

Flushing Township Master Plan

2013 - 2033



Amended July 2020

FLUSHING TOWNSHIP MASTER PLAN 2013 - 2033

*Adopted by the Flushing Township Planning Commission
April 15, 2014*

*Adopted by the Flushing Township Board
May 8, 2014*

*Amended by the Flushing Township Planning Commission
June 2020*

*Amended by the Flushing Township Board
July 2020*

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SECTION 1 INTRODUCTION



DESCRIPTION OF THE PLANNING PROCESS

In December 2011, the Flushing Township Planning Commission began updating their township's 1992 - 2012 Master Plan. This was the third such effort, and was based in part on the work on the 1992 plan and the previous 1976 plan.

The first step in the update process was updating the information contained in the 1992 plan. It included information on natural features, land use, population, economic characteristics, transportation facilities and community facilities. The Planning Commission assigned portions of the plan's "Data Base" section to each member to update.

The Planning Commission prepared an attitude survey similar to the one conducted in 1990. The availability of the survey was promoted, but resident participation was low and only 12 copies were filled out. The Planning Commission decided to rely on the public hearing process as the primary source of public input into the planning process.

By January 2013, the Planning Commission had gathered a substantial amount of information on changes in the community. The township then hired ROWE Professional Services Company to assist the Planning Commission in completing the data collection and analysis and complete the plan update and adoption process.

Based on the results of the data base update, the Planning Commission reviewed and modified the 1992 plan's list of problem statements. These are a list of current and potential future concerns identified by the survey or data base information that the commission felt should be addressed by the new plan.

The commission used the revised problem statements to update the plan goals. The goals are designed to help correct existing problems or prevent potential problems in the future.

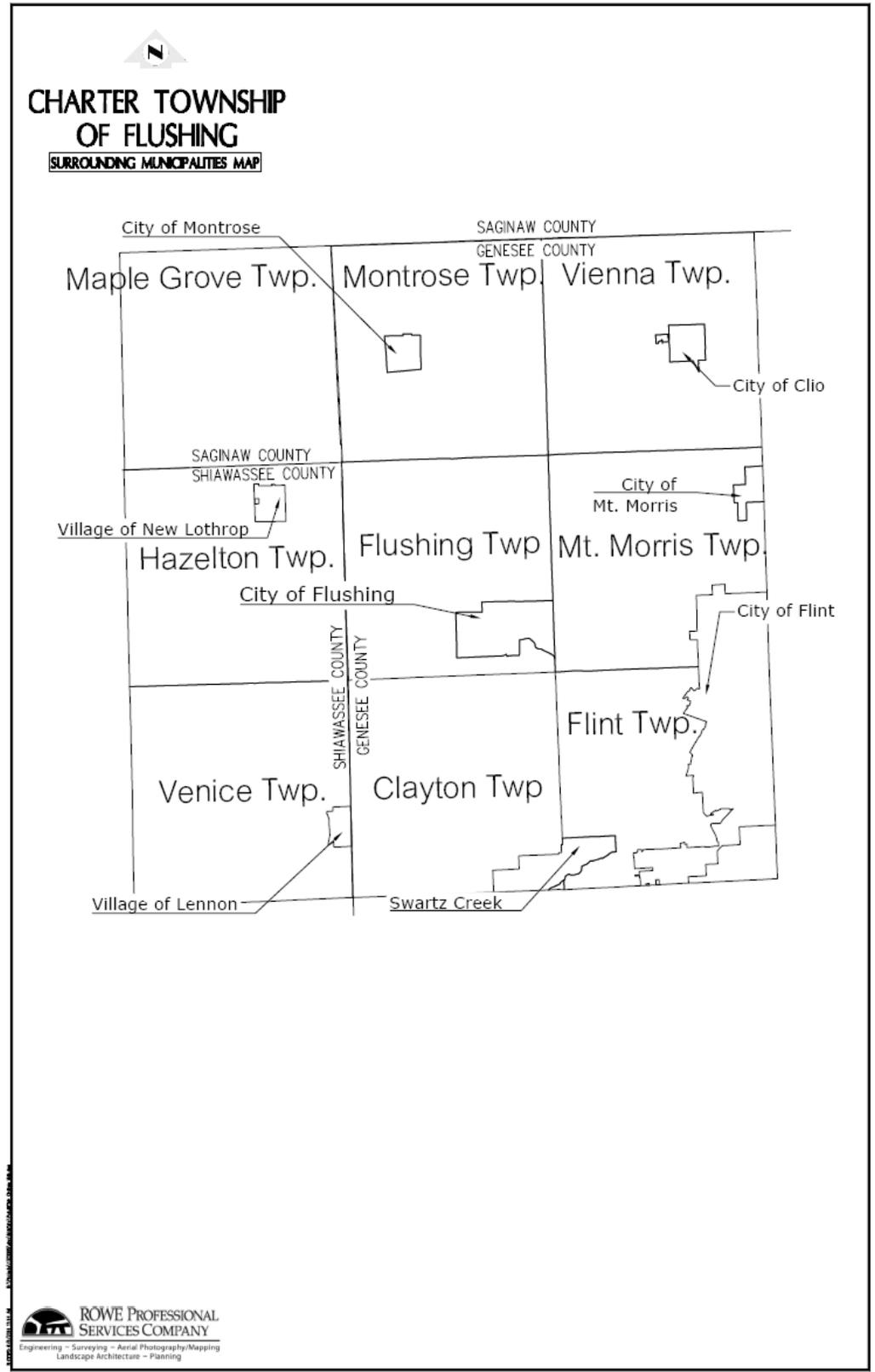
The plan policies were then reviewed and revised. The policies deal with zoning, subdivision control, and capital improvement decisions. They are designed to guide the township in the use of these tools to help implement the plan goals.

The Planning Commission then used the policies to review the current land use classification system. This system establishes the criteria to be used to determine the appropriate land use in various part of the township. The projection of future needs for various land uses prepared in 1992 was not updated at this time, due to the unsettled nature of the current economy and the lack of solid trends to base long term projections on.

The future land use map was reviewed and it was determined that no changes were needed at this time. The Transportation and Community Facilities Plans were also reviewed and it was determined that no changes were needed at this time.

The Planning Commission, in August 2019, then started to conduct their five-year review and amend their Master Plan. The parks and recreation section was updated and the Planning Commission reviewed the goals, objectives, and actions, future land use plan, and implementation plan. In compliance with the Michigan Planning Enabling Act, a Zoning Plan was prepared and incorporated into the plan.

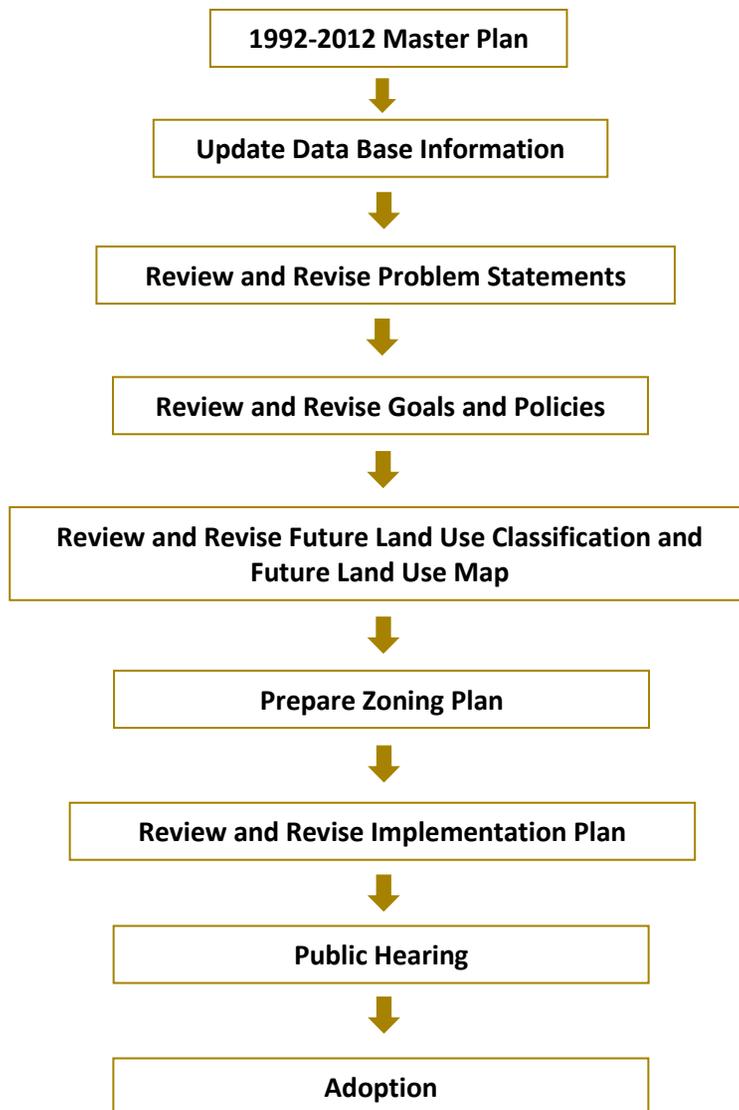
MAP 1 - SURROUNDING MUNICIPALITIES



Based on the review of the Future Land Use Map, the Transportation Plan, and the Community Facilities Plan the Commission reviewed the Implementation Plan. It was revised to reflect actions proposed in the 1992 plan that had been completed, but otherwise was not changed.

The plan was reviewed by the public, the county and adjacent communities in compliance with the requirements of the Michigan Planning Enabling Act, and adopted by the Township Board on April ____, 2020.

Figure 1 – Master plan Update Process



SECTION 2 DATA BASE



HISTORY OF FLUSHING TOWNSHIP

The Charter Township of Flushing was organized in 1838 and was nine (9) by twelve (12) miles, or 108 square miles. The original township area included the present area of Flushing and Clayton Townships, as well as one-half the portion of both Mt. Morris and Flint Townships. This area was later subdivided until the township was reduced to its present size of thirty-six (36) square miles, which includes the four (4) square miles of the City of Flushing. The name of Dover was originally adopted by the township organizers but, owing to the fact that another township of the same name existed in the state, the legislature substituted Flushing.

The earlier inhabitants of the Flushing River Valley were the Sauk Indians who lived off the land.

Land was first purchased in the township by John Paton, who bought 83.20 acres in Section 22 and 47.85 acres in Section 27 in June 1834. However, due to the fact that no one was living in Flushing Township at the time, he did not settle his family there until 1837.

The first non-native settler known to have taken up residence within the limits of what is now the Township of Flushing was Rufus Harrison, who settled in the fall of 1835 on a farm in the southeast part of the township.

In the history of Flushing, Joseph Gage was an African-American settler who became a well-known businessman. Mr. Gage was not only in business, he was an athlete; a barber; a boxer; a singer; a dancer; an early Boy Scout leader; a fireman and fire chief; and he and his wife also practiced faith healing. Mr. Gage died in 1956; he and Mrs. Gage are buried at Flushing Cemetery.

Thomas L. Brent, a Virginian who had acquired a national reputation and a large fortune, built a dam across the Flint River in Section 3 and erected a sawmill in the same year. The dam was washed away in 1837. The operation was replaced by another dam and a second mill somewhat removed from the river. The large acreage of pine in that area of the township was cleared.

In 1840, a number of families from England settled in the northwestern area of the township, in what was known as the "English Settlement". The first settlers in that area were John Reid, James Bailey and Samuel and James Wood.

The first road cut in the township was the "river road" from the east, which was surveyed in 1835, through to the farm of Paton in Sections 22 and 27.

Early extractive industries included coal, salt and sandstone removal. A vein of bituminous coal on Paton's farm was worked where it outcropped at the river. A well was at one time dug for salt, and brine was struck at a depth of 700 feet. Flushing sandstone, pronounced by experts to be of "excellent quality for building purposes and the best in the lower peninsula of Michigan" was quarried at beds south and east of Flushing Village. The stone was used in the construction of St. Paul's Episcopal Church and numerous buildings in Flint and elsewhere.

There is one site in Flushing Township currently on the National Register of Historic Places and one on the State Register of Historic Sites. The residence located at 10410 Stanley Road is on the National Register, and believed to have been built in 1870. According to the register entry "It is considered the most unusual of all nineteenth century architectural resources examined in Genesee County."

The Brent Creek Methodist Church located at 10412 W. Mt. Morris Road is on the State Register. It was built in 1891 as the first permanent church for the Flint River Circuit pastors.

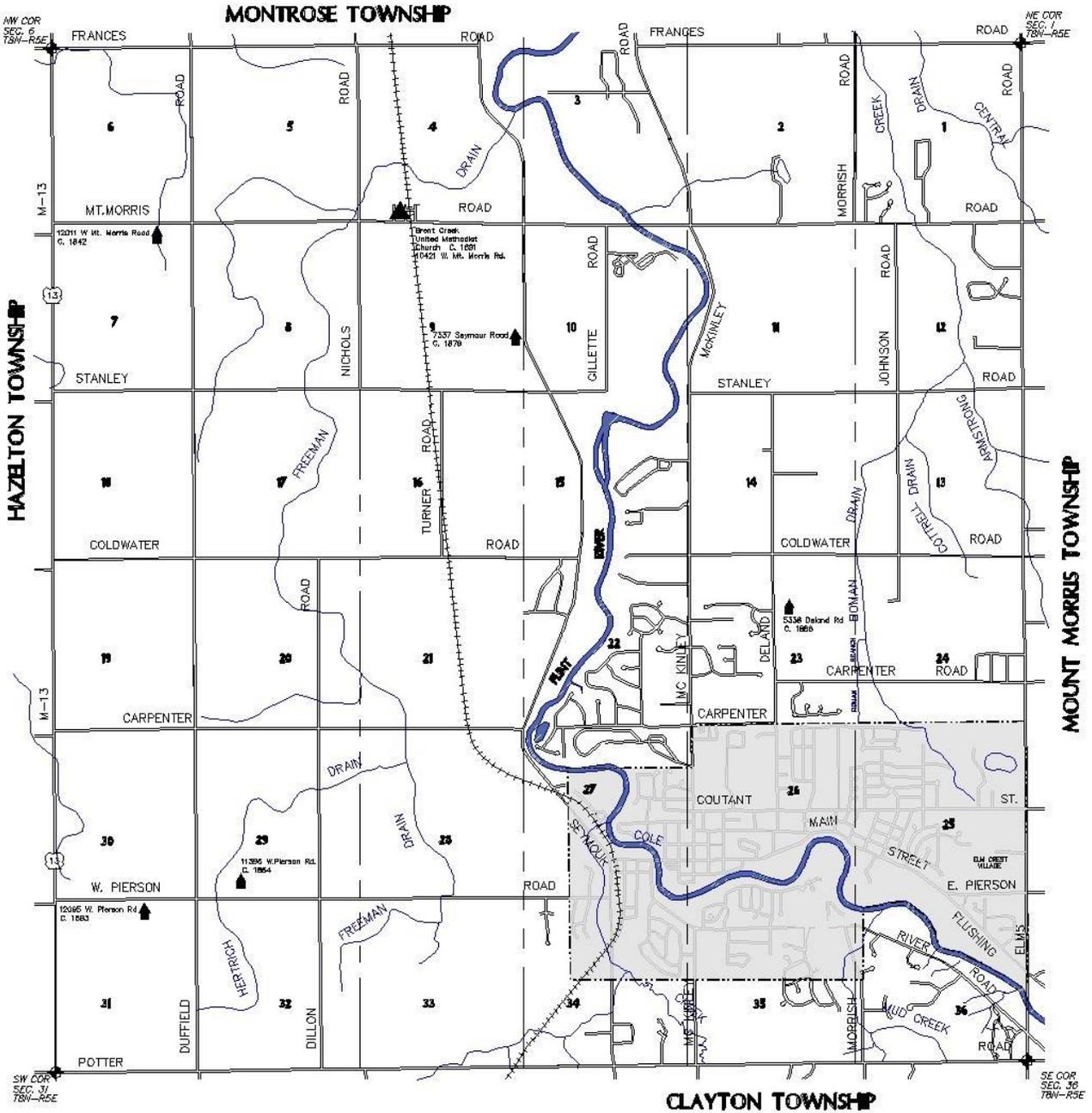
There are also six farms in Flushing Township listed on the Centennial Farms database. Centennial Farms are ones that have been actively worked and been in the same family for over 100 years. The oldest Centennial Farm, located at 12418 Carpenter Road, was first worked by its current family in 1842.

Table 1 Centennial Farms in Flushing Township		
NAME	FOUNDED	STREET
James Wood Farm	06/01/1842	12011 W. Mt. Morris Road
Caleb and Jane Chamberlain Farm	05/21/1853	12418 W. Carpenter Road
Milton Rufus Freeman Farm	10/14/1864	11396 W. Pierson Road
John and Mary Ann Rowe Farm	04/11/1876	7337 Seymour Road
Margaret Abigail Plass Farm	02/13/1888	5338 Deland Road
Eliza Cronk Farm	02/16/1893	12195 W. Pierson Road

The Township of Flushing has grown considerably since it was first founded in 1838. In 1840, Flushing Township had a population of 473; by 1860 it was up to 1,237; 1900 showed 2,132; in 1930 there were 3,298 residents and the 1960 population was 8,535. The 1990 census showed a population of 9,223; in 1997 there were over 7,000 registered voters. The 2000 census showed a population of 10,230; in 2006, there were 7,801 registered voters.

Flushing Township has many treasures to offer to families: 1) fishing and canoeing on the Flint River that flows through the township; 2) the Flushing Township Nature Park, which consists of approximately one hundred twenty-three (123) acres on the scenic Flint River with three (3) fishing piers, an observation tower, native plants, walking trails, pavilion, and many more features; 4) a great Flushing Community School system; 5) shops, restaurants, and local businesses located in the City of Flushing; 6) Flushing Area Senior Center; 7) Flushing Historical Society, and many more treasures too numerous to mention.

MAP 2 – HISTORICAL SITES



HISTORICAL SITES

- ▲ Centennial Farms
- ▲ State and National Historic Register Sites



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SOILS

Soil Characteristics

An understanding of the characteristics of various soil types and the limitations they place on different types of development is important if a community wishes for such development to occur in the most appropriate locations.

The most important soil characteristics include texture, permeability, available water capacity, acidity and shrink-swell potential. These factors, singly or in combination, determine flooding or drainage potential, corrosive potential, bearing capacity, liability to frost heave, stability on slopes, and potential for crops or landscape materials. Furthermore, the permeability of the soil has serious implications where liquid waste disposal is limited to septic tanks and tile fields.

Soils interpretation data is extremely important to the agricultural element of the community. A thorough understanding of the soils enables the farmer to determine the potential of his land, the special treatment and chemicals necessary to grow certain crops, and the drainage and soil conservation methods that will best suit his need.

A generalized soil survey was completed for Genesee County by the U. S. Department Agriculture's Soil Conservation Service (April, 1972). Since the reactions of the soils under various conditions are directly related to the slope of the surface, the survey classifies soils by characteristics and slopes and provides an assessment of their respective suitability for various types of use.

The soil survey indicates that, of the eight soil associations identified in the county, five of these are found in Flushing Township. The survey defines a soil association as a landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soils, and at least one minor soil, and it is named for the major soils. The soils in one association may occur in another, but in a different pattern. Map 3, Flushing Township Soil Associations shows these.

A knowledge of soil associations, which provides a general idea of the type and location of soils in large tracts, is a useful guide in identifying areas which are suitable for various land uses.

The five associations found in Flushing Township and a brief description of each follows.

Boyers-Spinks-Ceresco-Cohoctah: Nearly level to gently sloping, well-drained loamy sands that have a dominantly sand to sandy loam subsoil on outwash plains and terraces and level, somewhat poorly drained, poorly drained and very poorly drained fine sandy loamy underlain by fine sandy loamy to sand on bottom lands. (Septic tank disposal fields normally function well because these soils are well-drained.)

Del-Rey-Lenawee: Level to gently sloping, somewhat poorly drained and poorly drained silt loams and silty clay loamy that have a silty clay loam subsoil on lake plains. (Moderately slow permeability and a seasonally high water table limits the operation of septic tank disposal fields.)

Conover-Brookston: Level to gently sloping, somewhat poorly drained and poorly drained loamy that have a clay loam subsoil on till plains. (A seasonal high water table limits operation of septic tank disposal fields.)

Celina-Conover-Miami: Level to sloping, somewhat poorly drained to well-drained loamy that have a clay loam subsoil on uplands. (The seasonal high water table hinders the operation of septic tank disposal fields, although the soils in this association vary in their limitations and generally require on-site investigation.)

Granby-Gilford: Level, poorly drained loamy sands underlain by sands and sandy loamy that have a dominantly coarse sandy loam subsoil underlain by sand and gravel on lake plains. (Seasonal high water tables severely limit the operation of septic tank disposal fields.)

In considering the limitations of the soils for septic disposal fields, the factors considered were depth to the water table, permeability or percolation rate, hazard of flooding, and steepness of slope.

A more detailed evaluation of the individual soil types in the township is provided by the "Soils Five" tables available from the Soil Conservation Service. A summary of the table's ratings for urban type development is contained in Table 2. The table also includes a classification of the limitations each of these soils places on urban development based on the ratings information.

The classification system recognizes that some development limitations are caused solely by the soils inability to properly handle effluent from septic systems, and that in such areas the installation of municipal sewer service mitigates some or all of these limitations. These are the classifications "moderate with sewer" and "slight with sewer".

In using this information, two points should be considered. First of all, although the soil maps are much more detailed than the soil association map, it is still somewhat generalized. Soils with characteristics different from those mapped can and do show up when detailed site work is performed on property. Secondly, soils that pose severe limitations to development are still "developable" in many cases, but considerable care must be taken in the design and construction to prevent problems. But the township must be aware of these areas if it wishes to direct growth to those parts of the community most suited to it, and so that it knows when special care should be taken in reviewing development proposals.

