

MASTER PLAN

2012

WAVERLY TOWNSHIP

VAN BUREN COUNTY, MICHIGAN

**AN UPDATE OF THE 1995-2005 FUTURE LAND USE PLAN
WITH 2007, 2008 & 2012 AMENDMENTS**

Prepared by the Waverly Township Planning & Zoning Commission

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**2012 AMENDMENT BY THE
WAVERLY TOWNSHIP PLANNING & ZONING COMMISSION**

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ADOPTED BY THE WAVERLY TOWNSHIP BOARD: November 9, 2006
March 6, 2008
November 6, 2008
Amended: May 6, 2013

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INTRODUCTION

A. STATEMENT OF ORGANIZATION FOR WAVERLY TOWNSHIP FOR PLANNING

Recognizing the need for a Township Master Plan, the Waverly Township Board established a Planning & Zoning Commission in 1974 with directions to proceed with the preparation of a Future Land Use Plan for the Township. A second Master Plan was developed in 1995 to guide development to the year 2005. In 2004, the Township Planning & Zoning Commission recommended that the plan be updated and the Township Board authorized the Commission to utilize the assistance of Michigan Township Services-Allegan in the preparation of amendments and updates to incorporate the 2000 U.S. Census.

In 2007, the Planning Commission conducted a survey of the Township residents resulting in changes to the Master Plan map. As census material from the 2010 U.S. Census became available, the Planning Commission had Michigan Township Services update the tables, where possible, and amend the text to reflect the new information. At that time, it was also found to be necessary to adjust the text to conform to requirements of the Van Buren County Farmland Preservation program.

In 2012, the Planning Commission updated the population data using the 2010 U.S. Census, added the Farmland Preservation map and changed the statutory authority references to the new planning act.

In 2012, regarding Appendix D in the 2005-2010 Master Plan titled “Farmland Preservation Survey” and dated February 2007; the Planning Commission determined these pages are no longer necessary in the 2012 Master Plan. The Planning Commission approved a Farmland Preservation map and the 2012 Master Plan includes wording to support a property owner wishing to be considered for the Van Buren County Farmland Preservation Program. The 2007 Farmland Preservation Survey will become a historical document, which will be available at the Waverly Township Hall for future review.

A master plan was recognized as a guide for a zoning ordinance as well as for economic development and capital improvement projects. The purposes of a plan are as stated in Section 7 (2) of the Michigan Planning Enabling Act (P.A. 33 of 2008) as follows:

Section 7 (2) The general purpose of a master plan is to guide and accomplish, in the planning jurisdiction and its environs, development that satisfies all of the following criteria:

(a) Is coordinated, adjusted, harmonious, efficient, and economical.

- (b) Considers the character of the planning jurisdiction and its suitability for particular uses, judged in terms of such factors as trends in land and population development.
- (c) Will, in accordance with present and future needs, best promote public health, safety, morals, order, convenience, prosperity, and general welfare.
- (d) Includes, among other things, promotion of or adequate provision for 1 or more of the following:
 - (i) A system of transportation to lessen congestion on streets.
 - (ii) Safety from fire and other dangers.
 - (iii) Light and air.
 - (iv) Healthful and convenient distribution of population.
 - (v) Good civic design and arrangement and wise and efficient expenditure of public funds.
 - (vi) Public utilities such as sewage disposal and water supply and other public improvements.
 - (vii) Recreation.
 - (viii) The use of resources in accordance with their character and adaptability.

This plan includes a basic inventory of community resources, an identification of current trends, and a listing of land use related problems and opportunities. Finally, based on an evaluation of this information, a proposed future land use map was developed to reflect this evaluation and serve as a basis for future zoning recommendations to the Waverly Township Board.

B. PURPOSE OF THIS DOCUMENT

The purpose of this Master Plan is to provide the officials and citizens of Waverly Township with an efficient and reasonable guide to the orderly growth and development of the community. The plan is designed to support the Waverly Township Zoning Ordinance so as to reduce zoning conflicts and promote community-wide harmony. The Master Plan is not the Zoning Ordinance. It is a guide only for future changes to the Zoning Ordinance. Put another way, the Master Plan is the foundation upon which regulations are built.

Adopting or changing a Master Plan does not directly alter the zoning for any property. However, future changes to the zoning map are intended to be consistent with the uses shown on the Master Plan map.

C. OUTLINE OF THE PLANNING PROCESS

The planning process involves four basic steps: 1) a survey and analysis of background information, a determination of problems and trends, and an assessment of future needs; 2) the formulation of goals, objectives, and policies to

serve as a guide to future development; 3) a written and graphic plan designed to achieve the goals; and 4) recommendations for implementation of the plan.

The Waverly Township Master Plan was developed in the following order:

1. Organize for Planning
2. Review Community History
3. Review Existing Conditions and Past Trends
4. Assess Future Conditions
5. Determine Needs, Concerns, Advantages and Opportunities
6. Establish Goals and Objectives
7. Develop the Master Plan
8. Develop Recommendations for Implementation

The 2005 update of the Master Plan emphasized the following procedural and data inclusion elements:

- New notification requirements of the Township Planning Act,
- 2000 U.S. Census data,
- Population projections from the Southwest Michigan Commission,
- Post 2000 Building Permit data,
- A Short Opinion Survey of all Township Residents,
- Two Public Community Goals and Objectives Meetings,
- Re-assessment of the Strategies and Recommendations for Implementation, and
- Discussion and Debates on Township Participation in the Van Buren County Farmland Preservation Program.

D. FARMLAND PRESERVATION

Part 362 of the Natural Resources and Environmental Protection Act, Michigan Public Act 451 of 1994 as amended (NREPA), created the Agricultural Preservation Fund and the Agricultural Preservation Fund Board. In order to qualify for participation, a county unit of government must:

1. Have a master plan that has been adopted within the last 10 years and reviewed and/or updated within the last 5 years that contains an agricultural preservation component, and
2. Have adopted a purchase of development rights ordinance that includes a method to select parcels for possible purchase and also includes a method to determine the price to be paid for those development rights, and
3. Provide for funds to match the State grant.

In order to fulfill a portion of the requirements listed above, on July 13, 2003, the Van Buren County Board of Commissioners adopted a county-wide Farmland and

Open Space Preservation Ordinance. The intent of the ordinance is to create a Van Buren County Farmland and Open Space Preservation Program to:

1. Protect eligible farmland by purchasing development rights voluntarily offered for purchase by landowners,
2. Authorize acceptance of voluntary donations and the cash purchases and/or installment purchase of development right of eligible farmland and the placement of conservation easements on these properties that restricts their future development,
3. Establish a county comprehensive plan element to be prepared in collaboration with local units of government within Van Buren County that describes geographic areas within Van Buren County where eligible property should be protected and preserved,
4. Provide procedures and guidelines for selecting the farmland parcels to be protected; for determining the value to be paid for those rights; and, for the repurchasing of those rights for properties that no longer comply with the protection and preservation policies of the program and goals of the Van Buren County Comprehensive Plan.

Under the Van Buren County Farmland and Open Space Preservation Ordinance, in order for a township to participate in the program the Township's Master Plan must include:

1. A master plan map indicating the preservation area(s),
2. An explanation of the techniques/strategies that will be used to preserve farmland in the designated preservation area in addition to being eligible for the Purchase of Development Rights Program. In addition, if dense development has already occurred in the area, identify measures that will be taken by the township to discourage future development in that area,
3. Describe why farmland should be preserved in the township,
4. Describe how and why the preservation area(s) was/were selected,
5. Explain the process used to determine the area(s) and explain how this is (or is not) consistent with the recommendations of the master land use plan towards preservation.

CHAPTER I

I. WAVERLY TOWNSHIP: PAST CONDITIONS

A. Settlement and Early Development

From the 16th to the early 19th centuries Pottawatomie tribes of the Algonquin nation inhabited this part of Michigan. Recent research suggests that in the 1600's the French explorer LaSalle traveled up the Paw Paw River from Fort St. Joseph and almost certainly passed through what is now Waverly Township on his way to Detroit.

Waverly Township is located in the northeast quarter of Van Buren County in southwest Michigan. In 1827, a federal surveyor named Burt laid out the township and range lines in what was to be Van Buren County. A surveyor named Brookfield ran the section lines in 1830.

The first settlers arrived in 1837, with Reuben J. Myers settling in Section 2. In 1837, Waverly Township, Town 2 south, Range 14 west, was part of the historically defunct "Clinch Township", which encompassed all of Bloomingdale, Pine Grove, Waverly, and Almena Townships. Currently, Waverly Township is bounded on the north by Bloomingdale Township, on the east by Almena Township, on the south by Paw Paw Township, and on the west by Arlington Township. By 1843, enough settlers had arrived to organize Waverly Township as a political unit. At that time, the Township included what later became Bloomingdale Township. Bloomingdale Township was finally separated in 1845. Originally, Waverly consisted of 36 full survey sections, but due to an inability to maintain roads through the river floodplain, one and a half sections in the southwest corner were set off to Paw Paw Township. In like manner, a small portion of Section 1 of Arlington Township, being isolated by Scott Lake, was given to Waverly Township.

Due to the heavy clay soils, Waverly Township was once dismal and swampy. A network of county drains helped make the Township a productive agriculture area.

No incorporated village or railroad ever existed in the Township. The unincorporated village of Glendale at the junction of M-43 and County Road 665, near the center of the Township was for years the sole concentration of dwellings and commerce. The grocery store often served as a meeting place until the Township Hall was constructed in 1892. A post office was established in Glendale (originally known as Lamont) in 1868. The post office was transferred to Almena Township in 1874. The first public school was built in 1844. By 1890, there were 11 rural schools in the Township. All of the schools have been consolidated by school districts in neighboring communities. Today there are no school buildings

in the Township, which buses children to Bloomingdale, Gobles, Paw Paw, Bangor and Lawrence public school districts.

By 1890, the population of Waverly Township reached 1,100 persons. It fluctuated around that mark through 1960, by which time it had fallen slightly to 1,044. The following table shows the growth pattern since then.

Census	1960	1970	1980	1990	2000	2010
Population	1,044	1,313	2,130	2,188	2,467	2,554

Prior to 1959, there was only one platted subdivision in the Township. Between 1959 and 1972 two more subdivisions were platted and between 1972 and 1976 three plats were developed. Since 1976, there have been no new plats. In 2005, the Township approved its first condominium subdivision.

The rapid growth during the 1970's brought issues associated with the influx of new people. In 1975, in order to assist the community's understanding of the developing situation, Waverly Township adopted a General Development Plan that was drafted by staff from the Southwest Michigan Commission. As a result of that study, an Anti-Blight Ordinance was adopted in 1978 and later that year the Township's first Zoning Ordinance was adopted. That Zoning Ordinance was revised in 1987. A new Township Hall was built in 1984 at a cost of \$48,900. In 1995, the Waverly Township Future Land Use Plan, currently called the Master Plan, was developed to provide a guide for future zoning decisions. In 1996, this led to a major revision of the Zoning Ordinance. Since 1996, the private road and accessory structure sections have been revised. In 2003, mining regulations were added and in response to changes in state law, an open space preservation option was added to the zoning ordinance. Further major revisions of the Zoning Ordinance were made in 2004, when the Site Plan Review and Private Roads provisions were amended and a new section of Mining regulations was added. In addition, the regulations concerning accessory buildings were revised several times between 2002 and 2011.

Sources:

History of Van Buren County: 1880, David Schwartz.

History of Van Buren County: 1990.

B. Pre-settlement Vegetation

Map 1 is an aerial photo of the township taken in summer 2011. This shows the current vegetation patterns. These are a mix of remnants of the

pre-settlement vegetation and re-growth after clear-cutting or after abandonment of farming.

The early surveyors, as they laid out the township, took note of the existing vegetation patterns on the land (Map 2). At that time, a vast Beech-Maple forest dominated Waverly Township. The maples were predominately Sugar Maples. There were two other forests of note. In the north half of Section 1 and also stretching diagonally across Sections 25, 26, and 36 were an Oak-Oak Hickory forest. These were areas of poorer, relatively sandier soils. There were also two large tracts of swamp and bog forests one in Sections 7, 18, 19, 20, and 30 and the other in Sections 27, 28, 29, and 32. In addition, there were two smaller swamp and bog forests in Sections 4 and 35. These tended to be Black Ash swamps but could include Red Maple, Willow and/or Tamarack.

