



Master Plan Update

Garfield Township Bay County, Michigan

Adopted by the Garfield Township Planning Commission
on May 17, 2010

PLANNING COMMISSION RESOLUTION OF ADOPTION:
GARFIELD TOWNSHIP MASTER PLAN UPDATE

Resolution Number: 1

The following Resolution was offered by Commissioner Dave Mills and seconded by Commissioner Clarence Pelton

WHEREAS, The Township of Garfield has established a Planning Commission under the Planning Enabling Act, State Public Act 33 of 2008, as amended; and,

WHEREAS, The Township Planning Commission is required by Section 7 of said Act to make and adopt a master plan as a guide for the physical development of the township; and,

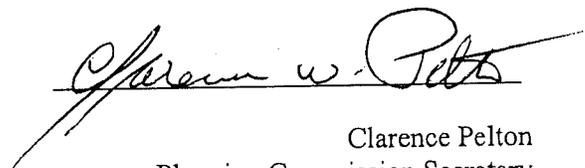
WHEREAS, The Township Planning Commission has worked with the consultants at Wade Trim to oversee a planning process that included significant public input, as well as investigations and surveys of the existing resources; and,

WHEREAS, The plan was presented to the public at a hearing held on May 17, 2010, before the Planning Commission, with notice of the hearing being provided in accordance with Section 43 of Public Act 33 of 2008, as amended;

NOW THEREFORE BE IT RESOLVED THAT, The content of this document, together with all maps attached to and contained herein, is hereby adopted by the Planning Commission as the Garfield Township Master Plan Update, on this 17th day of May, 2010.

AYES: 3 Roll Call Done
Bruce Brabie - a
NAYS: 0 Don Dubois - a
ABSENT: 2 Clarence Pelton a

I, Clarence Pelton, Secretary of the Garfield Township Planning Commission, do hereby certify the foregoing to be a true and correct copy of a resolution that was offered by the Garfield Township Planning Commission at their regular meeting held on May 17, 2010.


Clarence Pelton
Planning Commission Secretary

Garfield Township Master Plan Update

Adopted May 17, 2010



Acknowledgements

Garfield Township

**1138 W. Erickson Road
Linwood, Michigan, 48634
(989) 879-2552**

Township Board

James Dubay, Supervisor
Kimberly Day, Clerk
Betty Monsion, Treasurer
Brad Dubay, Trustee
James Herber, Trustee

Planning Commission

Bruce Bodrie
David Grillo
James Herber
Clarence Pelton
James Warren

Zoning Administrator

Leroy Day

Assistance Provided By:



3933 Monitor Road
Bay City, Michigan, 48707
www.WadeTrim.com

Garfield Township Master Plan Update

Adopted May 17, 2010



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Introduction and Executive Summary

Authority

The Township derives its authority to Master Plan from the Michigan Planning Enabling Act, PA 33 of 2008, which was recently adopted by the State Legislature to replace the Township Planning Act. Public Act 33 states:

"The planning commission shall make and approve a master plan as a guide for development within the planning jurisdiction."

Regional Setting

Garfield Township is located in western Bay County, northwest of Bay City. The adjacent townships are Mount Forest to the north, Fraser to the east, Beaver to the south and Mills (Midland County) to the west. The small, unincorporated community of Crump is located in the southeast portion of the Township. The Township is located approximately seven miles west of the Saginaw Bay (Lake Huron) shoreline.

The Township is part of the Bay City/Midland/Saginaw metropolitan area and the 14 County East Central Michigan Planning and Development Region (ECMPDR). The ECMPDR Region is one of fourteen regional planning areas in the state.

The Township is easily accessible from the I-75/Linwood exit, approximately one mile to the east, or through Garfield Road, a regional collector that runs north-south through the Township.

The master planning process is cooperative and public. Input from the public and various governmental entities are gathered throughout the planning process. Public Act 33 requires the Planning Commission to hold a public hearing before the final adoption of a master plan. Also, Public Act 33 requires review of a community's master plan after a five-year period but allows for change at any time. However, a public hearing is required if the Planning Commission wishes to alter or amend their master plan after its original adoption. The

master planning process offers the Planning Commission the opportunity to analyze and address any significant changes to the Township that may result in needed modifications to previous planning efforts. It also provides the opportunity to ascertain progress in implementing the goals and policies outlined in previous planning efforts.



Purpose

The planning process was designed to involve conscious selections of policies and land use choices relating to growth and development in Garfield Township. The Master Plan serves to promote these policies through the following:

1. Provides a general statement of the Township's goals and provides a comprehensive view of the community's preferred future.
2. Serves as the primary policy guide for local officials when considering zoning, land division, capital improvement projects and any other matters related to land development. Thus, the Master Plan provides a stable and consistent basis for decision making.
3. Provides the statutory basis for the Township Zoning Ordinance, as required by the State of Michigan.
4. Helps to coordinate public improvements and private development activities to assure the judicious and efficient expenditure of public funds.



Garfield Township Hall

Public Involvement

The process of developing a Master Plan that is both meaningful to the community and feasible in its implementation must enjoy the participation of a larger stake-holding group. In order to garner this needed input, direct communication between the Planning Commission and Garfield Township stakeholders was pursued throughout the Master Plan process. Knowledge regarding the concerns of the community was gained through multiple meetings, a public workshop, as well as a public hearing. This type of direct interaction with stakeholders allows for a more complete framework of the concerns and needs of Garfield Township community members.

Executive Summary

The Master Planning process began with a detailed assessment of existing conditions within the Township (Chapters 2 through 5 of this Plan). The most significant conclusions drawn from the existing conditions assessment include:

- The Township largely consists of agricultural and undeveloped land, comprising nearly 90 percent of the Township's total area.
- More than 3,500 acres of land within the Township is enrolled in the Michigan Farm-land and Open Space Preservation Program (PA 116).
- Residential lands, predominantly rural single-family dwellings, comprise approximately 11 percent of the Township's total area.
- Non-residential lands (commercial, industrial, institutional, etc.) comprise a relatively small percentage of the Township's land area. Commercial uses are primarily concentrated in the community of Crump.

- More than 8,900 acres of land in the Township are covered by woodlands (40 percent of the total Township area).
- Soil surveys indicate that the majority of land within the Township contain soils that are well suited for farming.
- As of 2007, the Township's population stood at 1,860 residents, representing a 4.8 percent growth from its 2000 population.
- Based upon past growth trends, the population of the Township is expected to increase to approximately 1,970 residents by the year 2025.
- Based upon a growing population and a declining average household size, it is estimated that approximately 260 new housing units will need to be added within the Township by 2025.
- The major transportation routes within the Township include Garfield Road, Erickson Road, Anderson Road and Linwood Road. Interstate 75, located approximately one mile east of the Township, effectively connects Garfield Township to the larger region.
- Of the 76.93 miles of roads within Garfield Township, well over half (43.46 miles or 56.5 percent) are paved.
- At present, no public water or sewer lines are located within the Township.

After gathering critical input from a dedicated group of citizens and Township officials, a clear vision for the future development of the Township was established. This vision is represented in

narrative form through various goals and objectives (Chapter 6). Overarching community goals include: preserving the rural character of the community; protecting the rights of the individual property owner; relating land use to the long-term natural characteristics of the land rather than short-term economic gain; and cooperating with the surrounding municipalities to provide needed community services.

Crafted through direct public participation, the Future Land Use Plan for Garfield Township is presented in Chapter 7. The Future Land Use Plan and Map establish seven future land use classifications, each of which contains specific recommendations for land use and the overall character of the land. The most dominant future land use classification is Agricultural/Rural Residential, which comprises nearly 95 percent of the total land area of the Township.

To assist the Township in implementing the various recommendations contained within the Master Plan, various resources and strategies for implementation are outlined in Chapter 8.

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Existing Land Use



information was reviewed and corrected for accuracy against aerial photographs.

The use of each parcel was categorized in accordance with a predetermined land use classification system, the Michigan Land Cover/Use Classification System, developed by the Michigan Department of Natural Resources (MDNR). Acreage calculations for each land use category are derived directly from the data compiled on the Existing Land Use Map, and are presented in **Table 1**.

Introduction

The rational application of the planning process in the preparation of the Future Land Use Plan is possible only when there is a clear understanding of existing conditions and relationships between land uses. Knowledge of existing land development furnishes the basic information by which decisions can be made concerning proposals for future residential, commercial, industrial, and public land use activities. The Existing Land Use Map and table included in this section of the report will serve as a ready reference for Garfield Township in its consideration of land use management and public improvement proposals.

Survey Methodology

A parcel-by-parcel field survey was originally conducted in March 1997 to document existing development in Garfield Township. Each use was recorded on a base map and subsequently referenced for accuracy against aerial photographs. In June of 2009, a newly updated base map was obtained from Bay County, and the 1997 existing land use information was updated by Garfield Township staff. Again, the existing land use

Land Use Characteristics

Map 1 illustrates how the land in the Township is being utilized as of June 2009. The image that is revealed after the “jigsaw” pieces are assembled is essentially a simple organization of land uses that resemble a rural mid-western farming community. The unincorporated community of Crump serves as the central commercial center and focal point for the Township. The vast majority of residences are located along section line roads throughout the entire Township. No medium to high density developments exist in the Township, thus preserving its rural character.

Table 1: Existing Land Use, 2009

Category	Acres	Percent of Total
Agricultural	12,097.6	53.0%
Single Family Residential	2,473.6	10.8%
Mixed Use Residential	27.5	0.1%
Commercial	25.4	0.1%
Industrial	95.8	0.4%
Public/Semi-Public	10.5	0.0%
Parks & Recreation	258.5	1.1%
Vacant/Rights-of-Way	7,839.5	34.3%
TOTALS	22,828.4	100.0%

Source: 1997 Master Plan, Updated by Garfield Township, June 2009.

The Township largely consists of agricultural and undeveloped land. Combined, agricultural and vacant lands comprise nearly 90 percent of the Township's total area, out of a total Township acreage of 22,828.4. A detailed discussion of each land use classification is presented below.

Agriculture

The agricultural category includes lands under cultivation, horse farms, ranching operations, sod farms, pastures, orchards, and tree farms. The largest land use in Garfield Township, there are 12,097.6 acres dedicated to agricultural purposes, which amounts to 53.0 percent of the total land area. Generally, the southern and eastern portions of the Township are most heavily utilized for agriculture, while the more densely wooded western portion of the Township features less farmland.

Map 2 illustrates lands enrolled in the Michigan Department of Agriculture Farmland and Open Space Preservation Program (PA 116) within the Township. The program is designed to preserve farmland and open space through agreements that restrict development, and provide tax incentives for program participation. Public Act 116 allows landowners to commit their property for agricul-



Pasture in Garfield Township

tural use for a certain time period in return for a tax assessment based on the land's agricultural value rather than development or market value. Comparing **Map 1** with **Map 2**, it is evident that many of the larger agricultural lands are committed under PA 116. As of July 2009, lands enrolled in the program within Garfield Township comprise approximately 3,538 acres.

Single Family Residential

This category includes one-family detached dwelling units, two-family duplex dwelling units, trailers and mobile homes outside of designated mobile home parks, and accessory buildings such as garages that are related to these units. It also includes farmsteads and related agricultural buildings located near the principal dwelling. Within the Township, 2,473.6 acres, or 10.8 percent of the total land area is considered single-family residential. Single family homes are scattered throughout the Township in no particular concentration, primarily along the county-line roads.



Cropland in Garfield Township

Mixed Use Residential

This category includes uses with multiple utility. For example, a residence that doubles as a excavation contracting office would fall under the mixed use category. Within the Township, 27.5 acres, or 0.1 percent of the total land area is classified as mixed use residential.

Commercial

Uses included in the commercial category are building material sales, eating and drinking establishments, grocery stores, farm equipment dealers, and gasoline service stations. Garfield Township contains 24.4 acres of commercial land, which amounts to 0.1 percent of the total land area. Except for the Heritier Saw Mill located on 11 Mile Road, all commercial uses are concentrated within Crump, near the intersection of Garfield Road and Anderson Road.

Industrial

Included in this category are warehouses, processing facilities, and manufacturing and non-manufacturing uses which are primarily industrial in nature. This category may include land areas with or without buildings where raw or semi-finished materials are fabricated or those using or storing raw mate-



Rural residential living in Garfield Township

rials for primary production. Typical uses include warehouses, lumber yards, junk yards, fabrication establishments, collision shops, or industrial printing operations.

A total of 95.8 acres, or 0.4 percent of Township land is used for industrial purposes. The largest industrial use is an explosives manufacturer located off of 11 Mile Road.

Public/Semi-Public

Public/Semi-Public land uses include lands for cultural, public assembly and utility substations, (e.g., gas, oil, water, electricity), educational uses, and governmental administration and service buildings. Within Garfield Township, 10.5 acres are used for public/semi-public purposes. Facilities include the Township Hall, Fire Department and the Garfield United Methodist Church.

Parks & Recreation

This category includes all public and private recreational facilities within the Township. The only public recreational facility is the Garfield Township Park, 36.3 acres in size, which is located adjacent to the Township Hall on Erickson Road. Two private recreation facilities are located in the Township:



Grocery and party store in the unincorporated community of Crump.



Garfield United Methodist Church



Garfield Township Park

the Bay Conservation and Gun Club, located on Rogers Road; and the Crump Fox Club, located on Prevo Road. In total, parks and recreation lands comprise 258.5 acres or 1.1 percent of the total Township land area.

Vacant/Open Space/Other

This category includes lands that are lying fallow, vacant lands, woodlands, rivers and other open spaces for which no specific use is evident from field inspection. Also included are all dedicated rights-of-way including road, railroad and utility easements are included in this category. The second largest category in Garfield Township, this land use comprises 7,839.5 acres, or 34.3 percent of the total land area.

3

Natural Features Assessment

Introduction

The development of land can significantly impact, and in turn be impacted by, the natural environment. Thus, when preparing a future land use plan, it is important to determine the extent of environmentally sensitive areas within a community.

Environmentally sensitive areas are lands whose destruction or disturbance will immediately effect the life of a community by either:

1. Creating hazards such as flooding or slope erosion;
2. Destroying important public resources such as groundwater supplies or surface water bodies; or,
3. Wasting important productive lands and non-renewable resources.

Each of these effects is detrimental to the general welfare of a community and may result in an economic loss.

The purpose of this section is two-fold. First, it identifies which areas in the Township are most suitable for development; specifically, those areas which will minimize development costs and provide maximum amenities without adversely impacting existing natural systems. Second, it identifies land which should be conserved in its natural state

and is most suitable for open space or recreation purposes.

Topography, woodlands, and soil conditions are among the most important natural features that impact land use. Descriptions of these three features follow.

Topography

The topography of Garfield Township is relatively flat. Elevations range from a low of 630 feet above sea level in the southeast to a high of 675 feet above sea level in the northwest portion of the Township. The flat terrain presents few constraints to development.

Woodlands

Woodlands data for Garfield Township is derived from the Michigan Resource Information System (MIRIS) Land Use/Land Cover data for Bay County. **Map 3** depicts the location of woodlands. As shown on this map, most woodlands are found in areas west of Garfield Road. In total, more than 8,900 acres of land are covered by woodlands within Garfield Township, comprising approximately 40 percent of the entire Township land area.

Woodland areas are complex ecological systems and, consequently, provide multiple benefits to the environment and its wildlife and human inhabitants. Woodlands play a role in flood protection by slowing the flow of surface run-off to allow for greater storm water infiltration. Woodlands also reduce air pollutants by absorbing certain airborne pollutants. In addition to providing wildlife habitats, forest vegetation moderates the effects of winds and temperatures while stabilizing and enriching the soil. For human inhabitants, forested areas offer a visual and audio barriers, which are considered aesthetically pleasing and offer unique opportunities for recreation and relaxation.

Woodland resources contribute greatly to the Township's environmental quality. The conservation of woodlands will play a positive role in maintaining and enhancing the future environmental character of the Township.

Soil Conditions

The review soil conditions includes an assessment of the various soil associations found within Garfield Township as well as insight into the soil's suitability to support agricultural production.

Soil Associations

There are three soil associations present in Garfield Township: Wixom-Pipestone-Tappan, Tappan-Londo-Poseyville, and Londo-Tappan. The following briefly describes the general characteristics of each soil association as reported in the Soil Survey of Bay County. **Map 4** delineates the general boundary line of each soil association.

The Tappan-Londo-Poseyville soil association is found primarily along the eastern sections of the Township and in large portions throughout the western half. This soil association is made up primarily of nearly level loamy sands that are poorly drained.