Table 2 Soils Limitations		
SOIL TYPE	URBAN DEVELOPMENT	URBAN DEVELOPMENT W/SEWER
Alganssee (Ah)	Severe	Severe
Barry (Ba/Bc)	Severe	Severe
Belding (Be)	Severe	Severe
Berville (Bh)	Severe	Severe
Boyer (Br/Bm)	Slight	Slight
Breckenridge (Bt)	Severe	Severe
Brookstone (Bw)	Severe	Severe
Carlisle (Cg)	Severe	Severe
Celina (Ch)	Severe	Severe
Ceresco (Cm)	Severe	Severe
Cohoctah (Cn)	Severe	Severe
Colwood (Cs)	Severe	Severe
Conover (Ct)	Severe	Severe
Edwards (Ek)	Severe	Severe
Eel (En)	Severe	Severe
Fox (Fo)	Severe	Severe over 15% slope
Gilford (Gg/Gh)	Severe	Severe
Granby (Go)	Severe	Severe
Iosco (Is/Iv)	Severe	Severe
Kendallville (Kh)	Severe	Moderate under 15% slope
Kibbie (Kn)	Severe	Severe
Linwood (Lo)	Severe	Severe
Locke (Ls)	Severe	Severe
Macomb (Ma/Mb)	Severe	Severe
Mancelona (Me)	Severe	Slight under 8% slope
Matherton (Mm)	Severe	Severe
Metamora (Ms)	Severe	Severe
Miami (Mu)	Severe	Moderate under 15% slope
Ottokee (Ok)	Severe	Severe
Owosso-Miami (Om)	Severe	Moderate under 12% slope
Plainfield (Pf)	Severe	Slight 0-8%; Moderate 8-15%
Sebewa (Sd)	Severe	Severe
Shoals (Sh)	Severe	Severe
Sloan (Sn)	Severe	Severe
Spinks (Sp)	Severe	Moderate under 15% slope
Tawas (Ta)	Severe	Severe
Wasepi (We)	Severe	Severe

MAP 3A



MAP 3C

Southeast Flushing Twp Soils

Field Office: FLINT SERVICE CENTER
 Agency: Genesee Conservation District
 Assisted By: Benjamin Wickerham
 State and County: MI, GENESEE

Date: 9/14/2011



Legend

- Section Numbers
- Flushing Twp NW



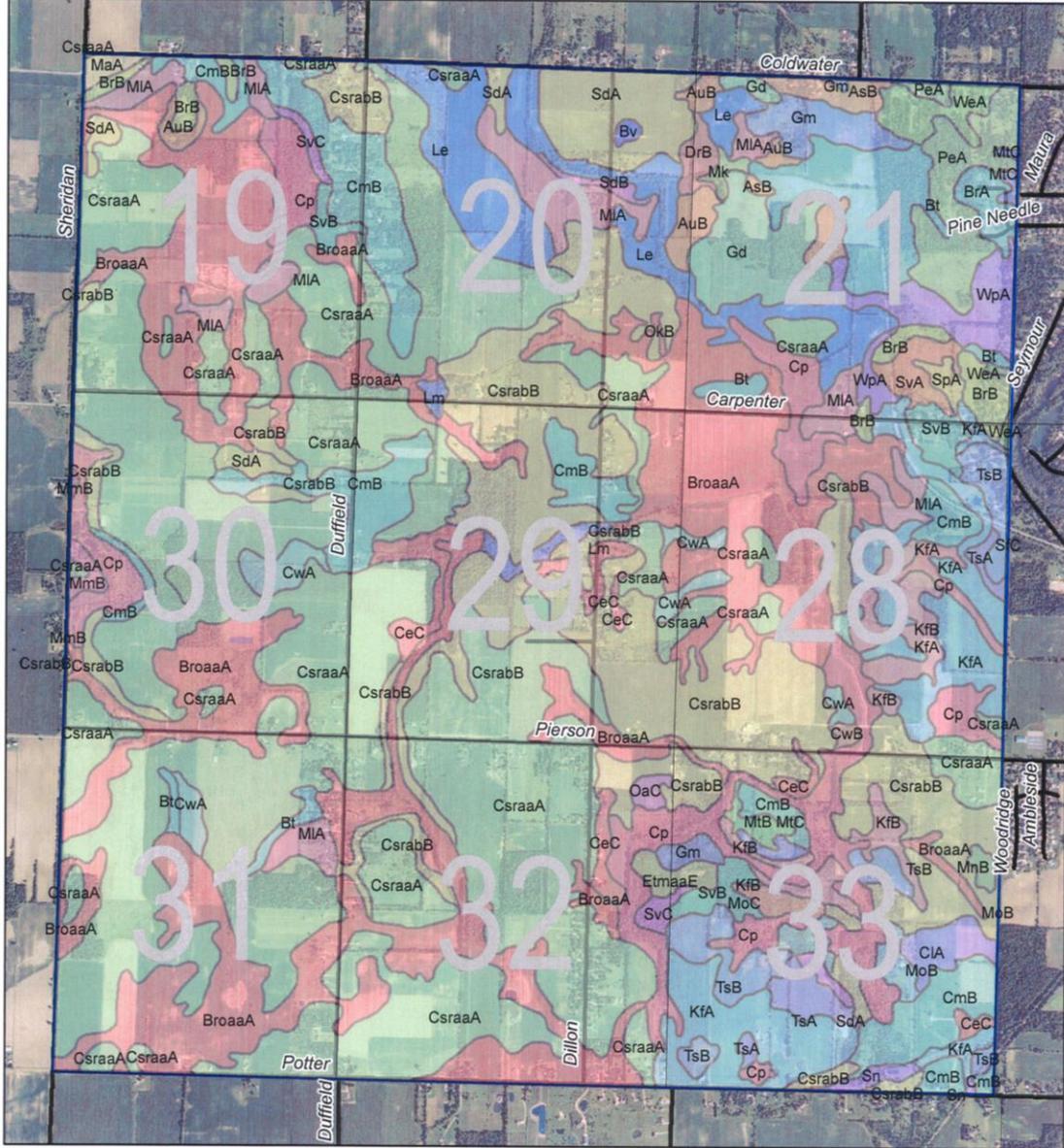
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MAP 3D

Southwest Flushing Twp Soils

Field Office: FLINT SERVICE CENTER
Agency: Genesee Conservation District
Assisted By: Benjamin Wickerham
State and County: MI, GENESEE

Date: 9/14/2011

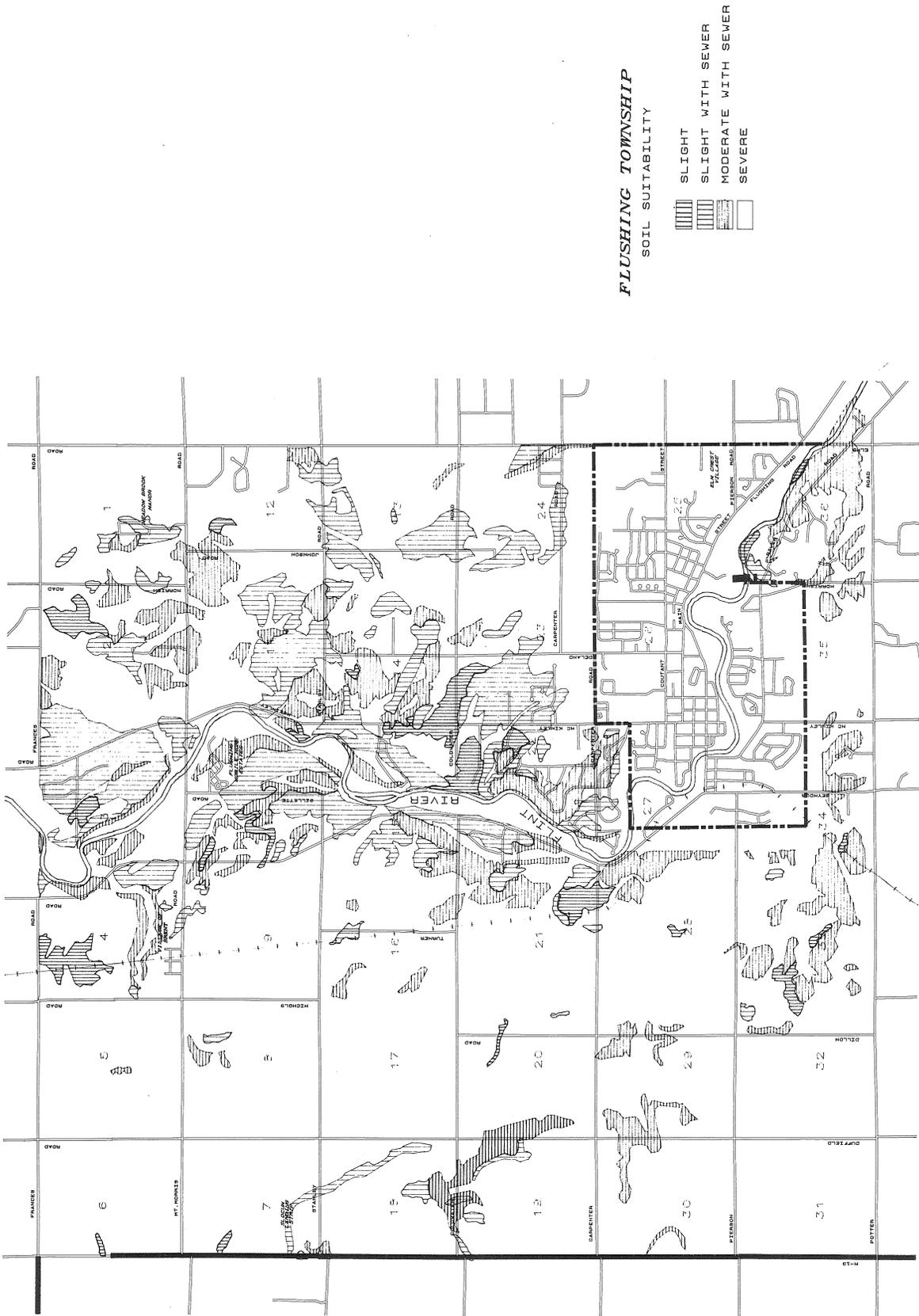


Legend

- Section Numbers
- Flushing Twp NW



MAP 4 – SOIL SUITABILITY



Prime Agricultural Lands

It is significant that the majority of the land area in the western one- half of Flushing Township has been designated as "prime" for agricultural uses by the U. S. Soil Conservation Service. Identification of land in this manner signifies that it possesses certain characteristics which render it most suitable for agricultural use. Prime land use areas are considered to be vital to the overall welfare of the people of Michigan and the nation.

The minimum area considered for agricultural use was 2,500 acres. There exist smaller areas of prime soils for agriculture; however, it is considered that it will be difficult to maintain these in agricultural use due to urban development pressures.

To be designated "prime" for agricultural uses, the area must possess one or more of the following features:

- ◆ Very high yield potential
- ◆ For general cash crops, a large contiguous area of 2,500 acres or more should be present
- ◆ Areas of fruit or specialty crops demanding micro-climate conditions
- ◆ Areas which, by their soils or location, are especially suited for agriculture and less well adapted for other uses

Map 5 depicts the areas in Genesee County which are well suited for cash crops such as sugar beets, soybeans, corn, and beans. The soils in these areas are level or nearly level, highly productive, and not already committed to nonagricultural uses. Organic soil areas which are currently developed were considered small in area and thus were not included.

Due to dairy operations being adapted to a wide range of soil and slope conditions, rolling land areas were not noted as prime, although dairy farming may well be suited for such areas.

MAP 5 – PRIME FARMLAND

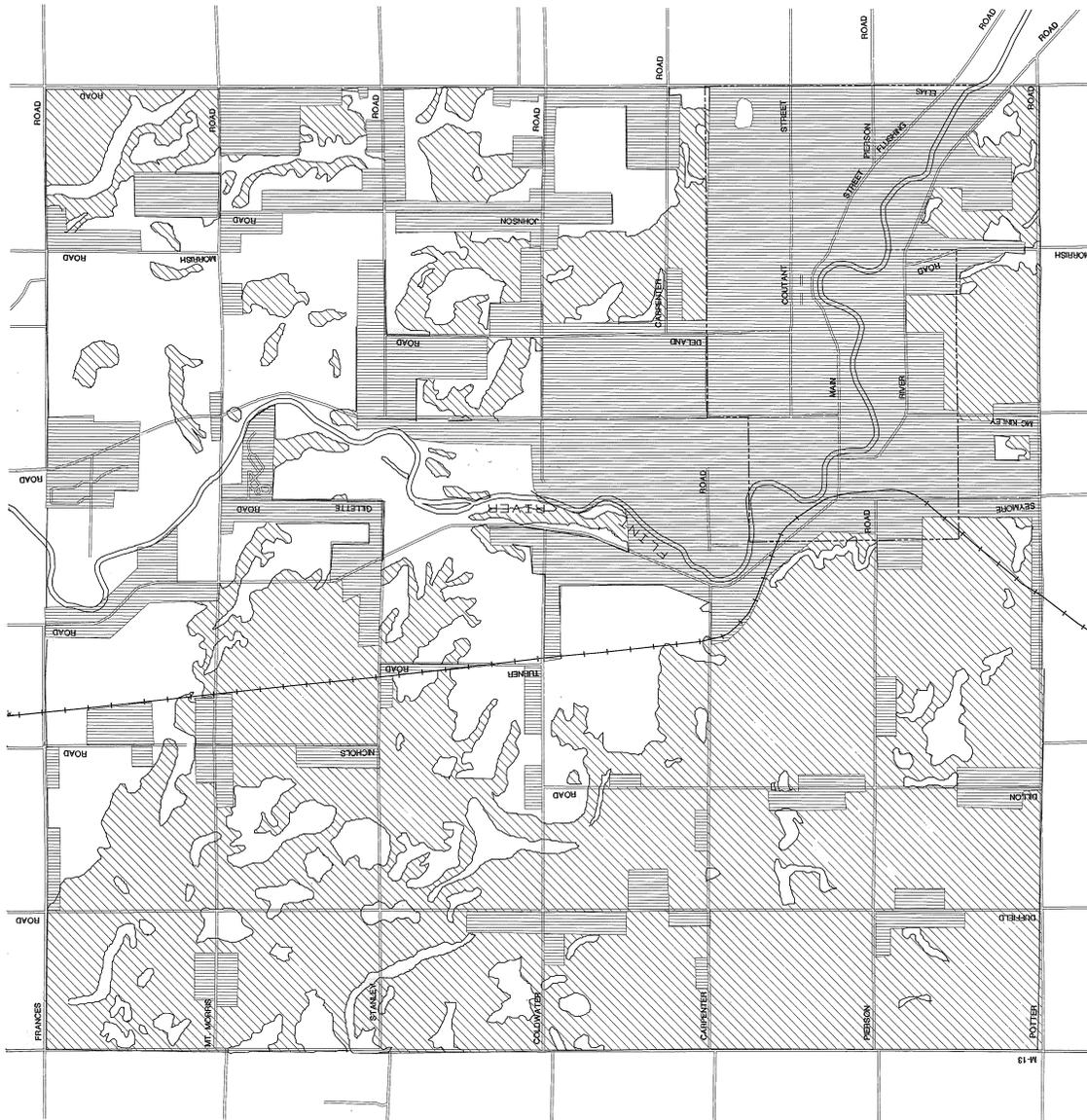
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MAP 5



FLUSHING TOWNSHIP

- PRIME FARMLAND
- PRIME FARMLAND
- OTHER LAND
- APPROXIMATE LIMITS OF URBAN GROWTH



POPULATION CHARACTERISTICS

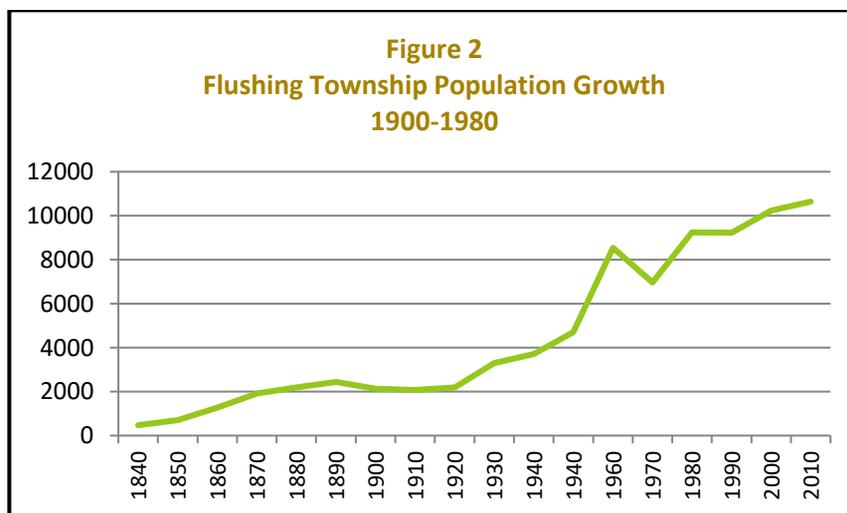
Characteristics of a community's population are important to understand for that community to adequately gauge their current and future needs. Information on population growth, income, age distribution and household size help the community evaluate their demand for various housing types, recreational facilities, educational facilities and other land uses.

Population Growth

The population of Flushing Township was listed as 473 in the 1840 U.S. Census. By 1960, it had grown to 8,535 which included 3,761 residents of the Village of Flushing. In 1964, the village was incorporated as a city, adding some additional township land in the process, and the township's population dropped to 4,440 in 1965. (Residents of villages in Michigan are considered to be residents of the township also, while residents of cities are not.) By 1970, the population had grown to 6,957 and by 1980 it was 9,246. The population saw a minor drop in 1990 to 9,223, but has grown the 20 years since then to a 2010 population of 10,640.

The population growth in the township from 1840 to 2010 is shown in Table 3 and Figure 2 below:

Table 3 Flushing Township Population Growth 1840 – 2010			
Year	Population	Year	Population
1840	473	1930	3,298
1850	708	1940	3,705
1860	1,273	1950	4,707
1870	1,919	1960	8,535
1880	2,192	1970	6,957
1890	2,444	1980	9,246
1900	2,132	1990	9,223
1910	2,075	2000	10,230
1920	2,198	2010	10,640



In considering population growth, it is helpful to examine recent trends in surrounding areas to determine if your community's growth rate conforms with or is an exception to area-wide patterns. This in turn can help the community in determining whether the factors affecting the growth are totally local or are regional in scope. Map 6 shows the growth patterns since 1980 in the area surrounding the township. It shows growth moving outward from the City of Flint to the surrounding municipalities in a classic pattern of suburbanization.

The 1990 census shows a 4.44% drop in population for Genesee County overall, and a .25% drop in Flushing Township. Besides the City of Flint, the largest drops were in the older suburban areas of Mt. Morris and Flint Townships, which lost 9.78% and 3.74% of their population respectively and the City of Burton, which lost 7.87% of its population.

Population Projections

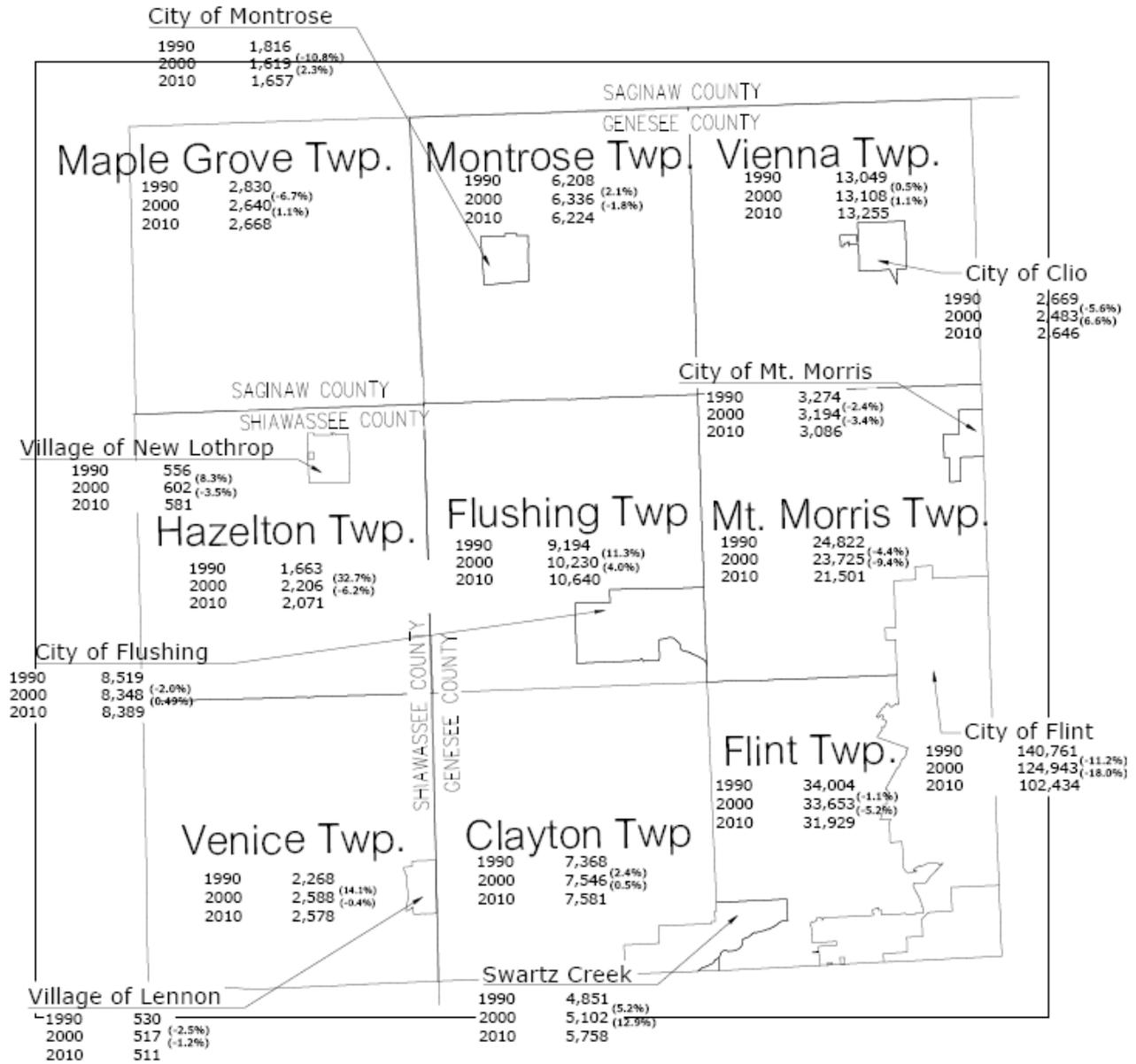
Projecting growth over a 20 year period for a relatively small population such as Flushing Township is very difficult at best and futile at worst. That is because, as shown by the review of recent population growth in the area, the primary forces affecting the townships are area-wide and beyond the control of the local municipalities. While at the same time, the current population is so small that decisions by a few developers to build or not to build can have a significant effect on the population level.

Normally, projections are made based on a continuation of current trends, with some adjustment up or down based on assumed assets or roadblocks to development. The danger of such a method is shown in the population projections made for the 1975 plan. These projections of the 1990 township population ranged from 12,570 to 17,088 and were 37% to 86% higher than the preliminary 1990 count. While the preliminary count may be low, it is not likely to be off by 37% to 86%.

MAP 6 – POPULATION GROWTH



**CHARTER TOWNSHIP
OF FLUSHING**
POPULATION GROWTH MAP



The moral of that experience is that projections must be treated as the educated guess they are, they should be checked frequently over the life of a plan and they should be adjusted, when necessary, to take into account changes in conditions.

The most recent population projections made for Flushing Township were by the Genesee County Metropolitan Planning Commission (GCMPC) for its 2030 Transportation Plan. Projections were also completed using the arithmetic method of extending the trend established over the past 10 years into the next 20 years, and the regional component method which assumes that the community will continue to grow at the same rate as the county as a whole. These projections are shown in Table 4.