Source: Western Michigan University, Department of Geography

Chapter II

II. EXISTING CONDITIONS

A. General Changes in Population Levels 1970-2010

The change in a community's population level over time is a highly significant factor since it is directly linked to the stability and viability of the community. Population growth and decline can be associated with fluctuations in economic, social, housing and business development trends in the local, regional, and national arenas. Also, there is most often specific rationale, which helps to explain changes in a community's population rates, either for overall gains or losses or for changes in particular segments of the population. The proper identification and analysis of such rationale can be key to understanding the strengths and weaknesses of the community and how it responds to changing conditions. Such an analysis can also be utilized in projecting population trends for the future. For reference, the 2000 population densities by Census Block are shown for Waverly Township on Map 3.

An analysis of fluctuation in population levels was conducted for Waverly Township and the other communities in Van Buren County for the period of 1970-2000 and extended to cover the period 2000-2010. The results are documented in Table 1 – part 1 and part 2. Comparisons of population changes were made between these communities and the Township since they are each affected by many of the same regional economic and social trends, which impact population characteristics, such as household size and type of housing structures. Several interesting trends were discovered during the analysis of population and housing growth, some of which are indicative of situations that have been experienced throughout the state and the nation.

For the period 1970 to 1980, Waverly Township experienced a 62.2% growth in population, the largest growth in Van Buren County. Since 1980, the Township has only grown at a 12.8% rate. All communities in the county experienced rapid growth from 1970 to 1980 with declining rates in the 1980's and 1990's. Overall, during the 1970's Van Buren County grew by 10,641 people. Such growth can be attributed to factors like an emigration to suburban or rural areas from the urban areas, an expansion in housing growth, and a rise in the birthrate. Helping to facilitate Van Buren County's growth is its location along the I-94 corridor and the excellent reputation of the public schools.

Although Van Buren County saw a population boom between 1970-1980, the increase was neither as significant from 1980-1990, nor was it much higher from 1990-2000. By comparison, the population for Waverly Township only increased 2.7% during (80-90) and 12.8% during (90-00).

Some communities experienced a population loss, like Breedsville Village whose loss was 12.9% but most of that was regained in 1990-2000. The population decline during the 1980's can be attributed to the poor economic situation across the entire nation. The 1980's saw an economic recession. Families needed to relocate to southern and western regions of the country due to the lack of employment in Michigan. There was also a decline in the birthrate due to the economic insecurity of the families; there simply was not enough money to have large families. The 1990's boom was only partially reflected in Van Buren County because of a series of major employment downsizes in Kalamazoo County during the period.

The period 2000 to 2010 saw an acceleration of the housing boom until 2008, when the major economic recession hit. Waverly still came out of the decade with a 3.5% growth. While the Village of Mattawan suffered a 21.3% loss, the surrounding townships of Antwerp and Almena both saw 12 to 18% gains primarily due to a strong school system and increased employment at MPI Research. Waverly fits into the second tier of favorable growth with Paw Paw Village and Pine Grove Township, which exceeded 5% growth. The rest of Van Buren County was negatively impacted with the county showing no growth at all during the decade and many individual communities showing significant losses.

A breakdown of the population percentage can be seen in Appendix A, Table 2 – part 1. All communities, except the Villages of Bloomingdale and Lawrence, saw an increase in the median age of residents from 1980-1990. This is following a statewide trend. The increase in median age is less in cities and villages because of the lower cost of existing housing. This makes these homes more attractive to younger families. In all communities, the 18-65 age group rose between 1980-1990 and it continued to do so between 1990 and 2000. The over 65 age group rose as a percentage of total population between 1980 and 1990, but in most communities this age group has declined significantly since 1990. In Table 2 – part 2 this trend continued with all but one community showing significant increase in the median age and the county as a whole rising from 36.6 to 41.3.

Waverly Township saw an increase in both age groups. The 18-65 age group rose from 58.7% to 61.5% to 62.9% but then fell to 59.0%. The 65 and over group rose 8.1% to 8.7% to 9.4% to 11.7%. The decrease in the 0-17 age group did not continue. This group fell from 33.2% to 29.8% to 27.6% but then rose to 29.3%. Waverly's median age still rose in spite of the increase in children as a percent of population.

B. General Changes in Housing 1970-2010

Because of changes in the makeup of the family, which follows national trends, housing growth or decline is no longer proportional to the population growth or decline. In 1980, Waverly Township had 771 total housing units (Table 4), 845 in 1990, 990 in 2000 and 1,092 in 2010. This is a very different growth pattern for a community whose population only increased by 58 people in the first ten years but then increased by 279 in the second ten years and only 87 in the last decade. Again, this is directly the result from the smaller household size that is a local and statewide trend.

Even though there was a considerably slower growth in population from 1980-2000 and 2000-2010 than in 1970-1980, the number of household units increased in all communities, except Breedsville, from 1980-2000 (Table 3). This trend continued in the townships, while all of the villages except Paw Paw lost households. Still the trend continued that while most people were purchasing houses, the number of persons dwelling in those houses decreased. Waverly Township witnessed a decline in household size from 2.98 to 2.85 to 2.71 to 2.66. During the 1980's Michigan began feeling the effects of the recession that had set in across the country. Families began to leave the state and couples made more prudent family planning decisions. The trend of smaller families continued during the 1990's despite the economic turn around. It is thought that the Great Recession of 2008 might reverse this trend but the census figures do not support this theory, so far.

Note: The following paragraph cannot be updated because the 2010 Census Bureau no longer collects this information.

In spite of the slow economy from 1980-1990, inflation caused a rise in the median household income for all communities in Van Buren County (Table 8). This trend continued into the 1990's. Even communities with population declines experienced a rise in household income. Waverly Township felt a considerable increase in the median household income, which had a tremendous impact on the housing and rental market. From 1980-1990, the median household income increased \$13,046 in Waverly Township. From 1990-2000, median income rose again by another \$12,303. At least part of the rise in household incomes has been the trend toward two-income families with both spouses working full time. As the recession spread, inflation rates rose, household expenses rose, and families found it no longer possible to survive on one income. The economic recovery was sustained by the continuation of the two-income household. This has contributed to the smaller household size. With the rise in the cost of living, property values also increased, which in turn increased the value of homes and rental units. It also increased

property taxes. All communities in Van Buren County saw increases in home and contract rent value. In total for the County there was a \$14,700 increase in home value from 1980-1990 or the equivalent of 44.1% (Table 7). From 1990-2000 there was a \$46,200 rise in value (96.3%). Waverly Township experienced above-average percent increases in housing value, which increased \$15,300 from 1980-1990 and \$42,000 from 1990-2000. The cost of new housing plays a significant role in the rental market. As new housing costs rise, even two income families find themselves priced out of the market. Available rental housing tends to be found in the cities and villages. Only Paw Paw Township, of all the townships, has a significant proportion of rental housing and this would be mainly in newer apartment developments in areas served by city sewer and water. Waverly Township has seen a slight increase in owner occupied housing over the last 20 years. This would reflect the increase in new housing in the Township.

Note: The following paragraph cannot be updated because the 2010 Census Bureau no longer collects this information.

By 1990, the mobile home unit had become a major contributor to the housing market in Van Buren County. Between 1980 and 1990, Waverly Township had an 11% increase in the number of mobile homes in the housing market, compared to other available housing options like single family homes, 2-4 unit buildings, and 5-unit buildings (Table 6). In Waverly Township, the mobile home is a significant factor for the increase in housing owners and the decrease in renters. Since mobile homes became a larger part of the housing market, contractors were attempting to make mobile homes as desirable as possible by changing their reputation from past years as “cheap and plastic-like.” Mobile homes were a more inexpensive way to purchase a home of one’s own. All communities in the county witnessed an increase in the mobile home market.

Note: The following paragraph cannot be updated because the 2010 Census Bureau no longer collects this information.

Due to the popularity of mobile homes, all other markets declined. In Waverly Township, the single-family home market went from 76.7% in 1980 to 71.1% in 1990 but then steadied at 71.3% in 2000. Likewise, 2-4 unit buildings went from 5.1% to 4.0% to 3.7% and 5+ unit buildings from 2.7% to 0.0% to 0.7%. Instead of spending money on rent over a number of years, people decided to put the money towards having a unit of their own. The mobile home was an economical means by which people could afford a home of their own; hence the significant growth in the mobile home market. In 1999, Waverly Township increased the minimum dwelling width in all areas of the Township from 14 feet to 24 feet.

C. Land Use

Existing land use patterns are one of the essential components in determining the directions of future growth and development. Where existing patterns of development and land use are appropriate, growth of a similar use should be encouraged. Where existing land use is incompatible, such as single family residential adjacent to heavy industry, the conflict needs to be settled by adhering to a Master Plan, and future land use decisions should discourage an increase in any undesirable use. Existing natural features can also play major roles in determining future land use. For example, surface bodies of water such as lakes and rivers will draw population growth; swampy areas and areas of intense agriculture production normally will not. However, low value land will attract development by the unwary, the under capitalized and the unscrupulous. Land use management policies must adjust to reflect conditions such as these. The 1978 land use data for Waverly Township is shown on Map 4.

The vast majority of all the land in Waverly Township is devoted to agriculture and forested areas. Forested areas are concentrated in the southwestern quadrant of the Township and the Paw Paw River, but there are also scattered wetlands in the northwest and southeast. Agriculture is largely a function of the central and north central portion of the Township. Pockets of wetlands can be seen at various locations generally associated with rivers and creeks. The southwest quadrant of the Township holds a large expanse of wetlands associated with the Paw Paw River floodplain. In 1997, the Southwest Michigan Land Conservancy acquired over 400 acres of wooded floodplain wetlands along the Paw Paw River in Sections 26 and 27. There are two watersheds in the Township. The Paw Paw River watershed is in 90% of the Township and the Black River watershed in the northwest corner is about 10% of the Township. In 2002, the Southwest Michigan Land Conservancy joined with the Michigan Chapter of The Nature Conservancy to begin a "Paw Paw River Project." The project is intended to provide a model for the protection of the river systems as a whole.

Urban or developed areas are either a function of highway access, as in the case of M-40 and M-43, or lake residential development. The largest developed area is in the extreme southwest corner of the Township, near Lake Brownwood, the majority of which is in Paw Paw Township. Commercial land use has developed around the intersections of M-40 and M-43, as well as M-43 and County Road 665. Population per square mile is exceeding 1,000 persons in the areas east of Lake Brownwood and all of Section 36. The mobile home park northwest of Glendale and the Scott Lake Campground have high density populations, while the area bordered by M-40, 36th Avenue, the Paw Paw River and Brandywine Creek has a

density of about 200 persons per square mile. The 1978 Michigan Resource Inventory Survey found urban land use patterns in Glendale within ¼ mile of the M-43 intersection with County Road 665; on the northwest shore of School Section Lake; and, the Bella-Brook Subdivision in Section 36. Since 1978, urban density of development has been reached on the north shore of Lake Brownwood (mostly through conversion of the seasonal dwellings to year around use) and along 47th Avenue from Lake Brownwood to Bellware Subdivision (Bella-Brook) and then south along County Road 665 to Paw Paw. Urban densities have also been reached along and to the west of M-40 in Section 36. Urban commercial densities have been developing slowly at the M-43/M-40 intersection. In other respects, the general character of Waverly Township land use has not changed during the past 25 years and still roughly reflects the 1978 land use pattern. About 85% of the land area of the Township is still in agriculture or open space. Residential land use will not have risen above 14% of the Township's land area. In the 2000 Census, only 23 persons in Waverly Township were employed in agriculture.

D. Soils and Geology

Soil limitations for basements and septic systems are the Township's most common factors affecting residential developments (Maps 5 & 6). Most of the Township's soils are classified as having severe limitations, meaning that soils are not suitable for concentrated residential development. (See Appendix A. 1976 Health Dept. letter)

Some limited areas of the Township have slight limitations. These are the extreme northeast corner of the Township and a corridor along County Road 665 north of M-43.

The consequences of these conditions must be taken into account during the planning process. To guide development into areas that are not environmentally suited to such development creates problems for residents and the Township in the long run. Land use management techniques can preserve these areas for uses, which are most consistent with the soil's ability to accommodate the uses.

The topography of Waverly Township is the end result of the area's geologic past. The glaciers left three surface features that dominate north-eastern Van Buren County. Each of these surface features has a north-south orientation. From the east these are:

1. the Kalamazoo Moraine
2. the Alamo Plain
3. the Valparaiso Moraine

The Moraines mark the end stages of the various glacial periods where the glacier paused for a time during its retreat. The moraines are composed of

undifferentiated outwash interspersed with glacial till to a depth of 700-900 feet. Below this, basically the gravel and clay mix is bedrock, the Cold water shale. The Alamo Plain is a post-glacial fluvial (floodplain) surface feature over the glacial till (Map 7).