The Wixom-Pipestone-Tappan soil association is found throughout the central portion of the Township and along the segments of the Kawkawlin river. This association is considered to be somewhat poorly drained and nearly level in character.

The last soil association found along the eastern edge of the south east quarter of the Township is the Londo-Tappan. This association shares the same features as the previous two; nearly level and poorly drained.

Soil characteristics help to define lands capacity to support certain types of land uses. Soils most suitable for development purposes are well-drained



North Branch Kawkawlin River

and are not subject to a high water table. Adequate drainage is important to minimizing storm water impacts and the efficient operation of septic drain fields. Adequate depth to the water table is necessary to prevent water contamination from septic systems. A high water table also may limit the construction of basements. Though civil engineering techniques can be employed to improve drainage and maintain adequate separation from the water table, such techniques are expensive to construct and maintain.

Agricultural Suitability

Soils also play an important role in the food supply system. The U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) identifies soils that are well or uniquely suited to crop production. When making land use decisions, it is important to consider the value of certain soils for agricultural purposes. Once a soil is developed or used for a non-agricultural purpose, it is permanently altered and its utility for agricultural production is greatly diminished if not destroyed. Although the agricultural industry is in decline, planners and public officials should carefully consider any development proposal which threatens this non-renewable resource.

According to the Soil Survey of Bay County, prepared by the NRCS, soils in Garfield Township are generally well suited for the production of crops commonly grown in the region. In order to more specifically identify the lands best suited for agricultural production, prime farmland data has been collected and mapped (see **Map 4**). The NRCS outlines five prime farmland categories, three of which are found within Garfield Township. The five prime farmland categories are defined below:

- Prime Farmlands - land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and that is available for these uses. It has the combination of soil properties, growing season, and moisture supply needed to produce sustained high yields of crops in an economic manner if it is treated and managed according to acceptable farming methods, including water management.¹
- Farmland of Local Importance - land of importance to the local economy for the production of food, feed, fiber, forage, or oilseed crops, as determined by the appropriate State or local agency or agencies, but does not meet the criteria of Prime Farmland.²
- Prime Farmland if Drained - lands that could be classified as Prime Farmland if provided with the proper draining techniques.
- Prime Farmland if Drained and Protected from Flooding - lands that could be classified as prime farmland if provided with proper draining and flood prevention techniques.

- Not Prime Farmland - lands not suitable for agricultural production for reasons of inadequate water supply, unfavorable temperature and growing season, and/or unacceptable nutrients for farming.

Reflective of the Township's strong agricultural heritage, and as shown **Map 4**, a substantial majority of land in the Township is classified as prime farmland if drained. In total, approximately 17,700 acres or 78 percent of the land within Garfield Township is classified as prime farmland if drained. Additionally, lands classified as farmland of local importance comprise approximately 1,300 acres or 6 percent of the total Township land area.

A relatively small amount of land in the Township is classified as not prime farmland. These lands are commonly found along water bodies, such as the North Branch Kawkawlin River and Erickson Drain. The prevalence of prime farmland in Garfield Township suggests that agricultural preservation be pursued as a community policy.

Wind Resources

The drive toward alternative energy sources, including wind energy, is gaining momentum. According to the Michigan Association of Planning's recently adopted Wind Energy Policy, "planners must be prepared to respond to the increasing demand for the development of alternative energy systems as a way to reduce dependence on fossil fuels." The policy also stresses that "municipalities must be prepared to embrace this new technology while protecting important local character, the environment, and quality of life," resulting in the need to obtain "a balance between the economic and environmental benefits of wind energy, and the likely adverse land use impacts."

In 2008, the Michigan legislature enacted a Renewable Portfolio Standard which, among other initiatives, mandates that 10 percent of the State's energy come from renewable sources by 2015. This mandate, coupled with Michigan's rich wind resources and declining costs of wind generation technology, has led to a strong interest in wind energy generation from both utility providers and private consumers (businesses, schools, homeowners, etc.). Two types of wind energy conversion systems are common: utility-scale, which supply energy to the utility grid for commercial profit; and on-site scale, which produce electricity used only by the primary residence, agricultural operation, or business.

In order to assess the potential for the generation of wind energy at the local level, the Land Policy Institute has developed a prototype wind prospecting tool. The purpose of the wind prospecting tool is to:

- Filter out areas of low potential for wind energy development.
- Focus efforts of stakeholders on high quality areas, and provide critical analysis of local and state policy gaps that could turn high quality areas into wind development ready communities where local interest and support is strong.
- Target statewide incentive policy and the wind development community investment toward those areas that are most conducive for wind energy development.
- Provide a clear benchmark of community wind development potential, and pathways to attracting investment

The wind prospecting tool relies on wind density data as calculated by the National Renewable Energy Laboratory using a 1 to 7 wind density rating scale (wind densities are recorded at a height of 50 meters). The wind prospecting tool assumes that wind densities rated higher than 3 are sufficient to support utility-scale wind energy conversion systems.

As detailed in the wind prospecting tool, existing wind densities within Garfield Township range between 1 and 2. However, several adjacent Bay County communities located along the Saginaw Bay, including Fraser Township and Kawkawlin Township, have been determined to have wind speeds sufficient to support utility-scale wind energy conversion systems. Even though utility-scale wind energy conversion systems may not be feasible within Garfield Township, the potential for private businesses, institutions, and homeowners to generate power from the wind does exist, and should be allowed and appropriately regulated within the Township.

Footnotes:

1. USDA Handbook No. 18, October 1993.
2. Farmland Protection Policy Act, Public Law 97-98, 7 U.S.C. 4201.

4

Socioeconomic Profile

Introduction

Population and household characteristics are essential components to consider in the development of any Master Plan. An analysis of a community's existing and future population and household characteristics provides a foundation upon which a major portion of a Master Plan is based. While an evaluation of a community's current characteristics provides insight to immediate needs and deficiencies, population projections provide a basis for determining future land use requirements, public facility needs, and essential services.

The following examples illustrate this point. A younger population may demand schools, active recreation opportunities, and low density residential development, while an older population may require property maintenance assistance and high-

er density residential development. Also, persons characterized as low income typically generate a higher demand for publicly provided facilities than persons in higher income categories who have access to private facilities.

This socioeconomic profile examines several elements which are central to understanding a community's population and housing characteristics. These items include population growth patterns, population projections, age breakdowns, household size, housing characteristics, income characteristics, and employment patterns.

Population Profile

Population Trends

Population growth is the most important factor influencing land use decisions in any community. Simply put, if the population of a community is growing, there will be a need for more housing, commerce, industry, parks and recreation, public services and facilities, or roads.

Table 2 compares population trends for Garfield Township, the adjacent Townships, Bay County and the State of Michigan between 1980 and 2007. In 1980, Garfield Township had a total population of 1,810, which declined to 1,736 by 1990. However,

Table 2: Population Trends, 1980-2007

Place	1980	1990	% Change (80-90)	2000	% Change (90-00)	2007 ¹	% Change (00-07)	% Change (80-07)
Garfield Township	1,810	1,736	-4.1%	1,775	2.2%	1,860	4.8%	2.8%
Beaver Township	3,027	2,810	-7.2%	2,806	-0.1%	2,923	4.2%	-3.4%
Fraser Township	3,954	3,680	-6.9%	3,375	-8.3%	3,253	-3.6%	-17.7%
Mills Twp. (Midland Co.)	1,461	1,635	11.9%	1,871	14.4%	1,957	4.6%	33.9%
Mt Forest Township	1,444	1,457	0.9%	1,405	-3.6%	1,756	25.0%	21.6%
Bay County	119,881	111,723	-6.8%	110,157	-1.4%	107,517	-2.4%	-10.3%
Michigan	9,262,078	9,295,297	0.4%	9,938,444	6.9%	10,071,822	1.3%	8.7%

¹ 2007 Population Estimate Source: Population Division, US Census Bureau.
Source: 1980, 1990, 2000 US Census Reports

since 1990, the Township has experienced population growth, increasing to 1,775 residents by 2000 and 1,860 by 2007. Overall, Garfield Township grew in population between 1980 and 2007 by 50 residents, or 2.8 percent. Significantly, however, the Township's growth rate between 2000 and 2007 registered at 4.8 percent. This is a positive trend that points toward continued growth into the future for Garfield Township, and is reflective of a continuing national trend of upper and middle income residents moving from core cities (i.e., Bay City) into surrounding suburban and rural areas like those found throughout Bay County.

The Township's historical population change is generally average when compared to the surrounding Townships, Bay County and the State. In contrast to Garfield Township, several communities declined in population between 1980 and 2007, including Fraser Township (-17.7 percent), Bay County (-10.3 percent) and Beaver Township (-3.4 percent). However, several units of government featured growth rates that were higher than Garfield Township between 1980 and 2007 including the State (8.7 percent), Mt. Forest Township (21.6 percent) and Mills Township (33.9 percent).

Population Projections

Table 3 presents one method for projecting the future population of Bay County and two methods for projecting the future population of Garfield Township through the year 2025. For Bay County, the numeric method was utilized, which is based on the County's population trend between 1990 and 2007 extended on a linear basis through 2025. Utilizing this approach, Bay County's future population is expected to continue to decline through 2025, reaching 103,704 residents.

A numeric population projection was also prepared for Garfield Township, based on its rate of growth between 1990 and 2007 and extended through 2025 on a linear basis. This numeric approach projects continued population increases for the Township, reaching 1,967 residents by 2025.

In addition to a numeric method, a component population projection method was employed to determine the future population of Garfield Township. The component method projects future population as a proportion, or share, of the County's expected future population. Historical ratios reveal that the Township's share of the County's population ranged from 1.55 percent in 1990, 1.61 percent

Table 3: Township Population Projections, 2010-2025

Place, Source and Projection Method	Historical Population			Population Projections			
	1990	2000	2007	2010	2015	2020	2025
Bay County							
U.S. Census	111,723	110,157	107,517				
Numeric Method ¹				107,296	106,098	104,901	103,704
Garfield Township							
U.S. Census	1,736	1,775	1,860				
Numeric Method ¹				1,862	1,897	1,932	1,967
Component Method ²				1,867	1,899	1,941	1,970
Average Projection				1,865	1,898	1,937	1,969

¹ Represents extension of population trend between 1990 and 2007 on a linear trend basis.

² Represents Township's estimated share of the County's projected population. Township's estimated share is based on the actual share of the County population from 1990 through 2007, extended through 2025 (1.74% in 2010; 1.79% in 2015; 1.85% in 2020; and 1.90% in 2025). Projection analysis by Wade-Trim

in 2000 and 1.73 percent in 2007. Wade-Trim expects that the Township’s share of the County’s population will continue to increase through the year 2025. Extending the past trends into the future, we expect that the Township’s share of the County’s population will reach 1.74 percent by 2010, 1.79 percent by 2015, 1.85 percent by 2020 and 1.90 percent by 2025. Applying these percentages against the County’s projected future population indicates future population growth for Garfield Township. Specifically, the component project methods results in an expected population of 1,970 residents by 2025.

Both the numeric and component population projection methods for Garfield Township result in similar population growth expectations. Therefore, the “accepted” population projection for Garfield Township, which will be referred to throughout this Master Plan, will be the average of the two population projection methods (1,969 residents by the year 2025).

As with all population projections, however, the numbers derived from the above described projections are heavily based on past trends. These projections can not foresee any significant developments, economic occurrences, or changing personal habitation preferences that may occur in the future. These figures should, therefore, be seen only as a preliminary benchmark for analysis of future population attributes.

Age Distribution

Information on age distribution within a population can assist a community in matching public services to community characteristics and in determining special needs of certain age groups. For example, the younger population tends to require more rental housing units and smaller homes, while the elderly population may have a need for assisted living facilities. Analysis of age distribution may also be used by policy makers to identify current gaps in services and to project future service needs for housing, education, recreation and medical care.

It is of equal importance in planning to anticipate which age groups are likely to increase during the planning period. Examples of this are the aging “baby boomers” and their children; both forming waves of population rise and fall as they move through their life-cycles.

Data in **Table 4** provide the age composition for Garfield Township in 1990 and 2000. Statistics clearly indicate that the Township has grown older, similar to state and national trends, since 1990. In 1990, the Township had a median age of 30.5 years, which rose to 36.7 years by 2000. The aging Township

Table 4: Age Group Trends, 1990-2000

Garfield Township Age Groups	1990		2000		Change in Percent of Population
	#	%	#	%	
Under 5 Years	118	6.8%	107	6.0%	-0.8%
5 to 14 Years	327	18.8%	261	14.7%	-4.1%
15 to 24 Years	298	17.2%	245	13.8%	-3.4%
25 to 34 Years	230	13.2%	215	12.1%	-1.1%
35 to 44 Years	324	18.7%	282	15.9%	-2.8%
45 to 54 Years	196	11.3%	325	18.3%	7.0%
55 to 64 Years	97	5.6%	195	11.0%	5.4%
65 to 74 Years	87	5.0%	76	4.3%	-0.7%
75 to 84 Years	50	2.9%	49	2.8%	-0.1%
85 Years and Over	9	0.5%	20	1.1%	0.6%
Totals	1,736	100.0%	1,775	100.0%	
Median Age (Years)	30.5		36.7		

Source: 1990 and 2000 US Census Reports

population is further demonstrated by sharp increases in certain older age groups and decreases in certain younger age groups. Between 1990 and 2000, sharp increases were found in the 45 to 54 year age group (+7.0 percentage points) and the 55 to 64 year age group (+5.4 percentage points). Significant decreases were found in the 5 to 14 year age group (-4.1 percentage points), 15 to 24 year age group (-3.4 percentage points), 35 to 44 year age group (-2.8 percentage points) and 25 to 34 year age group (-1.1 percentage points).

Even though the overall Township population has aged, the early- to mid-retirement age population (65 through 84 years) actually declined as a percent of the total population between 1990 and 2000. However, the late-retirement age population (85 years or older) increased as a percent of the total population between 1990 and 2000. This may be an indication that, although the existing retirement population in 1990 continued to live within the Township through the 1990's, many of those citizens nearing retirement prior to 1990 elected to move elsewhere after reaching retirement age during the 1990's. To address this issue, the Township may want to seek opportunities to better accommodate its retirement population, allowing them to "age-in-place" within Garfield Township.

Persons Per Household

The United States as a whole has experienced a decline in the number of persons per household. The number of persons per household has also declined in Garfield Township. This is important since, as the number of persons per household decreases,

the need for housing units increases proportionately faster than the rate of population gain.

The 1980 U.S. Census reported that Garfield Township averaged 3.57 persons per household. By 2000, this number had decreased to 2.87. Based on a linear extension of this past trend through 2025, we can approximate that the Township's persons per household figure will drop to 1.96 by 2025. Similarly, Bay County's persons per household figure has been on the decline since 1980 and, based on past trends, will continue to decline through 2025 (see **Table 5**).

Such a decline must be considered when analyzing future housing needs in conjunction with population projections, as housing units will be occupied by fewer people. Based on an understanding of the declining number persons per household within Garfield Township, a more detailed estimate of the number of housing units needed by 2025 is provided below.

According to the 2000 Census, Garfield Township had a household population of 1,733 residents and 604 total households. (It is important to note that of the 1,775 total residents, only 1,733, or 97.6 percent, were living within households, while the remainder were living in group quarters.) As detailed in **Table 3**, the Township's population is projected to reach 1,969 residents by 2025. Assuming that approximately the same percentage of residents (97.6 percent) are living within households in 2025 as did in 2000, we can then estimate the approximate number of households that will

Table 5: Persons Per Household Trends and Projections, 1980-2025¹

Place	1980	1990	2000	2010 Projection	2015 Projection	2020 Projection	2025 Projection	% Change 1980-2025
Garfield Township	3.57	3.11	2.87	2.48	2.31	2.13	1.96	-45.1%
Bay County	2.87	2.65	2.47	2.26	2.16	2.06	1.96	-31.7%

¹ Persons per household projection is a linear trend based on the rate of change between 1980 and 2000
Source: 1980, 1990 and 2000 US Census Reports; projection analysis by Wade-Trim

exist in Garfield Township in 2025 by dividing the projected household population (1,923) by projected persons per household (1.96). This results in an estimate of 981 households. Generally, each household requires one housing unit, indicating that approximately 981 housing units will be necessary by 2025 to accommodate the Township's growing population and declining persons per household. As of 2007, only 718 housing units are present in Garfield Township (figure estimated by Wade Trim, see **Table 6** below), meaning that an additional 263 housing units will need to be added by 2025.

