Newaygo-Forks (Croton). Others followed later until there was a network of lines.

With many miles of natural waterways, Bridgeton Township was a major transportation route for Native Americans, who were followed by the early trappers. Joseph Troutier (Truckee) set up a trading post near Truckee Lake around 1840. The combination of the Muskegon River waterway with large tracts of forest in the area led Bridgeton Township to become a lumbering area, with the first local sawmill built near the present day Bridgeton Bridge around 1845. Following the lumber industry, leftover stumps were removed and land was cleared for agriculture. However, due to large variations in soils, agriculture never developed to the extent of the lumber industry.

Bridgeton Township has a few working farms presently; however it is destined to remain a residential community thanks to an abundance of rural land and natural waterways. The township experienced economic and population growth in recent years, which may be attributed to the availability of land and access to employment and retail services nearby in Newaygo, Muskegon, and Kent counties. A few commercial businesses service year-round residents, as well as summertime residents, tourists, and outdoorsmen.

C. Transportation

Due to the rural nature and location of Bridgeton Township, transportation options are somewhat limited. The primary mode of transportation is automotive. Map 2 shows the township's network of local roads, while various other modes of transportation are discussed below.

Highways – There are no interstate or state highways located within the township. The nearest highways to the Township Hall are M-82, six miles to the north; M-37, six miles to the east; M-47, seven miles to the south; and M-120, eight miles to the northwest. The nearest US Highway is US-31, 14 miles to the west. The



nearest US Interstate is I-96, 20 miles to the south. County Road B-31, a major north-south route, runs along the township's western border with Cedar Creek Township connecting M-46 and M-120.

Public Transportation – The Newaygo County Commission on Aging (COA) provides basic access services to the seniors and handicapped of Newaygo County using five buses (four are on the road regularly, one is used as a backup). All of the vehicles are wheelchair-lift equipped. Currently the service delivery system consists of rotating the vehicles on a demand-response basis in each community and providing site access for Adult Day Care (ADC). Transportation is provided for shopping, banking, accessing congregate meal sites, and running errands in the closest shopping area.

The COA also provides unlimited health care access for in-county transportation utilizing five seven-passenger wheelchair-lift-equipped vans; a sixth van is available on a limited basis. The health care vans also provide out-of-county transportation to individuals who are wheelchair-bound. The health care van is available to transport anyone living in the county who is 60 years or older.

Finally, the COA utilizes a volunteer driver network for out-of-county travel for ambulatory seniors to obtain health services not available within the county. These services include treatment of cancer, appointments with some specialists (i.e. eye, heart), and specialized surgeries. It is more cost effective to utilize volunteer drivers for single or one-time out-of-county health care trips due to the trip time, the wait time, and due to the total number of health care trip requests that are received on a daily and monthly basis.

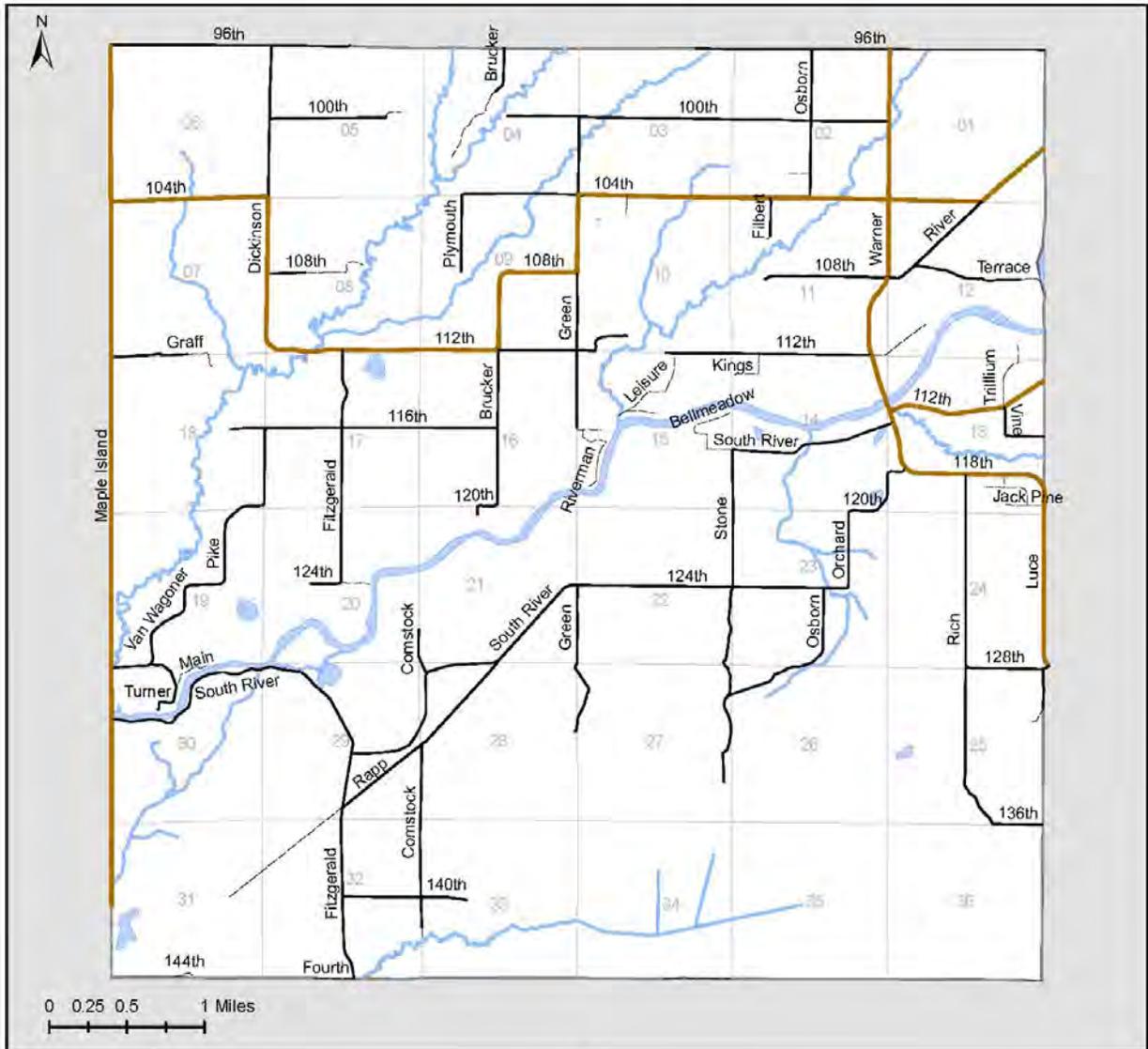
Rail – There are no railroads located in Bridgeton Township. The nearest active rails include a Michigan Shore Railroad line from Muskegon to Fremont, and a CSX Transportation line from Grand Rapids to Baldwin via Newaygo County near M-37. The Amtrak station in Grand Rapids, about 40 miles to the southeast of the township, is the nearest passenger rail service.

Air – Located about 20 miles to the southwest, the Muskegon County Airport is Bridgeton's nearest commercial airport. In addition, there are three other small airports nearby. Fremont Municipal Airport (General Utility Airport) is about 8 miles to the north of the Township Hall; Grant Airport is (Basic Utility Airport) 8 miles to the east; and White Cloud Airport (General Utility Airport) is about 17 miles to the northeast.

Water – Within a half-hour drive from Bridgeton lies Muskegon Lake, a deepwater port which provides shipping and recreational boating access to Lake Michigan, the Great Lakes, and ultimately worldwide. The Lake Express car ferry in Muskegon offers service to Milwaukee, Wisconsin from May into November. Other nearby harbors providing recreational access to Lake Michigan include White Lake in Whitehall and Mona Lake in Norton Shores.

Map 2

Bridgeton Township Road Network



Map created on October 21, 2010 by:

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Data Source:
Michigan Geographic Framework: Newaygo County (Version 10a),
Michigan Center for Geographic Information

Note:
This map is intended for general planning purposes only.

D. Natural Resources

There are some community features in Bridgeton Township that any resident would readily recognize as being important to the area's character and to their personal quality of life. These features are often associated with the natural environment such as rolling hills, woods, rivers and streams, and open views. The quality of these natural features is closely linked to the identity of the township.

Land use is the foundation of environmental quality because nearly every environmental problem has a land use origin. Without careful consideration of natural resources, local land use decisions may unintentionally degrade a community's natural features.

Changes to a landscape can happen incrementally and may often go unnoticed. However, their cumulative effects can have serious long-term impacts on water quality and rural character. As examples: Trees and natural vegetation may be cleared to make way for a few homes to be placed along the river or on a country road. Land may be cleared and leveled to make the layout and building of a small subdivision easier. Perhaps ten homes become located on the river over a period of several years. Over time, changes such as these can transform a countryside into a run-on subdivision rather than a rural environment. If even small-scale development is not thoughtfully placed and designed, over time it will gradually eat away at natural features like woodlots, wetlands, and natural topography.

In Michigan, natural features are regulated through the Natural Resources and Environmental Protection Act (NREPA), known as Act 451 of 1994, as amended. Under the Act, the State of Michigan and, in some cases local communities, have the power to regulate land uses in sensitive areas. Local regulations can fill the gaps left by state regulations to provide a more thoughtful approach to development. Simple site plan review criteria, design standards and other zoning regulations can provide local leverage to ensure new development will work with natural features rather than destroy them.

Natural resources are important factors in the planning process because they aid in determining the land's suitability for different types of development, and because they significantly contribute to a positive quality of life for residents. If growth is not appropriately controlled and site planning is not monitored, natural features can be lost, and the ecological services they provide can be lost or altered to such an extent as to severely retard their functioning capabilities. Bridgeton Township contains an abundance of undeveloped and natural areas that contribute to its rural character. The following sections describe those resources.

i. Topography

The presence of topography is not always readily identified as a natural resource. Steep slopes and rolling hillsides – unlike other resources such as groundwater – do not have clearly defined public benefits. If disturbed, these areas cannot be restored. Topography exists in a balance with vegetation, precipitation and runoff, and wind. Maintaining stable slopes helps prevent nonpoint source pollution of water resources (particularly soil erosion) while preserving a distinctive feature of the local landscape. Topography can also be a large component of rural character. Imagine gently rolling hills from a local viewpoint. If these hills were suddenly graded for development, not

only would it impact drainage patterns, erosion, and ultimately water quality, it would also significantly alter the look and feel of the area.

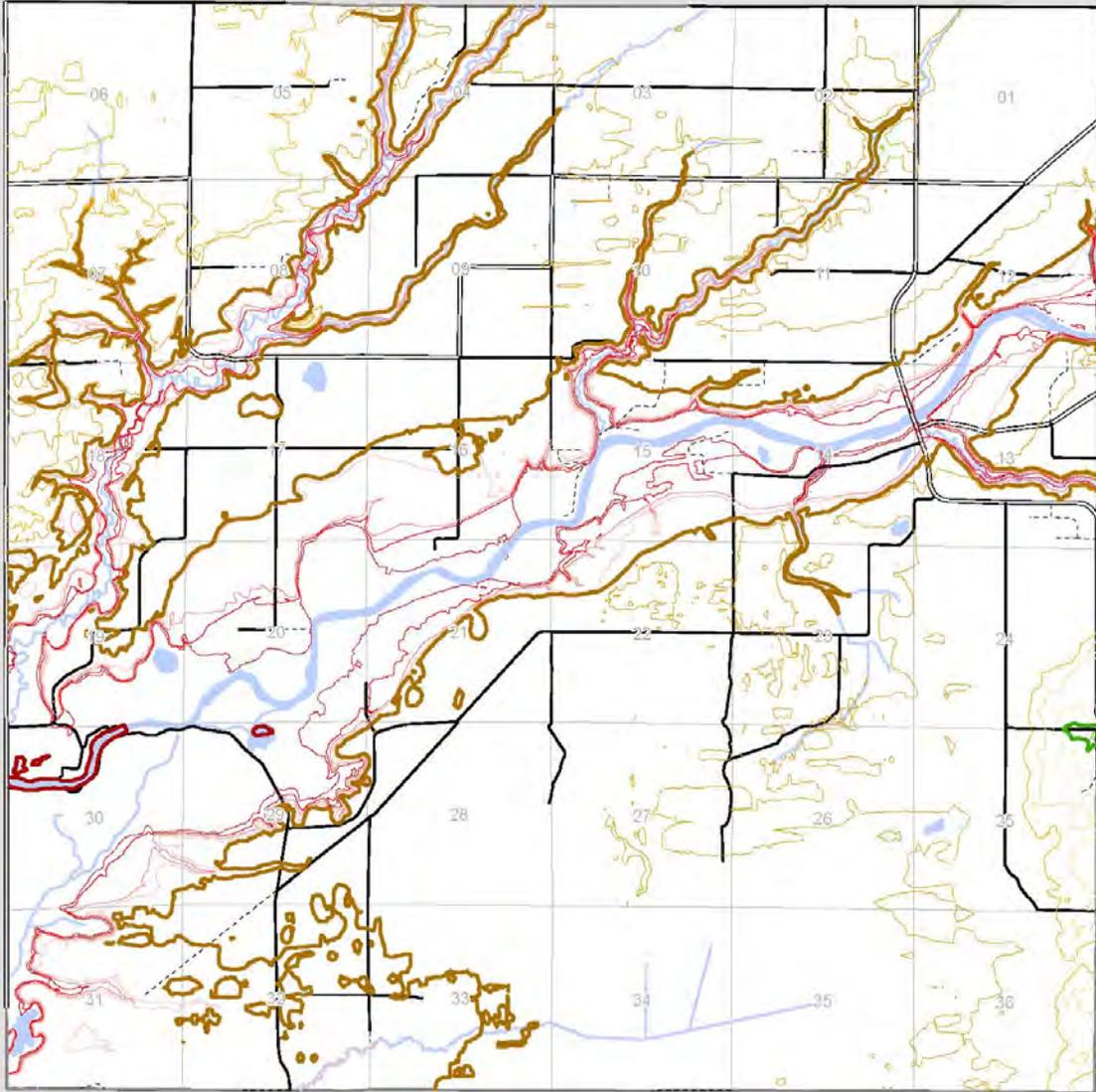
The varied topographic features found across Michigan, including Newaygo County, owe their existence to the activity of glaciers. The formation, movement, and recession of glaciers shaped the landscape by moving soil, cutting rivers and depositing lakes. Bridgeton Township's topography is level to rolling and contains some very steep slopes and ravines, with a high water table and a combination of heavy areas of sand and heavy clay soil. The elevation changes throughout the township, especially along the Muskegon River, will influence the use of properties within these areas. For example, cropland, subdivisions, and commercial buildings favor level or gently sloping sites. Hilly sites are better suited to very low density residential and recreational land uses. Slopes of more than 18 percent usually prohibit development because of the potential for erosion and development hazards they present. If development occurs within areas of steep terrain, it is important to properly review development proposals with respect to drainage, slope erosion, and preservation of existing vegetation. Zoning techniques like slope protection measures, mandatory planned unit development, and clustering options are tools that can help protect slopes and other vulnerable natural resources.



Map 3 – Elevation illustrates Bridgeton's topography. The highest elevation, over 800 feet above sea level, is located on the township's eastern border. The lowest point, about 600 feet above sea level, is located at the Muskegon River where it exits the southwest corner of the township.

Map 3

Bridgeton Township Elevation



Elevation (ft)

— 600	— 700	— 800	— Primary Road
— 620	— 720	— 820	— Local Road
— 640	— 740		— Other Road
— 660	— 760		— Stream
— 680	— 780		— Lake or River
			— Township Section

Map created October 21, 2010 by:

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0 0.25 0.5 1 Miles

Data Sources:
Elevation Data - Newaygo County GIS
Base Map - Michigan Geographic Framework: Newaygo
County (Version 10a), Michigan Center for Geographic
Information



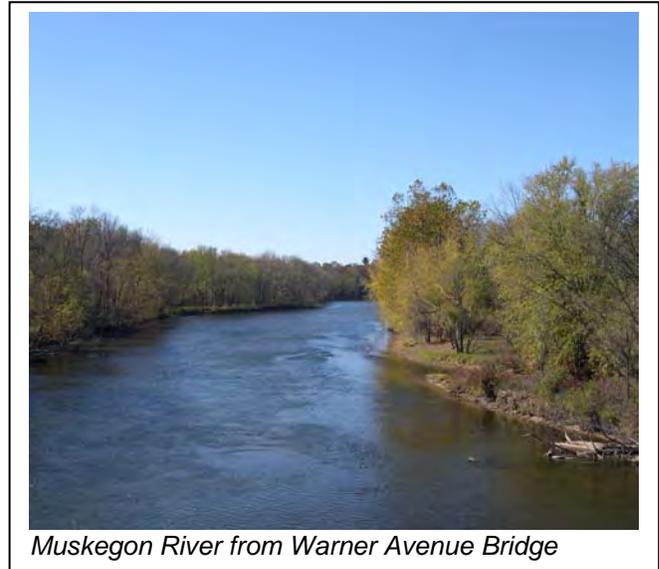
Note:
This map is intended for general planning purposes only.

ii. Water Resources

Surface water, wetlands, and groundwater resources located within Bridgeton Township are valuable, environmentally sensitive assets. They are essential to the character of the township and provide diverse natural habitats, recreation opportunities, and desirable places to live. These attributes must be protected in order to ensure future prosperity.

a. Surface Water

Surface water features – lakes, ponds, rivers and streams – are directly affected by land development and must be properly managed and protected to prevent detriment to the environment. Soil erosion, eutrophication, impermeable surfaces (such as parking lots and roofs), soil contamination, and recreational activities are all threats to surface water quality. Potential sources for polluted runoff in Bridgeton Township include roads, homes (including lawn care measures, sewage, etc.), and erosion. Populated areas along the Muskegon River are of particular concern where septic system malfunctions carry the potential to release excessive amounts of nutrients and contaminants into the river.



