Delta Township

Comprehensive Plan

2004

Delta Township
Comprehensive Plan

Prepared for:

DELTA
TOWNSHIP

Lansing, Michigan

June 2004
Project No. E16316

Prepared by:

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INTRODUCTION

Delta Township is a Charter Township with a Supervisor, Clerk, Treasurer and four Trustees. The Township Hall is located on West Saginaw Highway (M-43) just east of the I-96/Saginaw Highway interchange. As a Charter Township, Delta Township has basic powers granted to general law townships by state statute as well as the power to level more millage (up to 5 mills or 10 mills with the electorate's approval) and protect itself from annexation. Those powers include the ability to hire a manager, assessor, police or fire chief, superintendent and other necessary personnel. Townships are mandated to administer assessments, hold elections, and collect taxes. They are also responsible for financial administration, including budgets, accounting, investments and deposits. In addition, townships may enact and enforce ordinances, which include zoning ordinances. The Township manages the use of land under the Delta Township Zoning Ordinance, which is administered by the Township's Planning Director. Therefore, the Township has the sole responsibility for the development of its zoning ordinance and map.

The Comprehensive Plan is a long-range document intended to guide growth and development in the Township. The Plan, drafted as per the provisions of Michigan's Municipal Planning Act (Act 285 of 1931), is required to be reviewed every five years. The plan has a long-range focus of up to 20 years in the future. A component of the Comprehensive Plan is the Future Land Use Map which serves as the basis for Township zoning and subdivision regulations.

LOCATION

Delta Township is located in the northeastern corner of Eaton County, in the southcentral region of Michigan's Lower Peninsula. The Township's north and eastern borders are shared with the counties of Clinton and Ingham, respectively. To the south and west of Delta Township are the townships of Windsor and Oneida.

The Township is located at Township 4 North, Range 3 West and generally encompasses 36 contiguous land sections, or approximately 36 square miles. A small portion of the City of Lansing spills over into Delta Township from Ingham County and occupies much of section 36.

Natural features are an essential part of Delta Township's attractiveness

NATURAL FEATURES

Natural features are an essential part of Delta Township's attractiveness to residents and visitors. An understanding of Delta Township's land and water resources can help further define where certain land use activities should occur within its borders. The composition of local soils, the Township's general vegetation, and the quality and quantity of water all help determine the ability of the Township to locate, support and sustain different types of land development. Natural features can also help Township officials justify the denial of some development, based on the ability of the natural environment to support it. The following describes these natural elements in more detail:

Local Soils

Soils are the building blocks that define the types of activities that can be sustained on the land. For example, the type of vegetation and drainage that occur naturally in an area is determined by the soil. Soils also help determine where buildings, roads and other man-made structures can best be located. Classifications of Delta Township's soil have been identified and mapped by the Soil Conservation Service in the 1978 Soil Survey of Eaton County, Michigan.

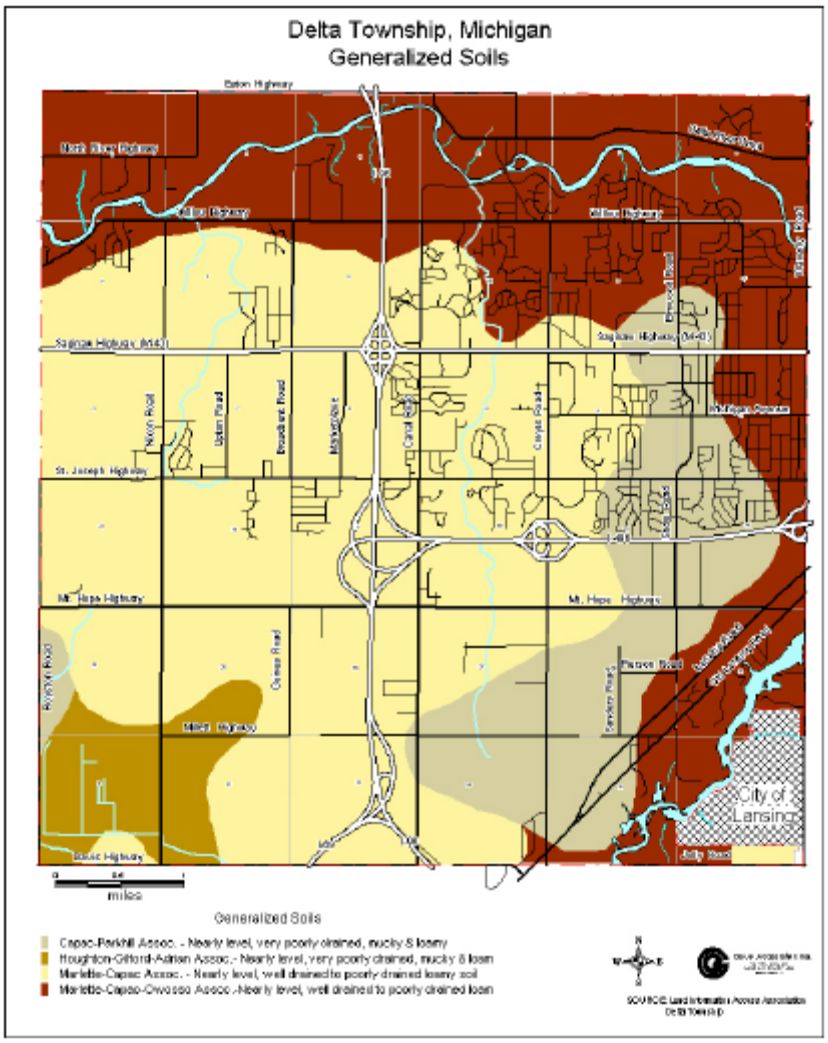
There are four different soil associations within Delta Township (Map 1-1). Each of these types has their own unique characteristics, including limitations for development, recreation and agriculture.

The majority of these soil types are a part of the Marlette-Capac and the Marlette-Capac-Owosso associations. The Marlette-Capac association is defined as soils that are classified as nearly level to gently undulating, well drained to somewhat poorly drained loamy soils on till plains. These soils are found in much of the central and western portions of the Township. The Marlette-Capac-Owosso association is classified as nearly level to hilly, well drained to somewhat poorly drained, loamy soils on moraines and till plains. These soils are found in the northern and eastern portions of the Township.

The Houghton-Gilford-Adrain soil classification found in the southwest corner of the Township presents various problems for urban-type development. This soil type is most conducive to agricultural activities such as the sod farms that predominate in the area.

The Houghton-Gilford-Adrian association and the Capac-Parkhill association make up the remaining portion of the Township. The Houghton-Gilford-Adrian association is identified as nearly level, very poorly drained, mucky and loamy soils in glacial drainage areas. Soils classified as Capac-Parkhill are nearly level to gently undulating, somewhat poorly drained, loamy soils and nearly level, poorly drained and very poorly drained loamy soils; on till plains and low moraines.