The surface clays and loams create problems for septic systems. However, the glacial deposits provide excellent sources for well water. The interspersed clay layers provide some wellhead protection from surface pollutants (Map 8).

E. Agriculture

Prime agricultural soils are a definite natural resource to a community. They can support an agricultural economy without requiring a significant amount of local services to support the economy. The northern half of the Township has a heavy concentration of prime agricultural soils, along with a significant concentration in the central portion of the Township. The presence of large tracts of land in these areas means that agriculture can remain viable. However, there may be pressure to split these parcels into smaller parcels or buildings sites for residential development. (Map 9)

Chapter III

III. FUTURE CONDITIONS

A. Development Trends

The events within Waverly Township over the next 20 years will of necessity be complex, but most of the important issues revolve around one trend: the likelihood of increased development in what is essentially a rural area. There are primarily four types of land use in Waverly Township: agriculture, rural residential, platted residential, and commercial. Each of these land uses is dependent on the maintenance of high-quality soil, transportation and effective disposal systems.

Population increases have largely been due to an influx of new residents onto single family lots. Many of these lots have been on or near the inland lakes or along the rivers and streams, some by development of pre-existing parcels, others by turning vacation homes into permanent residences. The other largest category of growth is the division of parcels previously used in agriculture or idle undeveloped land with creation of single family residential parcels along the roadways.

It is expected that these development trends will continue and possibly accelerate. It has been claimed that the largest single transformation resulting in loss of agriculture land and open space is the creation of 10-acre single family lots. This is likely to accelerate under the 1996/1997 revisions to the Plat Act that created the Land Division Act.

Although there are platted subdivisions in the Township, most of which have been development adjacent to the larger lakes, there has been little subdivision activity in the last 20 years. Until the platting review requirements of the Land Division Act are effectively amended, Waverly Township is unlikely to see another plat. What is more likely is the use of site condominiums to divide land when more divisions are desired than are allowed under the exceptions of the Land Division Act. Given current real estate trends and lack of public sewer and water utilities, the Township should not encourage the introduction of higher density residential uses.

B. Relation Between Development and Services

Higher density developments tend to require greater care to protect public safety, health and welfare, and create more concentrated risks for degradation of natural resources. Although development may result in an increased tax base, there is increasing evidence that the demand for services may be greater than the increased revenue to pay for them. Waverly Township should attempt to ensure that new development does not impose an undue burden in this regard. Newer zoning techniques,

such as access management, site plan reviews, planned unit developments, cluster zoning, transfer of development rights, and open space zoning may ease the negative impacts and demands of higher density developments. These techniques may prevent the creation of unnecessary pressures on public services and adjacent lands by promoting compact development patterns.

C. Urban Sprawl

Urban sprawl is defined as an increased overall density of residential developments scattered throughout rural areas, primarily along major thoroughfares. If increases in development are excessive within already crowded areas, especially in environmentally sensitive areas, the degradation of natural resources and public health could result. If new residences are haphazardly distributed along the roadways and scattered among farms and open spaces, other negative consequences may result. New neighbors to farms may not understand the odors, noises and long hours inherent in farm operation. As lots are split off existing agricultural parcels, the prospective market value for additional sales may increase the property tax burden on land remaining in farm production. Increased tax burdens add to the pressure to sell in response to other short-term needs, despite long-term agricultural productivity and probable permanent loss of this use of the land. Also, as homes are widely distributed along the roadways, the visual impression of open space becomes more suburban. If development is too closely crowded near existing residential clusters, the load on the available public services may be overburdened. If development is too widely scattered, the cost of delivering services over long distances may be prohibitively expensive. There can be problems as previously urban residents continue to expect urban services and conveniences at the same levels provided closer to town.

D. Population Projections

Previously, (Table 1) Van Buren County's population and housing growth from 1970 to 2000 was documented. That table included past trends for Waverly Township as well as the surrounding municipalities in northeast Van Buren County. In 2003 the Southwest Michigan Commission used the Michigan Department of Transportation Regional Econometric Model to project county population to the year 2030 (Table 9). Since 1980, Waverly Township's population has hovered around 3% of the County population. It is not likely that that percentage would hold, but in the absence of other information, Waverly Township's population could be projected as follows:

Year	Population	Year	Population
2005	- 2,500	2020	- 2,700
2010	- 2,550	2025	- 2,800
2015	- 2,600	2030	- 2,850

This would represent a low growth rate. Using past growth rates since 1970 is more difficult because the rates varied to an extreme from 2.7% to 62.2%. An average for the 30-year period was 25.9% per 10 years. That type of growth would yield the following projections:

Year	Population
2010	- 3,100
2020	- 3,900
2030	- 4,900

This can reasonably be taken as the maximum growth scenario. This type of growth would fall in line with Alma, Antwerp and Paw Paw Townships' experiences over the last two decades. These three townships have been experiencing an urban exodus from Kalamazoo County. The current urban sprawl models indicate that such growth 'leap-frogs.' As the easily developed ground is developed in the closer township, then development shifts to the next closest township with easily developable ground. Being located on M-43, with good north-south access via M-40, Waverly Township is next in line.

Growth on the maximum projection model would require the construction of 30 new dwelling units per year. The building inspector's records for the Township since the census show:

2000	- 22 dwelling units
2001	- 19 dwelling units
2002	- 20 dwelling units
2003	- 21 dwelling units
2004	- 18 dwelling units
2005	- 18 dwelling units
2006	- 7 dwelling units
2007	- 12 dwelling units
2008	- 6 dwelling units
2009	- 4 dwelling units
2010	- 1 dwelling unit
2011	- 2 dwelling units

The rate of construction from 2008 and later, represents a very low rate of growth and would project to only about 100 new dwelling units by 2030 rather than the 600 previously projected. This could in turn result in a population increase (assuming an occupancy rate of 2.6 persons per unit)

of only about 250 persons bringing Waverly Township's population to a total of about 2,800 persons.

In terms of land use, the low population projection would require only 100 new dwelling units or only a 10% increase. The major economic downturn may prevent development from exceeding the low-end projection.

A moderate level projection of 500 new dwellings added to the 1,092 dwellings of the 2010 Census represents a significant impact upon the character of the community. If the majority of these dwellings are built on 2 acre lots, then that represents 1,000 acres withdrawn from agriculture and open space or 5% of the total land surface of the Township. This amount of increase also represents an additional 2,000 vehicle trips per day on county and township roads. Currently, Waverly Township has a population density of 0.11 persons per acre. At the moderate growth scenario, the 2030 population density would rise to 0.18 persons per acre.

E. Projected Impacts

Depending upon how a moderate rate of growth is managed, there could be a significant psychological impact, or the growth could be accommodated so as to be almost unnoticeable. Even the high growth projection (population of 4,900) would result in a population density no greater than 0.21 persons per acre. If compact developments on private roads can be encouraged, especially if the open space provisions are utilized, then the psychological impact to the township as a whole can be minimized and the apparent rural character protected. The key then will be to discourage development along the major arterials (M-43, M-40, C.R. 665) and to encourage private roads developed in conjunction with the open space provisions.

If development is channeled towards the southeast quarter of the township, then commuter traffic would tend to exit that corner of the road system using either C.R.665 or M-40, thus resulting in minimal impact to the majority of roads in the Township. Both of the named roads would need upgrades but the overall costs should be significantly less than a multitude of minor upgrades across the entire network.

Chapter IV

IV. COMMUNITY VISION

A. Township Board, Planning Commission and Public Input

Beginning in the summer of 2003, visioning sessions were held with the Township Board and the Township Planning & Zoning Commission. These sessions were open to the public and the public was especially encouraged to participate in the session before the Township Board. In December of 2003, a short survey was mailed out with the winter tax bills. The Township received back over 200 responses.

In 2012, the Planning Commission conducted a review of existing conditions and determined that there had not been much change and the vision and goals are still valid and should remain the same.

B. Advantages of Waverly Township

At the Township Board meeting, the participants suggested the following advantages of Waverly Township:

- Quality of life
- No Industry
- Agriculture
- Native wildlife/plants
- No Pollution
- Small Lakes for Recreation
- Ability to Cluster Housing
- Paw Paw River
- Rural
- Geography-close to:
Lake Michigan (South Haven)
Walmart (Kalamazoo)
- Clean Groundwater
- 2 acre minimum lot size is not too big
- Township has Zoning
- Snowmobile Trails

Later in the month, the Township Planning & Zoning Commission suggested the following advantages:

- Rural setting, close to cities minus the traffic
- Zoning to keep things reasonable
- Good roads
- Good blend of residential & agricultural
- No heavy industry
- Low crime rate

C. Challenges to the Township

At the same meetings, each group was asked to come up with particular challenges facing Waverly Township. At the Board meeting, the challenges identified were:

- Blight – Zoning has not helped
- Commercial/Industrial uses have not been well planned
- M-43 Corridor issues

- M-40 Corridor issues plus shared jurisdiction with Almena Township
- Wetland development
- Flood Plain development
- Paw Paw River
- Development Rights:
 - County Purchase of Development Rights Program
 - Question of Waverly Township Response
- Cost of paving roads
- Aesthetics

The Planning & Zoning Commission chose similar challenges, as well as some additional issues:

- | | |
|-----------------------------------|----------------------------------|
| -Blight | -Signage |
| -Growth | -Traffic |
| -Farmland/open space preservation | -M-40 & M-43 traffic |
| -Lack of commercial property | -Lack of industrial property |
| -Purchase of development rights | - Home occupations in particular |
| -Sewer & Water utilities | |

D. Goals & Objectives

At each meeting, the participants were asked to select goals and objectives.

The Township Board meeting selected the following:

- | | |
|--|--|
| -Development Rights | -Senior Housing |
| -Cemeteries | -Parks, Recreation, Trails
(Kal-Haven tie-in) |
| -Fire & Police Protection | -Paved Roads: |
| -Maintain Rural Character | -bridge weight restrictions for
certain uses |
| -Return missing parts of Sections
31 & 32 (over 100 years) | -Organic Waste Regulation |
| -44 th Ave., Natural Beauty Road
status | |
| -Cooperation with other agencies, townships, communities, county.... | |
| -Section 13 – Aquifer Recharge Area near the center of the section. | |

The Planning & Zoning Commission selected the following goals and objectives:

- | | |
|---|----------------------------------|
| -Want to live in the Township | -Clean & free of blight |
| -Recreation area | -Land set aside for preservation |
| -More Commercial
(controlled growth) | -Remain rural community |
| -Independent | -No drastic tax escalation-SEV |
| | -Local autonomy |

E. Township Survey

Four questions were asked:

Q1: Are the following conditions important for you to continue living in Waverly Township? Five conditions were chosen by 90% of the respondents:

- Rural Atmosphere
- Crime Rate/Public Safety
- Quality School System
- Local Tax Rate
- Environmental Quality

One condition was chosen by 75% of the respondents:

- Cost of Housing

Business and employment opportunities were rated highly by less than 50% of the respondents.

Q2: Which types of housing would you like to see more of? Only one option received 90% affirmative.

- Year-round, single family homes

One option received 63% support.

- Retirement Housing

One option received 80% opposition:

- Apartments

Five options received opposition from 60 to 75% of the respondents:

- Condominiums
- Mobile Homes (in general and single- and double-wides with doubles only marginally less opposed)
- Low-cost Housing

There was also some opposition to seasonal housing.

Q3: Is 980 square feet with a minimum 24 feet width an adequate size?

The responses were split evenly.

Q4: Which of the following facilities would you use?