Muskegon River from Warner Avenue Bridge

All watercourses in Bridgeton Township flow towards the Muskegon River, which in turn flows towards Muskegon Lake and Lake Michigan. Notable watercourses, within the township include: the Muskegon River, Maple River, Sand Creek, Minnie Creek, Mosquito Creek, and Brooks Creek. Other water bodies in the township include Barton Lake, Maple Lake, Mystery Lake, Truckey Lake, and Wallison Lake. These features are identified on Map 5 – 100-Year Flood Features.

b. Wetlands

“Wetland” is the collective term for marshes, swamps, bogs, and similar areas often found between open water and upland areas. Part 303 of the Natural Resources and Environmental Protection Act (NREPA) defines a wetland as “land characterized by the presence of water at a frequency and duration sufficient to support, and that under normal circumstances does support, wetland vegetation or aquatic life and is commonly referred to as a bog, swamp, or marsh.”

Wetlands are valuable natural resources providing many important benefits to residents and the natural environment. They help improve water quality, manage stormwater runoff, provide important fish and wildlife habitat and support hunting and fishing activities. Wetlands also store excess water and nutrients, effectively

controlling flood waters and moderating the flow of sediment into rivers, lakes, and streams.

More specific wetland benefits include:

- Reduce flooding by absorbing runoff from rain and melting snow and slowly releasing excess water into rivers and lakes. (One acre of wetland, flooded to a depth of one foot contains 325,851 gallons of water.)
- Filter pollutants from surface runoff, trapping fertilizers, pesticides, sediments, and other potential contaminants and breaking them down into less harmful substances, improving water clarity and quality.
- Recharge groundwater supplies when connected to underground aquifers.
- Contribute to natural nutrient and water cycles, and produce vital atmospheric gases, including oxygen, and serving as nutrient traps when adjacent to surface water features.
- Provide commercial and recreational values to the economy by producing plants, game birds and fur-bearing mammals. Survival of certain fish species that require shallow water areas for breeding, feeding, and escaping from predators depend solely on wetlands.

Regulation of wetlands by the State of Michigan is enabled by Part 303 of the Natural Resources and Environmental Protection Act (NREPA). This legislation is a consolidation of several laws into one act which seeks to, among other things, protect wetland resources through regulating land which meets the statutory wetland definition based on vegetation, water table, and soil type. Wetland areas subject to regulation by the State include wetlands, regardless of size, which are contiguous to, or are within 500 feet of the ordinary high water mark of any lake, stream, or pond; and those wetlands which are not contiguous to any lake, stream, or pond, but are essential to the preservation of natural resources.

Certain activities will require a permit from the Michigan Department of Natural Resources and Environment (DNRE) on a site which satisfies the wetland definition, including:

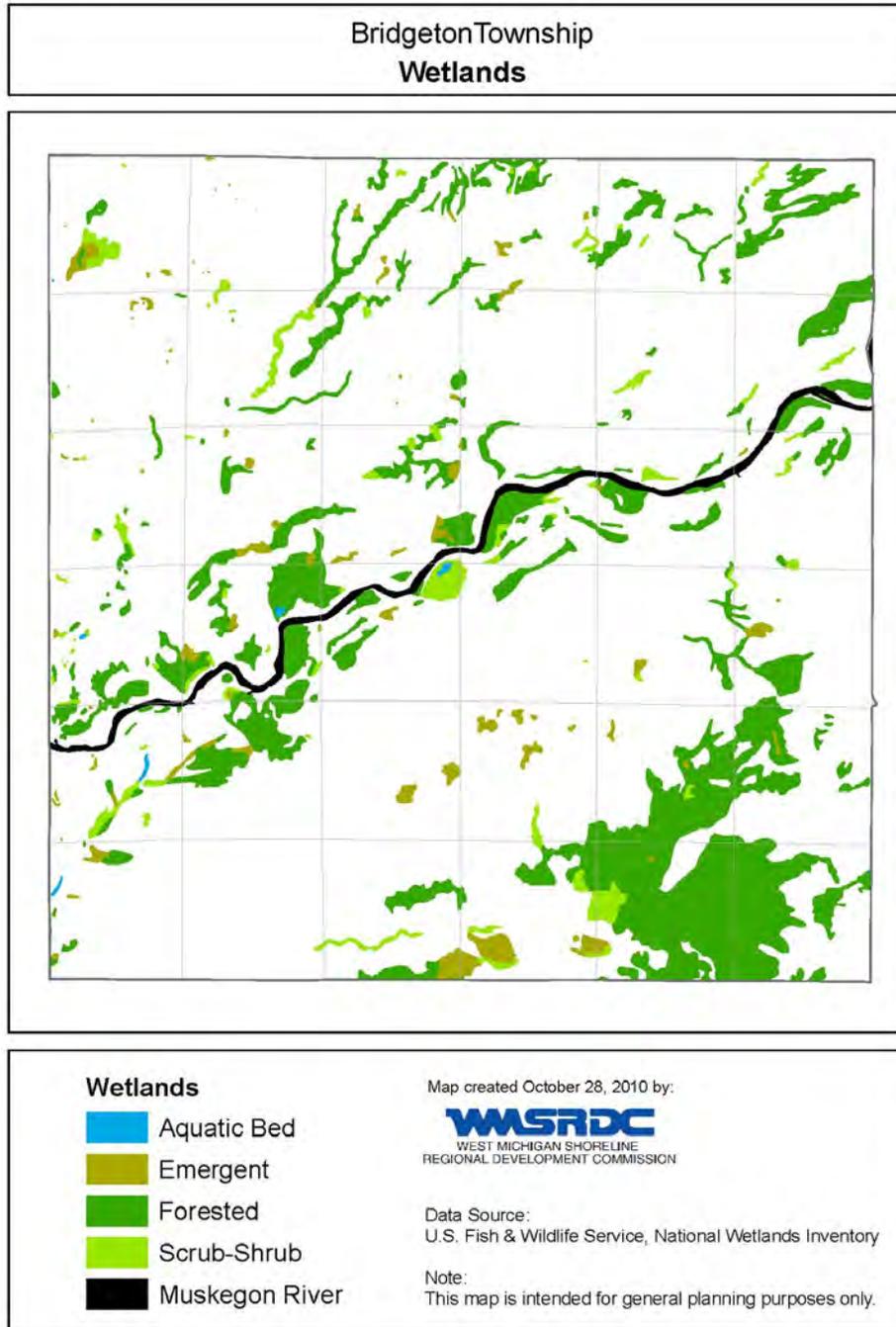
- filling of material in a wetland;
- draining water from a wetland;
- removal of vegetation, including trees, if such removal would adversely affect the wetland;
- constructing or maintaining a use or development in a wetland; and/or
- dredging or removing soil from a wetland.

Generally, wetlands must be identified through individual property analysis, usually before a development occurs. Accordingly, wetland areas shown on Map 4 should be considered only for planning purposes and are indicators of where wetlands may be located. Individual site determinations are still necessary prior to development approvals. In addition to the DNRE having authority over wetland resources, local

units of government can take additional measures to augment state law. While most of the Muskegon River corridor likely falls under some type of state regulation, not all wetlands and important drainage-ways are covered. Simple informational requirements during the site plan review process, like reflecting on floodplain and wetland boundaries, can help the township visualize the character of the land and help property owners avoid disruption of these critical areas.

Map 4 illustrates wetlands in Bridgeton Township identified by the National Wetlands Inventory. According to this data, wetlands occupy about 14 percent of Bridgeton

Map 4



Township's landscape. They are commonly found along the Muskegon River, adjacent to surface water features, and scattered throughout state-owned property in the southeast corner of the township.

c. Groundwater

Bridgeton Township relies on groundwater as its primary source of drinking water. Therefore, the protection of groundwater resources is a necessity. As with surface water, nitrates from fertilizers and septic systems can leach into groundwater supplies and impact their overall quality. While the District Health Department #10 has jurisdiction over the approval of wells and septic systems in the township, land use policy related to the type and intensity of development is the province of Bridgeton Township.

Groundwater resource quality may be directly impacted by increasing levels of septic system use, industrial spills, underground storage tanks, abandoned wellheads, indiscriminate dumping and junk storage, and farm wastes including nutrients from manure, pesticides, and salt. Attempting to restore this valuable resource after contamination would both be cost prohibitive and inconvenient.

The presence of sandy soils and a high groundwater table in Bridgeton Township require thoughtful land use planning to protect this fragile resource. Because the township does not have sewer service, the presence and quantity of septic systems must be considered as a potential threat to groundwater quality. As residential development continues to encroach upon sensitive natural areas, the potential for groundwater impacts increase.

The most promising methods of groundwater protection are proper land use management, pollution regulations, regulated soil testing where appropriate, and acquisition of land. Land use management is the first step in the process of protecting groundwater resources. Planning alone does not sufficiently protect sensitive groundwater areas, but it does provide the basis for development controls such as zoning, which can assist in groundwater protection.

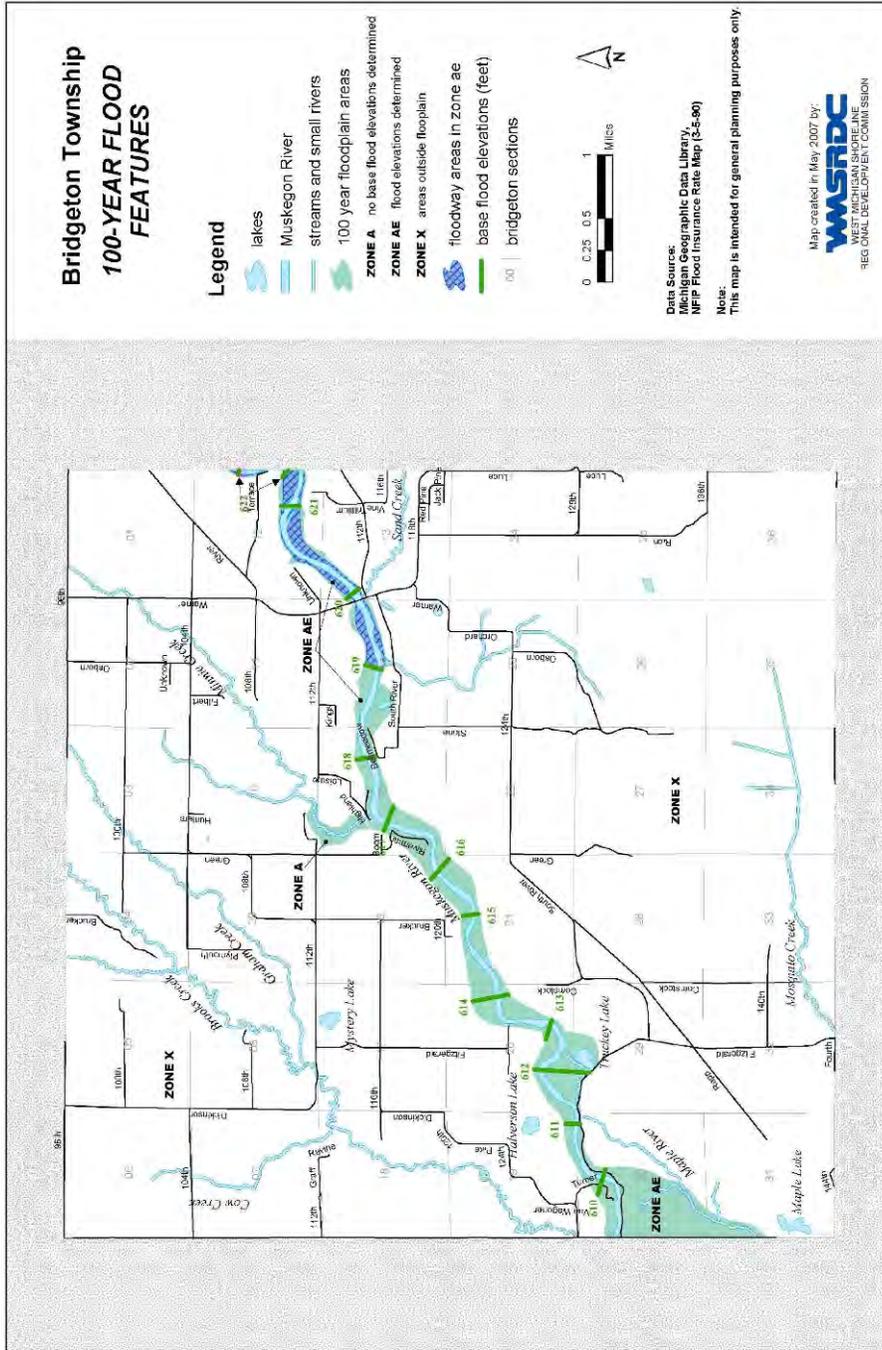
d. Flooding

When planning for future development, flooding potential should be an important consideration. Floods are caused when the ground becomes saturated beyond its capacity to absorb any more water or when precipitation is so intense that the ground cannot absorb it quickly enough. The less permeable the soil and the higher the water table, the more susceptible an area is to flooding. Flooding often transmits contaminants from streets, parking lots, soils, etc., into surface water sources.

Although flooding is possible virtually anywhere, it is most likely to occur in low-lying areas and near bodies of water. In Bridgeton Township, floodplains along the Muskegon River and its tributaries are subject to occasional or frequent flooding. This poses a threat to a number of residential subdivisions located within the Muskegon River floodplain. It is not unusual for residents to have parcels that contain floodplains or wetlands on a part of their riverbank property. Property owners should be aware of the potential dangers and development constraints of building within floodplains.

In 2008, Bridgeton Township Board approved the Bridgeton Township Flood Mitigation Plan, which was prepared by the West Michigan Shoreline Regional Development Commission in conjunction with the Bridgeton Township Planning Commission. The Flood Plan contains a history of Bridgeton's flooding events, analysis of current flooding threats, as well as a wealth of flood mitigation information. Map 5 identifies the 100-year floodplain areas of the township identified by Federal Emergency Management Agency, National Flood Insurance Flood Program (NFIP) maps.

Map 5



iii. Soils

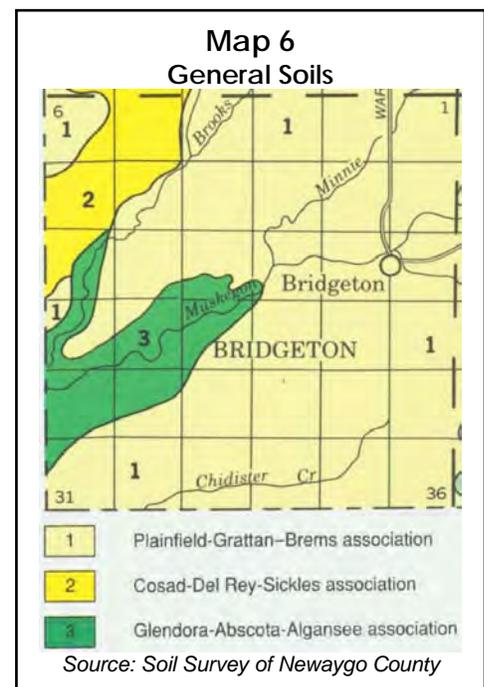
The suitability of soils for developments such as roads, foundations, wells, and septic systems is important to consider when determining their location and intensity. Soil is a primary factor in determining where future development will occur, especially in areas such as Bridgeton Township where there are no public water and sewer services available. Future development and growth must be monitored to determine its current and future impact on the township's need for future infrastructure. Bridgeton Township is also comprised of significant wetlands and tributaries that need protecting both for environmental concerns as well as potential contamination issues. Various soil characteristics such as depth, permeability, wetness, shrink-swell potential, erosion potential, slope, and weight-bearing capacity are all factors that determine a soil's suitability for a given use. Often, appropriate design and management can overcome the soil characteristics that create development limitations.

In Bridgeton Township, there is a direct relationship between surface water and groundwater as a result of a high concentration of sandy soils. Most notably, the entire Brooks Creek sub-watershed may be classified as being vulnerable to groundwater contamination. Consequently, any activity which compromises either surface water or groundwater quality can have a direct effect on the Muskegon River and must be considered in the land planning process.

Soil surveys are a primary source of soil information. Soils in Bridgeton Township are described in the Soil Survey of Newaygo County (USDA Soil Conservation Service, 1995). It provides information that may assist in determining soil characteristics such as the extent and location of flood-prone areas, access to aquifers, erosion and sedimentation potential, ability to accommodate site septic tanks and absorption fields, and the limitations for construction. Maps are an important component of the soil survey and are critical to the planning process because they can geographically depict areas that have development limitations based on the soil(s) present. In some instances, mitigation measures can be used to alleviate some or all of the limitations of a particular soil type. However, these measures are often costly, both to the developer/owner, and to society at large via the natural environment. Therefore soil survey information often becomes an important guide for determining future development.

a. General Soil Map

The Soil Survey of Newaygo County includes a "General Soil Map" which groups soils into associations. Each association is a unique natural landscape with a distinctive pattern of soils, relief, and drainage. Typically, an association consists of one or more major soils and some minor soils. The soils making up one association can occur in another, but in a different pattern. Bridgeton Township contains three soil associations which are listed and briefly described below.



Plainfield-Grattan-Berms Association

The major soils are well suited, fairly well suited or poorly suited to building site development depending on the slope. They are poorly suited to septic tank absorption fields because of a poor filtering capacity. This association covers about 80% of the township.

Cosad-Del Rey-Sickles Association

The major soils are poorly suited or generally unsuited to septic tank absorption and building site development. Wetness and restricted permeability are the major management concerns. This association covers about 12% of the township.

Glendora-Abscota-Algansee Association

The major soils are generally unsuited to septic tank absorption fields and building site development because of wetness and flooding. This association covers about 8% of the township.

b. Detailed Soil Map

Bridgeton Township contains over forty different soils according to the “Detailed Soil Map” in the Soil Survey of Newaygo County. The four most common soils in Bridgeton Township are Plainfield Sand, Kingsville Mucky Sand, Pipestone Sand, and Plainfield Perrinton Complex. These soils encompass the majority of Bridgeton Township. They are described below and shown on Map 7.

Plainfield Sand, 0 to 6 percent slopes. This nearly level to gently sloping excessively drained soil is on out wash plains. Permeability is rapid and available water capacity is low. Surface runoff is very slow. This soil is well suited to building site development. It is poorly suited to septic tank absorption fields because of a poor filtering capacity. It readily absorbs but does not adequately filter the effluent in absorption fields. The poor filtering capacity can result in the pollution of ground water.