Housing Profile

Housing Stock

Type of housing structure is the most basic measure of housing that refers to the type of housing units found in a community. Data in **Table 6** indicate the total number of housing units in Garfield Township and Bay County, and compares the

change from 1980 to 2007. During that timeframe, Garfield Township witnessed an increase in 194 housing units, representing a rate of 37.0 percent. For Bay County, even in the midst of a declining overall population, the total number of housing units increased from 43,170 in 1980 to 48,134 in 2007, a growth rate of 11.5 percent.

Data in **Table 7** provide information regarding the types of housing units within Garfield Township and Bay County in 1990 and 2000. In 1990, 87.6 percent of Garfield Township's housing units were one unit structures, while 11.5 percent were mobile homes (may also include boats, RV's, etc. used as dwelling units). Between 1990 and 2000, the number of one unit structures increased, while the number of mobile homes decreased, resulting in an even higher one unit structure percentage of 91.9 percent for Garfield Township. Correspondingly, the mobile home percentage declined to 7.8 percent. As of 2000, only two dwelling units located within multi-unit structures (i.e., a duplex)

were found in the Township.

Similar to Garfield Township, Bay County also has a high percentage of one unit structures

Table 6: Housing Units, 1980-2007

Place	1980	1990	2000	2007 ¹	Change 1980-2007	
					#	%
Garfield Township	524	574	627	718	194	37.0%
Bay County	43,170	44,234	46,423	48,134	4,964	11.5%

¹ Bay County Figure: U.S. Census Bureau State and County Quick Facts, May 2009; Garfield Township Figure: analysis by Wade Trim based on 2007 population and household size estimates. Source: 1980, 1990 and 2000 US Census Reports.

Table 7: Units in Structure, 2000

Units in Structure	Garfield Township				Bay County			
	1990		2000		1990		2000	
	#	%	#	%	#	%	#	%
1 Unit	503	87.6%	577	91.9%	33,730	76.3%	36,116	77.8%
2 to 4 Units	5	0.9%	2	0.3%	3,563	8.1%	3,550	7.6%
5 to 9 Units	0	0.0%	0	0.0%	1,182	2.7%	1,134	2.4%
10 or More Units	0	0.0%	0	0.0%	2,360	5.3%	2,664	5.7%
Mobile Home, Boat, RV, Van, etc.	66	11.5%	49	7.8%	3,399	7.7%	2,959	6.4%
Totals	574	100.0%	628	100.0%	44,234	100.0%	46,423	100.0%

Source: 1990 and 2000 US Census Reports

at 77.8 percent as of 2000. However, the County has much higher percentages of dwelling units within multi-unit structures in comparison to Garfield Township.

Age of Housing Stock

Data in **Table 8** identify the number of housing units by the year in which they were built. Generally, the average lifespan for residential structures is 50 years, dependent on the quality of materials, construction, and upkeep provided. Thus, approximately 30 percent of the Township's housing units were potentially approaching the end of their life cycle (assumes that a house built prior to 1960 is reaching its effective lifespan by 2010). Conversely, with over 70 percent of the housing stock less than 50 years old, it can be assumed that the majority of units comprising the housing stock in Garfield Township are structurally sound.

Occupancy Characteristics

The home ownership rate is a very important aspect of a community. A high home ownership rate could be an indication that the community has stable and well kept neighborhoods. A higher percentage of rental housing might indicate a more transient population. Owner and renter occupancy rates can also reveal whether the housing stock in the community is affordable. Lower income citizens, who may include single persons, young families, and the elderly, require more affordable housing options including rental housing. A low percentage of rental units could indicate that the community is not providing adequate housing for these groups.

Occupancy characteristics from the 2000 Census for Garfield

Table 8: Age of Housing Stock, Garfield Township, 2000

Year Structure Built	Number	Percent of Total
1990 to March 2000	118	18.8%
1980 to 1989	76	12.1%
1970 to 1979	189	30.1%
1960 to 1969	66	10.5%
1940 to 1959	97	15.4%
1939 or earlier	82	13.1%
Totals	628	100.0%

Source: 2000 US Census Reports

Township and Bay County are presented in **Table 9**. Over 96 percent of the Township's housing supply is occupied, with owner-occupied units accounting for nearly 95 percent of all occupied units. Conversely, only 5.5 percent of all occupied dwelling units are renter-occupied. Garfield Township's occupancy and ownership figures are quite similar to Bay County as a whole.

Knowledge of vacancy statistics can be helpful in predicting future growth and housing needs. A high vacancy rate might be an indicator of residential decline, but also shows that in the event of growth, housing units are available. Generally, a five- percent vacancy rate is considered necessary to provide an adequate housing selection and to keep home prices from rising faster than inflation. Vacancy rates below five percent indicate a restricted housing market. As shown in **Table 9**,

Table 9: Housing Occupancy Characteristics, 2000

Category	Garfield Township		Bay County	
	Number	Percent of Total	Number	Percent of Total
Occupied Housing Units	604	96.3%	43,930	94.6%
Owner-Occupied	571	94.5%	34,837	79.3%
Renter-Occupied	33	5.5%	9,093	20.7%
Vacant Housing Units	23	3.7%	2,493	5.4%
Vacant Year Round	19	82.6%	2,138	85.8%
Seasonal, Recreational or Occasional Use	4	17.4%	355	14.2%
Total Housing Units	627	100.0%	46,423	100.0%

Source: 2000 US Census Reports

vacant units represent only 3.7 percent of the total housing count (23 units). Of these vacant units, four are considered to be seasonal, recreational or of occasional use, while the remainder are vacant year-round. In contrast, Bay County's overall vacancy rate was slightly higher than Garfield Township at 5.4 percent as of 2000.

Housing Value

Analyzing housing values and rent could be the best way to determine both the quality and affordability of housing. It is of crucial importance that both quality and affordable housing is maintained to help retain current residents and attract new homeowners to a community.

The median value of owner-occupied housing units and the median value or contract rent for renter-occupied units for the years 1989 and 1999 for Garfield Township and Bay County are presented in **Table 10**. The 1989 figures have been adjusted to reflect 1999 values in order to accurately reflect changes in housing prices over the decade.

Between 1989 and 1999, the median value of Garfield Township's housing units increased by 43.5 percent, from \$58,692 to \$84,200. This rate

of increase was almost identical to Bay County's at 43.7 percent. Similarly, the cash rent values also increased within both Garfield Township and Bay County between 1989 and 1999.

These increases are reflective of the United States' generally robust housing market during the 1990's and extending into the 2000's. However, at present, the nation is experiencing a significant housing market slump, which has been evidenced by significantly declining home values. Therefore, it is likely that the 2010 Census figures for median housing values within the Township will reflect only modest gains or potentially losses since 2000. According to the U.S. Department of Housing and Urban Development and the Office of Federal Housing Enterprise Oversight as of June 2008, the average home price within Garfield Township has declined by 5.4 percent as compared to its peak home value since 2000. Although this trend is troubling and has undoubtedly impacted the lives of many households, it may represent a positive benefit to longer-term housing affordability as lower cost homes and foreclosed properties are entering the housing market.

Table 10: Housing Value Trends, 1989-1999

Place/Category	1989 ¹	1999	Change 1989-1999	
			#	%
Garfield Township				
Median Value of Specified Owner-Occupied Housing Units	\$58,692	\$84,200	\$25,508	43.5%
Contract Rent of Specified Renter-Occupied Housing Units Paying Cash Rent	\$373	\$515	\$142	38.2%
Bay County				
Median Value of Specified Owner-Occupied Housing Units	\$59,094	\$84,900	\$25,806	43.7%
Contract Rent of Specified Renter-Occupied Housing Units Paying Cash Rent	\$385	\$440	\$55	14.4%

¹ 1989 dollars have been adjusted for inflation to equal the value of 1999 dollars. Inflation rate: \$1 in 1989 equals \$1.34 in 1999. Source: U.S. Department of Labor, Bureau of Statistics, June, 2008; 1990 and 2000 US Census Reports

Income Profile

Studying income and poverty levels is a good way to measure the relative economic health of a community. Three measures of income (median household, median family, and per capita) are recorded by the Census Bureau. Household income is a measure of the total incomes of the persons living in a single household. Family income is a measure of the total incomes of a family unit. Family income does not include non-family units, such as single persons living alone, and for this reason is usually higher than household income. Per capita income is a measure of the incomes of every citizen of an area. Because per capita income is based on all individuals, they are much lower than family or household incomes.

Data presented in **Table 11** analyze the household, family and per capita income characteristics of Garfield Township and Bay County residents in between 1989 and 1999. Income statistics for the Township present an interesting comparison to the County. While the 1999 median household income and median family income values for the Township are both higher than the County, the per capita income for the Township is lower than the County. However, in terms of the change in income levels between 1989 and 1999, Garfield Township's income level growth has outpaced the County's in all three income categories.

There are 488 families living in Garfield Township. Data in **Table 12** provide information on the number of families and percent of total families at each family income range. The highest percentage of families (25.6 percent) within the Township have incomes between \$50,000 and \$74,999, followed by \$35,000 to \$49,999 (21.3 percent). The next two largest groups are those with incomes between \$25,000 to \$34,999 (13.1 percent) and \$75,000 to \$99,999 (12.5 percent).

Employment Profile

Employment by occupation and employment by industry are two related, yet individually significant indicators of community welfare. Employment by occupation describes the trades and professions in which Township residents are employed, such as a manager or salesperson. Employment by industry quantifies in what field that manager or salesperson may be employed. For instance, two salespersons may be present in the "Sales and Office Occupations" category of the employment by occupation table, but may be employed in two different fields. That is, a sales person in the manufacturing industry and a sales person in the real estate trade would be categorized within those different classifications in the employment by industry table.

Employment data by selected industry groupings for Garfield Township is displayed in **Table 13**. In

Table 11: Family and Per Capita Income, 1989-1999

Income Category	Garfield Township			Bay County		
	1989 ¹	1999	% Change	1989 ¹	1999	% Change
Median Household Income	\$41,397	\$44,044	6.4%	\$37,440	\$38,646	3.2%
Median Family Income	\$45,096	\$49,559	9.9%	\$45,606	\$48,111	5.5%
Per Capita Income	\$14,551	\$17,306	18.9%	\$16,880	\$19,698	16.7%

¹ 1989 dollars have been adjusted for inflation to equal the value of 1999 dollars. Inflation rate: \$1 in 1989 equals \$1.34 in 1999.

Source: U.S. Department of Labor, Bureau of Statistics, June, 2008; 1990 and 2000 US Census Reports

Note: Median income is that income value which divides the income category into two equal parts, with one half of the incomes above the median and the other half falling below the median. Per capita income is the mean income computed for every man, woman, and child in a particular group. It is derived by dividing the total income of a particular group by the

Table 12: Distribution of Families by Family Income, 1999

Family Income	Garfield Township		Bay County	
	Number of Families	Percent of Total	Number of Families	Percent of Total
Less than \$10,000	16	3.3%	1,344	4.4%
\$10,000 to \$14,999	29	5.9%	1,284	4.2%
\$15,000 to \$24,999	34	7.0%	3,409	11.3%
\$25,000 to \$34,999	64	13.1%	4,216	13.9%
\$35,000 to \$49,999	104	21.3%	5,525	18.3%
\$50,000 to \$74,999	125	25.6%	7,028	23.2%
\$75,000 to \$99,999	61	12.5%	4,022	13.3%
\$100,000 to \$149,999	51	10.5%	2,631	8.7%
\$150,000 to \$199,999	3	0.6%	432	1.4%
\$200,000 or More	1	0.2%	338	1.1%
Totals	488	100.0%	30,229	100.0%

Source: 1990 US Census Reports

Table 13: Employment by Industry, 2000

Industry	Garfield Township		Bay County	
	#	%	#	%
Agriculture, Forestry, Fishing and Hunting, and Mining	15	1.9%	549	1.1%
Construction	91	11.6%	3,454	6.8%
Manufacturing	178	22.7%	9,502	18.7%
Wholesale Trade	21	2.7%	1,727	3.4%
Retail Trade	119	15.2%	7,434	14.6%
Transportation and Warehousing, and Utilities	41	5.2%	2,318	4.6%
Information	25	3.2%	1,145	2.3%
Finance, Insurance, Real Estate and Rental, and Leasing	31	4.0%	2,466	4.9%
Professional, Scientific, Management, Administrative, and Waste Management Services	26	3.3%	2,865	5.6%
Educational, Health and Social Services	137	17.5%	10,872	21.4%
Arts, Entertainment, Recreation, Accommodation and Food Services	57	7.3%	4,261	8.4%
Other Services (Except Public Administration)	29	3.7%	2,539	5.0%
Public Administration	14	1.8%	1,672	3.3%
Total Employed Civilian Population 16 Years and Over	784	100.0%	50,804	100.0%

Source: 2000 US Census Reports

2000, the largest share (22.7 percent) of the work force was employed in manufacturing. The next largest industries of employment were educational, health and social services (17.5 percent), followed by retail trade (15.2 percent), and construction (11.6 percent). Although manufacturing remained the most important industry (in terms of employment numbers) in 2000, it should be noted that the share of manufacturing employees has declined significantly from a 33.8 percent share back in 1990. All indications point toward a continued decline in the manufacturing industry into the future.

Bay County, in comparison, is slightly more service oriented with the largest share of its workforce employed in the educational, health and social services industry (21.4 percent).

Employment data by selected occupation for the Township in 2000 is displayed in **Table 14**. The largest number of Township workers (186 or 23.7 percent) are employed in production, transportation and material moving occupations, followed by sales and office occupations (179 or 22.8 percent). When comparing Garfield Township's workforce against Bay County, significant differences are discovered. Generally, a much larger percentage of the Township's workers hold "blue collar" positions such as production, transportation, material moving, construction, extraction and maintenance occupations, while the County has a larger percentage of workers holding "white collar" positions such as management, professional, sales and office occupations.

Table 14: Employment by Occupation, 2000

Place	Garfield Township		Bay County	
	#	%	#	%
Management, Professional, and Related Occupations	137	17.5%	13,648	26.9%
Service Occupations	129	16.5%	8,516	16.8%
Sales and Office Occupations	179	22.8%	13,769	27.1%
Farming, Fishing and Forestry Occupations	5	0.6%	203	0.4%
Construction, Extraction, and Maintenance Occupations	148	18.9%	5,514	10.9%
Production, Transportation, and Material Moving Operations	186	23.7%	9,154	18.0%
Total Employed Civilian Population 16 Years and Older	784	100.0%	50,804	100.0%

Source: 2000 US Census Reports

5

Transportation, Utilities and Services Assessment

Introduction

Garfield Township, with support from a variety of outside public and private agencies, strives to ensure a high quality of life for residents and businesses within the community through the efficient provision of services. These services fulfill essential community needs such as public safety, public health, sanitation, social welfare, recreation, education, and mobility.

By ensuring that future land development occurs at an appropriate scale and location given the existing or planned capacity of public services, sound land use planning is an important tool for maintaining a high quality of life. In order to determine suitable locations and allowable types of new development, the existing or planned capacity of all types of public services must first be considered, particularly the capacity of the transportation network and availability of public utilities.

Transportation

National Functional Classification System

Garfield Township is served by a hierarchical network of roadways with various functions. This hierarchical network is defined by the National Functional Classification (NFC) system, which is a federal classification system for all public highways, roads and streets. The two primary considerations in classifying the functionality of highway

and street networks are access to property and travel mobility, as defined by trip travel time or operating speed. For example, local roads provide efficient access to property, but would be rated low in mobility. The basic classifications for the NFC are:

- Arterial roads, which generally handle longer trips and operate at higher and more uniform speeds;
- Collector roads, which collect and disperse traffic between arterials and the local roads; and,
- Local roads, streets, and other public ways, which serve the land access function to the residential areas, businesses, farms and other local areas.

Map 5 documents the transportation network of Garfield Township. As is shown on the map, no arterial roads are found within Garfield Township. The nearest arterial roadways to Garfield Township include I-75, which runs north-south approximately one mile east of the Township, M-13, which runs north-south approximately four miles east of the Township, and U.S. Highway 10, which runs east-



Erickson Road

west approximately 10 miles south of the Township.

Several major collector routes are found within Garfield Township: Garfield Road; Erickson Road; Anderson Road, west of Garfield Road; and Linwood Road, east of Garfield Road. Garfield Road runs north-south through the Township, connecting the Township with Mt. Forest Township to the north and the City of Auburn and U.S. Highway 10 to the South. Erickson Road runs east-west and extends from Fraser Township to the east, through Garfield Township, to Mills Township to the west (as it enters Midland County, Erickson Road becomes Levely Road). Linwood Road runs east-west along the southern edge of the Township. Importantly, Linwood Road serves as a “gateway” route in and out of Garfield Township, as it connects to I-75 just east of the Township. Anderson Road runs east-west and extends from Garfield Township to Mills Township to the west, ultimately connecting with M-30 in Midland County (as it enters Midland County, Anderson Road becomes Shaffer Road).

