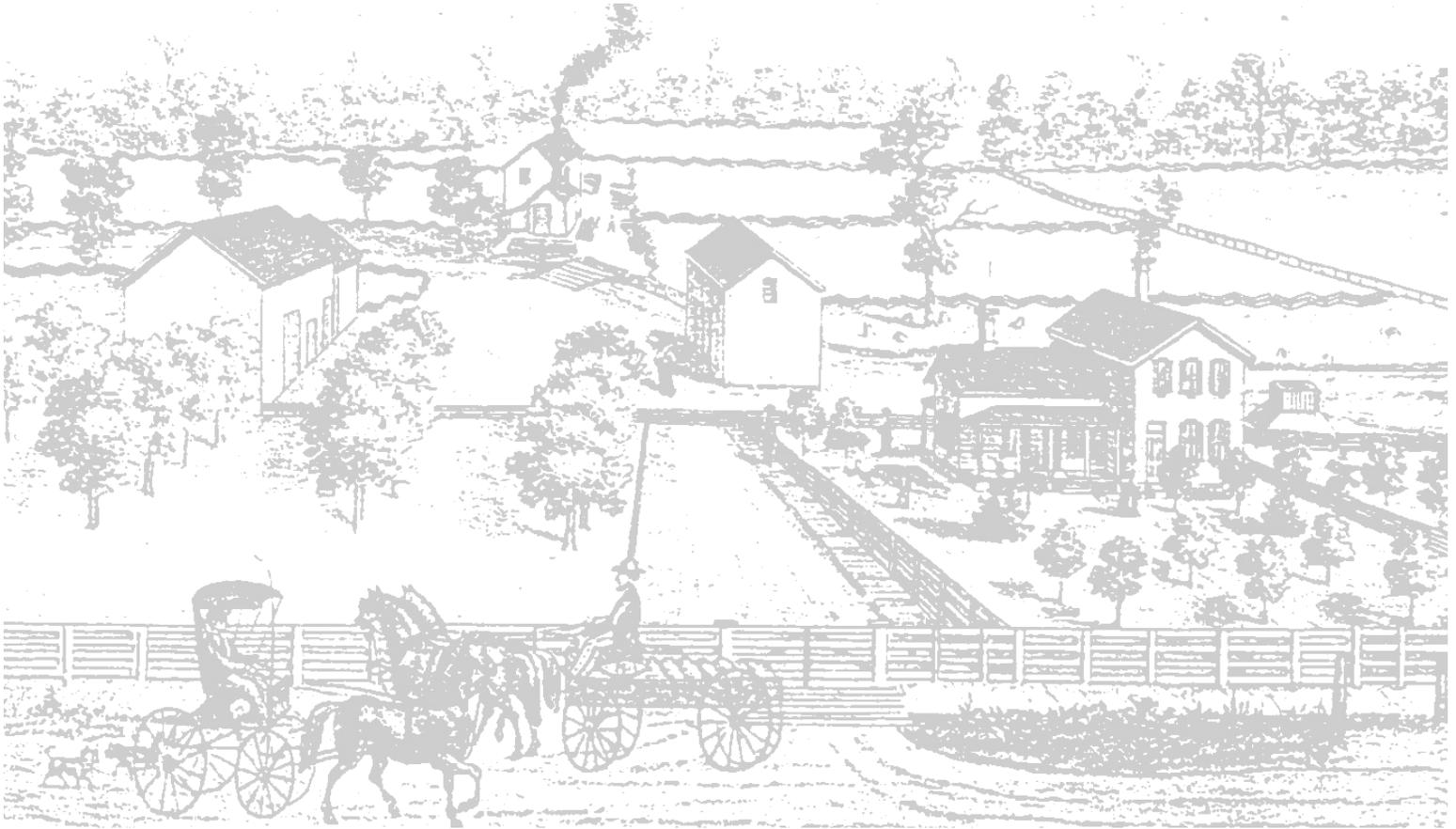


Whiteford Township

2010 Master Plan



July 2010

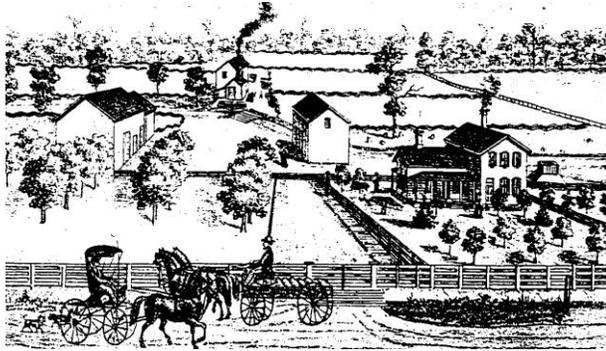
I hereby certify that the Whiteford Township 2010 Master Plan was approved at a regular meeting of the Whiteford Township Planning Commission on July 13, 2010

Alan Dippold, Chairman
Whiteford Township Planning Commission

I hereby certify that the Whiteford Township 2010 Master Plan was approved at a regular meeting of the Whiteford Township Board on July 20, 2010

Patricia Nidek, Clerk
Whiteford Township

Whiteford Township 2010 Master Plan



TOWNSHIP BOARD

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July 2010

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INTRODUCTION

The Whiteford Township Master Plan was prepared and updated by the Whiteford Township Planning Commission with the assistance of the Monroe County Planning Department and Commission, Partners-in-Planning Program. The Master Plan is a perspective for the future growth of the community, as envisioned by the Planning Commission.

The Plan is divided into four primary sections: Goals and Objectives, Land Use Program, and Master Plan and Map, and Community Profile.

The Goals and Objectives section establishes a set of statements and specific actions that will assist the Township's leaders in evaluating future development efforts and land use proposals.

The Land Use Program provides an in-depth evaluation for each of the basic land uses: Agriculture, Residential, Commercial, Industrial, and Recreation/Open Space. It also addresses utility and transportation needs. Each land use or need is described in terms of existing conditions, opportunities, policies, and the process used to develop the future land use map.

The Master Plan and Map section delineates the future land use proposals in both text and graphic illustration (map). The five primary land use classifications are divided into ten distinct patterns, as follows:

Agriculture

Agricultural Preservation
Reserve Agriculture

Residential

Low Density Residential
Medium Density Residential
High Density Residential

Commercial

Local Commercial
Highway Commercial

Industrial

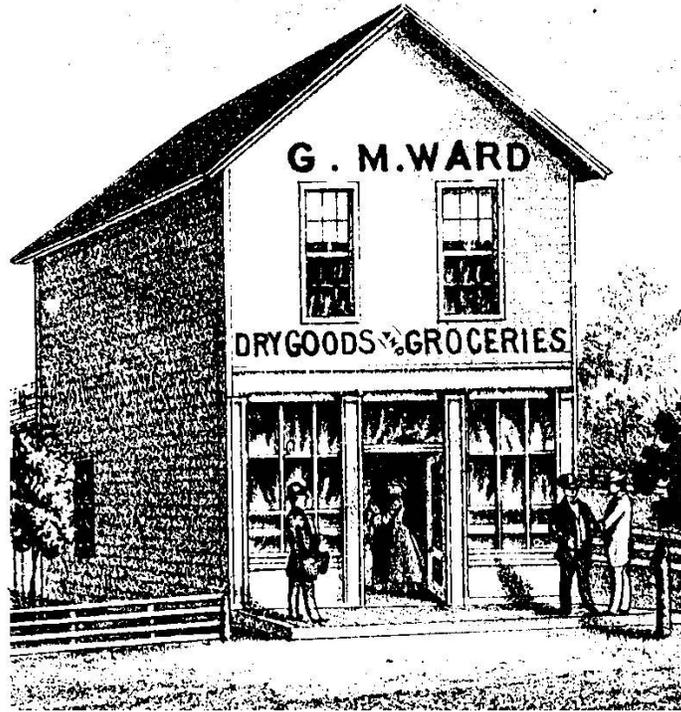
Industrial

Open Space

Recreation/Open Space

Finally, the Community Profile describes both the physical and social characteristics of Whiteford Township and also provides a historic perspective from its formation to the present.

This plan updates the Whiteford Township Master Plan which was approved in 1995 and amended in 1999. This plan is the first for Whiteford completed under the Michigan Planning Enabling Act – PA 33 of 2008. Over the past 10 years Whiteford Township has faced numerous planning challenges related to development, groundwater, agriculture, demographic and economic changes, and changes in neighboring communities. Under the new planning legislation, the Whiteford Township Planning Commission is required to review the master plan at least once every five years after adoption, and determine whether to commence the procedure to amend or update the plan.



Woodcut Print of Residence and Store of George M. Ward, Dealer in Dry Goods & Groceries and Agent for the Michigan State Insurance Company, Whiteford Center from the Atlas of Monroe County F. W. Beers & Company, New York 1876

COMMUNITY PROFILE

An understanding of the physical and social resources present within the community is an integral part of the planning process. This section will provide a general description of various characteristics of Whiteford Township, in order to better understand the problems and potentials that are present as they pertain to the planning process.

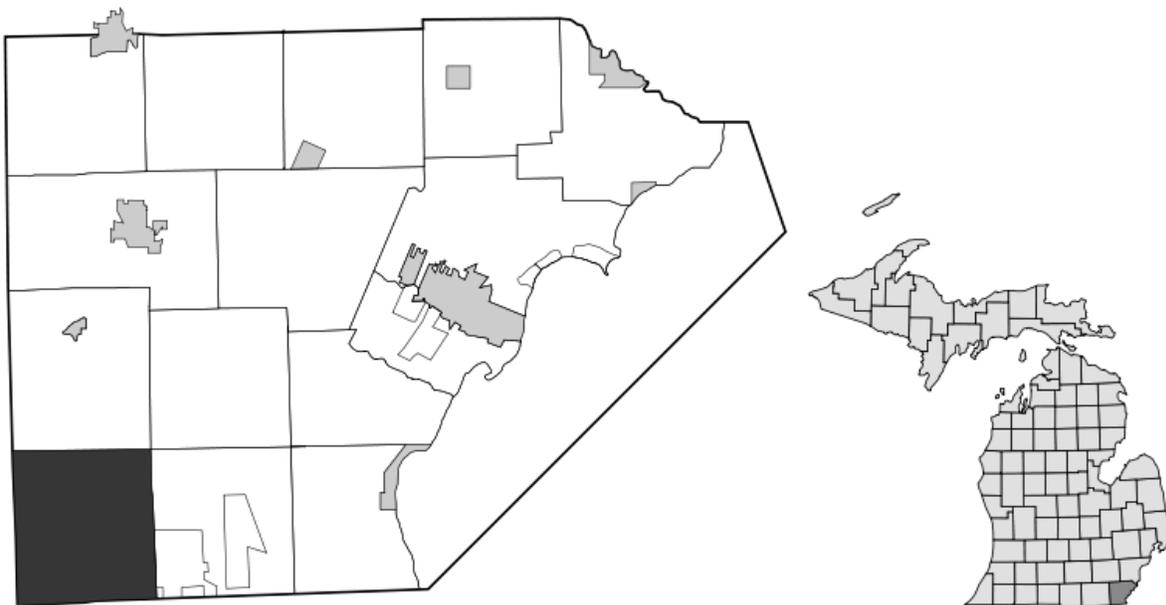
A. REGIONAL SETTING

Whiteford Township is situated in the southwest corner of Monroe County, bordering on the Cities of Sylvania and Toledo, Ohio (**Figure 1**). While affected by the Toledo Urban Area and the U.S. 23 corridor linking Toledo to Ann Arbor, Detroit and the remainder of Michigan, Whiteford has retained a primarily rural character.

Other Michigan communities surrounding Whiteford are also of a rural, agrarian nature, with the exception of Bedford Township to the east. As of the 1990 Census, Bedford is Monroe County's largest municipality, and is a suburb of Toledo.

It is these more urban communities that will provide the most pressure in determining the future development in Whiteford. Whiteford's location, adjacent to the Toledo Urban Area, makes it rather convenient for the extension of public sewer and water service into the Township and provides the possibility for greater urban growth to the southern portion of the community.

Figure 1. Location Map



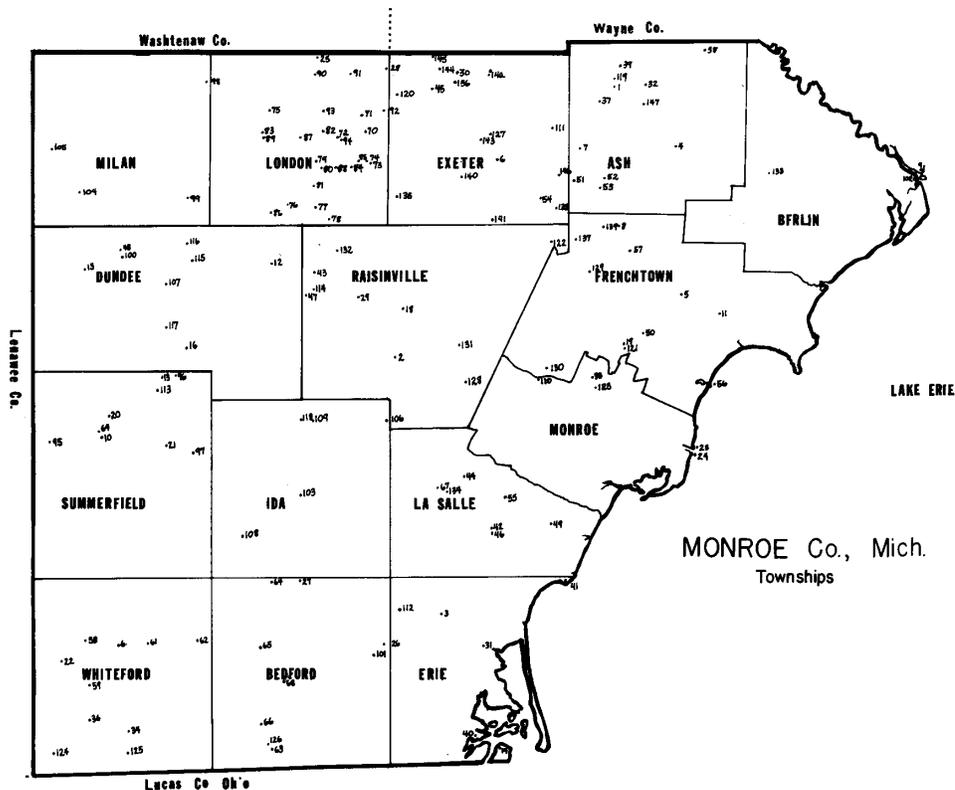
HISTORY AND EVOLUTION OF WHITEFORD

Because of its close proximity to the two important settlements of Detroit and Toledo in the latter eighteenth century, Whiteford Township is situated in one of the more historic sections of the Midwest. In the Township's early days, it was the home of Ottawa, Pottawattamie, Chippewa, Delaware and Wyandot Indian tribes, the *coureur des bois* (rover of the woods) — the early fur trappers, and traders, the French and British governments, ancient forests of beech, black walnut, cottonwood, elm and ash, and numerous fur bearing animals and water fowl such as: bear, deer, elk, wolves, fox, beavers, ducks, geese, turkeys, grouse and quail. It is also associated with the infamous “Toledo War”, which focused on the present boundary between Michigan and Ohio.

Prior to European colonization efforts in the Great Lakes region around the seventeenth century, the area was home to numerous Native American Indian tribes. Some of these are already noted above. Approximately 150 archaeological sites have been documented throughout Monroe County, with several being located in Whiteford Township (Figure 2). These sites contained fragments of stone, ceramic, human and animal remains, and suggest that the Monroe County area was inhabited in various settlement classifications as early as the seventh century A.D., the early Woodland Period.

Figure 2. Archaeological Sites

Source: *Michigan Archeologist* V. 19 no. 1 & 2

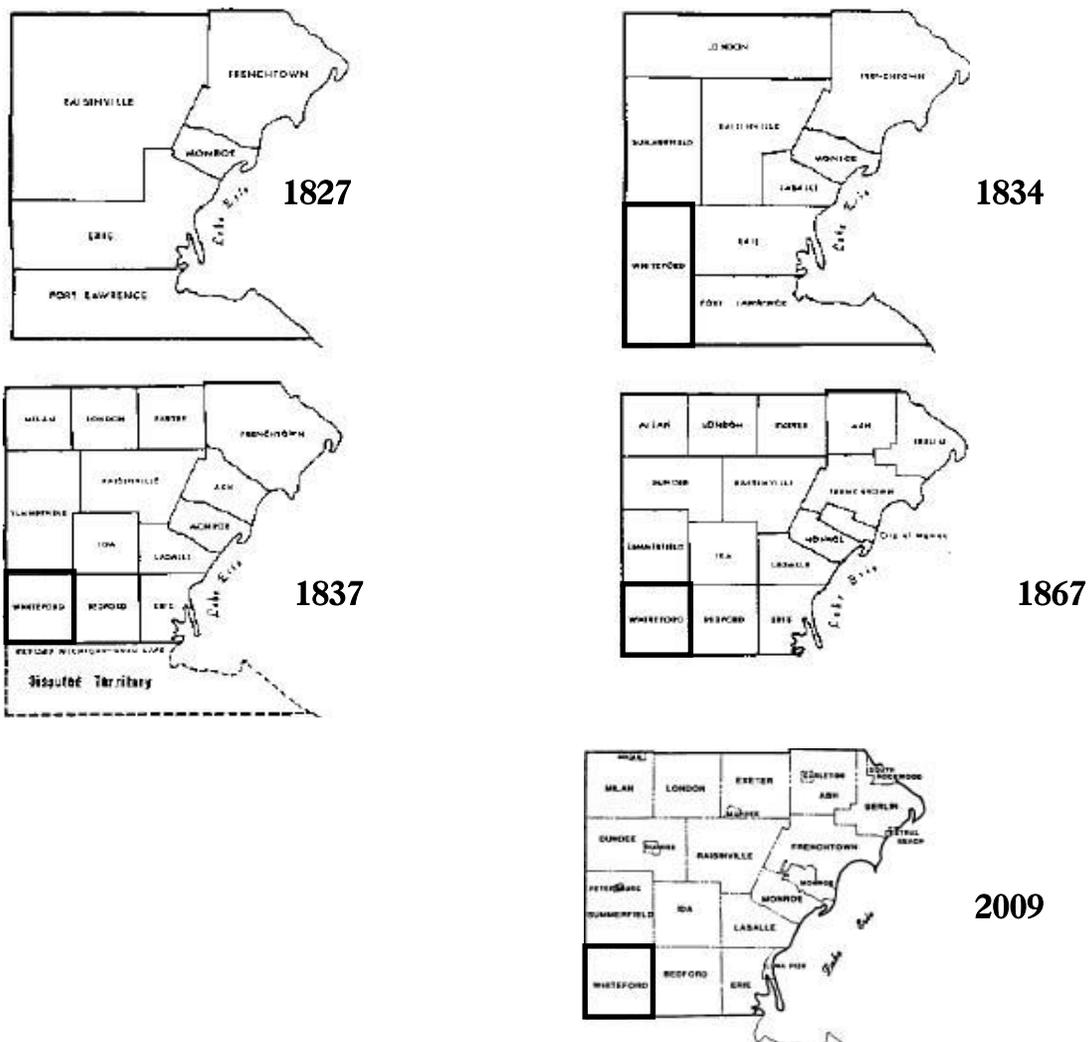


Around 1825, Congress adopted legislation to colonize their interior territories, which included Michigan, by establishing counties and townships. Monroe and Wayne Counties were established, and in 1827 Governor Cass established five townships in the county: Frenchtown, Monroe, Raisinville, Erie and Port Lawrence (Figure 3).

Whiteford Township was initially part of the original townships of Erie and Port Lawrence. It was organized at a meeting held on April 7, 1834 at the home of William Wilson in the present City of Sylvania, Ohio. In January of 1837, following a period of time referred to as the “Toledo” or “Bloodless” War, the Congress of the United States admitted Michigan into the Union as a state and established the present boundary line with Ohio. When Michigan obtained statehood, the original area of Whiteford Township was reduced over half, as the southerly 7.5 miles was ceded to the State of Ohio. No further changes to Whiteford’s boundaries have occurred since.

Figure 3. Evolution of Whiteford Township & Monroe County, Michigan 1827-2009

Source: J. M. Bulkley, History of Monroe County, Lewis Publishing Company, New York - 1913 Volume I



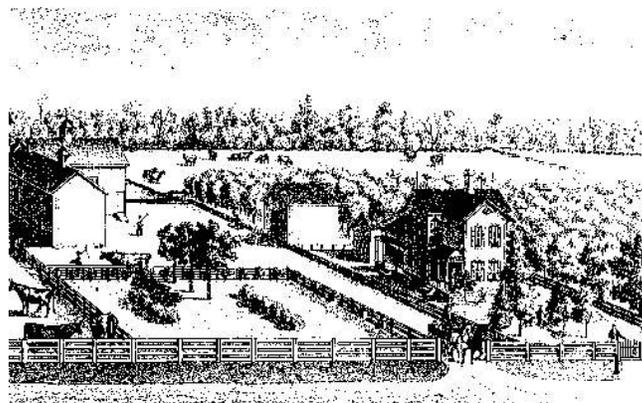
One of the earliest inhabitants, and most noteworthy, is its founding father, General David White, after whom the township was named. Although unconfirmed, it is thought that he originally migrated from Massachusetts and fought in the War of 1812, where he received the title “General”. General White was the first of approximately 35 individuals to serve as supervisor of the Township.

Transportation, prior to the early 1800s, was primarily by water (canoe) or by Indian trails that crisscrossed the area. These trails were narrow and usually sufficient for travel only in single file on foot or on horseback. Because the trails usually followed ridges, avoiding swamps and land which was flooded in the spring, they served as guidelines for surveyors who later laid out roads.

These roads were frequently little more than a cleared strip through the woods. Underbrush was slashed off and trees were cut as close as possible to the ground. The short stumps left standing were hazardous for horses or oxen and for wagon wheels. In swampy places, small tree trunks were laid across the road. After heavy rains, some stretches of road became quagmires. Some of these early roads (trails) include Whiteford Center Road, Old US 223 (now known as Memorial Highway), Head-O-Lake Road, and Summerfield Road. Memorial Highway was also known as the Cottonwood Swamp Road in earlier times and connected Blissfield to Ottawa Lake.

Around the turn of the 18th century, railroads caught the imagination of Americans. In 1833 the Erie and Kalamazoo Railroad was built, and connected Toledo, then Port Lawrence and a part of Michigan, to the Kalamazoo River. This rail line went through the southwest part of the Township, adjacent to Memorial Highway, where a remnant of the line is still in use today to serve the Ottawa Lake Co-op and Mid States Terminal.

In these earlier years, a number of unincorporated communities were established, such as: Ottawa Lake, Whiteford Center and St. Anthony. Other less known or remembered places like Gert, that were no more than a cluster of homes, have ceased to exist or have become subdivisions such as Orchard Grove and Ottawa Heights. One unnamed community was at the corner of Hicks and Yankee Roads, where a cooper shop and a blacksmith were located around 1850.



Woodcut Print of Residence of N. E. Shattuck, Section 31, Whiteford Township from the Atlas of Monroe County F. W. Beers & Company, New York 1876

DEMOGRAPHICS

According to the 2000 Census, Whiteford Township had a population of 4,420 persons. The most recent estimate available (SEMCOG, Dec. 2009) gives Whiteford a population of 4,667. **Table 1** displays the 2000 Census data according to age, sex, race, Hispanic origin and by household characteristics and gives comparison to the 1990 Census.

Table 1. Demographic Comparisons

Source: U.S. Census Bureau

	1990	2000
Population	4,433	4,420
Sex		
Male	2,308	2,252
Female	2,270	2,168
Age		
Under 5	258	248
5 to 24	1,366	1,236
25 to 34	677	445
35 to 44	687	797
45 to 54	601	708
55 to 64	397	504
65 to 74	276	299
75 and over	171	183
Median Age	33.9	39.1
Race		
White	4,290	4,217
Black or African American	92	87
American Indian	6	3
Asian & Pacific Islander	10	9
Other or more than 1 race	35	104
Hispanic Origin		
	89	110
Total Households		
Households w/children	1,523	1,582
Households w/ persons 65 & over	599	604
	n/a	341
Average household size	2.91	2.77
Total Families		
Married couple Families	1,216	1,244
	1,064	1,098
Average family size	3.32	3.17

As shown by the comparison in **Table 1**, Whiteford Township had a slight decrease in population between 1990 and 2000, but the SEMCOG estimate shows a growth in total population between 2000 and 2009 of 247 individuals, or 5.6%.