MAP 1-1



Vegetation

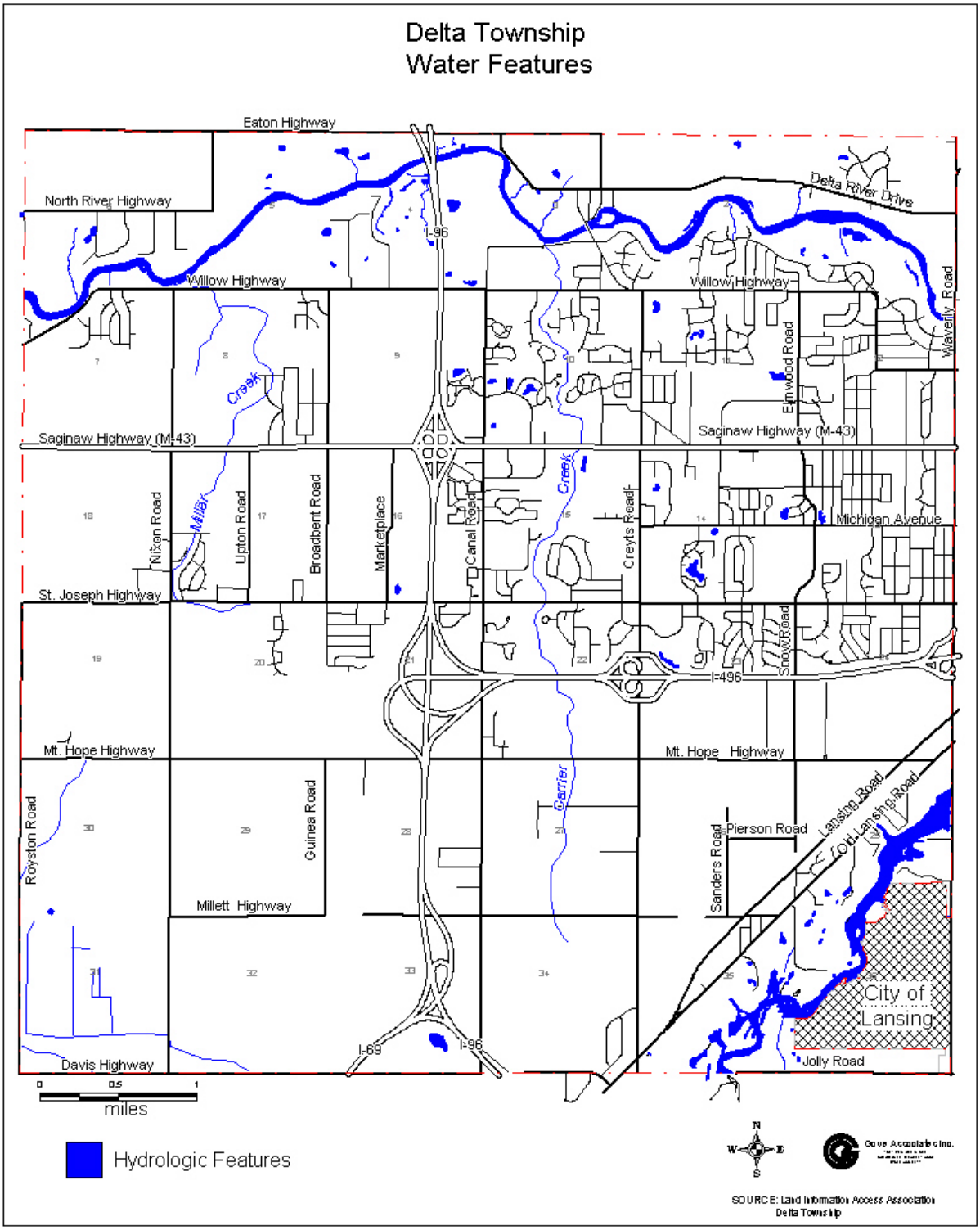
Presettlement vegetation in Delta Township was mostly beech and sugar maple forest. Areas of basswood, elm, white ash and hickory could be found among these beech and sugar maples. Wet prairies were present along the Grand River and Carrier Creek. In many areas hardwoods are still present while in other areas these hardwoods were removed to make way for agriculture and cultivation activity in the 1800s.

Water Resources

Delta Township, located in the Grand River Watershed, has over 410 acres of ponds, rivers and streams within its boundaries with the principal water feature being the Grand River. The Grand River occupies approximately 348 acres and stretches more than 10 miles in the northern and southeastern portions of the Township. More of the Grand River is located in Delta Township than any other single governmental unit in the Tri-County area. In addition, other water features in the Township include Miller and Carrier Creeks both tributaries of the Grand River. These creeks, and drains which feed them, flow from south to north draining much of the Township as shown on Map 1-2.

Some National Wetlands Inventory (NWI) regulated wetlands may exist within Delta Township. Prior to new development within the Township a NWI map should be consulted and an on-site field inspection conducted to more accurately determine whether regulated wetlands exist on the site in question.

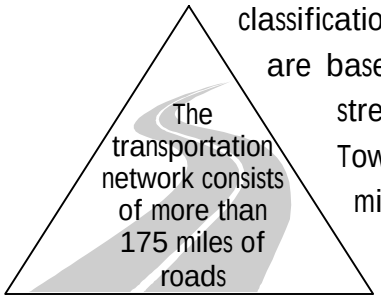
MAP 1-2


Delta Township
Water Features
Eaton Highway
North River Highway
Delta River Drive
I-96
Willow Highway
Willow Highway
Waverly Road
Elmwood Road
Saginaw Highway (M-43)
Saginaw Highway (M-43)
Creek
Nixon Road
Millar
Upton Road
Broadbent Road
Marketplace
Canal Road
Creek
Creyts Road
Michigan Avenue
St. Joseph Highway
Snow Road
I-496
Mt. Hope Highway
Mt. Hope Highway
Royston Road
Guinea Road
Carrier
Pierson Road
Lansing Road
Fort Lansing Road
Sanders Road
Millett Highway
City of
Lansing
I-69
I-96
Davis Highway
Jolly Road
0
0.5
1
miles
Hydrologic Features
N
W
E
S
SOURCE: Land Information Access Association
Delta Township

INFRASTRUCTURE

Roads

The transportation network within the Township can be divided into four classifications: freeways, arterial, collector and local streets. These classifications are based on the service function of the street and its relationship to other streets in the Township. In total, the transportation network within the Township occupies more than 2,500 acres and consists of more than 175 miles of roads.



Interstates 69, 96 and 496 are the principal highways within the Township. Interstate 69 is a major north/south highway in southern Lower Michigan passing through the Township and providing access to I-94 to the south and Flint (I-75) to the east. The traffic count on I-69 in 2003 in northern Delta Township was 32,500 daily vehicle trips while it was 28,300 trips at the Township's southern border. Interstate 96 connects Delta Township with Grand Rapids on the west and Detroit on the east. Within the Township, I-96 and I-69 occupy much of the same highway right-of-way. Interstate 96 merges with I-69 north of the Township where they continue south several miles as a single highway until they split just south of Delta Township. Interstate 96 continues east while I-69 continues southwest. A traffic count of 63,000 vehicles per day was recorded in 2003 for I-96 and I-69 just south of M-43. The I-96, I-69, and I-496 junction is located in the southern portion of the Township, where I-496 penetrates east into the City of Lansing. Traffic counts on I-496 within the Township in 2003 averaged between 24,700 daily vehicle trips near Canal Road to 33,300 near Waverly Road. Much of the traffic associated with these interstates typically bypasses Delta Township, as their origin and destination are locations outside of the Township.