Three minor collector routes are also found in Garfield Township: Flajole Road, north of Erickson Road; Prevo Road, east of Garfield Road; and Linwood Road, between Garfield Road and Carter Road.

The remaining roads in Garfield Township are classified as local roads or are not classified.

County Primary and Local Roads

Aside from a few private roads, the road network of Garfield Township is under the jurisdiction of the Bay County Road Commission. The County Road Commission classifies roads as either County Primary roads or County Local roads. This local classification system is important in that County Primary roads receive precedent for road improvements, repairs and maintenance (i.e., snow plowing). Consistent with the NFC, all of the collector

routes within Garfield Township are classified by the County Road Commission as County Primary roads. All other County roads are classified as County Local roads (see **Map 5**).

Traffic Counts

Map 6 displays twenty-four hour Average Daily Traffic (ADT) counts for all County roads segments within Garfield Township. These traffic counts were obtained from the Bay County Road Commission, while the actual counts were taken at different time periods between 2000 and 2008.

A graduated color scheme (yellows to greens to reds) has been used on the map in order to depict the highest and lowest traveled roads in the Township. As shown on the map, the two highest traveled road segments in Garfield Township (over 2,000 ADT) are: Linwood Road, extending from the east into Garfield Township and up to Garfield Road; and Garfield Road, extending from Linwood Road through the unincorporated community of Crump to Prevo Road.

Several road segments featured significant traffic counts ranging between 1,500 and 1,999 ADT. These road segments included: Garfield Road between Prevo Road and Erickson Road; and Anderson Road between Carter Road and Garfield Road. Other relatively higher traveled road segments (greater than 500 ADT) include segments of Garfield Road, Erickson Road, Anderson Road, and Prevo Road.

The traffic count data on **Map 6** clearly show a traffic pattern that is heavily influenced by the Linwood Road interchange at I-75, located approximately one mile east of the Township. Traffic volumes are highest along Linwood Road in the southeastern corner of the Township and gradually disperse to the other collector routes (i.e., Garfield Road, Anderson Road, Erickson Road) and ultimately to the local routes.

Surface Type

Map 6 also identifies the surface type of County roads as either paved or gravel. All of the County Primary roads in the Township are paved. In addition to these, many of the County Local roads are also paved. Of the 76.93 miles of roads within Garfield Township, well over half (43.46 miles or 56.5 percent) are paved.

Gravel roads are spread throughout Garfield Township but are most common in the western and northern portions of the Township. These gravel roads are mainly section line roads that provide access for a limited number of homes and the adjacent agricultural lands.



11 Mile Road

Public Utilities and Services

Public utilities and services, particularly emergency medical services and water supply and sanitary sewer systems, are important not only from a public health and environmental quality standpoint, but they also enable higher density development. The presence of utilities can also be an instigator of development, as developers and prospective business owners seek sites that have utility services in place.

Community Services

Public safety within Garfield Township falls within the jurisdiction of the Bay County Sheriff's Department, headquartered in the Bay County Law Enforcement Center in downtown Bay City. The Bay County Jail is also located in the Law Enforcement Center.

Fire and emergency response service is provided through the Garfield Township Fire Department, a volunteer fire department located on Erickson Road near the Township Hall.

No medical facilities are located within the Township, however a variety of medical facilities are found within the larger Bay City, Midland and Saginaw metropolitan area.



Garfield Fire Department Station No.1

The Garfield Township Park, located adjacent to the Township Hall on Erickson Road, provides ample recreational opportunities for Township citizens. Included at the park is a playground area, basketball court, baseball fields, duck pond, walking trail, pavilion and picnic area, and outdoor rest rooms.

The limited extent of public water and sanitary service within Garfield Township will have a significant impact in the future land use plan, as future locations for non-residential and higher density development must be planned concurrent with infrastructure capacity.



Garfield Township Park

Public Utilities

At present, no public water or sewer lines are located within the Township. For potable water supply, property owners must rely on private well systems. The review and approval of private well systems falls under the jurisdiction of the Bay County Health Department.

Property owners within Garfield Township must rely on private septic systems for sanitary sewer service. The regulation of on-site septic systems falls under the jurisdiction of the Bay County Health Department.

6

Goals and Objectives

Introduction

Before a community can actively plan for its future growth and development, it must first develop a set of goals and objectives that define the boundaries of its needs and aspirations and, thus, establish a foundation for Master Plan formulation. The goals and objectives must reflect the type of community desired and the kind of lifestyle its citizens wish to follow, given realistic economic and social constraints.

Goals and Objectives Defined

Each goal listed in this Chapter is a basic statement that sets a critical path, provides direction, and describes to the community how the desired outcome should look. Goals are a critical part of the planning process in that they are flexible, defining for the community, and timeless. Goals stay with the community until they are achieved. Goals are ambitious and general. They address issues and specific needs or problems, but they are grand in scope and speak to fundamental change and directly serve the mission of the community.

Objectives are the means to achieve a goal. An objective is a plan of action that sets a more specific task within a goal and helps gauge success. Objectives should often meet the following criteria:

1. An objective must be specific.
2. An objective must be measurable, that is, there must be no question that the objective was begun, carried out, and completed and that a tangible result can be produced.
3. An objective must be able to be assigned to a responsible party. There must be a party made to be in charge of each objective to ensure that it will be carried out and that there is no confusion as to who should answer for the results of the objective.
4. An objective must be trackable, or easy to follow. Each objective must be carefully monitored and its status must be known at all times. It is essential that the objective be set to a specific schedule and "landmarks" within it be set to convey its ongoing progress to residents and businesses alike.

Basis for the Goals and Objectives

The goals and objectives listed in this Chapter are based upon the collective desires of the citizens of Garfield Township. Below is a more detailed description of efforts and activities that shaped the Township's goals and objectives.

1997 Master Plan

The goals and objectives as developed for the 1997 Garfield Township Master Plan were used as the foundation for the goals and objectives in this Master Plan Update. In addition to various public workshops and meetings, the 1997 master planning process included a survey of key stakeholders that focused on "likes," "dislikes," and "future improvements" for Garfield Township.

Garfield Township Visioning Workshop

On September 16, 2009, a visioning workshop was held to ascertain citizen viewpoints related to the future planning and development of Garfield Township. The workshop was attended by approximately 15 Planning Commissioners, Township officials and citizens and included both individual and small group visioning exercises. An individual exercise prompted participants to answer the following three questions:

1. Why do you live in Garfield Township?
2. What do you treasure in Garfield Township?
3. What in Garfield Township are you most concerned about?

The inset on this page outlines the results of the individual exercise, with the responses generalized by topic and prioritized based on the number of instances.

Results of the Garfield Township Visioning Workshop

September 16, 2009, 6:30 pm

Summary and Prioritized Ranking of Treasures

T1. My home and my property (10)

T2. Good medical response (7)

T3. Spacious lots/not crowded (7)

T4. Woodlands (5)

T5. Location near urban centers (4)

T6. Peace and quiet (3)

T7. Small town feel (3)

T8. Small population (3)

T9. Farmland (2)

T10. My church (2)

T11. The Saginaw Bay (2)

T12. Wildlife (2)

- Trails/ORV
- Great hunting
- New Township hall
- No water/sewer
- Parks
- Bicycling opportunities
- Walking opportunities
- The community and people

Key:

Top Priority (8 or more instances)

Middle Priority (5 to 7 instances)

Low Priority (2 to 4 instances)

Other Issues (1 instance)

Summary and Prioritized Ranking of Concerns

C1. Blight/slums (9)

C2. Subdivisions/urban sprawl (6)

C3. Loss of woodlands (5)

C4. Loss of farmland (4)

C5. Local government efficiency/responsiveness (4)

C6. Need to increase citizen awareness of Township government (4)

C7. Need to maintain good fire protection (4)

C8. High taxes (3)

C9. Lack of gas lines for heating (3)

C10. Property rights/taxpayer rights (do not want to lose) (2)

C11. Gravel road maintenance (2)

C12. Increased traffic (2)

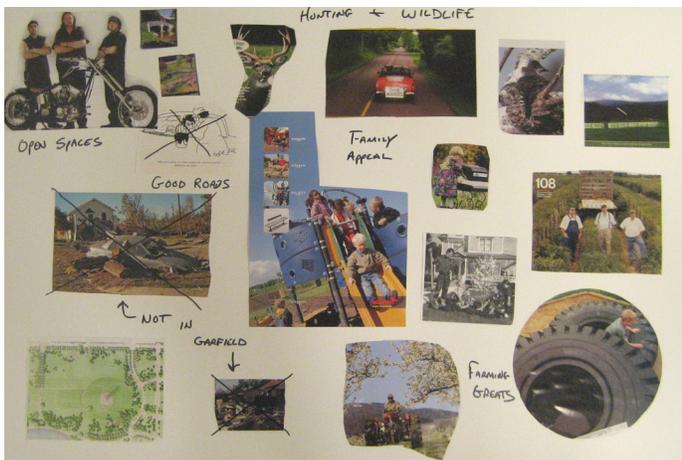
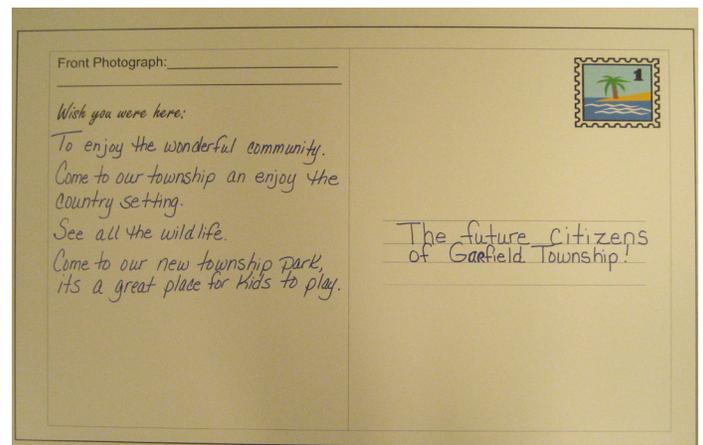
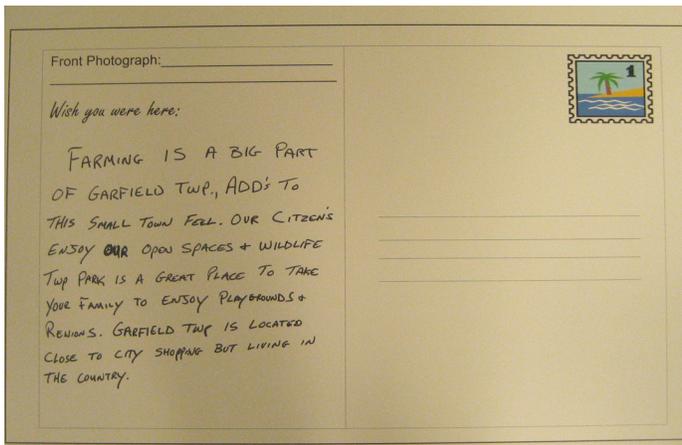
- Water quality/well water
- Not enough paved roads
- Aging housing
- Low tax base/need money for Township services
- Loss of businesses
- Need to improve schools
- Animal control

The visioning workshop also included a “postcard of tomorrow” exercise. For this exercise, participants were divided into two teams and asked to create a postcard that expressed their desires for the Township 10 to 15 years from now. The finished postcards included both a visual representation of the future as well as a narrative statement of the future. The front and back sides of each team’s postcard is included below.

In the end, the postcard exercise was successful in building consensus and provided the project team with direct insight about community values and a variety of points of view.

Goals and Objectives Review

On October 21, 2009, a meeting was held with Planning Commissioners, Township officials and citizens to conduct a detailed review of the Township’s currently adopted goals and objectives. The meeting began with a presentation of the prioritized results from the visioning workshop. Then, using a customized evaluation tool, each of the Township’s currently adopted goals and objectives was reviewed and critiqued for relevancy, effectiveness, and consistency with the overall community vision. After the review, the necessary additions, revisions and deletions to the currently adopted goals and objectives were made clear.



Team 1 Postcard of Tomorrow

Team 2 Postcard of Tomorrow

Goals and Objectives

Community-Wide Goals

1. To create an optimum human environment for the present and future residents of Garfield Township, an environment that will meet their physical, social and economic needs, while preserving the rural character of the community.
2. To preserve and promote the rights of individual property owners while maintaining the aesthetic character of the community.
3. To relate land use primarily to the natural characteristics of the land and the long-term needs of the community, rather than to short-term economic gain.
4. To encourage intergovernmental cooperation with Bay County and surrounding municipalities in the coordination of long-range planning for the provision of area-wide facilities.

Agricultural Goal

Encourage the retention of prime agricultural lands within the Township in recognition of the agricultural industry's direct impact on the region's economy and quality of life.

Agricultural Objectives

1. Protect those land areas that are economically important to the agricultural industry from encroachment and interference by incompatible uses.
2. Recognize that agriculture is an important economic activity of the Township, as well as a natural asset, by encouraging the use

of tools and techniques such as the Farmland and Open Space Preservation Act (PA 116), farmland conservation easements, and purchase of development rights programs, among others.

3. Ensure that land development codes allow for activities that might reduce costs or provide supplementary income for local farmers, such as farm stands, consistent with community character.
4. Promote sustainable agricultural practices, with its emphasis on environmental stewardship, wholesome food production, and a locally-oriented customer base.

Residential Goal

To promote the development of stable, high-quality and well-maintained residential areas designed to offer a variety of housing choices at affordable prices

Residential Objectives

1. Encourage and guide housing developments at densities that relate to the natural and environmental features.
2. Encourage innovative development techniques as a means of ensuring lasting identity and the preservation of sensitive environmental features
3. Require adequate buffers or transition areas between residential and non-residential developments to maintain property values and attractiveness.
4. Encourage the removal of conflicting or undesirable land uses from residential areas through code enforcement and other means.

5. Encourage the removal of unsanitary or unsafe housing through code enforcement or other means.
6. Encourage the development of housing designed to meet the specialized needs of the elderly population, enabling them to “age-in-place” in the Township.

Commercial Goal

To provide for a limited range of commercial facilities to serve the needs of the local residential population.

Commercial Objectives

1. Encourage the continued development of Crump as the commercial center of the Township.
2. Discourage strip commercial development.
3. A compatible relationship should be established between commercial and adjacent residential uses through the use of buffer devices such as walls, fences, landscaped areas, and transitional uses.
4. Recognize the role that the nearby communities of Midland and Bay City play as the primary commercial, shopping, cultural and entertainment destinations within the area, and relate the amount of planned commercial land accordingly.
5. Encourage the creation of home businesses that are compatible with adjacent properties.

Industrial Goal

To encourage limited light industrial development with attractive sites to strengthen the tax base and provide employment opportunities for area residents.

Industrial Objectives

1. Locate industrial areas that have reasonable boundaries, are easily accessible from existing transportation network, and are not subject to encroachment by incompatible uses.
2. Encourage the creation of home businesses that are compatible with adjacent properties.
3. Recognize the role that the nearby communities of Midland and Bay City play as the primary industrial and employment destinations within the area, and relate the amount of planned industrial land accordingly.

Transportation Goal

To develop and maintain a network of roads that meet the needs of all Township residents and businesses in a safe and convenient manner.

Transportation Objectives

1. Cooperate with the Bay County Road Commission in the planning and design of road improvements.
2. Limit points of ingress/egress on major roads.
3. Segregate truck and automobile traffic as much as possible.

4. Develop and implement a plan for improvements of secondary roads through a public participation process.

Park and Recreation Goal

To preserve the natural resources of Garfield Township and provide for the recreation needs of all Township residents.

Park and Recreation Objectives

1. Encourage public participation and utilize professional expertise to determine needed and desired recreation facilities.
2. Cooperate with the State of Michigan and adjoining communities in the development of recreation and community facilities.
3. Through a combination of funding sources including general funds, grants, and donations, continue to develop the Garfield Township Park with more active recreation facilities.
4. Maintain a community recreation plan to be used as a short term and long term guide for recreation improvements and to ensure eligibility for certain State recreation grant opportunities.

Natural Environment Goal

To preserve and enhance the natural and environmental resources of the Township for all current and future Township residents.