One of the more significant trends is the changing age structure of the population. All age groups under 35 showed decreases in population, while all of the older age groups showed increases. Large gains were in the 55 to 64 age group while the largest losses were in the 25 to 34 age group. The changing age structure of the population will affect the Township's need for services for an aging population, including factors such as medical care, transportation, and other unique social and economic needs of retirees, the elderly, and the infirm.

Since 1900, the population of Whiteford has increased 115%, from 2,050 in 1900 to 4,420 in 2000.

Table 2 and **Figure 4** shows the population progression from 1900 to the present. The Township has shown decennial changes ranging from a loss of 364 (-17.4%) between 1900 and 1910 and a gain of 848 (30.4%) between 1950 and 1960.

In order to plan for the future growth of the Township, it is important to make projections on the anticipated population. Projecting population involves many factors, which includes: natural increase based on the number of birth versus deaths within the community, development of new housing, construction of infrastructure (roads, sewers, water lines, and other services), the location or relocation of businesses and industries, and existing plans, policies and zoning regulations.

Table 3 presents the most recent population projections developed for Whiteford Township by the Southeast Michigan Council of Governments (SEMCOG). These projections, developed in 2008, predict slow but steady growth for the Township over the next 25 years, with a gain in population of 587 (12.9%) and a gain in households of 275 (16.0%).

Table 2. Whiteford Township Population Trends 1900 - 2009

Source: U.S. Census Bureau & SEMCOG

Year	Population	Change	% Change
1900	2,050	-	-
1910	1,686	-364	-17.8
1920	1,741	55	3.3
1930	2,205	464	26.7
1940	2,314	109	4.9
1950	2,793	479	20.7
1960	3,641	848	30.4
1970	4,122	481	13.2
1980	4,660	538	13.1
1990	4,433	-227	-4.9
2000	4,420	-13	-0.3
2009 (est.)	4,667	247	5.6

Figure 4. Whiteford Township Population Trends 1900 - 2009

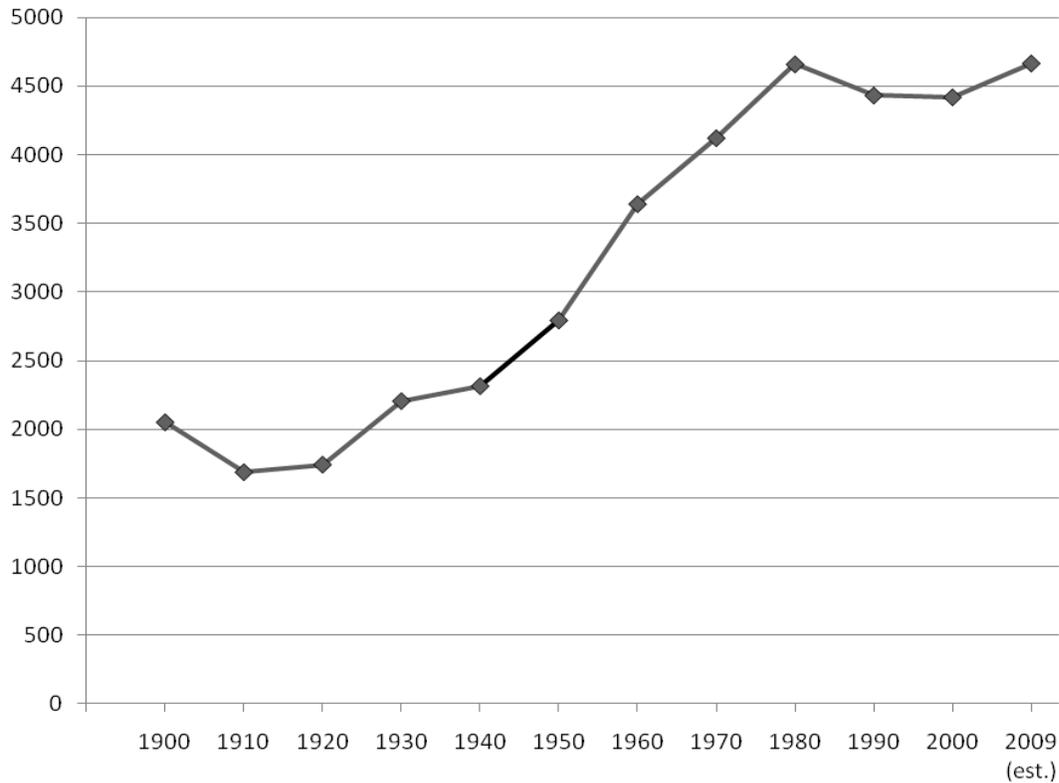
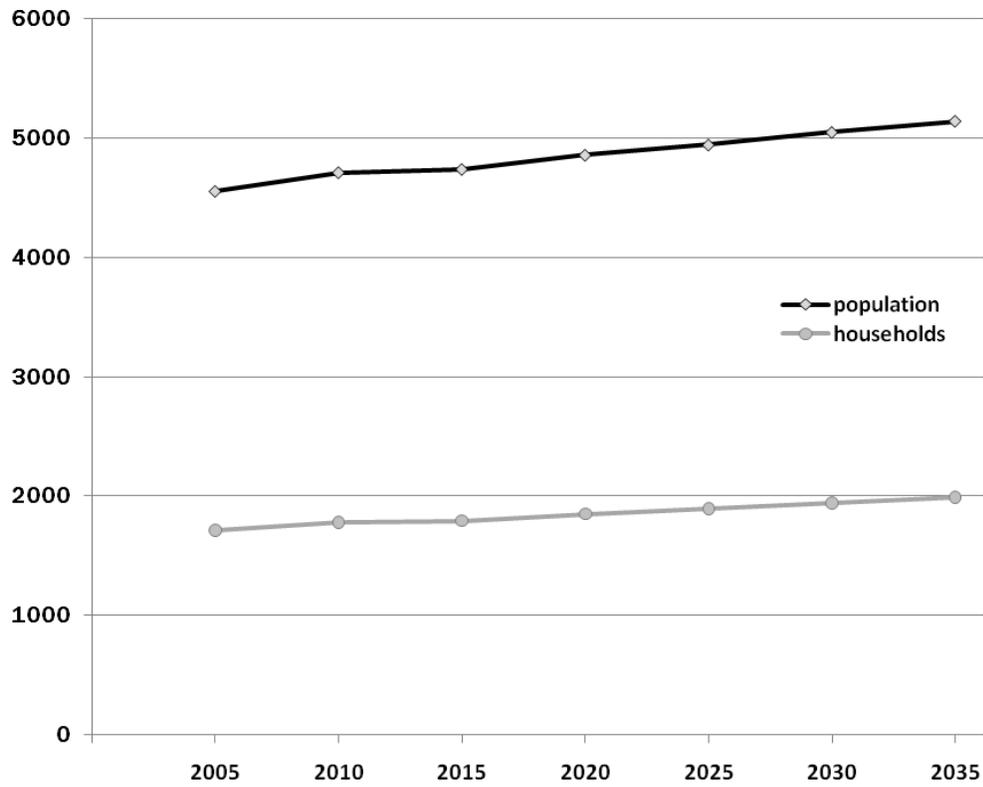


Table 3. Population Projections - Whiteford Township

Source: SEMCOG 2035 Regional Development Forecast (2008)

	population	households
2005	4,554	1,714
2010	4,711	1,780
2015	4,738	1,794
2020	4,857	1,852
2025	4,942	1,896
2030	5,048	1,943
2035	5,141	1,989
growth 2005 - 2035	587	275
percent change 2005 - 2035	12.9%	16.0%

Figure 5. Population Projections - Whiteford Township



NATURAL RESOURCES

Whiteford Township, situated in the extreme southwest corner of Monroe County, does not have as many of the natural resources other Monroe County townships have, such as: State Game Areas, Lake Erie, or a major tributary (River Raisin, Huron River or Maumee River), but it does have agriculturally productive soils and underlying limestone deposits. These resources are fragile and can be easily damaged through pollution, erosion, and uncontrolled development. It is important to understand the hazards that could befall these resources, and to address measures to manage and protect the frail equilibrium between man and nature. This section will describe the natural resources of Whiteford Township and their relationship to population.

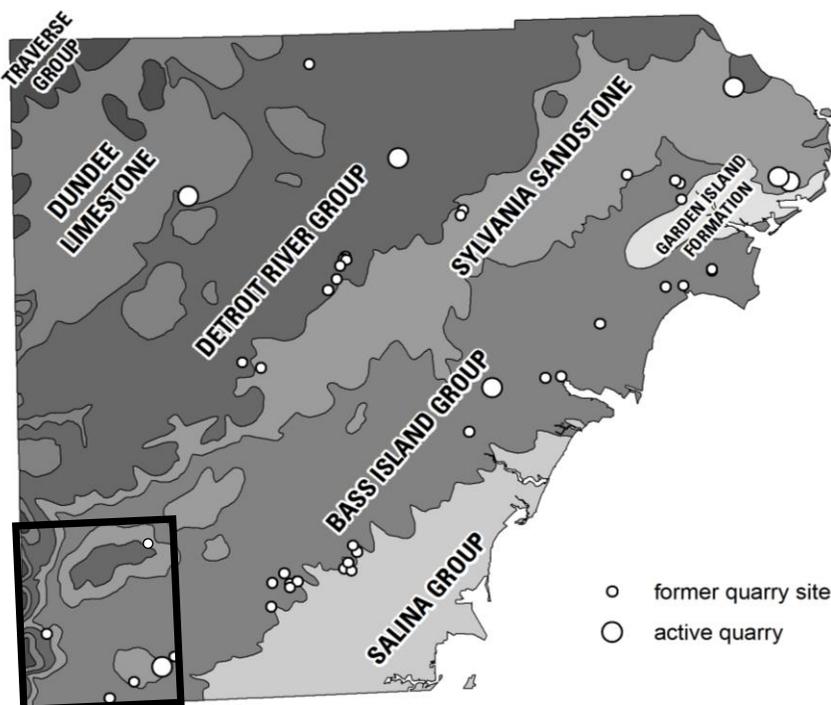
1. Bedrock Geology

Geological land formations can be very useful when developing a master development plan. This information can pose limitations on future land use. Fossil fuel and mineral deposits, groundwater reserves, sink holes, and outcroppings are examples of the types of information that can affect land use decisions.

Underlying Monroe County are Paleozoic strata that recede gradually to the northwest and consist mostly of limestone and dolomites (carbonate rock) with some sandstone and shale. The bedrock surface is not flat but irregular, featuring numerous valleys and ridges. Glacial drift, resting directly on the bedrock, varies in thickness from a few inches to nearly 160 feet (near the northwest corner of Milan Township). This layer consists mainly of clay till reworked by glacial lake water and coated by lacustrine sands, silt and clay.

Figure 6. Bedrock Geology

Source: Andrew J. Mazola (1974) *Geology for Environmental Planning in Monroe County, Michigan*.



The bedrock formations in Monroe County are a potential source of industrial minerals ranging from calcium limestone for cement and agricultural industries, shale for brick and pottery, to high quality quartz sand for glass and refractories. The bedrock underlying Whiteford Township runs the gamut of the formations that form the County's geology. The two most prevalent are the Bass Island group and the Detroit River group (**Figure 6**).

The Bass Island group consists mainly of dolomites and extends from the southern half of Berlin Township in a southwestern direction through the majority of Frenchtown Township, the City of Monroe and Monroe Township, the western two-thirds of LaSalle Township, the southeastern half of Ida Township, the northwest half of Bedford Township, and the majority of Whiteford Township. The primary use of this resource is in the construction industry, as crushed stone ranging from rip rap to crushed and sized aggregate for concrete. One quarry operation exists in the southeast portion of the Township off Sterns Road. Other such operations are located in Monroe and Berlin Townships.

The Detroit River group consists of the Anderdon, Amherstburg, Lucas and Sylvania formations, and occupies the northeastern two-thirds and the two inner most formations along the western third of the Township. A sizable deposit of the Sylvania formation is also located in the southeast portion of the community around the intersection of Sterns and Whiteford Roads (Sections 26 and 35). This is the location of the Stoneco Quarry operation, a division of the Old Castle Company.

The topography of the bedrock surface underlying Whiteford Township shows an undulating land form of low rising hills separated by channels or ravines (**Figure 7**). These channels are most noticeable in the southwest and west central portions of the Township. The topography gradually rises from the southeast to the northwest. The depth to bedrock (overburden) is less than 30 feet over much of the Township, and creates an inversion with the bedrock surface. In the southern and north central portions of the Township, the overburden thickness is less than 10 feet thick. It is in these latter areas of shallow bedrock that the building of foundations and utility construction (sewer lines) may be limited (**Figure 8**).

Figure 7. Topography of the Bedrock Surface

Source: Andrew J. Mazola (1974) Geology for Environmental Planning in Monroe County, Michigan

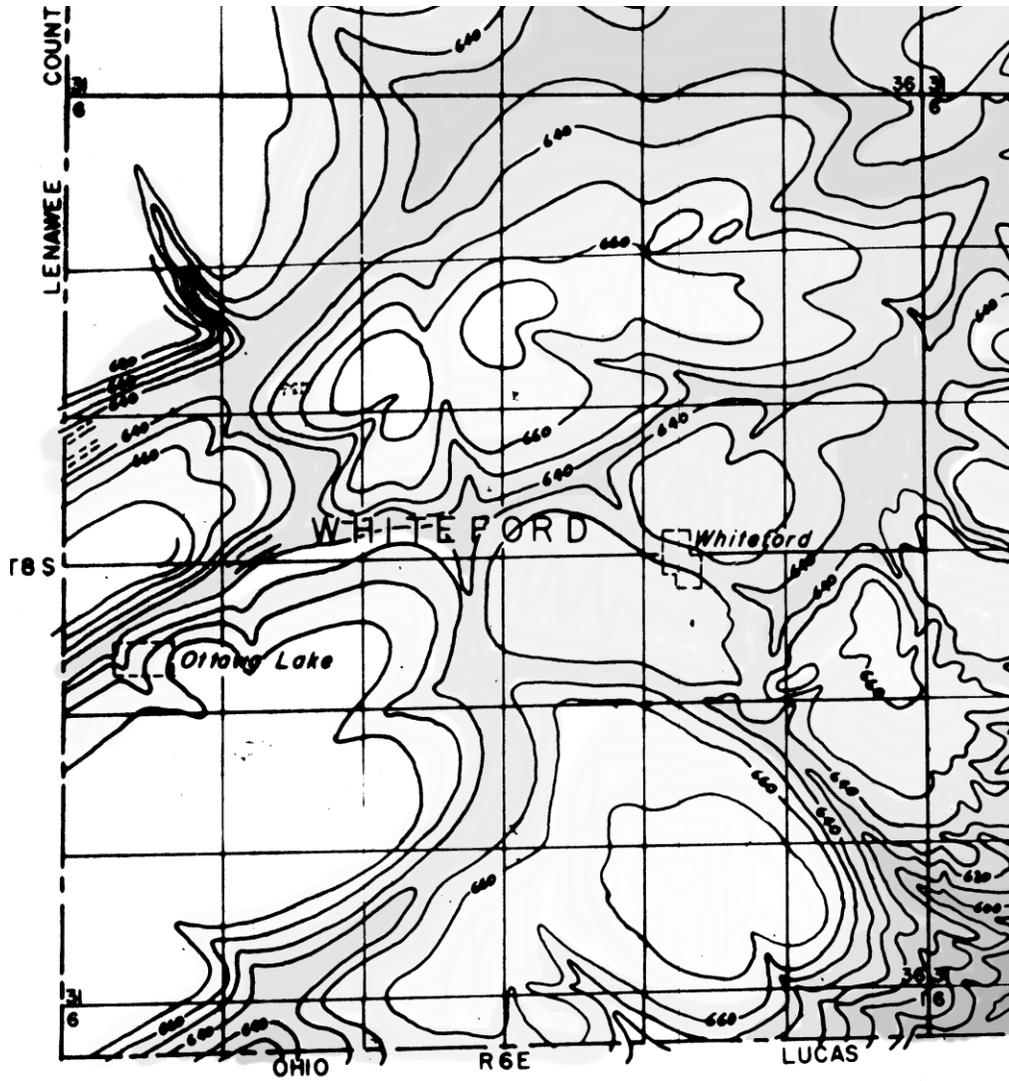
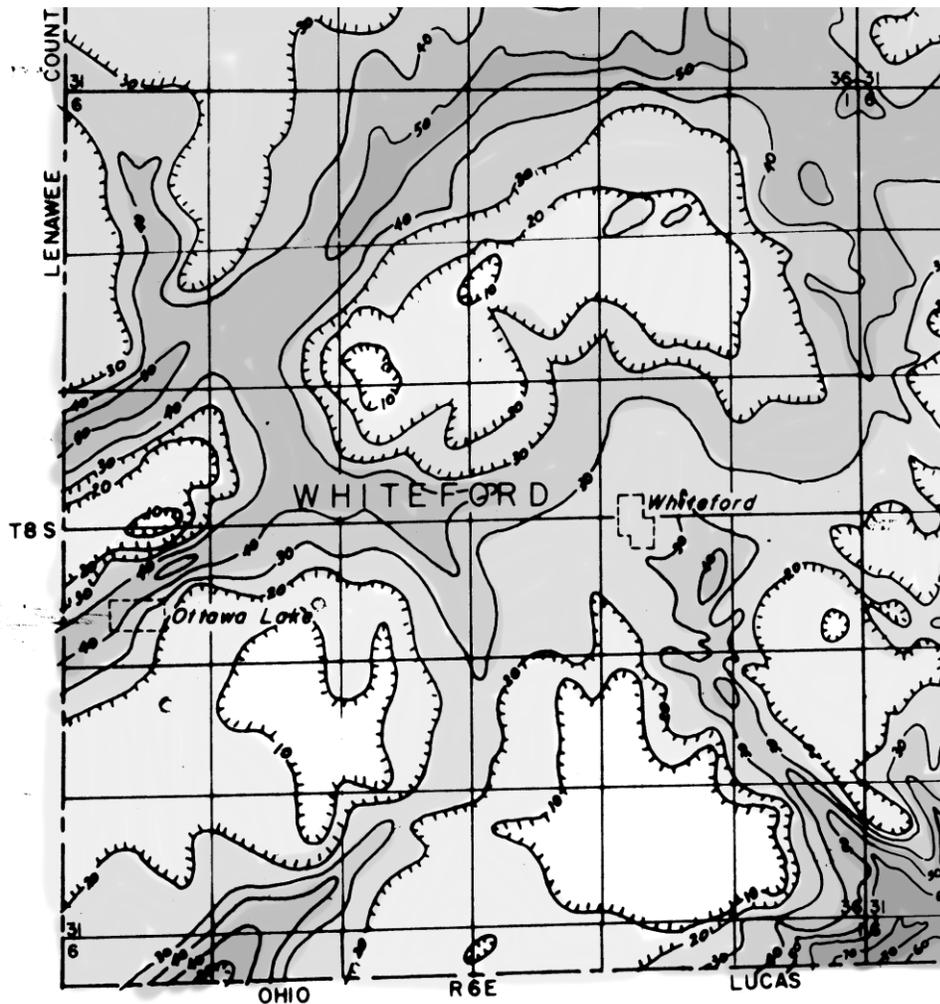


Figure 8. Overburden Thickness

Source: Andrew J. Mazola (1974) Geology for Environmental Planning in Monroe County, Michigan



2. Glacial Geology

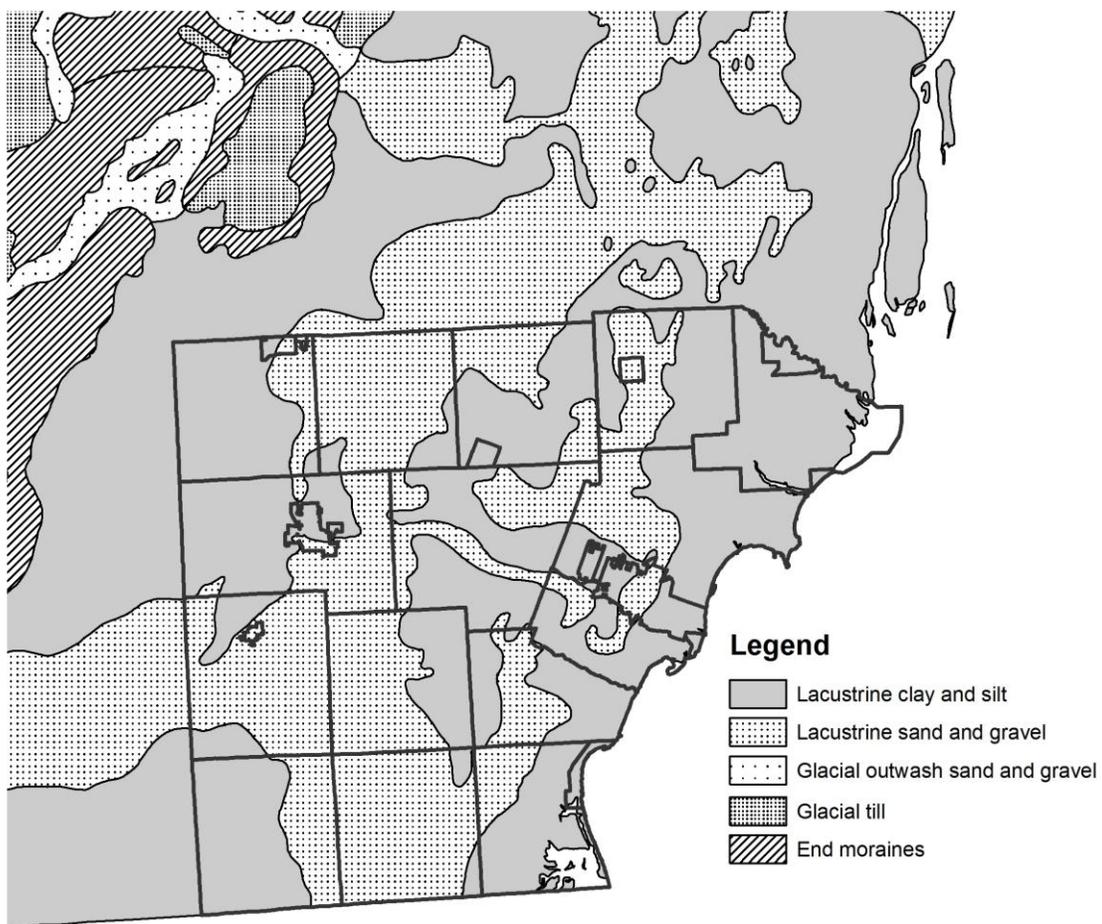
Most of the material covering the bedrock in Monroe County and the State of Michigan is the result of glacial meltwater. Our most recent ice age, called the Wisconsin Glaciation, around 12,000 years ago, covered the County with a sheet of ice approximately one mile thick. Glacial action altered the bedrock and left a layer of material called “till” as it melted. This till layer covers the majority of the County in the form of Lacustrine Clays and Sands mixed with varying of silts, pebbles and cobbles. Areas covered by clay deposits, or hard pan areas, can impede drainage. Above the till layer is another layer of unconsolidated material that was deposited when the glaciers melted, and the County was covered by a series of proglacial lakes. These glacial lakes were prevalent between 12,500 to 3,500 B.C. and covered much of Monroe County. As this series of lakes receded, their water levels left a chain of beach ridges throughout the County, from a low elevation of approximately 440 feet out in Lake Erie to a high of 735 feet in the northwest corner of Milan Township. One of these

beach ridges is located in the southwest portion of Whiteford Township, around the Village of Ottawa Lake. Some muck and peat deposits are sporadically found, primarily in the northeast portion of the Township.

This glacial action has left the area with deposits which eventually became productive agricultural soils, primarily the west two-thirds of the Township, and with deposits of sand and gravel with economic potential for mining which is currently being exploited.