Five options received 60 to 70% support:

- Fishing
- Hiking Trails
- Parks on Rivers
- Picnic areas
- Neighborhood parks

Three options received 60 to 70% opposition:

Athletic fields

Golf Courses

Teen Centers

Chapter V

V. GOALS AND OBJECTIVES

A. Zoning Ordinance Goals & Objectives

In 1996, Waverly Township upgraded its zoning ordinance and there were major amendments in 2010 and 2011. The resolution adopting the zoning ordinance clearly states:

WHEREAS, Act 184, P.A. 1943, amended, empowers the township board to enact a zoning ordinance and to provide for its administration, enforcement, and amendment; and

WHEREAS, the Township Board of Waverly Township deems it necessary for the purpose of promoting public health, safety, morals, and general welfare for the township to enact such an ordinance; and

WHEREAS, the township board, pursuant to the provisions of Act 168, P.A. 1959, as amended, has appointed a planning commission to study and recommend the boundaries of the various zoning districts and appropriate regulations to be enforced therein; and

WHEREAS, the planning commission has divided the Township of Waverly into districts, and has prepared regulations pertaining to such districts, in accordance with the basic plan, which are designed to lessen congestion in the streets; to secure safety from fire, panic, and other dangers; to promote the public health and general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; and to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public improvements; and

WHEREAS, the planning commission has given reasonable consideration to the character of the districts and their peculiar suitability for particular uses with a view conserving the value of buildings and encouraging the most appropriate use of land throughout the township.

It is the further purpose to adopt provisions for each designated zoning district, which within each location, the sizes and use of buildings, land and minimum open spaces, sanitary measures required, stormwater runoff provisions and the number of families to be housed in certain areas, in buildings erected or altered in the future are specified.

Since its inception, the Zoning Ordinance has provided for the establishment and regulation of zoning districts within the township. The district designations are attempts to encourage land and uses compatible with the character of the land. The Michigan Zoning Enabling Act, Public Act 33 of 2006, which replaced Public Act 184 of 1943, gives townships the explicit power to “provide by ordinance for the regulations of land development and the establishment of 1 or more zoning districts within its zoning jurisdiction which regulate the use of land and structures to meet the needs of the state’s citizens for food, fiber, energy, and other natural resources, places of residence, recreation, industry, trade, service, and other uses of land, to ensure that use of land is situated in appropriate locations and relationships, to limit the inappropriate overcrowding of land and congestion of population, transportation systems, and other public facilities, to facilitate adequate and efficient provision for transportation systems, sewage disposal, water, energy, education, recreation, and other public service and facility requirements, and to promote public health, safety and welfare.”

The districts established have been Commercial, Industrial, Agricultural, and various Residential districts (varying primarily as to population density). (*Editor note: Industrial was removed from the Zoning Ordinance.*) The Ordinance has been administered with reasonable effectiveness to date. Limitations on this effectiveness have included the continuation of non-conforming pre-existing structures, lots and land uses, and more significantly, the practical and financial difficulties entailed in the necessary surveillance and enforcement by the township government within the rather large area of Waverly Township. Although there have been limited controversies over the regulations pertaining to specific parcels or land uses, there have not been major difficulties in the establishment of zoning districts of the standards regulating these districts.

B. Master Plan Goals

This plan has two (2) primary purposes. The first goal is a requirement of Michigan Public Act 110 of 2006, as amended, the Michigan Zoning Enabling Act (replaced P.A. 168 of 1959), which requires that the zoning ordinance be based upon a plan. The second goal is derived from the comments of the public, the elected officials and the appointed officials of Waverly Township gathered during the ‘visioning sessions’ conducted in 2003. During the 2012 Master Plan review, the goals are still valid.

1. Provide a basis for the Waverly Township Zoning Ordinance to guide the establishment of zoning districts and to set and adjust those district boundaries to the benefit of the Township, and
2. Maintain the rural character of the community.

These two goals are directly related in that the zoning ordinance is one of the tools that the community can use to attempt to preserve the rural character of the community.

C. Master Plan Objectives

The following objectives were identified from the comments gathered at the visioning sessions as being directly related to land use within Waverly Township. There were other issues brought up during the sessions that do not relate directly to land use planning and zoning and, while important to the community, are not further dealt with in this document.

1. Objectives directly related to rural character:

- a. Preserve Open Space & Farmland Objective
 - Define and identify 'Prime Farmland',
 - Following Van Buren County guidelines, identify (an) agricultural preserve area(s),
 - Prepare the Township for the acquisition of environmentally sensitive lands by established land conservancy organizations, such as The Nature Conservancy, the Southwest Michigan Land Conservancy, and others.

- b. Manage Residential Density Objective
 - Maintain Township and citizen involvement in the planning process to continue to protect the interests of property owners,
 - Promote the education of citizens regarding the need to manage private sites for purposes of wildlife habitat and maintenance of rural character,
 - Maintain a majority of the Township's residential land area in low density development consistent with current development patterns, as well as the public's stated desire to retain Waverly Township as an environmentally sensitive, rural, community,
 - Create less dense second and third tier development along the lakes and waterways to protect water quality while still allowing people to enjoy waterfront living,
 - Identify which areas of the Township can support higher densities and use these areas in conjunction with the agricultural preserve area(s) to guide zoning amendments and, if appropriate, provide for a transfer of development rights receiving area(s),
 - Utilize Purchase of Development Rights, cluster zoning, open

space preservation and other techniques to protect natural features, keeping in mind not just site development but working to retain green-ways through the Township.

- c. Commercial/Industrial Impacts Objective
 - In the event new industrial development is proposed for the Township, infrastructure needs of the development shall be provided by the developer.
 - Revise minimum road frontage requirements for commercial. Current zoning regulation is too narrow.

- d. Preserve Environmental Quality Objective
 - Support County recreation trails through the Township,
 - Review all development projects for potential impacts and provide local regulatory controls to prevent degradation of the environment,
 - Enforce the protection of existing wetlands by ensuring that proposed development projects have been evaluated by the Michigan Department of Environmental Quality to ensure that impacts of the development will not significantly alter the current function of the wetland,
 - Formally adopt the Flood Insurance Rate Maps (FIRMs) and study dated 12/3/2009 applying to Waverly Township, Van Buren County, Michigan,
 - Identify and map aquifer recharge area(s) and adopt a strategy for protecting such areas,
 - Protect all water bodies from nutrient overloading and erosion by encouraging retention and protection of natural vegetation buffers,
 - Maintain the natural character of the surface water bodies through the preservation of natural vegetation buffers, stringent building setbacks, and the implementation of other environmentally friendly development regulations,
 - Support education strategies that involve informing property owners and recreationists of the threats to water bodies and about the practices that can potentially maintain and improve water quality.

2. Objectives for public infrastructure designed to assist in preserving the rural character of the community.

- a. Highway Corridor Protection Strategy Objective
 - As a part of site plan review, maintain greenbelt buffers along the Township's major highways (M-40 and M-43) in order to maintain or create visual impressions of rural character,

- Develop an access management ordinance for M-43 and M-40,
- b. Residential Densities Management Objective
 - Develop/adopt storm water management guidelines for new developments.
- 3. Objectives to preserve local autonomy, which is part of the rural character of the community.
 - a. Cooperate with adjacent communities and the County Objective
 - by coordinating land use decisions,
 - b. Properly manage the community's resources Objective
 - so that other agencies will not be needed,
 - c. Support County Initiatives Objective
 - Parks & recreation
 - Recreation trails
 - Open Space and agricultural preservation
- 4. Alternative Energy Goals & Objectives
 - a. Goal: Support the development of alternative energy generation for individual properties and utility-scale energy production.
 - b. Goal: Support the development of alternative energy generation for individual properties and utility-scale energy production.
 - c. Objective: Simplify regulations for small-scale individual on-site use alternative energy generation.
 - d. Objective: Support utility-scale alternative energy generation while providing appropriate protection for adjacent properties.
 - e. Objective: Provide clear regulations for any type of alternative energy facility.

Chapter VI

VI. LONG-RANGE LAND USE STRATEGIES

A. Zoning Tools

With Public Acts 591 of 1996, PA 87 of 1997, and PA 177 of 2001, the Michigan Legislature amended both the Plat Act and what is now the Michigan Zoning Enabling Act (P.A. 110 of 2006). The first two amendments greatly liberalized the provisions for creating land divisions exempt from the Plat requirement. On the other hand, these two amendments did give Townships some degree of review and approval authority over such divisions. The third amendment required Townships to provide for open space preservation at the property owner's discretion but under conditions set forth by the townships within the limits of the State Act.

Land Division Act: All land divisions for development purposes are now subject to municipal review and must meet the zoning district requirements of the municipality. This act presents the Township with the ability to manage and/or influence development density and to reduce negative impacts on the infrastructure. A “carrot and stick” approach can be used to either encourage or protect streets and sewer and water utilities by granting reduced requirements under the Zoning Ordinance when certain conditions are met.

Open Space Preservation Amendment: This law continues the “carrot and stick” approach but without the stick. It allows for more compact development without increasing overall density. Waverly Township has already adopted this tool.

B. Development Rights

There are a number of techniques and strategies available for farmland and open space preservation. These include but are not limited to:

- Exclusive agricultural zoning,
- Large-lot zoning,
- Prohibition of plats and condominium subdivisions in agricultural districts,
- Public Act 116 of 1974 agreements,
- Township purchase of development rights program (PDR),
- Transfer of development rights (TDR) zoning provisions,
- Private conditions, restrictive covenants and easements,
- Incentive zoning provisions.

As a matter of policy, Waverly Township has chosen not to utilize exclusive agricultural zoning, large-lot zoning, platting/condominium subdivision restrictions, or a township PDR and/or TDR program. The Township has supported applications for P.A. 116 agreements, and in Article IV Supplementary District Regulations, Section 4.12 Open Space Preservation, and Article XII Planned Unit Development, Section 12.02 District Requirements, the Waverly Township Zoning Ordinance specifically provides for conservation easements, plat dedications, deed restrictions, or covenants to preserved open space. These tools are provided for in order to encourage preservation of both farmland and land in an undeveloped state by providing development incentives to land owners/developers. Other incentives that these tools could allow for include: bonus divisions and bonus lot sizes. The main benefit to the developer would be to allow smaller lot sizes or possibly higher density. Additional bonuses could include zero lot line setbacks or reductions in dimensional or infrastructure requirements.

Van Buren County Farmland and Open Space Preservation Program: All land in Waverly Township is a valuable commodity and the Township does not want to exclude any land owner who wants to comply with the County requirements for consideration of farmland preservation. There are four (4) factors supporting participation by Waverly Township in the Van Buren County Farmland and Open Space Preservation Program. First, there are areas of prime agricultural soils, some of which are also prime development soils. Second, there is a thriving fruit industry in the Township that needs either high ridges for fruit trees or wetlands for blueberries. Third, there are areas of the Township where property owners, due to circumstances beyond their control, cannot achieve the full development potential due to soil conditions where septic systems cannot or should not be located and/or where wells cannot reach water. These lands in particular often are or have the potential to be productive agricultural lands. Fourth, all lands with water bodies including streams and county drains are under increasing pressure as residential development sites. The farmland preservation map #14 considers all land to include zoned farm land, commercial and residential.

An older tool is P.A. 116 of 1974, the Farmland and Open space Preservation Act, which establishes processes both temporary and permanent limitations on development. The statute provides for formal renewable agreements to keep farmland and open space out of development for periods of time from 10-90 years. Farmland may continue to be farmed during the agreement period. Open space land is not obligated to be open to access by the general public. In exchange, the landowner is granted tax deferments and tax exemptions. This process is initiated by applications from landowners at the township level. Townships notify the appropriate planning and soil conservation agencies

for comment and must approve the request before it is advanced to the Department of Natural Resources for a transfer of a “development rights easement” to the public.

Development rights may also be permanently transferred. P.A. 116 created a fund for buying development rights without direct purchase of the land using money recovered from the payback of tax credits when farmland agreements expire or are terminated. This acquisition of development rights by the State has not been used extensively and it is not anticipated that large areas of Waverly Township will be deemed sufficiently “unique or critical” to be preserved in this way in the near future.

Transfer of Development Rights: This type of program would allow a Township to set up a program whereby development rights might be purchased from the owner of a property in an area targeted for preservation and then used on a different parcel in another part of the Township where growth can be encouraged. This tool has potential uses in preserving not only farmland but also the function of the M-40 and M-43 corridors as well as the flood plains of the Paw Paw River.

In this plan are discussions of sensitive and valuable land and resources in Waverly Township, including prime agricultural soils, wetlands, surface water, woodlot and potential areas of contamination. Maps illustrating these areas are included. These are intended to form a basis for discussion and decisions regarding the suitability of land for particular uses the designation of lands best left open as open space.

C. Master Plan Focus

The focus of the Waverly Township Master Plan is on preservation of agriculture, particularly the family farm, and preservation of the Township’s rural character. Within a period of the next 10-15 years, Waverly Township is likely to experience development pressure from the south and the east, most likely from Paw Paw Township. The most desirable areas are those within the Paw Paw school district with access to surface water bodies. This pressure will be in the form of residential site condominiums and scattered two or three acre sites containing rural non-farm housing. If not managed well, this development will come at the expense of the prime agricultural land in the Township.