Natural Environment Objectives

1. Implement land use patterns which will direct new growth away from environmentally sensitive areas, such as woodlands, wetlands, steep slopes and areas subject to flooding.

2. Encourage the use of the open space development option, cluster housing option, and other techniques to minimize the impact of new residential development on existing natural assets and make them an integral part of new development.

3. Encourage the removal of conflicting, unattractive, or undesirable land uses from the Township.

4. Link natural features and open space areas to create a system of natural corridors.

Community Facilities and Services Goal

Continue to offer efficient services and facilities to residents and businesses, offering a variety of opportunities for human fulfillment, in locations appropriate for their development and utilization.

Community Facilities and Services Objectives

1. Operate a responsive and efficient Township government while allowing for meaningful involvement and participation by Township citizens and stakeholders in all planning processes.
2. For Township provided facilities, plan, locate and provide public areas based on a long-range general plan, short range project plans, and capital improvement programming.
3. Continue the cooperative relationship with neighboring and regional governmental agencies for the shared provision of public services and facilities, like recreation, emergency services, library, and senior services.

4. Diligently monitor and seek funding opportunities to develop and improve essential community services.
5. Encourage and support community volunteerism by providing opportunities for citizens motivated to contribute to the community's well-being, and to satisfy one's personal need for fulfillment, sense of accomplishment, and self-esteem.
6. Encourage long-term sustainability and the reduction of fossil-fuel emissions through the promotion and implementation of energy efficient facilities, services, programs and incentives.
7. Explore the feasibility of the Township's wind resources as an economic development tool and means to reduce energy consumption, weighed against potential impacts to the natural environment and rural character.



Future Land Use

Introduction

The Future Land Use Plan is designed to serve as a guide for future development. If it is to serve the needs of the community and function effectively, it must incorporate several important characteristics as follows:

1. The Plan must be general. The Plan, by its very nature, cannot be implemented immediately. Therefore, only generalized locations (not necessarily related to property lines) for various land uses are indicated on the Plan.
2. The Plan should embrace an extended but foreseeable time period. The Plan depicts land uses and community development strategies through the Year 2025.
3. The Plan should be comprehensive. The Plan, if it is to serve its function as an important decision-making tool, must give adequate consideration to the sensitive relationships which exist between all major land use categories.
4. The Plan should acknowledge regional conditions and trends. Garfield Township is an integral part of Bay City-Midland-Saginaw Region; therefore, the Plan should acknowledge the Township's regional context.

Through recognition of regional implications, the Township's Future Land Use Plan will be more realistic and reasonable in terms of guiding the future utilization of land resources in the Township.

5. The Plan must be updated periodically. The Plan may require periodic revisions to reflect significant changes in local, state, or national conditions which cannot be foreseen at this time. It is, of course, impossible to predict the type of changes which may occur over the next decade or two. Therefore, a comprehensive review of the Future Land Use Plan should be undertaken approximately every five years to provide for an adequate analysis of new conditions and trends. Should major rezonings which are in conflict with Plan recommendations be accomplished, the Plan should be reviewed and amended accordingly.

Plan Recommendations

Seven land use classifications are proposed for Garfield Township. The various land uses have been portrayed on **Map 7** and in **Table 15**. A discussion of each land use category is presented below.

Agricultural/Rural Residential

The Agricultural/Rural Residential future land use category is intended to preserve the agricultural heritage and rural character of the Township and is the predominant land use. An approximate total of 21,561 acres (94.4 percent of the land area in the Township) is devoted to this classification. Farming and related agricultural activities and rural housing are the principal uses of the Agricultural/Rural Residential classification. The lands included in this classification contain the majority of the protected farmland currently enrolled under PA 116.

The Agricultural/Rural Residential category is designed to conserve, stabilize, enhance, and develop farming and related resource utilization activities; to minimize conflicting uses of parcels, lots, buildings, and structures detrimental to, or incompatible with these activities; and to prohibit uses of parcels, lots, buildings, and structures which require streets, drainage, and other public facilities and services of a different type and quantity than those that currently exist. The category, in preserving areas for agricultural uses, is also designed to prevent proliferation of residential subdivision and urban sprawl. Additionally, lands within this category would be prime candidates for participation in the Bay County Purchase of Development Rights Program, if one is established.

Agricultural properties may be used for general and specialized farming, including the raising or growing of crops, livestock, poultry, bees, and other farm animals, and products. Buildings or structures may be located which are used for the day-to-day operation of such activities and other bona-fide agricultural enterprises, including limited sales of agricultural products produced on the premises (i.e., farm stands). Any lands that are kept as idle cropland should be treated to prevent soil erosion by wind or water and should be free of excessive weeds and shrubs.

Single family homes that are compatible with the agricultural use and rural character of the category are encouraged. A minimum lot area of one acre is recommended for each residential unit. Lot sizes must be large enough to provide for an approved on-site septic system, as public sanitary sewer facilities are unavailable within the designated

Table 15: Future Land Use

Category	Acres	Percent of Total
Agricultural/Rural Residential	21,561	94.4%
Medium Density Residential	205	0.9%
High Density Residential	20	0.1%
Commercial	60	0.3%
Industrial	104	0.5%
Public/Semi-Public/Recreation	45	0.2%
Conservation	835	3.7%
TOTALS	22,830	100.0%

Agricultural/Rural Residential areas and are not anticipated to be constructed within the planning horizon.

Medium Density Residential

The Medium Density Residential future land use category is intended to accommodate a slightly more dense residential area within the community of Crump. This category may include single family detached structures including permanent dwellings and accessory structures, and other facilities intended to support the residential area such as schools, churches and parks.

Although more dense than the Agricultural/Rural Residential lands, the overall character of the community of Crump is decidedly rural; therefore, any new residential development must be reflective of this character. A minimum lot area of three-quarters of an acre is recommended for each residential unit, given the ability to construct an approved on-site septic system. In total, lands within this category comprise approximately 205 acres or 0.9 percent of the Township.

High Density Residential

This future land use category is intended to provide opportunities for more affordable housing and alternatives to traditional single-family detached development. High density residential develop-

ment may serve as a transitional land use; for example, one which buffers single-family units from more intensive commercial uses. High Density Residential lands may include such uses as duplexes, attached condominiums, senior living, and garden apartments. Manufactured, mobile or modular home parks may also be permitted within this land use category. To ensure compatibility with adjacent land uses and the overall rural character of the Township, intensive landscaping and buffering is required along the perimeter of any new development, while a maximum permitted density of 4 dwelling units per acre must be maintained. Additionally, access to approved sanitary sewer facilities must be provided.

One area within the community of Crump, totaling approximately 15 acres, has been designated as High Density Residential. A second location along Garfield Road, a former school building, has also been designated High Density Residential.

Commercial

This land use category includes those areas of the Township that are currently developed or are planned to be occupied by retail and service facilities. These commercial areas, thoughtfully designed and oriented, will accommodate the commercial needs of established residential areas within Garfield Township and will provide for the logical expansion of the commercial areas located within the community of Crump.

It is recommended to allot approximately 60 acres (0.3 percent of the Township) for various types of commercial development. Most of the commercial uses are located in the Crump area and are intended to serve the local market only.

Industrial

The Future Land Use Plan allows adequate space within the Township for industrial development. The Plan designates 104 acres (0.5 percent of the

Township) for industrial development. In addition to existing operations on Flajole Road and Eleven Mile Road, the remaining planned industrial land is located in Crump. The proposed industrial land in Crump is adjacent to planned agricultural, high density residential and commercial lands. Due to this relationship, this category should allow for those uses which are generally compatible with, or, which under the imposition of certain reasonable standards, may be safely and aesthetically located in close proximity to commercial or residential uses. Light industrial uses are recommended.

Light industrial uses include operations which are generally confined within enclosed structures. Compliance with reasonable performance standards is required in an effort to reduce adverse impact on neighboring properties. Typical light industrial uses may include the manufacturing of products for component parts, parts assembly, food packaging, warehousing, and tool and die shops.

Public/Semi-Public/Recreation

This category was established to embrace all developed or undeveloped lands owned by various governmental and public agencies and institutions (including municipal services, schools, religious uses, and park space).

The Future Land Use Plan designates 45 acres (0.4 percent of the Township's total land area) for Public/Semi-Public/Recreation uses. All of the areas designated for public/semi-public/recreation uses are reflective of existing facilities.

No areas slated for future public/semi-public/recreational use are included in the Future Land Use Plan. Rather, any new facilities could be accommodated throughout the Township, where appropriate and consistent with the requirements of the Garfield Township Zoning Ordinance.

Conservation

The Conservation future land use category is designed to preserve and protect sensitive environmental areas of the Township. Totalling approximately 835 acres, this category comprises 3.7 percent of the Township. The category encompasses all of the lands along the North Branch Kawkawlin River as well as existing conservation lands including the Bay Conservation and Gun Club and the Crump Fox Club.

Preserving sensitive natural resources is important to the essential qualities of the Township that help to attract and retain Garfield Township residents. Therefore, future actions and policies to protect the natural environment found within this category will be of utmost importance. To ensure that residential development is compatible with natural areas, reasonable lot size, setback and lot coverage restrictions will need to be developed. In addition, criteria will need to be established to help land owners understand what natural assets are to be protected and the extent of preservation that is expected on their property.

Uses within this category may include preserves, wildlife sanctuaries, and open spaces. Public and private outdoor recreation uses such as parks, gun ranges, and golf courses may be considered under special conditions to ensure that such developments would be appropriate.

Other Recommendations

Home Based Businesses

With the continuing improvements in communications and transportation, there are a number of occupations and businesses that do not need to be located in exclusive commercial districts. The intent of this specific land use is to permit Township

residents to conduct certain of these occupations and businesses in their homes or on-site accessory buildings as a secondary use as long as the operation of the business has no demonstrably adverse effect on neighboring properties.

Home occupations and businesses should be limited to those having low impact such as the legal, engineering, and accounting professions; computer uses; software development; consulting; insurance; design; artistic endeavors; sewing; woodworking; tutoring; and similar occupations. The existence of a home business shall not be considered an adequate reason for rezoning either the property on which it is based or neighboring properties to commercial or industrial zoning districts.

To ensure that home businesses have negligible impact on neighboring properties, permits may be required and limitations placed on the number of employees, the amount of floor area used for the business, the amount of business traffic, the hours of operation, and such other restrictions as may be necessary.

Zoning Plan

The Garfield Township Zoning Ordinance is a regulatory tool that guides land use and development within the Township. As stipulated by the Michigan Zoning Enabling Act, Public Act 110 of 2006, the Zoning Ordinance must be based upon a Master Plan. Therefore, this Master Plan, by setting forth the long term vision of Garfield Township, provides the basis for the Township Zoning Ordinance, which contains the rules that govern the path to that vision.

As required by the Michigan Planning Enabling Act, the following is an explanation of the relationship between the future land use categories presented in this Master Plan and the zoning districts established in the Garfield Township Zoning Ordinance.

Existing Zoning Districts

The current Garfield Township Zoning Ordinance has established a total of two Zoning Districts as follows:

1. Open District
2. Commercial District

The purpose of the Open District, as generally stated in the Garfield Township Zoning Ordinance, is to retain the character of the large open land areas of the Township. A variety of uses are permitted by right within the Open District, including farms, preserves, recreational uses, dwellings, educational facilities, places of worship, clubs, nursing homes, and golf courses. Uses permitted by special permit in the Open District include airfields, kennels, cemeteries, mining activities, commercial and industrial enterprises, correctional institutions, and mobile home parks.

The purpose of the Commercial District, as generally stated in the Zoning Ordinance, is to provide retailing, personal and business services of all kinds to satisfy the needs of residents and visitors of the Township as well as wholesaling and industrial uses. Uses permitted by right within the District include business enterprises, light industrial enterprises, vehicular sales, auto service stations, mortuaries and animal hospitals. Uses permitted by special permit in the District include single and multiple family dwellings (4 units or less), theatres, vehicle wrecking yards, animal sales yards, bulk storage operations, and more intensive business and industrial enterprises (i.e., manufacturing).

Relationship Between the Future Land Use Categories and Zoning Districts

As outlined above, the Garfield Township Master Plan has established a total of seven Future Land Use Categories:

1. Agricultural/Rural Residential
2. Medium Density Residential
3. High Density Residential
4. Commercial
5. Industrial
6. Public/Semi-Public/Recreation
7. Conservation

As the Garfield Township Zoning Ordinance currently exists, with only two broadly defined Zoning Districts, the land use recommendations proposed in the seven Future Land Use Categories are not well represented or accomplished by the current Zoning Ordinance. For example, the Commercial Future Land Use Category describes an area where retail and service facilities would be located. The existing Commercial District within the Garfield Township Zoning Ordinance, by allowing a variety of uses well beyond the scope of "retail and service facilities," including industrial uses, would not be consistent with the Commercial Future Land Use Category.

Therefore, it is strongly recommended that a comprehensive update or a complete re-write of the Garfield Township Zoning Ordinance be conducted to better reflect the vision and recommendations of this Master Plan. In terms of Zoning Districts, it is recommended that, at a minimum, the following new Zoning Districts be established:

- A District intended to accommodate agricultural uses, rural residential uses, and other complementary uses as described in the Agricultural/Rural Residential Future Land Use Category
- A District intended to accommodate medium density residential uses and other complementary uses as described in the Medium Density Residential Future Land Use Category

- A District intended to accommodate high density residential uses and other complementary uses as described in the High Density Residential Future Land Use Category
- A District intended to accommodate commercial uses and other complementary uses as described in the Commercial Future Land Use Category
- A District intended to accommodate industrial uses and other complementary uses as described in the Industrial Future Land Use Category

Because public, semi-public, recreation, and conservation uses would likely be allowed within one or more of the new Zoning Districts, it may not be necessary to create a new Zoning District to exclusively accommodate the uses recommended within the Public/Semi-Public/Recreation or Conservation Future Land Use Categories.

Introduction

The Garfield Township Master Plan is a comprehensive community policy statement. The Plan is comprised of a variety of both graphic and narrative policies intended to function as benchmarks and to provide basic guidelines for making reasonable, realistic community development decisions. The Plan is intended to be used by Township officials, by those making private sector investments, and by all of those Garfield Township citizens interested in the future development of the Township.

The completion of the Plan is but one part of the community planning process. Realization or implementation of the recommendations of the Plan can only be achieved over an extended period of time and only through the cooperative efforts of both the public and private sectors. Implementation of the Plan may be realized by actively:

- Assuring community wide knowledge, understanding, support, and approval of the Plan
- Regulating the use and manner of development of property through up to date reasonable zoning controls, subdivision regulations, and building and housing codes
- Providing a program of capital improvements and adequate, economical public

services by using available governmental financing techniques to encourage desired land development or redevelopment

- Reviewing the plan periodically (at least every five years) to evaluate its consistency with changing trends and citizen desires

Public Support of the Master Plan

Citizen participation and understanding of the general planning process and policies of the Plan are critical to the success of the Township's planning program. A well organized public relations program is needed to identify and marshal public support. Lack of citizen understanding and support could well have serious implications for the eventual implementation of planning proposals. Failure of the public to back needed bond issues and continuing dissatisfaction concerning taxation, special assessments, zoning decisions, and development proposals are some of the results of public misunderstanding and rejection of long range plans.

In order to organize public support most effectively, the Township must emphasize the necessity of, and reasons for, instituting the planning program. Accordingly, the Planning Enabling Act under Section 51 states that the Township Planning Commission "may publish and distribute copies of the Master Plan or of any report, and employ other means of publicity and education." Additionally, the Planning Commission "shall consult with and advise public officials and agencies, public utility companies, civic, educational, professional, and other organizations, and citizens concerning the promotion or implementation of the Master Plan." In this spirit, the Township may wish to prepare a plan summary brochure for public distribution upon its adoption.

Zoning Ordinance

Zoning regulations are adopted under the local police power granted by the State for the purpose of promoting community health, safety, and general welfare. Such regulations have been strongly supported by the Michigan courts, as well as by the U.S. Supreme Court. Zoning consists of dividing the community into districts, for the purpose of establishing density of population and regulating the use of land and buildings, their height and bulk, and the proportion of a lot that may be occupied by them. Regulations in different kinds of districts may be different. However, regulations within the same district must be consistent throughout the community.

The intent of zoning is to assure the orderly development of the community. Zoning is also employed as a means of protecting property values and other public and private investments. Because of the impact that zoning can have on the use of land and related services, it should be based on a comprehensive long range community plan.