Figure 9. Glacial Geology

Source: Andrew J. Mazola (1974) Geology for Environmental Planning in Monroe County, Michigan



3. Soils

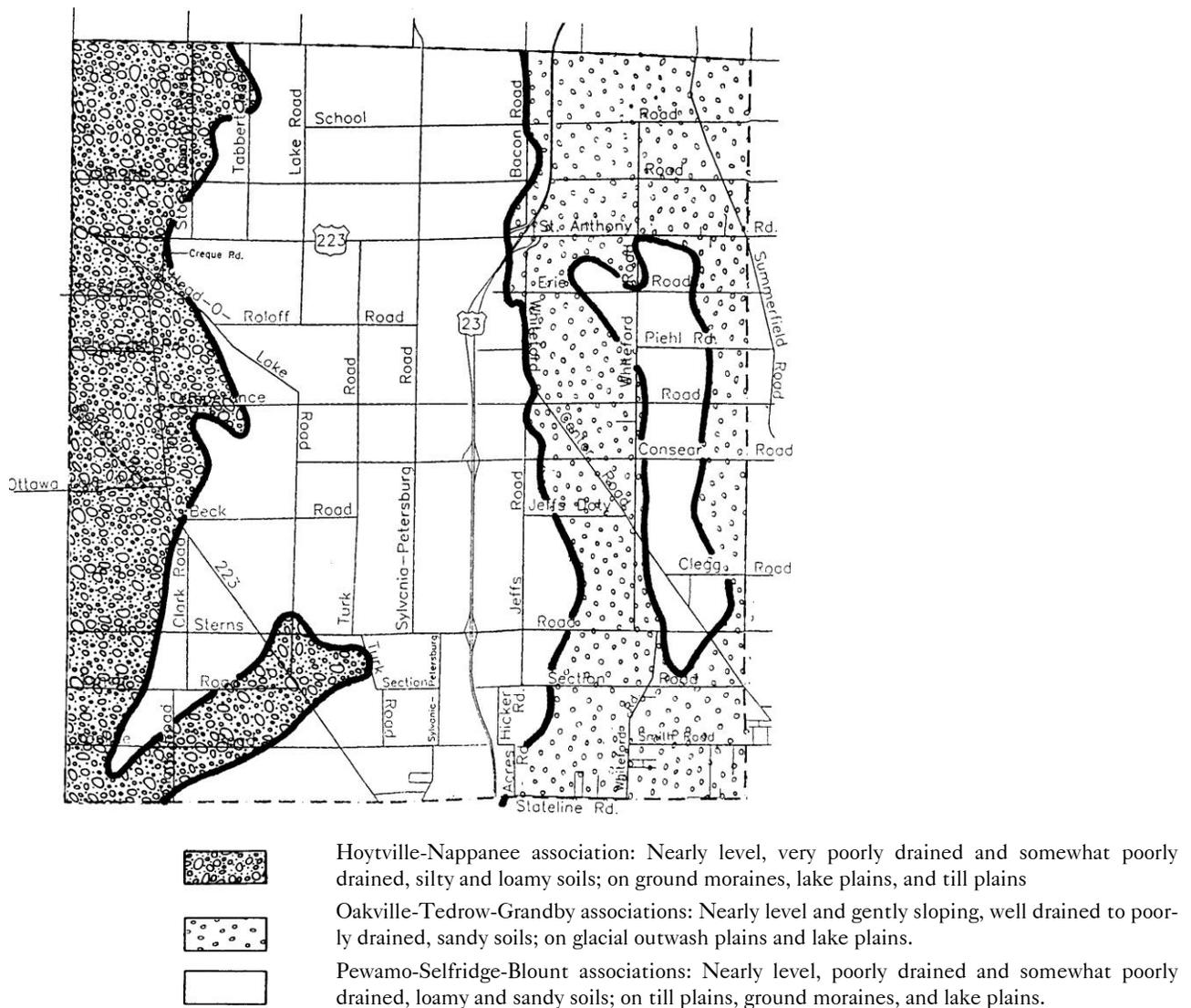
After the glaciers retreated and water levels receded, the materials deposited were changed by weathering, organic materials, erosion and time to create soil. Different factors, including the type of original or “parent” material, the type of plants growing on them, and the depth of the water level, worked on the glacial deposits and formed different types of soils with

unique characteristics. These soils occur in a mosaic-like pattern over the surface of the landscape. Soils with similar characteristics can be mapped as units and exist in this mosaic with other soils which have their own unique properties.

Hundreds of different soil types or “soil series” have been described and mapped by the Soil Conservation Service of the U.S. Department of Agriculture. There are approximately 25 different soil series in Whiteford Township; however, they are grouped into three main groups or “soil associations”: Hoytville-Nappanee, Oakville-Tedrow-Granby, and Pewamo-Selfridge-Blount (Figure 10).

Figure 10. General Soils Map

Source: USDA. Soil Survey of Monroe County.



The majority of the Township is comprised of the Pewamo-Selfridge-Blount association, as it appears to make up approximately 50 percent of the soils, a percentage that is comparable to

that of the County as a whole. These soils are normally situated on slight ridges and knolls. They are nearly level and poorly to somewhat poorly drained.

The Hoytville-Nappanee association comprises approximately 25 percent of the Township's soils, and are situated along the extreme western portion of the community, adjacent to Lenawee County. These soils are found in natural drainage ways and broad flat areas, are nearly level and are somewhat to very poorly drained. The Pewamo-Selfridge-Blount and the Hoytville-Nappanee associations are primarily suitable for farming.

The third soil group is that of the Oakville-Tedrow-Granby association, comprising the remaining 25 percent of the community, comparable with the County's 22 percent. This group is situated in the eastern third of the Township. Soils in this group are comprised of nearly level and gently sloping, well drained to poorly drained, sandy soils, on glacial outwash plains and lake plains. Unlike the other two soil associations, this group has fair to poor suitability for cultivated crops. The well drained and moderately well drained soils have the best suitability of any soils in the Township for building site development and for use as septic tank absorption fields.

4. Hydrology

Surface Water

The drainage pattern for Whiteford Township is primarily in a north-south direction in the east half and the lower one-third, with an easterly flow in the remainder of the community, eventually meandering to Lake Erie.

Three drains account for the majority of drainage within Whiteford: Halfway Creek, Ottawa Lake Outlet and the North Branch of the Ottawa River. Halfway Creek drains the northeast third of the Township and is situated primarily north and east of Whiteford Center Road. It crosses into Bedford Township just north of Section Road (**Figure 11**).

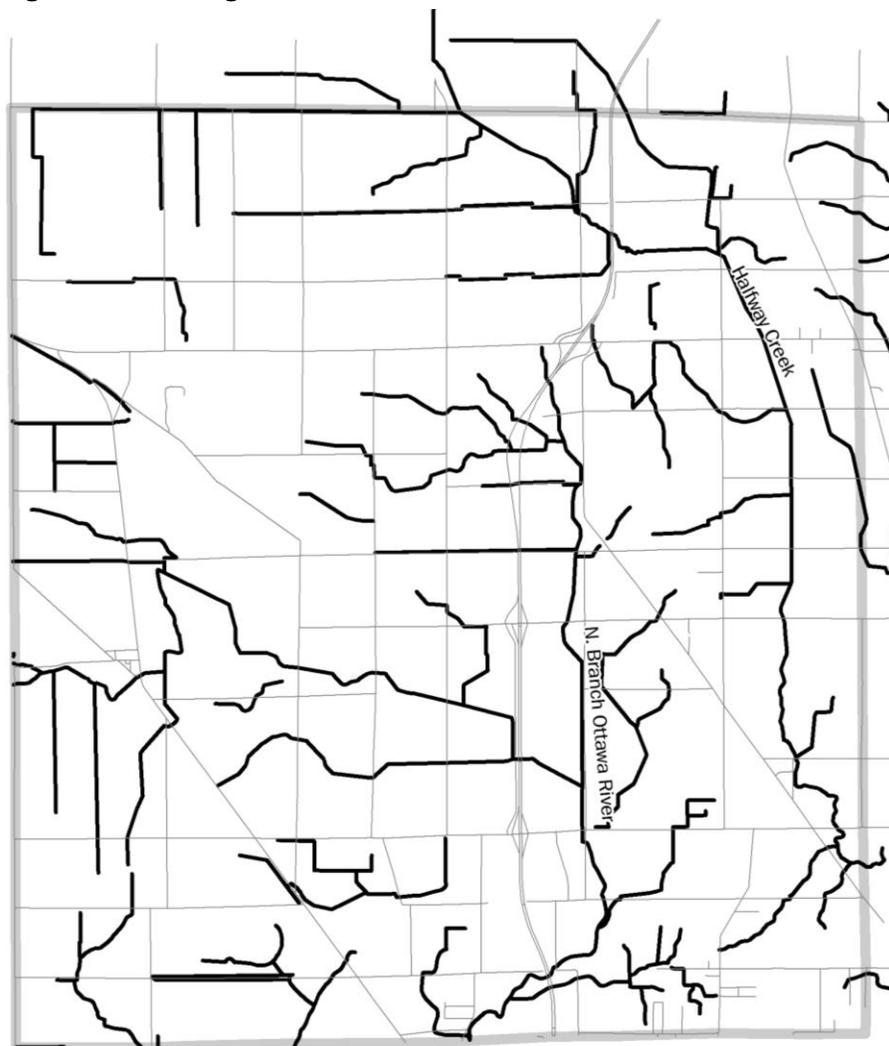
The Ottawa Lake Outlet and the North Branch of the Ottawa River combine to drain the majority of the remainder of the Township. It flows in a southern direction crossing into the City of Sylvania, Ohio.

The major planning concerns related to surface water in Whiteford Township are flooding and pollution. The relatively flat topography and poorly drained soils of the Township creates a significant potential for flooding. Flooding of the drains can occur after large storm events, especially in the early spring when the soil is frozen and runoff is high. The Federal Emergency Management Agency has provided detailed flood zone maps for the 100 and 500 year flood zones throughout the Township. Planning efforts should be aimed at identifying flood hazard areas and strictly regulating the types of land uses permissible in these areas (**Figure 12**).

Pollution of the surface waters in Whiteford Township can occur through a variety of means, including: in-flow of contaminated groundwater, agricultural runoff of sediment, farm chemicals and manure; residential fertilization, and illegal dumping. Planning efforts which could be taken to help prevent surface water pollution include: regulation of land uses in areas near water bodies, establishment of buffer zones between cultivated

lands and surface waters, encouragement of agricultural practices which reduce sedimentation and runoff, and regulation of hazardous materials used within the Township.

Figure 11. Drainage Patterns



Groundwater

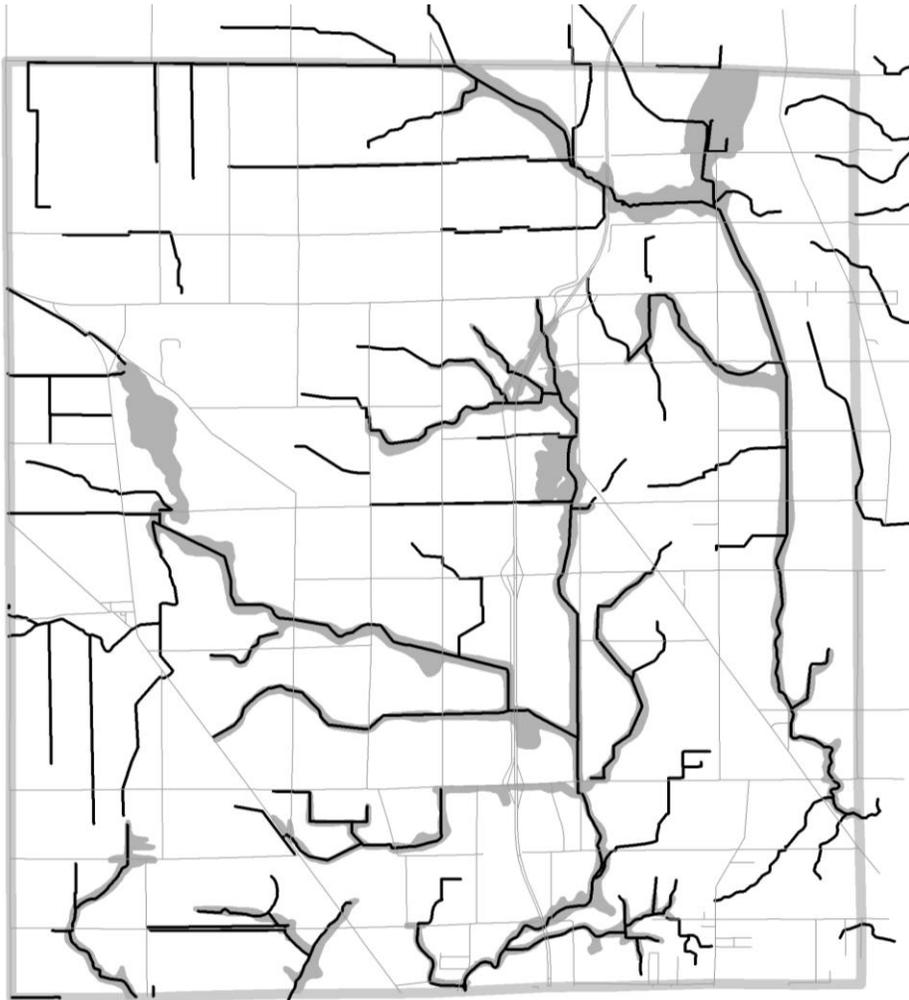
The groundwater supply of Whiteford Township is of particular concern in the planning effort, due to the fact that the residents depend on private wells for their source of water. Concerns related to groundwater include supply, quality and pollution.

The supply of groundwater is generally adequate for most uses. The water table is fairly close to the surface in most areas of the Township, although most wells are dug deep in order to tap aquifers located within the bedrock rather than the groundwater which may be “perched” on the surface of the bedrock. There are two major aquifers in Monroe County: the Silurian-Devonian and the Glacial aquifers. The Silurian-Devonian aquifer has a major recharge area in the vicinity of the intersection for Bedford, Ida, Summerfield and Whiteford Townships. In this area, the glacial drift is relatively thin and large

areas are sandy. Recharge in this area is from infiltrating precipitation, and the water table is below the bedrock surface.

Figure 12. 100-Year Flood Plain

Source: Federal Emergency Management Agency Q3 Flood Mapping



The quality of the groundwater is of concern to many users due to naturally occurring chemicals dissolved in the water, including calcium carbonate which creates “hard” water, and hydrogen sulfide which can create an unpleasant odor. The latter is only prevalent in the extreme western portion of the Township, around the unincorporated community of Ottawa Lake. Water softeners or other treatments by well water users can often solve these problems.

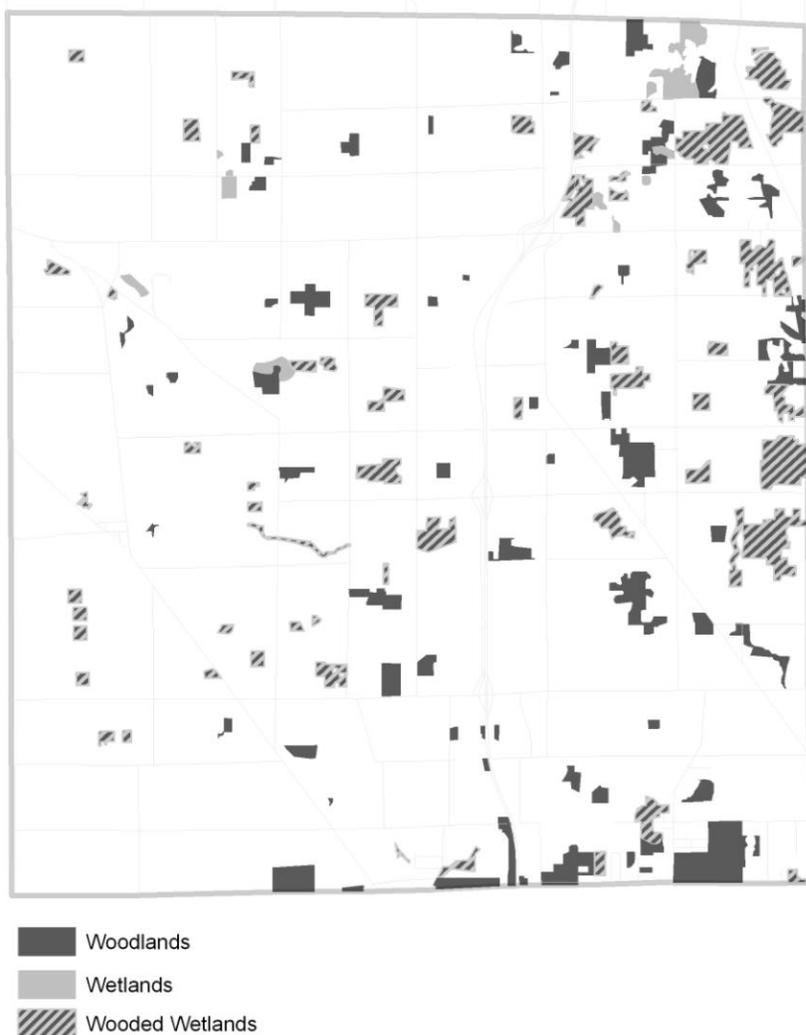
Groundwater pollution is a more serious concern. The migration of pollutants, either through the soil or through surface waters, can contaminate groundwater supplies. Sources of potential pollution include: leaking underground storage tanks, chemical spills, agricultural chemicals, leaking or improperly installed septic systems, and runoff

from roads, parking lots, and other areas. Planning efforts which can be taken include: community education, identification of areas with high potential for groundwater pollution, land use regulation, control of

5. Vegetation

Prior to 1850, most settlement in Monroe County was confined to river valleys; namely, the Huron, Raisin and Maumee regions. The vegetation and known travel routes restricted development to only the most accessible areas. At this time, Monroe County was described as having three vegetation zones, wet prairie, oak savannah, and swamp forest. There were also small clusters of Beech-Maple and mixed forests of moderately moist flora species.

Figure 13. Existing Vegetation



The Elm-Ash Swamp Forest zone comprised approximately 80 percent of Whiteford at that time, with the freshwater marshes and bogs occupying the remaining twenty percent in a wedge shaped portion of the NE ¼ corner of the community.

During colonization, the forests were cleared for timber and prepared for the cultivation of crops and pasture land for farms. Today the vegetation pattern is only a remnant of what it was at the turn of the eighteenth century. Some large tree stands are scattered throughout the Township, with the majority located east of U.S. 23. Fragments of the freshwater marshes and bogs are still visible today in the area of Whiteford and School Roads. **Figure 13** illustrates the location of these wetlands and woodlots.

Planning concerns relative to vegetation in Whiteford Township should involve the preservation of the remaining wetlands and woodlots.

Trees not only provide visual and aesthetic benefits, they serve as wildlife habitat and recreation areas; they also aid in preventing soil erosion, and act as flood retention and absorption areas. Owners of woodlots should be encouraged to preserve and enhance the existing woodlots in the Township, and others should be encouraged to establish windbreaks and plant trees along the Township roads.

Similarly, the bogs in the northeast portion of the Township and the areas adjacent to the tributaries throughout the community are quite important for their flood water storage capability, filtration of stormwater runoff, wildlife habitat and recreational benefits. Large numbers of waterfowl, deer and other animals utilize these areas on an annual or seasonal basis.

PUBLIC UTILITIES & SERVICES

Land use patterns in Whiteford Township have and will continue to affect the planning of public utilities and services. Included in these services are water, energy, transportation, solid waste and sewage disposal. The following is a discussion of the existing services and utilities in Whiteford Township.

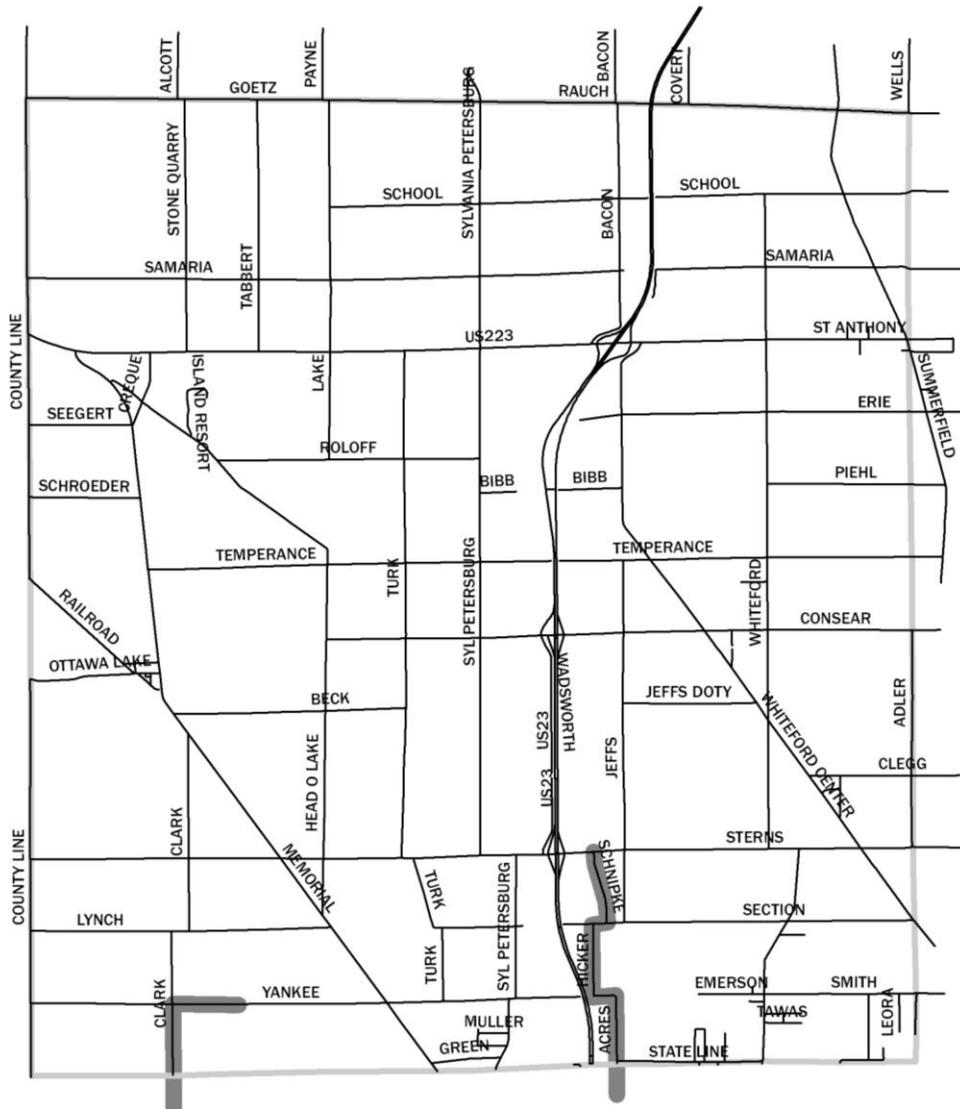
1. Wastewater Treatment

The proper disposal of wastewater is essential in protecting human health and the environment. Two basic types of systems are commonly used to treat wastewater: community-wide collection and treatment, and on-site, privately owned and operated treatment systems.

The majority of Whiteford Township depends on on-site private wastewater treatment. Only in the extreme southern portion of the Township are there any public sanitary sewer lines. One line serves only Yankee Road and Clark Roads in Section 32. A second sewer line just east of U.S. 23 serves Midwest II on Section Road and future developments in the Schnipke Road area. Both of these sewer lines are force mains and a part of the Sylvania, Ohio Waste Treatment System (**Figure 14**).

On-site treatment generally consists of wastewater flowing into an underground septic tank where solids settle out and are slowly decomposed, while liquid wastes flow into a subsurface drain field where wastewater is treated by soil micro-organisms. This type of system is functional only where groundwater levels and soil conditions are suitable. The water table must be well below the septic drain field in order to prevent groundwater contamination. Soils must be permeable enough to allow slow percolation of water through the soil, but not too dense (the wastewater would rise to the surface) or too permeable (the wastewater would seep into groundwater supplies without adequate decomposition in the soil).

Figure 14. Sewer Service Areas



2. Water Supply

Whiteford Township residents depend on private wells for their water supplies. These wells vary in depth throughout the Township. Due to a bacteriological problem, Whiteford Township is under a “well first” policy. Prior to the issuance of a permit for new construction, a well must be drilled first and approved by the Monroe County Health Department.