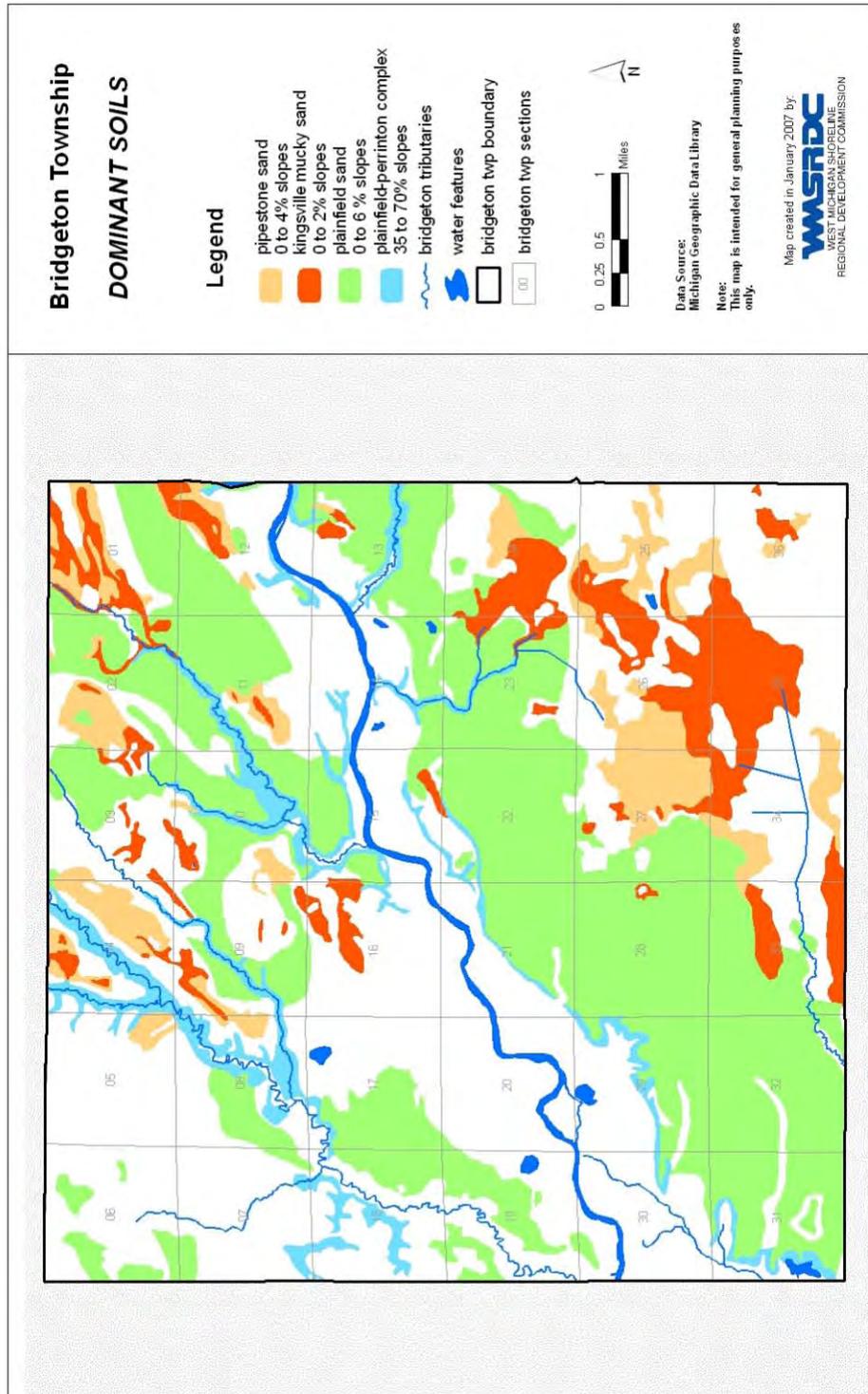
Kingsville Mucky Sand, 0 to 2 percent slopes. This nearly level, poorly drained soil is in drainage ways and low areas on lake plains and out wash plains. Permeability is rapid in the Kingsville soil and the available water capacity is low. Surface runoff is very slow. Most areas are used as woodlands. Because of wetness this soil is generally unsuited to septic tank absorption fields and building site development.

Pipestone Sand, 0 to 4 percent slopes. This nearly level to gently sloping somewhat poorly drained soil is on low knolls and ridges on lake plains and out wash plains. Permeability is rapid and available water capacity is low. Surface runoff is very slow. Most areas are used as woodland or are left idle. Because of wetness this soil is poorly suited to building site development and generally unsuitable as a site for septic tank absorption fields. Buildings can be constructed on suitable well-compacted fill material, which raises the site. All sanitary facilities should be connected to municipal sewage systems.

Plainfield-Perrinton Complex, 35 to 70 percent slopes. These steep and very steep soils are in areas where sand out wash overlies lake laid sediments.

These areas formed when drainage ways cut through the soils. The excessively drained Plainfield soil is on the upper part of the slopes and the well-drained Perrinton soil is on the lower part. Permeability is rapid in the Plainfield soil and available water capacity is low. Surface runoff is medium.

Map 7



c. Septic Suitability

The location of soils suitable for septic systems to properly function is critical in determining the extent and location where development can occur without the need for public utilities. Soil is not considered suitable for septic systems if it has excessively high or low permeability, if the slope is excessive, or if the water table is too near the surface. The permeability and coarseness of soil has a direct impact on its ability to properly filter toxins as they pass through the soil. The majority of Bridgeton's soils have low to rapid permeability according to the Soil Survey of Newaygo County, Michigan. This is an important concern because toxin-laden water may pass too quickly through the soil to be properly filtered, causing groundwater contamination.

Soils with a high flood frequency are also not generally considered to be adequate locations for septic systems. As the ground becomes saturated and floods, the toxins may be removed from septic tanks and flow into groundwater or surface water supplies. Quite often the waste deposited in septic systems is much more hazardous than human waste alone because materials such as household cleaners, bacteria, and other toxic nuisances may be present as well. Therefore, when a septic system fails, many different pollutants are released into both groundwater and surface water. Because Bridgeton Township predominately has permeable soil, flooding is not a regular occurrence away from bodies of water. Frequently and occasionally flooded soils in Bridgeton Township are generally located along and near Muskegon River and its tributaries.

Table 2 highlights the soil limitations for building site development on the township's four most common soil types. The limitations for septic system absorption fields listed are moderate to severe due to the rapid permeability of the sandy soil and due to poor filtering capabilities of the soils found within Bridgeton. It is important that on-site soil investigations be completed prior to any development and the necessary measures be taken to protect the environment from contamination.

In order to reduce the amount of pollution released from septic tanks, citizens should refrain from the disposal of medicines and household chemicals, such as ammonia, bleach or other hazardous substances, into the septic system. Septic tank maintenance should also be addressed on a regular schedule by adding necessary chemicals, cleaning, and using only to capacity. Additionally, a septic system should be emptied at a minimum of once every seven years but preferably every other year.

Table 2

Soil Limitations for Building Site Development						
Soil Type	Degree of Limitations Affecting Use For:					
	Residential Development	Sanitary Facilities: Septic tank absorption fields	Sewage Lagoon Areas	Buildings for Commercial and Light Industry	Traffic-ways	Soil and Water Features: Flooding and Depth
Pipestone Sand 0 to 4% Slopes	Severe	Severe, wetness, poor filter	Severe, seepage, wetness	Severe	Severe	Flooding: none Depth .5 to 1.5'
Kingsville Mucky Sand 0 to 2% Slopes	Severe	Severe, ponding, poor filter	Severe, seepage, ponding	Severe	Severe	Flooding: none Depth +1 to -1'
Plainfield Sand 0 to 6% Slopes	Severe	Severe, poor filter	Severe, seepage	Severe	Severe	Flooding: none Depth > 6'
Plainfield-Perrinton Complex 35 to 70% Slopes	Severe	Severe, poor filter, perks slowly, slope	Severe, seepage, slope	Severe	Severe	Flooding: None Depth > 6'
<p>Slight- Soil properties and site features are generally favorable for the indicated use and limitations are minor and easily overcome.</p> <p>Moderate- Soil properties or site features are not favorable for the indicated use and special planning, design, or maintenance is needed to overcome or minimize the limitations.</p> <p>Severe- Soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in constructions costs, and possibly increased maintenance are required.</p>						

Source: United States Department of Agriculture, Natural Resources Conservation Service and Forest Service. Soil Survey of Newaygo County, Michigan 1995

d. Erosion

Another indicator of an area’s suitability for development is the tendency for soil erosion by water and/or wind. All four dominant soil types in Bridgeton Township are susceptible to soil blowing and erosion if protective/vegetative land cover is removed. However, the prevalence of forests and other natural land cover in the township greatly reduces the erosion potential. Natural cover acts as a barrier to erosion in that trees, grasses, forest litter and stones hold the soil in place, even during torrential rainfall. Removal of this cover could expose the soil to its erosion potential. In addition, changes in development patterns often create substantial changes in the ratio of permeable surfaces in an area. Even in a heavily forested area, addition of asphalt, pavement, and roofs can make a substantial difference.

Construction is considered the most damaging phase of development projects for local water resources. Trees, vegetation, and topsoil are usually removed, and the exposed soil is more prone to erosion. Additionally,

Table 3

Soil Erosion Characteristics	
1	The amount of runoff generated is dependent upon the type of soil and the kind of land use prevalent in any given area.
2	Natural areas, where vegetation remains intact, are almost always better-equipped to absorb and retain water than are areas in either agricultural or urban use.
3	Those areas best able to absorb and retain rainfall include forests and other areas of dense vegetation.
4	Those areas which have the greatest impact on the amount of runoff created typically include urban lands with high percentages of impervious surfaces, and agricultural lands typically in row crops.

heavy construction equipment compact the soil's natural ability to infiltrate rainfall. Regulations that preserve vegetative cover should be emphasized during any new development project. Indiscriminate clearing of vacant properties, either in anticipation of development, or for clearance prior to construction of buildings and parking areas can increase soil erosion potential. Provisions to regulate land clearing are important planning tools to mitigate soil erosion.

iv. Woodlands

Unlike certain critical environmental areas, private woodlands have received little planning protection, despite their contributions to wildlife corridors and establishing natural, rural settings. As buffers and moderators of flooding, erosion, and noise and air pollution, woodlands are important to the region's quality of life. Additionally, the preservation of private woodlands will enhance the Muskegon State Game Area.

Benefits of woodlands include:

- Providing a varied and rich environment for plants and animals. Forest layers, including canopy, branches, trunks, shrubs, and plants on the forest floor, provide breeding, feeding, and refuge areas for many species of insects, birds, and mammals.
- Protecting watersheds and soils. Forest vegetation moderates the effects of winds and storms, stabilizes and enriches the soil, and slows runoff, allowing the forest floor to filter groundwater.
- Serving as buffers to the sights, sounds, and odors of roadways and agricultural operations. Forests mute noise from roadways and other land uses, and absorb air pollutants.
- Providing visual relief along roadways. Aesthetically pleasing roadways with natural vegetation tend to be more popular than those with little vegetation or highway clutter.

The question should not be whether or not to develop woodlands, but rather how woodlands should be developed. Mature roadside trees are sometimes considered hazardous, but always seen as attractive and valuable. To the extent possible, road improvements should respect and maintain these important landmarks, and their contribution to community identity.

Woodlands existing on private land deserve greater concern. Without proper recognition of existing areas, the township risks losing its remaining tree resources. Regulations designed to protect wooded areas can be difficult to enforce, if drawn too strictly. There are, however, reasonable regulations which can be drafted which do not necessarily address trees on existing individual lots, but rather examine land activities in general, such as Land Clearing Provisions.



Important woodlands along the Muskegon River

v. Greenways

Greenways are open spaces used to conserve and enhance natural and cultural resources. Greenways may also provide recreational opportunities, aesthetic benefits, and linkages for users between open space and recreational facilities. Establishment of a greenway adjacent to the Muskegon River, for example, would provide significant benefits from both an environmental, as well as a community character perspective.

Greenways can also:

- Tie public land components together to form a cohesive land assembly for recreation and open space;
- Emphasize cohabitation with the natural environment;
- Preserve an attractive environment for residents, businesses, and visitors;
- Allow uninterrupted and safe pedestrian movement between parks throughout the community;
- Protect areas inappropriate for development such as flood plains, wetlands, and steep slopes;
- Promote recreational tourism and enhance the local economy;
- Foster a greater awareness and appreciation of historic and cultural heritage;
- Provide people with a resource-based outdoor recreational opportunity and experience;
- Promote a sense of place and regional identity;
- Provide an effective and sensible growth management tool; and
- Enhance property values.

Greenways work best when sparsely developed. Some interruptions are inevitable because of existing roadways interposed between the open spaces. Wherever possible, the natural corridor should follow natural drainage corridors since the land offers more habitat value, is important for natural storm water drainage, and is generally more difficult to develop. Bridgeton contains a number of naturally-occurring greenways along water features and throughout the Muskegon State Game Area.

vi. Non-Point Source Pollution

Non-point source pollution poses one of the greatest threats to surface and groundwater. Rather than occurring from one major source, like a sewage treatment plant or industrial use, non-point source pollution results from rainfall or snowmelt moving over and through the ground. As this runoff moves, it picks up soil and human pollutants, and deposits them into lakes, rivers, wetlands, ponds, and groundwater.

In Bridgeton Township, sources of non-point contamination include a combination of agricultural practices, lawn chemicals, soil erosion, and storm water runoff. Techniques that significantly protect water quality from these threats include limiting impervious surfaces and protecting or providing vegetated buffers along existing waterways.

a. Stormwater, Soil Erosion, and Sedimentation

Storm water flowing over the land carries with it pollutants like oils and gas from motor vehicles, fertilizers and pesticides, and washed away soil particles. Pollutants degrade surface water quality and choke streams and rivers with sediment. Sediment is created when soils are washed from the land's surface into water bodies. Sediment can smother fish beds and disrupt aquatic insects and other life that serve as food for larger aquatic life. The impact of sediment moves up the food chain and fundamentally changes the entire ecosystem. There are many examples of cold water trout streams in Michigan that became choked with sediment as a result of stormwater runoff and erosion. Coldwater streams can also be degraded when removal of shoreline vegetation exposes the water to greater amounts of sunlight and warms the water. This can ultimately eliminate prized coldwater species like trout, and leave behind tough species like carp, suckers and bloodworms.

Ideally, storm water can be managed in a fashion which will not substantially alter the natural drainage flows, especially as it relates to the quantity of runoff (from rainfall) versus infiltration within a watershed. As more development takes place, either on large projects or on small home sites, the land loses its ability to hold soil in place. Natural vegetative cover is replaced by roof tops, roadways, parking lots, and other impervious surfaces. The increase in impervious area will greatly increase the rate and volume of runoff and decrease water infiltration into the ground.

As a result of these newly developed impervious areas, rainfall can easily overcome the ability of soil to remain in place. As rainfall hits the disturbed soil it has two choices; if on flat ground some may percolate into the groundwater; the remainder will either pond on the site, or find the most direct route available to run off the site, taking soil and pollutants along with it in the form of stormwater.

The township should ensure that post-development rates of runoff do not exceed pre-development runoff rates. This is generally accomplished by detaining or retaining stormwater to control the rate at which runoff is allowed to leave the development site. If storm water facilities are properly designed, significant water quality benefits can also be realized. Various storm water management alternatives can be employed to accomplish these objectives. In rural areas, it is important that storm water management methods blend with the environment. For example, rather than a stark detention pond that looks artificial, smaller retention areas with natural vegetation (rather than mown riverbanks) blend with the rural environment and can serve as new habitat. A series of smaller detentions areas is generally a better approach than one large area.

Improper drainage flows can create erosion and sedimentation problems, resulting in the loss of fertile topsoil, filling of lakes and streams, increased flooding, damage to aquatic habitat and animals, and structural damage to buildings and roads. Soil erosion and sedimentation controls are needed to ensure that development activities do not permit soil to be transported from the site to existing or planned drainage systems. A variety of methods exist to assist in achieving this objective. The most visible of these are silt fences which may be seen surrounding many development sites. Where the potential for erosion is high, it is critical not only that controls be in place prior to the start of development, but that such controls be maintained throughout the development process.

The purpose of Part 91, Soil Erosion and Sedimentation Control, of the NREPA (P.A. 451 of 1994, as amended) is to control soil erosion and to protect the waters of the state from sedimentation. This law requires that a permit be obtained for all earth changing activities that disturb one or more acres of land or is within 500 feet of a lake or stream. To obtain the permit, a soil erosion and sedimentation control plan must be submitted that effectively reduces soil erosion and sedimentation and identifies factors that may contribute to soil erosion and sedimentation.

vii. Climate

Bridgeton Township is located in an area of the United States which experiences unique and diverse climatic conditions due to its location, about 20 miles east of Lake Michigan. Table 4 shows notable climatic data from the 30-year period from 1951-1980 taken at the National Weather Service station in the Village of Hesperia. Approximately 15 miles north of the township's western border, Hesperia has the nearest NOAA weather station to Bridgeton Township. It is assumed that the township and the village experience comparable climatic conditions since they have the same proximity to Lake Michigan. The lake has a moderating effect on climate, making summers cooler and winters milder on the western side of Michigan's Lower Peninsula than in other areas of the state.