Zoning is an effective tool not only for the implementation of the Plan, but also benefits individual property owners. It protects homes and investments against the potential harmful intrusion of business and industry into residential neighborhoods; requires the spacing of buildings far enough apart to assure adequate light and air; prevents the overcrowding of land; facilitates the economical provision of essential public facilities; and aids in conservation of essential natural resources.

Enforcement

The ultimate effectiveness of the various ordinance requirements, however, is dependent upon the overall quality of ordinance administration and enforcement. If administrative procedures are lax, or if enforcement of regulations is handled in an inconsistent, sporadic manner, the result will be

unsatisfactory at best. The Township Zoning Administrator is often responsible for carrying out zoning/development related functions including building inspections, ordinance administration, community/developer liaison, and so forth. Each of these functions requires a substantial investment of staff time. If sufficient time is not made available to carry out these critical functions, they may only be accomplished in a cursory manner. Therefore, the Township should provide for adequate department staff levels and/or consulting assistance to assure that these essential day-to-day functions will receive the professional attention required to assure quality development.

Capital Improvements Program

The term "capital improvements" is generally intended to embrace large-scale projects of a fixed nature, the implementation of which results in new or expanded public facilities and services. Such items as public building construction, park development, sewer installation, waterworks improvements, street construction, land acquisition, and the acquisition of certain large-scale pieces of equipment (graders, sweepers, trucks, etc.) are included in the capital improvements budget.

Few communities are fortunate enough to have available at any given time sufficient revenues to satisfy all demands for new or improved public facilities and services. Consequently, most are faced with the necessity of determining the relative priority of specific projects and establishing a program schedule for their initiation and completion. The orderly programming of public improvements is to be accomplished in conjunction with the long-range Master Plan for development.

In essence, the capital improvements program is simply a schedule for implementing public capital improvements, which acknowledges current and anticipated demands and which recognizes present and potential financial resources available to the

community. The capital improvements program is a major planning tool for assuring that the projects proceed to completion in an efficient manner. The capital improvements program is not intended to encourage the spending of additional public monies but is simply a means by which an impartial evaluation of needs can be made. The program is a schedule established to expedite the implementation of authorized or contemplated projects.

Long-range programming of public improvements is based upon three fundamental considerations. First, the proposed projects must be selected on the basis of community need. Second, the program must be developed within the community's financial constraints and must be based upon a sound financial plan. Finally, program flexibility must be maintained through the annual review and approval of the capital budget. The strict observance of these conditions requires periodic analysis of various community development factors, as well as a thorough and continuing evaluation of all proposed improvements and related expenditures.

The Planning Enabling Act outlined a new requirement for all Planning Commissions in communities that have adopted a Master Plan and operate a public water and/or sewer system to annually prepare a capital improvements program. According to the Act, the program "shall show those public structures and improvements, in the general order of their priority, that in the Commission's judgement will be needed or desirable and can be undertaken within the ensuing 6-year period." Because it does not operate a public water or sewer system, Garfield Township is not required by State Statute to prepare a capital improvements program. However, capital improvements programming remains a valuable exercise and tool for determining and prioritizing needed public improvements.

Planning Education

Planning Commissioners should be encouraged to attend planning and zoning seminars to keep themselves informed of current planning issues and learn how to better carry out their duties and responsibilities as a Planning Commissioner. These seminars are regularly sponsored by groups as the Michigan Association of Planning, Michigan Townships Association and the Michigan State University Extension Service.

Funding Opportunities

Garfield Township's Master Plan has focused on providing an overall recommended pattern for future land uses in the Township. At the same time, however, it also has identified a number of policies, programs and services that will be important for the successful implementation of the Plan's goals. In particular, these policies and recommendations are listed in the Goals and Policies chapter of this Master Plan.

To accomplish these policies and recommendations, Township leaders should begin to develop criteria and priorities for such efforts including the provision of technical assistance and coordination of local project funding. However, in this time of diminished revenue from local funding sources, communities such as Garfield Township must diligently monitor and aggressively seek funds from state and federal funding sources. To assist in the implementation of the Master Plan, a comprehensive matrix of funding opportunities applicable to Garfield Township has been created (**Table 16**).

Table 16: Matrix of Funding Opportunities

Category/ Program Name	Sponsor	Funding Opportunity Description	Required Local Match Percentage	Link to Program Description
Parks, Recreation and Trails				
Transportation Enhancement Funds	MDOT	Acquisition of land and/or construction of non-motorized trails; bicycle and pedestrian facilities	20%	http://www.michigan.gov/tea
Michigan Natural Resources Trust Fund	MDNR	Purchase of land; development of outdoor recreational facilities and trails	25%	www.michigan.gov/dnr-grants
Land and Water Conservation Fund	MDNR	Development of outdoor recreational facilities and trails	50%	www.michigan.gov/dnr-grants
Community Forestry Grants	MDNR	Grants to support urban and community forest activities such as tree inventories, management plans, planting and other maintenance activities	No Match	www.michigan.gov/dnr-grants
Energy Efficiency and Conservation Block Grant Program	MDLEG	Energy efficiency strategies and projects to reduce total energy use, reduce fossil fuel emissions, and improve energy efficiency (could include studies, recreation projects and trails)	Yet to be determined	www.eecbg.energy.gov/
Community Facilities and Infrastructure				
Economic Adjustment Assistance Program	USEDA	Projects that stimulate employment (i.e., industrial parks) in areas that have experienced severe economic distress		www.eda.gov/AboutEDA/Programs.xml
Public Works and Economic Development Program	USEDA	Construction or rehabilitation of essential public infrastructure and facilities necessary to generate or retain private sector jobs and investments.		www.eda.gov/AboutEDA/Programs.xml
Energy Efficiency and Conservation Block Grant Program	MDLEG	Energy efficiency strategies and projects to reduce total energy use, reduce fossil fuel emissions, and improve energy efficiency (could include development of energy efficiency strategies and public facility improvements)	Yet to be determined	www.eecbg.energy.gov/
Clean Water State Revolving Fund	MDEQ	Grants and low-interest loans for water quality protection projects for wastewater treatment, nonpoint source pollution control, and watershed and estuary management.	No Match	www.epa.gov/owm/cwfinance/cwstrf/
Drinking Water State Revolving Fund	MDEQ	Grants and low-interest loans to install, upgrade, or replace infrastructure to continue to ensure safe drinking water.	No Match	www.epa.gov/safewater/dwsrf/index.html
Rural Development Community Facilities Program	USDA	Grants and low-interest loans for essential community facilities and capital projects or equipment that supports police, fire and health services in rural areas (20,000 or less population)	25% for grants	www.rurdev.usda.gov/rhs/cf/cp.htm
Rural Development Water and Environmental Programs	USDA	Grants and loans for drinking water, sanitary sewer, solid waste and storm drainage facilities in rural areas (10,000 or less population)	Varies	www.usda.gov/rus/water/
Assistance to Firefighters Grant Program	FEMA	Grants to fire departments to enhance their ability to protect the public and fire service personnel from fire and related hazards	10-20% depending on service area population	www.firegrantsupport.com/
Transportation (Including Non-Motorized)				
Safe Routes to School Program	MDOT	Trail development to improve school access	No Match	www.saferoutesmichigan.org
Transportation Economic Development Fund	MDOT	Category A: funding to assist in the development of highways, roads and streets necessary to support economic growth (must partner with the Monroe Co Road Commission).	20%	www.michigan.gov/tedf
Transportation Enhancement Funds	MDOT	Bicycle and pedestrian facilities; sidewalks; curb ramps; wide paved shoulders	20%	http://www.michigan.gov/tea
Energy Efficiency and Conservation Block Grant Program	MDLEG	Energy efficiency strategies and projects to reduce total energy use, reduce fossil fuel emissions, and improve energy efficiency (could include various road improvements and trail development)	Yet to be determined	www.eecbg.energy.gov/

Source: Wade Trim, December 2009.

Acronym Key:

- FEMA = Federal Emergency Management Agency
- MDEQ = Michigan Department of Environmental Quality
- MDLEG = Michigan Department of Labor and Economic Growth
- MDNR = Michigan Department of Natural Resources
- MDOT = Michigan Department of Transportation
- USEDA = United States Economic Development Administration
- USDA = United States Department of Agriculture

5-Year Master Plan Review

The Garfield Township Master Plan is a flexible document that should be updated periodically to address major changes in the community, such as the addition/loss of a major employer or changing citizen attitudes relating to a controversial issue.

At least every five years after the adoption of a Master Plan, the Planning Enabling Act requires that a Planning Commission “review the Master Plan and determine whether to commence the procedure to amend the Master Plan or adopt a new Master Plan.” The findings of the review must be recorded in the minutes of the relevant meeting or meetings of the Planning Commission.

A



Appendix: Mapping

Map 1, Existing Land Use

Map 2, PA 116 Farmlands

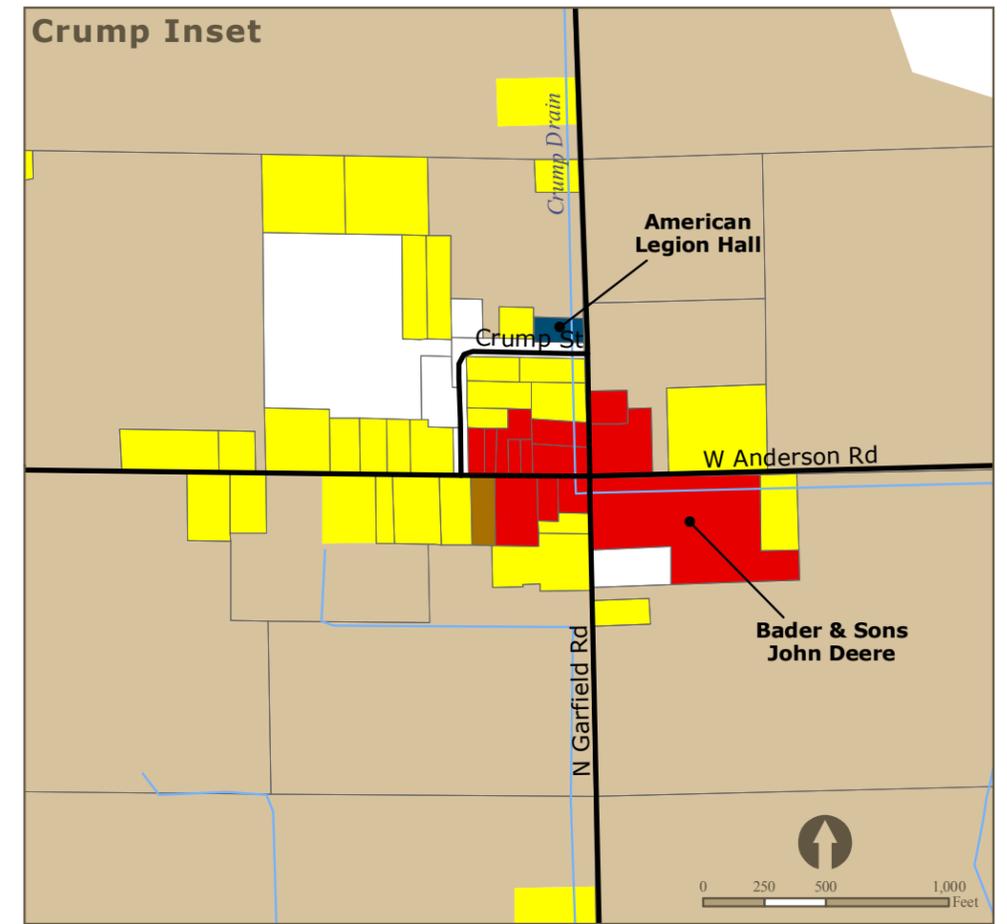
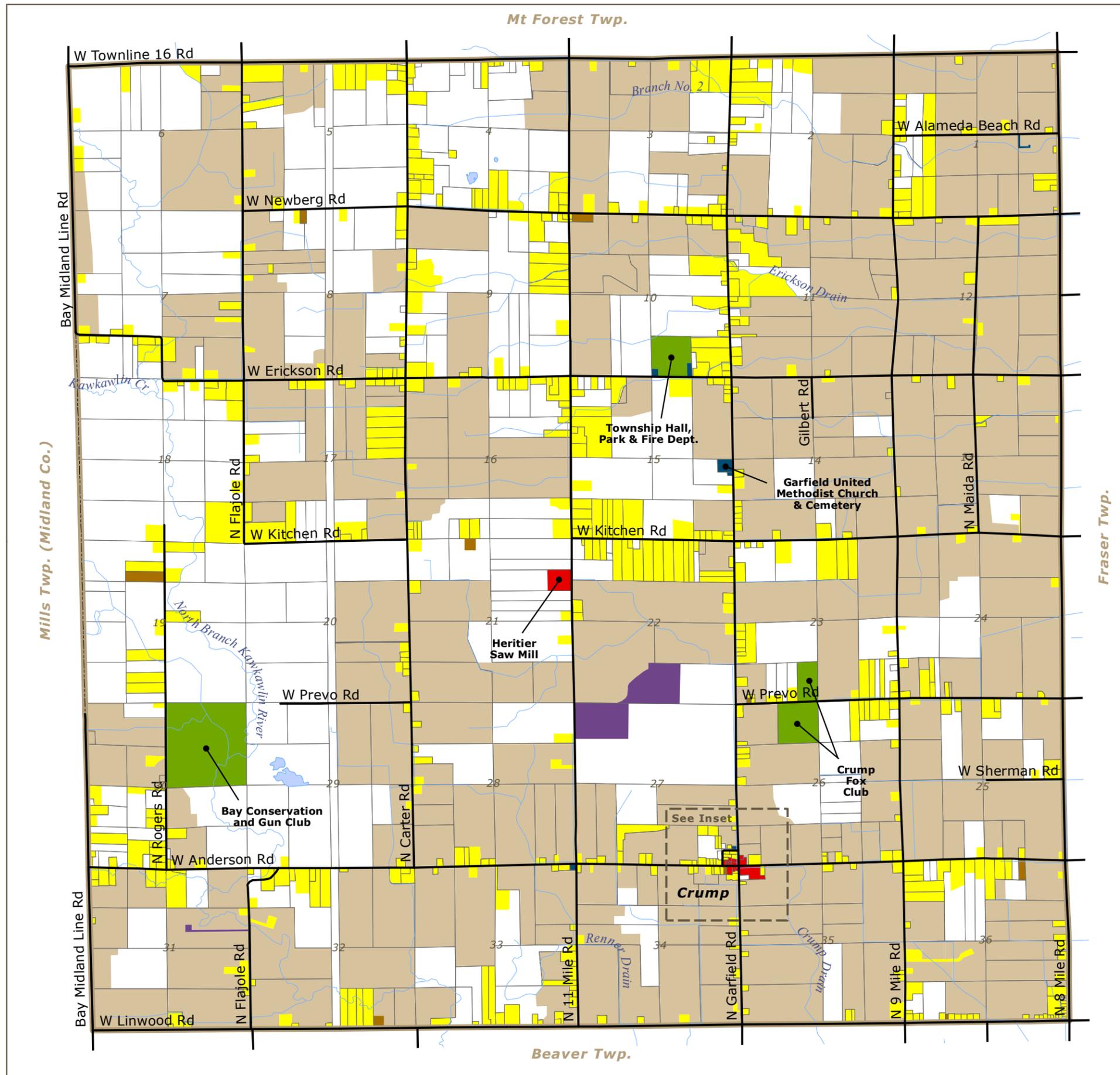
Map 3, Woodlands

