

# Union Charter Township 2017 Master Plan Update Appendix

July 17, 2017

This appendix summarizes existing conditions at the time the Union Township Master Plan was adopted in 2011 and updated in 2017. This background information provides a basis for the recommendations listed in the plan.

## **I. Demographics**

Figure 1: Population Change in Union Township  
Figure 2: Population Growth in Adjacent Communities  
Figure 3: Comparing Age Groups from 2000 to 2010  
Figure 4: Educational Attainment  
Figure 5: Housing Units in Structure  
Figure 6: Owner- Vs. Renter-Occupied Housing  
Figure 7: Median Household Income  
Figure 8: Employment Industry by Sector  
Figure 9: Commute Time

## **II. Existing Land Use**

Map- Existing Land Use

## **III. Transportation**

20xx Non-Motorized Plan  
2006 US-127 BR/ Access Management Plan

## **IV. Natural Features**

Map- Prime Farmland by Soil Type  
Map- Floodplain and Wetlands Areas  
Map- Existing Land Use- Agricultural Areas Highlighted  
Map- Prime Farmland with Residential Zoning

## **V. Utilities**

Map- Utilities

## **VI. 2016 Target Market Analysis – Executive Summary**

## **VII. 2016 Resident Survey**

## I. Demographics

The purpose of this document is to analyze qualitative and quantitative information regarding the existing conditions in and around Union Township. By compiling this information, which consists of population, housing, economic and employment characteristics, the community may be able to forecast upcoming development trends and land use patterns.

The following text and graphics offer an interpretation of information from a variety of sources, including the 2010 US Census and the 2011-2015 American Community Survey (ACS) General Housing and General Economic Characteristics 5-year estimates.

### A. Population Characteristics

Population trends influence the development and circumstances within the community. The number of residents influences planning for streets, utilities and services. The age, income and length of stay of residents within the community all place demands on services and channel growth.

Population characteristics in adjacent communities also influence the development tendencies in Union Township. Residents in the City of Mount Pleasant and throughout Isabella County often find employment outside of their community and utilize a variety of services provided by the Township.

This ultimately forms a dynamic socioeconomic relationship among these numerous cities in the region. In general, jobs and economic development are strongly associated with population growth, showing why analyzing population characteristics of the Township and surrounding communities helps to assess the development opportunities of the future.

Population Change in Union Township 2000-2010

	2000	2010	% Change
Union Township	7,615	12,927	69.8%
Isabella County	63,351	70,311	11.0%
State of Michigan	9,938,444	9,883,640	-0.6%

Figure 1

Source: US Census Bureau

### Regional Growth Trends

Union Charter Township, with 12,927 residents in 2010, according to the U.S. Census, has the largest population of the 16 townships which make up Isabella County. Union also is the only township that has experienced a population increase of greater than 1,000 people between 2000 and 2010. The U.S. Census figures show that Union gained 4,981 residents in that time period while the other townships have experienced from slight gains of just a handful of new residents as in Denver and Nottawa Townships.

Union's population trend is more similar to its neighbor, the City of Mt. Pleasant, than to other Isabella County townships as well as that of the State of Michigan overall.

Population Growth in Adjacent Communities

	2000	2010	% Change
Union Township	7,615	12,927	69.8%
Isabella County	63,351	70,311	11.0%
City of Mount Pleasant	25,946	26,016	0.3%
Chippewa Township	4,617	4,654	0.8%
Coe Township	2,993	3,079	2.9%
Deerfield Township	3,081	3,188	3.5%
Denver Township	1,147	1,148	0.1%
Fremont Township	1,358	1,455	7.1%
Isabella Township	2,145	2,253	5.0%
Lincoln Township	1,936	2,115	9.2%
Nottawa Township	2,278	2,282	0.2%
State of Michigan	9,938,444	9,883,640	-0.6%

Figure 2

Source: US Census Bureau

As seen in the table above, the population in both Mt. Pleasant and Union Township grew steadily in the past decade. The overall population of the State peaked in 2003 and has been on a steady decline since. Union Township is in a unique position of population increase, which may be linked to the growth of Central Michigan University, located in the City of Mt. Pleasant.

In June 2003, all of Isabella County was designated the Mt. Pleasant micropolitan area by the U.S. Census Bureau. A micropolitan designation requires an urban core with a population between 10,000 and 50,000 people, with adjacent suburban communities. The designation opened the door for federal money, particularly for road improvements, prioritized for urban areas.

## B. Age

Union Township also differs from statewide trends in terms of the age of the population. Union has seen a shift in its population's age distribution in the past ten years. In 2000 37% of the population was between the ages of 25 and 54. The 2010 Census shows that now only 26% of the population is in that age range. The largest percentage of the population has shifted to the 20 to 24 year age range.

Unlike the State overall, people ages 20 to 24 account for a significant portion of the population, or 41 percent in 2010. Housing data indicates that these young adults of the millennial generation are Central Michigan University students living in rental housing in Union Township. Young adults, especially students, have different demands on a municipality than adults over 25. Fiber optics, wireless systems and access to technology are important to this generation that has grown up with the internet. Many in this segment have access to recreation amenities at the university so the quality and range of recreation offered by the Township is not as important as it is to older residents with children. Finally, university student populations may remain stable or grow in terms of numbers but usually the length of time an individual stays in the same community or even dwelling unit is short. The continual influx of new residents can cause stress on a community, affecting the stability and character of neighborhoods. However, students bring growth, inject income, and can become long-term residents after graduation.