Waverly Township is also beginning to experience pressure for commercial development. Joint Planning Commission meetings with Alma Township identified a common desire to preserve the function of M-43 as a primary road and to coordinate commercial development along

M-40. One method for preserving rural character would be to maintain a greenbelt along these highways.

D. Land Use Categories

The Master Plan contains the following land use categories:

Agriculture: This land use category is intended for the full range of agriculture activities, intending to preserve the rural and agricultural character of the Township. It is intended to correspond with the minimum lot size of the AG Agricultural District in the Township Zoning Ordinance.

Low Density Residential: This is a single-family detached residential character land use that is suited to subdivisions. It is typically on a lot of at least one (1) acre in size. Low Density Residential areas are intended to be areas with soils described in the Soil Survey of Van Buren County, Michigan, Table 14 as having “Slight” or “Moderate” limitations for septic tank absorption fields. Low density residential development is consistent with the current development patterns, as well as the public’s stated desires to retain Waverly Township’s character as a rural community protective of its natural resources.

Medium Density Residential: This is a residential land use category that has a higher density than low density residential. It includes single-family dwellings on small lots, duplexes, mobile home parks, and small-scale multiple family development. Unless or until municipal sanitary sewer system(s) are available, Medium Density Residential planning areas must be limited to areas that have historically been zoned R-1, R-2 or Multi-Family, or that have stand-alone sanitary sewer systems approved by the State of Michigan and meeting public health code requirements.

Commercial: Land which is planned for commercial is intended for convenience and recreational-oriented businesses, and attached single-family residences. In order to reduce adverse impacts upon the road system, commercial land uses must be clustered around key commercial nodes with access managed to ensure the often-conflicting goals of accessibility, traffic safety and environmental protection. Areas for commercial uses must meet County Health Department requirements.

Industrial: In rural areas, industrial areas are generally intended for open-air operations and for agriculturally related enterprise, food processing and grain elevators. The lack of public water and sewer facilities in most of the Township will limit the demand for large site industrial development.

Flood Plain/Natural Resource Preserve: This category is associated with land that is not suitable for development. Such land would include flood plains and associated wetlands. The category also includes land where development may be possible but only at increased cost to the general public; or, where development would have adverse impact on the environment such as in wetlands and groundwater recharge areas.

Wetland Protection: Because Van Buren County has a population less than 100,000, wetlands under five (5) acres and not contiguous to a water body, are not regulated under the state's Wetland Protection Act (Part 303, of Public Act 451 of 1994). Contiguous means wetlands that are located within 500 feet of an inland lake, stream or pond or that have a direct hydrologic connection to a lake, stream or pond. A stream is defined by the state as any channel with definite banks and a bed, with visible evidence of continued flow or continued occurrence of water. A pond is a natural or permanent artificial body of open water that is more than one (1) acre but less than five (5) acres in area. Part 303 allows local municipalities to adopt local wetlands protection ordinances. Such an ordinance must follow a prescribed outline and is limited in its regulatory scope; however, through such a local ordinance the Township can regulate wetlands that are less than five (5) acres but more than two (2) acres. In order to adopt such an ordinance a wetlands inventory map must be produced that approximately identifies where wetlands are found in the Township. The inventory map and ordinance must be subject to a public hearing before adoption under rules specified in Part 303. The Van Buren County Conservation district has produced such a map. That map is based upon the National Wetlands Inventory produced by the U.S. Department of the Interior, Fish & Wildlife Service, which is provided as Map 12.

In addition, within the Township's Zoning Ordinance, the Township can add additional regulations requiring setbacks from wetland edges and for land divisions, requiring that each proposed land division include a specified percentage or acreage of non-wetland land in the total area. The local ordinance can include regulation for non-contiguous wetlands; however, such regulations must be developed with great care so as to avoid a regulator "taking" of private property. The best way to provide protection for wetlands within the zoning ordinance is to provide incentives. A typical incentive would be to provide additional development density on non-wetlands where adjacent wetlands are permanently preserved from development.

A further strategy for supporting wetland protection is to amend the Township's Land Division Ordinance to not include wetlands in the calculation of land area for meeting the minimum lot size requirements. An alternative would be to require a certain percentage of any resultant lot be non-wetland.

Chapter VII

VII. LONG-RANGE LAND USE PLAN

A. The Master Plan

The Master Plan is a synthesis of recommendations related to the development of the Waverly Township Master Plan Map. Each designated land use is defined as to its purpose and supported by specific zoning classifications in the Waverly Township Zoning Ordinance (Map 10 is the Zoning Ordinance). The Plan (Map 11) is also summarized in the following text.

B. Agriculture

The purpose of this designation is the protection, support, and expansion of the agricultural uses within Waverly Township. This land use designation is most closely linked with the agricultural zoning classifications, with the intent to reduce conflicts between agriculture and low density residential development and to provide a focus area for agricultural preservation activities.

The agricultural land use designation is intended to allow for a full range of agricultural activities, including the intensive livestock operations and the quasi-industrial types of agricultural production. Agriculture must be allowed to expand without the encumbrances of nearby residential or commercial development. Agricultural land uses should be able to take advantage of soil types that facilitate specific types of agricultural production (e.g. sandy soil for blueberries). The agricultural land base is planned for those areas of the Township that are certain not to have municipal sewer and water available in the foreseeable future.

While agricultural lands will continue to be split for residential development (the minimum lot size in the AG zoning district is two acres), the direction of the land use plan is to protect and preserve these areas for expansion of the agricultural economy. It is also the prime over-all goal of this plan to maintain the rural character of the community, something that is given strong support by current residents. Therefore, 80% of the Township is planned for Agriculture. The AG Agricultural zoning classification of the Waverly Township Zoning Ordinance is considered to be consistent with the intent of this land use designation. Farmland within the Agricultural planning areas is eligible for Van Buren County's Farmland Preservation program.

C. Residential

(1) There are two levels of residential use within this designation. The lowest is strictly geared to provide for new single family housing in areas without public sanitary sewer. This classification is consistent with the R-3 Very Low Density Residential zoning district in the Zoning Ordinance. This type of residential development should occur in those areas where soil conditions allow for the installation of private septic systems.

Residential housing options may be limited by, soil conditions, water tables or agricultural preservation policies. Those areas of the Township that possess suitable agricultural soils may also be suited for residential development.

The main roadways M-43, M-40, and CR 665 provide ready access to residential developments along these thoroughfares. However, this is not intended to promote strip development along M-43 and M-40, but rather to encourage development of new local roads that intersect the state highways and provide access to new residential developments that fully utilize large abutting tracts of land. Specifically for those areas directly abutting M-43 and M-40, this plan calls for the development of access management provisions in the zoning ordinances in order to preserve the function of the state highways, protect public safety and manage commercial development in a safe and efficient manner.

Sections or portions of sections of the Township planned for this Low Density Residential Land Use are: 6, 25, 35 and 36. This accounts for about 3% of the total area of the Township. Areas currently zoned R-3 outside of the three areas listed here are allowed to be rezoned to AG (Agricultural) in order to discourage land divisions less than two acres. In addition, all land in Waverly Township is a valuable commodity and the Township does not want to exclude any land owner who wants to comply with county requirements for consideration of farmland preservation.

(2) The second level of residential land use is intended to provide for single family and two family housing and may also support development of mobile home parks. This category relates to the R-1, R-2 and RM (R-4) zoning districts of the Township's Zoning Ordinance. The rationale for limiting this area is due to the lack of public sewer. It is necessary to centralize development in one area in order for sufficient density of development to provide the required financial support to expand sewer services. These Residential areas should be planned only for the area within ½ mile of the Glendale intersection and in those portions of Sections 8, 16, 35 and 36, that were historically zoned to these higher densities.

Some limited three and four family unit developments are also included in this category. The higher density developments are only appropriate in the extreme southern portion of Section 36 which already contains limited examples of this type of development.

Even these areas are to be considered eligible for farmland preservation. All land in Waverly Township is a valuable commodity and the Township does not want to exclude any land owner who wants to comply with County requirements for consideration of farmland preservation.

D. Flood Plain/Natural Resource Preserve

This land use designation is directed at the preservation of environmentally sensitive areas and also at discouraging development in areas prone to natural disaster. These areas are considered to be eligible for farmland preservation. Three areas of prime importance are:

- 1-The flood plain of the Paw Paw River (Map 12), and,
- 2-The identified Potential Groundwater Recharge Areas within the Township (Map 8).
- 3-Wetlands over 5 acres in area adjacent to waterbodies as identified on the National Wetland Inventory Map

The Federal Emergency Management Agency (FEMA) has produced official Flood Insurance Rate Maps (FIRMs) for Waverly Township, which may be used to qualify property owners in the Township for disaster relief and flood insurance. These maps indicate only small areas around Lake Brownwood and Scott Lake as being flood prone and do not include other areas in the Township known to flood regularly. A better guide for identification of flood prone areas in Waverly Township is Map 12, which shows existing wetlands based on the current National Wetland Inventory (NWI) dataset. The Natural Resource Conservation Service (NRCS) Soil Survey data is useful to identify soils in a particular location that are either wet or prone to wetness. The advantage to the Soil Survey is that it provides a defined line that the building inspector can use as the cut-off for sending the property owner to the Department of Environmental Quality engineer for baseline data. The Soil Survey also brings in the regulated wetlands (those wetlands that are part of the river floodplain and therefore regulated by the state). The areas involved in floodplain management and wetlands are in Sections 25, 26, 27, 28, 29, 30, 32, 33, 34, 35 and 36. Additional regulated wetlands are found around School Section Lake in Sections 15, 16 and 21 as indicated on Map 12.

A watershed is a geographic area in which water, sediments, and dissolved materials drain from higher elevations to a common low-lying outlet.

Watersheds cross political boundaries and connect communities with a common resource. Waverly Township lies within two watersheds: the Paw Paw River Watershed, which drains almost 90% of the Township and the Black River Watershed, which drains the remainder. Both watersheds drain to Lake Michigan. (Map 13).

A source of clean drinking water is one of the most important requirements for a healthy community. Natural areas within our watersheds filter pollutants out of runoff and keep drinking water sources clean, making them an invaluable part of the natural infrastructure. Provisions must be made for the protection, preservation, replacement, proper maintenance, and use of wetlands and groundwater recharge areas in order to minimize disturbances to them and to prevent damage from erosion, siltation, flooding and other hazards. Map 8 depicts the areas of groundwater recharge. These are areas where rainwater percolates to the water table and is then available for drinking water wells in areas down gradient from the source area. Great care must be taken to avoid contamination of the soils in these areas because of the potential for widespread negative impact.

Requests for rezoning in all of the Flood Plain/Natural Resource Preserve areas must be accompanied by at least an environmental impact statement (EIS) as described in the Michigan Environmental Protection Act, P.A. 451 of 1994. Review of the EIS by the Planning Commission may indicate the need for a full environmental impact study.

E. Commercial

The primary requirements for commercial development are accessibility to primary or highly traveled roads and a population base to support the specific services that are offered. A secondary requirement for commercial success is the clustering of complimentary services to create a traffic destination node or end point. Major concerns in providing for commercial development are:

- To provide sufficient highway access without destroying the function of the highway,
- To neither set aside too little nor too much land for commercial uses. Too little land will hinder economic development; too much land will prevent the concentration of the critical mass required for true economic development.

There are four areas planned for commercial development in Waverly Township, three of which are a function of M-43. The first is the intersection of M-43 and M-40; the second is around the unincorporated area of Glendale; and the third is located to the east of and adjacent to the

Glendale residential districts. This last location is a new area being proposed for commercial uses. The fourth location is a pre-zoning development consisting of quasi-industrial type commercial uses clustered on C.R. 665 about 2 miles north of Glendale. Provision should be made within the zoning ordinance allowing for continuation of these uses while protecting the neighboring uses and ensuring the compatible growth can occur. The plan also recognizes six (6) existing commercial developments located at quarter-mile intervals along M-40, and one (1) existing commercial area mid-way between Glendale (the intersection of M-43 and CR 665) and Armstrong Corners (the intersection of M-40 and M-43). The plan envisions that these commercial uses will continue to serve a local, clustered, commercial function.