Roads classified as arterial roads are roads that serve as the primary collectors of traffic generated on the collector and local streets in Delta Township. The collector streets in the Township generally follow a one-mile grid pattern which in most cases mirror the one-mile section lines of the Township, dating back to the 19th century survey of the area. Some of the major roads in the Township include the following east-west routes: Michigan Avenue, M-43/Saginaw Highway, Mt. Hope Highway, Willow Highway and St. Joe Highway, in addition to Creyts Road, Canal Road, Nixon Road, and Waverly Road, all north-south routes within the Township.

Numerous minor roads and private roads serve the Township's residential and commercial areas. The bulk of these roads are located in the more urbanized portion of the Township north of I-496 and east of I-96 and I-69. As of January 2004, approximately 94 percent of the Township's roads, not including Federal and State roads, were paved. The Road Classification Map can be found in Appendix A.

Sanitary Sewer Service

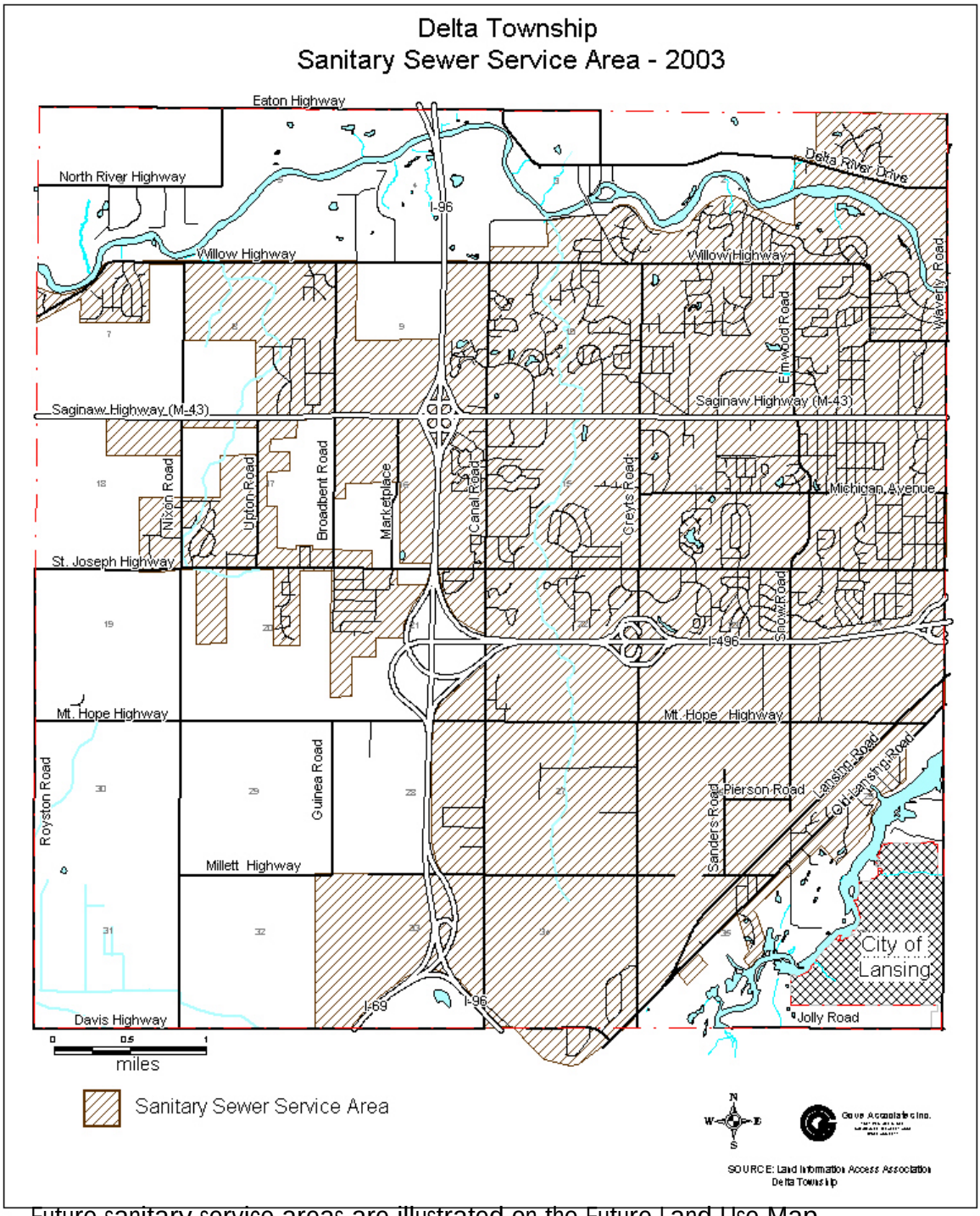
The Township has a combination of urban and rural land uses. As a result, portions of Delta Township are served by a sanitary sewer system while other areas rely on septic systems and drain fields. The areas served by the Township sewer system include most of the area east of I-69 and I-96, and all of the area north of I-496, and south of the Grand River. The availability of sanitary sewer service west of I-69 and I-96 is concentrated in the more densely populated neighborhoods along St. Joe Highway, Willow Highway, and West Saginaw, as indicated on Map 1-3.

Portions of the Township are served by a sanitary sewer system – other areas rely on septic systems

The sewage is collected and transported to the Delta Township Wastewater Treatment Plant located on Willow Highway east of Canal Road through a network of sewer lines ranging in size from 8" to 36" and 14 pump stations located throughout the Township.

As of July 2003 the Township reported 8,003 residential, 625 commercial and 13 industrial hookups. The current capacity of the treatment plant is six millions gallons per day, which is currently sufficient to handle the average daily waste flow generated. Expansion of the facility will occur prior to reaching capacity. The equalization basins in the system will help to balance the 24-hour plant flows.