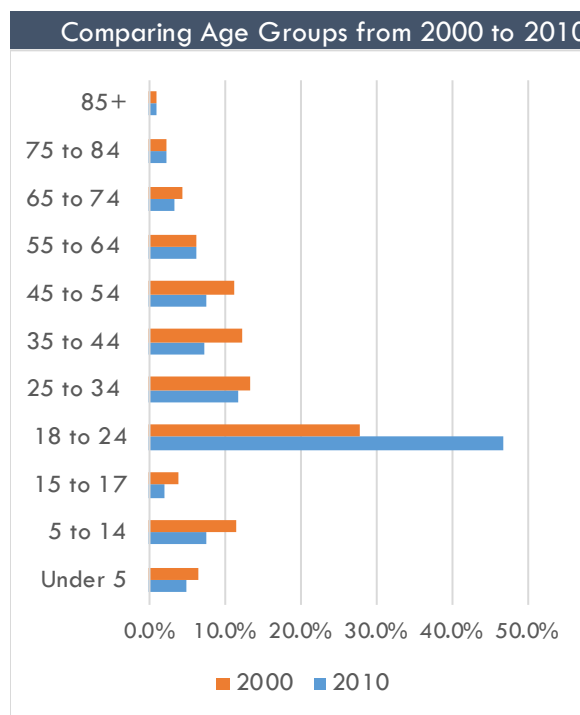


Figure 3

Source: US Census Bureau

## Educational Attainment

The Township has a lower percentage of high school and college graduates than the City of Mount Pleasant, but a higher percentage of high school and college graduates than the County overall.

	Educational Attainment	
	% High School Graduate or Higher	% Bachelor's Degree or Higher
Union Township	92.8%	29.5%
City of Mount Pleasant	93.2%	42.9%
Isabella County	91.1%	27.3%

Figure 4

Source: 2011-2015 ACS 5-year Estimates

## C. Housing Characteristics

Analyzing housing characteristics gives insight into the residential composition of the community, and consequently allows us to get an idea as to what type of housing is in demand. It is also important to evaluate the variety of housing types and affordability to determine if there are adequate housing options throughout the Township. By considering these observations, the necessary policies and strategies can be implemented to enhance residential development.

## Housing Units in Structure

Accounting for 36.1 percent of all housing, structures with 10 or more units have surpassed single-family units as the Township's dominant housing type (2011-2015 ACS 5 year Estimates). One unit detached structures are the second most common housing type at 34 percent of the Township's overall housing market.

Mobile homes and apartment complexes with 5 to 9 units accounted for 8.8 percent and 10.9 percent of the housing units, respectively.

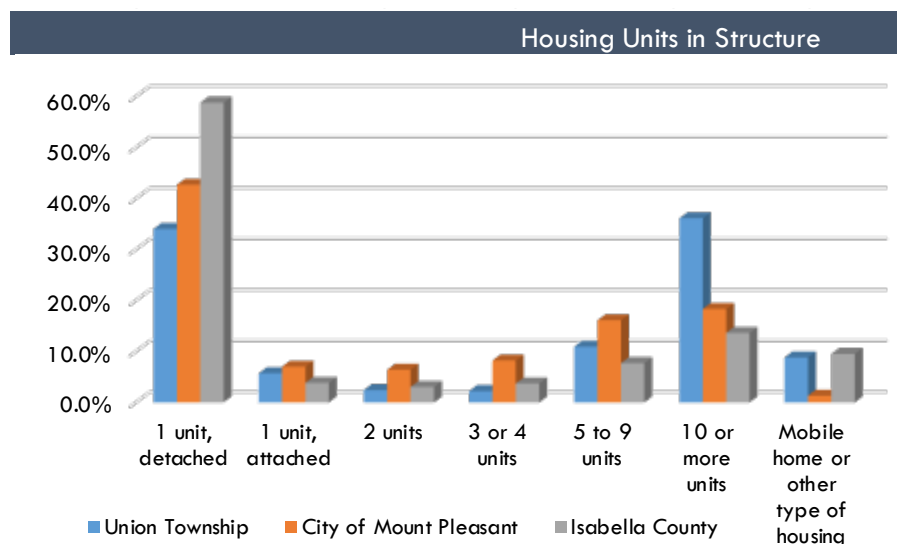


Figure 5

Source: ACS 2011-2015 5-Year Estimates

## Housing Tenure

Between 2011-2015, the ratios of owner-occupied and renter-occupied units has shifted as compared with the same interlude between 2000-2005. Whereas owner-occupied housing previously made up the majority at about 60 percent of all occupied units, recent data show they now account for 38 percent of occupied units. Renter-occupied housing now accounts for 62 percent of units in the Township, where before it accounted for 40 percent of units.

	Owner- vs. Renter-Occupied Housing			
	Owner-Occupied		Renter-Occupied	
	Number	Percent	Number	Percent
Township	1,838	38%	2,966	62%
Mount Pleasant	3,014	37%	5,174	63%
County	14,838	60%	9,823	40%
State	2,728,815	71%	1,112,333	29%

Figure 6

Source: 2011-2015 American Community Survey Estima

The data suggest the housing needs of Central Michigan University (CMU) students continue to have significant impacts on the size of the renter population in both Mt. Pleasant and Union Township.

See Section VI: Market Analysis below for a summary analysis of area wide housing trends from the 2016 Residential Target Market Analysis conducted for Isabella County.

### D. *Employment and Economic Characteristics*

Assessing the Township's economic and employment profile provides insight into the success residents are having in the community. Indicators of success include median household income, poverty rate, and employment characteristics. These indicators exemplify the community's skill level and earnings potential while demonstrating the needs citizens may have in the community. It is also important to relate these indicators to previous findings, such as educational attainment, in order to understand how many of the previously mentioned characteristics influence one another.

## Median Household Income

Union Township's median household income of \$27,739 is lowest among townships in Isabella County, but is comparable to that of the City of Mount Pleasant which is \$30,833. The next closest adjacent community in terms of income is Isabella Township at \$43,365, which shares the norther border of the Township. Figure 7 summarizes median household incomes for the surrounding communities.

Median Household Income (2015 dollars)	
Chippewa Township	\$ 45,714
Coe Township	\$ 48,750
Deerfield Township	\$ 77,125
Denver Township	\$ 42,381
Fremont Township	\$ 43,894
Isabella Township	\$ 43,365
Lincoln Township	\$ 56,683
Nottawa Township	\$ 53,860

Figure 7 Source: ACS 2011-2015 5-Year Estimates

## Poverty Rate

Of the Township's 13,110 residents in 2015, 6,051 fell below the poverty level. This equates to a poverty rate of 46.2%. Compared to Isabella County's poverty rate of 30.2%, the Township has a substantially higher proportion of the population living below the poverty line (2011-2015 ACS 5-year Estimates).