Table 4

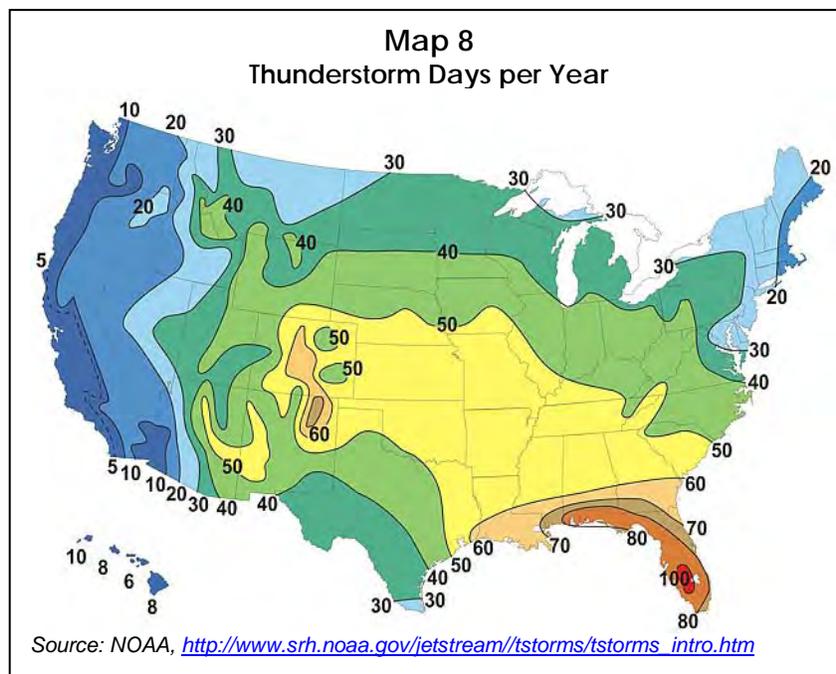
Temperature and Precipitation Summary for Hesperia 1951 - 1980								
Month	Average Daily Temperatures (Fahrenheit)			Average Monthly Precipitation (Inches)				
	maximum	minimum	mean	mean	Liquid Equivalent			Snowfall maximum month amount
					mean # of days with at least:			
					.1"	.25"	.5"	
January	28.6	12.7	20.6	2.40	7	3	1	48.1 (1979)
February	31.6	12.5	22.0	1.63	5	2	>1/2	28.0 (1958)
March	41.2	21.3	31.2	2.30	6	3	1	28.0 (1965)
April	56.4	32.9	44.6	3.34	7	4	2	12.0 (1965)
May	69.0	42.5	55.7	2.70	6	4	2	T (1979)
June	78.2	51.8	65.0	3.05	6	4	2	0.0
July	82.1	56.1	69.1	2.81	6	4	2	0.0
August	80.1	54.7	67.4	3.79	6	4	2	0.0
September	72.2	47.6	59.9	3.22	6	4	2	0.0
October	60.7	38.3	49.5	3.05	7	4	2	3.0 (1962)
November	45.7	29.0	37.3	2.78	8	4	2	17.0 (1966)
December	33.4	18.6	26.0	2.50	7	3	1	40.0 (1968)
Annual Averages	56.6	34.8	45.7	33.57	77	43	19	48.1 (1979)

Source: Michigan State Climatologist's Office. <http://climate.geo.msu.edu/stations/3769/>. 10-8-10.

The proximity of Lake Michigan also causes a meteorological phenomenon called lake effect snow. During the winter months, the relatively warm waters of the lake provide moisture for weather fronts as they cross over from Wisconsin. When these fronts

reach the cooler land of Michigan, the moisture condenses and falls as snow. Lake effect snows can be serious and hazardous weather events; however, their actual duration and severity can vary greatly. Winter weather, often in the form of lake effect snow, will annually affect Bridgeton Township through treacherous driving conditions, cost of snow removal, and infrastructure failures. Rural and secondary roads often experience the worst driving conditions during the winter because they are the last to be cleared and salted.

In addition to severe winter weather, Bridgeton Township may experience severe thunderstorms and high wind. According to FEMA's "Wind Zones in the United States" map, Bridgeton is located in the Zone IV, where winds of up to 250 miles per hour are possible. These winds may be produced by strong weather systems, tornadoes, or thunderstorms. The NOAA estimates that the township should experience around 30-40 thunderstorm days per year. Thunderstorms are most likely to occur during the warm months between spring and fall, but are possible any time of the year.



E. Population and Housing Characteristics

Population characteristics; such as growth, age distribution, income, and educational level; and housing characteristics help community planners make predictions based on historic patterns. A picture of the future can be painted by analyzing these factors.

The following sections provide a statistical profile of Bridgeton Township, utilizing figures from the 2000 U.S. Census of Population and Housing, and the 2008 American Community Survey. It should be noted that many demographic statistics of Bridgeton Township, the State of Michigan, and the United States of America have been significantly impacted by a worldwide economic recession since the 2000 Census was taken. The 2010 U.S. Census statistics will help reveal these impacts, however the data

was not yet available at the time this document was written. The 2010 data should be incorporated into this plan as they are released.

i. Population Trends

According to the 2000 Census, Bridgeton Township contained 2,098 persons. This marked a 33.3% increase from the township’s population of 1,574 as of the 1990 Census. Comparatively, Newaygo County’s population grew by 25.3% between the 1990 Census and 2000 Census.

Growth in Bridgeton Township is expected to continue; however, the rate of growth can only be estimated. While Bridgeton Township contains large areas of desirable, undeveloped, and natural land, it is difficult to predict future developmental pressures. Table 5 details the growth for the township since 1970 and projects growth in five-year increments from 2010 to 2025. Note that these projections are done on a county level (annual average growth for the previous ten years applied to current population) and then aggregated to the municipal level according to the municipality’s most recent share of county population. They do not take into account variations in development trends between individual municipalities.

Between 1990 and 2000, population of Bridgeton Township increased by 33.3 percent.

Table 5

Population Trends and Projections									
Year	1970	1980	1990	2000	2008	2010*	2015*	2020*	2025*
Number of Persons	870	1,562	1,574	2,098	2,399	2,442	2,552	2,668	2,789

*Source: U.S. Bureau of the Census, 1970-2000; American Community Survey, 2008.
* Projections calculated by WMSRDC*

Population projections indicate that Bridgeton Township’s population will reach 2,552 by 2015. Although less reliable, further population projections predict a total of 2,789 persons by 2025. When looking at these figures, it should be recognized that portions of the land in Bridgeton might be unsuitable for development. This is in part due to a significant portion of the land having severe development limitations, as well as the fact that a large area of the township is within the Muskegon State Game Area owned by the State of Michigan.

Thus, the buildable area is reduced and the true population density is higher than a straight calculation would indicate. It also bears mentioning that about three quarters of Bridgeton Township is currently undeveloped. If just one-third of the available land was developed, the resulting population growth would greatly impact the township’s population and future projections.

The projected population can be used to help predict other elements of population often associated with growth, such as the need for additional dwelling units. Given the additional 691 persons predicted between 2000 and 2025, the township will need 247 additional dwelling units if the average of 2.8 persons per dwelling unit holds true. Therefore, Bridgeton Township will need to be proactive in addressing housing issues.

ii. Age Distribution

It is useful to note an increase or decrease in certain population groups, specifically in the school and retirement age populations. These population groups can indicate whether or not there is an increased need for capital and service expenditures.

As can be seen in Table 6, the figures from the 2000 Census are very similar to the figures reported in 1990. This suggests no major shifts in population in the recent past. Overall, the population in Bridgeton Township is well-distributed throughout the groups of age 54 and younger. Individuals aged 35 to 44 comprise the largest segment of the population with 386 individuals, or 18.4%. The group of individuals aged 0-9 is the second largest group totaling 347 individuals, or 16.5% of the population. Finally, the 2000 Census data indicates that a significant portion of the population consists of residents of childbearing age. As such, there is a greater potential for a population increase if those individuals continue to reside in Bridgeton Township and raise families.

Table 6

Age Distribution				
Age	1990		2000	
0-4	141	9.0%	160	7.6%
5-9	141	9.0%	187	8.9%
10-14	142	9.0%	214	10.2%
15-19	133	8.5%	147	7.0%
20-24	85	5.4%	117	5.6%
25-34	268	17.0%	289	13.8%
35-44	245	15.6%	386	18.4%
45-54	145	9.2%	266	12.7%
55-59	78	5.0%	84	4.0%
60-64	60	3.8%	76	3.6%
65-74	86	5.5%	117	5.6%
75-84	46	2.9%	38	1.8%
85+	4	0.3%	17	0.8%
Total	1574	100%	2098	100%

Source: 2000 U.S. Bureau of the Census

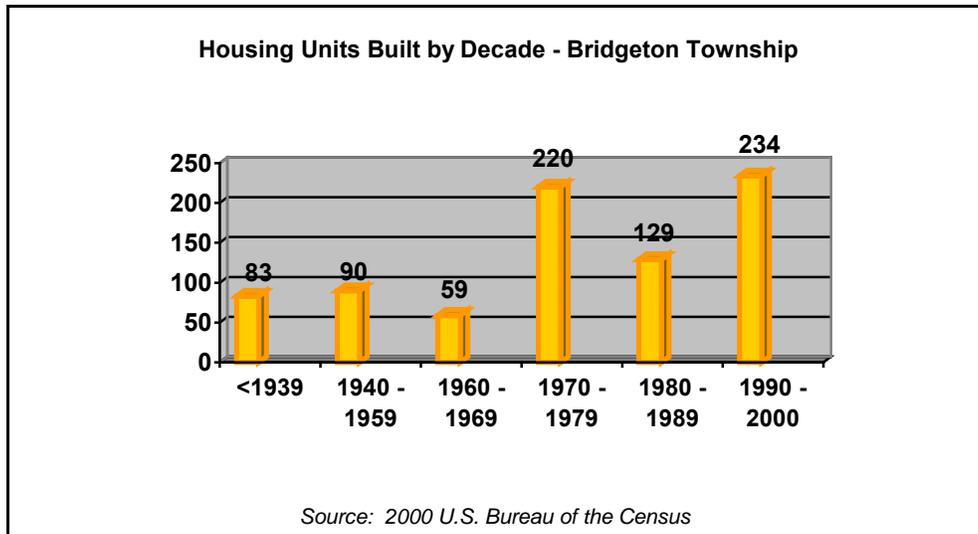
iii. Housing

Housing and significant changes in an area's housing stock have a direct impact on planning decisions. It is important to note that changing trends related to housing stock are often the first indications that important changes are taking place with the population base and land use. It is also important to note that a vital aspect of housing stock is the presence of a variety of house choices (i.e. traditional single-family homes, duplexes, and manufactured homes). Various housing types allow for affordable housing opportunities for all segments of the population.

The housing characteristics presented herein for Bridgeton Township are based on the 2000 U.S. Census of Population and Housing summary data and, therefore, do not reflect changes that have occurred since 2000. According to demographic information, the total number of housing units in the township increased from 617 to 815 (32.1%) between 1990 and 2000. Of the housing units present in 2000, about 33.9 percent were mobile homes.

The total number of housing units in Bridgeton Township increased by 32.1 percent between 1990 and 2000.

The decades from 1970-1979 and 1990-2000 saw the greatest increases in the number of housing units in the development of Bridgeton Township. As of the 2000 Census, seven out of ten housing units had been built between 1970 and 2000, and about one out of four were built between 1990 and 2000.



With the afore-mentioned increase in population expected, the coming decades promise a continued expansion of the housing stock as well. The township must remain proactive in addressing housing issues in order to preserve its rural character as well as to protect the environment.

Table 7 shows that housing units in Bridgeton Township have a much higher rate of occupancy (90.8%) than the entire county (75.9%) and, consequently, a lower number of vacancies. Additionally, about 4.6 percent of the housing units in the township are for seasonal, recreational or occasional use. Approximately 13% of housing units in the township are rental units. It is important to have an appropriate balance between renter and owner-occupied housing units in order to provide housing for all segments of the population and to maintain housing stock values. Housing occupancy for homeowners is 98.2% and renter occupied housing has a 5.2% vacancy rate.

Regarding variety of housing types in Bridgeton, the traditional single-family home is the most common. This could perhaps be attributed to a lack of appropriate building sites for other housing types. For example, multiple-family housing units often require water and sewer utilities. In the township, 532 (or 65%) of the homesteads are one-

Table 7

Housing Occupancy				
	Total Units	Occupied	Vacant	Vacant for seasonal, recreational or occasional use
Bridgeton Township	815	737 (90.8%)	75 (9.2%)	37 (4.6%)
Newaygo County	23,202	17,599 (75.9%)	5,603 (24.1%)	4,394 (18.9%)

Source: 2000 U.S. Bureau of the Census

unit, detached structures; while 276 units (or 34%) are mobile homes; and 7 (or 1%) of housing structures are boat, recreational vehicle, van, etc.

While most of the housing information presented in this section reveals conditions in 2000, Table 8 gives insight into more recent building trends in Bridgeton Township.

The table reports the number of building permits issued from 2002 through 2007 for building additions, decks, mobile homes, garages, pole barns, and new structures. Of the permits issued, less than 40% were for residential buildings.

Table 8

Permits Issued by Type					
Year	New Homestead	Manufactured Mobile/Home	Pole Barn	Garage	Addition, Deck Shed, Misc.
2002	9	12	14	14	9
2003	7	17	6	16	8
2004	19	8	7	22	11
2005	6	10	7	11	11
2006	11	4	5	19	5
2007	4	1	1	2	7
Totals	56	52	40	84	51
%	19.8%	18.4%	14.1%	29.7%	18.0%

Source: Bridgeton Township's Building Inspector's Office, 2007

iv. Income and Poverty

Another factor that helps to determine the variety of housing options within a community is household income. Table 9 identifies the gross annual income in Bridgeton Township and Newaygo County, while Table 10 shows the distribution of income levels throughout the population. These figures reveal that the township and the county have similar income characteristics.

Table 11 identifies poverty statistics for Bridgeton Township and Newaygo County, according to the U.S. Census. In the township, 243 persons were listed as being below the poverty level. This is equal to 11.8% of the population and is slightly higher than the county-wide poverty rate of 11.6%.

Table 9

Gross Annual Income (1999)		
	Per Capita Income	Median Household Income
Bridgeton Township	\$17,173	\$38,750
Newaygo County	\$16,976	\$37,130

Source: 2000 U.S. Bureau of the Census

Table 10

Household Income Distribution		
	Bridgeton Township	Newaygo County
Total Households	726	17,639
Less than \$10,000	60 (8.3%)	1,635 (9.3%)
\$10,000 to \$14,999	26 (3.6%)	1,396 (7.9%)
\$15,000 to \$24,999	97 (13.4%)	2,589 (14.7%)
\$25,000 to \$34,999	137 (18.9%)	2,586 (14.7%)
\$35,000 to \$49,999	154 (21.2%)	3,489 (19.8%)
\$50,000 to \$74,999	156 (21.5%)	3,597 (20.4%)
\$75,000 to \$99,999	73 (10.1%)	1,510 (8.6%)
\$100,000 to \$149,999	12 (1.7%)	538 (3.3%)
\$150,000 to \$199,999	2 (0.3%)	126 (0.7%)
\$200,000 or more	9 (1.2%)	128 (0.7%)

Source: 2000 U.S. Bureau of the Census

Table 11

Poverty		
	Bridgeton Township	Newaygo County
Percentage of Population in Poverty	11.8%	11.6%
<i>Of those in poverty:</i> Under 18 years	39.5%	36.1%
18 to 64 years	53.1%	52.8%
65 years and Over	7.4%	9.2%

Source: 2000 U.S. Bureau of the Census

v. Educational Attainment

Educational attainment is closely related to income. A higher level of education translates into higher earning potential. Table 12 details levels of educational attainment for Bridgeton Township and Newaygo County residents 25 years of age and over. It should be noted that just under one-third (31.4%) of this demographic has had some college or obtained higher education degrees, which is less than the county's level of 38.3%.

Table 12

Educational Attainment: Persons 25 Years and Over		
	Bridgeton Township	Newaygo County
Less than 9 th grade	93 (7.4%)	2,011 (6.6 %)
9 th – 12 th Grade	246 (19.7 %)	4,447 (14.7 %)
High School Diploma	518 (41.4 %)	12,242 (40.4 %)
Some College	223 (17.8 %)	6,337 (20.9 %)
Associate Degree	86 (6.9 %)	1,835 (6.1 %)
Bachelor's Degree	61 (4.9 %)	2,332 (7.7 %)
Graduate or Professional Degree	23 (1.8 %)	1,125 (3.7 %)

Source: 2000 U.S. Bureau of the Census

vi. Labor Force

The population of residents 16 years of age and over in Bridgeton Township totaled 1,488 persons in 2000, of which 974 were considered to be a part of the labor force. Out of the labor force, 906 were employed, leaving 6.6 percent of the labor force unemployed. About 73 percent of the employed laborers worked in one of four main industries:

Manufacturing (36.3%); Education, Health and Social Services (13.6%); Retail Trade (11.9%); and Construction (11.8%). Table 13 gives additional information about employed individuals in Bridgeton Township and Newaygo County.

Table 13

Class of Employed Labor Force		
	Bridgeton Township	Newaygo County
Employed Labor Force	906	20,569
Private wage and salary workers	789 (87.1%)	16,527 (80.3%)
Government workers	73 (8.1%)	2,350 (11.4%)
Self-employed workers	41 (4.5%)	1,599 (7.8%)
Unpaid family workers	3 (0.3%)	93 (0.5%)

Source: 2000 U.S. Bureau of the Census

F. Township Government

Townships are a product of Michigan's early history. Michigan is one of 20 states that currently have some form of township government. "General law" and "charter" are the two types of townships in Michigan. State laws authorize townships to perform a wide variety of functions and are required to perform assessment administration, tax collection, and elections administration. Townships may choose to perform numerous

governmental functions, including enacting and enforcing ordinances, planning and zoning, fire and police protection, cemeteries, parks and recreation facilities and programs, and many more.

Bridgeton Township was both established and incorporated in Newaygo County around 1852. It is a general law township operating under a Supervisor-Trustee form of government. The Board meets on the 2nd Monday of each month at the Township Hall located at 11830 South Warner Ave, Grant, Michigan 49327.



Bridgeton Township Hall

The Township Board, under an annual budget for the fiscal year, establishes priorities for capital expenditures, operations, and maintenance. The primary source of revenue for Michigan townships, such as Bridgeton, is the local government's share of the state sales tax, which has been drastically cut in recent years. Other revenue may be garnered from addition of a millage rate to local property tax fees, fees for building permits, and planning commission review fees. The 2009 Newaygo County Equalization Report provides the information for Table 14 regarding the Bridgeton Township tax base. According to the report, Bridgeton Township's total taxable value is \$46,199,797, which is a 2.08 percent increase from 2008.

Table 14

Real and Personal Equalized Valuation - 2009	
Agriculture	\$ 2,684,500
Commercial	\$ 671,200
Industrial	\$ 165,700
Residential	\$57,040,200
Personal	\$ 1,443,500
Total (real & personal)	\$62,005,100

Source: 2009 Newaygo County Equalization Report

Planning and zoning activities in Bridgeton Township are the responsibility of a five-member planning commission. Members of the planning commission are appointed by the Township Supervisor and approved by the Township Board. Meetings are held the third Monday of the month.