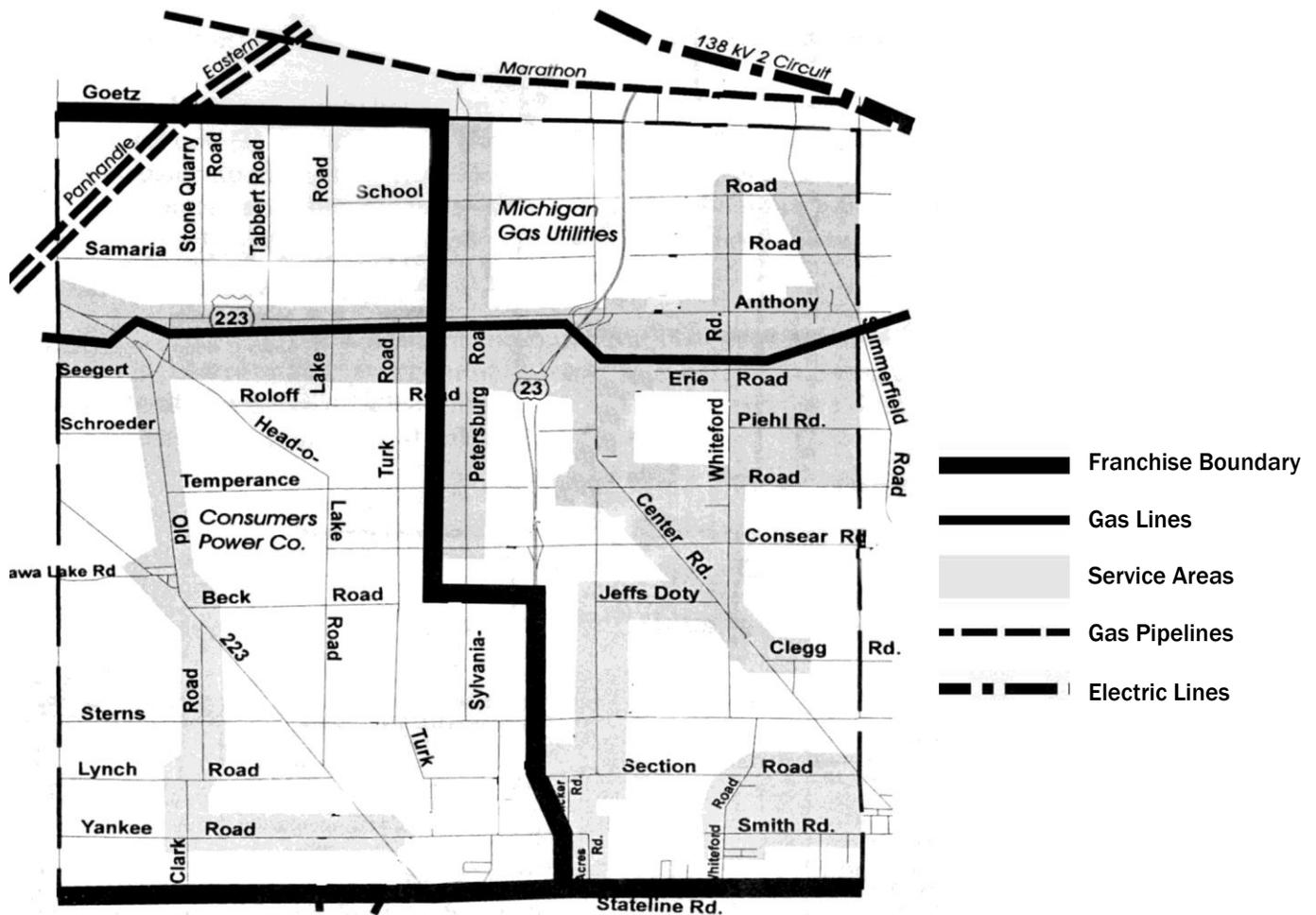
Information concerning the wells in the Township is limited beyond the depths of each well recorded at the Environmental Health Division of the Monroe County Health Department. Sink holes and drainage wells for agricultural purposes are suspected causes of the bacteriological contamination problem in the Township, along with failed and/or improperly installed septic systems.

3. Gas & Electric

Two utilities provide natural gas service to Whiteford Township: Consumers Energy and Michigan Gas Utilities. Franchise boundaries and service areas are depicted on **Figure 15**. There are also four gas pipelines that cross through the Township. These include Panhandle Eastern and Buckeye, each having two separate lines. Marathon has a line running in a south-east to northwest direction just north of the Township.

Electricity is supplied by the Consumer's Energy Whiting Generating Plant in Luna Pier. There are no major transmission lines or power stations within the Township, although a 120-138 KV transmission line, serving Jackson, bypasses the northeast corner of the Township (**Figure 15**).

Figure 15. Natural Gas Service Areas, Gas Pipelines and Electric Transmission Lines



TRANSPORTATION

A good transportation network is vital to any community. Modes of transportation are varied: bicycles, cars, airplanes, trains and even boats. Modes of transportation and transportation systems available to Whiteford Township are described below.

1. Roads

The National Functional Classification System (NFCS) is a major component of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). The NFCS is the process by which streets and highways are grouped into classes, according to the level of service provided. Basic to this process is the recognition that individual roads and streets do not direct travel independently. Rather, most travel involves movement through a network of roads. It becomes necessary then to determine how this travel can be channeled within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of travel through a highway network. The NFCS defines eight categories of thoroughfares according to their specific function. These include: Interstate, Principal Arterial-Freeway, Principal Arterial-Non-Freeway, Minor Arterial, Urban Collector, Major Collector, Minor Collector, and Local Streets and Roads (**Figure 16**). These categories are further divided into two primary divisions: Principal Arterials and Other Functional Classifications, and further classified as either Urban or Rural. The three Urban Areas in Monroe County are the City of Monroe and parts of Detroit and Toledo.

There are approximately 105 miles of rights-of-ways in the existing highway systems and roads within Whiteford Township. This includes almost 11 miles of Principal Arterials, Federal or State facilities, such as interstate highways, freeways (U.S. 23) and non-freeway routes (U.S. 223), 37 miles of County Primary Roads that include Minor Arterials, Urban Collectors, Major Collectors and Minor Collectors, and 58 miles of Local Roads. In addition, there is a small portion of the Toledo Urban Area Boundary in the southeast corner of the Township. This boundary is utilized for both census and transportation planning purposes. **Figure 16** identifies the road classification system both physically (by name and type) and graphically (by pattern). In clarification to the Urban and Major Collector pattern being the same, it should be noted that they are for all intents and purposes the same type of road, however, Urban Collectors are only situated within designated urban areas and Major Collectors are situated only in rural areas. It should be noted that Minor Arterials and above can be situated in either urban or rural areas.

Figure 16. Road Classification System

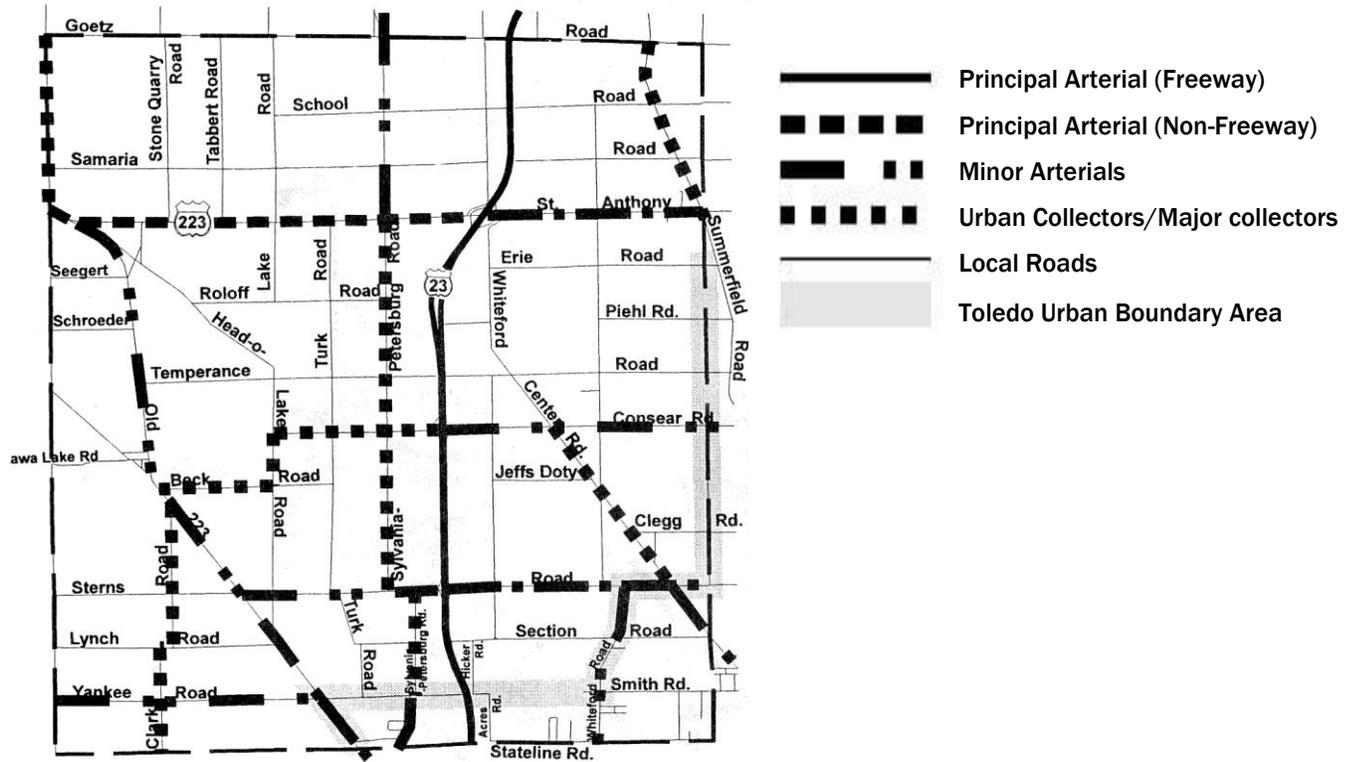


Table 4. Road Miles by Classification

	<u>Miles</u>		<u>Miles</u>
Principal Arterial - Freeway		Major Collectors	
U.S. 23	6.75	Memorial Hwy from U.S. 223 to Yankee Road	5.10
Principal Arterial - Non Freeway		Consear Road east of U.S. 23	2.40
U. S. 223 from U.S. 23 west to the Lenawee Co. Line	4.05	Sterns Road between Memorial Hwy and U.S. 23	1.85
Minor Arterials		Yankee Road west of Memorial Hwy	2.40
St. Anthony east of U.S. 23	2.00	Head-O-Lake Road south of Sterns Road	0.40
Sterns Road east of U.S. 23	2.40	Sylvania - Petersberg Road north of U.S. 23	1.70
Memorial Hwy south of Yankee Road	0.60	Minor Collectors	
Urban Collectors		Lenawee County Line Road north of U.S. 223	1.60
Sylvania - Petersberg Road south of Yankee Road	0.50	Clark Road south of Memorial Hwy	2.45
Whiteford Road south of Sterns Road	1.50	Sylvania-Petersburg Rd. from U.S. 223 Yankee Rd	4.40
Whiteford Center Road south of Sterns Road	1.95	Whiteford Center Rd. from Consear Rd. to Sterns Rd.	1.80
		Ottawa Lake Road west of Memorial Hwy	0.90
		Beck/Head-O-Lake/Consear fr. Memorial Hwy to U.S. 23	3.10
		The remaining roads are all considered local roads	<u>58.00</u>
		Total	105.35

2. Air Transportation

In Michigan the Federal Aviation Agency (F.A.A.) and the Michigan Aeronautics Commission (M.A.C.) control the design, construction, and maintenance of airports. The F.A.A. and M.A.C. also control the location of publicly owned, international, regional and municipal airports. Private landing fields and airports, which must comply with F.A.A. and M.A.C. specifications, are controlled by local zoning. The Toledo Suburban Airport, in the southeast portion of Whiteford Township, is the only state recognized facility in the community.

Monroe County has seven F.A.A. and M.A.C. recognized private airports and airfields and one public facility. The public airport is the Monroe Custer Airport located on North Custer Road in the City of Monroe. The Monroe Custer Airport is used both for private and commercial flights, and is classified as a general aviation/reliever airport. The Toledo-Suburban Airport in Whiteford Township is a privately owned facility, classified as a general utility facility.

There are two airports in southeast Michigan, Detroit Metropolitan Airport and Detroit City Airport, and one in northwest Ohio, Toledo Express Airport, that provide scheduled passenger service. Toledo Express is only 15 miles from Whiteford Township, while Detroit Metro is an estimated 50 miles away.

3. Rail Transportation

Only one rail carrier, Norfolk-Southern, provides service to Whiteford Township, and that consists of a 1.5 mile section of track along the west side of Memorial Highway that serves the grain facilities. This rail line links these facilities to the Port of Toledo, as well as other railroad systems.

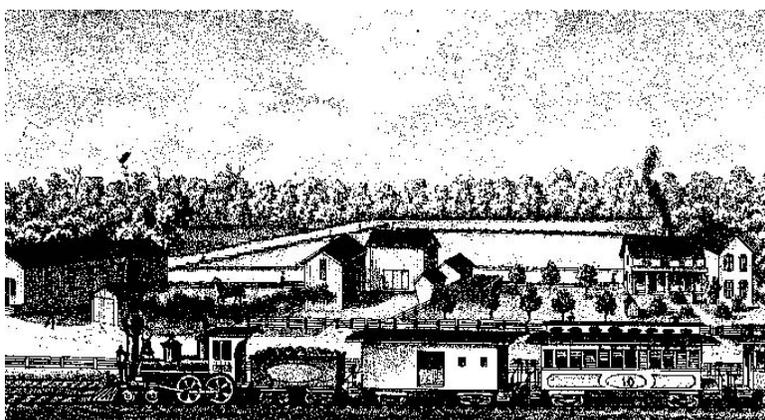
4. Public Transportation

While the Lake Erie Transportation Commission does not provide regular service to Whiteford Township, elderly and handicapped persons throughout Monroe County can utilize the Essential Transportation Service (ETS). The ETS provides curb-to-curb transportation by subscription, advance reservation, or on a demand-response basis. Whiteford residents, in the eastern portion of the community, can take advantage of the Bedford Dial-A-Ride service. This is a demand-responsive service which provides curb-to-curb service for all passengers within a designated service area. They also interconnect with the Toledo Area Regional Transit Authority (TARTA) at Alexis Park, Northtowne Mall, and Miracle Mile Shopping Center.

EXISTING LAND USE

The following land use map was developed by SEMCOG and the County of Monroe, with the 2005 data created with the assistance of the Whiteford Township Planning Commission.

Table 5 compares the amount of land in different general land use categories for 1990, 2000 and 2005. Some of the more significant changes between 1990 and 2005 include the loss of approximately 2,000 acres of farmland, the addition of approximately 1,000 acres of residential land, and the almost doubling of the amount of land in recreation, primarily golf courses.

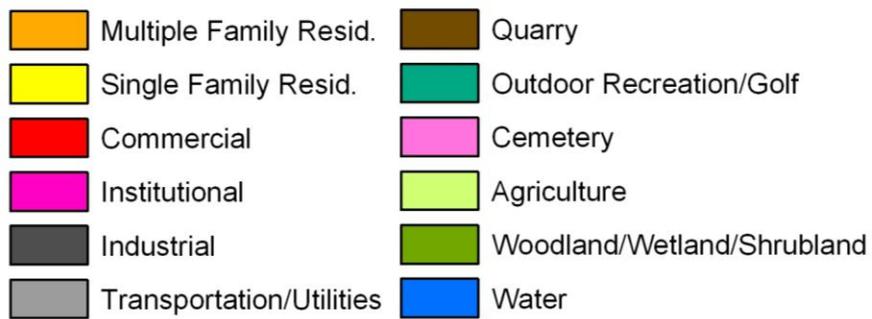
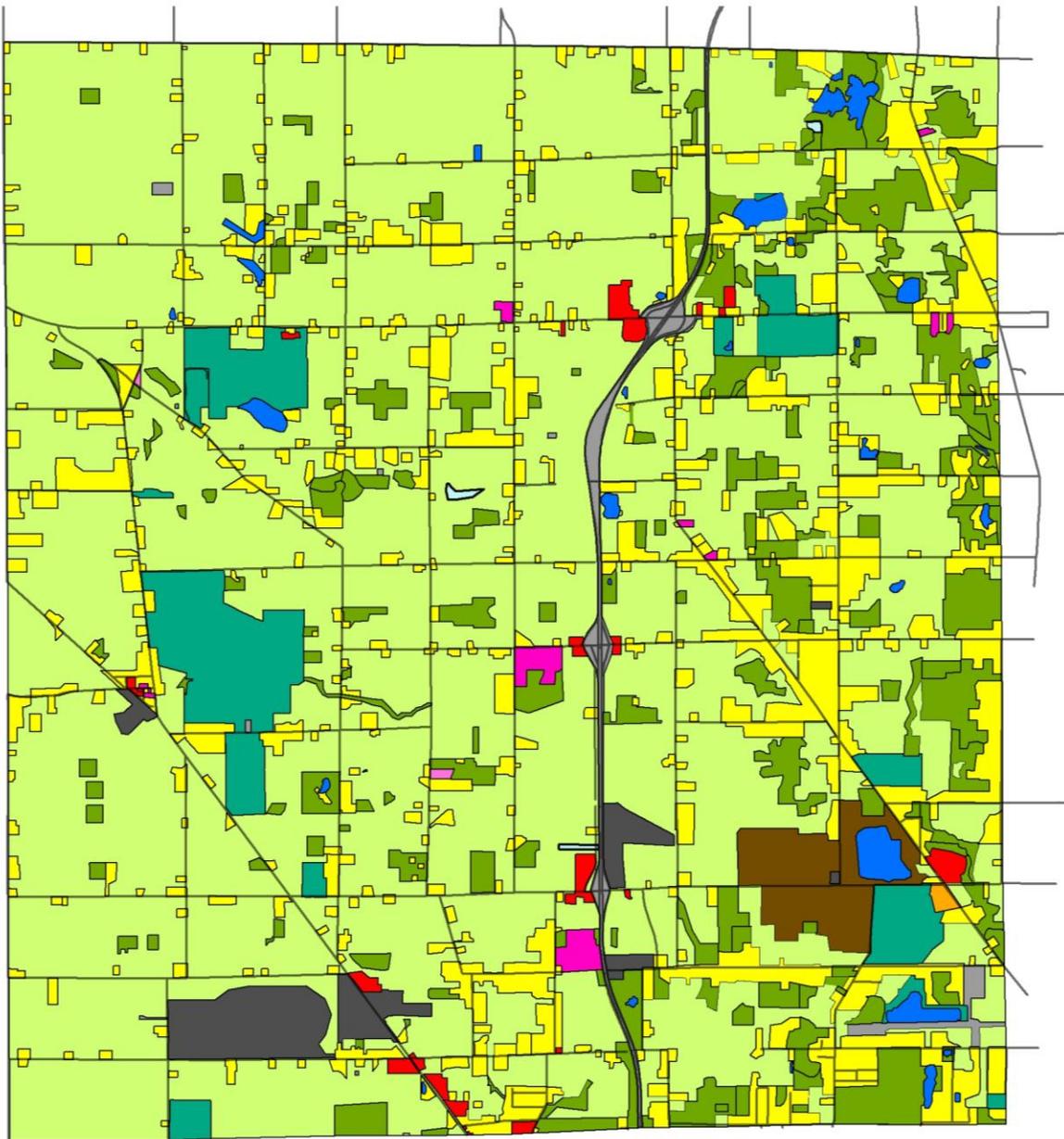


Woodcut Print of Residence and Blacksmith Shop of Anthony Bordeaux, Section 29 Whiteford Township from the Atlas of Monroe County, F. W. Beers & Company, New York - 1876

Table 5. Whiteford Township Land Use Change Report 1990-2000-2005

Land Use Category	1990		2000		2005		change 1990 - 2005	
	acres	percent	acres	percent	acres	percent	acres	percent
residential	2642.1	10.3%	3247.2	12.6%	3630.7	14.1%	988.6	37.4%
commercial	17.7	0.1%	90.2	0.4%	152.1	0.6%	134.3	758.0%
institutional	52.0	0.2%	52.0	0.2%	98.6	0.4%	46.6	89.8%
industrial	424.4	1.7%	463.6	1.8%	451.3	1.8%	26.9	6.3%
trans., comm., utilities	261.2	1.0%	271.5	1.1%	263.6	1.0%	2.4	0.9%
mining	201.8	0.8%	324.2	1.3%	353.9	1.4%	152.0	75.3%
recreation/cemeteries	386.3	1.5%	970.0	3.8%	1121.5	4.4%	735.2	190.3%
agriculture	18843.7	73.3%	17433.5	67.8%	16858.8	65.6%	-1984.9	-10.5%
forested/non-forested	1392.8	5.4%	1496.5	5.8%	1433.2	5.6%	40.4	2.9%
wetlands	1164.9	4.5%	1115.3	4.3%	1111.9	4.3%	-53.0	-4.5%
water	322.3	1.3%	251.4	1.0%	251.4	1.0%	-70.9	-22.0%
total	25709.2	100.0%	25715.2	100.0%	25726.9	100.0%	—	—

Figure 17. Existing Land Use



GOALS & OBJECTIVES

The most critical task during the formation of the land use plan is to develop a set of goals and objectives for the community leaders to utilize in guiding future development efforts and for evaluating the appropriateness of land use proposals. Goals are statements regarding a desired outcome, while objectives represent more specific actions, which, when taken, will achieve the desired goal. The following is a list of goals established for Whiteford Township, each followed by a set of objectives to assist in achieving the goals.

Overall goal and vision statement:

Whiteford Township should continue to be a rural community of people committed to the level of appropriate and sustainable development that will make our township an attractive setting for future generations to also call home.

Goals and Objectives:

A. To encourage a sense of community and family.

- Explore opportunities for the development, improvement, and/or expansion of community facilities such as schools, parks, libraries, community centers, and a Town Hall.
- Consider a consolidated center for public activity, where the facilities listed above could be concentrated in a unified setting.
- Provide opportunities for public input in the planning process and in all community development activities.

B. To make planning a local community effort to direct the Township's future and to protect the health, safety, and welfare of the community.

- Encourage citizen participation in the Township's planning and decision making process.
- Regularly monitor and update Township plans and zoning ordinances, at a minimum, in accordance with the Michigan Planning Enabling Act's requirement for a review every 5 years.

C. To preserve agricultural land and rural character, to support the viability of agriculture and to recognize the importance of agriculture for a healthy and diverse economy, for the quality of the environment, and for the heritage and culture of the community.

- Identify those areas of the township best suited for designation as agricultural preservation areas and enact policies and programs to maintain these areas as farmland.
- Maintain agricultural districts through effective zoning, including lot size and frontage restrictions, use provisions, and sufficient flexibility to provide for various forms of agriculture and agricultural related pursuits.
- Use tools such as purchase of development rights, farmland preservation agreements, transfer of development rights, conservation easements, and other voluntary programs to assure the long-term viability of farmland and open space.

- Encourage cooperation with the various agencies and other programs to reduce erosion of farmland, maximize production, and prevent conversion to other land uses.
- Promote land uses and infrastructure improvements which compliment agriculture and the agricultural economy, such as seed and implement sales, agricultural product processing facilities, transportation and sale of farm products, and similar uses.

D. To relate land uses to land capabilities.

- Encourage development only in those areas where utilities, roads, drainage, soils, natural features, and existing and surrounding land uses are capable of supporting the proposed use without significant impact or conflict.
- Maintain effective zoning, land use, site plan and subdivision controls.

E. To create a pleasing environment for living in Whiteford Township with a variety of housing types for all tastes and incomes, taking into account environmental limitations on development.

- Create effective zoning controls on residential development.
- Utilize site plan reviews and other building controls to achieve quality development in a pleasant environment.
- Limit residential development to those areas that are suitable.

F. To relate the development of the Township to the development of the County and region.

- Encourage the Township’s representation and participation in County, regional and state planning.
- Monitor the development and planning activities in surrounding communities.

G. Provide an environment for commercial activities in designated areas that have required facilities and not allow commercial activities in scattered spots or strips throughout the Township.

- Maintain effective zoning and land use controls.
- To concentrate commercial development in close proximity to urban centers and along U.S. 23 at major interchanges.

H. Allow for industrial expansion where it will have the least conflict with surrounding land uses, that maintains environmental integrity and where utilities are available.