## Employment Industry

As shown by Figure 8, services related to the arts and entertainment, education and health care industries make up the largest employment sectors in the township. Accounting for 13 percent of all employment, retail trade is also a major contributor of employment to the Township.

Employment Industry of Union Township	
Arts, entertainment, and recreation, and accommodation and food services:	29.9%
Educational services, and health care and social assistance:	28.4%
Retail trade:	13.0%
Professional, scientific, and management, and administrative and waste management services:	4.6%
Manufacturing:	4.5%
Finance and insurance, and real estate and rental and leasing:	4.4%
Public administration:	3.5%
Other services, except public administration:	3.3%
Construction:	2.7%
Transportation and warehousing, and utilities:	2.6%
Information:	1.2%
Agriculture, forestry, fishing and hunting, and mining:	1.0%
Wholesale trade:	0.8%

## Commute Times in Union Township

Less than 10 Minutes	43.3%
10 to 19 Minutes	40.2%
20 to 29 Minutes	4.1%
30 to 44 Minutes	2.4%
45 to 59 Minutes	2.8%
60 or more Minutes	3.7%

Figure 8 Source: ACS 2011-2015 5-Year Estimates

## Commute Time

Over 80 percent of the employed population in Union Township commutes twenty minutes or less to work, and of this population, 43.3% commute ten minutes or less. The mean travel time to work is 14 minutes for commuters living in the Township (2011-2015 ACS 5-year Estimates).

Figure 9 Source: ACS 2011-2015 5-Year Estimates

## II. Land Use

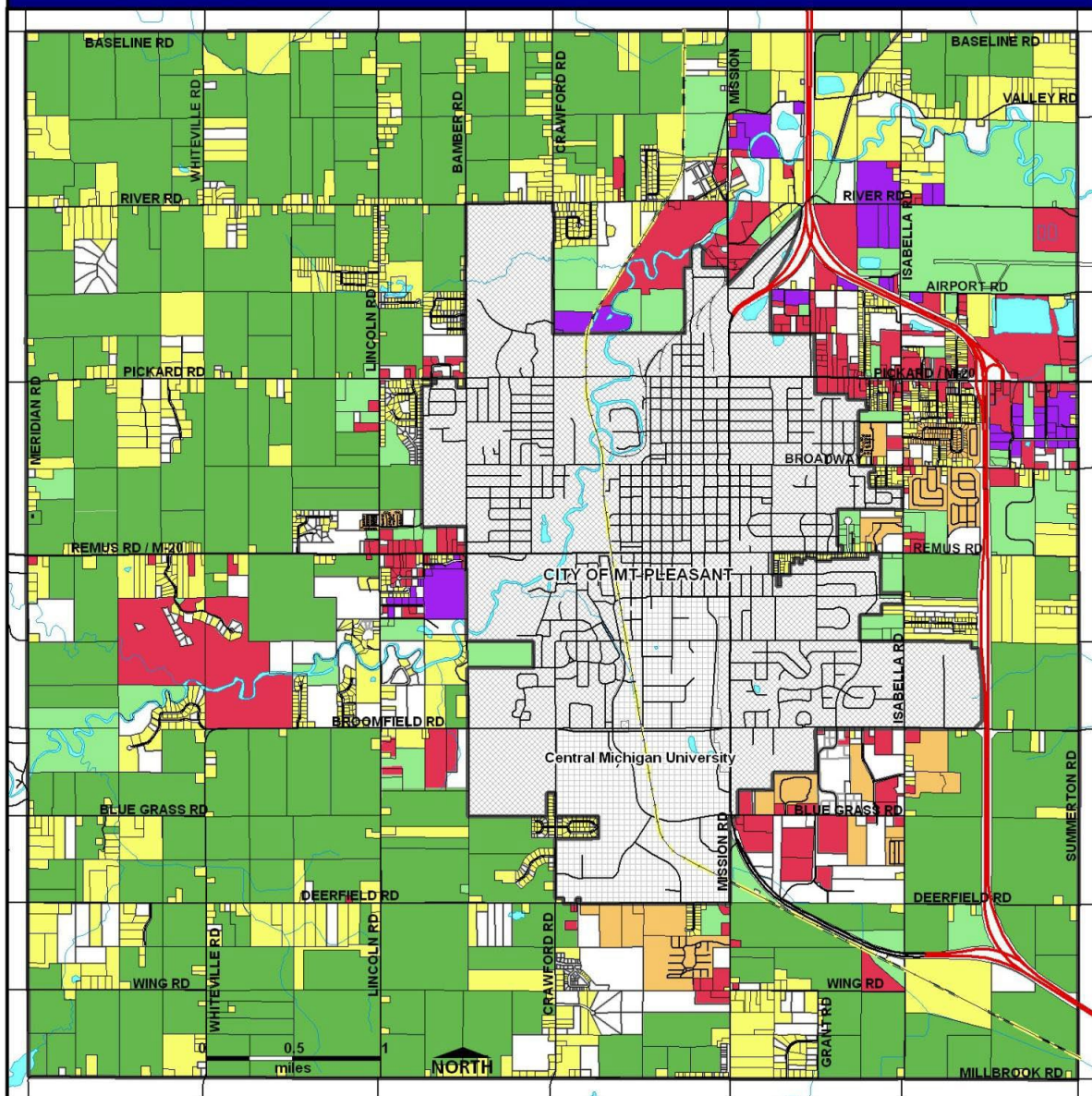
The land pattern in Union Township in February of 2010 is a traditional pattern of higher intensity uses, such as commercial and industrial, ringing the borders of the City of Mt. Pleasant, while residential and agricultural uses dominate the further corners of the Township. Industrial uses are in the northern or eastern part of the Township, near access to the freeway. Commercial also runs in strips near highway interchanges along major roads such as Pickard, Remus, Bluegrass and Mission Roads. Public and civic uses, such as parks, are mostly adjacent to the city and natural features.