G. Recreation Facilities and Public Open Spaces

Recreation facilities in the surrounding areas of Bridgeton Township are a combined effort of public and quasi-public entities. They consist primarily of boat launches and State of Michigan owned land. These assets are shown on Map 9 – Public Land and Access.

According to 2006 township parcel data, Bridgeton contains almost 6,000 acres of State-owned land. This includes portions of the Muskegon State Game Area which encompasses over 10,000 acres across Newaygo and Muskegon counties. The State

land in Bridgeton is primarily forested with scattered wetlands. Most of the area is not accessible by vehicles, so hikers can enjoy an excellent wilderness experience.

The township also has two boat launches available for public use. One is located on the south bank of the Muskegon River at Warner Avenue (pictured below). This 1.8-acre site which was acquired by the township in 2003 has limited parking capacity and carries potential for future improvements. The other boat launch is on state-owned lands on the north bank of the Muskegon River near Maple Island Road. It includes an improved launch ramp, parking spaces, and toilet facilities.



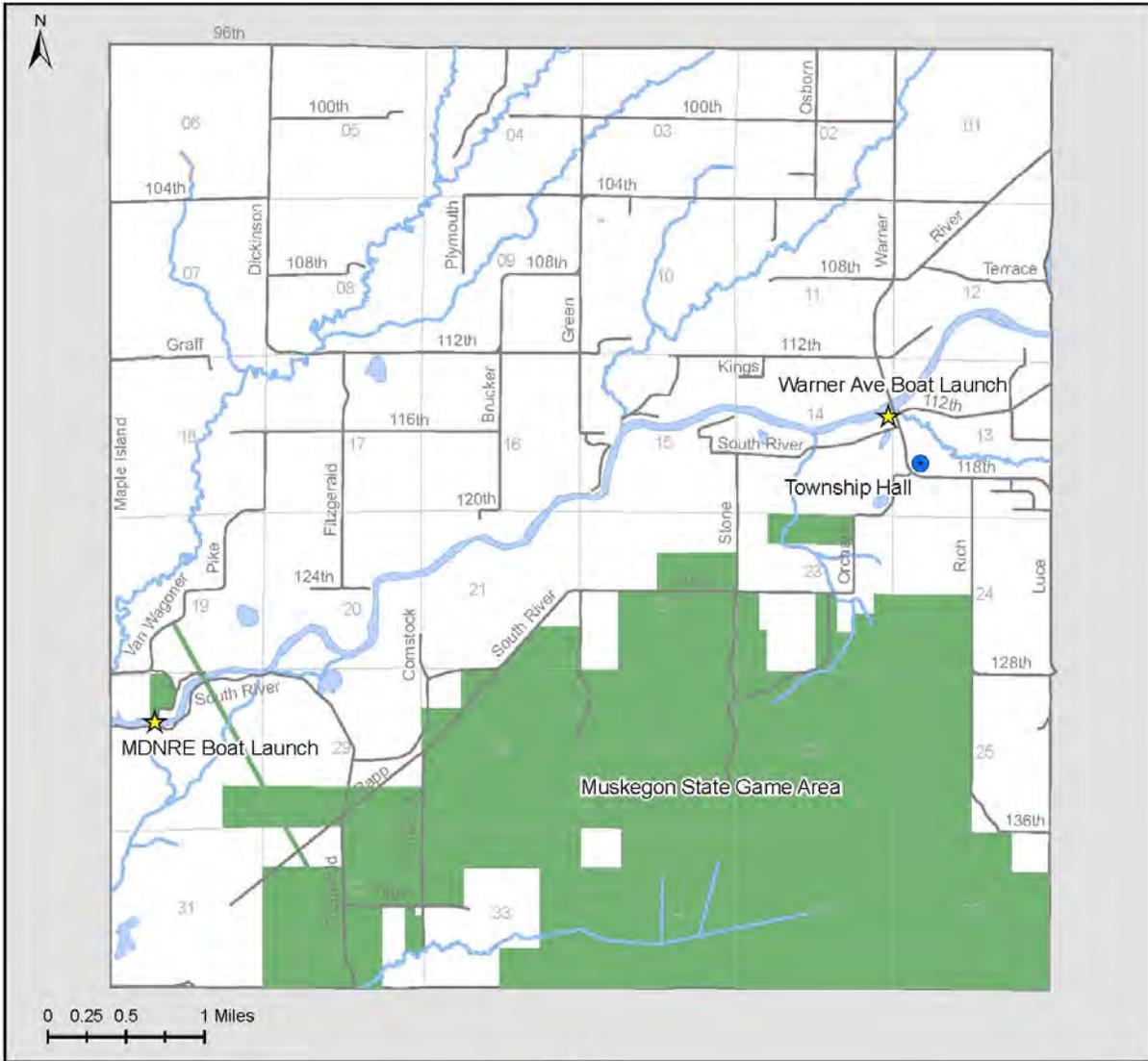
Bridgeton Township has a Recreation Plan which was completed in 2004 and revised in 2009. This plan makes the township eligible for funding through grant applications and low-interest loans from the Michigan Department of Natural Resources and Environment (DNRE). Currently, the township is in the process of seeking funds to make improvements to the boat launch at Warner Avenue.



Township boat launch on Warner Avenue

Map 9

**Bridgeton Township
Public Land and Access**



- ★ Boat Launch
- Township Hall
- State of Michigan
- Township Section
- Lake or River
- Creek or Stream
- Road

Map created on October 26, 2010 by:



Data Source:
Michigan Geographic Framework: Newaygo County (Version 10a),
Michigan Center for Geographic Information

Note:
This map is intended for general planning purposes only.

H. Existing Land Use and Cover

Bridgeton Township's current land use consists primarily of scattered residential development with a small number of working farms within its jurisdiction. Residential development in the form of subdivision or cluster housing is limited and only affects a small portion of the township. Commercial development within the township is limited as well. With a large portion being owned by the State and the unique natural features rendering many areas unbuildable, it is reasonable to expect that development will continue to remain limited in the near future.

Although Bridgeton's population increased by about a third between 1990 and 2000, its character has remained rural. There have been no major changes or disruptions to the township's land uses or land cover. Bridgeton's rural nature is illustrated by its land use and land cover shown on Map 10 – Land Cover circa 1992. Although the land cover data presented in this section is rather dated, it remains useful for identifying land cover patterns.

Map 10 reveals that the majority of Bridgeton Township land cover is either forested or cultivated. Agriculture (planted and/or cultivated areas) is most common in the northern and northeastern areas. Wetland is the third most common land cover in the township. Table 15 reports the percentages of land covers shown on Map 9.

Map 10 was derived from the National Land Cover Dataset (NLCD) published by the United States Geological Survey (USGS) in 1999. The data represents conditions in the early 1990's and is displayed on the map by 30-meter pixel detail. The USGS states that this data is most accurate when viewed at the state or multi-state level (rather than the township level). Therefore, it is important to note that this map is very general and should not be consulted for site-specific land cover analysis. NLCD Land Cover definitions are listed in Table 16.

Table 15

Land Cover Distribution circa 1992	
Land Cover Category	%
Development	0.48%
Herbaceous Upland	10.74%
Planted/Cultivated	21.32%
Forest	56.40%
Wetland	10.25%
Water	0.81%

Statistics derived from NLCD (USGS, 1992).

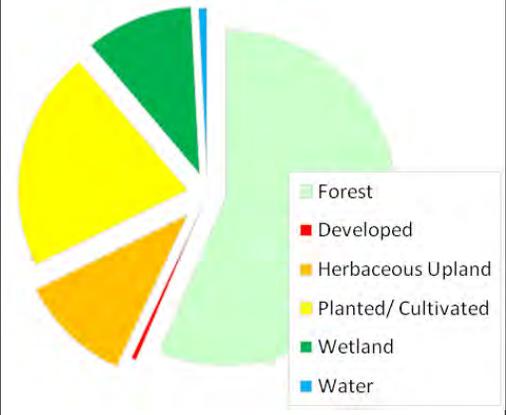


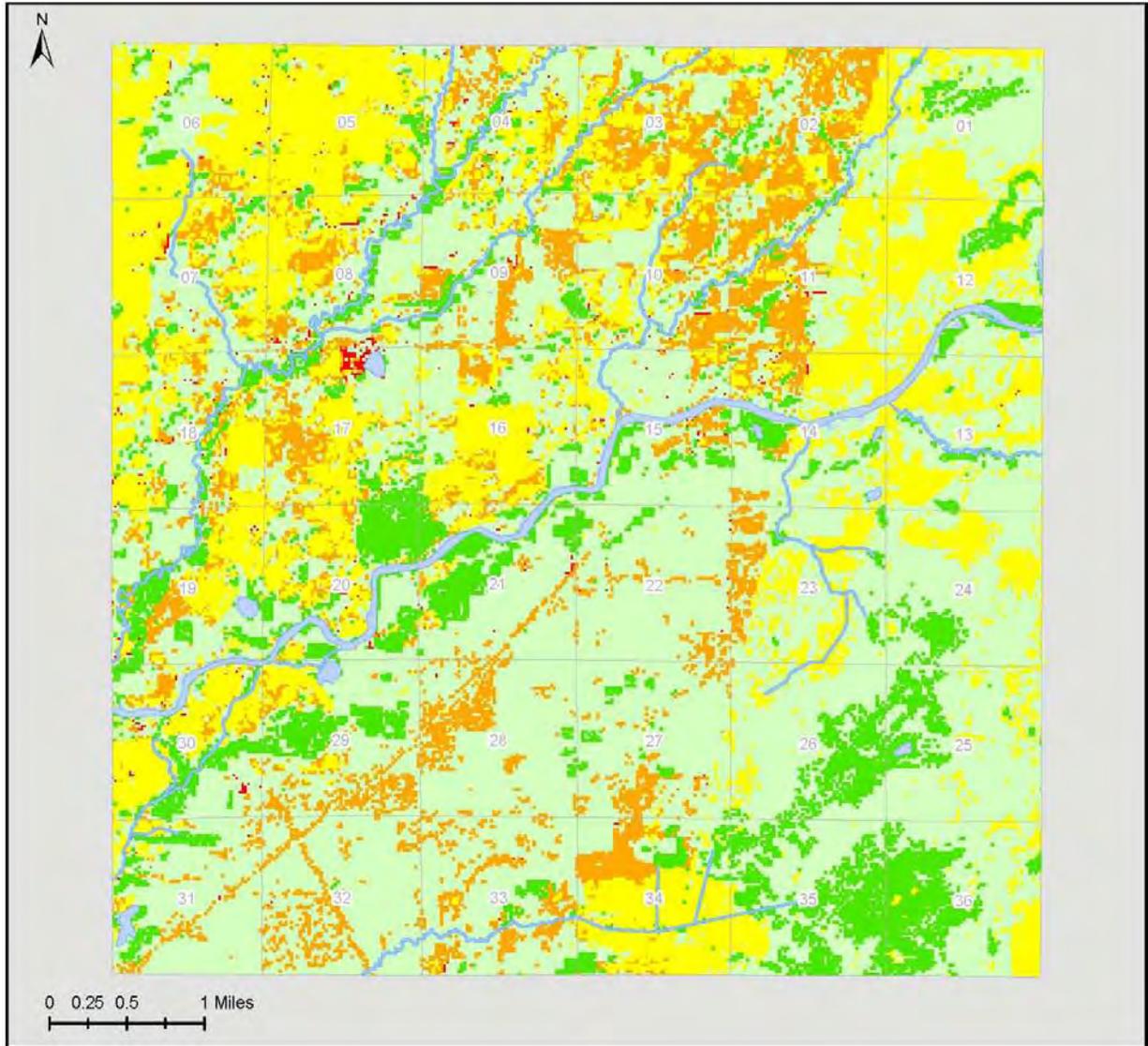
Table 16

NLCD Land Cover Classification Definitions	
Developed	Areas characterized by high percentage (approximately 30% or greater) of constructed material (e.g. asphalt, concrete, buildings, etc.).
Herbaceous Upland	Upland areas characterized by natural or semi-natural herbaceous vegetation; herbaceous vegetation accounts for 75-100% of the cover.
Herbaceous Planted/Cultivated	Areas characterized by herbaceous vegetation that has been planted or is intensively managed for the production of food, feed, or fiber; or is maintained in developed settings for specific purposes. Herbaceous vegetation accounts for 75-100% of the cover.
Vegetated/ Natural Forest Upland	Areas characterized by tree cover (natural or semi-natural woody vegetation, generally greater than 6 meters tall); Tree canopy accounts for 25-100% of the cover.
Wetlands	Areas where the soil or substrate is periodically saturated with or covered with water.

Source: National Land Cover Dataset (USGS, 1992)

Map 10

Bridgeton Township
Land Cover circa 1992



-  Developed
-  Herbaceous Upland
-  Herbaceous Planted/ Cultivated
-  Forested Upland
-  Wetland
-  Open Water
-  Creek or Stream
-  Township Section

Map created on October 18, 2010 by:



Data Source:
National Land Cover Dataset 1992, USGS; Michigan Geographic Framework Newaygo County (Version 10a), Michigan Center for Geographic Information

Note:
This map is intended for general planning purposes only.

Chapter 3: Goals and Objectives

One must obtain a thorough understanding of a community in order to establish an appropriate development strategy for its future. The previous chapters of this document describe the township's history, demographics, infrastructure, and physical geography. However, one critical component to the analysis of Bridgeton Township has yet to be addressed: public opinion. It is described in the "Township Visions" section below. The information presented therein is then synthesized with the information from previous chapters of this document to form the final section of this chapter, "Goals and Objectives."

A. Township Visions

The needs and desires of the citizens must be carefully considered in order to develop an effective master plan. To help develop the visions and revealed in this chapter, the following efforts were made to seek public input from township residents.

The Bridgeton Township Planning Commission distributed a mail-in survey to 100 randomly chosen citizens in March 20. Sixteen surveys were completed and returned, while eight were "returned to sender." Appendix B includes a copy of the survey form, the survey results, as well as written comments received along with the surveys.

Additionally, a special public meeting was held at the Township Hall on Monday, April 19, 2010 at 7:00 PM to gather input from interested citizens regarding land use decisions in the Bridgeton Township Master Plan and the future direction of the township. Township officials published a notice of this hearing in the April 14, 2010 edition of the Fremont Times Indicator.

The 2002 Bridgeton Township Land Use Plan encouraged the community to conduct a Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis in accordance with the goals and objectives. During the April public meeting, a SWOT Analysis exercise was conducted by staff from WMSRDC. Attendees of the meeting were asked to discuss strengths, weaknesses, opportunities, and threats facing Bridgeton Township.

A **SWOT Analysis** is a highly effective method of identifying **Strengths** and **Weaknesses** (existing conditions) as well as **Opportunities** and **Threats** (future conditions). This kind of exercise assists in the process of identifying and focusing on important issues within a community.

These responses were recorded and combined into the "Bridgeton Township SWOT Analysis Report" which has been included in Appendix C of this plan.

The SWOT activity revealed a number of issues facing the township and produced many alternative solutions to address those issues. A recurring theme of the SWOT Analysis was the natural features and recreational attributes of Bridgeton Township. The negative impact of tourism on the township was viewed as a weakness; while the natural setting of the Muskegon River was identified as a strength of the community. Input such as this provided valuable Bridgeton Township perspectives, and strongly influenced the Goals and Objectives found in the following section.

Bridgeton Township's participation in the Muskegon River Watershed Education Project in 2007 also influenced the Goals and Objectives. Thanks to this initiative, the township

received several useful suggestions to help place extra emphasis on natural resource protection.

B. Goals and Objectives

The following goals and objectives are intended to describe a desirable end state or condition of the township within the next 20 to 25 years. They are intentionally general but are all attainable through a proactive and collaborative community effort. The objectives tend to be more specific and may be viewed as milestones used in the process to achieve the larger goal. Although the goals and objectives were not listed in a significant order, they have been organized under the following four subject areas: Land Use and Development, Recreation and the Environment, Local Economy, Infrastructure, Community Character, and Natural Features Preservation.

Land Use and Development

GOAL: Maintain a strong commitment to remain proactive regarding land use and development issues within the township in order to provide a sustainable community for area residents.

Objectives:

- Remain proactive in and dedicated to the long-term planning efforts of the township.
- Support land use decisions that maintain the township's rural character and minimize the potential for over development.
- Determine optimal locations for future residential development, giving special consideration to environmental protection and open space preservation.
- Make a commitment to address and minimize blight within the township.
- Work with surrounding communities in order to promote and foster intergovernmental cooperation and communication in both Newaygo and Muskegon counties.

Recreation

GOAL: Strive to provide quality recreational opportunities for area residents while protecting the township's abundant natural resources.

Objectives:

- Continue working with local environmental groups to take actions to preserve the natural assets of the Muskegon River while also promoting its recreational benefits to the surrounding area.

- Maintain existing parks and trails within the township, and strive to expand or add new recreational facilities as needed in order to adequately serve area residents.
- Work with area tourism professionals in order to promote the recreational opportunities available in Bridgeton Township.
- Strive to protect and preserve the natural beauty and resources of the township, and remain mindful of potential environmental impacts of future land use and recreational decisions made by township officials.
- Continue work to inform and educate area residents and visitors of the abundant natural resources and the need to protect and preserve these important areas.
- Work with surrounding local units of government and area organizations to provide consistency in recreational opportunities, environmental protection, and addressing safety issues along the Muskegon River.

Local Economy

GOAL: Promote and foster the local economy while taking advantage of the area's existing natural assets.

Objectives:

- Take steps to encourage and support existing and future small business development.
- Positively utilize the area's tourism industry as an economic development generator for the township.
- Continue to work closely with the Newaygo County Economic Development Office (NCEDO) in order to promote and support economic development efforts within the township, as well as throughout Newaygo County and West Michigan region.

Infrastructure

GOAL: Strive to provide quality sustainable infrastructure that meets the needs of township residents.

Objectives:

- Maintain a strong working relationship with the Newaygo County Road Commission in order to provide good quality roads within the township.

- Work with local utility providers and continually seek opportunities to provide state of the art communication infrastructure for area residents.

Community Character

GOAL: Preserve the rural community character of Bridgeton Township in order to maintain the high quality of life enjoyed by residents.