- Maintain effective zoning and land use practices.
- Support industrial development adjacent to existing industrial activities.
- Support the use of railroads and freeways for industrial shipping purposes within the Township.
- Promote the Township as an especially well suited location for “green” industries, technology related businesses, research and development parks, and similar uses that are likely to attract clean industries, high paying jobs, and a stable tax base.

I. To use tax dollars efficiently by avoiding the duplication of services, and to put government on a sound financial basis.

- Investigate grants and matching funding from a variety of sources to finance capital improvements.
- Strive for improved coordination between various governments' capital improvement planning.

J. Sewer and/or water service should be provided to selected areas of the Township only after careful assessment of the social, environmental, and economic costs and benefits involved in providing these services.

- Monitor the public health and safety concerns related to on-site sewage disposal and ground water quality.
- Explore the availability of federal and state grants to provide public utilities to the Township.
- Establish water districts, both as expansions of South County Water and the City of Sylvania systems, primarily as a means to solve public health issues and as an economic development tool.

K. To preserve the natural features of the Township.

- Encourage the preservation and restoration of woodlands, wetlands, prairie, and other natural areas.
- Encourage the planting of windrows and buffer strips as a means of preventing soil erosion and sedimentation.
- Maintain the quality of ground and surface water in the Township by promoting soil conservation, sewage treatment, solid waste disposal, the proper use of agricultural and industrial chemicals.
- Identify the unique karst resources in the Township and take efforts to protect these and other areas which are vulnerable to groundwater pollution.

L. To preserve the historic, cultural and aesthetic features of Whiteford Township.

- Inventory the unique and historic buildings, landscapes, cemeteries, and cultural resources in the Township.
- Encourage the preservation and adaptive reuse of historic structures.
- Encourage efforts which protect the rural atmosphere and scenic quality of Whiteford Township, such as blight control, farmland preservation, and the planting and protection of native vegetation.

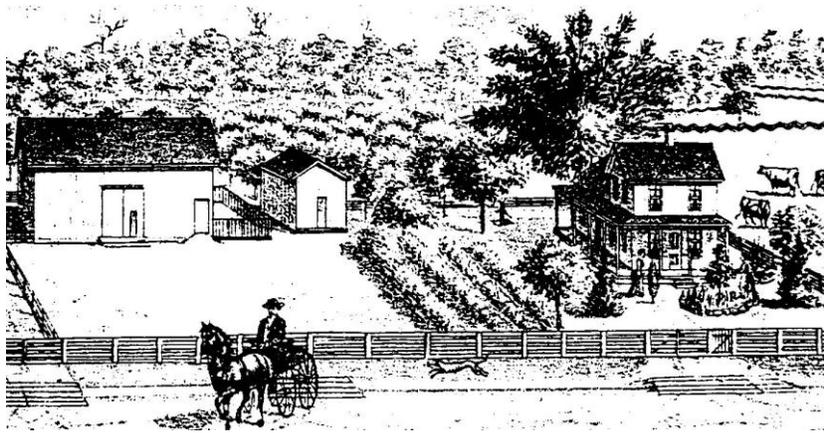
M. Provide for present and future recreational needs of all citizens of the Township.

- Promote the preservation and improvement of existing parks, both public and private.
- Support the development of a park and open space in any new residential development.
- Support the development of non-governmental recreational facilities, as long as the proposed developments do not conflict with land use plans and policies.

- Explore expanded opportunities for bicycling and walking, for exercise and recreation as well as for transportation.

N. Improve the vehicular circulation of the Township to provide for the smooth and efficient flow of automobiles, trucks, buses, farm equipment and emergency vehicles.

- Support the development of an overall transportation and maintenance program for the Township, in accordance with state, regional and county agencies, under the auspices of federal transportation funding programs.
- Document the need for public transportation programs in the Township and promote the expansion of services, especially for seniors and persons with disabilities.



Woodcut Print of Residence of Mrs. Margett Ferris, Section 4, Whiteford Township from the Atlas of Monroe County, F. W. Beers & Company, New York - 1876

LAND USE PROGRAM

This portion of the Land Use Plan is intended to function as a guide to future land use for Whiteford Township. Agricultural, residential, commercial, industrial and recreation/open space land uses are described in terms of existing conditions, opportunities, policies, and the process used to develop the future land use map. Besides the above land use categories, this section will address the potential availability of public utilities (sewer and water) to Whiteford Township and those areas most appropriate, and to address the transportation needs of the Township.



Woodcut Print of Residence of Eld. J. Wilder, , Ottawa Lake from the Atlas of Monroe County, F. W. Beers & Company, New York - 1876

A. AGRICULTURAL LAND USE

With the absence of public utilities that could boost the economic opportunities to the community and with approximately 66 percent of the land oriented to agricultural pursuits, Whiteford must address the preservation of their primary land use. Agriculture includes cropland, orchards, bush fruits, vineyards, horticultural areas, pastures and feed lots.

In the past, agriculture was usually looked upon as an alternative land use by planners and communities. Land not deemed suitable or designated for building was categorized as agricultural. Under this section of the plan, all lands will be considered as potential agricultural areas. They will be tested against set criteria to identify those lands that are not suited to agriculture and separate those where farming is not the best use of the land. The measurements used to determine the lands best suited for agriculture are:

- Soil capabilities
- Act 116 - Farmland Agreements
- Large parcels (35-40 acres)
- Existing farmland

These measurements can be further classified as physical or socio-economic.

1. Physical Criteria

The suitability of land for farming is very dependent on the physical characteristics of the land; namely, soil conditions. Soil is perhaps the most significant influence on whether or not a parcel of land is capable of supporting agriculture.

Two physical characteristics have been taken into consideration in an attempt to identify highly productive agricultural land within Whiteford Township. These include prime agricul-

tural soils and Class II soils. These two physical characteristics were selected because they could be easily measured, and were not subject to change. While the following two physical characteristics are not meant to be exclusive, they do represent important factors that have a direct influence on the suitability of land for farming. Both of these physical criteria utilize soil data available through the Soil Survey of Monroe County, completed in 1981 by the United States Department of Agriculture. Each of these physical factors is discussed in more detail below.

a. Prime Agricultural Soils

The U.S. Department of Agriculture discusses the characteristics of prime agricultural soils in the following narrative:

“Prime agricultural soils...are those soils that are best suited to producing food, forage, fiber and oilseed crops. Such soils have soil properties that are favorable for the economic production of sustained high yields of crops. The soils need to be treated and managed using acceptable farming methods. The moisture supply, of course, must be adequate, and the growing season has to be sufficiently long.

Prime farmland soils may presently be used as cropland, pasture, or woodland, or they may be in other land uses. Urban and built-up land or water areas cannot be considered prime farmland.

Prime farmland soils usually get an adequate and dependable supply of moisture from precipitation or irrigation. The temperature and growing season are favorable. The soils have few or no rocks and are permeable to water and air. They are not excessively erodible or saturated with water for long periods and are not frequently flooded during the growing season. The slope ranges mainly from 0 to 6 percent.

Soils that have limitations, high water table, subject to flooding, or drought, may qualify as prime farmland soils if the limitations are overcome by such measures as drainage, flood control, or irrigation. On-site evaluation is necessary to determine the effectiveness of corrective measures.”

The soil survey identifies 25 individual soil types which are considered very well suited for farming; ten are present within Whiteford Township and make up approximately 75 percent of the total land area (**Figure 18**).

b. Class II Soils

This land classification indicates the suitability of soil types for field crops. The classes are grouped I through VIII, with the first category having the fewest limitations for farming and the last having the most. The highest soil capability in Whiteford Township is Class II. Monroe County does not have any Class I soils.

Class II soils are those that have “moderate limitations that reduce the choice of plants or that require moderate conservation practices.” The major limitations of these soils are erosion, wetness, shallowness or the presence of stones. Corrective measures on the part of the farmer may be necessary to mitigate these problems. These soils are capable of producing high yields of crops, and, as shown in **Figure 19**, is almost a mirror image to the Prime Agricultural Soils.

Figure 18. Prime Farmland Soils

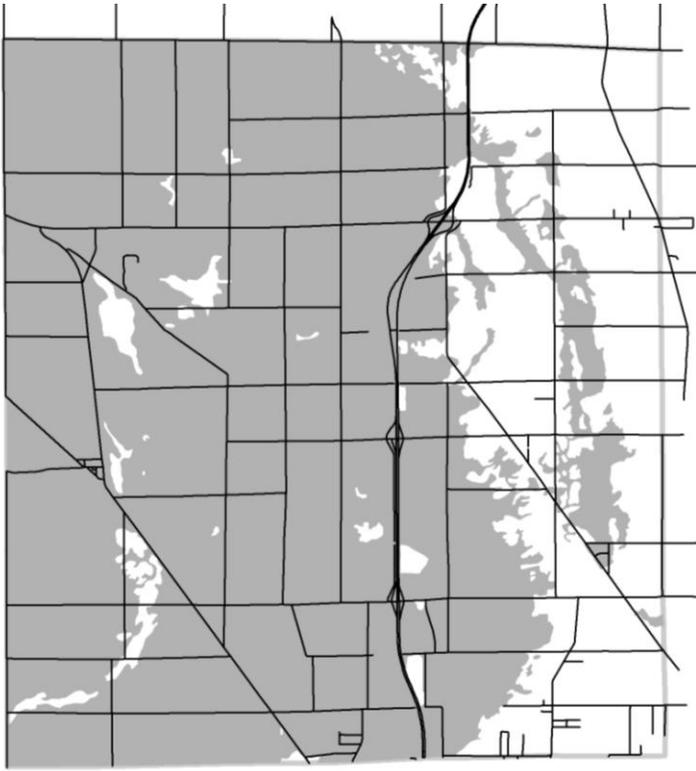
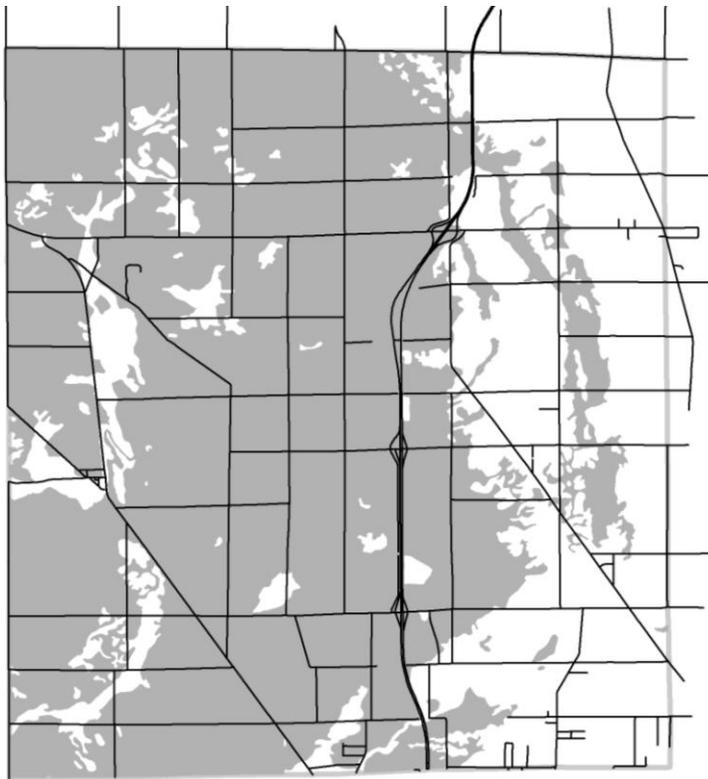


Figure 19. Class II Soils



2. Social and Economic Criteria

Soil capabilities are an important factor when evaluating an area for large scale farming. Soils, however, should not be the only basis for a parcel to be labeled as prime agricultural land. Social and economic factors also have an influence on whether a parcel of land will be used for agriculture or will be converted to another land use. The social and economic factors that this plan considers are parcels enrolled in PA 116, parcels over 35 acres, and existing farms. These three factors are useful indicators of valuable farmlands since they demonstrate a commitment by the landowner to continue to use the property for agricultural purposes.

a. P.A. 116 Parcels

In 1974, the Farmland and Open Space Preservation Act, P.A. 116, was enacted by the State of Michigan. This Act allows a landowner to enter into a development rights agreement with the state, by which he/she would receive specific tax benefits in return for maintaining his/her land for agricultural or open space purposes for a specified period of time (minimum of 10 years). Applicants for farmland agreements may qualify in one of three ways:

- 1) A farm 40 acres or more in size under one ownership.
- 2) A farm over 5 but less than 40 acres in size, which has produced from agricultural use at last \$200.00 annual gross (total) income per acre of cleared and tillable land.
- 3) A specialty farm, which has produced an annual gross (total) income from agricultural use of \$2,000.00 or more.

Since the inception of the program in 1976, there have been 128 Farmland Preservation applications filed by landowners in Whiteford Township. Currently, there are 90 active agreements, totaling 5,184 acres, or 20 percent of the acreage in Whiteford. It also represents approximately 40 percent of the lands identified as agricultural in the existing land report in the Community Profile section. These figures and percentages indicate the importance of agriculture to the community and the commitment of the citizens to preservation (**Figure 20**).

b. Large Parcels

Parcel size and shape has an important influence on the viability of a given area for long term agricultural production. Larger parcels with regular shapes lend themselves more readily to farming than smaller parcels that have been split up for non-agricultural purposes. Larger parcels are also more likely to remain as active farms than smaller parcels. Those parcels that are approximately 35 acres in size or larger were considered highly suited for farming. **Figure 21** indicates that approximately 65 percent of Whiteford Township is comprised of parcels 35 acres or larger. This is another indicator of the necessity to preserve prime agricultural lands in Whiteford.

c. Existing Farms

Land that is currently being used for farming was the final factor that was considered as part of this plan. This criterion was selected because it also demonstrated an obvious commitment to farming. A large percentage of the Township is actively being farmed (**Figure 22**). This information was obtained by reviewing 2005 aerial photography.

Figure 20. P.A. 116 Agreements

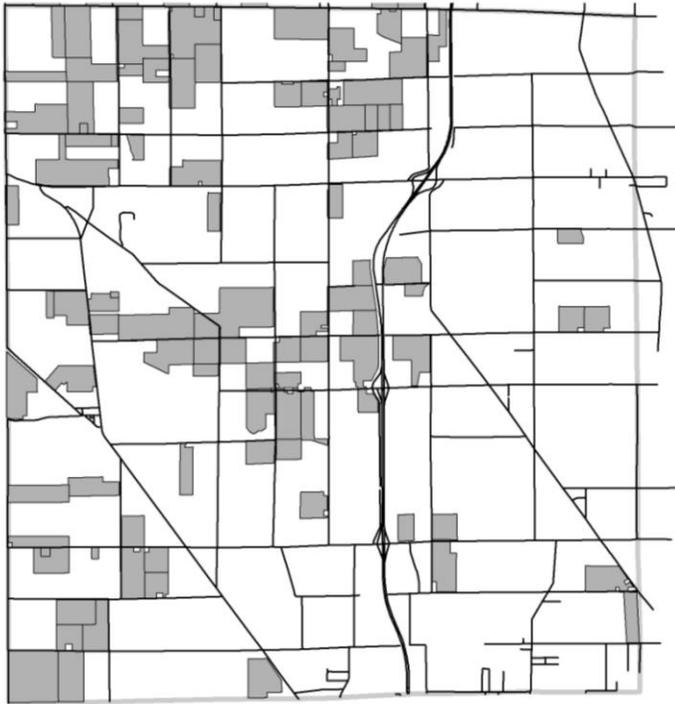
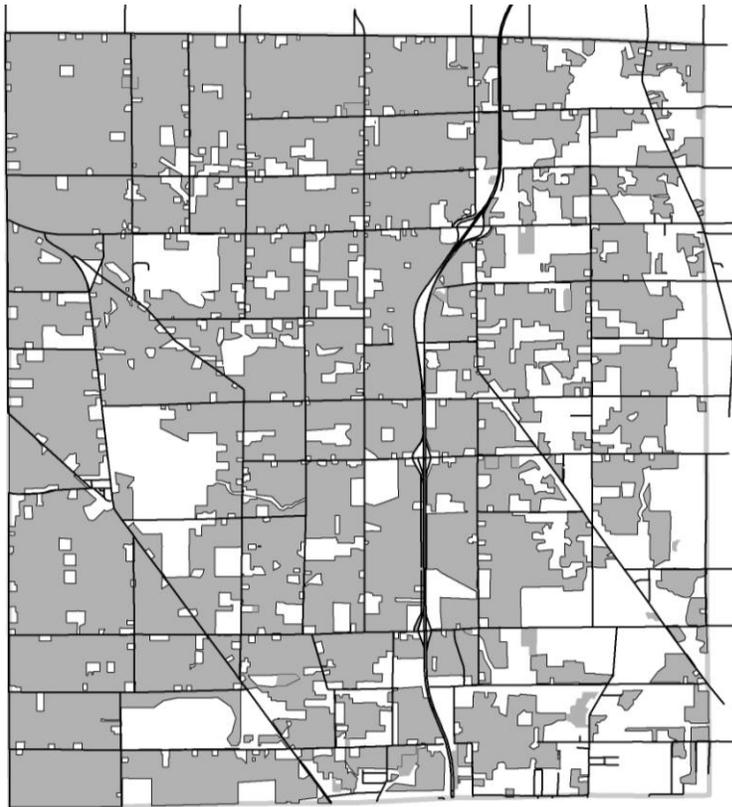


Figure 21. Large Parcels



Figure 22. Existing Farmland



3. Farmland Classification

In defining Whiteford Township's prime agricultural areas, the maps from the previous section were compared with one another, then against the following four criteria: (Figure 23)

a. Class A Farmland

- Both physical factors (Prime Agricultural Soils, Class II Soils)
- At least two socio-economic factors (P.A. 116, 35 acres or larger, existing farmland)

b. Class B Farmland

- Both physical factors
- One socio-economic factor

c. Class C Farmland

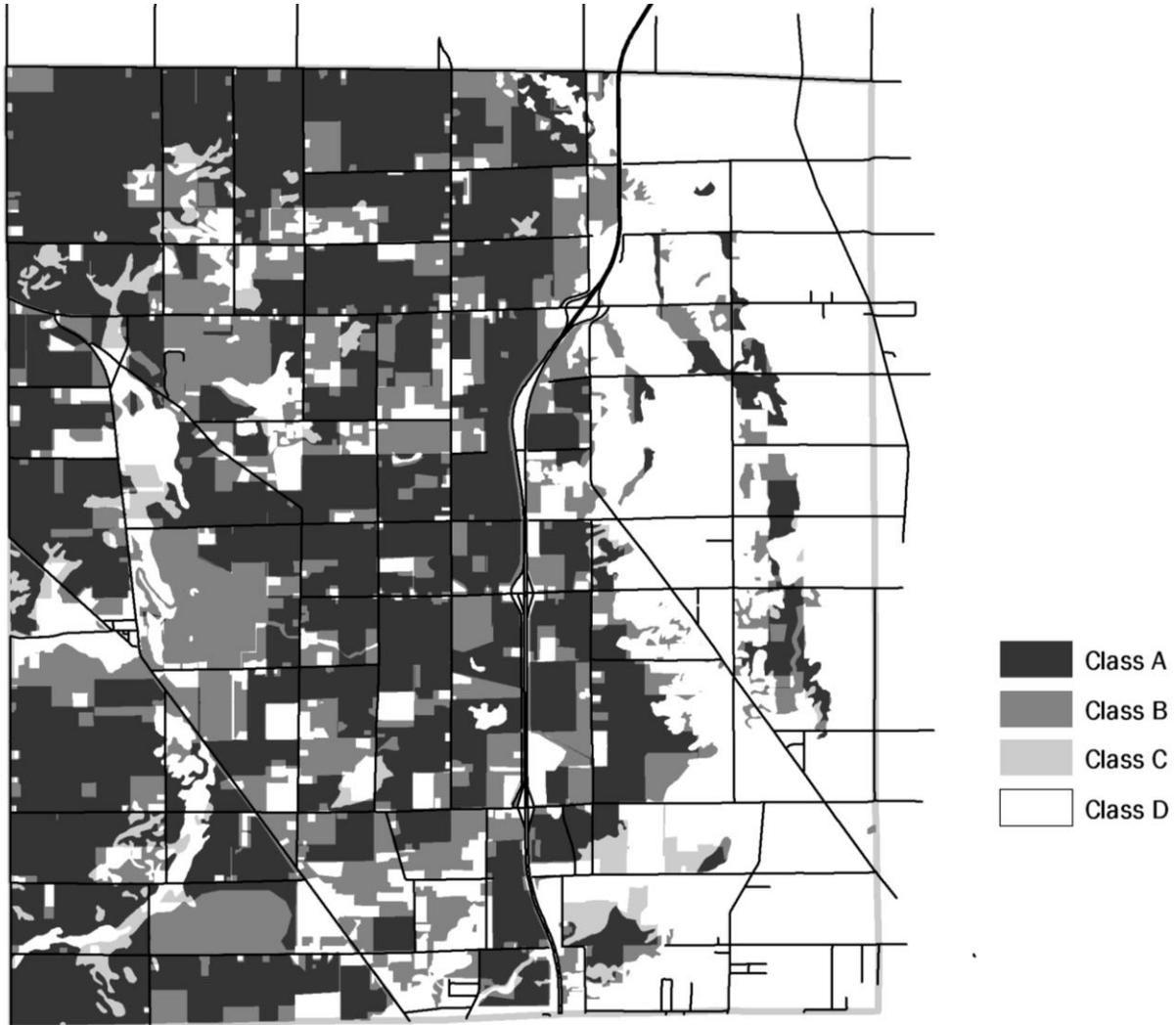
- One physical factor
- At least two socio-economic factors

d. Rural Reserve (All lands not previously classified)

Although these lands may not be Class A, B, or C, they are still valuable to the farming community. They often consist of sandy soils, which produce abundant yields of potatoes and similar crops or, due to their small size and proximity to residential areas, make

ideal truck farms. Before any farmland is converted to other uses in a Rural Reserve designation, a site evaluation should be undertaken to determine the agricultural value versus the proposed development's value to Whiteford Township.

Figure 23. Farmland Classification Map



4. Opportunities

Judging from the land use inventory in the Community Profile section, Whiteford Township can be considered an agricultural community. There are approximately 17,000 acres of land used primarily for cropland, along with orchards, confined feed operations, permanent pasture land, and other agriculturally oriented uses.

Farms in the Township range in size from 35 to 300+ acres, which generally include the farmhouse and accessory buildings. Major crops include: corn, soybeans, wheat, pumpkins, sugar beets, tomatoes, hay and other small grains. Presently, there are over 5,100 acres of farmland enrolled in the Act 116 Farmland Preservation Program with the State of Michigan.

Agricultural land is hard to create but extremely easy to lose. Factors such as urban development, erosion, subdivision of land, and financial issues of farmers are current predicaments that relate to today's farmland. To maintain Whiteford's agricultural community, practical methodologies should be enacted.

Zoning regulations, which are implemented and enforced at the local level, can be an effective way of preserving farmland. By excluding non-agricultural uses, zoning for agriculture can act to stabilize property values in designated areas. However, agricultural zoning will lose as a farmland preservation medium if zoning requests are regularly approved or if agricultural districts are seen as just holding areas for future urban development. With a majority of the Township's acreage devoted to agriculture, it would only be reasonable to distinguish the most important or prime farmlands by retaining their agricultural integrity.

"Prime" farmland should be strongly supported for preservation of agricultural uses only. However, there are instances where prime farmland, because of location, size or other conditions, will be better utilized for more urban uses as population or economic pressures dictate. These areas are identified as "reserve farmland," to be retained in an agricultural state until suitable plans are prepared and adopted that would change these lands to another use. Farmland retention objectives could remain with the designated prime farmland areas, while the agricultural worth of the reserve farmland could be retained until community growth pressures warranted change.

The Act 116 Farmland and Open Space Preservation Act is a program that is initiated by the individual landowner. Local community board review and recommendation are required, after receiving comments from the County Planning Commission and the Soil and Water Conservation District. Their comments can inform and lend support to the landowners request prior to formal enactment of the agreement between the individual and the Michigan Department of Natural Resources. Under this act, owners of eligible land agree to retain their farms in agriculture for a minimum period of ten years. In return, an income tax credit, equal to the amount by which their property tax exceeds 7 percent of the applicant's household income, can be claimed. Landowners are also exempt from special assessments for non-farm uses, such as sewers, lights, water, etc. Enrollment of farmland into the Act 116 program can be extremely beneficial to farmland preservation, and can also have financial opportunities for the landowner/applicant. It is important, however, that the community carefully weigh each Act 116 application to assure that areas identified for potential urban development is not mistakenly preserved, as it is quite difficult to withdraw from the program once an agreement is executed.