### Union Township Existing Land Use

Existing Land Use (ELU) Category	Acres of ELU	% of ELU	Acres of Zoned Land Use	Zoning Land Use category	Acres of Zoned Land Use	% of Zoned land
Agriculture	9,038	49.0%	10,431	Agricultural (AG)	10,431	58.0%
Low Density Residential	3,369	19.0%	4,903	Low Density Residential (R1)	2,379	13.0%
				Medium Density Residential (R2A, R2B, R5)	2,524	14.0%
High Density Residential	464	3.0%	561	High Density Residential (R3A, R3B, R4)	561	3.0%
Commercial/Office Service	1,346	8.0%	1,400	Office Service (OS)	62	<1%
				General Business (B4)	323	2.0%
				Highway Business (B5)	779	4.0%
				Auto Highway (B6)	66	<1%
				Retail and Service Business (B7)	170	1.0%
Industrial	302	2.0%	684	Light Industrial (I1)	341	2.0%
				Heavy Industrial (I2)	343	2.0%
Public/Civic/Exempt	1,541	9.0%	-	NA	-	0.0%
Vacant	1,841	10.0%	-	NA	-	0.0%
	-	-	79	Tribal Trust lands	79	<1%
Total	17,901	100.0%	18,058		18,058	100.0%

Source: Union Township

## Existing Land Use



### Parcels by Land Use Class

<span style="display: inline-block; width: 15px; height: 15px; background-color: green; border: 1px solid black;"></span> Agricultural	<span style="display: inline-block; width: 15px; height: 15px; background-color: orange; border: 1px solid black;"></span> High-Density Residential
<span style="display: inline-block; width: 15px; height: 15px; background-color: red; border: 1px solid black;"></span> Commercial / Office Service	<span style="display: inline-block; width: 15px; height: 15px; background-color: lightgreen; border: 1px solid black;"></span> Public / Civic / Exempt
<span style="display: inline-block; width: 15px; height: 15px; background-color: purple; border: 1px solid black;"></span> Industrial	<span style="display: inline-block; width: 15px; height: 15px; background-color: white; border: 1px solid black;"></span> Vacant
<span style="display: inline-block; width: 15px; height: 15px; background-color: yellow; border: 1px solid black;"></span> Residential	

Existing land use information was developed from Union Township property data, land use/land cover data, and aerial imagery. Additional land use data, collected in the field, was provided by Matt Robinson (CMU Geography Department Senior Honors Project).

Compiled by Union Township GIS Department, October 2010.

### III. Transportation

Transportation recommendations and implementation strategies for this plan included key points from the following sources:

#### [2011 Greater Mt. Pleasant Area Non-Motorized Plan](#)

The 2011 Non-Motorized Plan presents a vision of how the greater Mount Pleasant Area may improve their non-motorized connections, links to surrounding communities, and regional trail resources located in Isabella County. The plan is divided into eight parts:

**Goals and Objectives.** Vision that guides the plan

**Inventory & Analysis.** Assesses the state of the existing pedestrian and bicycle facilities

**Proposed Facilities.** Covers the specific infrastructure improvements to the transportation system to establish a non-motorized transportation network

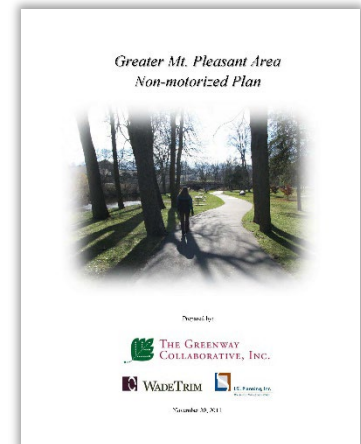
**Implementation Plan.** Provides the phasing, costs and funding recommendations for near, mid and long term improvements to the non-motorized network

**Planning & Zoning Review and Recommendations.** Describes how planning and zoning codes can be structured to support a bicycle and pedestrian friendly community

**Proposed Policies & Programs.** Describes the support system necessary for a successful pedestrian and bicycle network

**Education & Marketing.** Provides ways to promote non-motorized transportation while providing information on safe bicycling and walking

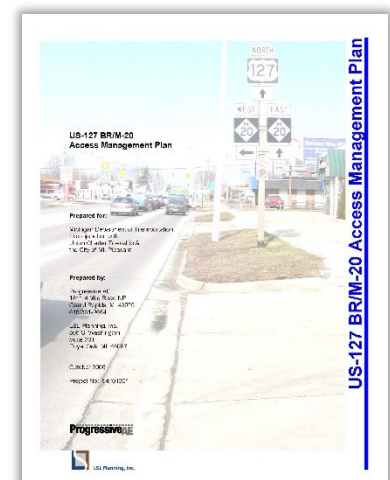
**Design Guidelines.** Provides a background on non-motorized transportation issues and defines current best practices for bicycle and pedestrian facility design



#### [2005 US-127 BR/M-20 Access Management Plan](#)

The 2005 Access Management Plan recommends access improvements for three distinct road segments, including Mission Street from Bluegrass Road north to Corporate Drive, Pickard Street (M-20) from Mission east to Summertown Road, and M-20 (Remus Road) from Lincoln Road west to Meridian Road.

Both the City of Mt. Pleasant and Union Charter Township recognize that the preparation and implementation of an access management plan will help alleviate a portion of the existing traffic congestion on Mission and Pickard Streets, while allowing for the more effective accommodation of



traffic generated by future development on M-20/Remus Road west of Lincoln Road.

The following pages include selected excerpts from the plan.

## IV. Natural Features

Natural features contribute to the character of the community and its attractiveness. Preservation of these features can also enhance the community's quality of life. Too often, natural features are viewed as barriers to development. The Township needs to look for creative ways to integrate physical features into the development process.