What is notable by its absence in the Master Plan is strip development along M-40 and M-43. The Master Plan, in conformance with Chapter IV and the wishes of the public as expressed in the survey responses received, strongly suggests that clustering commercial development is the far better approach to serving the commercial needs of the Township.

Related to the need to preserve the function of the highways, as well as to protect public health, safety and welfare, it is recommended that the minimum lot width for properties zoned commercial and fronting on either M-40 or M-43, be increased to at least 300 feet, unless provisions are made for joint driveways.

Further, in order to protect public health, safety and welfare, the minimum lot size for all properties not served by municipal sanitary sewer and municipal water must be increase to at least 1.1 acres. This is the minimum lot size recommended for on-site sanitation by the Van Buren County Health Department and the Michigan Department of Public Health.

Finally, all land in Waverly Township is a valuable commodity and the Township does not want to exclude any land owner who wants to comply with County requirements for consideration of farmland preservation.

F. Industrial

This land use category will require the approval of a private system to meet Van Buren County Health Department requirements. The Plan calls for this type of area to be a function of the M-40 and M-43 corridors, which provides excellent transportation linkage to I-94, US-131 and population centers like Kalamazoo, South Haven, Allegan and the Village of Paw Paw, however, the plan does not specify any particular area. With agriculture remaining the largest part of the Township's economy, the Plan does not provide specific areas for industrial type development other

than (potentially) the area northwest of the M-40 and M-43 intersection. Rezoning to Industrial (I) must be accompanied by the provision of sewage treatment and stormwater pollution protection.

APPENDIX A

Table 1 – Part 1 POPULATION GROWTH TRENDS 1970 – 2000

	1970	1980	# CHANGE (70 – 80)	% CHANGE (70- 80)	1990	# CHANGE (80 – 90)	% CHANGE (80 – 90)	2000	# CHANGE (90 – 00)	% CHANGE (90 – 00)
Waverly Twp	1313	2130	817	62.2%	2188	58	2.7%	2467	279	12.8%
Almena Twp	1845	2956	1111	60.2%	3581	625	21.1%	4226	645	18.0%
Antwerp Twp	5346	7744	2398	44.9%	9293	1549	20.0%	10813	1520	16.4%
Arlington Twp	1645	1884	239	14.5%	1929	45	2.45	2075	146	7.6%
Bloomingtondale Twp	1989	2490	501	25.2%	2854	364	14.6	3364	510	17.9%
Columbia Twp	1866	2248	382	20.5%	2552	304	13.5%	2714	162	6.3%
Lawrence Twp	2345	3017	672	28.7%	3030	13	0.4%	3341	311	10.3%
Paw Paw Twp	5645	6285	640	11.3%	6701	416	6.6%	7091	390	5.8%
Pine Grove Twp	1835	2379	544	29.6%	2594	215	9.0	2773	179	6.9
Bloomingtondale Vllg	496	537	41	8.3%	503	-34	-6.3%	528	25	5.0%
Breedsville Vllg	209	244	35	16.7%	213	-31	-12.7%	235	22	10.3%
Lawrence Vllg	790	903	113	14.3%	915	12	1.3%	1059	144	15.7%
Lawton Vllg	1358	1558	200	14.7%	1685	127	8.2%	1859	174	10.3%
Mattawan Vllg	1569	2143	574	36.6%	2456	313	14.6%	2536	80	3.3%
Paw Paw Vllg	3160	3211	51	1.6%	3169	-42	-1.3%	3363	194	6.1%
Gobles City	801	816	15	1.9%	769	-47	-5.8%	815	46	6.0%
VanBuren County	56173	66814	10641	18.9%	70060	3246	4.9%	76263	6203	8.9%

Source: U.S. Censuses 1970, 1980, 1990 and 2000.

Table 1 – Part 2 POPULATION TRENDS 2000 – 2010

	2000	2010	# CHANGE (00 – 10)	% CHANGE (00- 10)	2020	# CHANGE (10 – 20)	% CHANGE (10 – 290)	2030	# CHANGE (20 – 30)	% CHANGE (20 – 30)
Waverly Twp	2467	2554	87	3.5%						
Almena Twp	4226	4992	766	18.1%						
Antwerp Twp	10813	12182	1369	12.7%						
Arlington Twp	2075	2073	-2	-0.1%						
Bloomingtondale Twp	3364	3103	-261	-7.8%						
Columbia Twp	2714	2588	-126	-4.6%						
Lawrence Twp	3341	3259	-82	-2.5%						
Paw Paw Twp	7091	7041	-50	-0.7%						
Pine Grove Twp	2773	2949	176	6.3%						
Bloomingtondale Vllg	528	454	-74	-14.0%						
Breedsville Vllg	235	199	-36	-15.3%						
Lawrence Vllg	1059	996	-63	-5.9%						
Lawton Vllg	1859	1900	41	2.2%						
Mattawan Vllg	2536	1997	-539	-21.3%						
Paw Paw Vllg	3363	3534	171	5.1%						
Gobles City	815	829	14	1.7%						
VanBuren County	76263	76258	-5	-0.0%						

Source: U.S. Censuses 2000 & 2010

Table 2 – Part 1 AGE GROUPS AS A PERCENTAGE OF TOTAL POPULATION 1980, 1990 & 2000

	1980				1990				2000			
	0-17	18-64	65+	Median Age	0-17	18-64	65+	Median Age	0-17	18-64	65+	Median Age
Waverly Twp	33.2%	58.7%	8.1%	27.7	29.8%	61.5%	8.7%	32.5	27.6%	62.9%	9.4%	36.3
Almena Twp	32.9%	59.8%	7.3%	29.3	30.4%	62.6%	7.0%	32.7	26.9%	64.3%	8.8%	38.3
Antwerp Twp	33.0%	56.5%	10.5%	29.2	30.9%	58.8%	10.3%	32.3	29.9%	60.3%	9.8%	35.1
Arlington Twp	32.3%	56.8%	10.9%	31.0	28.0%	58.2%	13.8%	34.8	27.2%	60.1%	12.7%	38.5
Bloomingtondale Twp	31.4%	55.8%	12.8%	30.5	28.7%	58.4%	12.9%	33.9	28.6%	59.3%	12.1%	36.9
Columbia Twp	28.8%	55.8%	15.4%	32.9	26.9%	59.7%	13.4%	34.9	27.9%	59.8%	12.3%	36.8
Lawrence Twp	30.1%	54.5%	15.4%	30.6	28.8%	55.3%	15.9%	33.9	29.0%	58.8%	12.2%	35.8
Paw Paw Twp	27.6%	57.2%	15.2%	32.2	26.0%	59.7%	14.3%	35.0	25.9%	60.9%	13.2%	37.6
Pine Grove Twp	32.6%	58.5%	9.0%	28.7	29.6%	59.9%	10.4%	33.3	26.5%	61.6%	11.9%	38.3
Bloomingtondale Vllg	36.5%	53.1%	10.4%	26.7	29.2%	54.5%	16.3%	33.0	31.8%	57.6%	10.6%	32.5
Breedsville Vllg	27.0%	58.2%	14.8%	31.9	34.3%	56.3%	9.4%	30.9	31.9%	58.7%	9.4%	31.5
Lawrence Vllg	30.1%	52.3%	17.6%	30.1	28.6%	54.5%	16.8%	31.9	31.2%	58.3%	10.5%	31.7
Lawton Vllg	27.4%	50.2%	22.4%	33.4	30.0%	50.4%	19.6%	34.1	27.2%	53.0%	19.8%	36.9
Mattawan Vllg	32.9%	57.6%	9.5%	28.6	30.1%	59.4%	10.5%	31.0	30.0%	61.4%	8.6%	32.9
Paw Paw Vllg	24.9%	56.3%	18.8%	32.9	24.8%	57.6%	17.6%	34.5	23.3%	61.7%	15.0%	36.3
Gobles City	29.9%	58.8%	11.3%	28.8	30.3%	57.1%	12.6%	32.5	30.6%	56.1%	13.3%	33.8
Van Buren County	31.6%	56.2%	12.2%	29.7	29.1%	58.3%	12.6%	33.3	28.1%	14.7%	14.7%	36.6

Source: U.S. Census – Summary Files 1980, 1990 and 2000.

Table 2 – Part 2 AGE GROUPS AS A PERCENTAGE OF TOTAL POPULATION 2000 & 2010

	2000				2010				0-17	18-64	65+	Median Age
	0-17	18-64	65+	Median Age	0-17	18-64	65+	Median Age				
Waverly Twp	27.6%	62.9%	9.4%	36.3	29.3%	59.0%	11.7%	39.6				
Almena Twp	26.9%	64.3%	8.8%	38.3	27.6%	61.0%	11.3%	41.3				
Antwerp Twp	29.9%	60.3%	9.8%	35.1	30.1%	58.6%	11.3%	37.3				
Arlington Twp	27.2%	60.1%	12.7%	38.5	26.4%	58.2%	15.4%	42.2				
Bloomingtondale Twp	28.6%	59.3%	12.1%	36.9	25.4%	61.8%	16.5%	43.7				
Columbia Twp	27.9%	59.8%	12.3%	36.8	27.9%	57.5%	14.6%	40.1				
Lawrence Twp	29.0%	58.8%	12.2%	35.8	29.1%	58.1%	12.9%	39.3				
Paw Paw Twp	25.9%	60.9%	13.2%	37.6	25.5%	59.7%	14.8%	40.7				
Pine Grove Twp	26.5%	61.6%	11.9%	38.3	26.6%	61.1%	12.3%	41.9				
Bloomingtondale Vllg	31.8%	57.6%	10.6%	32.5	28.9%	58.6%	12.6%	38.4				
Breedsville Vllg	31.9%	58.7%	9.4%	31.5	28.1%	64.8%	7.0%	34.5				
Lawrence Vllg	31.2%	58.3%	10.5%	31.7	35.5%	55.3%	9.1%	31.7				
Lawton Vllg	27.2%	53.0%	19.8%	36.9	28.0%	52.8%	19.2%	38.9				
Mattawan Vllg	30.0%	61.4%	8.6%	32.9	31.5%	57.0%	11.3%	36.5				
Paw Paw Vllg	23.3%	61.7%	15.0%	36.3	26.8%	59.4%	13.8%	36.4				
Gobles City	30.6%	56.1%	13.3%	33.8	30.2%	57.2%	12.7%	37.7				
Van Buren County	28.1%	14.7%	14.7%	36.6	28.1%	52.3%	13.8%	41.3				

Source: U.S. Census – Summary Files 2000 and 201

Table 3 – Part 1 NUMBER OF HOUSEHOLDS & AVERAGE HOUSEHOLD SIZE 1980, 1990 & 2000

	1980		1990		2000	
	# of Households	Average # of Persons/Household	# of Households	Average # of Persons/Household	# of Households	Average # of Persons/Household
Waverly Twp	714	2.98	769	2.85	912	2.71
Almena Twp	975	3.03	1204	2.97	1553	2.72
Antwerp Twp	2566	2.95	3121	2.92	3764	2.80
Arlington Twp	618	3.04	688	2.79	736	2.77
Bloomingtondale Twp	823	2.94	1019	2.73	1179	2.74
Columbia Twp	780	2.83	917	2.76	981	2.70
Lawrence Twp	1088	2.77	1098	2.75	1194	2.74
Paw Paw Twp	2330	2.64	2589	2.55	2771	2.49
Pine Grove Twp	780	3.05	889	2.92	1018	2.72
Bloomingtondale Vllg	175	3.07	191	2.63	181	2.92
Breedsville Vllg	90	2.71	70	3.04	73	3.22
Lawrence Vllg	358	2.52	358	2.53	392	2.68
Lawton Vllg	530	2.61	538	2.78	610	2.63
Mattawan Vllg	766	2.8	896	2.74	961	2.64
Paw Paw Vllg	1268	2.43	1313	2.34	1417	2.27
Gobles City	291	2.8	280	2.67	314	2.75
Van Buren County	23121	2.86	25402	2.73	27982	2.66

Source: U.S. Census – Summary Files 1980, 1990 and 2000.