MAP 1-3



Future sanitary service areas are illustrated on the Future Land Use Map

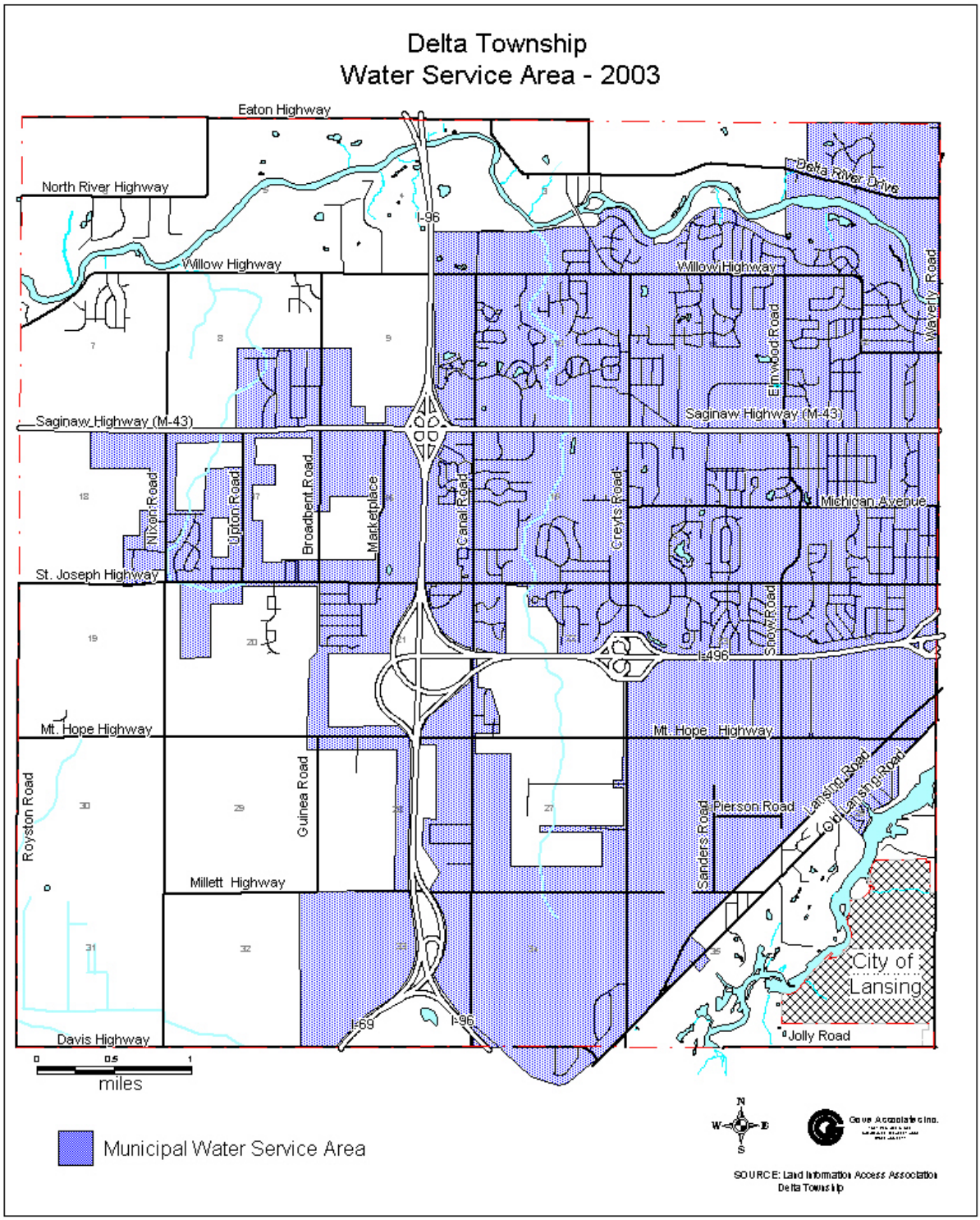
Municipal Water System

Delta Township has an agreement to purchase up to 15 million gallons of water per day from the Lansing Board of Water and Light. This water provides domestic service and fire protection to approximately 6,411 residential, 557 commercial customers and 17 industrial customers as of July 2003. Four pump stations with pumping capacities of between 475 and 1,300 gallons per minute pump the water through a network of pipes ranging in size of 2" to 20" in diameter. The water is stored in four water tanks with storage capacities of 500,000, 1,250,000, 2,000,000 and 1,000,000 gallons. These facilities are located on Snow Road, S. Creyts Road, Willow Highway/I-96 and Millett Highway/I-96.

Water service is provided to 6,411 residential, 557 commercial and 17 industrial customers

The distribution of water is primarily concentrated in areas east of I-69/I-96 and commercial and residential areas west of I-69/I-96 along Saginaw Highway and St. Joseph Highway. The remainder of the Township obtains groundwater through private and residential wells (Map 1-4).

MAP 1-4



Future water service areas are illustrated on the Future Land Use Map.

TRANSPORTATION

Mass Transit

The Eaton County Transportation Authority (EATRAN) has been in operation since 1980 and provides transportation service to residents living within Eaton County on an on-call, as-needed basis. Eaton County residents arrange a pick up and drop off time and location with EATRAN 24 hours prior to the service. While EATRAN serves all Eaton County residents they specialize in providing commuter express trips and medical trips for senior citizens and handicapped individuals. In 2002 EATRAN served 182,674 passengers. Forty percent of all riders in 2000 were senior citizens or handicapped individuals.

The fees associated with EATRAN transportation depend on the age of riders, and service requested by them. This fee is sufficient to support the current level of service provided by EATRAN and user fees are not expected to increase any time soon.

CATA

The Capital Area Transportation Authority (CATA) was formed in 1972 by the City of Lansing. Delta Township was provided with transit services from the late 1970s to the early 1980s in exchange for financial subsidies. In the spring of 1984 CATA discontinued many of the fixed transit routes in Delta Township because the Township did not join CATA. CATA presently operates 25 fixed-routes serving Lansing and East Lansing, Delhi, Meridian and Lansing townships.

CATA's Route Three busses enter Delta Township at the Waverly/West Saginaw intersection, proceed westbound on West Saginaw to Elmwood, northbound to West Mall Drive, westbound to Mall Drive South and then return eastbound to the City of Lansing on Saginaw Highway and adjacent service drives. Route Three serves West Saginaw Plaza, the Lansing Mall, Delta Center, and Meijers. CATA's Route Twelve busses serve Waverly Road between Michigan Avenue and St. Joe Highway with a turn-around point at Waverly Plaza (Home Depot and Value City).

CATA does provide "Delta Late Night Service" which begins when EATRAN service ends for the day. This service provides limited transportation with a 24 hour reservation between Delta Township and Greater Lansing. Service is limited to West Saginaw Highway east of Broadbent Road and Creyts Road between Saginaw and Davis Highway. Delta Late Night allows individuals the option of working later hours and still having public transportation available to them.

The Capital City Airport is located in Clinton County less than one mile northeast of Delta Township. The airport encompasses approximately 1,600 acres and is owned and operated by the Capital Region Airport Authority. Commercial and general aviation services are provided to Township residents as well as those living in the Greater Lansing Area. The airport is presently served by five commercial passenger carriers and two freight carriers. These air carriers make more than 30 flights daily to Detroit, Green Bay, Minneapolis, Cincinnati, Chicago-O'Hare and Pittsburgh. The Airport served more 534,700 passengers in 2003 making the Capital City Airport one of Michigan's busiest airports in terms of passengers boarded. The facilities available at the airport include the main terminal with six gates, offices, restaurants, a gift shop, hangers, maintenances facilities and three runways ranging in length from 3,601 feet to 7,251 feet. The Department of Public Safety of the Capital Region Airport Authority provides public security and safety. The department is registered with the State of Michigan as a police department, fire department and emergency first responder.

Railroad Facilities

The Canadian National Railroad Company and the CSX Transportation Company operate railroads within the Township. In 1987, CSX acquired the Chesapeake and Ohio line located in the far northwest corner of the Township in section 6. However the line does not provide direct service to the Township. The Canadian National Railroad line is located in the southeastern corner of the Township in sections 24, 25, 26, 34 and 35. The line connects Delta Township with Port Huron on the east and Chicago on the west, and the line provides rail service to numerous industrial facilities within the Township.

PUBLIC SERVICES

Police and Fire Protection

The Eaton County Sheriff's Department provides Delta Township police protection referred to as the "Delta Patrol." This is a contract agreement between the Township and the County and as of 2003 the Patrol consisted of:

1 Lieutenant	20 Deputies
5 Sergeants	1 Tri-County Metro Narcotics Officer
3 Detectives	

The Michigan State Police provides additional police protection if needed. The Sheriff's Department sub-station is located on Administrative Drive off of Canal Road just north of Saginaw Highway.