### Land Features

Land features are aspects which affect what type of activities and buildings can happen. The Chippewa River flows across the Township, bringing natural beauty to the community while limiting construction in its floodplains and wetlands. The Township is also rich with soils fertile for farming but has areas, especially along the river, where agriculture would be difficult. The soil and water resources in the Township pose choices for the community.

### Prime Agricultural Soils

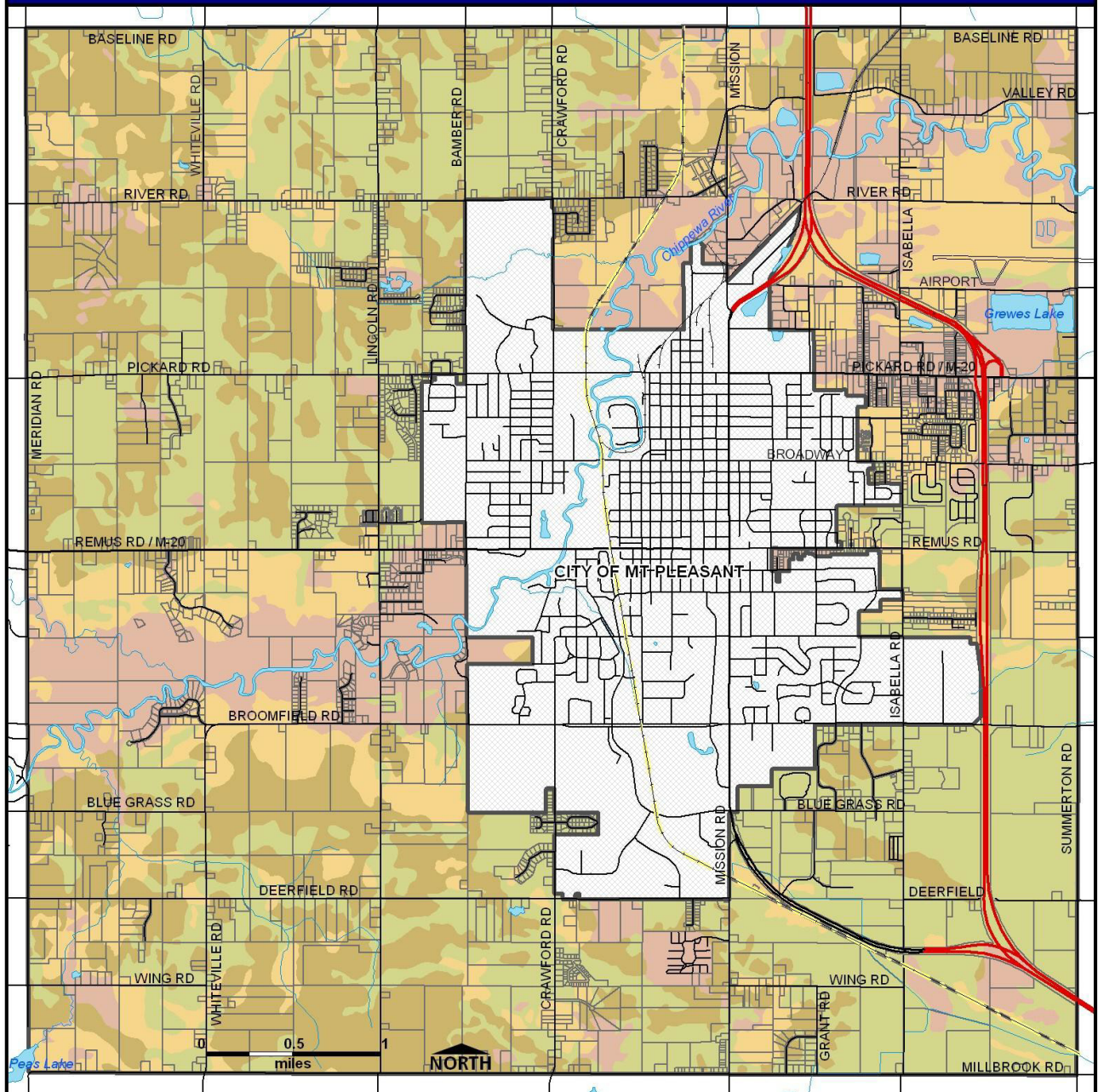
Union Township has prime agricultural soils that are rich with nutrients and the best moisture content to grow crops. The prime farmland in Union Township is shown in shades of brown below, the darker areas requiring drainage. The prime farmlands are located primarily in the northwest portion and the southern half of the Township. Much of the prime farmland adjacent to the City has already been developed as commercial and residential uses.

Prime farm land is designated by soil type and characteristics that are suitable to local growing conditions. These soils are known as soils of local importance, a category higher than the general —prime farmland. The categories shown on the Prime Farmland Map indicate:

- Areas of [prime farmland](#) – as categorized by the US Department of Agriculture (USDA) based on soil type and characteristics.
- Areas of prime farmland if drained – as categorized by the USDA. Current drainage status is not mapped and unknown. Many areas that are completely developed are still classified as prime farmland due to soils conditions. This is relevant in the event that large areas are vacated and to be consistent in the classification of land throughout the Township.
- Not prime farmland. This is land that is in the flood plain or largely wetland, developed or undeveloped.

The following map identifies all the land in the Township with respect to farmland capability.

## Prime Farmland by Soil Type



### Farmland Classification by Soil Type

- All areas are prime farmland
- Prime farmland if drained
- Farmland of local importance
- Not prime farmland

Source: Soil Survey of Isabella County Michigan, 1985. USDA / NRCS Soil Conservation Service (<http://websoilsurvey.nrcs.usda.gov>). Map produced October 2010.