Table 4					
Flushing Township Population Projections					
2010 – 2030					
	2000	2010	2010	2020	2030
	(Census)	(Census)			
GCMPC	10,230	-	10,981	11,667	12,423
Arithmetic	10,230	10,640	-	11,406	12,227
Regional Component	10,230	10,640	-	11,778	12,207

The GCMPC study, which was done between the 2000 and 2010 census, overestimated the growth from over that period. The suitability of its projections depends on whether recession experienced in the state over that period resulted in a permanent lag in growth, or whether the drop-off is made up over the next 20 years

The projections prepared using the arithmetic method de-emphasizes the decades long trend of population growth that occurred prior to 2000 and exaggerates the effects of the past decade's economic downturn.

The component method assumes that the township will continue to be a source of population growth within the county. It could be argued that most of the growth will be in the southern portion of the county, due to the influence of growth in southeast Michigan.

Although the township has lost population over the past ten years, it has gained housing units. This is possible because there has been a decrease in household size. This trend is expected to moderate over the next 20 years. As housing growth continues in the township and household size stabilizes, an increase in household size is expected to occur. This is the philosophy contained in the GLS projections. For the basis of this plan, the township will use the GLS Region V projections. However, as part of the planning maintenance process, the township Planning Commission will review the figures annually to check any variance from these projections and revise any elements of the plan required if that variance appears.

Scio-Economic Characteristics

The information on the socio-economic characteristics of Flushing Township population in this plan comes from the 2010 U.S. Decennial Census and the 2007-2011 American Community Survey (ACS) The decennial census information is "100% count" data, which means it represents the responses of close to all of the residents of the township in April 2010. The ACS data is "sample" data taken from surveys of a small portion of the population each year and then averaged over the 5-year sample period.

Race

The 2010 census shows the township with a racially homogeneous population in a county where the population is racially diverse. Table 5 shows a comparison, in absolute and percentage terms, of the racial make-up of the county as a whole and the township.

Table 5 Racial Composition – Genesee County / Flushing Township 2010				
Race	Genesee County		Flushing Township	
	#	%	#	%
White	317,393	74.5	10,045	94.4
Black or African American	88,127	20.7	227	2.1
American Indian and Alaska Native	2,252	0.5	68	0.6
Asian	3,879	0.9	83	0.8
Native Hawaiian and Other Pacific Islander	79	0	3	0.0
Some Other Race	3,044	0.7	48	0.5
More than One Race	11,016	2.6	166	1.6
TOTAL	425,790	100	10,640	100
Hispanic or Latino*	12,983	3	255	2.4

* Hispanics are not a racial category i.e. a person can be white and Hispanic or black and Hispanic or Indian and Hispanic. Therefore, the Hispanic figures should not be added to the others in coming up with a total.

Age

The 2010 census shows a population that is somewhat older than the county population as a whole. Table 6 shows that the township's percentage of population 45+ is slightly higher than the county's average, while its combined percentage of school age (5-19) and those in the process of household formation (20-44) is slightly higher. This results in a lower demand per-capita for school space and some forms of recreational facilities and other family oriented needs.

Table 6 Age – Genesee County/Flushing Township 2010				
Age Range	Genesee County		Flushing Township	
	#	%	#	%
0-4	27,319	6.4	550	5.2
5-19	91,652	21.5	2,265	21.2
20-44	130,973	30.7	2,798	26.2
45-64	117,657	27.6	3,405	32.1
65+	58,189	13.8	1,622	15.3
Totals	425,790	100	10,640	100
Median Age	38.5		42.9	

Population Stability

The population in Flushing Township appears to be somewhat more stable than the population in the county as a whole. Over 90% of the residents of the township were living in the same house in 2010 as in 2009, compared with only 86% of all the county residents. The difference appears mainly in intra-county movement, because the percentages for individuals who either live in the same house or a different house, but same county are very close. So, while a higher percentage of residents in the county moved someplace new from 2009 to 2010, they generally moved from someplace else in the county.

Population stability affects a community's ability to plan by affecting the potential stability of the community's goals and values. In a municipality with a rapidly changing population, the attitude of the majority of residents concerning development goals, growth controls, environmental protection and appropriate levels of community service can quickly be altered, making it difficult for the community to establish and maintain consistent, long term goals. This does not appear to be a problem for Flushing Township.

Income & Employment

The 2010 census reveals a township population that is composed of more white collar workers and has a higher average income than the county.

Table 7 shows a comparison of the township and the county in type of work people were employed in. The township had a higher percentage of people categorized as management, business, science and arts occupation, as well as sales and service

Table 7 Occupation – Genesee County/Flushing Township 2010				
Occupation	Genesee County		Flushing Township	
	#	%	#	%
Management, business, science, and arts occupations	49,745	30.2	1,492	34.9
Service occupations	32,953	20.0	670	15.7
Sales and office occupations	42,561	25.8	1,272	29.8
Natural resources, construction, and maintenance occupations	12,486	7.6	401	9.4
Production, transportation, and material moving occupations	27,058	16.4	437	10.2
Civilian employed population 16 years and over	164,803	100	4,272	100

Table 8 shows the difference in 2010 income for households in the township in comparison with households in the county. Households in the township have a larger percentage of their total with an income in ranges over \$35,000. This is reflected in a higher median income of \$62,361 per household versus \$43,418 for the county as a whole.

Table 8				
Household Income – Genesee County/Flushing Township				
2010				
Household Income	Genesee County		Flushing Township	
	#	%	#	%
Less than \$10,000	16,593	10.0	85	2.2
\$10,000 to \$14,999	10,057	6.0	113	2.9
\$15,000 to \$24,999	20,704	12.4	278	7.1
\$25,000 to \$34,999	19,921	12.0	207	5.3
\$35,000 to \$49,999	25,919	15.6	739	18.8
\$50,000 to \$74,999	31,160	18.7	1,100	28.0
\$75,000 to \$99,999	18,315	11.0	573	14.6
\$100,000 to \$149,999	16,539	9.9	641	16.3
\$150,000 to \$199,999	4,722	2.8	127	3.2
\$200,000 or more	2,549	1.5	63	1.6
Total households	166,479	100.0	3,926	100.0
Median household income (dollars)	\$43,418	N/A	\$62,361	N/A
Mean household income (dollars)	\$56,465	N/A	\$70,861	N/A

This higher than average income level is a reflection of the township's increasing role the past 50 years as a refuge for upper and middle class county residents wishing to escape the problems associated with the Flint urban area. It has meant that the township has been less burdened with the problems of poverty, such as substandard housing or inadequate municipal services than other municipalities in the county. But it has also led to an "exclusionary" mood among many of the township residents as shown in the attitude survey. The effects of this attitude will be discussed in the Housing section of the plan.

HOUSING

Housing is one of the dominant land uses in the township, along with agriculture. The 2010 housing count in the 2010 census identified 4,174 housing units, up from 3,334 in 1990.

Housing Types

The primary housing type in the township is the single-family, detached home. The homes are located in platted subdivisions, on individual sites along county roads, and on private streets accessing county roads.

Most of the principal subdivisions are located near the City of Flushing, on River, McKinley, Seymour and Elms Roads. Other subdivisions with interior roads are located off McKinley and Elms Roads in the northern part of the township. Additional strip residential subdivisions along county roads are scattered throughout the township.

Most of the single-family homes outside subdivisions are located on lots sited on county roads. Due to the requirement in the Subdivision Control Act (adopted in 1968) that division of a lot into five or more parcels of 10 acres or less over a 10-year period, required approval of a subdivision plat. Many residential lots of 10.01 acres or more were split off larger parcels during the period from 1968 - 1997. In 1996, the Subdivision Control Act was substantially modified and renamed the Land Division Act. The revisions remove the incentive for creating 10.01 acre lots.

Some single-family homes have been built on private roads extending deep into the section. Often four or more lots will be serviced by a single, private road.

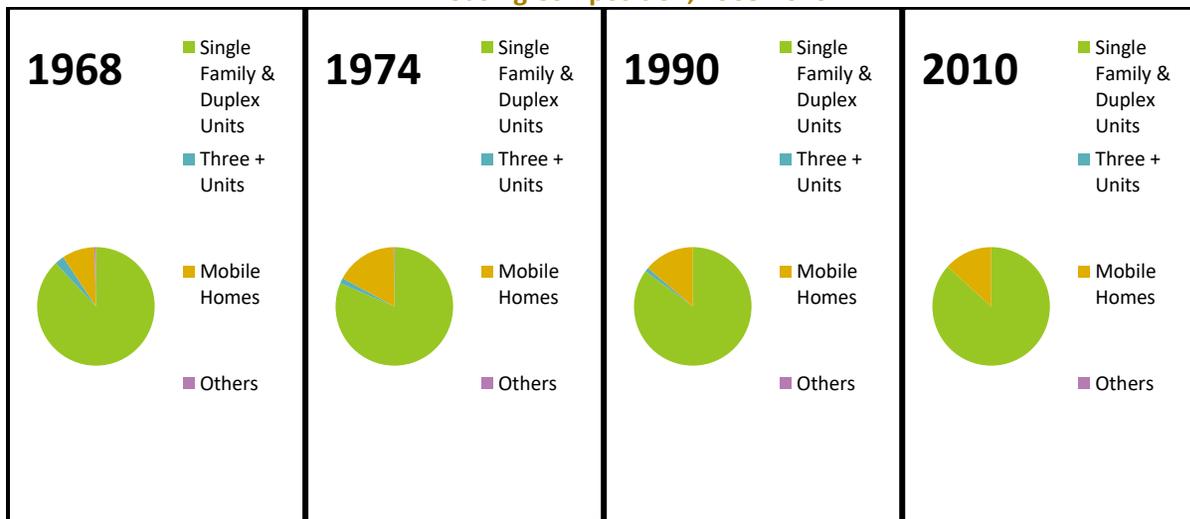
The second most common housing unit type is the mobile home. These are located exclusively in the two mobile home parks in the township. Flushing Mobile Home Park, with 123 lots, is on the east side of Gillette Road in Section 10. Meadowbrook Manor Estates, with 356 lots, is on the north side of Mt. Morris Road in Section 1. The third type of housing in the township is the apartment. There is only one apartment complex in the township, located on McKinley Road just north of the City of Flushing. The complex, built prior to 1968, contains 36 units.

Another type of housing unit that has traditionally been counted along with the single-family structures in housing counts performed in the township in the past is the duplex. The most recent housing count identified ten duplexes, one on McKinley Road, north of the city; four on Saddlehorn, north of the city; and four on Potter Road. All of them appeared to be relatively new.

In 1968, the GCMPC completed a land use inventory, including a housing count, of the entire county. In 1974, the GCMPC updated that inventory. In 1990, the township conducted an inventory of the township separately. A comparison of the information included in the three studies with the data from the 2010 census is presented in Table 9 and Figure 3.

Table 9 Housing Composition – Flushing Township 1968 – 2010								
	1968		1974		1990		2010	
	#	%	#	%	#	%	#	%
Single-Family & Duplex Units	1,207	88.0	1,992	81.4	2,838	85.1	3,618	86.7
Three + Units	36	2.6	36	1.5	36	1.1	0	0.0
Mobile Homes	123	9.0	415	16.9	460	13.8	556	13.3
Others	5	0.4	5	0.2	0	0.0	0	0.0
Totals	1,371	100.0	2,448	100.0	3,334	100.0	4,174	100.0

Figure 3
Housing Composition, 1968-2010



This data indicates that the single-family residence continues to be the dominant housing type in the township. A trend identified in the 1976 township comprehensive plan of increasing mobile home units has abated somewhat over the period 1975-2010. Although the total number of units increased over that period, its percentage of the total housing stock has decreased.

Table 10				
Cost of Owner Occupied Homes – Flushing Township				
1980 – 2010				
Cost of Owner Occupied Homes	1980		2010	
	#	%	#	%
Less than \$50,000			94	2.3
\$50,000 to \$99,999			198	4.7
\$100,000 to \$149,999			806	19.3
\$150,000 to \$199,999			444	10.6
\$200,000 to \$299,999			1,270	30.4
\$300,000 to \$499,999			621	14.9
\$500,000 to \$999,999			343	8.2
\$1,000,000 or more			136	3.3
Total			3,812	100.0
Median (dollars)			262	6.3

The age of a community's housing stock reflects the growth rate of the community. It also affects the value of the housing because newer homes tend to appreciate at a faster rate than older ones. Rehabilitation of the housing stock is also less of a need for communities with relatively new housing. Table 11 shows the breakdown of housing age. Approximately ¼ of the housing units in the township are 20 years old or less, while over half are between 20 and 40 years old. Comparison of the data in Table 10 with county data shows that the township has a younger housing stock than the county as a whole, with 67.3.7% built after 1970 compared with 46.0% for the county as a whole.

Table 11		
Year Structure Built – Flushing Township		
2010		
Total housing units	4,174	4,174
Built 2005 or later	94	2.3%
Built 2000 to 2004	198	4.7%
Built 1990 to 1999	806	19.3%
Built 1980 to 1989	444	10.6%
Built 1970 to 1979	1,270	30.4%
Built 1960 to 1969	621	14.9%
Built 1950 to 1959	343	8.2%
Built 1940 to 1949	136	3.3%
Built 1939 or earlier	262	6.3%

Household Size

The average number of persons per dwelling unit in Flushing Township has been dropping for many years, in line with a national trend toward smaller households. Table 12 illustrate the drop from 1970 to 1990 and shows a projection of this trend to the year 2010. The projection takes into account the fact that as the household size nears 1, the rate of change from year-to-year drops somewhat.

Table 12	
Average Household Size – Flushing Township	
1980 – 2010	
YEAR	AVERAGE HOUSEHOLD SIZE
1980	3.27
1990	2.65
2000	2.50
2010	2.73

Cost of Housing

Housing values throughout the country experienced substantial increases from the early 1980's until the mid-2000s when a weakening state economy, followed by the national mortgage crisis in 2008, resulted in a drop in housing values.

ADJACENT AREAS PLANNING & ZONING

Although a municipalities authority to control land use is limited to the area within its borders, the effect of its land use decisions can be felt many miles beyond. For that reason, it is important that local units of government consult one another when preparing or updating their land use plans and zoning ordinances.

In an effort to take into consideration land use issues in adjacent areas, Flushing Township reviewed the land use plans or zoning ordinances of its neighbors and invited representatives of each of the municipalities to meet to discuss any land use issues they felt were of joint concern.

Review of Local Plans and Ordinances

The Flushing Township Planning Commission reviewed the land use plans for Hazelton, Clayton and Mt. Morris Townships. Montrose Township and the City of Flushing did not have current land use plans when the analysis was done, so in these cases the community's zoning ordinances were reviewed instead.

Hazelton Township – Hazelton Township borders Flushing Township on the west. It is a primarily agricultural area. The Village of New Lothrop is located in the northeast quadrant of the township. The primary commercial area in the township is the village. A small commercial area is located at the intersection of Easton Road and M-13. Residential sites are scattered throughout the township.

The township is covered by the Shiawassee County Master plan adopted in 2007. The plan is focused towards protecting its prime farmland. Most of the land in the township is classified as "Important Agriculture" and zoning restrictions limit non-farm residences to one per 40 acres, including most of the land that borders Flushing Township.

Clayton Township – Clayton Township borders Flushing Township on the south. It is experiencing development pressures on its eastern border with Flint Township, but its western half is still primarily agricultural. Commercial development is scattered along M-21, which runs east-west through the center of the township and along Miller Road on the township's southern border.

The township's future land use plan generally proposes to permit moderate density single-family and multi-family residential development in the eastern quarter of the township, with the western third of the township agricultural and the land in between classified as suburban farm or rural estate.

The future land use plan projects single-family residential development in the two most eastern sections of the township adjacent to Flushing Township, with the exception of one parcel with an existing multi-family development which is classified as such. From McKinley Road west to the Grand Trunk Railroad tracks, the land is classified as Suburban Farm. This classification is designed to promote an agricultural/residential development as a buffer between the urban areas to the east and the agricultural uses to the west. The land adjacent to Flushing Township, west of the Grand Trunk Railroad track to M-13, is classified as agricultural. The plan recommends the minimum lot size for this district to be 10 acres, which would still permit significant residential development, as well as agricultural activities but at a lower density than areas to the west.

Mt. Morris Township – Mt. Morris Township is an urbanizing community, but with a substantial amount of agricultural and rural residential land still intact. It borders Flushing Township on the east. The major influences on growth in the township are the 1-75 and 1-475 expressways, which run through the town; the City of Flint, which is located in the extreme southeast portion of the township; and the City of Mt. Morris, which is in the northeast quadrant of the township. The 1-75 expressway is located 2 1/2 miles east and parallel with the township's border with Flushing. Mt. Morris and Pierson Roads intersect with 1-75 at interchanges. Substantial portions of the Pierson Road corridor, from the 1-75 interchange to the township border with the City of Flushing at Elms Road, have been developed commercially.

The township's current Master plan was adopted in 1998. The township land use plan anticipates the remaining acreage along the Pierson Road corridor being developed commercially. The plan also projects the Mt. Morris, 1-75 interchange being developed into a major commercial, light industrial center. Most of the land directly adjacent to Flushing Township along Elms Road is classified as rural agricultural/low density residential. One parcel on the southeast corner of the intersection of Elms and Mt. Morris Roads is identified for commercial/office development.

Montrose Township – Montrose Township is characterized by a mixture of residential and agricultural development. The Village of Montrose is located near the center of the township on M-57 and contains the bulk of the commercial land, although there are other commercial sites scattered throughout the area.

The township's 1995 Master plan identifies most of the land adjacent to Flushing as "Residential Farms" which is intended to provide open land area for orderly residential growth, continued agricultural use, and residential activities of a semi-rural character.

City of Flushing – The City of Flushing is almost completely surrounded by Flushing Township, except for its eastern border, which it shares with Mt. Morris Township. Except for the Flint River and a small section of Carpenter Road, the boundary between the township and city has no physical shape. In most cases, the division between city and township is an imaginary line.

The current City Master plan was adopted in 1992, and has been amended and updated several times since. The current plan's future land use map shows the majority of the property adjacent to the township classified as Low Density Residential, with an existing mobile home park designated Manufactured Housing, an area of existing senior apartments classified as High Density Residential and an existing area of light manufacturing as Light Industrial.

In general, the surrounding municipalities land use plans and/or zoning ordinances conform with the current land uses and land use trends along the border area with the township. Mt. Morris Township's proposal for development of a mobile home park in the southeast corner of the intersection of Elms Road and Mt. Morris Road could pose a problem with over concentration of mobile home development in that area, particularly with the proposed expansion of the mobile home park in Section 1 of Flushing Township.

NATURAL FEATURES

Development that does not take into account the natural features on the development site is likely to result in problems for the developer and the community. In preparing a land use plan it is important for the community to identify its natural features and determine the level of protection required to protect them.

The 1991 Master plan identified four natural features. They were: 1) floodplains, 2) woodlots, 3) steep slopes, and 4) wetlands.

Floodplains – A floodplain is an area of land including and adjacent to a river, where excess water flows when the capacity of the normal river channel is exceeded. At the time that the 1975 plan was prepared, the best information on areas subject to flooding was from the 1966 Genesee County Soil Survey identifying floodplain soils. At that time it was noted that the information was not accurate enough to impose restrictions on the property.

In 1981, the Federal Emergency Management Administration (FEMA) published a Flood Insurance Rate Map (FIRM) and study for Flushing Township. This map defined the "100-year floodplain". This term causes some confusion among the public regarding its meaning. A 100-year flood does not mean it occurs only once over any 100-year period. It is a flood that has a 1% chance of occurring any given year. A 100-year floodplain is the area that would be covered with water during that flood. The study also identifies the 500-year floodplain.

Publication of the FIRM and study provides the township with a basis upon which to regulate development in the floodplain by accurately defining its boundaries. In 1981, the township adopted a floodplain ordinance. The ordinance requires the lowest habitable level of any residence built in the floodplain be above the elevation of the 100-year flood and that no construction is to take place in the floodway (that portion of the floodplain which carries the water downstream). Map 7 shows the floodplain areas in the township.

Woodlots – The area that is now Flushing Township was primarily woods 150 years ago, but most of the land has been cleared of woods by the lumber industry and settlers developing farm land. Existing woodlots were mapped as part of the Michigan Resource Inventory System (MIRIS) project in 1985, and are shown on Map 7.

Wooded areas represent valuable recreation resources, provide natural features valuable to human settlement and are aesthetic assets to the community. The preservation of the character of the lands becomes more difficult as development pressures increase. It is becoming increasingly important that urban development either avoid these lands or that precautions be taken to preserve the existing natural vegetation during the construction process. Cluster subdivisions and planned unit developments offer techniques for preserving forested areas while maintaining economic residential densities.

Steep Slopes – Flushing Township is generally flat, the land generally dropping 120 feet from the south to the north. The exception is that area around the Flint River. Along some portions of the river the land slopes quite steeply. Development in areas of steep slopes can result in increased flooding and erosion problems by stripping the land of its natural vegetative cover and increasing the velocity of run-off. Ian McNarg, in his book Design With Nature, suggests that areas with slopes in excess of 12% be developed as forest or recreation land, with scattered very low density residential permitted on occasion. Map 8 identifies those areas in the township with a slope in excess of 12%.

Wetlands – Wetlands were not identified in the 1975 plan, probably because the Goemaere - Anderson Wetland Protection Act was not enacted until 1979. This act defined a wetland as "land characterized by the presence of water at a frequency and duration sufficient to support and that under normal circumstances does support wetland vegetation or aquatic life and is commonly referred to as a bog, swamp or marsh and which is any of the following:"

- ◆ Contiguous to the Great Lakes or Lake St. Clair, an inland lake or pond, or a river and stream
- ◆ More than 5 acres in size
- ◆ Five acres or less in size, if the Department of Natural Resources (DNR) determines that protection of the area is essential to the preservation of the natural resources of the state from pollution, impairment or destruction and the department has so notified the owner

The act prohibits filling, dredging, draining or construction in wetlands.

In 1994, the law was merged into the Natural Resources and Environmental Protection Act (Part 303).

The DNR provides maps that identify potential wetlands identified through the MIRIS program and The US Fish and Wildlife Service (FWS) wetland mapping program. The MIRIS map shows a few wetland areas in the township, which is shown on Map 7. However, while they use these maps in making initial determinations on wetlands, the DNR does not rely solely on them for identification. This means that other areas that meet the definition of wetlands may exist in the township, and probably do exist along the Flint River.