The County of Monroe has enacted a Farmland Preservation ordinance, which can help make the county eligible to receive funding for the purchase of development rights from willing farm owners, thereby permanently preserving farmland and open space. Whiteford Township has passed the necessary resolution to be eligible to participate in the program, and the Township Supervisor currently sits on the County's Land Preservation Board.

Other opportunities for farmland preservation involve participation and cooperation with other agencies and programs involved with agricultural land. The Cooperative Extension Service in Monroe County can provide farmers with a wide variety of services and educational

programs involving efficient agricultural land use. The Soil and Water Conservation District has been active in providing landowners with techniques to prevent erosion through shrewd farming methods and land use practices, including filter strips, conservation tillage, drain and tile maintenance, conservation and windbreak plantings, and other methods to preserve farmland. By participating in these and similar programs, the Township can help the landowners protect the long term viability of their farms.

5. Goals and Objectives

To preserve the importance of agriculture in Whiteford Township, and to protect the Township's rural atmosphere.

- Maintain agricultural districts through effective zoning.
- Encourage cooperation with agencies and programs to reduce erosion of farmland and maximize production.
- Support the preservation of prime agricultural land through participation in the Act 116, Farmland Preservation Program.
- Encourage, where appropriate, participation in purchase of development rights programs, land conservancy opportunities, and other means of farmland preservation.

6. Land Use Policies

The prime factor in supporting the agricultural base of the community is to identify the most important farmlands and then direct its efforts to preserve those areas. **Figure 18** through **Figure 22** depict the criteria used to identify Whiteford's prime agricultural farmlands, as outlined earlier. The composite created by these criteria produced the Farmland Classification Map (see **Figure 23**). This map indicates that the prime farmland (Class A, B, and C farmland) is situated in the western two-thirds of the Township, primarily west of U.S. 23.

Using the Farmland Classification Map, current land use development patterns, as well as recommendations from the Agricultural Component of the Monroe County Comprehensive Plan, an Agricultural Land Use Map for Whiteford was created (**Figure 24**). This map proposes two agricultural districts, Agricultural Preservation and Reserve Agricultural. The Agricultural Preservation district addresses those areas which were identified to be the Township's most productive farmland and which were not depicted as being prone to more urban land pressures in the foreseeable future. The Reserve district represents those lands that, while possessing quality agricultural traits, because of their location, size or other limiting physical or social factors, suggest a possible future relationship to a more urban form of development. The Reserve district, however, should remain as agricultural until sound, worthwhile development proposals are approved that justify a shift from agriculture.

Other policies related to agricultural land use include:

- Agricultural Preservation districts should be dedicated primarily to agricultural pursuits. Non-agricultural uses should be encouraged to locate in areas more suitable or compatible.
- Reserve Agricultural districts should also be dedicated to agricultural pursuits; however, conversion to more urban uses may take place. This conversion of land use should take place in an orderly and planned manner, with only minimal development occurring at one time to reduce the unnecessary destruction of large tracts of farmland. Strong agricultural zoning will also deter the premature and costly extension of public utilities (sewer and water) and avoid urban sprawl.
- Farmers should be encouraged to employ agricultural practices which minimize soil erosion and ground and surface water pollution from sedimentation, animal wastes and chemicals.
- The Township should support cooperation with the Monroe County Cooperative Extension Service and Monroe County Soil and Water Conservation District on agricultural technology and farmland preservation issues.

Figure 24. Agricultural Land Use Map

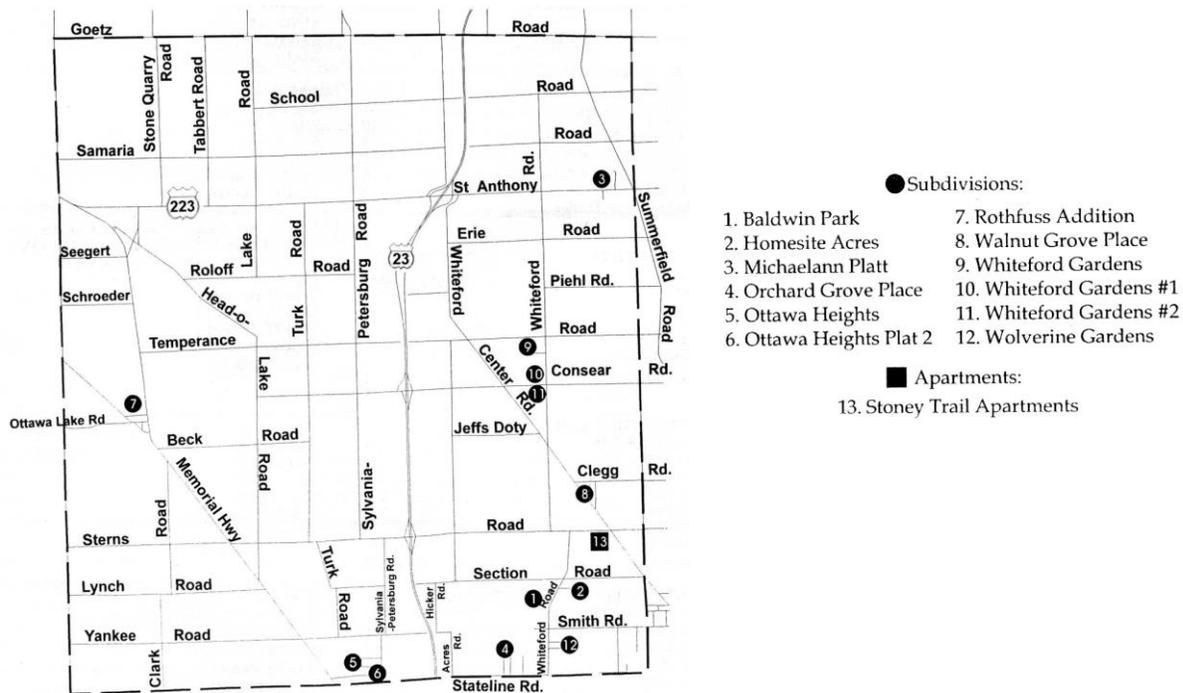


B. RESIDENTIAL LAND USE

As of the 2000 Census, Whiteford Township had a population of 4,420 persons and a housing unit count of 1,654. Comparing the 2000 and 1990 figures indicate a loss of 13 people but a gain of 77 housing units. This section will discuss where land is currently being used for residential development and where future residential growth can be best accommodated.

Residential development, on a general level, can be classified into one of three primary categories: subdivisions, rural estates and farm lots. Subdivisions are dense concentrations of homes (approximately 2.5 per acre) on small lots and served by secondary roads. For purposes of this section, subdivision type development may include: typical subdivision; apartment, condominium, townhouse complexes; and manufactured housing communities. There are 12 platted subdivisions in Whiteford (Figure 25), primarily situated in the southeast portion of the Township, south of Temperance Road and east of U.S. 23.

Figure 25. Platted Subdivisions & Multi-Family Developments



Multiple-family housing (apartments, townhouses, mobile home parks) are represented by the Stoney Trail Apartments, a 72 unit complex. Rural estates are homes located on 2-20 acre parcels, while farm lots include homes located on large parcels (20+ acres) of agricultural land. Farm lots and rural estates are distributed throughout the Township and are generally served by dedicated County and local road systems. The housing stock in Whiteford today is primarily single-family, owner-occupied. Almost half of these homes were built prior to 1960. In 2000, the median value of a home was \$129,800, compared to \$132,000 for the County as a whole (Table 6).

Table 6. Housing Characteristics, 2000

Total housing units	1,654	MORTGAGE STATUS AND SELECTED MONTHLY OWNER COSTS	
UNITS IN STRUCTURE		With a mortgage	640
1-unit, detached	1,505	Less than \$300	0
1-unit, attached	35	\$300 to \$499	75
2 units	11	\$500 to \$699	96
3 or 4 units	6	\$700 to \$999	238
5 to 9 units	6	\$1,000 to \$1,499	164
10 to 19 units	70	\$1,500 to \$1,999	56
20 or more units	6	\$2,000 or more	11
Mobile home	15*	Median (dollars)	916
Boat, RV, van, etc.	0	Not mortgaged	398
		Median (dollars)	268
YEAR STRUCTURE BUILT		SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1999	
1999 to March 2000	37	Less than 15 percent	531
1995 to 1998	145	15 to 19 percent	136
1990 to 1994	54	20 to 24 percent	185
1980 to 1989	129	25 to 29 percent	74
1970 to 1979	273	30 to 34 percent	25
1960 to 1969	204	35 percent or more	79
1940 to 1959	345	Not computed	8
1939 or earlier	467		
Occupied Housing Units	1,582	Specified renter-occupied units	160
YEAR HOUSEHOLDER MOVED INTO UNIT		GROSS RENT	
1999 to March 2000	133	Less than \$200	0
1995 to 1998	355	\$200 to \$299	13
1990 to 1994	252	\$300 to \$499	78
1980 to 1989	304	\$500 to \$749	34
1970 to 1979	238	\$750 to \$999	15
1969 or earlier	300	\$1,000 to \$1,499	0
		\$1,500 or more	0
Specified owner-occupied units	1,038	No cash rent	20
VALUE		Median (dollars)	463
Less than \$50,000	39	GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1999	
\$50,000 to \$99,999	256	Less than 15 percent	45
\$100,000 to \$149,999	435	15 to 19 percent	12
\$150,000 to \$199,999	102	20 to 24 percent	26
\$200,000 to \$299,999	190	25 to 29 percent	26
\$300,000 to \$499,999	16	30 to 34 percent	0
\$500,000 to \$999,999	0	35 percent or more	25
\$1,000,000 or more	0	Not computed	26
Median (dollars)	129,800		

* questionable data – may include temporary units

Source: 2000 Census

Construction of new residential units in Whiteford has slowed considerably in recent years. Only six new homes were built in the township in each of the last three years (2007, 2008, and 2009). Since 2000 there have been 174 new housing units built, an average of 19 per year. Since 1990 there have been 375 permits for new single family houses, also an average of roughly 19 new housing units per year. If you include permits issued in the 1980s, a total of 447 new residential units were built, an average of 15 new units per year.

Because of the lack of public utilities (sewer and water) in the township, large scale and denser developments have not developed as they have in adjoining communities to the south (Sylvania and Toledo, Ohio) and east (Bedford Township). This does not preclude the use of on-site wastewater treatment systems or portable water supplies approved by the Michigan Department of Public Health.

Based on the population projections from **Table 3**, and the building permit data over the past two decades, future housing unit development is not expected to increase appreciably. Using the population projections and SEMCOG’s estimated household size for the year 2030 of 2.60, it is estimated that Whiteford will need approximately 1,943 total housing units by 2030, an increase of 289 units over the 2000 total, or approximately 10 new units per year.

Table 7. Units in Structure 2000 Census

	Whiteford Township		Monroe County		Michigan	
	number	percent	number	percent	number	percent
1-unit, detached	1,505	91	42,044	74.5	2,988,818	70.6
1-unit, attached	35	2.1	1,097	1.9	164,910	3.9
2 units	11	0.7	1,546	2.7	146,414	3.5
3 or 4 units	6	0.4	1,071	1.9	118,067	2.8
5 to 9 units	6	0.4	1,596	2.8	169,946	4
10 to 19 units	70	4.2	1,141	2	144,848	3.4
20 or more units	6	0.4	2,103	3.7	216,573	5.1
Mobile home	15	0.9	5,858	10.4	277,158	6.5
Boat, RV, van, etc.	0	0	15	0	7,545	0
TOTAL UNITS	1,654	100	56,471	100	4,234,279	100

Source: 2000 U.S. Census

Utilizing the maximum projected 2030 housing needs and the estimated additional housing units needed to meet that project, it is appropriate to address a proportionate ratio of housing types. As seen in **Table 7**, Whiteford Township’s housing totals showed that 1,540 units (93.1%) of its 1,654 total units were single family. This percentage in comparison to those of Monroe County (76.4%) or the State of Michigan (74.5%) is much higher. In further comparison, Whiteford’s percentages of two-family, multiples and mobile homes are lower. In order to provide a more equitable balance of housing opportunities in the community the following ratio of housing diversification is proposed by the year 2030:

Table 8. Units in Structure Whiteford Township, 2030

	2000		2030	
	Number	Percent	Number	Percent
Single Family	1,540	93.1	1,782	91.7
Two Family	11	0.7	29	1.5
Multiple Family (3 or more)	88	5.4	97	5.0
Mobile home	15	0.4	35	1.8
Totals	1,654	100.0	1,943	100.0

1. Opportunities

Lying on the fringe of the Toledo Urban Area, and with easy access to U.S. 23, Whiteford has excellent opportunities to expand its residential base. Factors that presently limit this growth include the lack of sewer and water and the importance of agriculture. Currently 37 percent of Whiteford's land is in Act 116 Farmland Agreements. With the exception of the eastern ¼ of the Township, soils are not conducive to on-site waste treatment; however, Whiteford officials have discussed the possibility of public utility extension with the cities of Sylvania and Toledo, Ohio and the South County Water Board.

Opportunities for residential development include multi-family housing, development of subdivisions and rehabilitation of existing housing stock. The demand for high-density residential development may increase as housing becomes more expensive. Uses associated with high-density development include single and multi-family units, condominiums, manufactured housing communities and planned unit developments. Such developments should be constructed close to a large population base and close to existing or impending sewer service areas. They should be located near roads, utilities and other public services.

2. Goals and Objectives

To create a pleasing environment for living in Whiteford Township with a variety of housing types for all tastes and incomes, taking into account environmental limitations on development.

- Create effective zoning controls on residential development.
- Utilize site plan reviews and other building controls to achieve quality development in a pleasant environment.
- Limit residential development to those areas that are suitable.

To preserve the historic, cultural and aesthetic features of Whiteford Township.

- Encourage the preservation and adaptive reuse of historic structures.
- Encourage efforts which protect the rural atmosphere and scenic quality of Whiteford Township, such as blight control, farmland preservation, and the planting and protection of native vegetation.

To relate land uses to land capabilities.

- Encourage development only in those areas where utilities, roads, drainage, soils, natural features, and existing and surrounding land uses are capable of supporting the proposed use without significant impact or conflict.
- Maintain effective zoning, land use, site plan and subdivision controls.

3. Land Use Policies

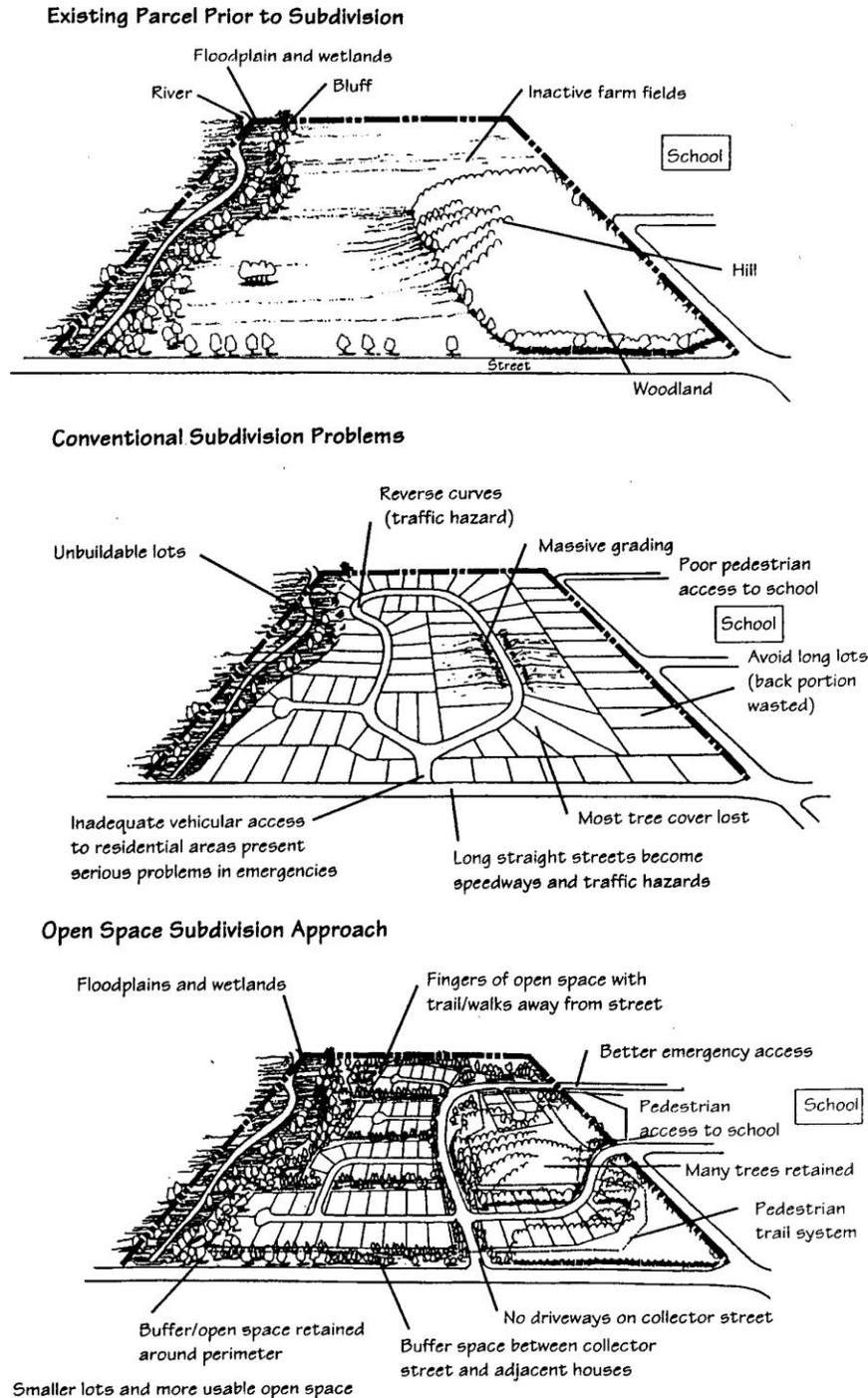
The following policies represent the basis for the residential land use map. Although the map is meant to guide future residential development in Whiteford Township, it is hoped that these policies will provide a framework for assessing the merits of future development proposals, whether or not they have justification in the proposed land use map.

- Residential development should be coordinated with the availability of wastewater disposal systems, approved by the Monroe County Environmental Health Division, if on-site.** With roughly $\frac{3}{4}$ of the soils in Whiteford not conducive to septic systems, low-density development should be encouraged primarily in the east $\frac{1}{4}$ of the Township until public sewers are available.
- Avoid development in prime agricultural areas and encourage development patterns which conserve land.** Avoiding residential development on prime agricultural land is essential to maintaining Whiteford's social and economic character. Converting farmland to residential use is an irreversible process and should be carefully controlled. For areas which are reviewed and determined that residential uses are appropriate, there are methods to ensure natural features are preserved. Well-planned subdivisions and planned unit developments can be useful ways to achieve attractive neighborhoods, reducing the unnecessary conversion of agricultural lands and open space (Figure 26).
- Encourage a diversity of housing styles.** Single family detached homes comprise the majority of housing in Whiteford Township. Changing lifestyles and economic incentives can make other types of development attractive to residents. Alternative housing styles include rehabilitated historic structures, two-family developments, multi-family housing, modular or prefabricated homes and smaller single family homes.
- Avoid development in floodplains.** Some of Whiteford Township lies within the 100 year floodplains of Halfway Creek, the north branch of the Ottawa River, and the Ottawa Lake outlet. While flood damage can be avoided in some cases by raising floor elevations above flood level or using flood control structures, development in flood hazard areas should be avoided whenever possible.

4. Future Residential Land Use

Land suitable for future residential development is illustrated on the Residential Land Use Map (Figure 27). The map identifies three residential land use classifications which provide for a range of housing types and densities and which conform to the public utility service areas to be discussed later. The following is a description of these residential land use classifications.

Figure 26. Residential Development Options



Note: Communities can require that the number of lots in the open space subdivision not exceed the number of lots that would exist if it were conventionally platted.

Source: SEMCOG.

a. Low Density Residential

Low density residential areas should be developed with high quality single family housing in attractive settings. Housing densities of 0.2 to 1 units per acre or less are generally considered low density. Areas most suited for low density residential include:

- The southeast portion of the Township bounded on the north and west by Con-sear Road, U.S. 23, Sterns Road and Memorial Highway;
- The intersection of Beck Road and Memorial Highway; and
- The area along Summerfield Road from St. Anthony's to Samaria Roads.

b. Medium Density Residential

The medium density residential classification use is intended for single family housing units developed at a density of 2.0 to 5.0 dwelling units per acre. Medium density housing should be located in areas served by public water and sanitary sewer facilities. Areas designated medium density residential on the Residential Land Use Map include:

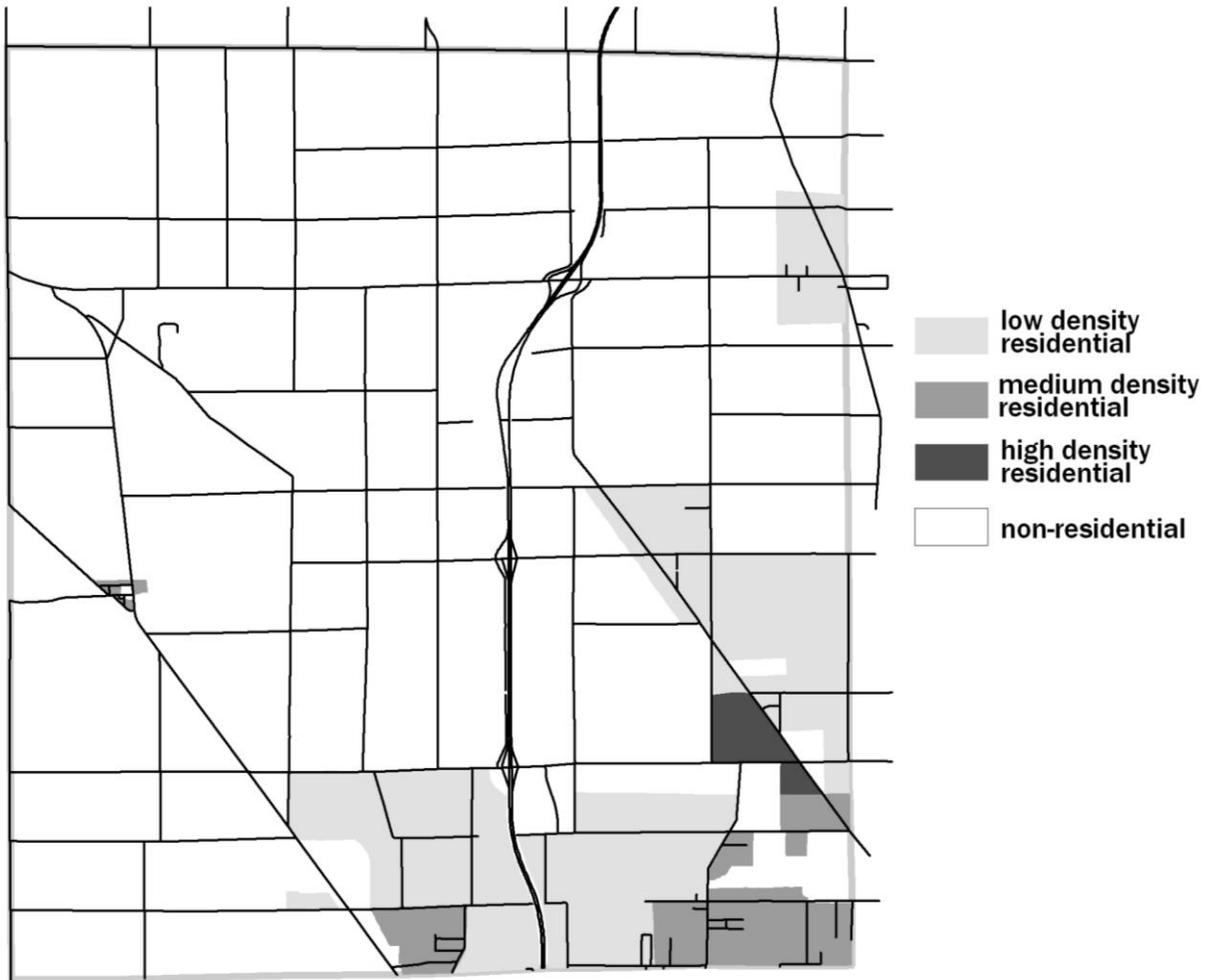
- The extreme southeast portion of the Township, south of Section Road and west of Whiteford Road, plus that portion of Fractional Section 2 from Orchard Grove Place eastward;
- That portion of the Township lying south of Yankee Road between Memorial Highway and U.S. 23; and
- The unincorporated area of Ottawa Lake.

c. High Density Residential

High density residential areas are intended to be developed at a density of 5.1 or more dwelling units per acre. Housing types may include single family attached townhouses, apartments, condominiums or mobile home parks. High density housing serves as a transitional use between commercial development and lower density single family housing, and is located near major thoroughfares. The Residential Land Use Map designates one general area where high density residential development is appropriate:

- Around the intersection of Whiteford Center and Sterns Roads in the southeast portion of the Township.