The Delta Township Fire Department founded in 1953, operates 3 stations located throughout the Township with full and part-time staff consisting of fire fighters and paramedics. The Township maintains 30 full-time on-duty firefighters. The Department responded to 4,120 alarms in 2003, of which 3,043 were EMS alarms and 1,077 were fire alarms. The Department maintains and operates a variety of vehicles, boats and other equipment in an effort to provide the comprehensive fire and rescue services.

Fire Station No. 1 on N. Canal Road north of West Saginaw Highway has the following:

- 1 - Class A Pumper
- 1 - 3000 Gallon Tanker with a 1,250 gpm pump
- 1 - 1 3/4 ton Brush Truck with Skid Load
- 1 – 100 Foot Platform Ladder Truck
- 1 – Heavy Rescue Vehicle
- 2 – Sets of the Jaws of Life
- 1 – Rescue Boat

Fire Station No. 2 in the southeast corner of the Township on Lansing Road west of Waverly has available one Class A Pumper.

Located on Snow Road south of West Michigan Avenue, Fire Station No. 3 has two Class A Pumpers, 1 set of the Jaws of life, a rescue boat, one pickup truck and one air compressor truck.

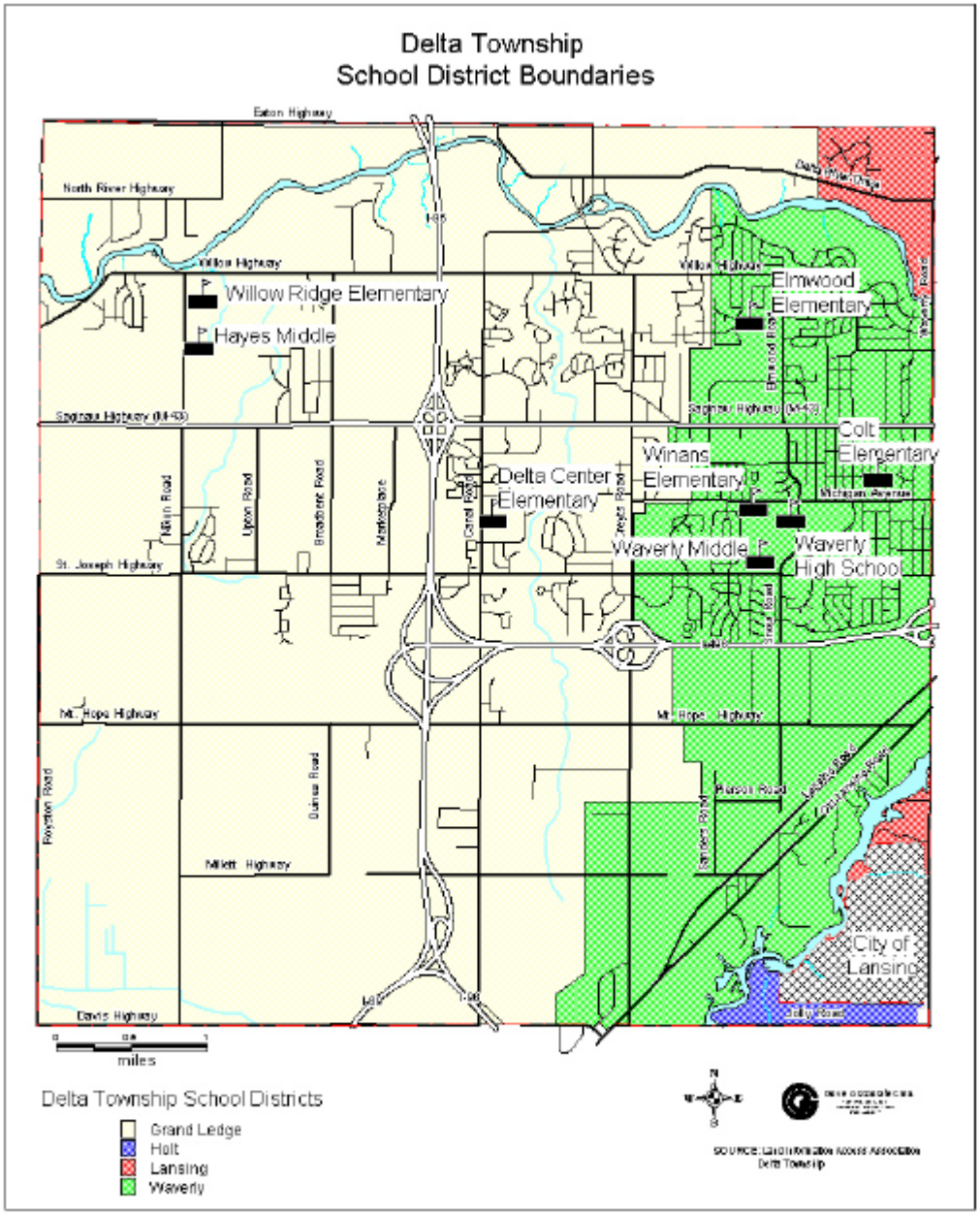
The Delta Township Fire Department has a Mutual Aid Agreement with the neighboring communities of Grand Ledge, Lansing, East Lansing, Meridian Township and Lansing Township, in the event additional fire fighting personnel are needed.

Schools

Delta Township is served by four school districts: Grand Ledge, Holt, Lansing, and Waverly. Nearly two-thirds of the Township is served by the Grand Ledge Public Schools. There are three Grand Ledge Schools located in Delta Township: Delta Center Elementary School (2002 enrollment of 470), Willow Ridge Elementary School (2002 enrollment of 500), and Hayes Middle School (2002 enrollment of 800).

The Waverly Community School District serves nearly one-third of the Township with five of the district's seven buildings which include: Elmwood School (2003 enrollment of 250), Colt Elementary School (2003 enrollment of 339), Winans Elementary School (2003 enrollment of 321), Waverly Middle School (2003 enrollment of 552), Waverly High School (2003 enrollment of 1,061). Only a fraction of the Township is served by Holt Public Schools and Lansing Public Schools and neither district operates school buildings within Delta Township. Map 1-5 illustrates the School District boundaries and the location of school buildings in Delta Township.

MAP 1-5


Delta Township
School District Boundaries
Eaton Highway
North River Highway
Willow Highway
Willow Ridge Elementary
Hayes Middle
Elmwood Elementary
Saginaw Highway (M-43)
Colt Elementary
Winans Elementary
Delta Center Elementary
Waverly Middle
Waverly High School
St. Joseph Highway
Mt. Hope Highway
Milett Highway
Davis Highway
City of Lansing
miles
Delta Township School Districts
Grand Ledge
Holt
Lansing
Waverly