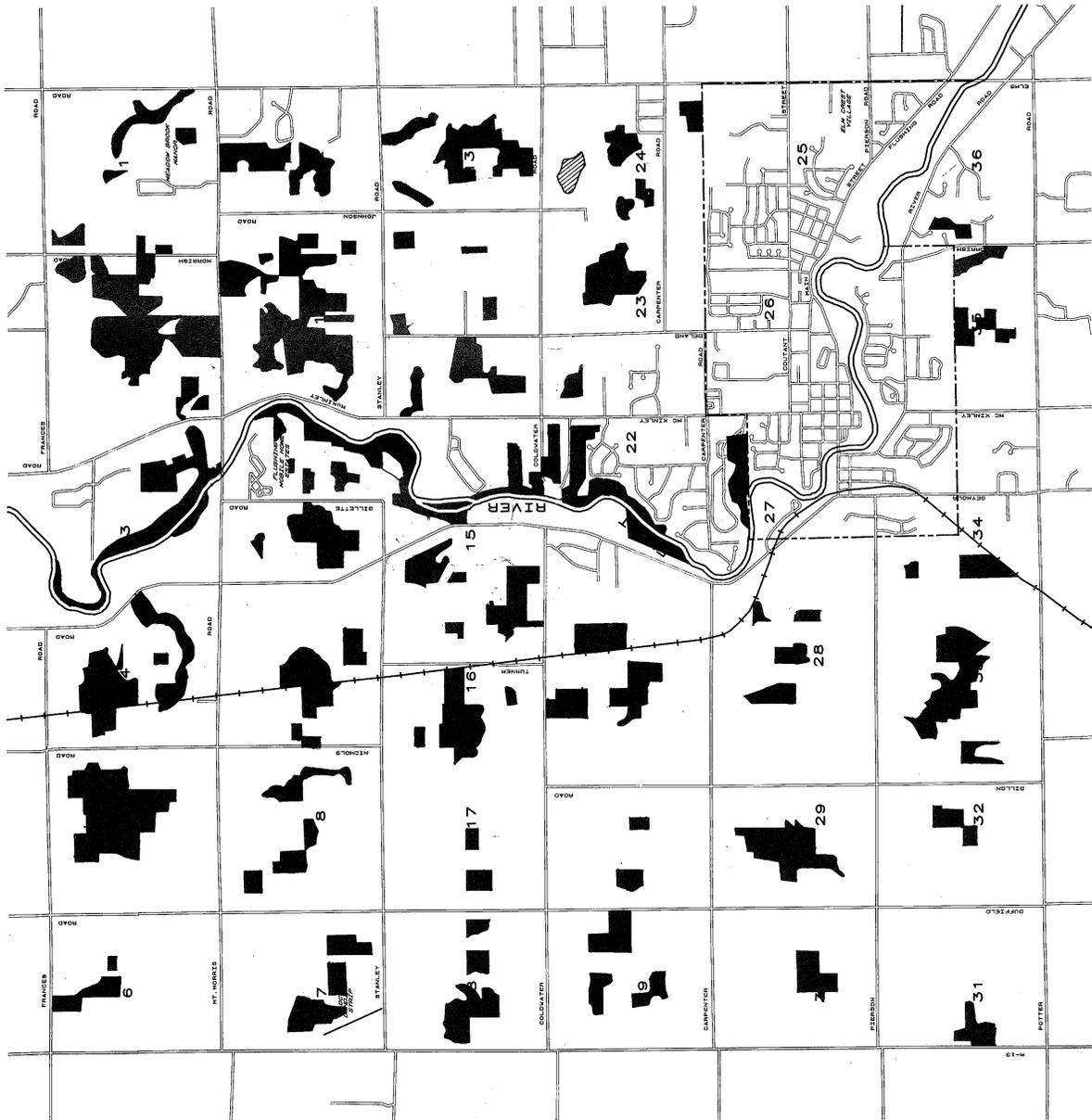
Protection of wetlands are important because of the benefits they provide the community, including flood and storm control through their ability to absorb and store excess water; recharge of ground water supplies; pollution treatment by serving as a biological and chemical oxidation basin; erosion control by serving as a sedimentation area and filtering basin; and protection of wildlife by providing breeding, nesting and feeding grounds and cover for many forms of wildlife.

Part 303 of the Natural Resources and Environmental Protection Act entrusts statewide enforcement to the DEQ, but also permits local municipalities to adopt ordinances, but limits the scope of their authority and regulation. The law requires that local wetland regulation:

- ◆ Not require a permit for activities exempted from regulation under Part 303
- ◆ Use the same wetland definition as in Part 303
- ◆ Local units of government must publish a wetland inventory before adopting a wetland ordinance
- ◆ Local units of government that adopt wetland ordinances must notify the DEQ

MAP 7 – WETLANDS AND FLOODPLAIN

PREPARED BY:
ROWE ENGINEERING INC.
FLUSHING CARD OVASSO
1448 E. PIERSON 194 N. STATE 217 N. WASHINGTON
313-889-3489 517-633-8838 517-233-8185



0 0.5 1 2 MILES

NORTH

FLUSHING TOWNSHIP

WETLANDS AND WOODLOT MAP

- WETLANDS
- WOODLOTS

AGRICULTURE

Flushing Township has historically been a rural farming community. As development pressures from the Flint urban area have moved outward toward the township; residential land uses have established themselves in many parts of the township, altering the character of the area and, in some cases resulting in friction between the agricultural and residential communities.

Agricultural land uses continue to predominate in Flushing Township, but not to the extent that they did 30 years ago. An important aspect of the township's land use plan will be the determination of agriculture's role in the township's future and the extent to which it should be protected from non-agricultural development.

The Status of Agriculture in the State and Genesee County

A report by the Michigan Farmland Preservation Project in 1985 outlined the importance of farming to the state's economy. It noted that agriculture and agribusiness combined are the second largest segment of that economy, contributing \$11 billion in value added to it, compared with \$14 billion for the auto industry. Farming and related activities employ 12.5 % of the state's workforce.

All of this is despite the fact that the agricultural sector's natural resource base, prime farmland, has been shrinking at a rapid rate. From 1967 to 1985, prime farmland in the state was converted permanently to another use at the rate of 120,000 acres a year, and there are no signs to indicate that the rate has dropped since 1985. Almost 40% of the farmland in existence 30 years ago in the state has been converted to other uses.

Table 13 shows the major trends in farming over the period 1992-2007. Total number of farms increased over the period, which is a change from the previous twenty year trend, while average farm size fluctuated back and forth between 10 million and 9.9 million acres. The total value of products sold rose somewhat from 1992 to 2002 before taking a dramatic rise between 2002 and 2007.

Table 13 Agriculture in Michigan 1992-2007				
	1992	1997	2002	2007
# of Farms	46,462	46,017	53,315	56,014
Total Farm Acreage	10,088,170	9,872,812	10,142,958	10,031,807
Average Farm size	217	215	190	179
Market Value of Products Sold (in 000's)	\$3,028,547	\$3,567,825	\$3,727,435	\$5,753,219
Source: The Census of Agriculture 1992, 1997, 2002, 2007; US Dept. of Agriculture				

Historically, Genesee County has been associated with the automobile industry, but in 2007 the values of farm products sold in 2007 was over \$58 million.

Table 14				
Agriculture in Genesee County				
1992-2007				
	1992	1997	2002	2007
# of Farms	799	796	1,051	988
Total Farm Acreage	137,082	117,968	142,756	129,232
Average Farm size	172	148	136	131
Market Value of Products Sold (in 000's)	\$30,897	\$27,995	\$29,432	\$58,775

Source: The Census of Agriculture 1992, 1997, 2002, 2007; US Dept. of Agriculture

Table 14 shows that the total average acreage in Genesee County has fluctuated between 142 thousand and 118 thousand acres. The total value for farm products was relatively stagnant between 1992 and 2002, before almost doubling between 2002 and 2007. The county's average farm has dropped steadily from 1992 to 2007, and remains lower than the state average. The county's Cooperative Extension Agriculture Agent noted that there are many part-time farmers in the county who work small parcels and have full-time jobs in the Flint area. This would result in a smaller average farm.

Table 15 shows the top agricultural products produced in Genesee County by sales value in 2002 and 2007. Because corn and soybeans were not broken out in 2002, it is difficult to clearly identify the change in their value, although it is clear that they increased substantially. The most significant change was in nursery products, which increased from 15.8% of value of products sold to 30%.

Table 15					
Top Agricultural products Sold in Genesee County by Sale Value					
2002-2007					
Product	2002		Product	2007	
	Sale Value in 000's	% Of Total Value		Sale Value in 000's	% Of Total Value
Corn	N/A*	N/A*	Nursery Products	\$17,648	30.0
Soybeans	N/A*	N/A*	Corn	\$12,207	20.8
Dairy Products	\$5,371	18.2	Soybeans	\$11,308	19.2
Nursery Products	\$4,640	15.8	Dairy Products	\$5,371	9.1
Cattle	\$2,357	8.0	Cattle	\$3,555	6.0
Vegetables	\$1,608	5.4	Other Crops and Hay	\$1,984	3.4
Other Crops and Hay	\$1,433	4.9	Vegetables	\$1,179	2.0

Source: The Census of Agriculture 2002, 2007; US Dept. of Agriculture
 *In the 2002 Agricultural Census corn and soybeans were not broken out separately from "Grains, oilseeds, dry beans, and dry peas" but that category equaled \$13,213,000 in sales and based on past data it is reasonable to believe that corn and soybeans represented the majority of those sales

The Status of Farmland in Flushing Township

There are few statistics available dealing with farming in the township itself. Previous discussions with the county Cooperative Extension Agriculture Agent indicated that the major farming activity in the township appears to be crop farming, with some raising of horses and pigs.

The extensive crop land identified in the land use survey would indicate that crop farming is indeed the major current farming activity.

While the 1991 plan indicated that there was a significant threat to conversion of farmland in the township to non-agricultural purposes, improvements in commodity prices and collapse of the housing market has virtually eliminated pressures for conversion in the short-term. The Planning Commission will evaluate any change in those pressures during the “five-year review” of the Master Plan.

RECREATION

One of the common results of development in a rural area is increased demand for recreational facilities. Two of the primary causes for this is the migration of urban/suburban families who are used to convenient recreational facilities to the rural area and a reduction in prime open space caused by development resulting in a demand for some of the remaining areas be acquired for public enjoyment.

Recreation Inventory

Recreational facilities in the Flushing Township area are currently provided by the City of Flushing, Flushing Township, the Flushing Community School District, the Genesee County Parks Recreation Commission, and the private non-profit and for profit operations. Map 9 and Table 16 show the existing recreational facilities in the area.

Recreation Plan

There is currently a joint 2019-2023 Parks and Recreation Plan for the township, city, and school district. This is an update from the 2010-2015 Parks and Recreation Plan.

The 2019-2023 Parks and Recreation Plan outlines an action plan that addresses the goals and objectives for each of the jurisdiction's parks and recreation. For Flushing Township, this action plan includes the following:

- ◆ Participate in Safe Routes to Schools and Crim programs.
- ◆ Maintain trail system through the Township Nature Park.
- ◆ Maintain a part-time employee for maintenance of the Township Nature Park.
- ◆ Maintain security of Township Nature Park by township police department.
- ◆ Maintain public access and requirements of DNR funded facilities.
- ◆ Seek additional hosting opportunities for events/revenue generation at the Township Nature Park.
- ◆ Develop an accessible kayak launch at Nature Park to provide an accessible water trail connection to Montrose Township Park.
- ◆ Coordinate with Flint River Watershed Coalition (FRWC) on water trail signage.
- ◆ Trail connection/participation on Seymour Road corridor.

The plan's goals and policies for the township are listed below. Priorities will be to maximize on current facilities first, prior to developing new elements. The following goals support this (not listed in any order of priority).

Goal 1: Pursue grants and develop partnerships and advocates to serve park and recreation needs.

- ◆ Continue to seek partnerships with other recreational providers and agencies, and with neighboring communities to share ideas and provide non-competing programs and facilities.
- ◆ Actively support and model a regional recreation approach; document current successes and missed opportunities. Practice shared-use approach and formulate a structure that can sustain this approach.
- ◆ Support Chamber of Commerce role to promote tourism and business growth along with "quality of life" assets in the community through coordination of programs, festivals, community calendar, etc.
- ◆ Use grants to develop park facilities with support from various agencies.

- ◆ Use local partnerships with Rotary, Lions Club, etc. to provide/leverage donated labor and match for key projects.
- ◆ Maintain a clean and safe park environment
- ◆ Involve youth and develop future leadership within the park and recreation community.
- ◆ Utilize funding from the Neighborhood Improvement Authority for key projects.

Goal 2: Meet community, county, and regional needs for year-round indoor and outdoor recreation opportunities.

Maintain quality of life and retain existing population. Stimulate the area economy through recreation related tourism and community revitalization.

- ◆ Develop an approach to evaluate underserved or maintenance/budget challenged facilities.
- ◆ Develop small intensive use facilities balanced by larger passive use/lower maintenance areas.
- ◆ Increase accessibility within existing parks.
- ◆ Analyze key properties with resource value to maximize available resources for development.
- ◆ Support ongoing sports programs and facilities (AYSO, little league, youth football, etc.)

Goal 3: Provide public access to water bodies, particularly the Flint River, to facilitate their recreational use.

- ◆ Protect the Flushing area's natural recreation resources and provide for their public use and enjoyment.
- ◆ Refer to resource agencies and existing studies to recognize: limits of flood plain and forested land; outdoor recreation and greenspace; and scenic, historic, educational and environmental significance. Judicious development should allow a close relationship with natural features without destroying them. Master plan
- ◆ Acquire key properties of significance as appropriate.
- ◆ Improve and maintain public access to the Flint River.
- ◆ Support a regional "Water Trail" route along the Flint River Corridor.
- ◆ Promote water trails throughout the area through the pending National Water Trails System (through the National Parks Service) as well as the State of Michigan Water Trail designation for the Flint River.

Goal 4: Promote non-motorized connections within existing facilities.

Build on the assets and successful trail system currently in place.

- ◆ Utilize and expand on existing sidewalk/trails to provide linkages to parks, schools, and neighborhoods.
- ◆ Increase universal accessibility with emphasis along and to the river.
- ◆ Maintain routes as appropriate for all-season use.
- ◆ Expand trail network to rural destinations through 'complete streets' design, including bike lanes where appropriate.
- ◆ Support the Genesee County Regional Trail plan.

Flushing Township Master Plan 2013-2033

The legend for Map 9 is shown below. More information about the inventory of the public, school, and private recreation amenities are included in the 2019-2013 Recreation Master Plan.

Table 16			
Flushing Area Public Facilities			
Name	Map I.D.#	Facilities Available	Acreage
Riverview Park 	1	Parking Spaces (60) Amphitheater (Band Shell) Basketball Court Benches Drinking Fountains (2) Ice Rink (Outdoor) Picnic Area Playground (playscape) Swimming Pool (Outdoor) Tennis Court Restrooms Pavilion Stankwitz Clock Plaza Canoe/Kayak launch	7.4
Mutton (Bonnie View) Park 	2	Parking Spaces (15) Softball Diamond (Lit) Basketball Court (Lit) Benches Playground Picnic Area	3.5
Waterworks Park 	3	Parking Spaces (20) Softball Diamond	4.0
Eastview Veterans' Memorial Park	4	Parking Spaces (30) Softball Diamond (Lit) Youth Ball Diamonds (4) Horseshoes Pits (Lit) (10) Picnic Area	14.4

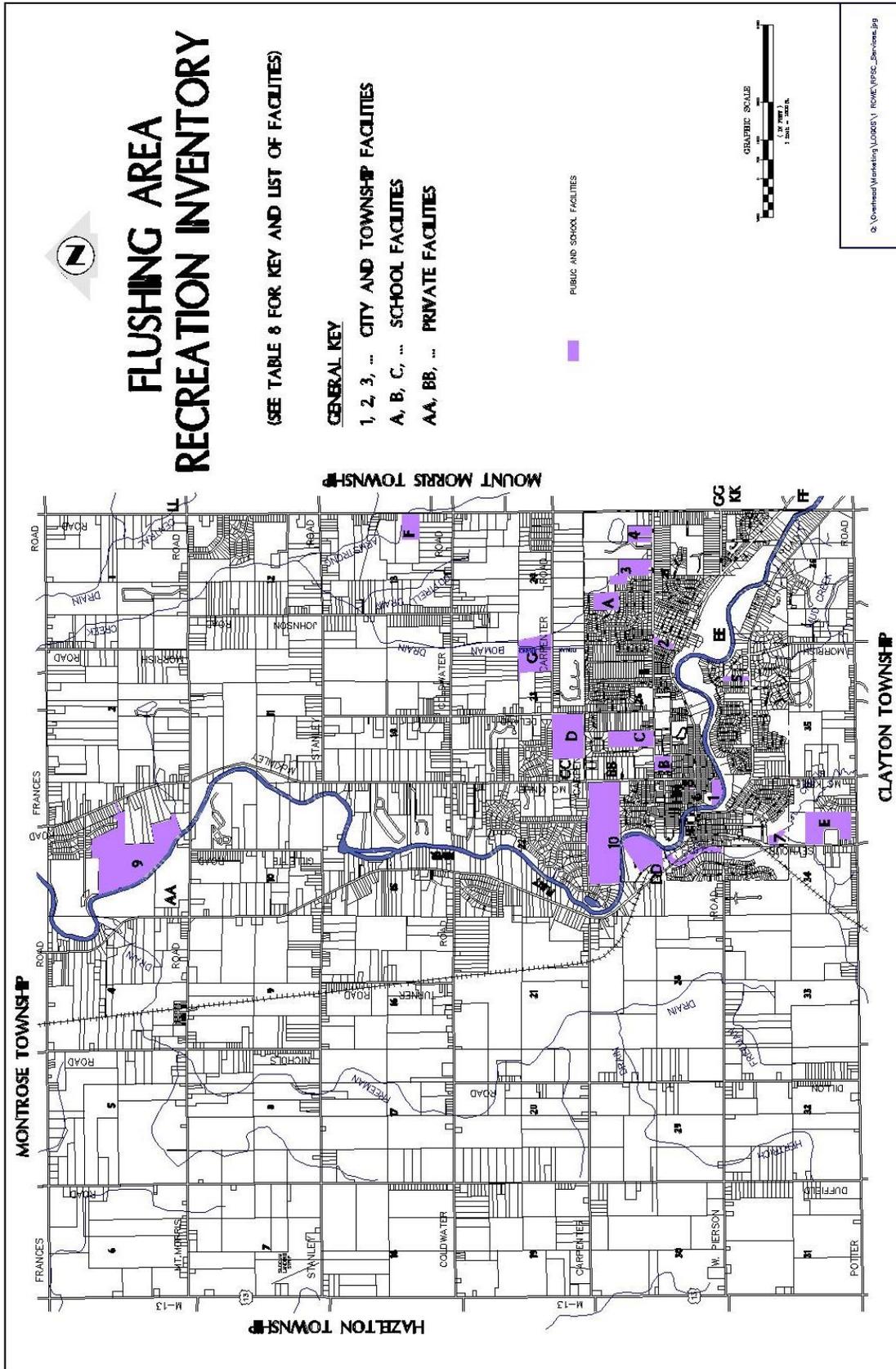
Table 16 Flushing Area Public Facilities			
Name	Map I.D.#	Facilities Available	Acreage
		Playground Pavilion	
River Road Park 	5	Parking Spaces (10) Playground Picnic Area Basketball Court (full)	4.6
Cornwell Park 	6	Fountain Benches Picnic Table	0.2

Table 16 Flushing Area Public Facilities			
Name	Map I.D.#	Facilities Available	Acreage
Somerset Park	7	(Undeveloped)	N/A
Various			
Senior Citizens Center 	8	Organized Activities	N/A
Trails	9	Non-motorized Trails (2.5 miles)	
Flushing Township			
Flushing Township Nature Park 	10	Parking Spaces (25) Trails (2+ miles) Picnic Pavilion Restrooms Park Maintenance Building Observation Tower Park Office Cross Country Trails Fishing Access Sites Prairie Habitat Wetland Ecosystem	130
Genesee County			
Genesee County Flushing Park 	11	Playground Picnic Area (5) Pavilions (5) Basketball courts (2) Softball Diamonds (3) Tennis Courts (2) Cross Country Ski Trails (2 miles) Dog Park	105

Table 16 Flushing Area Public Facilities			
Name	Map I.D.#	Facilities Available	Acreage
Flushing Community Schools Recreational Facilities			
Springview Elementary School 	A	Parking Spaces (72) Athletic Field Baseball Diamonds (2) Softball Diamonds (2) Gymnasium Multipurpose Room Playground Soccer Field	14.3
Flushing Early Childhood Center 	B	Parking Spaces (68) Softball Diamond Basketball Hoops (2) Gymnasium Multipurpose Room Playground	5.9
Central Elementary School 	C	Parking Spaces (111) Athletic Field Softball Diamonds (4) Basketball Courts (2) Football Fields (Lighted w/ Concessions) Gymnasium Multipurpose Room Playground	24.5
Flushing High School 	D	Parking Spaces (800) Athletic Field w/ Concession Stands Softball/Baseball Diamonds (2 each) Football/Lacrosse Fields (3) Gymnasium Multipurpose Room Running Track Soccer Fields (2) Tennis Courts (12)	104

Table 16 Flushing Area Public Facilities			
Name	Map I.D.#	Facilities Available	Acreage
Seymour Elementary School and Recreation Complex 	E	Parking Spaces (136) Athletic Field Softball Diamond Basketball Courts (3) Gymnasium Multipurpose Room Playground Soccer Fields (7) w/ 100 unpaved parking spaces Restrooms Pavilion	50
Elms Elementary School 	F	Parking Spaces (93) Softball Diamonds (2) Gymnasium Playground Soccer Fields (2) Basketball Courts (2) Pavilion	17
Middle School 	G	Nature Path Softball Fields (2) Baseball Fields (2) Soccer/Football Fields (3) Indoor Gym	45

MAP 9 – RECREATION INVENTORY



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WATER RESOURCES

Water is a natural resource necessary for human survival. It is also a recreational and esthetic asset. Therefore, protection and maintenance of surface and groundwater resources are an important goal in any land use plan.

Surface Water

Flushing Township lies primarily within the Flint River watershed, with the exception of the far western edge, which is located in the Shiawassee River watershed. North of the City of Flushing, the Flint River flows northerly through the township, descending at a rate of 4 feet per mile. Traversing the City of Flushing in a northeasterly direction, the channel bed decreases to 3 feet per mile.

The quantity and quality of the Flint River is affected upstream at the City of Flint. The level and flow of the river are regulated by the city through the use of dams and reservoirs. In Flint, the primary uses of water involving withdrawal from the river are for cooling and other municipal and industrial uses. The primary non-withdrawal use is waste disposal. Municipal wastewater treatment facilities and industrial sites appear to be the major polluters. Active recreation is not a primary use of the Flint River as it is for the Shiawassee River to the South.

Portions of seven major drainage basins are located in Flushing Township. The drainage characteristics of the soils in these basins are described in the soils section of this study.

Groundwater

Groundwater is the principal source of water for domestic use in Flushing Township. Sixty-two percent of the respondents to the attitude survey conducted as part of this plan indicated that they got their water from a private well. The remaining 38% get their water from county lines that connect with a system drawing water from Lake Huron.

Groundwater is found in both the glacial drifts and bedrock formations. Glacial drift is the loose sand, gravel and rock left as the last glacier to cover Michigan receded. In some parts of the state this glacial drift material can be a couple hundred feet in depth or more, but in Flushing Township it is only 30 feet or less. Under the drift is bedrock belonging to the "Saginaw Formation".

The groundwater found in the glacial drift material is adequate, but often hard. Most residents, however, cannot obtain their groundwater from the glacial drift material because the depth of the drift is less than the minimum depth permitted by State Health Department rules for private residential wells. Drilling even to the minimum depth normally results in the well entering the bedrock. The water from the wells in bedrock is likely to have a high chloride content. Wells drilled to a sufficient depth in the Saginaw formation will produce salty water.