Table 3 – Part 2 NUMBER OF HOUSEHOLDS & AVERAGE HOUSEHOLD SIZE 2000 & 2010

	2000		2010		2000	
	# of Households	Average # of Persons/Household	# of Households	Average # of Persons/Household	# of Households	Average # of Persons/Household
Waverly Twp	912	2.71	959	2.66		
Almena Twp	1553	2.72	1839	2.71		
Antwerp Twp	3764	2.80	4457	2.70		
Arlington Twp	736	2.77	752	2.70		
Bloomingtondale Twp	1179	2.74	1201	2.53		
Columbia Twp	981	2.70	964	2.66		
Lawrence Twp	1194	2.74	1224	2.65		
Paw Paw Twp	2771	2.49	2895	2.38		
Pine Grove Twp	1018	2.72	1123	2.62		
Bloomingtondale Vllg	181	2.92	172	2.64		
Breedsville Vllg	73	3.22	65	3.06		
Lawrence Vllg	392	2.68	371	2.65		
Lawton Vllg	610	2.63	730	2.45		
Mattawan Vllg	961	2.64	788	2.53		
Paw Paw Vllg	1417	2.27	1499	2.27		
Gobles City	314	2.75	320	2.59		
Van Buren County	27982	2.66	28928	2.61		

Source: U.S. Census – Summary Files 2000 and 2010

Table 4 – Part 1 TOTAL NUMBER OF HOUSING UNITS 1980, 1990 & 2000

	1980	1990	# Change (80 – 90)	% Change (80 – 90)	2000	# Change (90 – 00)	# Change (90 – 00)
	Total Number of Housing Units	Total Number of Housing Units			Total Number of Housing Units		
Waverly Twp	771	845	74	9.6%	991	146	17.3%
Almena Twp	1042	1254	212	20.3%	1633	379	30.2%
Antwerp Twp	2748	3280	532	19.4%	3968	688	21.0%
Arlington Twp	855	924	69	8.1%	943	19	2.1%
Bloomingtondale Twp	1089	1284	195	17.9%	1461	177	13.8%
Columbia Twp	1159	1429	270	23.3%	1433	4	0.3%
Lawrence Twp	1414	1451	37	2.6%	1516	65	4.5%
Paw Paw Twp	2864	3076	212	7.4%	3248	172	5.6%
Pine Grove Twp	886	982	96	10.8%	1123	141	14.4%
Bloomingtondale Vllg	191	206	15	7.9%	206	0	0.0%
Breedsville Vllg	93	80	-13	-14.0%	85	5	6.3%
Lawrence Vllg	390	392	2	0.5%	434	42	10.7%
Lawton Vllg	591	604	13	2.2%	668	64	10.6%
Mattawan Vllg	809	932	123	15.2%	1024	92	9.9%
Paw Paw Vllg	1351	1390	39	2.9%	1515	125	9.0%
Gobles City	310	304	-6	-1.9%	333	29	9.5%
Van Buren County	28801	31530	2729	9.5%	33975	2445	7.8%

Source: U.S. Census, Summary files 1980, 1990 and 2000.

Table 4 – Part 2 TOTAL NUMBER OF HOUSING UNITS 2000 & 2010

	2000	2010	# Change (00 – 10)	% Change (00 – 10)		# Change (90 – 00)	# Change (90 – 00)
	Total Number of Housing Units	Total Number of Housing Units			Total Number of Housing Units		
Waverly Twp	991	1092	101	10.2%			
Almena Twp	1633	1945	312	19.1%			
Antwerp Twp	3968	4737	769	19.4%			
Arlington Twp	943	1004	61	6.5%			
Bloomingtondale Twp	1461	1576	115	7.9%			
Columbia Twp	1433	1511	78	5.4%			
Lawrence Twp	1516	1588	72	4.7%			
Paw Paw Twp	3248	3505	257	7.9%			
Pine Grove Twp	1123	1259	136	12.1%			
Bloomingtondale Vllg	206	208	-2	-1.0%			
Breedsville Vllg	85	80	15	-5.9%			
Lawrence Vllg	434	436	2	0.5%			
Lawton Vllg	668	788	120	18.0%			
Mattawan Vllg	1024	873	-151	-14.7%			
Paw Paw Vllg	1515	1697	182	12.0%			
Gobles City	333	347	14	4.2%			
Van Buren County	33975	36785	2810	8.3%			

Source: U.S. Census, Summary files 2000 and 2010.

Table 5 – Part 1 PERCENTAGE OF HOUSING STOCK OWNER AND RENTER OCCUPIED 1980, 1990 & 2000

	1980		1990		2000	
	% Owner Occupied	% Renter Occupied	% Owner Occupied	% Renter Occupied	% Owner Occupied	% Renter Occupied
Waverly Twp	82.2%	17.8%	85.7%	14.3%	87.6%	12.4%
Almena Twp	92.5%	7.5%	90.9%	9.1%	94.1%	5.9%
Antwerp Twp	80.5%	19.5%	83.9%	16.1%	84.6%	15.4%
Arlington Twp	86.7%	13.3%	86.0%	14.0%	90.1%	9.9%
Bloomingtondale Twp	83.2%	16.8%	79.3%	20.7%	82.1%	17.9%
Columbia Twp	85.1%	14.9%	85.7%	14.3%	85.3%	14.7%
Lawrence Twp	74.7%	25.3%	76.8%	23.2%	82.2%	19.8%
Paw Paw Twp	70.6%	29.4%	69.9%	30.1%	71.0%	29.0%
Pine Grove Twp	85.5%	14.5%	86.8%	13.2%	89.4%	10.6%
Bloomingtondale Vllg	74.9%	25.1%	68.6%	31.4%	75.1%	24.9%
Breedsville Vllg	80.0%	20.0%	77.1%	22.9%	78.1%	21.9%
Lawrence Vllg	63.4%	36.6%	60.9%	39.1%	64.3%	35.7%
Lawton Vllg	70.0%	30.0%	70.4%	29.6%	68.9%	31.1%
Mattawan Vllg	76.9%	23.1%	83.8%	16.2%	82.3%	17.7%
Paw Paw Vllg	59.9%	40.1%	54.5%	45.5%	56.8%	43.2%
Gobles City	69.4%	30.6%	72.5%	27.5%	63.4%	36.6%
Van Buren County	77.0%	23.0%	76.7%	23.3%	79.6%	20.4%

Source: U.S. Census – Summary files 1980, 1990 and 2000.

Table 5 – Part 2

PERCENTAGE OF HOUSING STOCK OWNER AND RENTER OCCUPIED 2000 & 2010

	2000		2010		% Owner Occupied	% Renter Occupied
	% Owner Occupied	% Renter Occupied	% Owner Occupied	% Renter Occupied		
Waverly Twp	87.6%	12.4%	88.8%	11.2%		
Almena Twp	94.1%	5.9%	92.1%	7.9%		
Antwerp Twp	84.6%	15.4%	82.7%	17.3%		
Arlington Twp	90.1%	9.9%	85.9%	14.1%		
Bloomingtondale Twp	82.1%	17.9%	82.4%	17.6%		
Columbia Twp	85.3%	14.7%	83.0%	17.0%		
Lawrence Twp	82.2%	19.8%	79.8%	20.2%		
Paw Paw Twp	71.0%	29.0%	66.9%	33.1%		
Pine Grove Twp	89.4%	10.6%	87.2%	12.8%		
Bloomingtondale Vllg	75.1%	24.9%	73.8%	26.2%		
Breedsville Vllg	78.1%	21.9%	78.5%	21.5%		
Lawrence Vllg	64.3%	35.7%	63.6%	36.4%		
Lawton Vllg	68.9%	31.1%	60.1%	39.9%		
Mattawan Vllg	82.3%	17.7%	77.0%	23.0%		
Paw Paw Vllg	56.8%	43.2%	48.5%	51.5%		
Gobles City	63.4%	36.6%	65.0%	35.0%		
Van Buren County	79.6%	20.4%	77.9%	22.1%		

Source: U.S. Census – Summary files 2000 and 2010.

Table 6 TYPE OF STRUCTURE AS A PERCENTAGE OF TOTAL HOUSING STOCK 1980, 1990 & 2000

	1 Unit (Single Family Home)			2 – 4 Units			5+ Units			Mobile Homes, other		
	1980	1990	2000	1980	1990	2000	1980	1990	2000	1980	1990	2000
Waverly Twp	76.7%	71.1%	71.3%	5.1%	4.0%	3.7%	2.7%	0.0%	0.6%	14.3%	25.3%	24.4%
Almena Twp	80.9%	82.4%	87.4%	2.0%	1.4%	1.8%	0.4%	0.0%	0.0%	14.1%	16.3%	10.9%
Antwerp Twp	72.8%	69.7%	73.6%	6.0%	5.6%	5.3%	4.3%	3.8%	4.7%	16.0%	20.6%	16.5%
Arlington Twp	67.6%	79.2%	82.1%	1.6%	0.8%	0.7%	0.5%	0.0%	0.0%	12.2%	20.1%	17.1%
Bloomingtondale Twp	62.7%	66.1%	72.7%	2.2%	2.7%	1.5%	3.2%	3.7%	5.2%	13.0%	27.3%	20.9%
Columbia Twp	77.2%	78.7%	78.8%	0.7%	1.6%	0.7%	3.1%	0.0%	0.6%	9.7%	19.5%	19.9%
Lawrence Twp	69.0%	75.5%	81.2%	3.2%	2.5%	2.5%	4.9%	5.0%	6.1%	8.9%	16.3%	10.2%
Paw Paw Twp	64.2%	74.9%	75.5%	8.9%	6.3%	6.1%	10.6%	12.0%	12.4%	3.0%	6.6%	6.0%
Pine Grove Twp	79.0%	80.3%	83.3%	2.3%	1.2%	1.1%	0.9%	0.0%	0.0%	13.0%	18.4%	15.1%
Bloomingtondale Vllg	81.7%	76.2%	77.9%	9.9%	6.8%	5.5%	3.7%	14.6%	12.5%	3.1%	3.9%	4.0%
Breedsville Vllg	89.2%	82.5%	94.3%	0.0%	2.5%	0.0%	7.5%	0.0%	0.0%	6.5%	15.0%	5.7%
Lawton Vllg	76.1%	75.2%	77.6%	11.2%	10.8%	7.7%	11.7%	10.8%	14.0%	0.3%	1.7%	0.7%
Mattawan Vllg	48.1%	38.8%	44.1%	5.9%	6.9%	8.7%	2.6%	4.5%	5.2%	43.1%	51.6%	42.1%
PawPaw Vllg	66.2%	61.2%	59.7%	15.0%	11.1%	12.1%	18.1%	24.7%	23.3%	0.0%	1.6%	4.9%
Gobles City	80.0%	74.3%	72.3%	11.0%	11.8%	9.5%	7.4%	5.6%	12.5%	5.2%	7.6%	5.8%
Van Buren Cnty	67.2%	72.3%	75.4%	5.6%	4.5%	4.1%	5.4%	5.7%	5.5%	10.2%	17.3%	15.0%

Source: U.S. Census, Summary Files – 1980, 1990 and 2000.

NOTE: The U.S. Census did not compile this information in the 2010 census

Table 7 - Part 1

MEDIAN HOME VALUE AND RENT 1980, 1990 & 2000

	1980		1990		1980 - 1990		2000		1990 - 2000	
	Median Home Value	Median Contract Rent	Median Home Value	Median Contract Rent	Increase in Home Value		Median Home Value	Median Contract Rent	Increase in Home Value	
					\$	%			\$	%
Waverly Twp	\$41,800	\$271	\$57,100	\$379	\$15,300	36.6%	\$99,000	\$557	\$42,000	73.5%
Almena Twp	\$45,900	\$245	\$64,500	\$351	\$18,600	40.5%	\$118,500	\$388	\$54,000	83.4%
Antwerp Twp	\$38,300	\$213	\$58,400	\$371	\$20,100	52.5%	\$110,200	\$470	\$51,800	88.7%
Arlington Twp	\$31,600	\$208	\$45,100	\$362	\$13,500	42.7%	\$84,100	\$446	\$39,000	86.5%
Bloomingtondale Twp	\$33,800	\$234	\$41,800	\$350	\$8,000	23.7%	\$89,400	\$473	\$47,600	113.9%
Columbia Twp	\$25,400	\$217	\$36,100	\$370	\$10,700	42.1%	\$73,200	\$494	\$37,100	102.8%
Lawrence Twp	\$33,600	\$221	\$45,200	\$290	\$11,600	34.5%	\$82,200	\$433	\$37,000	81.9%
Paw Paw Twp	\$39,100	\$199	\$55,600	\$315	\$16,500	42.2%	\$96,500	\$456	\$40,900	73.6%
Pine Grove Twp	\$33,200	\$241	\$52,500	\$361	\$19,300	58.1%	\$106,000	\$442	\$53,500	101.9%
Bloomingtondale Vllg	\$23,600	\$216	\$29,500	\$326	\$5,900	25.0%	\$70,800	\$428	\$41,300	140.0%
Breedsville Vllg	\$19,800	\$200	\$23,200	\$350	\$3,400	17.2%	\$43,300	\$675	\$20,100	86.6%

Table 7 – Part 2

MEDIAN HOME VALUE AND RENT 1980, 1990 & 2000

	1980		1990		1980 - 1990		2000		1990 - 2000	
	Median Home Value	Median Contract Rent	Median Home Value	Median Contract Rent	Increase in Home Value		Median Home Value	Median Contract Rent	Increase in Home Value	
					\$	%			\$	%
Lawrence Vllg	\$27,500	\$198	\$34,200	\$261	\$6,700	24.4%	\$70,600	\$371	\$36,400	106.4%
Lawton Vllg	\$26,400	\$212	\$37,600	\$336	\$11,200	42.4%	\$84,300	\$428	\$46,700	124.2%
Mattawan Vllg	\$37,500	\$196	\$53,700	\$373	\$16,200	43.2%	\$96,700	\$531	\$43,000	80.1%
Paw Paw Vllg	\$35,700	\$193	\$46,000	\$300	\$10,300	28.9%	\$86,800	\$426	\$40,800	88.7%
Gobles City	\$28,300	\$235	\$37,700	\$348	\$9,400	33.2%	\$69,000	\$405	\$31,300	83.0%
Van Buren County	\$33,300	\$217	\$48,000	\$343	\$14,700	44.1%	\$94,200	\$451	\$46,200	96.3%

Source: U.S. Census – Summary Files – 1980, 1990 and 2000.