Objectives:

- Strive to maintain Bridgeton Township as a bedroom community by taking advantage of and promoting the township's central location in the West Michigan region.
- Continually work with and support area schools and higher educational facilities to provide quality education and training to township residents.
- Encourage and provide avenues for communication between township residents and officials. In addition, make efforts to reach out and encourage increased public participation within the township.
- Maintain a strong commitment to the safety, health, and welfare of area residents.
- Sustain a good working relationship with area police and fire in order to provide adequate public safety.

Natural Features Preservation

GOAL: Preserve the quality of lakes, rivers, streams, woodlands, wetlands, wildlife habitat, and other natural features with a renewed commitment to engage in effective measures for their protection, improvement, and enhancement.

Water Quality Objectives:

- Protect surface and groundwater quality and adopt groundwater protection standards to implement via the site plan review process.
- Promote special consideration of natural features such as flood plains, wetlands, slopes, woodlots, and water features in development proposals.
- Identify and regulate land uses and development practices that have the potential to contaminate surface water and groundwater.
- Enact stormwater management standards that prevent direct discharge of storm or melt water into surface water.
- Limit the amount of impervious surface in new developments by: placing limits on the amount of a site that can be covered by impervious surfaces; providing buffers between paved areas and wetlands or surface waters; permitting deferred parking; and instituting maximum parking standards.

- Enact anti-keyholing or funneling regulations along water bodies.
- Promote the use of non-phosphorus fertilizers for waterfront properties.
- Create buffer areas adjacent to streams in which physical disruptions are limited.
- Encourage the re-establishment of wetlands as opportunities arise.
- Consider requiring point of sale septic inspections in the township.

Open Space Objectives:

- Enact zoning ordinance regulations that prohibit the clearing or grading of land without proper zoning approvals.
- Augment site plan review, planned unit development, and other design review criteria of the zoning ordinance to specifically address the protection of natural features such as woodlands, landmark trees, rolling topography, wetlands, etc.
- Separate higher density development and consumptive land uses from agricultural land and sensitive natural areas.
- Devise design guidelines that create buffers to protect open space and natural features from encroachment.
- Develop zoning incentives to promote rural clustering and creative design in residential developments. Bonus densities should be provided for such things as additional open space, private recreational opportunities, or providing connections to adjacent greenways.
- Consider the use of non-contiguous Planned Unit Developments to allow higher density in areas appropriately suited to support it while protecting more sensitive environmental areas.
- Require a certain percentage of open space for every development.
- Promote a township-wide network of greenways, non-motorized trails, and open space areas.

Chapter 4: Development Concepts

Development concepts serve as a bridge between the township's goals and objectives, and its plan for future land use. They include broad explanations of basic assumptions and supporting ideas that were used to develop the Future Land Use Districts and the Future Land Use Map revealed in Chapter 5. Township leaders keep the following concepts in mind when making land use decisions.

A. Basic Assumptions

Based on the Community Profile (Chapter 2) and the Goals and Objectives (Chapter 3), three key assumptions about growth and development of Bridgeton Township can be established:

- 1) The population of the township has continually increased from 870 in 1970 to 2,399 in 2008. This growth is expected to continue over the next 20 years.
- 2) As the township continues to grow, preservation of the community's rural character and natural resources will be paramount.
- 3) Cooperation, collaboration, and communication with neighboring communities will be vital to achieve desirable development of the township, especially as demand for infrastructure and community services increases.

B. Growth Management

Growth, in terms of population and employment, affects land use patterns and the character of a community. Open spaces, lack of traffic congestion, and rural settings found in low residential density townships often entice people to move to such areas. However as growth occurs, the very things that were enticements can be lost. The results of growth can be expensive (cost of infrastructure, school facilities, public safety, etc.) and potentially harmful to natural resources. Residential development pressure will likely increase as Bridgeton Township continues to grow.

Orderly development which provides for the protection of environmental resources as well as the character of the township should be promoted through responsible growth management strategies and techniques. According to the Michigan Department of Natural Resources in 1995, growth management refers to the systematic attempt by a community to guide the type, rate, location, timing, public cost of, and often the quality and character of land redevelopment. In other words, growth management seeks to accommodate growth rationally, not to prevent or limit it. The Bridgeton Township Planning Commission supports this concept as a means of managing future development.

C. Settlement Patterns

The manner in which a township develops has a tremendous impact upon its character, opportunities for recreation, etc. For the most part, land is a finite resource, and must therefore be used wisely. Once land is fully developed it is nearly impossible to revert it

back to its original state. Therefore, conserving open spaces at the onset of development is imperative.

The full development of entire land parcels may result in excessively large residential lots. A “one size fits all” zoning regulation dictated by minimum lot sizes can result in a checkerboard layout of large, nearly identical lots. A community concerned with conserving open spaces must exercise caution with this method settlement management which may lead to the unnecessary consumption of significant natural areas.

Fortunately this is not the only means of managing development. Full density can be achieved on a much smaller portion of land by allowing flexible standards for lot size and frontage. This leaves the balance in permanent conservation. The open-space subdivision design approach, as well as other land preservation methods, encourages the conservation of more than just floodplains, wetlands, and steep slopes. They can allow for the protections of sensitive or unique natural areas, historic buildings, scenic views, or anything else a community deems worthy of conserving to preserve its character and natural resources. Costs of development and infrastructure will also be minimized by reducing the amount of land utilized by the development.

Chapter 5: Future Land Use

A future land use map requires a synthesis of all the information included in a master plan and results in a map that generally depicts the various types of recommended land uses and their approximate locations in the community. The map is accompanied by text explaining the “districts” or “categories” used on the map. These categories describe the character of land uses as well as their relation, if any, to the zoning districts dictated by the Bridgeton Township Zoning Ordinance.

A master plan and a zoning ordinance are separate, yet closely related, and often mistaken for one-another. Generally speaking, the master plan and future land use map are intended to reflect the future ambitions of the community, while a zoning ordinance provides the means to arrive at that point. The future land use map is intended to serve as a guide for land use decisions over a longer period of time, while the zoning map is a mechanism for shaping immediate development decisions.

A zoning ordinance is the legal arm of a master plan. It is the most frequently used and effective regulatory tool to implement a master plan, as it regulates land use. The primary land use regulation tool is a community’s ability to alter and adjust regulations spelled out in the zoning ordinance. The master plan and future land use map can be utilized to guide and encourage what and where zoning changes will occur. For example, rezoning requests are often required to be consistent with the master plan’s designations, which are consistent with the community’s desires for the future.

The word “district” is often used in both kinds of documents; however, the term must be used carefully. On one hand, using similar terms for the various land use designations is one way to demonstrate the relationship between the two documents, and it helps to avoid confusion and translation difficulties. On the other hand, it is imperative to acknowledge that future land use map and a zoning map districts are not necessarily equal. For example, the use of a term such as “cluster housing” in a future land use map does not necessarily translate into specific numbers in terms of lot sizes and other elements of zoning. Zoning districts should be specific and precise for legal reasons, while future land use categories should remain general to allow for future flexibility and interpretation.

Future Land Use Categories

With assistance from a special Bridgeton Township Planning Commission meeting, five general future land use categories have been identified for the township. These districts were chosen as a result of the analysis of current land uses and ownership, physical and environmental suitability, and compatibility with goals and objectives identified in the plan. These land uses include:

- Commercial
- Light Industrial
- Low Density Rural
- Medium Density Residential
- Open Space/Parkland

Commercial

The Commercial category is intended to allow for retail, office, and service establishments to serve the demands of the Bridgeton Township, neighboring municipalities, as well as pass-by traffic. It is not intended to provide regional retail opportunities. In order to preserve the existing character of the township, new commercial developments should be compatible and harmonious with adjacent surroundings. Additionally, the preservation of environmentally sensitive areas, important open space, and natural corridors is strongly encouraged.

Areas designated for commercial use are located in three areas: along 112th Street south of the Muskegon River and near Warner Avenue; along Warner Avenue from 108th Street to the township's northern border; and along Maple Island Road in portions of Sections 6 and 7. The areas along 112th Street and Warner Avenue currently host some commercial activity.

The Commercial future land use category closely corresponds with the Local Business District (B-1) zone described in the Bridgeton Township Zoning Ordinance.

Light Industrial

The Light Industrial category is intended to allow for industrial uses such as research and development; wholesale and warehouse activities; and operations which manufacture, compound, process, package, assemble, and/or treat finished or semi-finished products from previously prepared material. Ideal industrial activities in this area would exist without causing nuisance to nearby properties or the general public, and have minimal environmental impact. It is recommended that these areas have access to major transportation routes and municipal water and wastewater services.

Due to a lack of appropriate infrastructure, Bridgeton Township does not have intentions of promoting or encouraging industrial development within the township. However, township officials recognize that small industrial-type developments may happen in the future and wish to remain proactive in the placement of that development. Therefore a general area on 100th Street near Warner Avenue was identified as the best suited to minimal industrial development, if it were to occur. This area is currently used as a scrap yard and is located near existing commercial businesses.

The Light Industrial future land use category closely corresponds with the Industrial (I) zone described in the Bridgeton Township Zoning Ordinance.

Low Density Rural

Covering about 65% of the township's future land use map, Low Density Rural is the most common future land use type. It is intended to allow space for natural vegetation, agricultural preservation, and single-family residences. The wide range of low-density uses is intended to maintain Bridgeton Township's rural and residential character. The Low Density Rural area should be utilized as a transition between undeveloped and developed areas of the township and is not planned for municipal water and wastewater services.

The Low Density Residential future land use category closely corresponds with the Rural Residential (RR-1) zone described in the Bridgeton Township Zoning Ordinance.

Medium Density Residential

The Medium Density Residential category is intended to identify areas within the township that are most suitable for higher-density developments and to provide the township with a wider range of housing opportunities. These areas could include developments such as small lot single family homes, duplexes, multiple dwelling units, and mobile home parks. To be consistent with infrastructure and land capabilities, medium density developments should either be served or plan to be served by shared or municipal water and wastewater services.

Areas designated for medium density residential developments are located in Sections 2, 10, and 11 to the north of the Muskegon River; as well as in Section 13 where a subdivision currently exists south of the Muskegon River.

The Medium Density Residential future land use category closely corresponds with the Medium Density Residential (RR-2) zone described in the Bridgeton Township Zoning Ordinance.

Open Space/Parkland

The intent of this category is to preserve significant open spaces, natural features, and parkland within the township. The designation includes State of Michigan-owned land in the southern half of the Bridgeton Township and encompasses about one quarter of Bridgeton's future land use area.

The designated areas should support a diverse mixture of land uses, all of which provide or conserve open space, such as undeveloped land (forest, meadows, wetlands, etc.) or minimally developed land, regardless of ownership. These areas contain unique characteristics, are environmentally sensitive, and/or perform important natural functions. Extensive consideration must be given in the determination of development policies and land use because of the critical nature of these areas and their sensitivity to development. Open spaces provide scenic views, groundwater recharge areas, recreation areas, and erosion protection with natural plant cover within the township.

The Open Space/Parkland future land use category does not directly correspond with any zones described in the Bridgeton Township Zoning Ordinance. Any development of these lands would likely be most similar to the Rural Residential (RR-1) zone. If development pressures lead to development of State lands, it may be appropriate to utilize a Planned Unit Development District (PUD), as described in the Zoning Ordinance, which lists many PUD-related objectives including:

- Permit flexibility in the regulation of land development allowing for higher quality of projects through innovation in land use, variety in design, layout, and type of structures constructed;
- Allow clustering of development to preserve common open space, or significant natural features; and
- Ensure capability of design and function between neighboring properties.

Waterfront Preservation

This category serves a number of purposes, but it is primarily intended to protect the shore land along lakes, streams, and rivers to ensure that new development is compatible with the water quality and carrying capacity of the water resource. One of the most effective means of preventing water quality degradation is through protection of the water's edge with a natural species vegetated buffer.

Bridgeton Township has a number of developed areas along the Muskegon River, including older plats with allowed lot widths of 50-75 feet. While the majority of these developments occurred over forty years ago, their associated land use and storm water runoff continue to have lasting effects on water quality.

The Waterfront Preservation category is sensitive to the need to preserve the qualities that make waterfront living desirable, while at the same time protecting these water resources for the general public and future generations. Sensitive site development techniques, such as preserving existing vegetation, will help control erosion and protect water quality. Existing waterfront development should be monitored for its impact on water quality. Proper site plan review and low impact design techniques can also assist in the protection of water quality.

Accordingly, it is the township's intent to improve water quality by providing and implementing guidelines for land use and development within 500 feet of water resources. New development in these areas should be limited to low-density, low-intensity residential and recreational uses. New and current property owners should be educated on how their use of land and lawns can affect their water resources and include recommendations to encourage sound land stewardship.

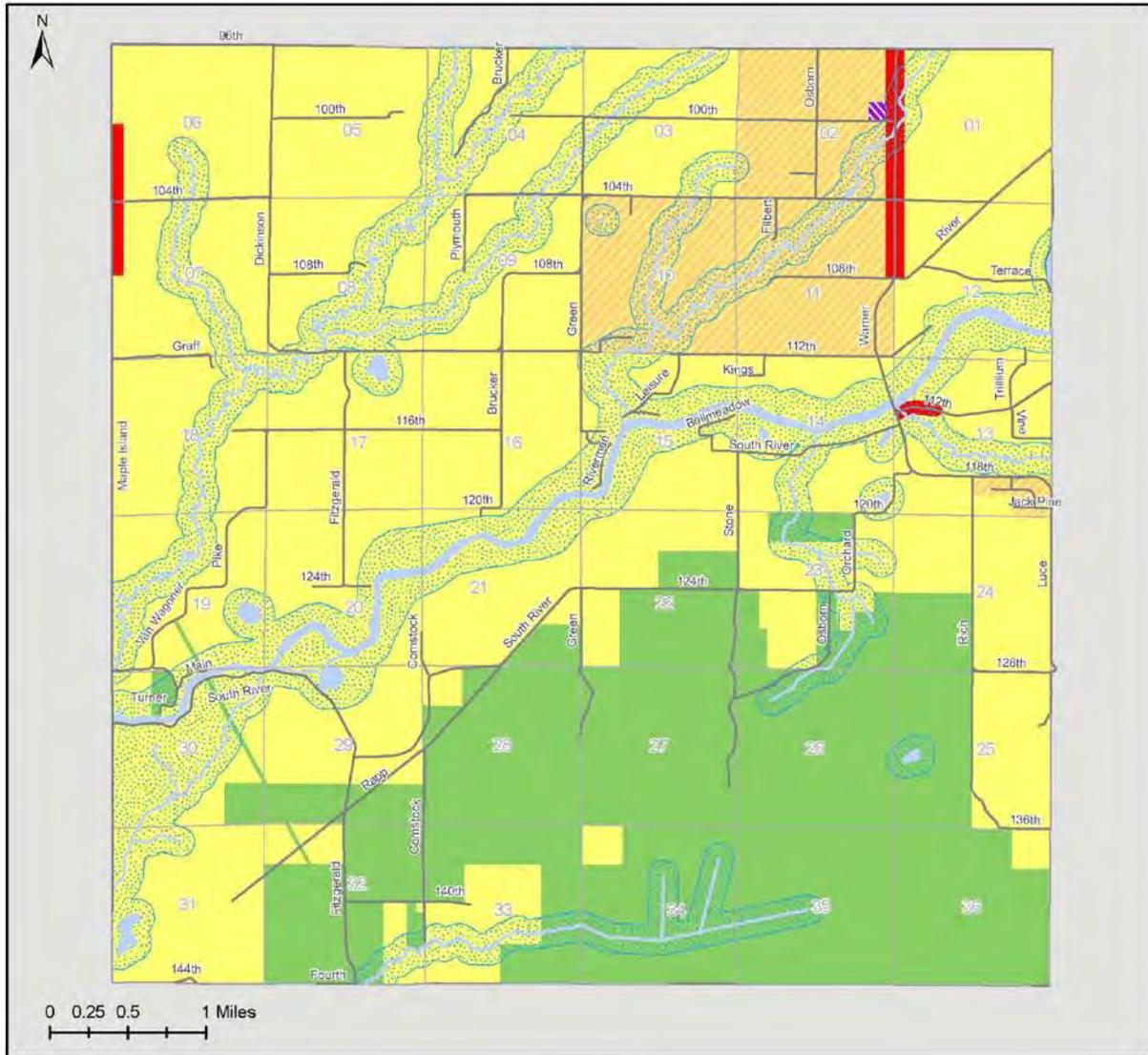
Non-riparian "keyhole" land development projects should be prohibited. Docks for boats should be limited to those accessory and customary to single family residential development on the shore, unless in an otherwise appropriate area. Fertilizer applications should be limited and designed for minimal water quality impact.

The Waterfront Preservation future land use category corresponds with the Waterfront Overlay District described within Chapter 8 of the Bridgeton Township Zoning Ordinance. The Waterfront Overlay District provides "additional standards for development to preserve the quality of the waters, promote safety and to preserve the quality of recreational use of all waters in the Township."

The Waterfront Preservation category depicted on the Future Land Use map should be referenced as a general guide to development, as its boundaries are general in nature. It is not intended to establish finite boundaries of the category. Refer to the Bridgeton Township Zoning Ordinance for specific guidelines and regulations within these areas.

Map 11

Bridgeton Township Future Land Use



	Low Density Rural		Road
	Medium Density Residential		Creek or Stream
	Commercial		Lake or River
	Light Industrial		Township Section
	Open Space/Parkland		
	Waterfront Preservation		

Map created on November 23, 2010 by:



WEST MICHIGAN SHORELINE
REGIONAL DEVELOPMENT COMMISSION

Data Source:
Michigan Geographic Framework: Newaygo County (Version 10a),
Michigan Center for Geographic Information

Note:
This map is intended for general planning purposes only.

Chapter 6: Implementation Tools and Techniques

The ultimate goal of planning, of course, is implementation. Implementing the ideas generated through the planning process is the culmination of the analysis, goal setting, and interaction activities, which took place during the creation and update of the Master Plan. This portion of the Plan is designed to guide the community in taking the actions necessary to achieve its goals and objectives.