Parks and Recreation/Natural Areas

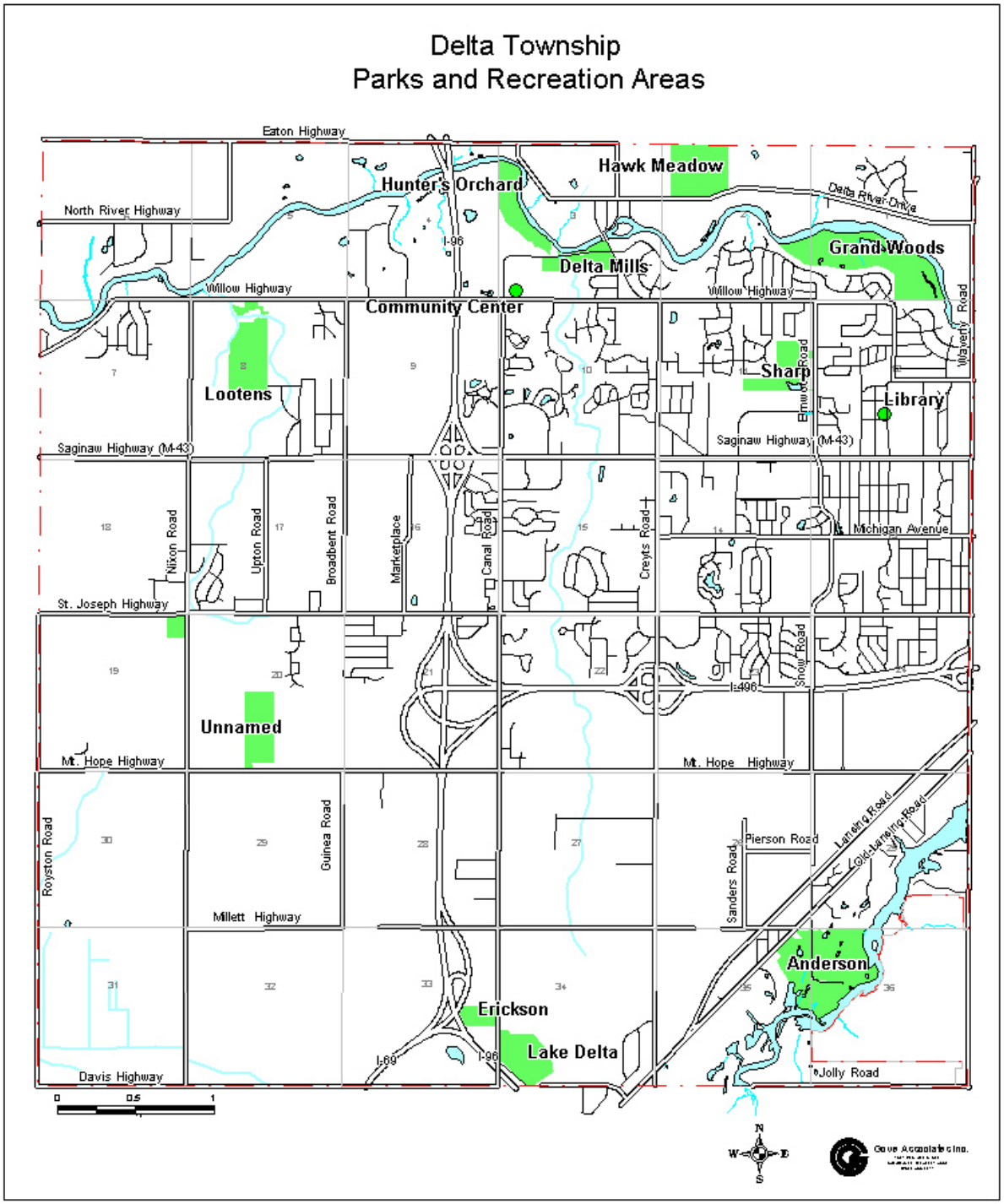
Parks and Recreation facilities and programs within Delta Township are administered through the Parks, Recreation and Cemeteries Department. The department maintains 12 parks and recreation areas and two cemeteries throughout the Township encompassing more than 680 acres. The parks, ranging in size from 1.1 acres to more than 150 acres, offer a variety of recreation opportunities, everything from passive natural recreation areas and picnic shelters to active recreation like play grounds, baseball fields and Frisbee golf. The Parks and Recreation Department provides a complete recreation program with the majority of the indoor activities conducted in the Township's Library and Community Center.

There are a significant number of recreation fields, basketball courts and open space provided at various elementary school sites located throughout the Township. These facilities are owned and maintained by the Waverly and Grand Ledge School Systems.

TABLE 1-1 – DELTA TOWNSHIP PARKS AND AVAILABLE AMENITIES

Parks	Acres	Undeveloped	Bathrooms/ Concessions	Picnic Shelter	Pavilion	Playground	Fishing	Nature Trails	Softball	Volleyball	Frisbee Golf	Amphitheater	Basketball	Tennis	Canoe Launch	Horseshoe Pits
Anderson	151	x														
Grand Woods	128		x	x	x	x	x	x	x	x	x					
Hawk Meadows	128	x														
Lootens	84	x														
Sharp	58		x	x		x	x			x		x	x	x		
Lake Delta	40						x									
Delta Mills	32		x	x		x	x	x	x	x			x	x	x	x
Hunter's Orchard	26	x						x								
Erickson	17		x						x							
Leland	1					x										

MAP 1-6 – PARKS AND RECREATION AREAS



Library

The Delta Township District Library, also known as Enrichment Center, is located at 4538 Elizabeth Road and serves Delta Township residents. The library is housed in a 4,800 square foot building containing 33,000 books, CD's, DVD's, video games, tapes, and magazines. It is operated by 3 full-time and 10 part-time librarians and is currently open six days a week. The library is part of the Capital Library Cooperative which includes 23 libraries located in Jackson, Eaton, Ingham, Clinton and Gratiot counties. The Delta Township Library services nearly 30,000 persons with 10,000 cardholders, with no restrictions on membership. Delta Township officials are considering the construction of a new Library on Township property on the east side of Elmwood Road, north of Davenport Drive.

INTRODUCTION

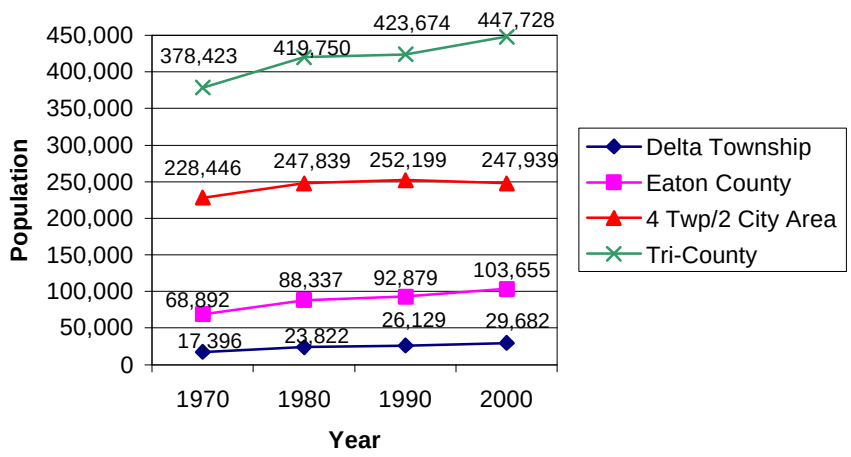
People are Delta's most valuable asset. They are the factor that allows Delta Township to function as a government. This section of the Comprehensive Plan provides information about the population, housing, social and employment characteristics of the Township. By examining these factors a clear picture of the demographic conditions emerges. Understanding these conditions provides both a valuable insight into potential future conditions, as well as a basis for projecting future needs in housing and land use development.