Figure 27. Residential Land Use Map



C. COMMERCIAL LAND USE

1. Description

Commercial land use represents only a small percentage of total acreage in Whiteford Township. The main commercial activity centers include the three interchanges on U.S. 23 at Sterns, Consear and U.S. 223/St. Anthony Roads; the unincorporated Village of Ottawa Lake; and the intersection of Memorial Highway and Green Road, near the Lucas County and City of Sylvania border in Ohio (**Figure 28**).

Commercial land use in Whiteford can be divided into two basic categories: highway oriented businesses and local, family oriented business. The highway oriented businesses are situated along the U.S. 23 corridor and service either traveler/pass-through users or regional area needs. The local family oriented businesses are primarily located along Memorial Highway and Whiteford Center Road, and serve the needs of the neighborhoods or the Township at large. These businesses are connected to storage, recreation, services, eating, and arts and crafts. For comparison shopping and major grocery purchases, residents travel to nearby Bedford or the cities of Toledo or Sylvania, Ohio.

Figure 28. Existing Commercial Sites



2. Opportunities

Expansion to the commercial base of the Township would not only provide an increased tax base, but would provide local sources for everyday and leisure comforts. Opportunities for commercial development include highway oriented businesses, as well as an expanded retail trade designed to meet the day-to-day consumer needs.

Highway related businesses should be aimed at servicing not only the through traffic along U.S. 23, but also the local people. Gasoline service and repair stations, motels and restaurants are typical activities usually sited at freeway interchanges. Local business opportunities could include neighborhood markets, professional services, restaurant/lounges, and agricultural services to meet the need of Whiteford's agricultural community.

3. Goals and Objectives

Provide an environment for commercial activities in designated areas that have required facilities and not allow commercial activities in scattered spots or strips throughout the Township.

- Maintain effective zoning and land use controls.
- To concentrate commercial development in close proximity to urban centers along U.S. 23 at major interchanges.

4. Land Use Policies

The selection of suitable sites for commercial development is important to both the success of the commercial enterprise and for the protection of adjacent land uses and the smooth flow of traffic. The following commercial land use policies are aimed at promoting appropriate commercial development in Whiteford Township, while maintaining the value of other types of land uses.

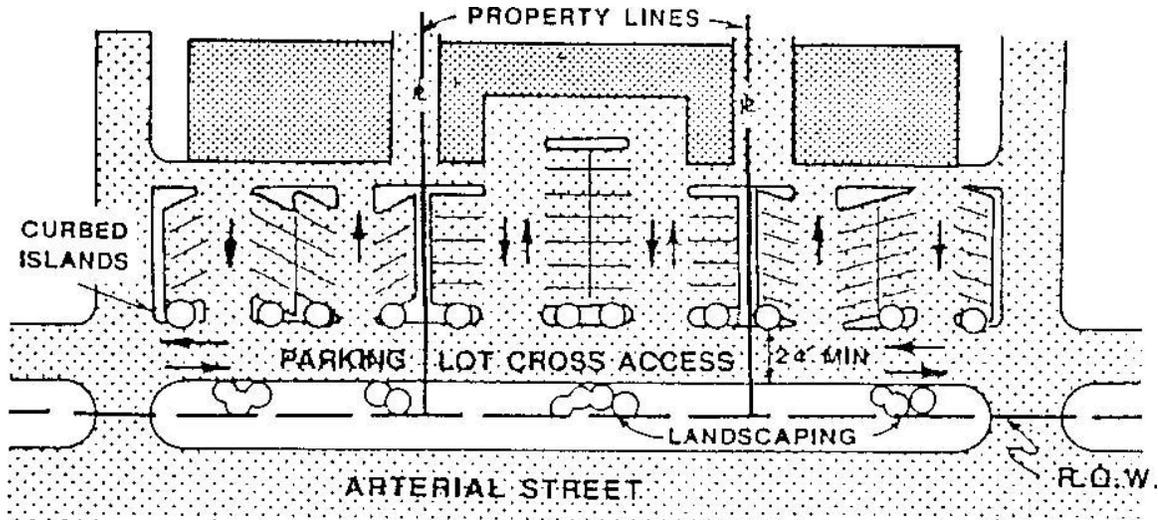
a. Consolidate Commercial Areas

Clustering commercial land uses into well-defined districts would provide maximum convenience to shoppers and would prevent the traffic and visual quality problems associated with commercial strips spread over a wide area. Consolidated commercial districts also allow shoppers to make several purchases at one location, benefiting both the consumer and the store owner.

As part of the development scheme to consolidate commercial areas, the use of a service drive may also be warranted. A service drive would provide access to individual uses and at the same time limit access points to the main thoroughfare. Traffic problems caused by individual ingress/egress points would be avoided, and signalization could be incorporated in the service drive approach (**Figure 29**).

Figure 29. Parking Lot Cross Access

Source: Grand River Avenue Area Corridor Study: Genoa Township, Michigan, The WBDC Group, February 1989



b. Locate Commercial Districts in Appropriate Areas

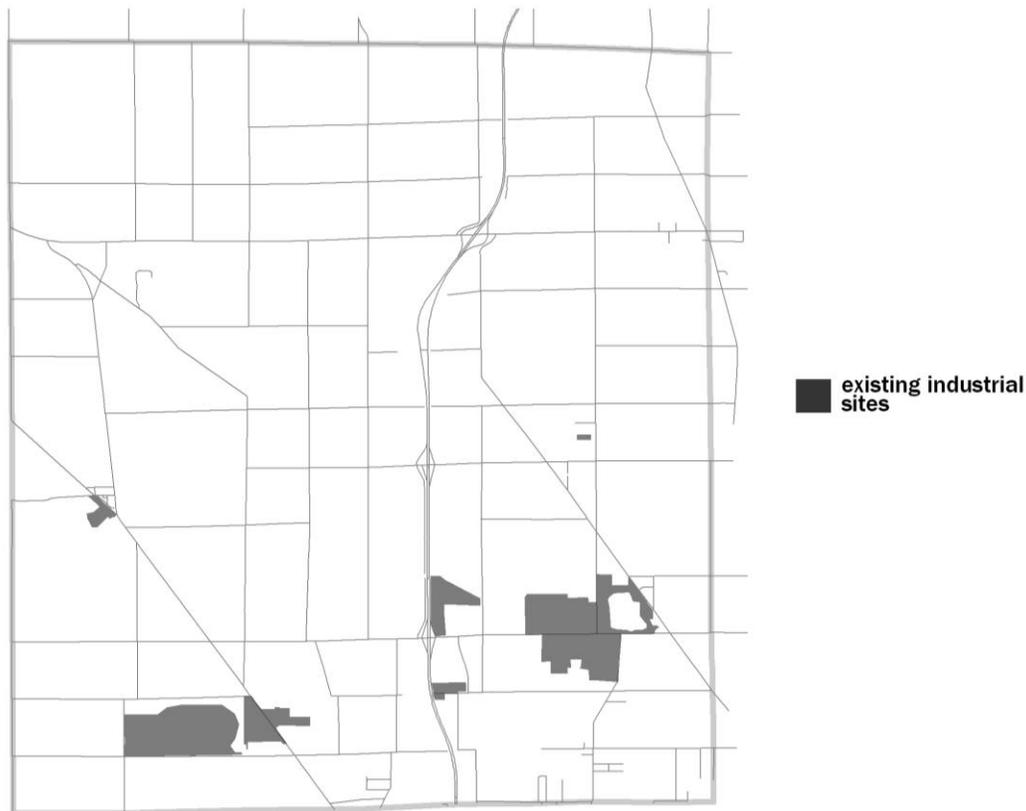
Local commercial districts should be located near population centers and near intersections of major roads in order to provide easy access for shoppers, as well as high visibility for retailers. Similarly, areas near highway interchanges provide suitable sites for automobile service and repair stations, motels and restaurants. Commercial districts should also be served by either public utilities (sewer, water and gas) or by approved on-site systems.

D. INDUSTRIAL LAND USE

1. Description

Approximately 800 acres (3.1%) of Whiteford Township land is used for industrial, utility or extractive operations. These uses are primarily located in the southern ¼ of the Township, along Sterns Road (east of U.S. 23), and on Yankee Road and Memorial Highway (west of U.S. 23), (Figure 30).

Figure 30. Existing Industrial Sites



2. Opportunities

Because of Whiteford's proximity to U.S. 23 and Toledo, there is potential to attract quality industries and to expand upon the existing industrial base. However, this potential is dependent on the availability of sewer and water. The outgrowth of new industries and the expansion of existing ones would provide employment for local residents, as well as increase the tax base. These spinoffs are seen as desirable, as long as the type of industry, impact on the environment, and burden on community facilities is not excessive.

Several organizations could be called upon to assist the Township in attracting industry. The Monroe County Planning Commission works with the Monroe County Industrial Development Corporation (MCIDC) to provide site information to developers. The Commission reviews new development to maintain orderly growth and work toward goals established in the Monroe County Comprehensive Plan.

The MCIDC is a private, non-profit organization, whose goal is to attract new businesses and retain existing businesses in Monroe County. The MCIDC is able to provide information to prospective developers pertaining to available sites, as well as financial packages which are available, including various loans, bond and grant programs.

The Monroe County Economic Development Corporation (MCEDC) is a public corporation which, through the sale of tax exempt bonds, is able to provide low cost funds for attracting economic development. The Economic Development Corporation Act of 1974, which provides for the EDCs, also allows municipalities to acquire land through eminent domain and then transfer the land to the EDC.

These organizations have been utilized by the Township in the recent expansion of Midwest Products and the extension of a public sewer line to the industry from Sylvania, Ohio.

Other resources which could be utilized to attract industry to Whiteford include the Southeast Michigan Council of Governments' (SEMCOG) computerized industrial site directory, the Monroe County Chamber of Commerce, and the Small Business Center of the Monroe County Community College.

3. Goals and Objectives

Allow for industrial expansion where it will have the least conflict with surrounding land uses, that maintains environmental integrity and utilities are available.

- Maintain effective zoning and land use practices.
- Support industrial development adjacent to existing industrial activities.
- Support the use of railroads and freeways for industrial shipping purposes within the Township.

Sewer and/or water service should be provided to selected areas of the Township after careful assessment of the social, environmental, and economic costs and benefits involved in providing these services.

- Monitor the public health and safety concerns related to on-site sewage disposal and ground water quality.
- Explore the availability of federal and state grants to provide public utilities to the Township.

4. Land Use Policies

In identifying suitable sites for industry, certain criteria should be considered. Although the purpose of a land use plan is to identify suitable sites for particular types of uses, a plan must be flexible enough to allow proposals which do not conform to the plan to be assessed on a case-by-case basis. The following site criteria will help to identify suitable locations for industrial land use, as well as to provide standards for reviewing future proposals for development outside of designated industrial districts.

a. Current Land Use

The current use of a parcel of land has a bearing on whether an industrial use is appropriate. The need for industry in Whiteford Township must be balanced with the need

to maintain valuable agricultural land, historic resources, or other natural or cultural features. Although additional industrial development in the Township would most likely occur on land presently in agricultural use, it is important to promote industry in areas which are not essential to agriculture or other irreplaceable resources. The best locations for prospective industry would be on sites which are adjacent to existing industrial uses or on marginal farmland.

b. Characteristics of the Surrounding Area

Neighboring land uses must be considered in selecting suitable sites for industry. Although the type of industry will have an effect on its impact, industrial land uses should, in general, be located away from residential areas, which would be devalued by noise, odors, smoke or other potential environmental impacts. Light industrial uses, such as storage areas and warehouses, might be more compatible with commercial and residential districts than heavy industry, such as material processing or assembly plants. In situations where industry may not be compatible with the surrounding area, practices such as buffering, setbacks, fencing and landscaping can help minimize adverse impacts.

c. Parcel Characteristics

The size and shape of a parcel, as well as its characteristics, will have an important effect on the site's suitability for industrial land use. Although individual industries will have their own space requirements, in general, parcels need to be large enough to accommodate a building plus parking, loading, setbacks, drainage retention, landscaping and possible future expansion. Parcels suited for industrial use generally require suitable soils for development. Sites which are flood prone, poorly drained, or have a high water table, shallow soils, and steep holes should generally be avoided.

d. Availability of Utilities

Most industrial land uses would require sewer and water service, as well as electric and gas. Determining suitable sites for industry needs to go hand-in-hand with facilities planning, so that areas to be developed for industrial land uses are also areas which can be efficiently served by sanitary sewers and water supply lines.

e. Transportation

Industrial land uses have to be accessible from major transportation corridors, but also need to be located where heavy traffic volumes can be accommodated without disruption of local or residential traffic. The U.S. 23 and Memorial Highway corridors should be analyzed for new or expanded industries in Whiteford Township. Memorial Highway also provides rail transportation on the Norfolk-Southern spur, which serves the Mid States Terminal, by way of Sylvania and Toledo, Ohio.

E. RECREATION AND OPEN SPACE

Parks, golf courses, sportsmen clubs, school facilities and unique natural features are aspects of a community that provide its citizens with both active and passive recreational opportunities. They also provide the amenities which people relate to “Quality of Life”.

There are several types of recreation facilities available to the residents of Whiteford Township (see **Table 9**). There is one public and one private school in the Township; each has ball fields and open play areas, as well as other facilities. There are two parks that offer recreation/open space opportunities. The Covered Wagon Park offers overnight camping and water activities as well.

Table 9. Recreation Inventory

Facility Name	Acreage	Equipment
Schools		
Whiteford Agricultural Schools (K-12)	44.4	P,F,B,PK
St. Anthony	2.5	P,F
Parks		
Whiteford Community Park	96.0	F,PK
Ottawa Lake Park	1.2	—
Golf Courses		
Sand Wedge Golf Course	80.0	PK,SH (18 Holes)
Cherrywood Golf Course	37.6	PK,SH (9 Holes)
Whiteford Valley Golf Complex	513.4	PK,SH (72 Holes)
Quarry Ridge	40.0	PK,SH (9 Holes)
Legacy Golf Course	219.8	PK,SH (18 Holes)
Private Facilities		
Schnipke Park	70.0	PIC,SH,PK,SW/F
Covered Wagon Park	20.0	PIC,SH,PK,SW/F
Ottawa Lake Sportsmen Club*	12.5	PK,SH
Great Northern Sportsmen Club	3.1	—
Toledo Memorial Park & Mausoleum	146.4	—
Natural Amenities		
Sink Creek Marsh Area	152.6	—
Noble Pond	20.0	—
Ottawa Lake Lakebed	75.0*	

*A portion of the Ottawa Lake Sportsmen Club lies within the Ottawa Lake Lakebed

Key: P:Playground Equipment, PIC:Picnic area, PK:Parking, F:Fields (Softball or Baseball), S:Soccer Field, SH:Shelter Bldgs. or Restrooms, B:Basketball Court, SW/F:Swimming/Fishing

Five golf complexes are located within the Township, with the Whiteford Valley Complex offering four complete 18-hole courses, including a driving range and banquet facilities. Two sportsmen clubs and a private park also offer some recreational activities to residents. The Toledo Memorial Park and Mausoleum in Sylvania also owns property in Whiteford adjacent

to the City. This land should remain open space.

Recreational needs of the community are currently handled by the Whiteford Township Park Board which was formed as an advisory board by the Township in 2003 to oversee development of the new township park as well as to lead recreation planning efforts for the Township. The **Whiteford Township Community Park, Recreation, Open Space and Greenways Plan** was approved by the Township in 2006.

In addition, the Whiteford Recreation Club, Inc., is a private non-profit organization, that works with the Township Board and Whiteford Agricultural School, providing recreational programs throughout the year.

1. Other Recreational Opportunities

Surrounding communities offer Whiteford residents a wide variety of recreational opportunities. Monroe County owns Vienna Park, a 57 acre site in Bedford Township that offers both active and passive recreational pursuits. The Toledo Metropolitan area offers a variety of outdoor and indoor activities such as: the Wildwood Preserve Metropark, Ottawa Park, the Toledo Zoological and Botanical Parks, the Toledo Museum of Art, the Stranahan Theater/Toledo Masonic Auditorium, the Toledo Recreation Center, and Toledo Sports Center.

Lake Erie, the Walleye Capital of the World, provides boating and fishing opportunities, and Cedar Point in Sandusky, Ohio is a well-known amusement facility. Sterling State Park, just north of the City of Monroe, provides additional camping, swimming and active and passive recreational pursuits (**Error! Reference source not found.**).

2. Goals & Objectives

The following goals and objectives are taken from the Whiteford Township Community Park, Recreation, Open Space and Greenways Plan:

Provide for present and future recreational needs of all citizens of the Township.

- Promote the preservation and improvement of existing parks, both public and private.
- Support the development of parks and open space in any new residential development.
- Support the development of non-governmental recreational facilities, as long as the proposed developments do not conflict with land use plans and policies.
- Complete the development of the 96-acre community park at the intersection of Sterns and Whiteford Road.

To preserve the natural features of the Township.

- Encourage the preservation of woodlands, wetlands, and other natural areas.
- Encourage the planting of windrows and buffer strips as a means of preventing soil erosion and sedimentation.

Develop a long range strategy for acquisition and development of new greenways, multi-use trails and linkages between recreation facilities.

-
- Form committee to study, review, and pursue creation of potential linkages between recreational facilities in the Township, based on the obvious demand for this form of recreational amenity indicated in the Community Survey.
 - Potential locations for multi-use trails, bike paths, bike lanes, and other linkages should be explored.
 - Wherever possible, existing or planned facilities should be linked.
 - Feasibility of various options should be studied in terms of acquiring necessary right-of-way and/or conservation easements.
 - Pursue potential funding alternatives for such linkages.

Develop a funding mechanism for maintenance and management for these outdoor recreation facilities.

- Identify the likely costs associated with the maintenance and management of existing facilities.
- Identify all potential funding tools that could be used in developing financial strategies
- Apply regularly to the MDNRE for state grant funds for land acquisition and outdoor recreational development and improvement funds.

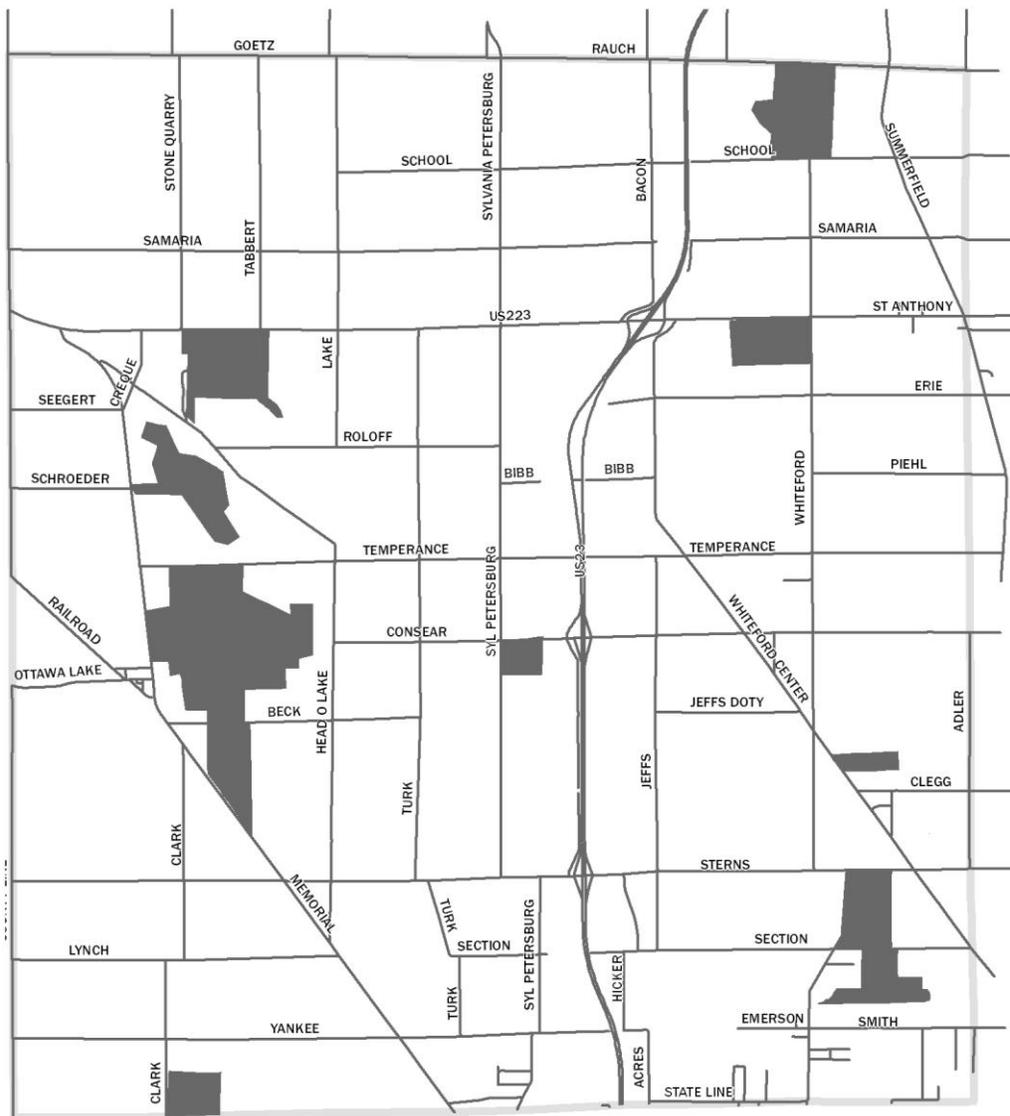
Improve communication and coordination between agencies involved in public access and use of public lands for recreation.

- Work closely with county, state and local organizations involved in outdoor recreation.
- Seek and develop cooperative relationships with other public and private organizations.

3. Recreational Land Use

Recreation/Open Space uses are identified on the Recreation Land Use Map (Figure 31). This map basically identified only those existing facilities or areas that possess recreational attributes or amenities that should be addressed and/or preserved. One area that is not shown, but is of importance, is the Township's drainage system. These drainage ways should be protected and used as filter strips, especially in the agricultural community. Development near them should be carefully monitored.

Figure 31. Recreational Land Use Map



F. INFRASTRUCTURE IMPROVEMENTS

In order for a community to grow, especially one adjacent to a major urban center, it must provide for those amenities that will ensure growth; namely, public sewer and water, and a quality transportation network. The following will address these concerns:

1. Public Utilities (sewer & water)

As addressed in the Community Profile section, Whiteford Township is primarily served by on-site utilities for wastewater treatment and potable water supply. Only the Dana Corporation Technology Center and the Schnipke Road Corridor, situated in the extreme southern section of the Township, are served by separate public sewer lines. These lines are force mains provided by the City of Sylvania, Ohio. There are no public water lines within Whiteford Township.

a. Goals & Objectives

Sewer and/or water service should be provided to selected areas of the Township after careful assessment of the social, environmental, and economic costs and benefits involved in providing these services.

- Monitor the public health and safety concerns related to on-site sewage disposal and groundwater quality.
- Explore the availability of federal and state grants to provide public utilities to the Township.

To relate land uses to land capabilities.