## Water and Wetlands

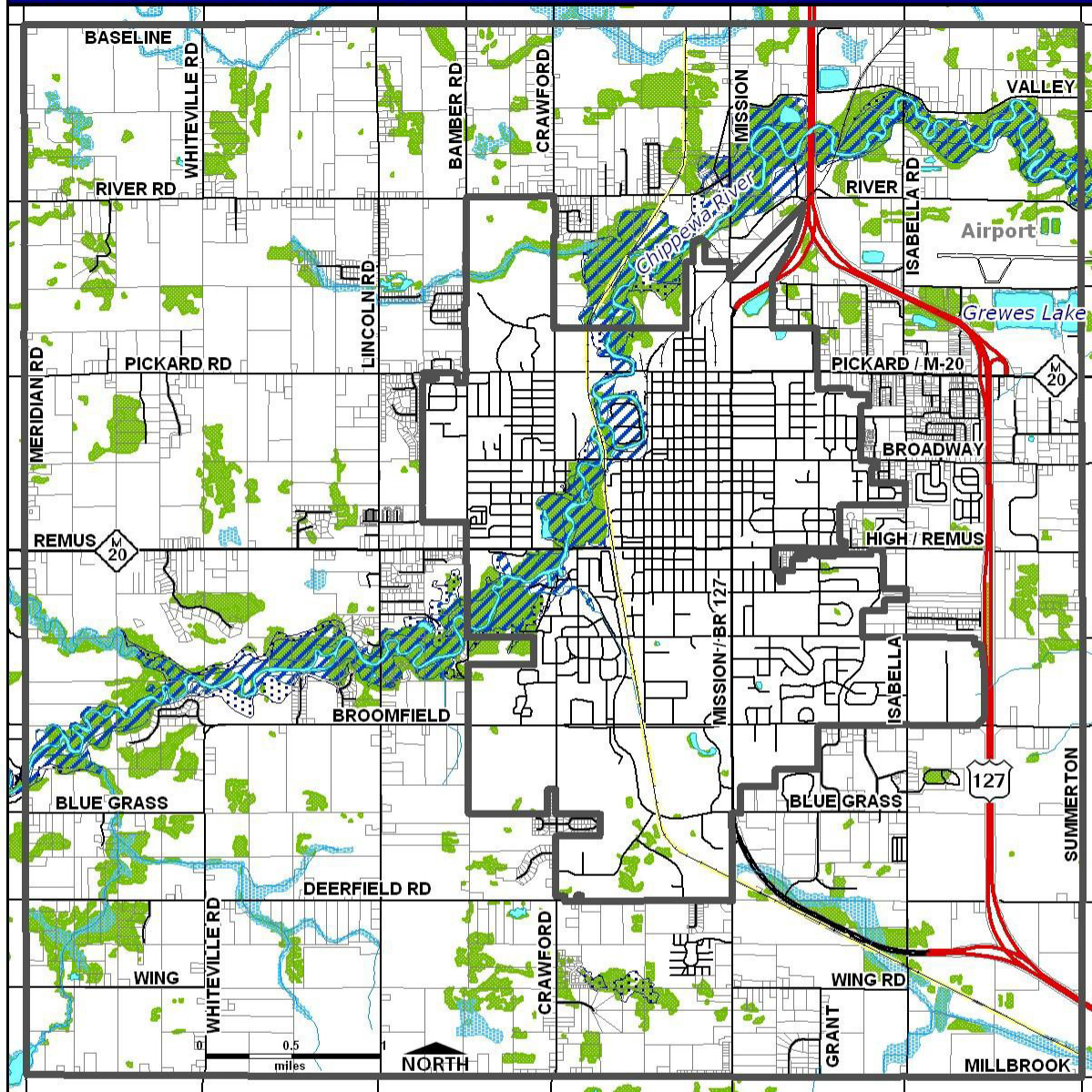
Union Township is rich with water features such as the Chippewa River, creeks and lakes. These waterways and bodies provide scenery and recreation opportunities. Building in the floodplains, the area shaded with slanted lines in the natural features map below, is limited by state and federal laws. Three of the large parks in the Township encompass some of the floodplain. The Chippewa Watershed Conservancy uses conservation easements to protect sensitive natural area along the river. The community will need to plan appropriate uses in these areas that comply with existing regulations and may partner with organizations to protect areas.

Wetlands, low lying areas saturated with moisture for part of the year, are shown in a blue hatch mark in the natural features map below. Union Township is dotted with wetlands, with a chain of large wetlands between US Highway 127 and the eastern township border. Also known as marshes, fens or swamps, wetlands play a key part in the natural cycle of water purification and recharge. The residents of Union Township depend on wells for drinking water so protection of wetlands is a factor for public safety. Wetlands also absorb water during floods, lessening the impact.

The following wetlands map is for very general reference purposes only. Actual delineated wetlands are determined by the Michigan Department of Natural Resources and the Environment. ([MDNRE](#))




Due to instability of wet soil, buildings cannot be constructed safely in wetland areas unless the area is drained or specific construction techniques are used. The US Army Corps of Engineers regulates wetlands associated with navigable waterways such as the Chippewa River. The Michigan Department of Natural Resources and the Environment has authority over construction in wetlands over five acres in size or those associated with a water body. The master plan will need to address appropriate activities in wetland areas, per state and federal law but also for the protection of the wetlands and the groundwater. The most recent floodplain maps are available at the [FEMA website](#).