A survey conducted by the Genesee County Health Department in August 1973 determined that some wells located in Sections 8, 10, 17 and 21, west of the Flint River, possess extensive saline content. It was found that the problem has a high incidence in wells deeper than 76 feet, although near brine solutions were yielded by shallower wells near Brent Creek.

Further studies conducted by the Health Department on portions of the township over the past ten

years to determine the necessity of extending water lines for health reasons has shown that high salinity is not isolated in various areas of the township, but rather is a problem throughout the township. There are isolated areas where water salinity is slightly better or worse, but no defined pattern that would permit the township to encourage development in areas of recognized "good" water while discouraging development in areas of "bad" water.

A recent study of groundwater throughout Genesee County tested for 32 substances in the county's groundwater. However, only 18 of those substances have health-related maximum content guidelines set by the Environmental Protection Agency or the Michigan Environmental Health Association. Twenty-one percent of the wells tested in Flushing Township exceeded the maximum contaminant level for chloride, compared with a county average of 11%. Seven percent of the wells exceeded the MCL for iron compared with a county average of 13.9%. Fourteen percent of the wells showed levels of manganese in excess of the MCL, compared with 4% in the county as a whole.

Chloride, iron and manganese are all secondary standards rather than primary. There is no known health risk from elevated iron or manganese levels, although high intake of sodium chloride has been shown to have harmful health effects.

The general characteristics of the groundwater suggests two prudent policies: 1) protect existing groundwater supplies from contamination to prevent the impairment of over half the township's water supply, 2) limit development in areas of the township not currently serviced by municipal water while directing it to those areas that currently are.

TRANSPORTATION

Transportation systems influence land use and in turn are affected by them. Access to land is one of the prime requirements for its development, and the greater the access, the greater the development potential of the land. Land use activities such as residences, businesses and industrial facilities tend to generate their own particular demand for transportation facilities, varying in level, type and timing. By coordinating the development of the transportation systems with the development of its land, a community can ensure adequate access to areas proposed for development while preventing over development in areas with systems inadequate to meet the additional demand.

Road Jurisdiction

By far the primary transportation system in the township is the road system. It consists of M-13, a two-lane state highway on the border between Shiawassee and Genesee counties that is maintained by the Michigan Department of Transportation, and the remaining streets and roads which are maintained by the Genesee County Road Commission. These "county" roads are in turn classified as either "primary" or "local". Primary roads are part of a county-wide system designed to promote movement of traffic throughout the county. All other roads in the county are classified as county local roads. The bulk of the state revenue received by the Genesee County Road Commission goes for the construction and maintenance of the primary roads. The cost of maintenance and repair of local roads is normally shared by the by the road commissions and local townships. Map 10 shows the jurisdiction of the various roads in the township.

Road Classification

The current plan uses a road classification system developed for the 1975 plan. It divided the township into urban and rural zones, and the roads in the zones into principal and minor arterials, collectors and local roads. That system has been replaced with the classification system used by MDOT under Act 51 and reflected in Map 10.

- ◆ State Trunklines
- ◆ County Primary Roads
- ◆ County Local Roads (Paved)
- ◆ County Local Roads (Unpaved)

Traffic Count

The Genesee County Road Commission conducts traffic count studies annually. The study consists of 24-hour average daily traffic counts for various Genesee County roads. Map 10 shows the most recent Average Daily Traffic Counts (ADT's) for sections of 2-lane arterial roads in Flushing Township for 1999-2011. Table 17 shows the comparison of ADT's in 1974, 1989/99 and 2010/2011.

Comparison of the data shows that while almost all of the road segments saw significant increases between 1974 and 1989, several saw only limited increases or even drops between 1989 and 2011. The most significant increase in traffic volumes was on River Road, between the Flushing city limits and Elms Road. This location experienced a 32.4% increase in traffic volumes over the period, from 3,631 trips per day in 1988/89 to 4,809 trips per day in 2010/2011.

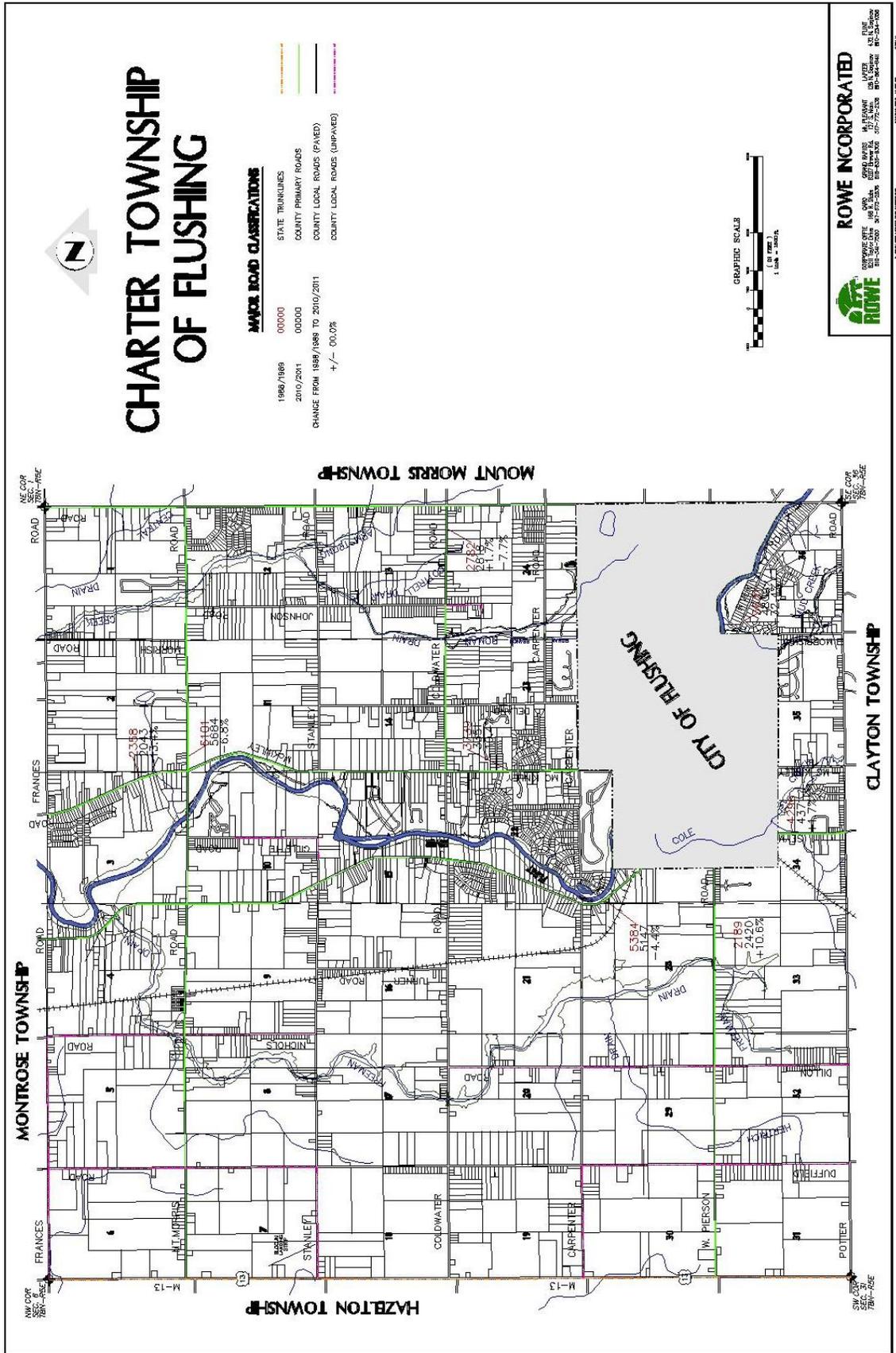
Roadway Capacity-Level of Service

There is no maximum number of vehicles that a road can handle. However, there are measurements for the amount of traffic that can be handled, with a corresponding amount of delay. Roadway capacity is measured by delay and is based on a number of factors, including the number and frequency of turning movements, speed limit, number of lanes, frequency of stop signs and traffic lights, etc.

The most common measurement of capacity is Level of Service (LoS). Level of Service is a qualitative measurement of how well a roadway operates. LoS is measured by delay, such as how close actual speeds are to posted speeds, length of time needed to complete turning movements and length of delay at signalized intersections. LoS is based on a scale ranging from A to F. A LoS of “A/B” represents little or no delay; “C/D” represents some delays; “E” represents traffic volumes near or at capacity, as well as some congestion; and “F” represents significant delays, and significant congestion. In rural areas, a LoS of “C” or “D” is typically the worst level acceptable. Generally, the typical design standards for a 2-lane arterial road is a LoS of “C” or “D”, which is an ADT of 12,000 to 14,000.

Table 17 Average Daily Traffic Count Comparison – Flushing Township 1974 - 2011							
Road Segment	ADT 1974	ADT 1989/99	%	ADT 2010/2011	% Change 1989-2011	Unadjusted Design Capacity	Level of Use
Pierson Road (M-13 to Flushing City Limits (FCL))	1,928	2,189	13.5	2,420	10.6	9,005	26.9
Coldwater Road (McKinley to Elms Road)	2,509	2,782	10.8	2,818	1.7	9,816	28.7
Mt. Morris Road (M-13 to Seymour Road)	2,205	2,420	9.8	2,616	8.1	8,182	32.0
Mt. Morris Road (Seymour Road to Elms Road)	5,712	6,101	6.8	5,684	(6.8)	9,816	58.0
Seymour Road (FCL to Frances Road)	3,946	5,384	36.4	5,147	(4.4)	8,182	63.0
Seymour Road (FCL to Potter Road)	3,561	4,296	20.6	4,371	1.7	8,182	53.4
McKinley Road (FCL to Coldwater Road)	4,039	3,739	(6.1)	3,351	(10.4)	8,182	41.0
McKinley Road (Coldwater Road to Frances Road)	2,859	2,358	(17.5)	2,043	(13.4)	8,182	25.0
River Road (FCL to Elms Road)	3,338	3,631	8.8	4,809	32.4	8,182	58.8

MAP 10 – MAJOR ROAD CLASSIFICATIONS



One possible approach to maintaining a highway's LoS, while also accommodating development, is a reduction in the number of driveways. As development occurs along roads, the number of driveways also increases. If each use has a driveway associated with it, the number of locations with turning movements also increases, reducing the road's capacity. Shared driveways can reduce the number of total driveways along a road and therefore, reduce the number of locations where turning movement occur. By encouraging uses to share driveways and therefore, reduce the number of driveways on township roads, the ease of traffic movement and capacity on township roads can be maintained and the necessity of expensive road improvement projects can be reduced.

Two other locations on Elms Road are approaching a LoS grade of "C/D". One location is between Flushing and Pierson (ADT of 10,461) the other is between Coutant and Pierson (ADT of 10,373). A 15% increase in traffic volume would place the LoS of Elms Road at "C/D" at the two locations.

Private Roads

The three main problems with private roads are: 1) substandard design and construction; 2) inadequate easement or right-of-way; and 3) lack of recorded joint maintenance agreement that runs with the land. Anecdotal evidence would indicate that all three problems have occurred with at least some of the private roads in the township.

The township has taken action however, to address those problems by adoption of a new private road ordinance in 1989. The ordinance requires a private drive to be at least 30 feet wide; the recording of an easement in the location of the drive to all property owners served by the road and the recording of a maintenance agreement on the private road. Building permits for residences on private roads already serving 5 homes, or serviced by roads less than 30 feet wide, cannot be approved until the township Planning Commission has approved the private road as adequate.

Mass Transit

The 1980 census identified only 57 households in the township that did not own a car. The 2011 American Community Survey data did not include this question, but did ask about commuting to work and found that while 237 residents indicated they worked at home, none of the population indicated that they used public transportation to get to work. This is an indication of the dominance the private automobile has over all other types of transportation in the township.

The only form of mass transit in the township is Your Ride, a dial-a-ride based program. This system is operated by the Mass Transit Authority (MTA). Its area of operation is Flushing and Flushing Township.

Non-Motorized Transportation

Non-motorized transportation refers mainly to bicycle and pedestrian transportation systems. Both provide an alternative to the automobile for short trips, and reduce our society's dependence on energy, while furnishing us with a form of recreation.

Sidewalks provide the transportation "system" for pedestrians. Although often taken for granted in urban areas, they are quite rare in rural areas such as Flushing Township. Even suburban subdivisions, such as the ones surrounding the City of Flushing, lack these simple pedestrian pathways, which sharply reduces the incentive to walk to a location rather than drive. That is because the alternative to

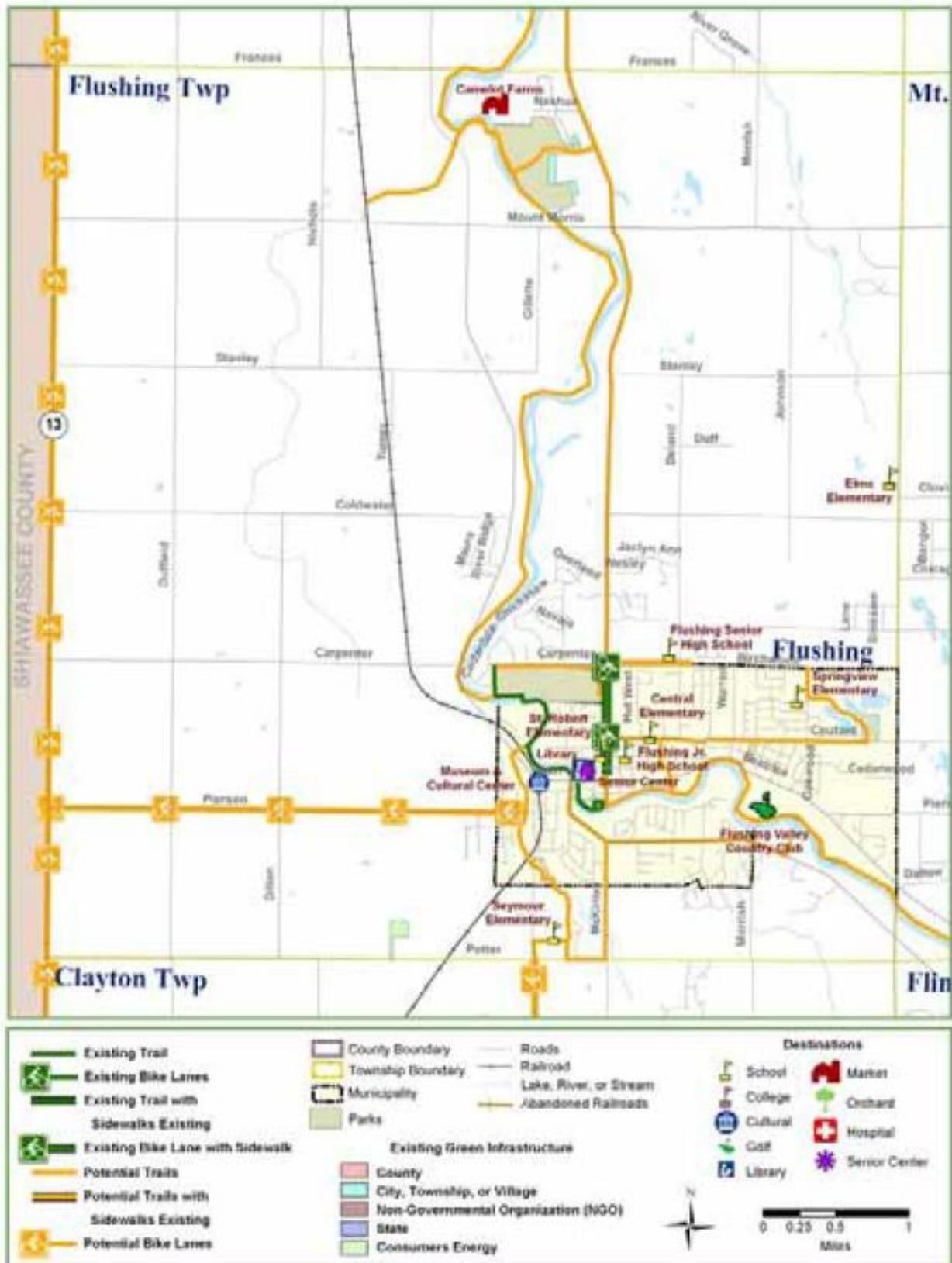
sidewalks is walking along the side of the road, and if the road is narrow, or busy, or if it is dark out, walking along the side of the road can be unsafe.

Another disincentive for would-be-pedestrians in rural areas is the relatively long distances between land uses. With many lots 600' wide rather than the 60' or so common in cities and villages, a friend a "couple of houses away" can be a mile down the road. Even in the newer subdivisions, with half acre lots or so, land uses tend to get spread thinly over the landscape.

Bike paths are seen as another option for non-motorized transportation. The need for separate paths for bike versus autos is not as great since bikes have a right to use the road way. But many bicyclists feel more comfortable if a lane is provided along the shoulder of the road, particularly in rural areas.

The 2007 Genesee County Regional Trail Plan includes specific recommendations for both walking and biking trails in Flushing Township. These recommendations are illustrated in the map below taken from the plan. It includes trails that are part of the recreation plan.

MAP 11 – EXCERPT OF REGIONAL TRAIL PLAN



LAND USE

The primary focus of a Master plan is the use of land in a community, how those uses compliment or conflict with one another, and how they affect the community's quality of life. It is reasonable therefore, that one of the factors a community looks at in developing a comprehensive plan is the existing land use and recent trends in land use changes.

In studying a community's land use it is necessary to place each parcel of land in a certain land use category. In preparing the township's 1991 plan, the land use classification system used by the Michigan Resource Inventory System (MIRIS) was used. Using this system had two advantages: the township land uses were surveyed by GCMPC in the mid 80's, providing an available data base that can easily be updated to 1990; and since the rest of the state has been inventoried using this system, comparisons in land uses can be made between the township and other various communities.

The disadvantage in using this system was in comparing existing data with information compiled in the past, because there is no guarantee that the same categories were used each time or, even if the same categories were used, there is no guarantee that the same definition for that category was used (i.e. is "cropland" land that is currently planted, or land that shows signs of having been planted in the recent past?). In comparing the 1990 data with the 1974 survey information compiled by GCMPC, these points should be kept in mind.

Method of Land Use Survey

The MIRIS map of the township was used as the base for the land use survey. Because the MIRIS system does not map land uses smaller than 5 acres in size, the 1987 aerial maps of the township provided by GCMPC were used to identify significant land uses not shown on the MIRIS map, as well as updating the map to 1987. Information gained during the housing count was added to update the map to 1990.

Land Use Categories

MIRIS uses a land use classification system developed by the DNR in 1973. It is a four-level hierarchical system using a number code up to four numbers long. The first digit in the number identifies the general land use (urban built up, agricultural, rangeland, etc.) The second, third and fourth numbers increase the level of detail as shown below in Table 18

Table 18	
Examples of DNR'S Hierarchical Land Use Classification System	
1	Urban & Built Up
11	Residential
113	Single-Family/Duplex Residential
1132	Medium Density Single-Family/Duplex Residential

Most of the data provided by MIRIS was broken down to the second or third level. Depending on the importance of breaking particular types of land use/cover down, some of the sub-categories were combined. An example of this was forest land. In the MIRIS data, most of these land uses were broken down to the third level, with classifications such as lowland conifers or upland hardwoods, and pine associations. For the purpose of this land use survey, all forest land was lumped into one "Forest" category. Below are the various land use classifications used in the survey, an explanation of the type of

land use/cover that they include and the code number used by the DNR classification system.

Agricultural - Code 2

Agriculture may be broadly defined as land used primarily for production of farm commodities and includes cropland; pasture; orchards; livestock feeding areas; greenhouses; and non-commercial racetracks. Farmsteads are listed under this category.

Vacant - Code 3

This is the area classified under MIRIS as rangeland, which is defined as areas supporting grasses or shrubs. It does not include areas that are seeded, fertilized or otherwise maintained.

Single-family/duplex - Code 113

This category includes areas having detached single and two-family structures used as a permanent dwelling. Associated structures may include tool sheds, garages, garden sheds, etc.

Forest - Code 4

Forest lands are lands that are at least 10% stocked by trees producing an influence on the climate or water regime. Lands from which trees have been removed to less than 10% stocking, but which have not been developed for other use, are also included.

Public/Semi-Public - Codes 1214 (Education), 1215 (Religious), 1218 (Government), 193 (Outdoor Recreation)

This category is made up of a combination of MIRIS categories covering schools, churches, government facilities and recreational facilities.

Commercial - Code 12

The uses in this class include those dealing primarily with the sale of product and services. The main building, secondary structures and areas supporting the basic use are all included, such as office buildings, warehouses, driveways, sheds, parking lots, landscaped areas and waste disposal areas. The educational, religious and government uses normally included in this category have been separated out and included in the Public/Semi-Public classification. Industry is also included in this MIRIS category but, there was no industrial property mapped in the township.

Mobile Home Park - Code 115

This class includes land used for the grouping of mobile homes. Usually these areas will include mobile homes in numbers over three. Related services and recreational spaces are to be included. Single mobile homes will be classed as part of 113.

Extractive - Code 17

Extractive land encompasses both surface and subsurface mining operations, such as sand and gravel pits, stone quarries, etc. Industrial complexes where the extracted material is refined, packaged or further processed are included in the industrial category, even if they are adjacent to the mine. Areas of future reserves are included in the current use category, agricultural, or forest land, regardless of the expected future use. Unused pits or quarries that have been flooded are placed in the Water category if the water body is greater than 40 acres in size. Abandoned pits, areas of tailings, and strip-mined areas that are barren of vegetation remain in the Extractive category.

Wetlands - Code 6

Wetlands are those areas where the table is at, near, or above the land surface for a significant part of most years. Examples of wetlands include marshes; mudflats; wooded swamps; and floating vegetation situated in the shallow margins of bays, lakes, rivers, ponds, etc. They include wet meadows and seasonally wet or flooded basins or potholes with no outlet. Shallow water areas with submerged aquatic vegetation are classed as Water. Wetland areas drained for any purpose belong to other land use categories.

Water - Code 5

This category includes all areas which are predominately or persistently water covered. Water bodies that are vegetated are placed in the Wetland category. Sewage treatment or water supply facilities are a basic part of the urban pattern and are included in the Urban category, even when the unit is large enough to be separately identified.

Road Transportation - Code 144

Although the land use classification system MIRIS uses includes a category for roads, most roadways are not digitized. To come up with an estimated acreage for road right-of-way (ROW) the roadway built since the 1975 plan was done was identified, its length measured and that distance multiplied by 66 feet and then divided 43,560 feet. This acreage was then added to the ROW figure from the 1975 plan and subtracted proportionately from the other land use categories.

The breakdown of land uses in Flushing Township in 1990 is contained in Table 19.