Note 1: Home Value is the value that the occupant-home owner reported to the Census Bureau.
 Contract Rent is the monthly rent that the rental occupant reported to the Census Bureau
 Keep in mind that the Census Bureau only reports on the response of the occupant so each house is described only by either the home value or the rent paid. The median home value does not include the value of structures that were rented at the time of the census.

Note 2: The U.S. Census Bureau did not compile this information in the 2010 census.

Table 8 MEDIAN HOUSEHOLD INCOME 1980, 1990 & 2000

	1980	1990	1980 - 1990		2000	1990 - 2000	
	Median Household Income	Median Household Income	\$	%	Median Household Income	\$	%
Waverly Twp	\$17,179	\$30,225	\$13,046	75.9%	\$51,100	\$20,875	69.1%
Almena Twp	\$20,584	\$38,724	\$18,140	88.1%	\$51,027	\$12,303	31.8%
Antwerp Twp	\$18,535	\$33,471	\$14,936	80.6%	\$50,556	\$17,085	51.0%
Arlington Twp	\$14,434	\$25,694	\$11,260	78.0%	\$36,847	\$11,153	43.4%
Bloomingtondale Twp	\$16,486	\$24,007	\$7,521	45.6%	\$40,488	\$16,481	68.7%
Columbia Twp	\$12,225	\$23,389	\$11,164	91.3%	\$34,389	\$11,000	47.0%
Lawrence Twp	\$12,850	\$23,673	\$10,823	84.2%	\$36,944	\$13,271	56.1%
Paw Paw Twp	\$16,233	\$27,692	\$11,459	70.6%	\$43,802	\$16,110	58.2%
Pine Grove Twp	\$17,075	\$30,859	\$13,784	80.7%	\$47,060	\$16,201	52.5%
Bloomingtondale Vllg	\$14,444	\$20,441	\$5,997	41.5%	\$35,714	\$15,273	74.7%
Breedsville Vllg	\$11,023	\$21,250	\$10,227	92.8%	\$32,917	\$11,667	54.9%
Lawrence Vllg	\$11,654	\$16,776	\$5,122	44.0%	\$29,583	\$12,807	76.3%
Lawton Vllg	\$13,910	\$23,472	\$9,562	68.7%	\$36,250	\$12,778	54.4%
Mattawan Vllg	\$16,222	\$30,962	\$14,740	90.9%	\$42,241	\$11,276	36.4%
Paw Paw Vllg	\$13,297	\$19,298	\$6,001	45.1%	\$38,750	\$19,452	110.8%
Gobles City	\$15,556	\$24,318	\$8,762	56.3%	\$26,917	\$2,599	10.7%
Van Buren County	\$15,397	\$25,491	\$10,094	65.6%	\$39,365	\$13,974	54.4%

Source: U.S. Census – Summary Files – 1980, 1990 and 2000.

Note: The U.S. Census did not compile this information in the 2010 census.

Table 9 POPULATION FORECAST - 1990 – 2030 for Van Buren County, Michigan

Population	1900	2000	2010	2020	2030	Percent Change			
						1990 to 2000	2000 to 2010	2010 to 2020	2020 to 2030
Total	70,302	76,340	79,541	84,761	89,468	8.6 %	4.2 %	6.6 %	5.6 %
Age 0-4 years	5,536	5,345	5,541	5,939	5,822	-3.5 %	3.7 %	7.2 %	-2.0 %
Age 5-15	12,651	13,891	11,594	12,699	13,327	9.8 %	-16.5%	9.5%	4.9%
Age 16-17	1,970	2,348	2,261	2,138	2,473	19.2%	-3.7%	-5.4%	15.7%
Age 18-24	6,201	6,218	8,189	6,547	7,197	0.3 %	31.7%	-20.1%	9.9 %
Age 25-34	10,776	8,944	9,126	11,251	9,769	-17.0%	2.0 %	23.3%	-13.2%
Age 35-44	10,891	12,828	10,098	10,520	12,797	17.8%	-21.3%	4.2 %	21.6%
Age 45-54	7,231	10,560	12,571	10,027	10,539	46.0%	19.0%	-20.2%	5.1 %
Age 55-64	6,182	6,820	9,975	11,996	9,662	10.3%	46.3%	20.3%	-19.5%
Age 65-74	4,973	5,076	5,678	8,413	10,237	2.1 %	11.9%	48.2%	21.7%
Age 75-84	2,934	3,147	3,237	3,801	5,796	7.3 %	2.9 %	17.4%	52.5%
Age 85 +	957	1,163	1,271	1,430	1,849	21.5%	9.3 %	12.5%	29.3%

Based on the Regional Econometric Model, Inc. (REMI), 2003

Sources:

MDOT, Bureau of Transportation Planning, Statewide Model Unit
 Southwest Michigan Commission

APPENDIX C

[Reproduction of 1976 letter from Van Buren County Health Department to Southwestern Michigan Commission staff concerning the 1976 Waverly Township Sketch Plan]

January 13, 1976

Mr. Dave R. Hollomon
Local Assistance Planner
Southwestern Michigan Regional Planning Commission
2907 Division Street
St. Joseph, MI 49085

Dear Dave:

Regarding the Waverly Township Sketch Plan, I would like to make the following comments.

The installation of conventional on-site sewage disposal systems consisting of septic tanks and tile fields or drywells is difficult in Waverly Township.

Specific soil types, Allendale and Nappanee create drainage problems in the majority of the township. The Allendale area in Waverly Township occupy the area around the headwaters of the tributary of the Paw Paw River. The average depth of the sand decreases back from the stream, and the surface is slightly rolling, with irregular depressions.

The Nappanee soil is quite extensive in the Township. Natural run-off is fair to good. Underdrainage is poor because of the compact structure of the substatum. In some places the drainage has been improved by ditching. Outcrops of clay occur in some cultivated fields where the surface material has been carried away. In general, the topography of the township is nearly level.

Orderly development, both residential and commercial, will not be achieved in the majority of Waverly Township without some type of community or municipal sewage collection and treatment.

Residential development is proceeding over a wide area of the township. Over the three year period, 1973, 74 and 75 a yearly average of 44 new private sewage disposal systems have been installed in the township.

An area consisting of Sections 34, 35, and 36 are currently included in the Waste Water Study in conjunction with the Paw Paw Sewage Disposal Service Area.

I appreciate having the opportunity to make these comments.
Your very truly,

Leslie C. Brown
Director of Environmental Health

[2006 NOTE: While septic tanks, dry wells and tile fields are no longer permitted, the basic soil characteristics have not changed – see 2005 memorandum. In addition, while the Waste Water Study for the Paw Paw Sewage Disposal Service Area has not been superseded, the portion of the plan to extend utilities to Waverly Township has not been implemented and is not likely to be implemented in the foreseeable future.]

APPENDIX C

MEMORANDUM: OCTOBER 19, 2005

TO: WAVERLY TOWNSHIP PLANNING & ZONING COMMISSION

FROM: P. HUDSON, AICP, MTS-SERVICES-ALLEGAN, INC.

RE: MASTER PLAN WORKING REPORT: PRIME BUILDING SITES

On the Van Buren County Soil Survey, the Prime Farmlands are:

<u>Map #</u>	<u>Soil Name</u>	<u>wetlands</u>	<u>floodplain</u>	<u>septic issue</u>
4B	Blount silty loam	no	no	severe
6B	Oshtemo sandy loam	no	no	moderate
22A/B	Kalamazoo loam	no	no	severe
24A	Bronson sandy loam	no	no	severe
32	Colwood silt loam	no	yes	severe
33B	Tuscola silt loam	no	no	severe
39A	Matherton loam	no	no	severe
47A	Selfridge loamy sand	no	no	severe
50B	Metea loamy fine snd.	no	no	severe
52B	Riddles sandy loam	no	no	moderate
53B	Capac loam	no	no	severe
56	Pewamo silty clay lm.	no	no	severe
60	Belleville loamy sand	no	yes	severe

The following soils are either wetlands or flood plain or both:

7	Glendora sandy loam	no	yes
26	Gilford sandy loam	no	yes
32	Colwood silt loam	no	yes
37	Thetford loamy sand	no	yes
43	Sloan loam	no	yes
51	Kingsville loamy snd.	no	yes
60	Bellville loamy sand	no	yes
66	Alganssee Cohoctah	no	yes
10	Aquents/Histosols	yes	usually
11	Edwards muck	yes	no
27	Adrian muck	yes	yes
28	Houghton muck	yes	yes
38	Napoleon mucky peat	yes	no
54	Palms muck	yes	no

(Appendix C page 2 item 2 of 3)

<u>Map #</u>	<u>Soil Name</u>	<u>Septic Issue</u>	<u>Prime Farm Soil</u>
6B	Oshtemo sandy loam	slight	yes
6C/D/E	“	moderate slope	no
12B	Spinks Oshtemo	slight	no
12C	“	moderate	no
18B	Ormas loamy sand	slight	no
18C	“	moderate	no
20B	Spinks loamy sand	slight	no
20C	“	moderate	no
64/65	Urban land	moderate/severe	no
Good Building Sites but Septic Issues			
3B	Coloma loamy sand	severe poor filter	no
9B	Plainfield sand	severe poor filter	no
22A/B	Kalamazoo loam	severe poor filter	yes
36B/C	Oakville fine sand	severe poor filter	no
49B	Grattan sand	severe poor filter	no
50B	Metea loamy fine sand	severe poor filter/ percs slowly	no

APPENDIX C

MEMORANDUM: December 12, 2005

TO: Waverly Township Planning & Zoning Commission

FROM: P. Hudson, AICP

RE: Minimum Lot Sizes

I had a long discussion with a couple of the Van Buren County Health Department inspectors about recommended minimum lot sizes in Waverly Township.

One primary note that they wanted made is that whenever two or more lots are created the State rules for septic systems automatically take effect. Even on the best soils, typically, a minimum lot size of 1.01 acres is required. At a minimum, the septic field must be 4,000 sq ft with 10 feet setback from all lot lines, 25 feet from the house and 50 feet from the well.

On clay soils or wetland/floodplain or high water table soils, the minimum area for a mounded septic field increases to about 14,000 sq ft depending on the size of the house and number of bedrooms.

The Health Department has to try to work with people with lots previously platted as in Belleware, however, new subdivisions must meet the State regulations. This is one of the reasons why the condominium subdivision on School Section Lake was delayed.

The main point for the Planning Commission is that the R-1, R-2, and RM districts should not be expanded until a municipal sanitary system is provided for. This could be a condition for rezoning. The master plan should limit these zones to Section 36 and the south quarter of Section 35 where they already exist. The minimum lot size in R-3 should be raised to 1.01 acres or the definition should be revised as to what is include in the minimum lot area.

Commercial lot sizes also need to be looked at. The health inspectors did not think that one acre would be necessary but 6,000 sq ft is too small to accommodate a 4,000 sq ft septic field.