## Floodplain and Wetland Areas



### Floodplains by Zone 2010

FEMA Flood Hazard Zones (Base Flood Elevation = BFE)

-  A 100-year 1% annual chance flood w/ no BFEs
-  AE 100-year 1% annual chance flood w/ BFEs
-  X500 500-year 0.2% annual chance flood hazard

 River, Creek, or Drain

 Lake or Pond

 Wetlands

Map Produced in November 2010 by:  
Union Township GIS Department

## Agriculture and Rural Areas

According to the 2007 U.S. Agricultural Survey conducted by the U.S. Department of Agriculture, farming is growing in Isabella County in terms of sales. Data from the same census at the zip code level show the following trends for the 266 farm operators in the 48858 zip code:

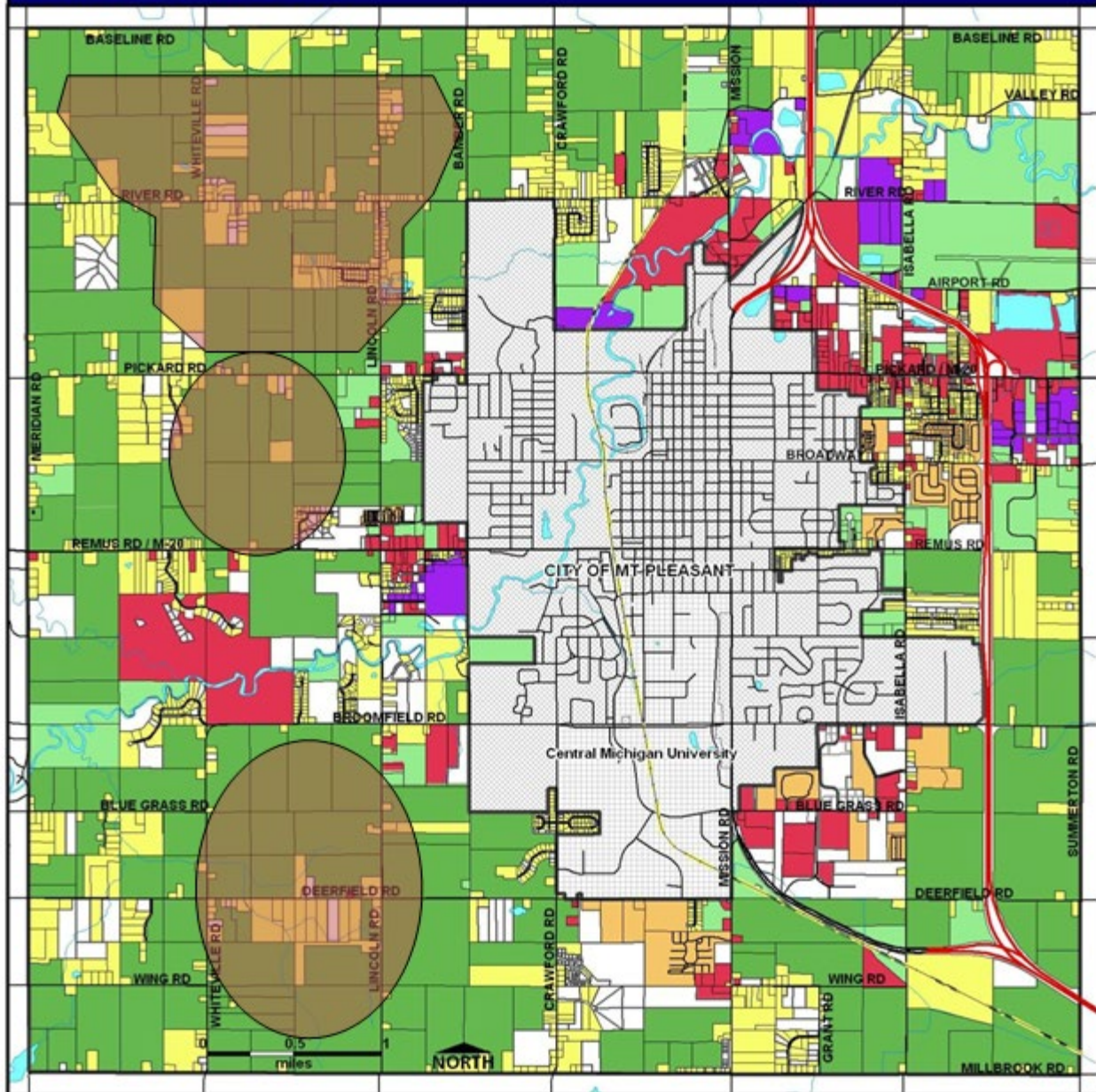
98 farm operations with crops have sales less than \$50,000, 35 had sales between 50K and 250K, while 16 operations had over \$250,000 in sales.

- Farm operations with animals mostly take in less than \$50,000 in sales (90 of the 110 operations with animals). However, 11 operations took in more than a quarter million in sales.
- For almost half of the farm operators, farming is their primary occupation (130 of 266).
- 41 % of the farms have two or more operators.
- Over 82% (220 of 266) of principal farm operators live on their farm.
- Farm operations tend to be medium-sized farms (83 under 50 acres, 171 between 50 to 999 acres, and only 12 with 1,000 acres or more)
- Only 29 farm operations in the zip code sell directly to consumers
- Orchards are small – only 5 operations each with less than 15 acres.
- Only 6 operations grow vegetables with sales – 3 are over 15 acres, 3 are between 15 and 100 acres.
- Most operations grow commodity crops – corn, hay, soybeans, wheat – which are fed to animals or usually sent out of the community to be processed.

The following maps show the location of existing farmland and prime agricultural soils in the Township. The first map shows the areas that are still primarily agricultural in use. The second map is the same prime farmland base map with the residential zoning shown in yellow and orange, drawing attention to the large amount of land that is still in agricultural use and largely prime farm land that is zoned or used for single family residential. Permissive residential zoning and development along with extending water lines across agricultural land area the two primary actions that the agricultural community identified as the cause of the major losses in farmland over the past two decades.

A closer look at the maps indicates that farming is largely comprised of smaller tracts of land, concentrated in commodity crop production. As a percentage of land, active farmland comprises approximately 20% of the Township. It is important to remember that township boundaries are artificially placed lines that do not take into account adjacent land uses outside of the Township. In the case of Union, there is an active and thriving farming community to the south and west that may serve to support the smaller tracts of land that we see in Union Township. Some communities choose to plan outside their borders to avoid conflicting land uses, however in the instance of agricultural land at the borders of the Township this is not an issue.