Table 19 Existing Land Use 1990		
Land Use	#	%
Agriculture	10,838.8	53.7
Vacant	2,878.1	14.3
Single-Family	2,765.8	13.7
Forest	2,463.8	12.2
Public/Semi-Public	124.4	0.6
Commercial	108.5	0.6
Mobile Home Parks	62.7	0.3
Extractive	31.0	0.2
Wetlands	15.8	0.1
Water	162.5	0.8
ROW	742.0	3.6
	20,193.4	100.0

A new land use survey was not conducted for this plan update. The primary change in land use since 1990 has been increases in single-family residential development, including subdivisions and site condominiums. Map 12 shows the extent of these developments by 2000. Since then residential development in the township has been relatively slow.

TOWNSHIP ECONOMY

The economy of a community is important to consider in developing a comprehensive plan for two reasons: 1) the strength and structure of a community's economy affects its ability to grow and develop so understanding that economy is important in projecting future trends; and 2) appropriate locations for economic activity are necessary if the local economy is to grow.

The normal components of a community's economy are the agricultural, commercial, and industrial sectors. The township's State Equalized Value (SEV) illustrates the township's current evolution from a farming community to a "bedroom" community. All three economic sectors lag far behind the residential category in land value. Agriculture has the highest SEV and parcel count of the three and it comprises 8.3% of the township's total SEV; while commercial property accounts for only 3.3% of the total SEV and there is no industrial property assessed in the township.

Table 20 shows that between 1990 and 2013, growth in the value of residential property has far outpaced the growth in the agricultural or commercial category. The result is that although the total value of all commercial property increased 193% during that period, commercial property as a percentage of total value dropped from 4.1% to 3.3%. Furthermore, much of the increase in the commercial category came from an increase in the value and number of vacant commercial parcels. The total number of developed commercial parcels actually dropped from 19 to 17 over the time period. The value of agricultural land increased by only 77% over the time period, while the total number of parcels fell by a third.

Table 20 Assessed Values Flushing Township Real Property 1990, 2013			
Property Class	1990	2013	% Change
Agricultural	\$8,701,525	\$15,876,900	82.5
Commercial	\$3,462,400	\$9,713,600	180.5
Industrial	\$-0-	\$66,000	N/A
Residential	\$92,365,350	\$233,132,100	152.4
Total	\$104,529,275	\$258,788,600	147.6

The agricultural sector of the townships economy is covered in a separate section of this plan. But it's appropriate at this point to take a closer look at the township's commercial sector.

Commercial

As part of the housing count/land use survey conducted in the township in late 1990, 14 commercial establishments were identified. There has not been significant commercial expansion since then. Several of the of the establishments are grouped around the corner of Mt. Morris and McKinley Roads; while others are located at the intersection of Frances and Stanley Roads; and on the corner of Elms and Coldwater Roads; on Mt. Morris Road adjacent to the Meadowbrook Manor Mobile Home Park and along M-13.

The commercial development in the township so far has been primarily been of the neighborhood convenience type, designed to meet the convenience level shopping needs of a relatively small

residential population; and the highway service type, designed to service the needs of passing motorists. The higher level of community commercial and regional commercial facilities that provide a greater range of shopping options; require a larger population base for support. Community commercial facilities, which include businesses selling convenience level products and services required on a less frequent basis than those found in neighborhood level establishments, are primarily provided by the City of Flushing. Regional level commercial facilities include business that provides shoppers with the opportunity to comparison shop for products not purchased on a regular basis. These facilities are provided by the area malls and the commercial districts in the Flint urban area.

Projected trends would indicate that the township's population growth will not exceed the ability of these community and regional facilities to service them, and locating those types of facilities in the township is not expected to be required. However, increases in the population will increase the demand for additional neighborhood level establishments, while increased traffic along the township's major roads is expected to increase the demand for highway service establishments.

Demand for neighborhood level commercial facilities is not a direct 1-to-1 correlation between required floor space and population. As an area's population increases, the range of types of businesses that it can support increases, so that the demand for commercial floor grows increasingly fast. The three primary population centers in the township are the subdivisions north of the City of Flushing, the subdivisions south of the city and the subdivisions and mobile home parks along the eastern half of Mt. Morris Road. Neighborhood level commercial facilities are available in the City of Flushing to the residents of the subdivisions north of the city. The same is true for residents of the subdivisions to the south. The area around the eastern half of Mt. Morris Road would appear to be the primary area for increased neighborhood commercial land. This is based on three factors: the first is that the projected population growth from the mobile home park expansion (426 spaces) is substantial and when added to single-family residential growth and the fact that Mt. Morris Township's land use plan projects an additional mobile home park and residential development in the area, indications are of a continual increase in the number of residences in the area; secondly the number of existing commercial facilities, although comprising half of the township's commercial base, is not very large; and thirdly, the provision of sewer service along Mt. Morris Road from Meadowbrook Manor west to the I-75 interchange will increase development pressures in the area. The effect of these factors could be moderated somewhat by the extent to which commercial development occurs at the Mt. Morris/I-75 interchange.

Demand for additional highway service commercial facilities is even more difficult to predict due to its dependence on traffic patterns rather than land use. As noted in the transportation section, traffic counts along the primary roads are expected to increase, resulting in the increase in demand for commercial floor space. This increased demand can be expected in those areas with existing high counts, such as the Mt. Morris Road, Elms Road, River Road and Seymour Road corridors.

Care must be taken in the planning to meet this additional land use demand. The primary problems associated with commercial development in urbanizing areas are spot development and strip development.

Spot commercial development is the location of inappropriate commercial facilities in isolation from other such uses. It should be emphasized that the establishment of a single commercial use in an agricultural or residential area does not necessarily constitute spot development, if that use is designed to service the surrounding land and the scale of the development is appropriate to the area. A

convenience store in a residential area could be an example of an appropriate commercial use because the store is designed primarily to serve to neighborhood it is in. A tanning salon or record store in the same area would be inappropriate because the population base that it serves is much larger, and such uses should be grouped together. The grouping of the uses together has two advantages. It increases the viability of a commercial area by increasing the drawing power of the development (the basic philosophy of shopping centers and shopping malls), and it reduces the chance of conflict between commercial and residential or agricultural uses. To prevent spot development, it is important to have adequate land suitably located so that an alternative site for the proposed use is available.

Strip commercial development is one of the most prominent problems facing areas experiencing commercial development. It is characterized by the development of a series of commercial establishments, each with their own separate entrances and exits, along a major road. The development begins with establishments wishing to capitalize on the advantages of visibility and access provided by the road and its traffic. As traffic increases due to the draw of customers to the area, additional businesses, seeking the advantages of concentration discussed above, move in. This increases traffic even more, which in turn increases the value of the area to commercial businesses, and so on. This cycle begins to change when the increase in the traffic causes congestion, slowing travel speeds to the point that the through traffic begins to find alternative routes around the area, thereby reducing the total traffic. In some cases this can result in a reversal of the cycle, as reduced traffic volumes result in reduced business, which results in reduced traffic volumes, etc. In any case, it results in additional road construction expenses as the road must be widened or alternative routes improved; it reduces traffic safety by adding many closely spaced entrances and exits, each generating substantial traffic; and it causes visual pollution with the jumble of signs and buildings, each vying for the motorist's attention.

Industrial

Flushing Township has no industrial areas within its boundaries, although there is one parcel in the township zoned Industrial. This is an extension of an industrial area in the City of Flushing located northeast of Seymour Road and south and west of the Flint River.

There are four primary requirements normally accepted as essential to siting an industrial facility. The first is access to adequate utilities, including sewer and water. The second is availability of land large enough to be suitable for development. Third, the site must have access to required transportation facilities. In the past this usually would mean a rail line, but recent trends in industrial development has reduced the importance of rail traffic for the movement of goods and increased the importance of trucking. This has increased the importance of access to the state and national highway system and the need to locate the facility on a major road. The final criteria are proper isolation or buffering from surrounding land uses, particularly residences.

In reviewing the township with these criteria in mind, the limiting factors appear to be the availability of utilities and the location of residences. Sewer service should be required for any industrial development, unless the range of uses permitted on the site are limited to those light industrial uses, such as trucking or warehousing that would be able to use on-site sewage disposal facilities to meet their needs. This would limit development to areas adjacent to the City of Flushing or the eastern one and a half miles of the township. In that area, most of the land fronting county primary roads is lined with residential development. This problem of resolving land use conflicts is complicated by the lack of support for such development among residents of the township, as reflected in the attitude survey.

If the township decides to site additional industrial acreage it can take one or more of three approaches. It could site light industrial uses such as trucking or storage operations in the western half of the township, along a major road such as M-13 and away from major concentrations of residences. The types of uses permitted would need to be controlled to prevent higher intensity uses from being established in the area that may later require the extension of water or sewer facilities.

A second option is to establish an industrial zone on land close by the existing sewer lines in an area that is currently lightly populated such as Section 2, reserving this area for future industrial development. In most areas, this would require improvement of the road servicing the area to permit it to handle considerable truck traffic. With the proposed establishment of an industrial center in Mt. Morris Township at the Mt. Morris Road/I-75 intersection, an industrial site in that area of Flushing Township could be redundant, and may not be worth the cost both in required infrastructure improvements, and the impact on established residential parcels in the area.

A third option is to establish an industrial zone in the western half of the township now, with a long-term strategy of extending utilities to the site. Siting in this area would have the additional advantage of an available rail line. Intensive industrial activity would not be permitted until the utilities were extended, but establishment of the zone now could prevent encroachment of residential development prior to the utility extension. As noted, this would be a long term strategy and would probably not provide industrial sites over the first five to ten years of the plan.

COMMUNITY FACILITIES

Part of the development of a municipality's comprehensive plan is the study of its existing community facilities, the affect the existing facilities have on growth of the area, and the additional demand that can be expected to be placed on those facilities from that growth.

Sanitary Sewer

As noted in the Soils Section of this report, many of the soil types existing in the township pose moderate or severe restrictions to urban type development. Many of those restrictions are due to the soils inability to adequately handle the leachate from private septic systems, limiting the ability to develop on small lots, or to establish uses such as office buildings or restaurants that place heavy burdens on sewage disposal systems.

To permit urban style development in these areas requires the use of alternative disposal systems, the primary one of which is sewer lines. Genesee County has developed a network of sanitary sewers throughout most of the county. A 72" interceptor sewer line runs through the middle of Sections 1, 12 and 13, along Coldwater Road to Deland and south to the City of Flushing, as can be seen in Map 13. Off of this line a 24" trunk line is being built running from a point where the interceptor crosses Mt. Morris Road, east to the Mt. Morris Road/I-75 Interchange. There are very few other connections to this line in the township. A second 84" interceptor enters the township from the southeast along the Flint River. Lines off this interceptor serve subdivisions adjacent to the river and one line extends west all the way to the Seymour Elementary School near the corner of Potter and Seymour Road.

Since 1990, there have been no extensions of sewer mains into new areas. One connection was along Mt. Morris Road to Flushing Mobile Home Estates (Section 10) to replace its sewer lagoon system. Sewer services were also extended to subdivision developments including the Bluffs (Section 23), Meadowbrook Park (Section 23) and subdivision development in the southwest corner of Section 22, adjacent to the city. South of the city, Ambleside Subdivision (Section 34) and Krystal Creek Subdivision (Section 35) were connected to the system's 84" interceptor, which is located in the City of Flushing.

Availability of these lines provides a way to promote growth at densities and of a type that would be difficult if they did not exist. This does not mean that urban style development is appropriate for every parcel of land within reach of a sewer line. It does, however, make sense to promote the intensive development the township does feel is appropriate in an area already serviced by sanitary sewers rather than some other part of the township and then be required to extend the sewer lines to that area. By limiting such development to areas where sewer service is already available, the township can prevent the additional costs caused by unnecessary extension of sewer lines while limiting urban sprawl.

Public Water System

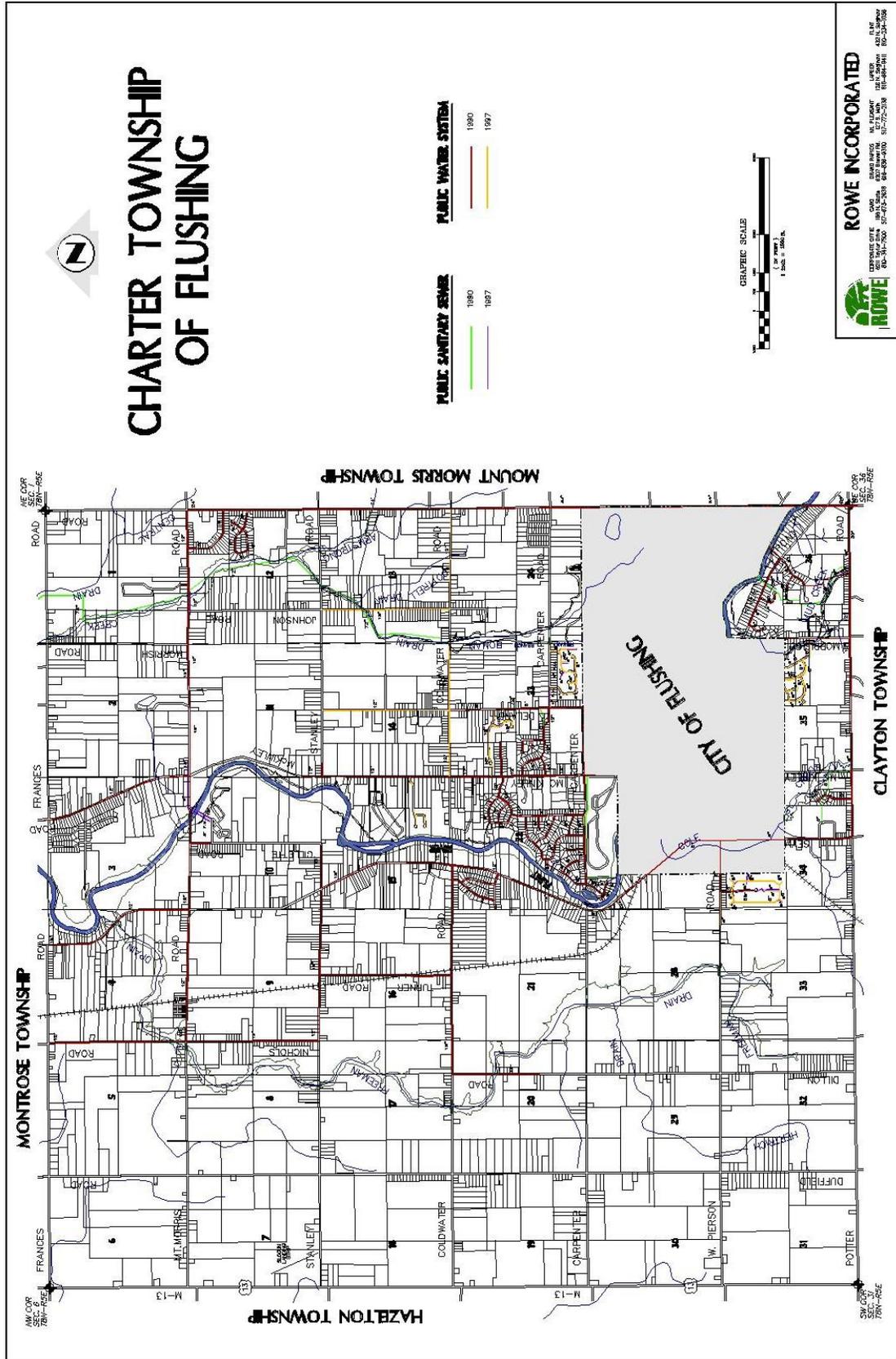
As noted in the Water section of this plan, the quality of groundwater in the township ranges from fair to poor. This has generated a demand for municipal water and this demand has resulted in the extension of water lines out in the township to a much larger degree then the sewer lines discussed above. As can be seen in Map 13, the lines range outward from the City of Flushing north, south and east to the township line and as far west as Nichols Road.

Since 1990 public water services have been extended to five subdivision developments: Ambleside (Section 34), Krystal Creek (Section 35), Meadowbrook Park (Section 23), Pleasant Woods (Section 23) and the Bluffs (Section 14). A 12" water line was extended from the 24" watermain running along Elms Road, westward along Coldwater Road to Johnson and northward along Johnson Road to Stanley Road. Another 12" water line was extended eastward along Coldwater Road past Deland Road and north along Deland to Stanley Road. These extensions have further extended public water services to Sections 13 and 14, and have greatly improved the potential for urban-type development in these areas.

This extension of water lines into the rural areas, while the need by those residents of adequate water quality, also encourages additional growth, promoting sprawl. It has also encountered some opposition from some of the residents, as shown in the attitude survey. This is partly due to the varying quality of groundwater found in any particular area and the method by which the cost of the water line extension costs are passed on to property owners through assessments. This results in one resident whose water quality is acceptable being required to share the cost of extending a water line past their house to a group of neighbors whose water quality is worse.

There is no easy answer to this solution. If the township continues its policy of extending water lines into the rural areas, development in those areas will increase and some residents feel unfairly burdened with the cost of an improvement they did not want. If the township discontinues extension of water lines, residents with poor water quality will feel that the township is not responding to their needs. One possible compromise to this problem would be a limited, phased expansion of the system. The expansion plan would need to be well publicized so that potential property owners would have an idea when water might become available to their area. This would limit development in areas not scheduled for immediate service, thereby limiting any future demand for premature extension of the lines.

MAP 13 – WATER AND SEWER LINES



SECTION 3 GOALS AND POLICIES



PROBLEM STATEMENTS

The following problem statements were based on the information contained in the data base and on the comments made by township residents in the attitude survey as part of the previous Master plan project.

Soils

- 1) Soils pose long term problems for medium density residential development.
- 2) Sewers need to be extended into existing or proposed areas of intensive development.

Water Resources

- 3) Relatively poor quality of ground water results in requests for extension of municipal water lines.

Current Land Use

- 4) Urban sprawl results in expensive extension of municipal services, including water, sewer and road improvements.

Housing

- 5) There is a current lack of a reasonable mix of affordable housing.
- 6) Selection of housing types is limited primarily to single-family residential homes.

Agriculture

- 7) Fragmentation of farmland into non-agricultural developments, particularly in areas of prime farmland, reduces the viability of township agriculture and results in conflicts between agricultural and non-agricultural land uses.

Recreation

- 8) Hiking/Biking facilities are in demand in Flushing Township.

Natural Features

- 9) There is potential for inappropriate development in areas with natural features such as flood plains, wetlands, steep slopes and woodlots that are environmentally sensitive and need to be protected.

Surrounding Areas

- 10) Coordination of land use planning between Flushing Township and the surrounding municipalities including the City of Flushing.

Transportation

- 11) Many primary roads are in inadequate condition

Township Economy

- 12) There is a lack of appropriate industrial sites in the township.

In addressing these problems, it is important that the township not lose site of the existing assets in the community. These township assets were identified by the residents in the attitude survey and from the data base information.

- 13) The high quality of the existing housing stock;
- 14) The rural atmosphere of the community; and,
- 15) The Flint River as a natural resource for recreation and aesthetics.

GOALS, OBJECTIVES, & POLICIES

Goals are general guidelines that explain what the community wants to achieve. Objectives are rules, guidelines, or general actions designed to achieve goals. Policies are specific actions or requirements that can be taken to fulfill the objectives. The goals, objectives, and policies are divided into eight different topics, including: Natural Resources, Agricultural, Residential, Transportation, Community Facilities, Industrial, Recreation, and Surrounding Areas.

Natural Resources

Goal: Promote the wisest possible utilization of valuable natural resources and the protection of these resources from unnecessary encroachment by development. Areas with natural features such as floodplains, wetlands, steep slopes, and woodlots that are environmentally sensitive need to be protected.

Objectives:

1. The township shall encourage the protection and preservation of water features, wetlands, floodplains, and groundwater.

Policies:

- The township will make sure that developments meet all state and federal government regulations related to environmental protection.
 - Review zoning ordinance requirement to encourage stormwater management best practices and adequate setback from water features.
 - When the location of a proposed building in relation to an existing floodplain boundary is questionable, building permits will be accompanied by a statement from a licensed professional land surveyor stating whether the parcel is in or out of the floodplain and floodway and the elevation of the building site.
 - The township should take actions to ensure the availability of groundwater supplies which are adequate to meet anticipated needs, by reviewing lot size for areas with unsuitable septic system soils.
2. Wooded areas, which have unique scenic or recreational potential, should be conserved.

Policies:

- Township officials should support the opportunities presented in the Farmland and Open Space Preservation Act for designation of open space “holding zones” to preserve valuable natural areas, in addition to prime agricultural land, from urban sprawl.
 - Require provisions for adequate maintenance of any open space residential areas proposed as part of PUDs or subdivision development.
3. Land disturbed by mining will be restored so that it may be developed for some other use in keeping with the area once mining activities end.

Policies:

- Review zoning ordinance to ensure there is adequate restoration requirements for mining operations.

Agricultural

Goal: The township will maintain its primarily agricultural practice heritage.

Objectives:

1. Encourage preservation of prime farmland.

Policies:

- Public water and sanitary sewer systems should not be extended to areas designated as prime agricultural lands, except when there is a threat to the public health and safety.
 - Prime agricultural land is classified as land containing soils classified as prime by the US Soil Conservation Service; is made up predominantly of large (40 acre+) parcels; is not currently served by municipal water and sewer; and the extension of those services is not planned for the area.
 - Land devoted to agriculture and prime agricultural land should be retained as such.
2. Limit the visual intrusion of needed non-agricultural land uses in rural areas.

Policies:

- Prime agricultural land should be buffered from currently developing areas by transition zones that permit low density residential development, as well as low impact agricultural land uses.
- Development of non-productive agricultural land for residential use will be permitted in the prime agricultural area as long as the design, scope, and density of the development is such that it will not change the character of the area or increase demand for extension of urban services.
- Fragmentation of farmland into non-agricultural development should be discouraged.

Residential

Goal: The township provides for various quality housing types for existing and future residents and is a family-oriented community.

Objectives:

1. Encourage the utilization of appropriate land areas for residential development to provide a reasonable mix of affordable housing

Policies:

- Permit high-density residential development only in areas proposed for both public water supply and sanitary sewer service.
- Residential developments in the township should result in housing supply for all economic and social groups.
- Land areas should be identified for prime consideration for low-, medium-, and high-density urban residential development.
- Evaluate zoning ordinance to see if various missing middle housing types (duplexes, triplexes, quadplexes, townhouses, etc.) are allowed in various residential zoning districts.

2. Protect the existing housing stock quality by protecting residential neighborhoods from conflict with inappropriate land uses.

Policies:

- Low-density development should be encouraged only in those areas where such development is not likely to require a high degree of public investment in utilities and services.
- Low-density residential land use should be buffered from high- and medium-density, commercial, and industrial development.
- Review zoning ordinance to ensure adequate buffering is provided for less compatible land uses.

Transportation

Goal: Encourage the development of an efficient, convenient, and safe system for the movement of people and goods within Flushing Township.