POPULATION

Population Trends

The historic population trends for Delta Township from 1970 to 2000 are illustrated in the following graph. The Township's population grew a total of 70.6 percent between 1970 and 2000, about 20 percent more than Eaton County's overall population growth during the same time period. The population growth in Delta Township was also much greater than the four township/two city area consisting of DeWitt Township, Delhi Township, Lansing Township, Meridian Township, Lansing City, East Lansing City, and the Tri-County Region.

Figure 2-1 - Population Growth



SOURCE: 1970-2000 U.S. Census of Population; Gove Associates 2002

Township population grew 13.5% between 1990 and 2000.

Delta Township and Eaton County both experienced the most rapid growth between 1970 and 1980 within the region. This growth continued during the 1980s - however, at a much slower rate. Between 1990 and 2000 the Township's population grew by 13.5 percent while the County's population grew by 11.6 percent.

Township population 28.6% of overall population in the County

In 2000 the Township comprised nearly 28.6 percent of the overall population in Eaton County. This translates to approximately 1.3 persons per acre, up from 0.77 persons/acre in 1970, when the Township was home to roughly 25 percent of the County population. It is expected that the proportion of the County's population living in Delta Township will increase as will the Township's population density.

TABLE 2-1 – DELTA TOWNSHIP POPULATION AS A PERCENTAGE OF EATON COUNTY AND DENSITY

	1970	1980	1990	2000
Proportion of Eaton County	**25%**	**26.9%**	**28.1%**	**28.6%**
Population Density/Acre	**0.77**	**1.0**	**1.1**	**1.3**

SOURCE: 1970 - 2000 U.S. Census of Population; Gove Associates 2002

Table 2-2, using the data presented in Figure 2-1, shows that the rate of growth in Delta Township has been more pronounced than in the County over each of the past 10 year periods.

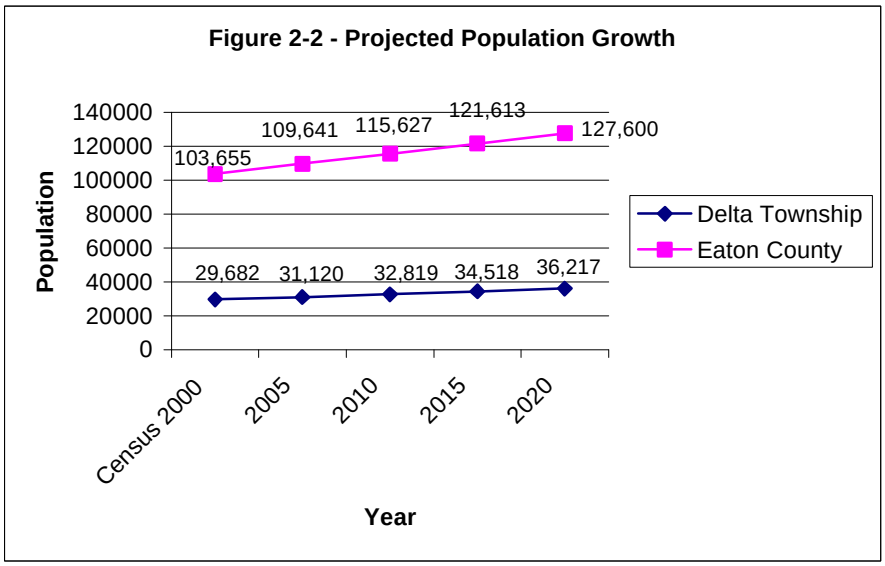
TABLE 2-2 - HISTORIC POPULATION TRENDS PERCENT CHANGES

	% Change 1970-1980	% Change 1980-1990	% Change 1990-2000
Delta Township	**36.9**	**9.6**	**13.6**
Eaton County	**28.2**	**5.1**	**11.6**

SOURCE: 1970-2000 U.S. Census of Population; Gove Associates 2002

By using population projections developed by the Tri-County Regional Planning Commission, adjusting these numbers to reflect the 2000 Census and applying them to the 2000 Census population of Delta Township, a generalized picture of future population growth is presented in the following graph (Figure 2-2).

It is estimated that between 2000 and 2020 a steady population growth of 1.15 percent annually, or 23.1 percent, will occur for Eaton County. During the same period, it is projected that Delta Township will experience a population change of 22 percent or 1.1 percent per year, slightly lower than the County as a whole.



SOURCE: 1990 and 2000 U.S. Census; Michigan Department of Management and Budget 1996; Gove Associates 2002

As a result of this steady increase in population there will be a need for additional housing, and business and industry for employment. With the increase in population, new businesses and industry, there will be a need for infrastructure improvements (roads, sanitary sewer, water service and storm drains for runoff). Periodic evaluation of school facilities and emergency services will be necessary to ensure adequate coverage for the growing population.

Age Composition

The needs and lifestyles of individuals differ among age groups, as do the demands for retail goods and services, and the need for public or institutional program changes within each age group. Table 2-3 shows the composition of the Township's population for 1990 and 2000 relative to Eaton County and the State as a whole. This information will be useful in later sections when the future of Delta Township is formulated.

According to Table 2-3, Delta Township experienced a decrease in the percentage of residents between the ages of 10 and 34 during the 1990s. This was offset by an increase in the number of residents age 35 and over during the same period. This increase in older residents as a percentage of total Township residents is reflected in the higher median age of 38.4 in 2000 versus 34.9 in 1990. That is more than two years older than the County and nearly three years older than the State as a whole. Hence, the age distribution in Delta Township is generally older than the County and State as a whole. This pattern of an aging population represents the ongoing nation-wide trend of older populations, as members of the "baby boom" generation are beginning to reach retirement age.

Decrease in ages 10 to 34 during the 90s — offset by increase of residents age 35+.

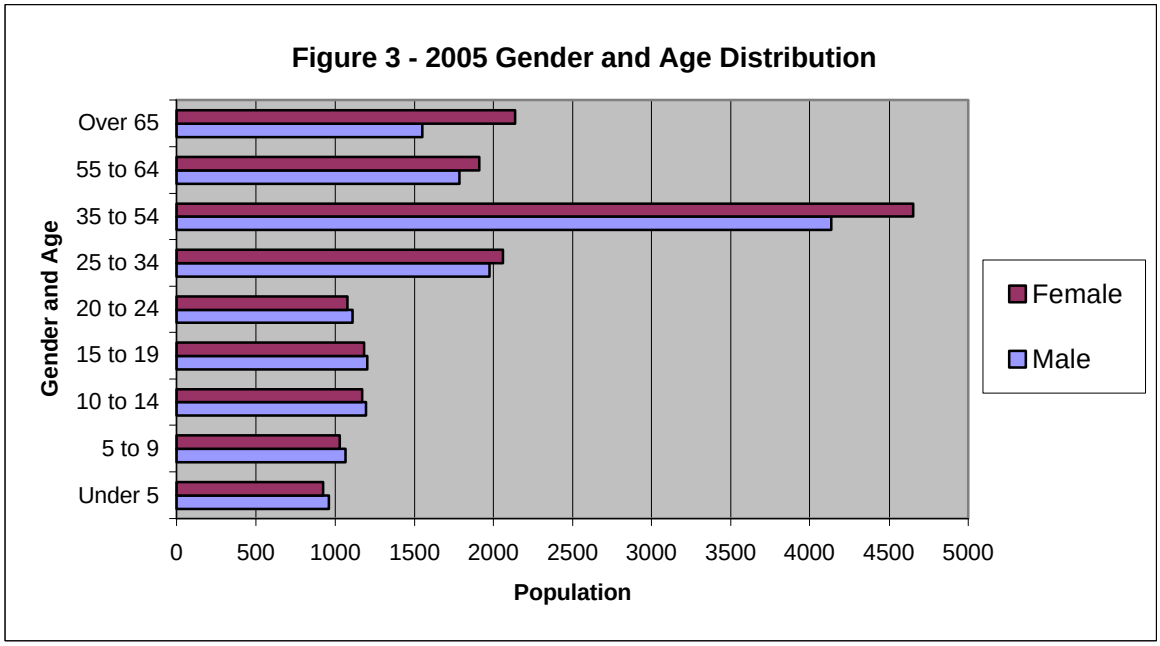
In 2000 the median age was 38.4.