## Existing Land Use -Agricultural Areas Highlighted



### Parcels by Land Use Class

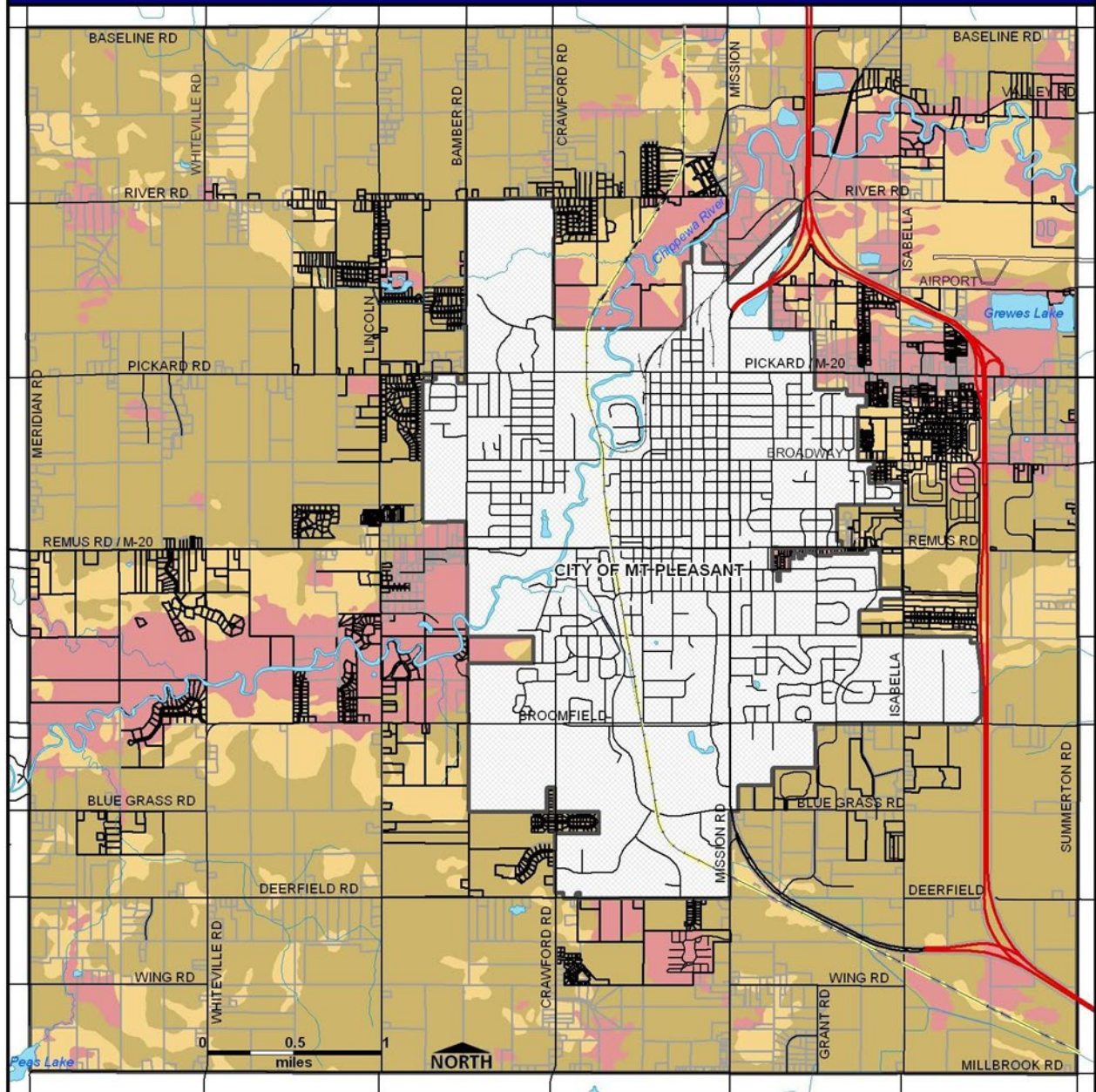
<span style="color: green;">■</span> Agricultural	<span style="color: orange;">■</span> High-Density Residential
<span style="color: red;">■</span> Commercial / Office Service	<span style="color: lightgreen;">■</span> Public / Civic / Exempt
<span style="color: purple;">■</span> Industrial	<span style="color: white;">■</span> Vacant
<span style="color: yellow;">■</span> Residential	

Existing land use information was developed from Union Township property data, land use/land cover data, and aerial imagery. Additional land use data, collected in the field, was provided by Matt Robinson (CMU Geography Department Senior Honors Project).

Compiled by Union Township GIS Department, October 2010.

Map 4: "Existing Land Use-Agricultural Areas Highlighted" above shows the areas of the Township that are still primarily agricultural in use.

## Prime Farmland with Residential Zoning



### Farmland Classification by Soil Type

- Prime farmland or prime farmland if drained
- Farmland of local importance
- Not prime farmland

### Residentially Zoned Property

- Not a residentially zoned property
- Property zoned residential

Source: Soil Survey of Isabella County Michigan, 1985. USDA / NRCS Soil Conservation Service (<http://websoilsurvey.nrcs.usda.gov>). Map produced October 2010.

## **V. Utilities**

Municipal water and sanitary sewer services often determine what type of development can occur. Industrial land uses need high pressure water. Residential dwelling units on less than an acre usually must be serviced by a municipal waste water system, since septic fields require an acre or more of land. Commercial uses tend to locate where municipal services are available either out of necessity or cost.

In order to protect the health and safety of the residents and environment in Union Township, utilities should be carefully planned and financed. In doing so, future development should be linked to the capacity of systems and existing or planned locations of pipes.

The map on the following page shows the location of water and waste water in the Township. The City of Mt. Pleasant and the Chippewa Tribe also have water and waste water systems, but none are currently connected to those in Union Township.

## **VI. 2016 Target Market Analysis**

The Executive Summary of the 2016 Residential Target Market Analysis is listed on the following pages. Further detail can be found by viewing a PDF of the document via [EMCOG](#).

## **VII. 2016 Public Survey**

A copy of results from the Union Township resident survey completed in December 2016 is on the following pages.