Map 4, Soil Conditions

Map 5, Transportation Network

Map 6, Transportation Analysis

Map 7, Future Land Use

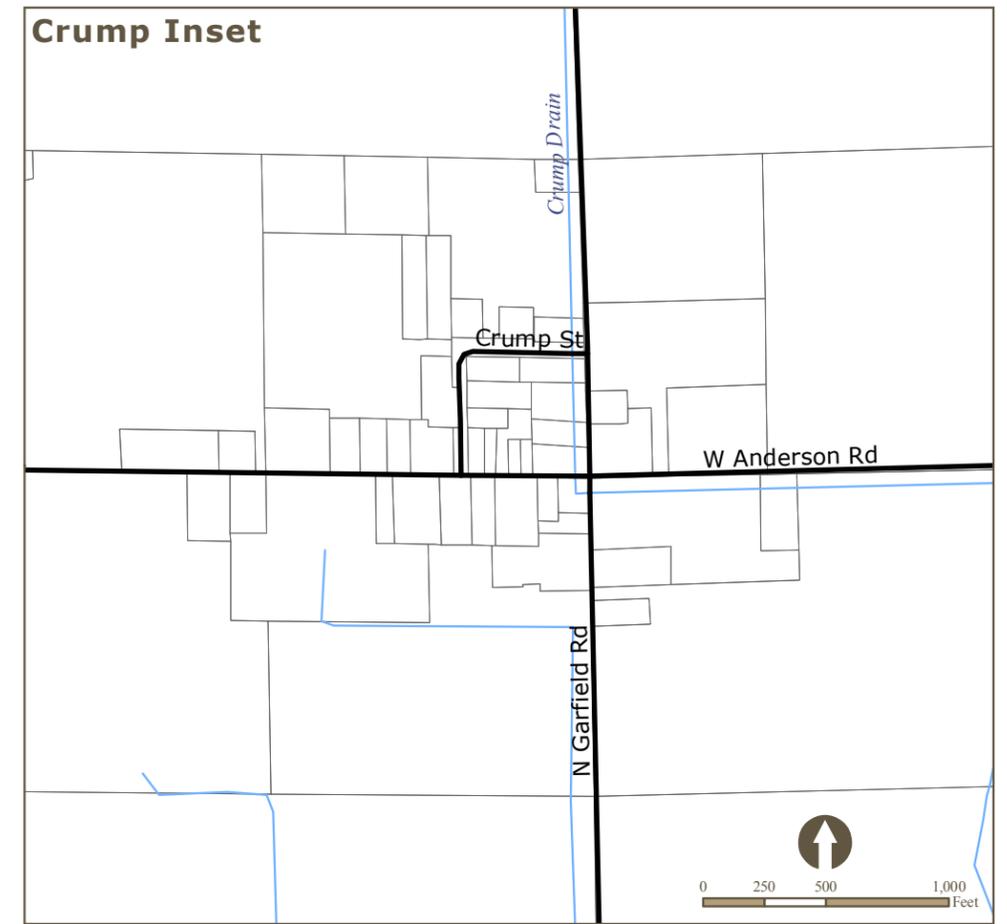
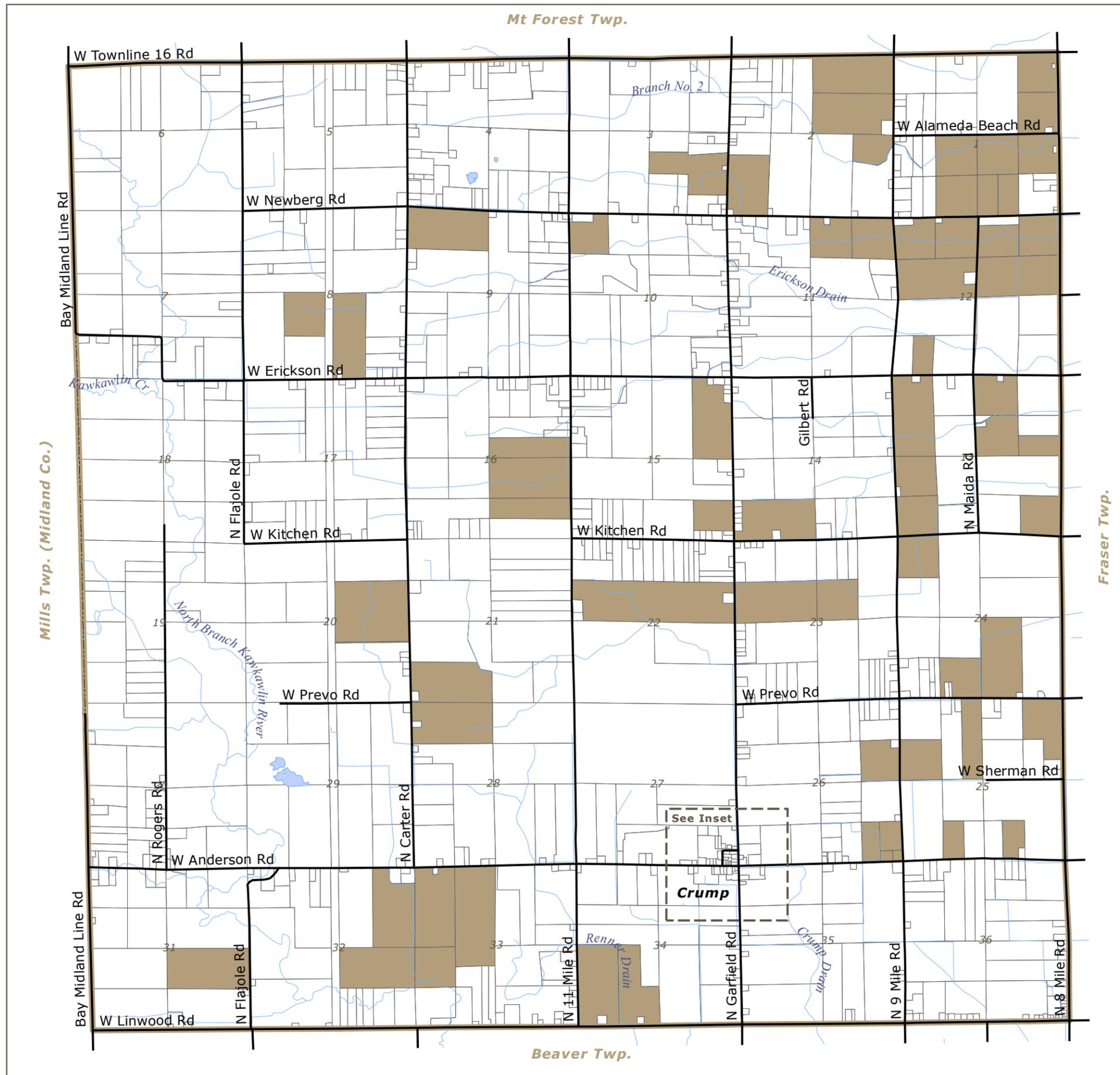


Map 1 Existing Land Use

Master Plan Update

- ### Legend
- Agricultural
 - Single Family Residential
 - Mixed Use Residential
 - Commercial
 - Industrial
 - Public/Semi-Public
 - Parks and Recreation
 - Vacant/Rights-of-Way
 - Roads
 - Rivers and Creeks
 - Water Bodies
 - Municipal Limits
 - Parcels

Base Data Source: Michigan Geographic Framework, 2008.
 Parcel Source: Bay County GIS, 2009.
 Existing Land Use Source: 1997 Master Plan, Updated by Garfield Township, June 2009.



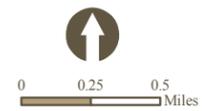
Map 2 PA 116 Farmlands



Master Plan Update

Legend

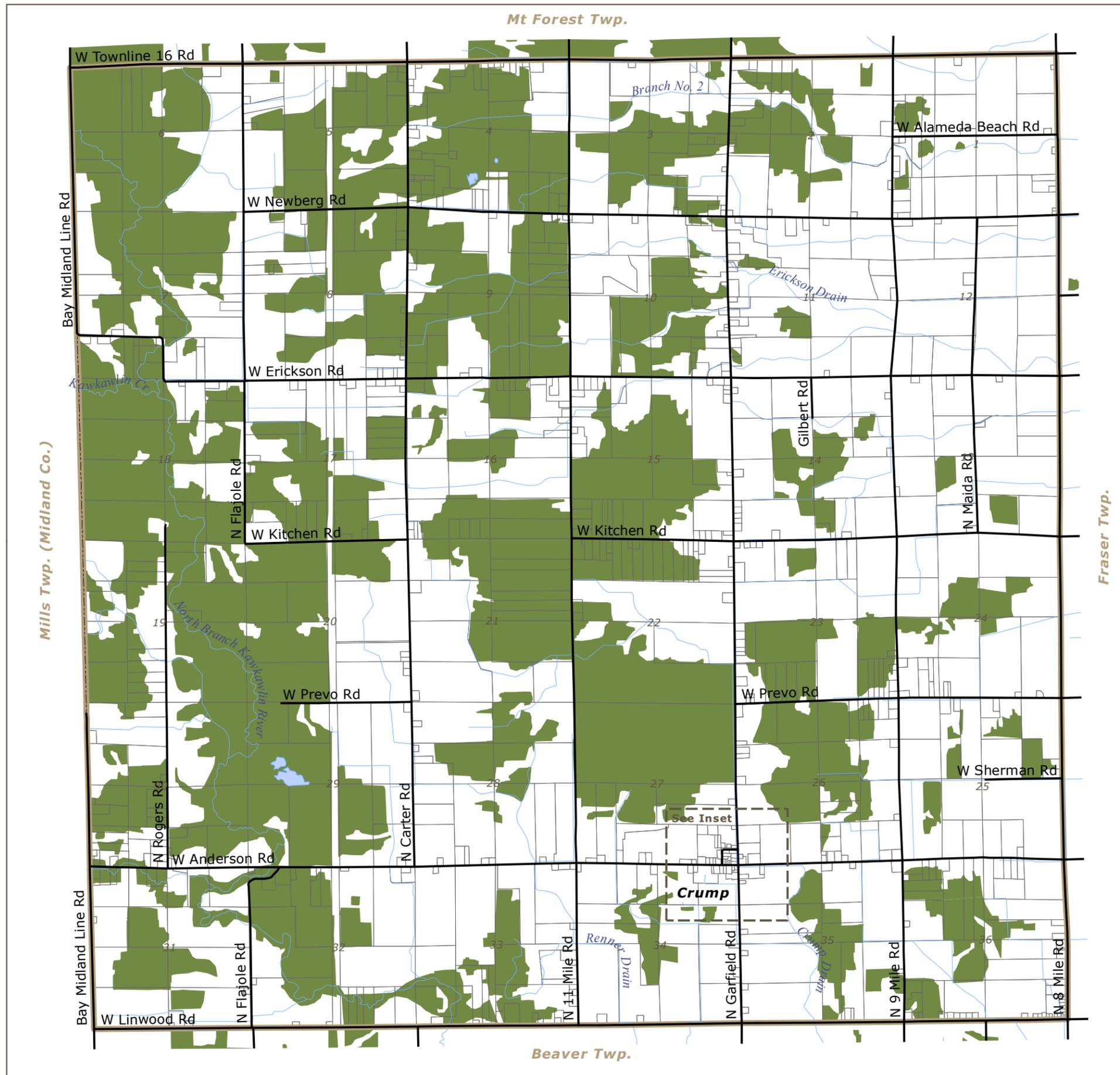
- PA 116 Farmlands
- Roads
- Rivers and Creeks
- Water Bodies
- Municipal Limits
- Parcels



Base Data Source: Michigan Geographic Framework, 2008.
 Parcel Source: Bay County GIS, 2009.
 PA 116 Source: Michigan Department of Agriculture, Environmental Stewardship Division Listing as of 7/15/2009.

Garfield Township
 Bay County, Michigan





Map 3 Woodlands

Master Plan Update

Legend

- Woodlands
- Roads
- Rivers and Creeks
- Water Bodies
- Municipal Limits
- Parcels

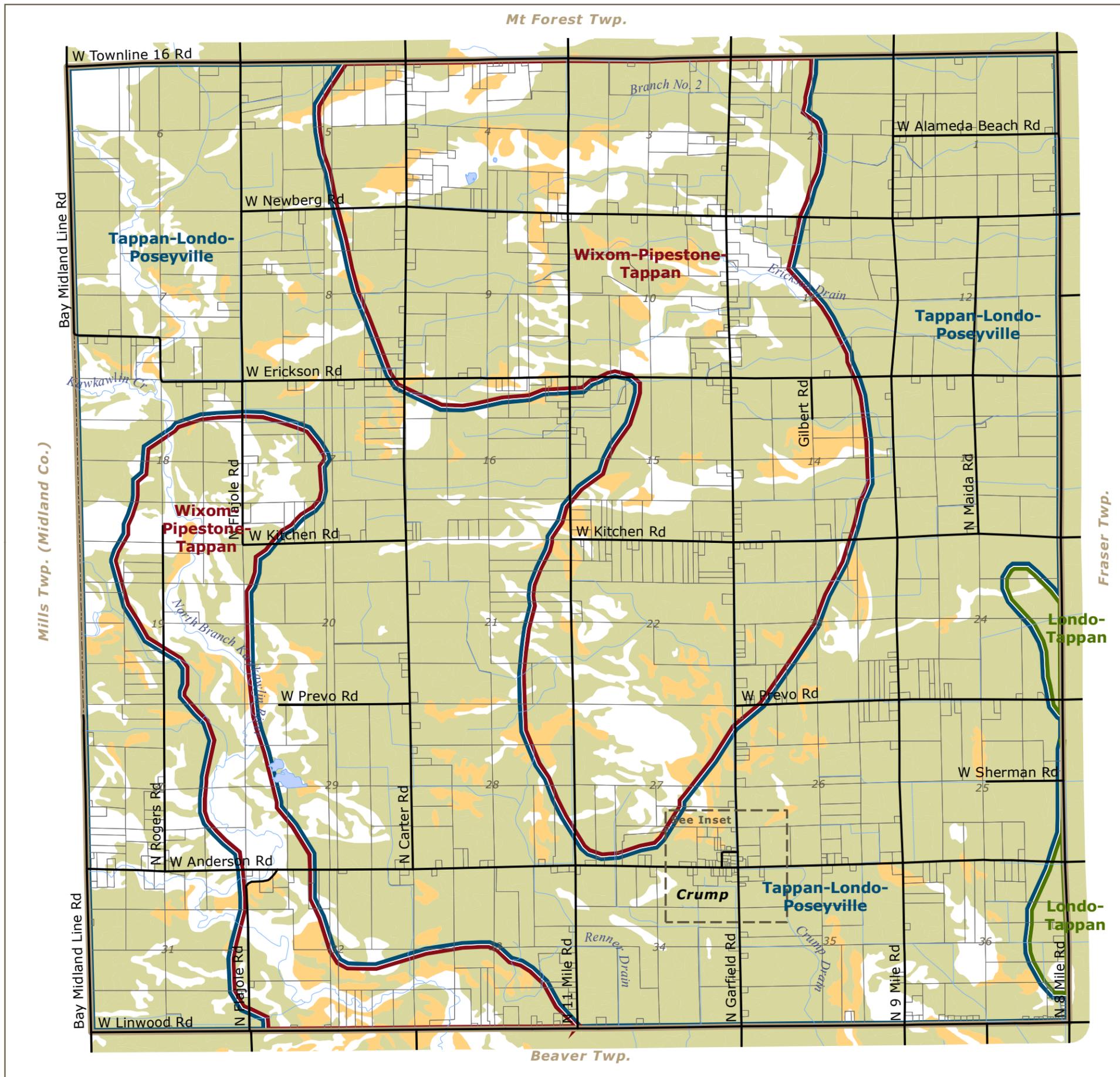
Base Data Source: Michigan Geographic Framework, 2008.
 Parcel Source: Bay County GIS, 2009.
 Woodlands Source: MIRIS Land Use/Land Cover for Bay County, 1978.