Objectives:

1. The roadway network should be improved, where necessary, to accommodate present and future motor vehicle needs.

Policies:

- All roadways should be designed to minimize traffic conflicts at ingress/egress points.
 - Maintain a system of functional road classifications and standards to facilitate coordination of efforts to improve transportation facilities in the township and Genesee County.
 - Road condition and traffic counts should be monitored annually and road improvements should be prioritized based on condition, capacity, and the proposed area.
 - Existing and future road capacity should be considered when reviewing rezoning requests and special use permits.
 - Driveways along major collectors should be limited through the use of shared driveways, service drives, and access roads.
 - Subdivisions on major collectors should not provide driveways for individual lots along the road but should be designed to provide access to lots from interior streets.
2. Commercial and high-density residential developments should be designed to encourage pedestrian circulation.

Policies:

- Review zoning ordinance to require responsible standards to required pedestrian-friendly developments.
 - Support implementation of the Flushing Area Recreation Master Plan.
3. The township will encourage nonmotorized transportation in appropriate locations for maneuverability throughout the township.

Policies:

- Provisions for bicycle traffic should be made when roads are upgraded.
- Partner with Genesee County, Parks and Recreation Committee, and regional planners to coordinate development of non-motorized pathways.

Community Facilities

Goal: Provide, in the most economic manner possible, those public service facilities necessary to adequately accommodate the health, safety, and general welfare needs of township residents.

Objectives:

1. Encourage the provision of adequate sanitary sewer and public water supply facilities to meet the needs of township residents where appropriate.

Policies:

- Coordinate development with the extension of municipal service facilities where necessary due to poor water and soils.
 - High-intensity uses should be permitted only in areas with existing water and sewer service.
 - Areas with poor soils or water which require water and/or sewer service should not be approved for development until such utilities are available to the site.
2. Township and local school officials should coordinate efforts whenever possible in the provision of adequate public educational facilities to meet the needs of students from Flushing Township.

Policies:

- Consider shared services for various public equipment.
 - Consider helping to promote each entity's various events and community initiatives.
 - Work together to provide safe passage to schools located in the township, such as adding a sidewalk in front of the middle school.
3. Provide for the delivery of police and fire protection services (including necessary facilities) to meet the need of all residents, in cooperation with adjacent governmental units and other agencies when appropriate.

Policies:

- Continue to provide adequate funding for services
 - Continue to work with the township to cover each other's service.
4. Maintain adequate township governmental administrative facilities to meet the community service needs of all residents.

Policies:

- All capital improvement projects in the township should be reviewed by the township Planning Commission as required by the Michigan Planning Enabling Act.
- Continue to update the township's website and provide a transparent government.

- Continue to work on coordinating the Building Department, Planning Commission, and enforcement.

Industrial

Goal: The township shall maintain the limited industrial area.

Objectives:

1. Appropriate sites will be identified and reserved over the long term for industrial development, particularly along the railroad and the junction of Mt. Morris Road and Southbound M-13.

Policies:

- The zoning ordinance should be amended to permit some light industrial uses in a highway service commercial district by special use permit. The acceptability of the uses would be based on their compatibility with highway service uses and their ability to operate without municipal water or sewer.
 - Industrial sites will be restricted from areas with poor soils that pose severe limitations to adequate foundations.
 - Industrial uses will be buffered from low-density residential uses by agricultural land, open space, forest land, or commercial uses.
2. Neighboring properties shall not be directly harmed/impacted by the proposed industrial uses.

Policies:

- Review zoning ordinance to ensure adequate buffering is provided for adjacent properties.
- Industrial uses will be buffered from low-density residential uses by agricultural land, open space, forest land, or commercial uses.
- Review zoning ordinance to ensure that all industrial developments will be reviewed to ensure that operations at the facility, including loading and unloading of material processing operations and disposal of material is conducted in an environmentally safe manner.

Recreation

Goal: The township provides for a variety of quality recreational opportunities and support the regional recreation system.

Objectives:

1. Adequate recreational services will be provided.

Policies:

- Support implementation of the Flushing Area Recreation Master Plan.
- The township will explore various opportunities for using the Township Nature Park.

2. Public access to the Flint River and activities pertaining to it (canoeing, kayaking, etc.) will be encouraged.

Policies:

- Develop an accessible kayak launch at the Nature Park to provide an accessible water trail connection to Montrose Township Park.
- Coordinate with Flint River Watershed Coalition (FRWC) on water trail signage.
- Encourage provision of public access in developments along the Flint River.

Surrounding Areas

Goal: Coordinate land use planning between Flushing Township and surrounding municipalities.

Objectives:

1. Consider existing and proposed land uses in adjacent communities when considering appropriate land uses in the township.

Policies:

- Development in the township should be tracked annually to assist the township Planning Commission in identifying development trends. Information gathered would include building permit issuances, zoning changes requested, and changes in area land use plans.
 - Meet with adjoining units to discuss land use issues concerning the township Planning Commission.
 - Notify surrounding municipalities of rezonings or special land use permit (SLUP) requests dealing with property within 1 mile of their boundaries. Request that they do the same.
 - Continue to support the City of Flushing as a center of commercial activity.
2. Encourage a regional approach to planning decisions.

Policies:

- Cooperate with Genesee County Metropolitan Planning Commission in their regional planning efforts.
- Appoint a representative from the township to attend all meetings of the GCMPC, at which rezoning requests in or near the township are to be reviewed.

SECTION 4 PLANS



LAND USE NEEDS

LONG TERM AGRICULTURAL – There is no defined need for a specific amount of agricultural land. The primary goal of the plan regarding it is that as much prime agricultural land should be preserved as possible over the planning period. The land use inventory showed that there was 11,086 acres of land in agriculture. It is assumed that this number has decreased somewhat due to residential development since then, but it remains one of the primary land uses in the township.

AGRICULTURAL/RESIDENTIAL – The amount of land required for the residential land uses in this category is dependent on the average size per acre of the lots. Assuming all of the development in this area will be lot splits off existing agricultural parcels, with some greater and some less than 10 acres in size, the average residential lot size is estimated to be 5 acres. Assuming that 10% of all single-family residential development occurs in this zone (9% of single-family residential development occurred in agricultural areas between 1975-1990), then 1,070 acres are needed. What will be more of a determinant in developing the size of zone is the need to provide separation between the residential and long-term agricultural zones.

LOW DENSITY RESIDENTIAL – The total acreage required for low density residential land uses is 536. This is based on the assumption that development will be a mixture of lot splits of existing parcels and subdivision development, with an average lot size of one acre, and that 50% of all new residential single-family dwellings built in the township will locate in this area.

HIGH DENSITY RESIDENTIAL – The total acreage required for high density residential uses is 43. This is based on the assumption that the development will be predominately townhouses and apartment buildings, with an average density 10 units per acre and that 40% of the residential dwellings built in the township over the planning period will be of this type.

MOBILE HOME PARK – There is currently 140 acres of existing mobile home park acreage and vacant land currently zoned for and proposed for mobile home development. This is estimated to be adequate for the planning period.

COMMERCIAL – The total projected commercial land needs are equal to the existing commercial land, plus a percentage increase comparable to the increase in the township population (20%). That equals 51.4 acres, an increase of 8.6% acres.

LIGHT INDUSTRIAL – No accurate estimate of the existing demand for the type of light industrial development proposed for the township is available. A 40 acre parcel adjacent to commercial and industrial land in Hazelton Township is proposed.

LAND USE CRITERIA

LONG TERM AGRICULTURAL – The land in this category represents the main agricultural base of the township. The primary land use in the area is agricultural practices. Most parcels in the area are still relatively large and conducive to large scale farming operations.

Location Criteria

- The soils are classified as prime by the Soil Classification System (SCS) .
- Municipal water and/or sewer are not currently available or planned within the area.

AGRICULTURAL / RESIDENTIAL – The purpose of this category is to provide a transition zone between the agricultural and low density residential areas. The zone permits residential development alongside limited agricultural activities. The current land use in the area is a mixture of single-family residences and agricultural. There is a mix of small and large sized parcels. The main intent is to provide rural farm-land preservation.

Location Criteria

- Public water and sewer may or may not be available.

LOW DENSITY RESIDENTIAL – The purpose of this category is to provide adequate land for single-family residential development in the township. The current land use is a mix of single-family residential in subdivisions, in strip development along county roads, and on rural lots, as well as vacant land and some agricultural land. The desired density of dwelling units is one unit per 20,000 square feet if onsite utilities are provided and 9,900 if City services are provided.

Location Criteria

- The land is currently, or projected to be, served by water and sewer or the soils do not pose severe limitations to development without sewer and the water quality is adequate.
- The soils are generally not considered prime.

MEDIUM DENSITY RESIDENTIAL – The purpose of this category is to provide adequate land where development can occur with a greater range of types of single-family detached and single-family attached residences than in the low density residential area such as three and four units, garden apartments, and townhouses.

Location Criteria

- The land is currently, or projected to be, served by water and sewer.
- Development should have access to a primary road or state highway and be near the City of Flushing or the proposed commercial center.
- The soils are generally not considered prime.

HIGH DENSITY RESIDENTIAL – The purpose of this land use category is to provide sites of high density, multi-family residential development and many forms of missing middle housing such as townhouses, rowhouses, tri-plexes, and quad plexes.

Location Criteria

- The land is concentrated around existing urban areas of Flushing and the commercial strip along Mt. Morris Road.
- Access to the parcel is to be by county primary road. Water and sewer must be available to the site.
- Road capacity must be able to handle the anticipated increase in traffic.

MOBILE HOME PARK – This future land use classification is proposed to hold mobile home parks. The purpose of this land use category is to provide sites for mobile home development. Current analysis indicates land currently zoned for mobile home parks will provide adequate space for additional development over the planning period.

Location Criteria

- Access to the parcel is on a county primary road.
- Water and sewer must be available to the site.

SPORTS AND RECREATION – The purpose of this future land use classification is to provide sites for large scale sports and recreational land uses in the township. The only areas designated on the future land use map are those currently zoned as SR and future requests will be analyzed based on their appropriateness. There should be adequate room on the property to properly buffer the sites impact from adjacent land uses.

Location Criteria

- Access from a primary road or state highway

COMMERCIAL – This future land use classification is for the commercial centers in the township. Appropriate uses include retail, professional offices, and a variety of more intense commercial operations like a gas station as a special land use. There is adequate room on the property to buffer this site's impact from adjacent land uses.

Location Criteria

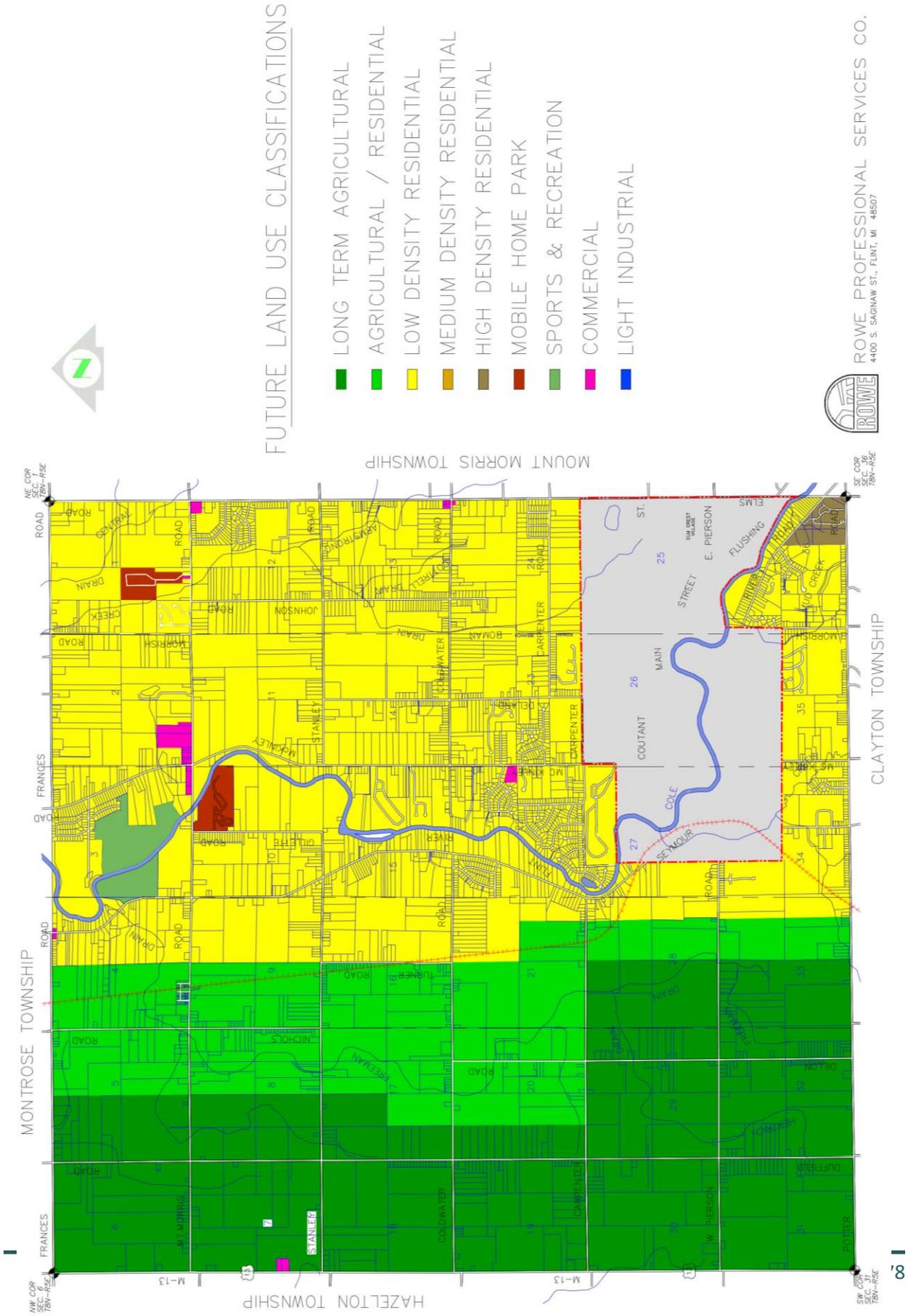
- The area around the intersection of McKinley and Mt. Morris Roads.
- Local commercial uses would be appropriate both in the commercial center and in isolated sites on primary road or state highway intersections serving residential neighborhoods.

LIGHT INDUSTRY – Light industrial activity will be permitted, as shown, in a concentrated area along M-13. The purpose of this land use category is to provide an area for light industrial activities that do not require public water and sewer, but would find advantage in being located adjacent to a state highway.

Location Criteria

- Access to the parcel is to be by county primary road, specifically M-13 and Seymour Road.
- Must have good quality soils for adequate support of the foundation.
- Should be located with access to municipal water and sewer.

MAP 14 – FUTURE LAND USE



FUTURE LAND USE CLASSIFICATIONS

- LONG TERM AGRICULTURAL
- AGRICULTURAL / RESIDENTIAL
- LOW DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- MOBILE HOME PARK
- SPORTS & RECREATION
- COMMERCIAL
- LIGHT INDUSTRIAL



ROWE PROFESSIONAL SERVICES CO.
4100 S. SAGINAW ST., FLINT, MI 48507

TRANSPORTATION

This transportation plan, which is part of the Flushing Township Land Use Plan, is designed to do three things:

- 1) Integrate the township's transportation planning into the Genesee County Transportation Plan.
- 2) Identify potential road improvements expected to be necessary over the planning period.
- 3) Provide strategies that will limit the need for road improvements through land use and site design controls.

Flushing Township and the Genesee County 2035 Long Range Transportation Plan

The Genesee County 2035 Long Range Transportation Plan was adopted in 2009 to provide solutions to long-term transportation problems in Genesee County. The study concentrated on the major roads. In Flushing Township that meant the county primary roads. The roads were divided into segments and evaluated based on twenty-four hour volume/capacity analysis; peak period volume/capacity analysis; surface conditions; parking, accidents per million vehicle miles traveled; adequacy of existing lane widths; existence of school zones with restrictive speeds; and number of railroad crossings. Seven hundred and twenty two segments were evaluated, with one hundred and forty five identified as "problem segments" requiring investigation. None of these segments were in Flushing Township, although two segments of McKinley and one of Main Street in the City of Flushing were included on the list.

When the final plan was adopted it did not include recommendations on improvements to any portions of the major roads in the township (McKinley, Seymour, Elms, Pierson, and Mt. Morris).

Despite the fact that the current long range plan does not include any road segments in the township at this time, it is important for the Planning Commission to continue to monitor the long range plan's recommendations for changes that could affect the township.

Anticipated Road Improvements

Road improvements that can be expected to be required over the planning period fall into two categories; road surface improvements and road capacity improvements. The primary responsibility for both of these improvements lies with the County Road Commission, which provides all or much of the funding for the projects and therefore sets the priorities on road improvements. Roads that were identified as needing improvement in the *Genesee County 2035 Long Range Transportation Plan* were Mt. Morris and River Roads, as well as portions of Coldwater and Seymour Roads. They are heavily traveled and rank poorly in pavement condition. This plan anticipates that these roads will be improved over the planning period and will have an impact on the traffic patterns in the township.

Traffic Considerations in Land Use and Site Design Decisions

The primary transportation considerations in land use deal with the use's expected traffic generation and that traffic's impact on the existing transportation system. Mass transportation systems are benefited by land use decisions, which concentrate businesses and residences into compact areas that can be efficiently serviced. Policies that spread residences and businesses thinly over the landscape, on the other hand, tend to discourage mass transportation options.

Policies that promote the intermixing of businesses and residences encourages the individuals to walk or bike to work or shop rather than using a car, while land use decisions that segregate land uses tend to increase dependence on the automobile.

Land use policies that result in sprawl also increase transportation costs by increasing the demand for road improvements as the number of residences increase gradually above a strictly "rural" density throughout the community.

The land use policies presented in the preceding sections will tend to encourage dependence on the automobile and increase the demand for road improvements because it will permit residential development throughout the rural areas of the township. This underlying effect on the township's policy not to interfere in the development rights of property owners in rural areas by restricting low density single-family development must be understood. This effect can be mitigated to some extent by the policies adopted to limit the establishment of other types of residential and commercial developments in this area.

The township can also act to reduce the impact of development that does occur by requiring appropriate site design criteria be used to limit the development's impact on existing traffic flow. The criteria include the use of common driveways, possibly in conjunction with parallel access drives, to reduce the number of entrance points into the flow of traffic. Strip residential development should be discouraged for the same reason, in favor of projects with interior streets. The use of acceleration/deceleration lanes at major driveways should also be promoted.

CAPITAL FACILITIES PLAN

The ability of the township to implement a capital improvement plan is limited because of its limited role in financing capital improvements in the township. As we have already noted, the township plays only a limited role in the financing of road improvements, normally covering half the cost for the graveling of local roads, with an occasional paving project. Although the township is involved in the construction of water and sewer lines in the township, it normally is simply reacting to a request by a developer or group of residents for that service. The financing is usually provided by the developer or the township sets up an assessment district in which the property owners served by the new line pay for the cost of its extension. The other capital improvement types of projects that the township may get involved in are either limited in scope (the recycling drop-off center, for example) or there is not an expectation that the current facilities will need to be replaced over the planning period (such as the township hall).

Sanitary Sewer

Based on the policies adopted as part of this plan, it is the intent of the township to limit the expansion of the existing sewer system to an area outside the long-term agricultural area. Since the boundary of this district is currently 3.5 miles from the existing sewer lines, this policy was not viewed as overly restrictive in limiting growth of the sewer system, but it does help to protect the long-term agricultural area from high intensity residential and non-residential land uses.

In order to help implement this policy, the Planning Commission will request that it be permitted the right to review all requests for extension of the sewer lines, as granted under the township Planning Act.

Public Water

The township Planning Commission decided upon a policy of not interfering with the extension of water lines into the rural portions of the township not currently serviced by them. Extensions of lines will continue as they have in the past, with the incentive for expansion of the system provided by the property owners in the township.

Recreation

The joint township/city/school district recreation plan includes several proposed projects in the township, including construction of a bike-hike-run path linking Flushing and Montrose, and development of a year-round indoor nature center facility at the Township Nature Center site. The Planning Commission will continue to monitor the progress of the parks and recreation plan.

Other

The township has adopted a new strategy in their management of solid waste. The township's waste hauler is operating a curbside recycling program for township residents, which has reduced the need for a drop-off center. The center has been closed and plans to expand it have been dropped.

ZONING PLAN

Because Flushing Township has adopted a zoning ordinance to regulate land use within its boundaries, it must include in its master plan a “Zoning Plan” that identifies the relationship between the future land use designation in this plan and the zoning districts in the zoning ordinance.

The table below identifies that relationship.

Table 21	
Zoning District	Future Land Use Classifications
RSA – Residential Suburban Agriculture	Long Term Agricultural Agricultural / Residential
RU-1 – Residential Urban Single-Family	Low Density Residential
RU-2 – Residential Urban Medium Density	Medium Density Residential
RU-3 – Residential Urban High Density	High Density Residential
RU-4 – Residential Urban Mobile Home Park	Mobile Home Park
C-1 – Local Commercial	Commercial
C-2 – General Commercial	
C-3 – Shopping Center	
M-1 – Light Manufacturing Industrial	Light Industry
M-2 – Heavy Manufacturing Industrial	

The RSA zoning district includes land designated in the plan as both “Long Term Agricultural” and “Agricultural / Residential”. The controlling factor between the two future land use designations is the availability of municipal water and sewer in the area designated Agricultural / Residential or the expectation of its extension into this area during the plan’s time frame.

The land designated “Commercial” in the plan includes property zoned “Local Commercial”, “General Commercial”, and “Shopping Center”. The appropriateness of the zoning is based on the proposed use’s location. It is anticipated that General Commercial will be the primary zoning in the commercial center identified in the plan as the area around the intersection of McKinley and Mt. Morris Roads. Local Commercial uses would be appropriate both in the commercial center and in isolated sites on primary road or state highway intersections serving residential neighborhoods. The Shopping Center district is available in case commercial uses on a regional scale are proposed, in which case the appropriate location would be in the identified commercial center.

Agricultural / Residential

The purpose of this category is to provide a transition zone between the agricultural and low-density residential areas. The zone permits residential development alongside limited agricultural activities. The current land use in the area is a mixture of single-family residences and agricultural. Public water and sewer may or may not be available.

Low Density Residential

The purpose of this category is to provide adequate land for single-family residential development in the township. The current land use is a mix of single-family residential in subdivisions, in strip development along county roads and on rural lots, as well as vacant land and some agricultural land. The land is currently, or projected to be, served by water and sewer or the soils do not pose severe limitations to

development without sewer and the water quality is adequate. The soils are generally not considered prime.

Medium Density Residential

The purpose of this category is to provide adequate land where development can occur with a greater range of types of single-family detached and single-family attached residences than in the low density residential area. The land is currently, or projected to be, served by water and sewer. Development should have access to a primary road or state highway and be near the City of Flushing or the proposed commercial center. The soils are generally not considered prime.

High Density Residential

The purpose of this land use category is to provide sites of high density, multi-family residential development. The land is concentrated around existing urban areas of Flushing and the commercial strip along Mt. Morris Road. Access to the parcel is to be by county primary road. Water and sewer must be available to the site. Road capacity must be able to handle the anticipated increase in traffic.