The Plan is intended to be a working document that provides township decision makers with information on the goals desired and communicated by the community. The Plan should be consulted whenever policy issues arise, especially those relating to land use. Additionally, when the visions of the township change or advance, the Plan should be updated accordingly.

Successful implementation requires a dedicated effort on the part of the Bridgeton Township Planning Commission, Township Board, and the community at large. It is essential that each member of the Planning Commission and Township Board understands the Plan, knows his/her own role as it relates to the Plan, and promotes implementation of the Plan.

The Goals and Objectives of the Bridgeton Township Master Plan Update can be implemented through the use of the following described tools and techniques that are available to the township. The list of tools and techniques is certainly not exhaustive, and some items on it are more applicable to the township than others. Many of the tools and techniques can be used for multiple purposes by the township to achieve its goals and objectives, even though they are listed under specific headings.

Zoning Ordinance

A zoning ordinance is the primary regulatory tool used to implement master plans. Following the adoption of the Plan, the township should complete an internal inventory and review its priorities. It should then amend the Bridgeton Township Zoning Ordinance as appropriate. This will ensure that the zoning ordinance will be consistent with the approved Master Plan, and will also help the township defend its land use-related decisions.

Evaluation of Land Use Changes

Changing the land use or zoning designation for any property can have far-reaching consequences; physically, environmentally, financially, and legally. Therefore, careful evaluation of proposed rezonings is essential. As with any land use decision, the use of standards is essential to reaching fair and consistent decisions. The following evaluation measures are included in the Plan to permit their use by township officials when rezonings or future land use changes are contemplated. The zoning district intents and rezoning criteria provided in the zoning ordinance must also be considered during the evaluation process.

Standard 1 – Consistency with the Community Vision and Plan Strategies

If conditions (such as economic factors, demographic shifts, new utility lines, changing traffic conditions) upon which the Master Plan was developed have changed significantly since the Plan was adopted, the Planning Commission and Township Board should incorporate these factors into their deliberations to ensure that the Plan is current. Particular attention should be paid to the Goals and Objectives to ensure that the township's vision remains valid, and that any proposed rezoning or land use change does not impair their intent.

Standard 2 – Compatibility with adjacent uses and districts.

All land uses allowed in a proposed zoning district should be compatible with the conditions present on the site and in the immediate vicinity of the site especially in terms of density, character, traffic, aesthetics, and property values. The Plan provides several guidelines, as noted above, which should be considered when determining whether the proposed zoning district is compatible with the neighborhood and the township as a whole.

Standard 3 – Capability of being used as already zoned.

It is the right of every property owner to receive a reasonable return on the investment placed on property. This does not mean that zoning is a slave to the "highest and best use" (which is not a zoning, but rather a real estate term). It does mean that there should be a reasonable use available within the zone district. But if the property is capable of being used as zoned, there should be a compelling reason to change the zoning. Such reasons may be related to the first two standards of consistency and compatibility.

Site plans will not be considered as part of a rezoning request. The Planning Commission and/or Township Board will not be swayed by what is proposed by the petitioner. Instead, the township will make a specific finding that ALL of the uses permitted in the proposed district are appropriate for the site and area, not just the one shown on a proposed site plan.

Standard 4 – It is critical that the Master Plan be read in its entirety.

Rather than attempting to isolate individual statements that may appear to support one position or another regarding the future land use in the township, the Planning Commission must consider the intent of the Plan as a whole. This requires a careful reading of the Plan to ensure that all of the Plan's considerations are included in the evaluation of any change.

Land Division Act

Townships are authorized to regulate and control the subdivision of land within their jurisdictions pursuant to Public Act 591 of 1996, the Land Division Act (formerly known as P.A. 288 of 1967, the Subdivision Control Act). Amended in 1997, this act gave a township with a land division ordinance more control over how land could be divided and lessened state controls. The act governed the division of existing parcels, called "parent parcels," as identified by the state.

A township can have an important voice in the design and layout of subdivisions and can set uniform standards for streets and roads, utilities, and other improvements with the utilization of a local land division control ordinance. The land division ordinance can reference all other township ordinances and require conformance with them. Conformance with the zoning ordinance and the insertion of land division design standards while updating the ordinance offers control over density.

Planned Unit Development (PUD)

The planned unit development concept is utilized by many communities to encourage innovative and imaginative project design. As a development type, it permits flexibility in site design and usage. It allows buildings to be clustered by mixing types, or by combining housing with ancillary uses such as neighborhood shopping. It allows for better design and arrangement of open space and the retention of such natural features as forests, slope, and floodplains. As a regulatory tool, it allows variation in many of the traditional controls related to density, setback, use and open space.

Cluster Development

Cluster development is a residential site design and zoning technique used to protect natural, cultural, or recreational features of the landscape while allowing new development. The basic idea is to cluster new development on one portion of a property, while leaving a large tract of environmentally sensitive or scenic land intact on the remainder of the parcel. If used carefully, this technique can significantly lower the impact on the natural landscape and minimize the costs of providing public services to new homes since they are located in proximity to each other.

While similar to PUD development, Cluster development should not be confused with planned unit development (PUD). Cluster development places a greater emphasis on protecting open space and typically applies only to residential units. PUDs, on the other hand, focus on infrastructure reduction and often allow compatible commercial development (e.g., convenience stores, office, etc.) to be included in the overall development.

Open Space Preservation

A variation on the PUD theme is an Open Space Preservation district. In this type of district, or in a residential district with this feature, developers are encouraged to set aside open space in perpetuity in exchange for flexibility on the part of the township with respect to zoning requirements. Open space conservation is important because open space needs to be planned and provided for prior to complete development occurring.

Key characteristics of an Open Space Preservation District/Overlay, when combined with elements of the PUD concept, include:

- Flexibility in the design of a development.
- Lot size restrictions in traditional zoning are converted to density limitations where the unit of measurement is the entire project, not the individual lot.

- Allowance for slightly greater density than normal zoning, in most cases, *as an incentive*.
- Buffering/open space in the development is *in exchange* for flexibility on the part of the township, so the alternative (i.e. traditional zoning) must be fairly rigid, more restrictive, and strictly enforced.
- The developer saves money through lower up-front costs for infrastructure, and tends to make more profit through higher initial sales price and greater sales volume.

Open Space Zoning allows the developer to have some additional units to market, in exchange for the promise to set aside a portion of the development as open space in perpetuity.

Growth Management

As mentioned in Chapter 3, growth management refers to the systematic attempt by a community to guide the type, rate, location, timing, public cost of, and often the quality and character of land re-development. Growth management must be, first and foremost, well integrated into the planning and zoning process. As an overview, there are several possible avenues to explore when considering a growth management strategy. Among them are:

Purchase of Development Rights

In this scenario, the township directly remunerates the land owner in return for exclusive rights to develop the property as the township sees fit or to preserve it. The rights may also be sold to yet another property owner who can (or will) develop the land as the township wishes. The land owner participates voluntarily, still owns the land, and can use or sell the land for specified purposes, such as farming or hunting.

Once a Purchase of Development Rights agreement is made, a permanent deed restriction is placed on the property which limits the type of development that may take place on the land. A legally binding guarantee is thus achieved to ensure that the parcel will remain as it is or be developed only as wished. The deed restriction can also be referred to as a conservation easement.

Conservation Easements

The Farmland and Open Space Preservation Act of 1974 provides for dedication of a conservation easement to a public entity while the Conservation and Historic Preservation Easement Act of 1980 gives a third party, such as a land trust, the right to receive and the resulting responsibility to enforce an easement. Conservation easements are voluntary legal agreements between landowners and a land conservancy or government agency and are distinct property rights that may be sold or donated separately from other rights.

Conservation easements are effective for preserving sensitive lands, providing public access along rivers or greenways, and allowing property owners to consider land stewardship while they continue to live on their land. They permanently limit development of the property in order to protect the conservation values of the land. The landowner continues to bear all costs and liabilities related to ownership and maintenance of the property.

The relationship between Purchase of Development Rights and conservation easements is close and the terms are often used interchangeably. However, conservation easements can be both sold or donated. When a land owner sells the development rights for less than their full value, it is called a “bargain sale.” Bargain sales and donations can reduce income, inheritance, and property taxes while providing cash for needed purposes when meeting the necessary requirements.

Transfer of Development Rights

Although not authorized by statute for use between jurisdictions in Michigan, this technique has been used successfully elsewhere. It is a variation on the above, except a trade is made between two or more parcels. It essentially is a method for protecting land by transferring the “right to develop” from one area (sending) and giving it to another area (receiving). A consensus must be reached on where the public wishes to preserve low density or open space and where it will allow for increases in development densities.

“Receiving” areas generally have streets, public water and sewer, and other improvements or the improvements are such that they can be extended a short distance without extensive cost. The costs of purchasing the easements are recovered from the developers who receive building “bonuses” according to the values agreed upon. As with Purchase of Development Rights, the owner of the preserved site participates voluntarily and retains existing use rights while receiving compensation for the development value of the land.

Concurrency

This is a situation in which the township ties development (i.e. density and type) to established bench marks regarding public service (i.e. water, sewer, roadway capacity, police, fire, educational and others) to control development. No development can occur in a given area until the benchmarks are met, either by the township or the developer. This method also requires a carefully laid out capital improvements plan to be fully effective.

Development Agreements

This would operate much like a contract/site plan review process combined. It would cover a fixed period in time, and would identify specific elements of development covered. It would offer assurances for both sides that planning could take place and there would be no changing of the rules in the middle of the game.

Regional Impact Coordination

In a larger sense, this concept amounts to a specific agreement to involve other jurisdictions in any development which has a “regional impact”. One way to implement such coordination is through the establishment of a joint planning commission (JPC), as enabled by the State of Michigan’s Joint Municipal Planning Act PA 226 of 2003.

The State of Michigan has taken another step by making it mandatory that amendments to a community’s master plan be submitted, for review and comment, to all bordering jurisdictions, the acting regional planning commission, and ultimately the county. While presently these comments have no regulatory implications, this legislation is the first step in working towards a collaborative effort amongst bordering municipalities encouraging similar land uses on adjacent parcels.

Capital Improvements Program

A Capital Improvements Program (CIP) is a fiscal plan outlining the means for the township to finance selected projects requiring capital, either on a short-term or long-range basis. The CIP thus sets priorities for future development. Projects typically included are public facilities such as township halls and parks, land improvements, roads, bridges, acquisitions, utilities, planning projects, etc.

Dedicated Millage

A dedicated millage can be used to generate revenues for a specific purpose and, in so doing, can implement recommendations of the Master Plan. For example, a dedicated millage could be used to establish a land acquisition fund, a recreational path fund, or a conservation easement program. All of these would be useful tools for promoting open space preservation.

Although acquisition of land by a governmental unit provides the greatest level of land use control, it is also the most expensive. In addition to acquisition costs, purchases remove property from the tax rolls and decreases property tax revenues.

Land Conservancy

While property owners can voluntarily donate or sell land or easements in the interest of conserving natural resources or natural features, and perhaps qualify for income, estate and property tax benefits, private land trusts can facilitate a resource protection program by use of a variety of land acquisition and conservation techniques.

For instance, the Land Conservancy of West Michigan (LCWM) “protects lands that contribute to the distinctive character and quality of life in West Michigan; lands that are important for their values as habitat for native plants and animals, as centers for study and quiet recreation, and as elements of scenic beauty and rural character. LCWM offers positive, non-regulatory solutions to disappearing open space that benefit landowners and local communities.”

LCWM acquires natural land through donation or “bargain sale” purchase of high priority land for the purpose of creating nature preserves that are open to the public. It also assists with conservation easements and works with developers to construct easements for open space design. Finally, LCWM assists local governments with identifying important natural areas, preserving lands, creating community parks, and writing grant applications for project funding.

Chapter 7: Recommendations

Bridgeton Township contains an abundance of natural resources in the form of watercourses, groundwater, topography, forests, and some agriculture. These attributes, along with the township's close proximity to regional services and employment, have combined to create a desirable environment to live and play. This is reflected in the township's increasing population trends and forecasts for future growth.

To maintain its rural character and quality of natural features, it will become increasingly important for Bridgeton Township to frequently reference this Plan to help in the management of growth, protection of natural resources, preservation of open space, and connection of open spaces (via greenways). If utilized properly, this Plan will provide a central vision from which township officials can make sound and consistent decisions. Additionally, the township should regularly revisit the Goals and Objectives identified in this document, and prioritize those of greatest and most timely importance, to ensure the plan's continued relevance and usefulness.

Recognition of impending development pressures associated with future population increases helps to highlight the importance of remaining proactive to maintain the rural character of the township. Objectives for growth management include on-going education on growth management techniques, utilization of those techniques, and inclusion of environmental and infrastructure considerations in development decisions.

If current development forecasts materialize, the township may have to consider its options for providing municipal water and wastewater systems, or for requiring shared systems in higher densities of development. Additionally, the township should remain open to multi-unit residential developments (in accordance with environmental conditions and existing infrastructure) to maintain a healthy, balanced, and affordable housing market.

Communities surrounding, and including Bridgeton Township, share many of the same rural characteristics. Consequently, many of the communities' needs may coincide as well. In some cases, it may be more feasible to fulfill these needs through municipal collaboration, rather than by each community on its own. While only appropriate under certain circumstances, municipal collaboration is a viable option to improve standard of living through the provision of more and/or better quality services. One example already being implemented by Bridgeton Township is the provision of fire service. Bridgeton Township is able to utilize the capacity of surrounding municipal fire services rather than invest in its own fire department. The potential for future collaborations certainly exists, and could include construction and maintenance of recreational trail systems, park facilities, or nature preserves.

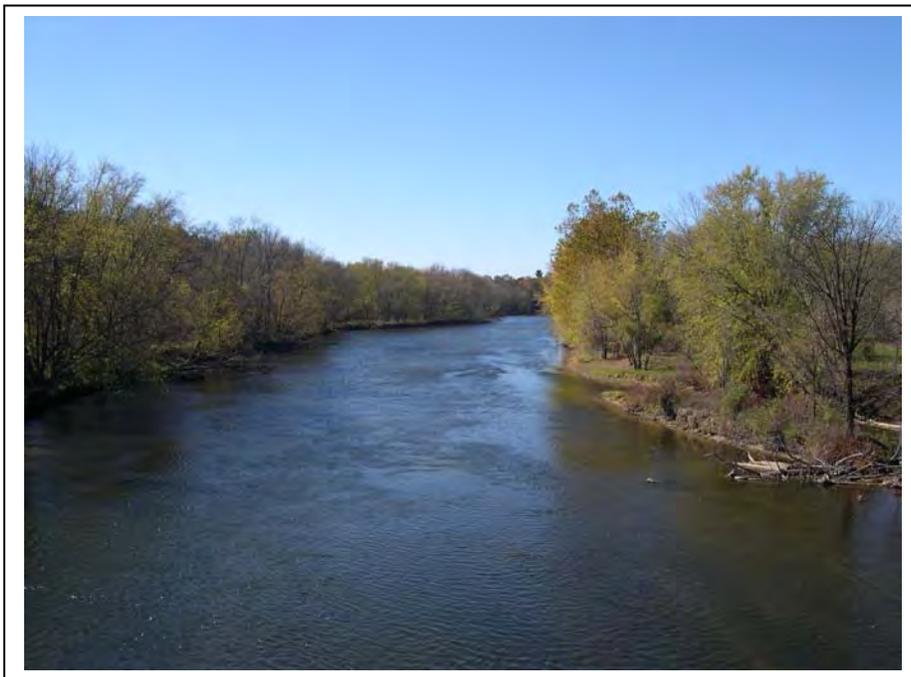
Finally, consideration must be given to the significant portion of Bridgeton Township owned by the State of Michigan. The township should carefully consider what might happen if the State decided to sell property to private land owners. In this case, specific site plan or planned unit development requirements may be needed in order to preserve as much of the valuable and natural open space as possible.

Chapter 8: Conclusion

The purpose of this master plan is to offer guidance, based on the desires of the community, to any and all actors whose decisions affect the land. It provides a clear vision for Bridgeton Township's future growth and development. If properly used, this master plan will help Bridgeton Township manage development, protect natural resources, and provide potential investors with a general sense of the desired type and location of new developments within the community.

After this plan is adopted, the community must remain dedicated and proactive towards land use planning by reviewing this master plan at a minimum of every five years. This will enable the Bridgeton Township Planning Commission to track progress of implementation, take the pulse of the community, and reassess the Goals and Objectives. This is a living document that should be updated as needed to keep it in line with the community's desires, and to keep it consistent with the Bridgeton Township Zoning Ordinance.

It is important to recognize that changes are inevitable; both natural and man-made. Managing those changes will be the key to Bridgeton Township's success in guiding development and preserving the township's character and natural resources.



Appendix A

Public Notices and Approval Process

This section chronicles efforts of Bridgeton Township to invite the public, and neighboring communities, to participate in the planning processes for the Bridgeton Township Master Plan Update. Also included are public notices, meeting minutes, and resolutions relevant to the development and adoption of this document.

Notice of Intent to Plan – Below is an example of the letter that was mailed to the listed communities on February 16, 2010.

Newaygo County Planning Commission
Muskegon County
Ashland Township
Casnovia Township
Cedar Creek Township
Egelston Township

Garfield Township
Holton Township
Moorland Township
Sheridan Charter Township
Consumers Energy
Great Lakes Energy

Mr. Harry Robinson, Chairman
Newaygo County Planning Commission
E. 80 Exchange
Grant, MI 49327

Dear Mr. Robinson,

On behalf of the Bridgeton Township Board of Trustees, I would like to advise you that Bridgeton Township with assistance from the West Michigan Shoreline Regional Development Commission has started the process of developing a Township Master Plan. It is anticipated that this plan will act as the Township's official Master Plan once completed and adopted. We are requesting your cooperation and comment during this process.

A public meeting has been scheduled for 7:00 PM on Monday, April 19 at the Bridgeton Township Hall located at 11830 South Warner Avenue. The purpose of the meeting is to gather community input for the Master Plan.

A draft document is expected to be completed by October 2010. At that time, a copy of the draft document will be submitted to you for your review and comment. We look forward to receiving your input regarding the Bridgeton Township Master Plan.

If you have any questions regarding the Bridgeton Township Master Plan, please contact me at (231) 722-7878 extension 18 or at ekuhn@wmsrde.org. Thank you for your time and cooperation.