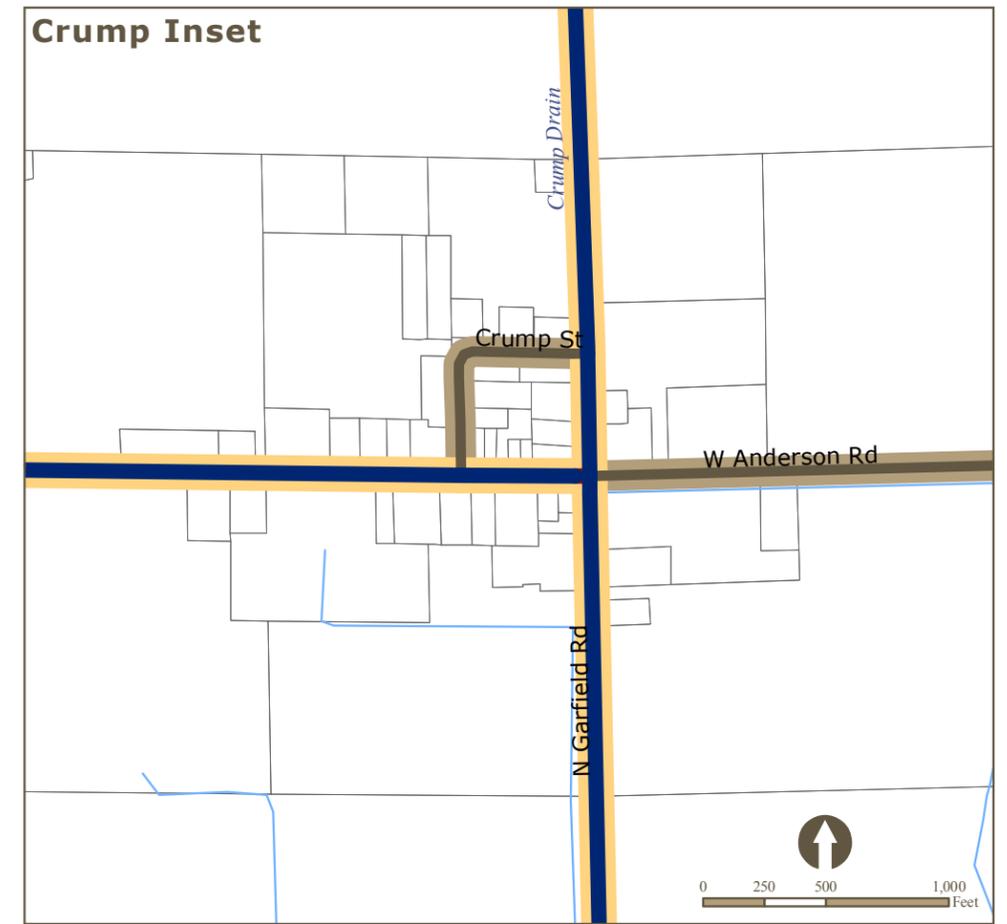


Garfield Township
 Bay County, Michigan



800.482.2864 WadeTrim.com





Map 5 Transportation Network

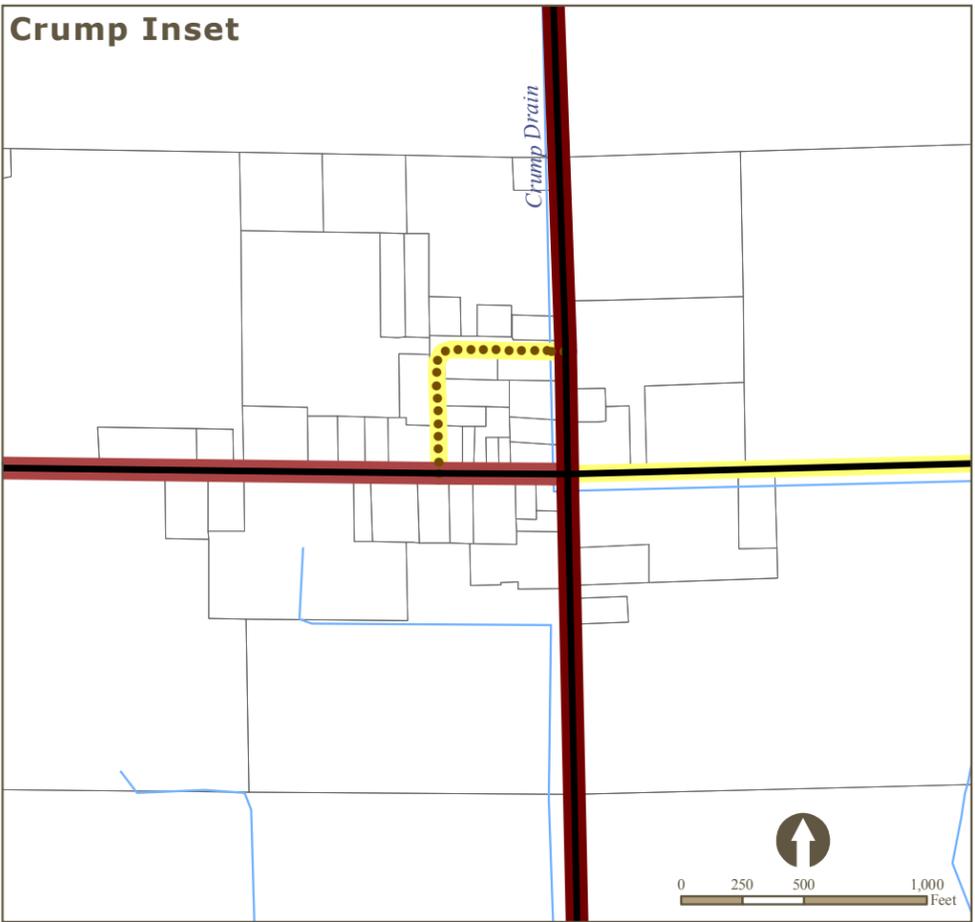
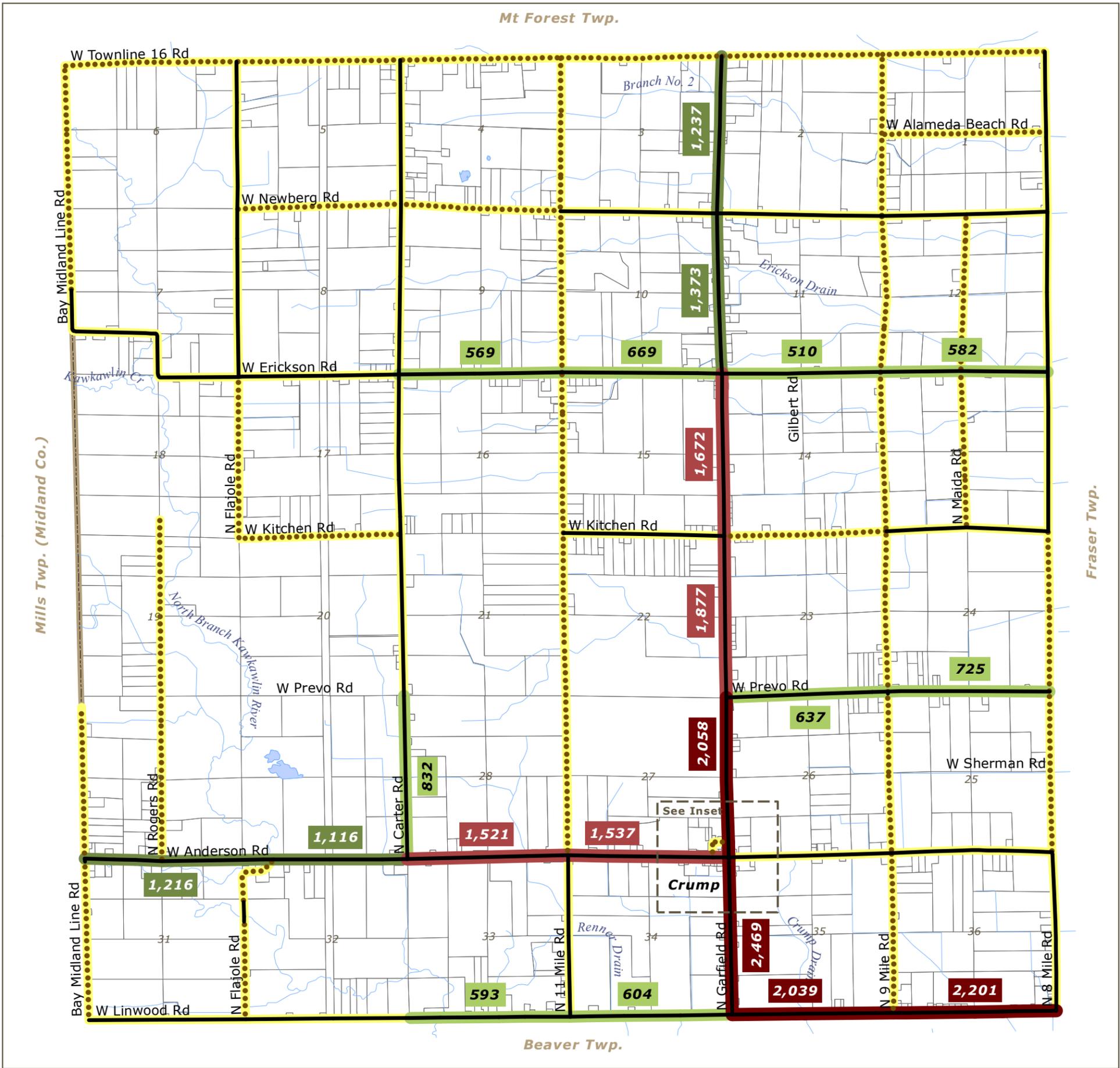
Master Plan Update

- Legend**
- National Functional Class (NFC):
- Major Collector
 - Minor Collector
 - Local Road
 - Not Classified
 - Rivers and Creeks
 - Water Bodies
 - Municipal Limits
 - Parcels
- Legal System:
- County Primary Road
 - County Local Road
 - Private/Other
- 0 0.25 0.5 Miles

Base Data and Transportation Source: Michigan Geographic Framework, 2008.
Parcel Source: Bay County GIS, 2009.

Garfield Township
Bay County, Michigan





Map 6 Transportation Analysis

Master Plan Update

Legend

Road Surface Type:

- Paved
- Gravel

Traffic Counts (ADT):

- 2,000 or Higher
- 1,500 to 1,999
- 1,000 to 1,499
- 500 to 999
- Less than 500
- Actual ADT Count

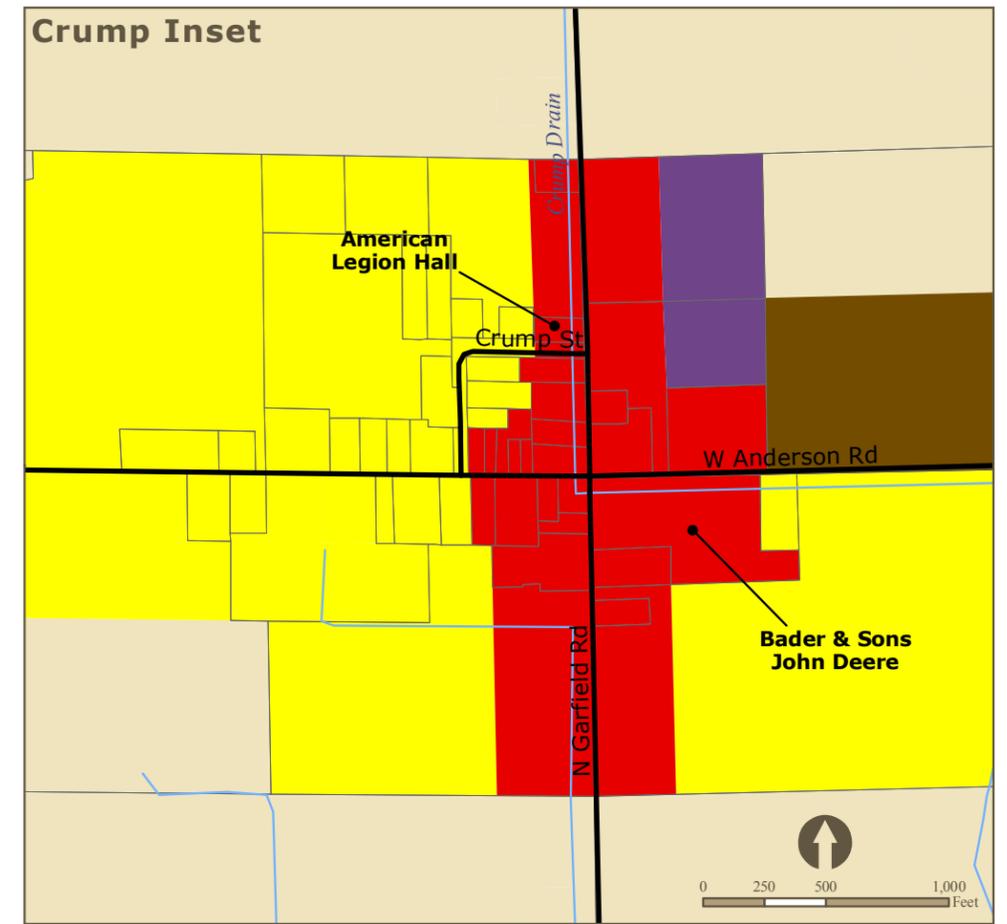
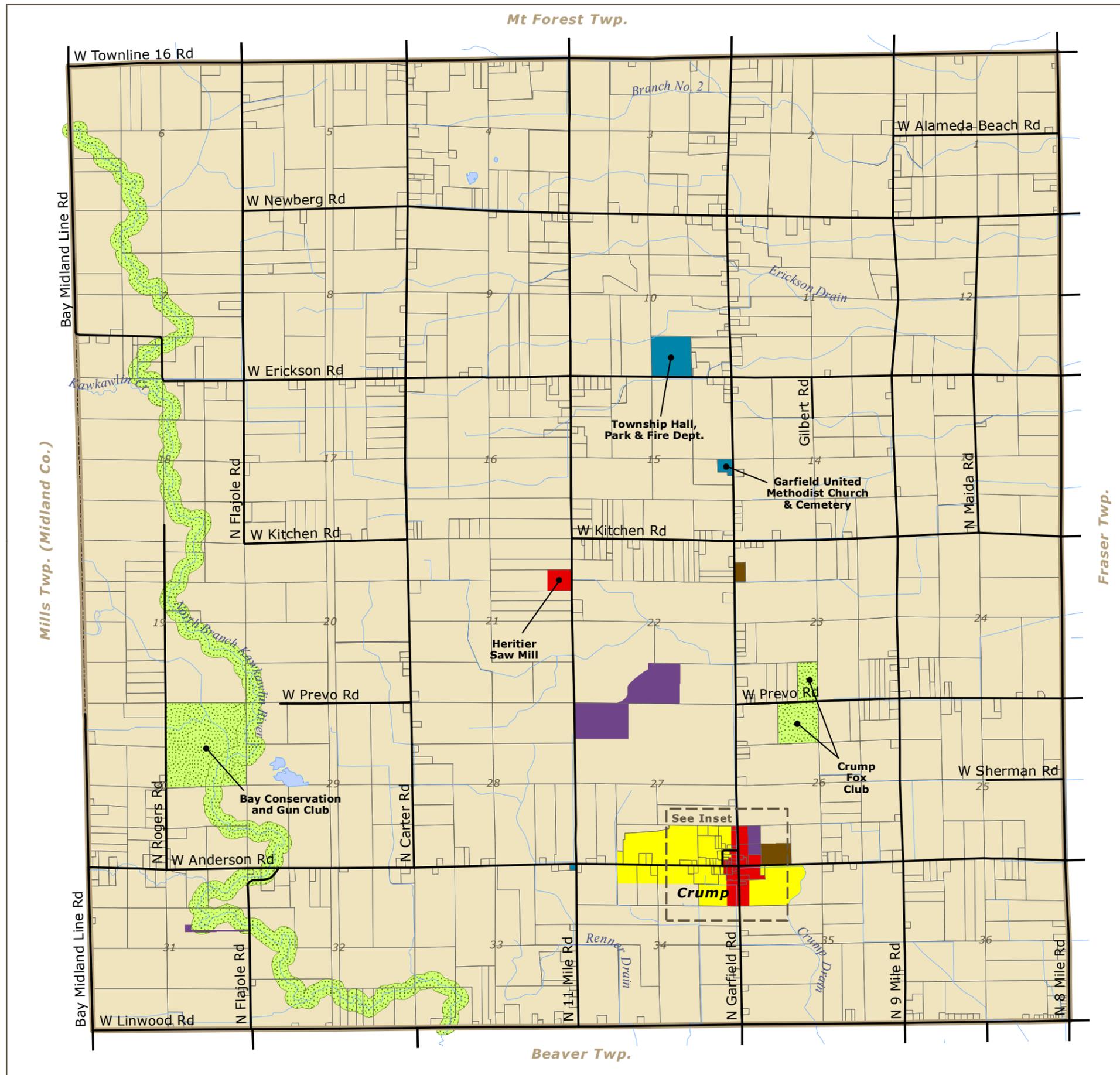
- Rivers and Creeks
- Water Bodies
- Municipal Limits
- Parcels

Base Data and Transportation Source: Michigan Geographic Framework, 2008.
Parcel Source: Bay County GIS, 2009.
Surface Type Source: Wade Trim Field Survey of May 2008.
Traffic Counts Source: Bay County Road Commission, 2000-2008.



Garfield Township
Bay County, Michigan





Map 7 Future Land Use

Master Plan Update

- Legend**
- Agricultural/Rural Residential
 - Medium Density Residential
 - High Density Residential
 - Commercial
 - Industrial
 - Public/Semi-Public/Recreation
 - Conservation
 - Roads
 - Rivers and Creeks
 - Water Bodies
 - Municipal Limits
 - Parcels



This is to certify that this is the official Future Land Use Map of Garfield Township, adopted May 17, 2010.

Clarence Pelton
Clarence Pelton
Planning Commission Secretary

Garfield Township
Bay County, Michigan





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3933 Monitor Road
Bay City, MI 48707
www.WadeTrim.com

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