Mobile Home Park

There is currently 140 acres of existing mobile home park acreage and vacant land currently zoned for and proposed for mobile home development. This is estimated to be adequate for the planning period.

Sports and Recreation

The purpose of this land use category is to provide sites for large scale sports and recreational land uses in the township. The only areas designated on the Future Land Use Map are those currently zoned as SR and future requests will be analyzed based on their appropriateness. Locational criteria would include access from a primary road or state highway, with adequate room to properly buffer the sites impact from adjacent land uses.

Commercial

The total projected commercial land needs are equal to the existing commercial land, plus a percentage increase comparable to the increase in the township population (20%). That equals 51.4 acres, an increase of 8.6 percent acres.

Light Industrial

No accurate estimate of the existing demand for the type of light industrial development proposed for the township is available. A 40-acre parcel adjacent to commercial and industrial land in Hazelton Township is proposed.

The zoning ordinance will implement the master plan's vision by limiting the location of uses that are appropriate for the future development of the community. The focus for the township is to maintain its agricultural heritage, provide varied quality housing stock, provide services to the community, limit industrial development, and promote recreational development.

PROPOSED CHANGES TO THE ZONING ORDINANCE

Changes to Requirements Regulation

- Review zoning ordinance requirement to encourage stormwater management best practices and adequate setback from water features.
- Township officials should support the opportunities presented in the Farmland and Open Space Preservation Act for designation of open space “holding zones” to preserve valuable natural areas, in addition to prime agricultural land, from urban sprawl.
- Review zoning ordinance to ensure there is adequate restoration requirements for mining operations.
- Evaluate zoning ordinance to see if various missing middle housing types (duplexes, triplexes, quadplexes, townhouses, etc.) are allowed in various residential zoning districts.
- Review zoning ordinance to require responsible standards to required pedestrian-friendly developments.
- Existing and future road capacity should be considered when reviewing rezoning requests and special use permits.

Changes to Land Use Districts Regulation

- Review zoning ordinance to ensure adequate buffering is provided for adjacent properties.
- The zoning ordinance should be amended to permit some light industrial uses in a highway service commercial district by special use permit. The acceptability of the uses would be based on their compatibility with highway service uses and their ability to operate without municipal water or sewer.
- Review zoning ordinance to ensure that all industrial developments will be reviewed to ensure that operations at the facility, including loading and unloading of material processing operations and disposal of material is conducted in an environmentally safe manner.
- Review zoning ordinance to ensure adequate buffering is provided for less compatible land uses.
- Prime agricultural land should be buffered from currently developing areas by transition zones that permit low density residential development, as well as low impact agricultural land uses.

Changes to Administration Regulation

- Notify surrounding municipalities of rezonings or special land use permit (SLUP) requests dealing with property within 1 mile of their boundaries. Request that they do the same.
- Appoint a representative from the township to attend all meetings of the GCMPC, at which rezoning requests in or near the township are to be reviewed.

Special Uses and Site Plan Review

One of the most important changes to the Michigan Zoning Enabling Act, which made a general overhaul of all local zoning enabling legislation in 2008, was the confirmation of a community's right to issue special use permits. The special use permit provides a zoning ordinance with the flexibility that it often needs to permit a needed high impact use at an appropriate location, while protecting the community's residents.

Several changes can be made in the township's zoning ordinance dealing with special use permits and

site plan review that can help to implement the goals and policies of this plan.

In order to implement the policies dealing with protection of the natural resources such as groundwater and wooded areas, the standards used to consider SUP requests should be expanded to include specific consideration of natural features, including soil suitability, in determining suitability of the use.

In order to implement the policy calling for protection of groundwater supplies the special use permit requirements for uses dealing with hazardous material should be amended to require the applicant show compliance with all state and federal environmental regulations as a condition of permit approval.

In order to encourage the development of a variety of low cost housing options for the residents of the township, a special use permit classification should be established permitting the use of development cost reduction options such as reduced lot size, zero lot lines, and “granny flats” in some residential zones.

Site plan criteria should be amended to require, or at least encourage, the development of common driveways, shared signage, and screening of parking areas in the concentrated commercial area around McKinley and Mt. Morris Roads.

Site plan criteria should be amended to encourage bicycle paths and sidewalks in major developments. To implement the light industrial/commercial development proposal along M-13, a special use classification should be established permitting highway service types of uses in the area based on the uses expected demand for public utilities.

SECTION 5 IMPLEMENTATION



ZONING

The purpose of an implementation plan is to ensure that the goals, policies, and plans of the township master plan are implemented and that the plan is kept current and maintained. It does this by the use of tools provided to the township by state laws. This plan will outline the appropriate tools that the township Planning Commission feels would be appropriate in implementing this plan.

One of the preeminent tools used by communities to reach the goals of their master plan is zoning. Zoning is a regulatory power given by the state to local townships through the Michigan Zoning Enabling Act (MZEA). The act authorizes the local units to establish zoning ordinances controlling the use of property and the height, bulk, and location of buildings on that property. In order for an ordinance to be effective in implementing a master plan, it must be tailored to that plan. When a plan is updated, following that process the local zoning ordinance should also be updated to take into account those changes. The Zoning Plan in the previous section identified the relationship between the future land use classifications and the current zoning designations. This section will review proposed changes in the township's current zoning ordinance that could assist the township in meeting its stated objectives. The proposed changes will be in the uses permitted in the various districts, the actual configuration of the zoning districts, and possible special use permit and site plan review requirements.

Capital Improvement Plan (CIP)

Under the Michigan Planning and Zoning Enabling Act (MPEA), the township is not required to prepare and annually update a Capital Improvement Plan. The township does not normally finance infrastructure projects, and either approves plans from private developers or limitedly finances public infrastructure projects. The following are potential projects that the township could be or is involved in:

- Request permission to review requests for sewer line extensions.
- Develop a non-motorized multi-use trail that links Flushing and Montrose.
- Develop an indoor year-round nature center facility at the Township's Nature Center site.

Other Implementation Strategies

Environmental

- The township will make sure that developments meet all state and federal government regulations related to environmental protection.
- Require provisions for adequate maintenance of any open space residential areas proposed as part of PUDs or subdivision development.
- Township officials should support the opportunities presented in the Farmland and Open Space Preservation Act for designation of open space "holding zones" to preserve valuable natural areas, in addition to prime agricultural land, from urban sprawl.
- When the location of a proposed building in relation to an existing floodplain boundary is questionable, building permits will be accompanied by a statement from a licensed professional land surveyor stating whether the parcel is in or out of the floodplain and floodway and the elevation of the building site.
- The township should take actions to ensure the availability of groundwater supplies which are adequate to meet anticipated needs by reviewing lot size for areas with unsuitable septic system soils.

Township Activities

- Fragmentation of farmland into non-agricultural development should be discouraged.
- Permit high-density residential development only in areas proposed for both public water supply and sanitary sewer service.
- Land areas should be identified for prime consideration for low-, medium-, and high-density urban residential development.
- Road condition and traffic counts should be monitored annually, and road improvements should be prioritized based on condition, capacity, and the proposed area.
- Provisions for bicycle traffic should be made when roads are upgraded.
- Coordinate development with the extension of municipal service facilities where necessary due to poor water and soils.
- Continue to update the township's website and provide a transparent government.
- Continue to work on coordinating the Building Department, Planning Commission, and enforcement.
- Meet with adjoining units to discuss land use issues concerning the township Planning Commission.
- Cooperate with Genesee County Metropolitan Planning Commission in their regional planning efforts.
- Continue to support the City of Flushing as a center of commercial activity.
- Continue to implement and invest in curbside recycling pickup for township residents.

Township Funding

- Continue to provide adequate funding for police and fire services.
- All capital improvement projects in the township should be reviewed by the township Planning Commission as required by the Michigan Planning Enabling Act.

Parks and Recreation

- Partner with Genesee County, Parks and Recreation Committee, and regional planners to coordinate development of non-motorized pathways.
- Develop an accessible kayak launch at the Nature Park to provide an accessible water trail connection to Montrose Township Park.
- Coordinate with Flint River Watershed Coalition (FRWC) on water trail signage.
- Encourage provision of public access in developments along the Flint River.

Community Facilities and Institutions

- Consider shared services for various public equipment.
- Consider helping to promote each entity's various events and community initiatives.
- Work together to provide safe passage to schools located in the township, such as adding a sidewalk in front of the middle school.

Other Township Plans and Documents

- Support implementation of the Flushing Area Recreation Master Plan.
- Development in the township should be tracked annually to assist the township's Planning Commission in identifying development trends. Information gathered would include building permit issuances, zoning changes requested, and changes in area land use plans.

Zoning District Boundaries

It is not unusual for major changes in a land use plan to be followed by wholesale rezonings initiated by

the Planning Commission, or adoption of a new zoning ordinance in order to have the zoning district boundaries match the new land use map boundaries. While this is an effective tactic in order to ensure maximum compliance with the land use plan, it often results in the creation of large numbers of non-conforming uses and confusion among property owners as to the zoning classification of their property.

This plan does not propose any changes to the zoning map to be initiated by the township. To the extent that the Future Land Use Map might infer a proposed rezoning, the plan gives the initiative to propose that rezoning to the property owner.

OTHER ORDINANCES

Besides the zoning ordinance, state law has provided local communities with authority to adopt other specific ordinances that can be used to enforce the goals and policies of a land use plan.

Subdivision Control Ordinance

Although the state's Land Division Act requires the developer of a subdivision to submit a proposed plat before a township for review and approval, it also authorizes a township, if it wishes, to prepare a subdivision control ordinance. This ordinance may include stricter standards for subdivision design as long as they do not conflict with the provisions of the state act. It permits the community to establish design standards that conform with the land use plan and are therefore, more effective in enforcing the plan.

One of the problems with a local subdivision control ordinance is that it is often too technical in nature for a local community to administer without technical support from consultants who can review the engineering standards to determine compliance. Another problem is that, to the extent that extensive local review lengthens the review process, it encourages developers to use site condominiums as an alternative.

Floodplain Regulations

Flushing Township has participated in the National Flood Insurance Program since 1981. As a participant, Flushing Township property owners are permitted to purchase flood insurance at attractive rates. In return, the community adopted a flood management ordinance that restricts development within the floodplain with the aim of reducing future losses from flooding. The ordinance is enforced by the township Building Inspector/Zoning Administrator.

5-YEAR STRATEGIC PLAN

In the next five years, the Planning Commission has prioritized the implementation strategies that should be accomplished. When the Planning Commission prepares their annual report, they should keep these items in minds and see if they are being done. Other items listed in the implementation plan may be appropriate to add as a goal for the following year.

Strategy	Responsible Party	Deadline
Implement Recreation Master Plan Sidewalk Project	Joint Parks and Recreation Committee	Start 2020
Update CIP	Planning Commission, Board of Trustees, Department of Building and Zoning, Township Staff	2021
Update zoning ordinance	Planning Commission	Start 2022
Conduct a 5-year Review	Planning Commission	2025

PLAN MAINTENANCE AND UPDATE

A master plan is not a static document. It must continuously be maintained and updated if it is to remain valid. Below are recommendations on methods that the Flushing Township Planning Commission should adopt to ensure that the plan is adequately maintained.

Five-Year Review

Under the terms of the Michigan Planning Enabling Act (MPEA), the township's Planning Commission must review the master plan at least every five years to determine if there is a need to update it. The findings and determination should be recorded in the minutes and through a resolution attached to the appendix of the plan.

The review should be a formal process if the township intends it to serve as compliant with the requirements of Section 45 (2) of the MPEA. This section outlines some criteria when considering if an update to the master plan is merited.. The findings should be set out in a resolution adopted by the Planning Commission.

It is recommended that the Planning Commission conduct a less formal review annually, based on those issues that have risen through use of the plan in making zoning decisions.

Standards for Review

In conducting the five-year review, or a less formal annual review, the township Planning Commission should evaluate the plan using the following criteria. If they become invalid or have potential of being invalid in the near future, the Planning Commission must determine what the changes in circumstances mean for the plan goals and policies. This plan is based on certain assumptions concerning the growth of the township. These assumptions are contained primarily in the plan's data base. It is important for the township to regularly monitor these assumptions to determine if they are still valid. If they become invalid, the Planning Commission must determine what the changes in circumstances mean for the plan goals and policies.

- 1) **Population Growth** – The plan is based on the projection of population growth contained in the population section of the data base. As noted in the narrative following the projections, there is always a certain amount of guessing that goes into population projections and they should be continuously monitored.
- 2) **Housing Growth and Mix** – The plan makes assumptions on the growth of housing in the township over the planning period and the mix of single-family, multi-family, and mobile home units . The township should monitor housing growth and mix to determine if it is following the projections. Differences in the mix of housing types between what was projected and what is built may mean certain assumptions on market demand for various housing types were incorrect, which could impact policies dealing with the provision of varied housing types. Differences in the total housing count will impact the population projections and also the land use need estimates contained in the plan.
- 3) **Housing Cost** – Housing costs should be monitored to see if they are increasing more rapidly than household income during the planning period. A marked increase in housing costs in relation to

income may require more aggressive efforts in providing low-cost housing, while stable costs may indicate that current strategies are working in providing a broad range of housing costs.

- 4) Adjacent Planning and Zoning – Changes in the land use plans or zoning maps of adjacent townships or the City of Flushing should be reviewed to consider their impact on the township's plan, preferably before that community makes a decision regarding the matter.
- 5) Agriculture – The land use plan categorized the pressure on agricultural land uses by non-farm development in the township as low-to-moderate, and placed few measures into effect to restrict development in the prime agricultural area. The Planning Commission may wish to review the indicators identified in the Community Profile Worksheet that was filled out by the commission as part of the plan development to determine if these development pressures increase. A lack of change in these indicators would suggest that the current policies are adequate, while a change in the indicators may suggest a need for review of the policies.
- 6) Recreation – The township participated in the development of a recreation plan in cooperation with the City of Flushing and the Flushing School District. The Planning Commission should ask the township's representative to this committee for an annual update regarding changes in this plan. Changes in the recreation plan can affect the land use plan, particularly when relatively high intensity recreational activities are proposed.
- 7) Transportation – The township should monitor changes and proposed changes in the roads and streets in the township. Any update of the County Long Range Transportation Plan and Road Commission's project schedule should be reviewed for their impact on the plan. Traffic count data is updated annually by the Road Commission and this information should be compared with capacity figures for various road sections, along with accident data from the township Police Department to determine if traffic congestion is increasing at an unexpected rate or if traffic safety is deteriorating.
- 8) Utilities – The plan anticipates relatively unfettered expansion of the existing water lines, but limited extension of sewer lines. The sewer service area is then considered the determining factor in expansion of urban density development. Unanticipated expansion of the sewer lines should be reviewed to determine their effect on this type of development in the township.
- 9) Commercial Development – The plan anticipates a need for limited commercial development around the Mt. Morris/McKinley Road intersection, primarily neighborhood convenience and highway service types of businesses. Rezoning requests and special use permit requests should be monitored for indications of a need for additional commercial area.

Reviewing the Plan Goals and Policies

After reviewing the updated information on the plan data base, the Planning Commission should review the goals and policies. Specifically, the commission is looking for goals or policies that are no longer relevant due to changes in conditions or policies that have proven ineffective in addressing a goal. Those items that are identified should be deleted or modified in light of the new information. The plan should be officially amended to incorporate the changes in the goals or policies and the basis for the change should be reflected in public hearing record.

Incorporating Plan Review into Rezoning Request Review

Although an annual review of the plan is necessary for a comprehensive examination, many problems with a land use plan will become obvious during consideration of a rezoning or special land use permit request. It is important to incorporate review and amendment of the land use plan as part of the Planning Commission's consideration of such requests.

USING THE LAND USE PLAN FOR ZONING REVIEW

As noted earlier, the primary method of enforcing a land use plan is the zoning ordinance. In order for that to be done effectively, the community's rezoning and special land use permit request and site plan review procedure should be structured so land use goals and policies are considered.

Rezoning Requests

In considering a rezoning request, the primary question to ask is: "Does this request conform to our land use plan?". Three subsidiary questions follow that: "Was there an error in the plan?"; "Have there been relevant changes in conditions since the plan was approved?", and "Have there been changes in the goals and policies of the plan?". Answering these questions should answer the question of whether or not a rezoning request is appropriate and that should frame the reason within the context of the plan.

This method of analyzing a request rests on the assumption that a request that complies with a valid plan should be approved and a request that does not comply with a valid plan should not be. Furthermore, it assumes that the three circumstances that would invalidate a plan are a mistake in the plan, a change in condition that invalidates the assumptions that the plan was built on, or a change in the goals and priorities that the community set for itself.

Mistake – A mistake in a plan can be an assumption made based on incorrect data, an area on a land use map that is incorrectly labeled, or other factors that, if known at the time of the plan adoption, would have been corrected.

Change in Conditions – A plan is based on the assumption that certain conditions will exist during the planning period. If those conditions change, then goals, policies, and land use decisions that made sense when the plan was adopted may no longer be valid and a rezoning that was not appropriate before is appropriate now.

Change in Policy – In the end, a plan is based on the Planning Commission's vision of what is the best future for their municipality. When that vision changes, the plan should change. When a zoning issue results in a change in vision, a decision can be made that is contrary to the current plan as long as that changed vision is explicitly incorporated into the plan.

Two points should be made. First of all, the three factors for consideration (mistake, change in condition, and change in goals or policy) can work in reverse; making a proposal that otherwise seems appropriate, inappropriate. Secondly, these factors should not be used to create excuses for justifying a decision to violate the land use plan, or to change it so often that it loses its meaning.

Special Use Permits

The establishment of special uses in the zoning ordinance is based upon the goals and policies in the land use plan. The plan in turn should be used to determine when it is appropriate to permit a particular special use on a particular piece of property. To use the plan to help in making the determinations, the Planning Commission should look at the goals and policies that are appropriate to the type of use being proposed. The goals and policies of the plan should indicate the general intent of the plan regarding this activity and may be more specific in detailing what appropriate criteria are for approving the use. In most cases, this criteria will be reflected in the zoning regulations. In either case, it is important that this connection with the land use plan goals and policies be stated so that the planning basis for the decision is clear.

APPENDIX

Definitions

Some of the terms used in planning may be unfamiliar to members of the general public. Although the Planning Commission attempted to assure that the plan was written in "everyday" English, a buzz word or acronym sometimes slipped through. To help the reader in understanding the plan, the following list of definitions is provided.

AESTHETICS – Issues dealing with personal taste or concepts of beauty.

AQUIFER – Soil or rock that contains water that can be withdrawn in usable amounts.

ASCS – Agricultural Stabilization and Conservation Service

BEDROCK – The rock underlying the soil and unconsolidated earth. In some areas bedrock may be several hundred feet below the surface, but in Flushing Township it is relatively close to the surface. Types of bedrock include sandstone and shale.

CAPITAL IMPROVEMENT PLAN – A six-year plan that identifies the need for new construction and major repair to public works such as roads, bridges, sewer, water systems, etc., which represent major investments in money for facilities with a life of several years. The plan estimates the cost for each year's improvements and the proposed source of funds to pay for them.

CENSUS – A survey of characteristics of a group. The US Census of the Population is conducted in every year that ends in "0" and identifies several characteristics of the country's population. But the Bureau of the Census conducts census on many types of groups including farmers, manufacturers, retailers, etc.

CLUSTER SUBDIVISION – A subdivision built so that the homes are grouped on a small part of the entire land developed, with the remaining land provided for all of the residents either as open space, recreation areas or other uses.

DATA BASE – A collection of information on a particular subject or related subjects.

DIGITIZE – To electronically record the location of a series of points and lines that make up a drawing on a computer, which can then display the drawing or reproduce it using a computer printer or plotter.

ENVIRONMENTALLY SENSITIVE – An area that because of its characteristics is more susceptible to environmental damage as a result of development. These areas include wetlands, floodplains and steep slopes.

FARMLAND FRAGMENTATION – The process in which large agricultural parcels of land are divided into smaller parcels under different ownership, often for residential purposes, reducing the viability of the remaining farmland to be used for agricultural purposes.

FEMA – Federal Emergency Management Agency. This agency administers the National Flood Insurance Program and is responsible for delineating the location of flood plains.

FIRM – Flood Insurance Rate Map. The map prepared by FEMA that shows the probability of a particular area suffering flooding.

FUNCTIONAL ROAD CLASSIFICATION – A system that categorizes a road based on the level of use that it is designed to handle. The system is much like a tree with twigs, branches, limbs and trunk. Examples of classes are local roads, which are designed to serve primarily local traffic; collectors, which collect traffic from local roads and funnel them to the major roads; and arterials, which are major roads that provide

quick movement for most of the traffic moving from one point to another.

GCMPC – Genesee County Metropolitan Planning Commission.

GLACIAL DRIFT – Material deposited by the glaciers during the Ice Age that lays over the bedrock and consists of loose material like sand, gravel or clay.

GREENBELT – An area of grass, plants and/or trees designed as a buffer that surrounds an area and is designed either to buffer it from the surrounding area or buffer the surrounding uses from its impact. Green belts can be as small and simple as a row of evergreen trees planted between two lots or as involved as a forest preserved to buffer two large land uses.

GROUNDWATER – Water that is stored in porous rock and glacial drift material under the water table.

HOMOGENEOUS – All similar or alike.

HOUSEHOLD – The census defines a household as all the members of a housekeeping unit. A single person living by themselves is one household. So are two unrelated persons sharing a house or apartment, a single parent and child, or a conventional family.

HOUSING UNITS – A structure designed to be used by one household. A single-family home would be one housing unit; a duplex would be two housing units.

INGRESS\EGRESS – The way into or out of an area.

INTER-COUNTY – Movement from one county to another or an issue dealing with more than one county.

INTRA-COUNTY – Movement within a county or an issue dealing solely with a single county.

LANDSCAPING – The use of earth, trees, grass, plants and man-made objects to beautify an area outdoors.

MIRIS – Michigan Resource Information System. A statewide data base of land uses and natural features.

MULTI-FAMILY – A structure designed to provide more than one dwelling unit.

MUNICIPALITY – A local unit of general purpose government such as a county, township, city or village.

MUNICIPAL SERVICES – A service provided by a municipality to its residents as part of its governmental responsibilities. These can include water or sewer service, trash collection, fire and police protection, etc.

NON-FARM RESIDENCE – A dwelling unit in a rural area that does not include the out buildings such as a barn, silo, sheds, etc. associated with a working farm.

OPEN SPACE – An area of land unoccupied by buildings, often designed as a buffer between two uses and/or as a recreational space.

PLANNED UNIT DEVELOPMENT – A development consisting of several types of uses such as commercial, residential, recreational and industrial designed together as one project to complement one another.

PLAT – A map or chart showing the subdivision of land.

ROW (Right-of-Way) – A strip of land along which certain individuals or the general public have been given the right to travel. Public roads are built within rights-of-way, although the road is normally narrower than the right-of-way itself.

SCS – Soil Conservation Service

SOLID WASTE MANAGEMENT – The methods used by a community to collect, process and dispose of their refuse.

TRAFFIC CAPACITY – The maximum number of vehicles that a roadway can handle in a given period of time.