Sincerely,

Erin Kuhn
Program Manager

Public Hearing Notice – Published in the April 14, 2010 edition of the Fremont Times-Indicator.

NOTICE OF TOWNSHIP MEETING REGARDING
BRIDGETON TOWNSHIP MASTER PLAN

Please be advised that Bridgeton Township, with the assistance of the West Michigan Shoreline Regional Development Commission (WMSRDC), will hold a Town Meeting on Monday, April 19, 2010 to receive public input for the Bridgeton Township Master Plan. The meeting will take place at 7:00 PM at the Bridgeton Township Hall located at 11830 South Warner Avenue, Grant, Michigan 49327. The meeting is open to the public, and everyone with an interest in the future direction of Bridgeton Township is encouraged to attend the meeting. Citizen participation in this process is essential.

Written comments may also be submitted by April 16, 2010 to the West Michigan Shoreline Regional Development Commission, P.O. Box 387, Muskegon, Michigan 49443 or via electronic mail at wmsrdc@wmsrdc.org. If there are any questions, please contact Ms. Erin Kuhn, Program Manager, at (231) 722-7878, extension 18 or at ekuhn@wmsrdc.org.

63-Day Review Period – Below is an example of the letter that was sent on February 25, 2011 to the same entities that were sent a Notice of Intent to Plan.

Mr. Harry Robinson, Chairman
Newaygo County Planning Commission
E. 80 Exchange
Grant, MI 49327

Dear Mr. Robinson,

On behalf of the Bridgeton Township Planning Commission, I would like to advise you that Bridgeton Township, with assistance from the West Michigan Shoreline Regional Development Commission, has completed a draft of the Bridgeton Township Master Plan. It is anticipated that this plan will act as the Township's official Master Plan once adopted.

At the February 2011 Bridgeton Township Regular Board Meeting, the Township Board approved the draft Plan for the state mandated Bordering Township and County 63-day Review Period. Enclosed is a CD copy of the draft Bridgeton Township Master Plan for your review and comment.

Please forward any and all written comments to the Bridgeton Township Hall located at 11830 South Warner Avenue, Grant, Michigan 49327 by Monday, May 9, 2011.

A public hearing to receive public comment is currently scheduled for May 16, 2011 at 7:00 p.m. at the Bridgeton Township Hall. An additional notice of the public hearing will be published in the local newspaper closer to the date of the public hearing.

If you have any questions regarding the draft Bridgeton Township Master Plan, please contact me at (231) 722-7878 extension 18 or at ekuhn@wmsrdc.org. Thank you for your time and cooperation.

Sincerely,

Erin Kuhn
Program Manager

Public Notice – Published in the March 28, 2011 and April 25, 2011 editions of the Fremont Times-Indicator.

**NOTICE OF PUBLIC VIEWING REGARDING
THE BRIDGETON TOWNSHIP MASTER PLAN**

Please be advised that Bridgeton Township with the assistance of the West Michigan Shoreline Regional Development Commission (WMSRDC) will hold a public viewing period between Monday, April 18, 2011 and Friday, May 6, 2011 to review the draft Bridgeton Township Master Plan. This viewing is open to the public and anyone with an interest in the Bridgeton Township Master Plan is encouraged to attend and review the document. The viewing will take place by appointment at the Bridgeton Township Hall located at 11830 South Warner Avenue, Grant, Michigan 49327. To schedule an appointment, call (231) 834-0014.

Following the viewing period, a Public Hearing will be held to receive comments on the Bridgeton Township Master Plan. The Public Hearing is scheduled for Monday, May 16, 2011 at the Bridgeton Township Hall, at 7:00 PM.

Written comments may also be submitted by Monday, May 9, 2011 to the West Michigan Shoreline Regional Development Commission, 316 Morris Avenue, Suite 340, P.O. Box 387, Muskegon, Michigan 49443 or via electronic mail at ekuhn@wmsrdc.org. If there are any questions, please contact Ms. Erin Kuhn, Program Manager, WMSRDC, (231) 722-7878 (extension 18).

Planning Commission Approval – The Bridgeton Township Master Plan Update was approved and passed to the Township Board, by roll call vote, on May 15, 2011. Below are the resolution and minutes from that meeting.

Planning Commission Resolution

I, Dave Hough, the Planning Commission Board Chairman, recommend approval of the Master Plan by resolution to be sent to the Township Board on Monday, June 13th seconded Marcia Annis-VanOver.

Roll call vote:

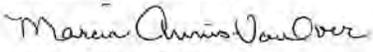
Marcia Annis-VanOver – yes,

Jenny Griffin – yes,

Dave Hough – yes.

Resolution carried.

Respectfully Submitted by



Marcia Annis-VanOver
Bridgeton Township
Planning Commission Secretary

Bridgeton Township
Planning Commission Minutes
May 16, 2011

Call to Order at 7:00 pm

Pledge of Allegiance

Roll Call – Vice Chair: Present – Marcia Annis-VanOver, Dave Hough and Jenny Griffin. Absent – Chris Matteson and Jim Schuiteman

Motion made for the approval of agenda by Marcia Annis-VanOver and seconded by Jenny Griffin. Motion carried.

Motion made for the approval of minutes from previous meeting dated 4/26/11 by Marcia Annis-VanOver and seconded by Jenny Griffin. Motion carried.

Communication: Dave received a letter from MTA about classes in June.

Township Representative – none

Recreation Committee – none

Building Inspector - none

Old Business: Fall clean – up at date needs to be set so that we can the information in the newsletter that will be going with the tax statements this summer – the date was decided on Saturday, September 24. The request for bids for the same three companies plus Geers will go out in the next two weeks so we can have the bids back by our next meeting. Motion made by Marcia Annis-VanOver that for fall clean – up on Saturday, September 24th from 8 am to 2 pm, Dave Hough seconded. Motion carried.

New Business:

Township Representative – none.

Members – none.

Audience – Tim Reagan referred a request for zoning question from a resident to Scott Wilk.

Work Session:

Close regular meeting 7:20 pm.

Public Hearing/Master Land Use Plan was opened at 7:20 pm.

WSRDC did not receive any comments on the Master Plan. Dave Hough talked to a few residents to come to the meeting tonight but was not interested. Jenny commented on how better the maps and tables are better. Tim Reagan brought up about the drainage of the property.

Resolution from the Planning Commission and the Township Board is needed to finalize the Master Plan then send to WSRDC so that they can finalize the printing of the Master Plan.

i, Dave Hough, the Planning Commission Board Chairman, recommend approval of the Master Plan by resolution to be sent to the Township Board on Monday, June 13th seconded Marcia Annis-VanOver. Roll call vote: Marcia Annis-VanOver – yes, Jenny Griffin – yes, Dave Hough – yes. Resolution carried.

The public hearing was closed at 7:25 pm.

Motion made to adjourn meeting at 7:43 pm by Marcia Annis-VanOver and seconded by Jenny Griffin. Motion carried.

Respectfully Submitted by,
Marcia Annis-VanOver
Planning Commission Secretary

Bridgeton Township Board Adoption – At its June 13, 2011 meeting, the Bridgeton Township Board reserved the right to approve or reject the township’s master plan, and subsequently adopted the Bridgeton Township Master Plan Update. Below are the resolutions from that meeting.

**TOWNSHIP OF Bridgeton
COUNTY OF NEWAYGO MICHIGAN
Resolution No. 0613-1-2011**

RESOLUTION ASSERTING TOWNSHIP BOARD RIGHT TO APPROVE MASTER PLAN

WHEREAS, the Michigan Planning Enabling Act (MPEA) authorizes the Planning Commission to prepare or amend a Master Plan for the use, development and preservation of all lands in the Township; and

WHEREAS, the MPEA authorizes a township board to assert by resolution its right to approve or reject the proposed master plan or plan amendment approved by the planning commission;

NOW THEREFORE BE IT RESOLVED THAT, pursuant to MCL 125.3843(3), the Bridgeton Township Board reserves to itself the right to approve or reject a proposed master plan or master plan amendment approved by the planning commission; and

BE IT ALSO RESOLVED THAT, after approval of a proposed master plan or master plan amendment by the planning commission, the Bridgeton Township Board shall approve or reject the proposed master plan or master plan amendment.

A statement of resolution recording the Township Board’s approval of proposed master plan or master plan amendment, signed by the Township Clerk, shall be included on the inside of the front or back cover of the master plan and, if the future land use map is a separate document from the text of the master plan, on the future land use map.

The foregoing resolution offered by Board Member Schooley

Second offered by Board Member Drake

Upon roll call vote the following voted:

"Aye": Beagon "Nay" _____
Schooley _____
Nelson _____
Drake _____
Schuteman _____

The Supervisor declared the resolution adopted.

DATE: June 13, 2011

Carolyn Drake
Carolyn Drake, Bridgeton Township Clerk

TOWNSHIP OF BRIDGETON

COUNTY OF NEWAYGO MICHIGAN

Resolution No. 0613-2-2011

TOWNSHIP BOARD RESOLUTION TO ADOPT REVISED MASTER PLAN

WHEREAS, the Michigan Planning Enabling Act (MPEA) authorizes the Planning Commission to prepare a Master Plan for the use, development and preservation of all lands in the Township; and

WHEREAS, the Planning Commission prepared a proposed *updated* Master Plan and submitted the plan to the Township Board for review and comment; and

WHEREAS, on May 9th, 2011, the Bridgeton Township Board received and reviewed the proposed Master Plan prepared by the Planning Commission and authorized distribution of the Master Plan to the Notice Group entities identified in the MPEA; and

WHEREAS, notice was provided to the Notice Group entities as provided in the MPEA; and

WHEREAS, the Planning Commission held a public hearing on MAY 16TH, 2011 consider public comment on the proposed *updated* Master Plan, and to further review and comment on the proposed *updated* Master Plan; and

WHEREAS, the Township Board finds that the proposed new *updated* Master Plan is desirable and proper and furthers the use, preservation, and development goals and strategies of the Township;

WHEREAS, the MPEA authorizes the Township Board to assert by resolution its right to approve or reject the proposed Master Plan;

THEREFORE BE IT HEREBY RESOLVED AS FOLLOWS:

1. ***Adoption of 2011 Master Plan.*** The Township Board hereby approves and adopts the proposed 2011 Master Plan, including all of the chapters, figures, maps and tables contained therein. Pursuant to MCL 125.3843 the Township Board has asserted by resolution its right to approve or reject the proposed Master Plan and therefore the approval granted herein is the final step for adoption of the plan as provided in MCL

RECORDED VOTES: 5 aye 0 naye 0 abstained

Carolyn Drake
Carolyn Drake, Bridgeton Township Clerk

June 13, 2011
Date

Appendix B

Survey



Bridgeton Township Planning Commission
11830 S Warner Ave
Grant MI 49327

March 20, 2010

To Fellow Bridgeton Community Members:

The current Bridgeton Township Planning Commission is working on the township's Master Plan and is requesting community input in this process. The community's ideas are important to this process. We are requesting that you fill out the enclosed short survey and return it to the Planning Commission by April 12, 2010 in the enclosed envelope.

The Planning Commission is also having a public meeting on Monday, April 19, 2010 at 7:00 pm at the Bridgeton Township Hall, 11830 S. Warner Ave, Grant. Please plan to attend to give your ideas a voice.

If you have any questions concerning this survey you can contact Dave Hough, Planning Commission Chairman, at 231-924-5573 or Marcia Annis-VanOver, Planning Commission Secretary, at 231-924-6601.

Sincerely,

Dave Hough
Planning Commission Chairman

Bridgeton Township Planning Commission
Master Plan Survey

Please fill out the following survey:

How Strongly do you agree/disagree with the following statements about the quality of life in Bridgeton Township?	1 Strongly Disagree	2 Mildly Disagree	3 Neutral	4 Mildly Agree	5 Strongly Agree
---	---------------------------	-------------------------	--------------	----------------------	------------------------

I am proud to say that I like in Bridgeton Township.					
--	--	--	--	--	--

The people in my neighborhood look out for each other.					
--	--	--	--	--	--

I am concerned about how growth in nearby communities will affect the township.					
---	--	--	--	--	--

Please rate in order of importance, the below concerns/issues as to how they relate to Bridgeton Township.	1 Not Important	2	3 Neutral	4	5 Very Important
--	-----------------------	---	--------------	---	------------------------

Environmental Concerns:

Protection of Topographical Elevations					
Recreational Uses					
Natural Features					

Land Uses:

Agriculture					
Commercial					
Wildlife Refuge					
Residential					
Open Spaces					
Wood Lots					
Forest -- Forestry					
Bicycle Path					
Waterway Uses					

Comments:

Bridgeton Township Planning Commission

Master Plan Survey Results

Sent out 100 surveys 16 completed 8 returned to sender

Please fill out the following survey:

How Strongly do you agree/disagree with the following statements about the quality of life in Bridgeton Township?	1	2	3	4	5	Average of Answers
	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	

I am proud to say that I like in Bridgeton Township.	0	0	2	3	11	3.2
--	---	---	---	---	----	-----

The people in my neighborhood look out for each other.	0	0	0	8	8	3.2
--	---	---	---	---	---	-----

I am concerned about how growth in nearby communities will affect the township.	1	0	9	3	3	3.2
---	---	---	---	---	---	-----

Please rate in order of importance, the below concerns/issues as to how they relate to Bridgeton Township.	1	2	3	4	5	Average of
	Not Important		Neutral		Very Important	

Environmental Concerns:

Protection of Topographical Elevations	1	1	5	1	8	3.2
Recreational Uses	0	0	5	1	10	3.2
Natural Features	0	0	4	3	9	3.2

Land Uses:

Agriculture	0	0	7	1	7	3.0
Commercial	2	2	6	2	4	3.2
Wildlife Refuge	0	0	5	3	8	3.2
Residential	0	0	4	4	8	3.2
Open Spaces	0	0	4	3	9	3.2
Wood Lots	0	0	4	3	9	3.2
Forest – Forestry	0	0	5	3	8	3.2
Bicycle Path	3	2	4	2	4	3.0
Waterway Uses	0	1	4	2	9	3.2

Comments

TK - Waterway Uses as in limiting powered craft, our concern is that the Muskegon River is being "overused" by high powered outboards, jet-skis, etc. rather than our wanting to see more "use".

Douglas P. Herman - Spend more time on fixing the roads and less on survey's.

No Name - I would like to see the river improved for fishing and stay natural as much as possible.

Doris Barnhard - Having lived on river frontage property for over fifty years, I am concerned that the river is over used. Fishing, conocing, tubing could be great family outings, but a few are causing this to become a problem. We are being forced from our own river frontage.

John Pastotnik - To Whom This Does Concern, my wife Flora and I lived here on Dickerson Road for about 30 years. We have excellent neighbors and all them have been helpful at time of need. This is a might fine area - we live it and Bridgeton Township - Newaygo County were good to my sister-in-law Ardeth Fagan and my mother-in-law Olive Chandler for many years. We would like to spend our last days on earth here in Bridgeton Township. Thank you.

Mike & Susan Reagan - (1) Preserving and protecting quality of life, natural resourses, air, land and water quality. (2) Improving all of above. (3) Preventing harm to all above w/zoning, regulation and enforcement.

4887 Jack Pine Dr - I like living in Bridgeton but proud is a strong word. On people in my neighborhood - it is built upon relationships we have built. On growth of nearby communities - I never think about it. On bicycle path - this would be great.

Appendix C

SWOT Analysis Report

BRIDGETON TOWNSHIP MASTER PLAN *SWOT ANALYSIS REPORT*

Purpose of the SWOT Analysis:

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis is a highly effective way of identifying Strengths and Weaknesses (existing conditions) and also your Opportunities and Threats (possible future conditions). Carrying out this type of analysis will help an entity to focus on the areas where it is strong and where the greatest opportunities lie.

To identify various areas in each of these categories, often a series of questions ought to be answered. The following questions were examined:

Strengths:

- What are this project's advantages?
- What are Bridgeton best attributes?
- How do others view the Bridgeton area and its existing condition?

Weaknesses:

- What are areas for improvement for the Bridgeton area?
- What types of things/attitudes should be avoided?

Opportunities:

- In which areas are the good opportunities facing this project?
- What are the interesting trends that you are aware of?

Threats:

- What obstacles does this project face?
- Down the road, who or what will be a force for detriment?

When this analysis is done in a realistic and candid way, it can be very informative – both in terms of pointing out what needs to be done, and in putting various issues into proper perspective.

The Bridgeton Township Master Plan SWOT Analysis:

Bridgeton Township, Newaygo County, Michigan held a public meeting on Tuesday, April 19, 2010 at 7:00 PM at the township hall in order to gather input from citizens and township leaders regarding the development of the Bridgeton Township Master Plan and the future direction of the township. During the meeting a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis exercise was conducted by staff from the West Michigan Shoreline Regional Development Commission. Attendees of the meeting were asked to list Strengths, Weaknesses, Opportunities and Threats facing Bridgeton Township. Listed below are responses from the SWOT Analysis.

SWOT Results:

Strengths

- small community
- less dense
- river
- recreation
- central location
- bedroom community
- containing sprawl
- long term vision with flexibility
- safety health welfare
- environment
- rural feel
- natural resources - state game area
- access good schools – solid transportation
- respectability
- strong planning efforts
- tight community/support
- snowmobile trail
- motorcycle park
- website
- cemetery/history
- paved roads quantity/quality
- small businesses

Weaknesses

- river – tourism impact
- snowmobile – noise disturbances
- infrastructure handling tourism
- lack of resident participation
- lack of communication – leaders/residents
- lack of communication – internet
- gravel roads
- distance from fire/police protection
- apathy
- economy

Opportunities

- park/boat launch
- student programs - ffa, tech center
- renewable energies
- rubbish transfer site
- support for small businesses

- intergovernmental cooperation – share resources
- river
- utilize tourism
- focus on recreation opportunities
- communication infrastructure
- improve roads
- small businesses
- community foundation funds

Threats

- state/federal requirements
- lack of local funds – revenue sharing
- township permitting process
- camper use
- splitting of lots
- lack of public participation
- distance from public safety
- river – flooding/tourism
- blight
- surrounding communities
 - wastewater plant development
- overdevelopment – septic
- forest overharvesting
- population retention
- agricultural cafo's

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