- Encourage development only in those areas where utilities, roads, drainage, soils, natural features, and existing and surrounding land uses are capable of supporting the proposed use without significant impact or conflict.
- Maintain effective zoning, land use, site plan and subdivision controls.

To use tax dollars efficiently by avoiding the duplication of services, and to put government on a sound financial basis.

- Investigate grants and matching funds from a variety of sources to finance capital improvements.
- Strive for improved coordination between various governments' capital improvement planning.

2. Future Utility Plans

To anticipate the future growth expected over the next 20-25 years, Whiteford officials have already begun discussions for the possibility of extending public utilities with adjacent communities. The following will address various options for each:

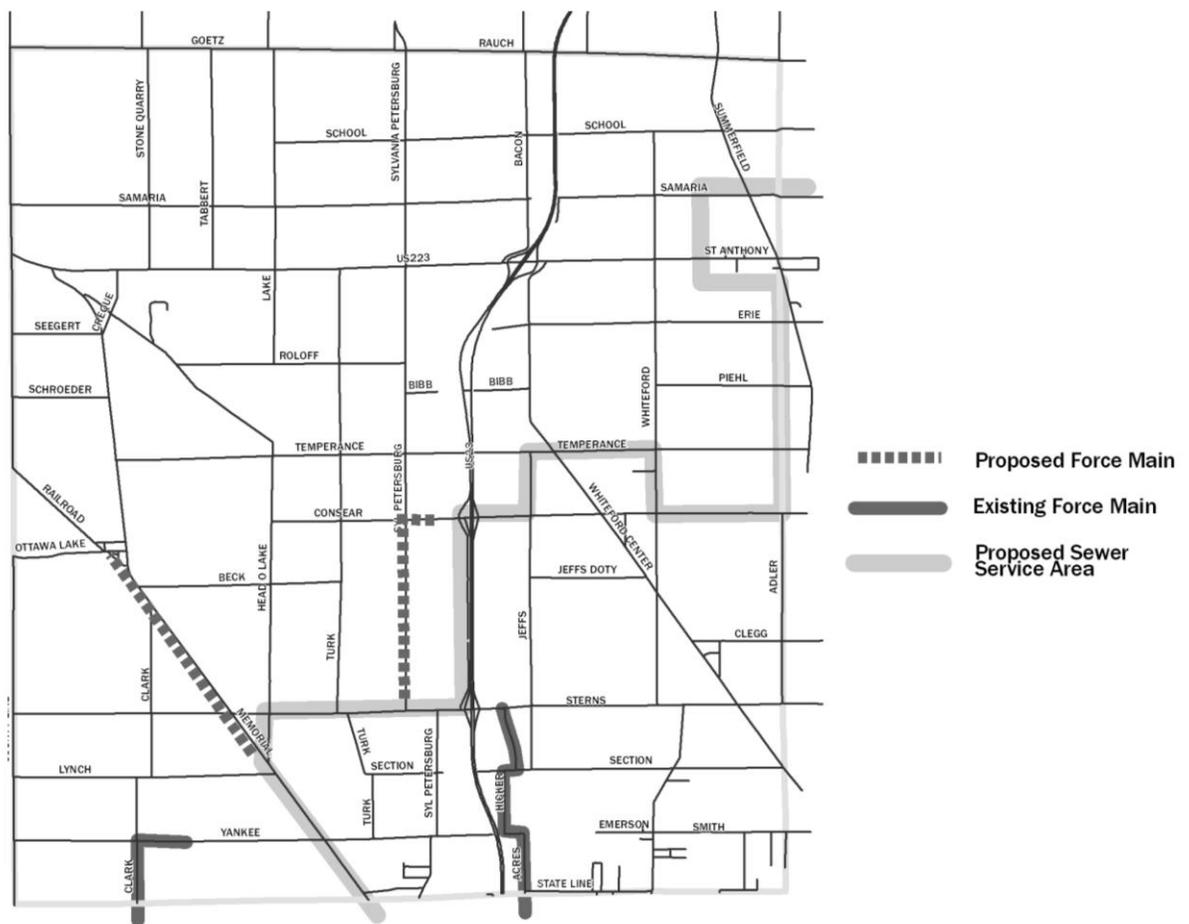
a. Public Sewer Service

Preliminary discussions on the extension of public sewer lines have been held with Bedford Township, the City of Sylvania, Ohio and Lucas County/City of Toledo. Based on

these discussions, it has been determined that the most reasonable alternative for sewer service would be from either the City of Sylvania or Lucas County, Ohio. Because of long range capacity concerns, the Bedford Township alternative has been eliminated.

To support this recommendation, the Toledo Metropolitan Area Council of Governments (TMACOG), as part of their long range planning efforts, is in the process of updating their Sewerage Facility Planning Area Map for the years 1990-2030. The southeastern portion of Whiteford Township has been recommended to be aligned with either of the Ohio Sewerage Facility Planning Areas. This area is bounded by Consear Road on the north, U.S. 23, Sterns and Memorial Highway on the west, Bedford to the east, and the Ohio border to the south. In addition to the main service area, it is suggested that the unincorporated area of Ottawa Lake and the Whiteford Agricultural School Complex be served by this system. Should Bedford Township extend utilities north along Summerfield Road, it is recommended that the St. Anthony area, in the northeast corner of the Township, remain with the Bedford Township Facilities Planning Area (Figure 32).

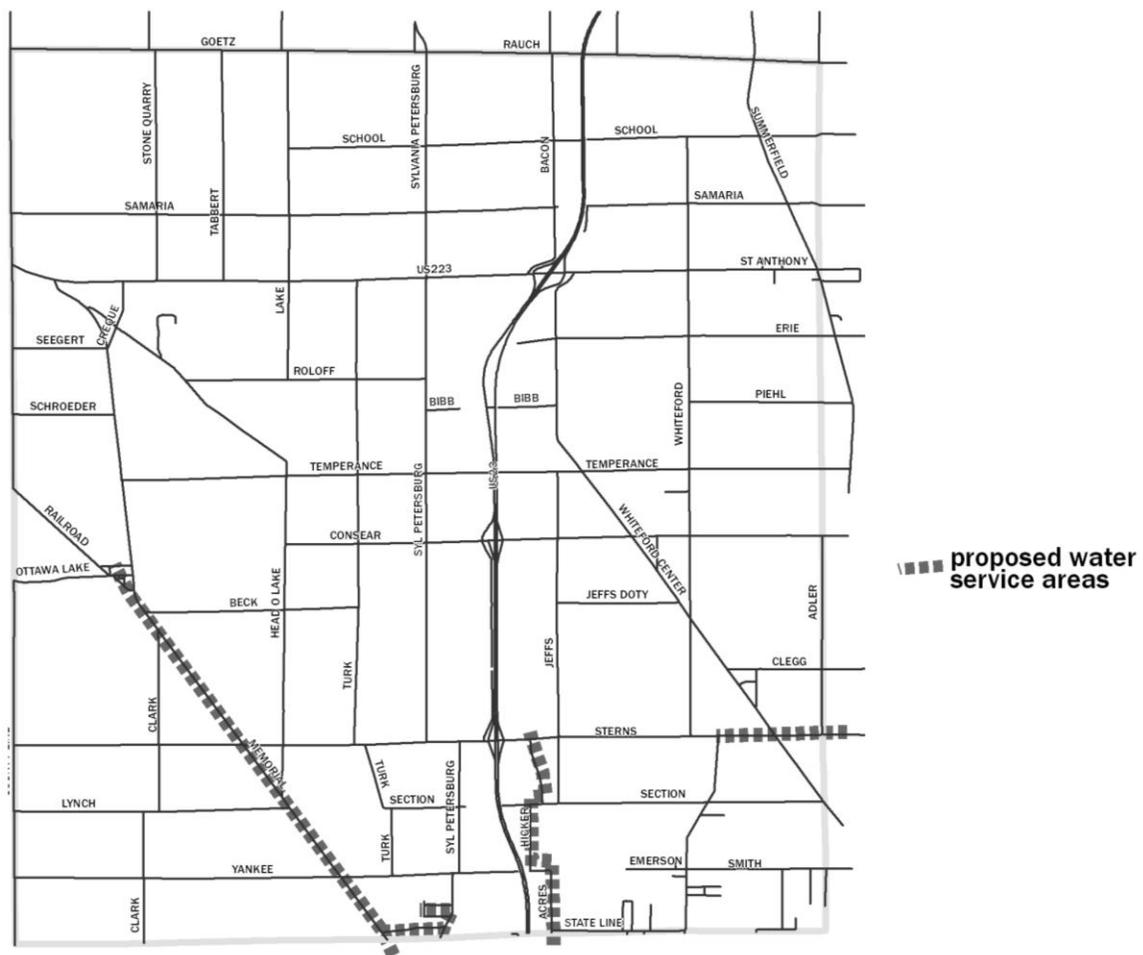
Figure 32. Proposed Sewer Service Area



b. Public Water Service

In 2009 Whiteford Township contracted with David Arthur Consultants, Inc. to do a feasibility study for water services to the southern part of the community. The report and grant application consisted of three municipal water districts, two of which would be connected to the Sylvania, Ohio municipal system and the third would be connected to Monroe County's South County Water System. The proposed system would provide public water to some of the areas of the Township which are having public health concerns due to groundwater quality. The system would also provide water to areas proposed for economic development and in addition would provide for improved fire protection. Figure 33 illustrates the three proposed water districts.

Figure 33. Recommended Water Distribution System



3. Transportation

The overall transportation system of a community contains any mode of transportation that is used in the community or used by residents of the community outside of the community's boundaries. The elements of a transportation system include roads and highways, railroads,

public transportation, air and water travel, and bike and walking trails. Not all of these elements are present within Whiteford Township, nor are they located in most non-urban communities; however, they are located within a thirty minute drive.

Whiteford is strategically located in proximity to north/south, as well as east/west, travel routes. U.S. 23 provides residents and commerce with easy access to regional metropolitan areas and markets. Toledo's Express Airport, Central Union Station and the Port of Toledo are all within 15 miles of the Township. Detroit's Metropolitan Airport is approximately 50 miles away. Toledo Suburban Airport, a privately owned facility classified as a general utility airport, is located within the Township. Public transportation, while not available to the general public, is offered to senior citizens and handicapped individuals through the Lake Erie Transit Commission.

The only other transportation mode in Whiteford is a 1.5 mile section of Norfolk-Southern track that is situated adjacent to Memorial Highway and serves the Ottawa Lake Co-op and Mid States Terminal.

The Toledo Suburban Airport, located in the southeast corner of the Township, is presently a Class B, General Utility Airport. This designates an airport that has at least a 3,800 foot runway and is designed for a broader spectrum of general aviation needs, as well as some air taxi and commuter traffic with 20 seats or less, and some of the small business jets with low approach speeds.

The Norfolk-Southern rail spur is a vital economic development tool that the Township should insist be retained. While currently used by the Ottawa Lake Co-op and Mid States Terminal, it could be utilized for future industrial development along Memorial Highway.

a. Goals and Objectives

Improve the vehicular circulation of the Township to provide for the smooth and efficient flow of automobiles, trucks, buses, farm equipment and emergency vehicles.

Support the development of an overall transportation and maintenance program for the Township in accordance with state, regional and county agencies under the auspices of the current federal transportation act.

b. Future Transportation Plans

Road maintenance and construction are areas that are a joint partnership between the local community and the Monroe County Road Commission (MCRC). These efforts are usually part of the Road Commission's Transportation Improvement Program (T.I.P.), which is an annual process that generally covers a three year period. The Michigan Department of Transportation (MDOT) projects are addressed in the same manner. The present 3-year T.I.P. (2009-2011) does not specifically include any Whiteford Township projects.

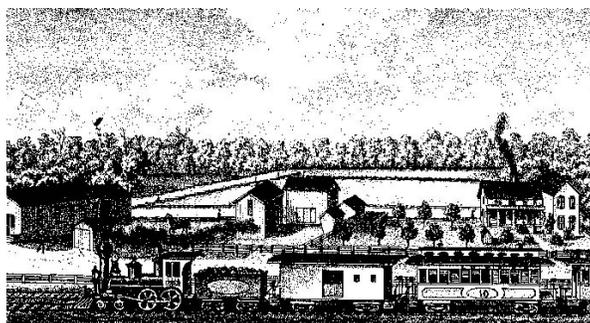
Whiteford Township, over the years, has budgeted monies to do road maintenance. This process has been very effective and should be continued. Whiteford officials should also continue to work closely with the County Road Commission on major road improvement projects, and to review MCRC road condition information that will enable them to identify future road maintenance projects.

MASTER PLAN MAP

The following Master Plan Map delineates the future land use proposals for Whiteford Township. This map was created from the combination of ideas addressed in the previous Land Use Program section for Agricultural, Residential, Commercial, Industrial, Recreation and Open Space and Transportation. In merging these specific concept maps, disagreements periodically occurred where different land use proposals would overlap one another. In these instances, a decision was made on the most appropriate use. The prevailing aim through this master planning process was to designate the highest and best use of land to various segments of the Township and to avoid conflicts between incompatible uses.

Although the Land Use Plan Map divides the Township into distinct districts, it should be viewed as being flexible enough to allow for amendments as social, physical, or economic conditions evolve. The Master Plan Map should adequately serve the Township as a guide for assessing the appropriateness of proposed zoning and land use changes.

The following narrative provides summary descriptions of each district within the Whiteford Township Master Plan Map (page 69).



Woodcut Print of Residence and Blacksmith Shop of Anthony Bordeaux, Section 29, Whiteford Center from the Atlas of Monroe County F. W. Beers & Company, New York 1876

A. AGRICULTURE

The criteria used to identify Whiteford's prime agricultural soils indicate that the Township was divided into two distinct soil districts; therefore, this Plan has designated these districts as Agricultural Preservation and Reserve Agriculture.

1. Agricultural Preservation

The Agricultural Preservation District includes those areas of the Township whose physical and socio-economic factor indicated a high suitability for the production of food, forage, fiber or oilseed crops. These areas should be dedicated primarily to agricultural pursuits; non-agricultural should be encouraged to locate in areas more suitable or compatible. Minimum lot size for agriculture should be in the area of 35 to 40 acres. To allow for non-farm residential development, the quarter/quarter concept could be utilized to preserve the majority of the prime farmland. This would allow one non-farm

residence per each undeveloped 40 acres, but on a smaller parcel of land that would meet state and county health standards for on-site utilities.

The area designated for Agricultural retention is primarily in that portion of the Township lying west of U.S. 23.

2. Reserve Agricultural

The Reserve Agricultural District is that portion of the Township whose soils, while not meeting the high expectations of the Agricultural Preservation District, provide a reasonable return for agricultural pursuits; lot size and soil suitability may be their major drawback. These areas should remain dedicated to agriculture; however, conversion to more urban uses may take place. This conversion of land use should take place in an orderly and planned manner, with only minimal development occurring at one time to reduce the unnecessary destruction of large tracts of farmland. Minimum lot size in this district should be at least five acres.

That portion of the Township lying east of U.S. 23 and primarily north of Sterns Road has been identified for the Reserve Agricultural District. It should also be noted that a major recharge area for the Silurian-Devonian aquifer is in the northeast portion of the Township. Additional precautions must be taken to protect the aquifer from intrusion by development prior to the extension of public utilities.

B. RESIDENTIAL

The residential land use portion of the Plan is divided into three categories: high density, medium density and low density. Residential areas are proposed for primarily the southeast and south central portions of the Township, as is the proposed utility service areas discussed in the previous Land Use Program section.

1. Low Density Residential

Areas designated for low density residential use should be developed with high quality single family housing in attractive settings. Housing densities of .2 to 1.0 units per acre are considered low density.

Areas identified as low density include the south central portion of the Township south of Sterns Road between Memorial Highway and Whiteford Road; from Whiteford Center Road east to Bedford Township and south of Temperance Road; the unincorporated areas around St. Anthony's in the northeast portion of the Township; and Ottawa Lake near the intersection of Memorial Highway and Beck Road.

2. Medium Density Residential

Areas designated for medium density residential use are intended to be single family housing units developed at a density of 2.0 to 5.0 dwelling units per acre. At this density, medium density housing should be located in areas served by public water and sanitary sewer facilities.

Areas designated for this density of development include the extreme southeast portion of the Township bounded by Sterns Road on the north, Bedford Township on the east,

Whiteford Road on the west, and Lucas County, Ohio on the south. The northeast ¼ of fractional Section 2 is also included in the area. Another area is that part of the Township adjacent to Sylvania, Ohio, bounded by Yankee Road on the north, Sylvania-Petersburg Road on the east, and Memorial Highway on the west. The only other area proposed for this density is in the unincorporated area of Ottawa Lake.

3. High Density Residential

High density residential areas are intended to be developed at a density of six or more dwelling units per acre. Housing types may include single family attached townhouses, apartments, condominiums or mobile home parks. High density housing serves as a transitional use between commercial development and lower density single family housing, and is located near major thoroughfares.

The Master Plan indicates the area bounded by Clegg Road (extended west) on the north, Whiteford Center Road on the east, Whiteford Road on the west, and Section Road on the south as the primary area for this density of development.

C. COMMERCIAL

Commercial development within Whiteford Township consists of two types: Highway Oriented and Local. For comparison shopping and major grocery purchases, residents usually travel to nearby Bedford or the Cities of Toledo or Sylvania, Ohio.

The following describe each type and their proposed locations.

1. Highway Oriented Commercial

These business types cater primarily to the motoring public and/or deal with services of a regional nature, such as: hotels/motels; automobile service and repair; new or used car dealers; and outdoor sales and service establishments. Utility service should be compatible with the use.

These types of uses are designated at the three interchanges along U.S. 23 at Sterns Road, Consear Road and U.S. 223.

2. Local Commercial

Existing concentrations of local businesses are located along Memorial Highway and Whiteford Center Road, and would primarily serve the needs of the neighborhoods or the Township at large. These later businesses relate to storage, recreation, services, eating, and arts and crafts. Designated areas for future development include the intersection of Whiteford Center and Sterns Roads, the east side of Memorial Highway south of Yankee Road, the intersection of Memorial Highway and Ottawa Lake Road, and the area near Schnipke Road and Sterns.

D. INDUSTRIAL

Industrial development in Whiteford Township should remain primarily Light Industrial: small manufacturing, tool and die, warehousing and research based facilities. Two primary

industrial areas are proposed in Whiteford Township that concentrate future development adjacent to existing facilities. These areas include:

- The east side of the U.S. 23/Sterns Road interchange between Section Road and Ottawa Lake Outfall Drain, and west of Jeffs Road.
- That portion in the southwest corner of the Township roughly bounded by Lynch Road on the north, Clark Road to the west, Yankee Road on the south, and Turk Road to the east.

Sewer service is available to the former Dana facility at the intersection of Clark and Yankee Roads. Additional development and service could be provided in this area should the proposed public facilities be developed.

A second public sewer line has been developed by the Township to serve Midwest Products located on the east side of U.S.23 at Section and Hicker Roads. In addition, Schnipke Road, a class A all-weather road has been constructed from Sterns Road to provide a direct link to Midwest Products and open up approximately 100 acres for further industrial use.

Both force main sewer lines are part of the City of Sylvania, Ohio sewer system.

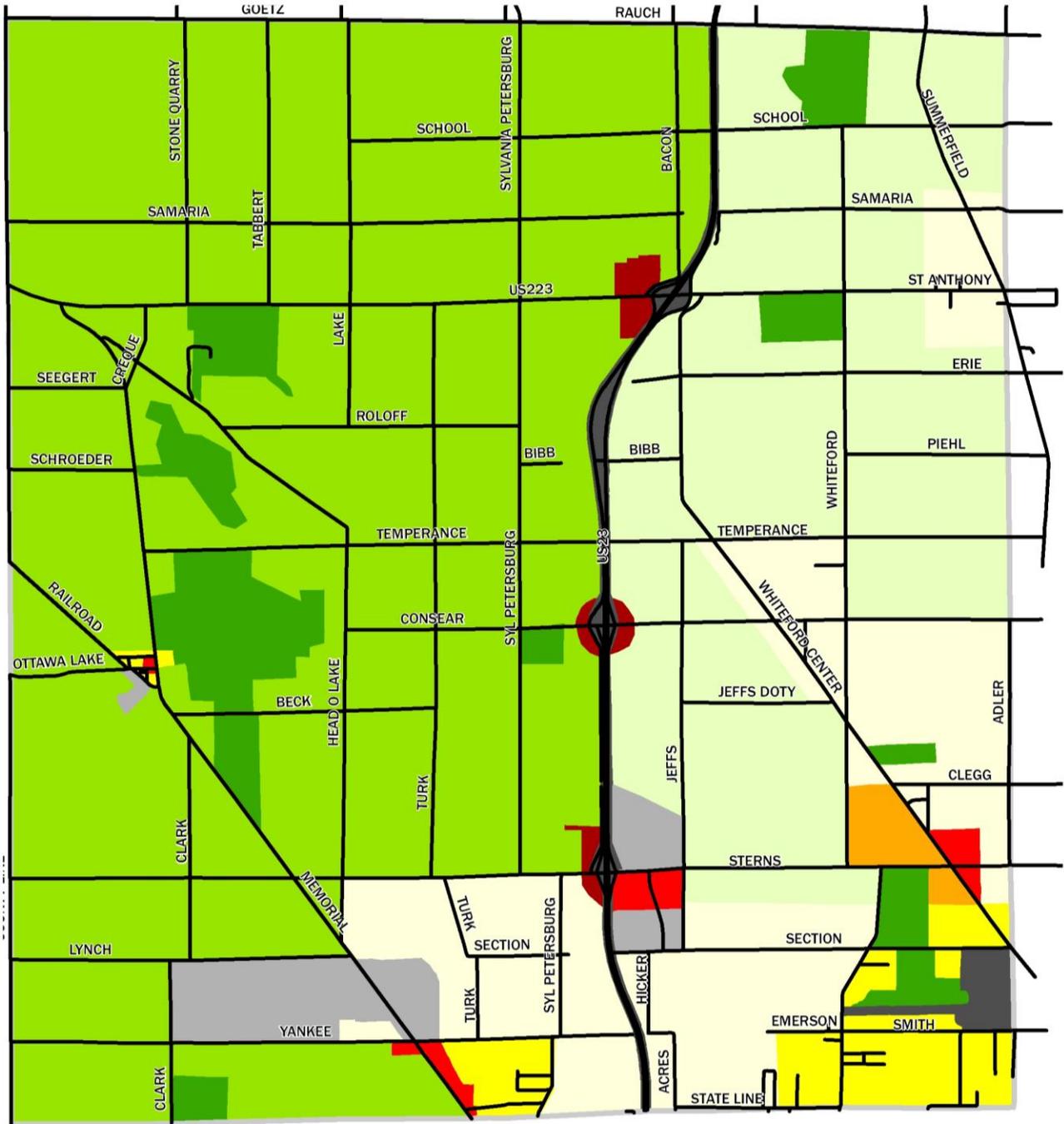
E. RECREATION/OPEN SPACE

Areas included in this classification include: the golf complexes of Sandwedge, Cherrywood, Whiteford Valley, Quarry Ridge and Legacy; the new Whiteford Stoneco Community Park and Ottawa Lake Park; Schnipke Park; Covered Wagon Park; the Toledo Memorial Park & Mausoleum property; and the drainage system of Halfway Creek, Ottawa River Drain and Ottawa Lake Outlet Drain.

F. INFRASTRUCTURE IMPROVEMENTS

Infrastructure improvements for Whiteford Township include the service area boundaries for public utilities (sewer and water). Public sewer and water service areas for this plan are identified and outlined on **Figure 32** and **Figure 33**. They include the majority of the southeast portion of the Township that is bounded by Consear Road on the north; U.S. 23, Sterns and Memorial Highway on the west; Bedford Township to the east; and the Ohio State line to the south. The unincorporated area of Ottawa Lake and the Whiteford Agricultural School Complex are included for utility service; however, these are proposed to be connected by force mains, as indicated on the map. The area around St. Anthony's Parish is also identified for future utility service, but is proposed to be part of the Bedford Service Area, should utilities be extended out Summerfield Road.

WHITEFORD TOWNSHIP FUTURE LAND USE PLAN



- | | |
|--|---|
| agricultural preservation | low density residential |
| reserve agriculture | medium density residential |
| local commercial | high density residential |
| highway commercial | transportation |
| industrial | recreation/open space |

Whiteford Township Future Land Use Plan