TABLE 2-3 – AGE DISTRIBUTION 1990-2000

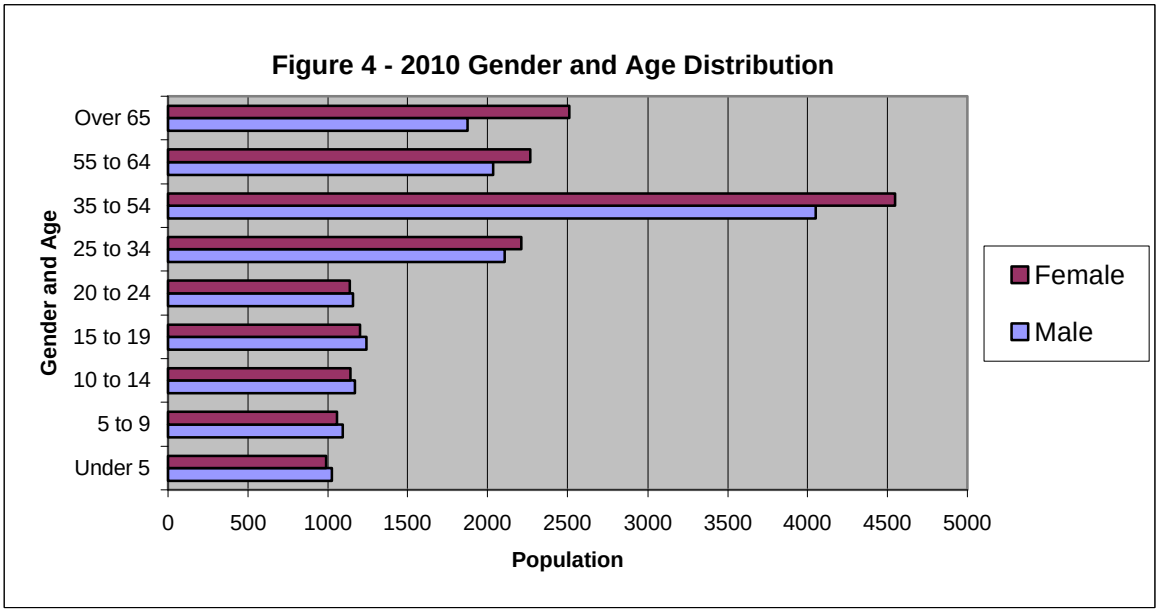
Age Group	Delta Township 1990	Delta Township 2000	Eaton County 1990	Eaton County 2000	Michigan (%) 1990	Michigan (%) 2000
Under 5 Years	1,611	1,677	6,622	6,500	7.5	6.8
% of Total	6.2	5.6	7.1	6.3		
5-9 Years	1,814	1,802	7,438	7,354	7.4	7.5
% of Total	6.9	6.1	8.0	7.1		
10-14 Years	1,725	2,009	7,229	8,132	7.1	7.5
% of Total	6.6	6.7	7.8	7.8		
15-19 Years	1,876	2,099	7,179	8,054	7.5	7.2
% of Total	7.2	7.1	7.7	7.8		
20-24 Years	1,801	2,018	6,206	6,349	7.5	6.5
% of Total	6.9	6.8	6.7	6.1		
25-34 Years	4,311	3,847	15,202	13,105	16.9	13.7
% of Total	16.5	12.9	16.3	12.6		
35-54 Years	8,059	9,286	26,562	32,752	25.3	29.9
% of Total	30.8	31.3	28.6	31.6		
55-64 Years	2,331	3,045	7,286	9,559	8.5	8.7
% of Total	8.9	10.3	7.8	9.2		
65 + Years	2,601	3,899	9,155	11,751	11.9	12.3
% of Total	9.9	13.1	9.9	11.3		
Total	26,129	29,682	92,879	103,655	100.0	100.0
Median Age	34.9	38.4	32.9	36.4	32.6	35.5

SOURCES: 1990-2000 U.S. Census, Gove Associates 2002

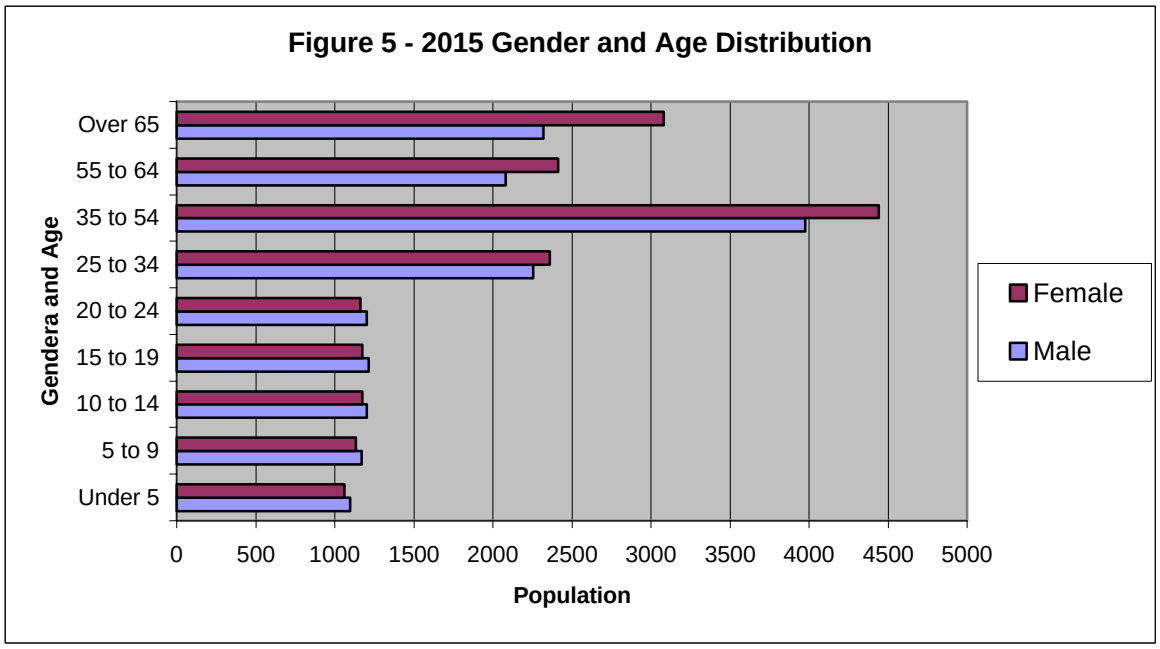
2005-2020 Gender and Age Distribution Graphs



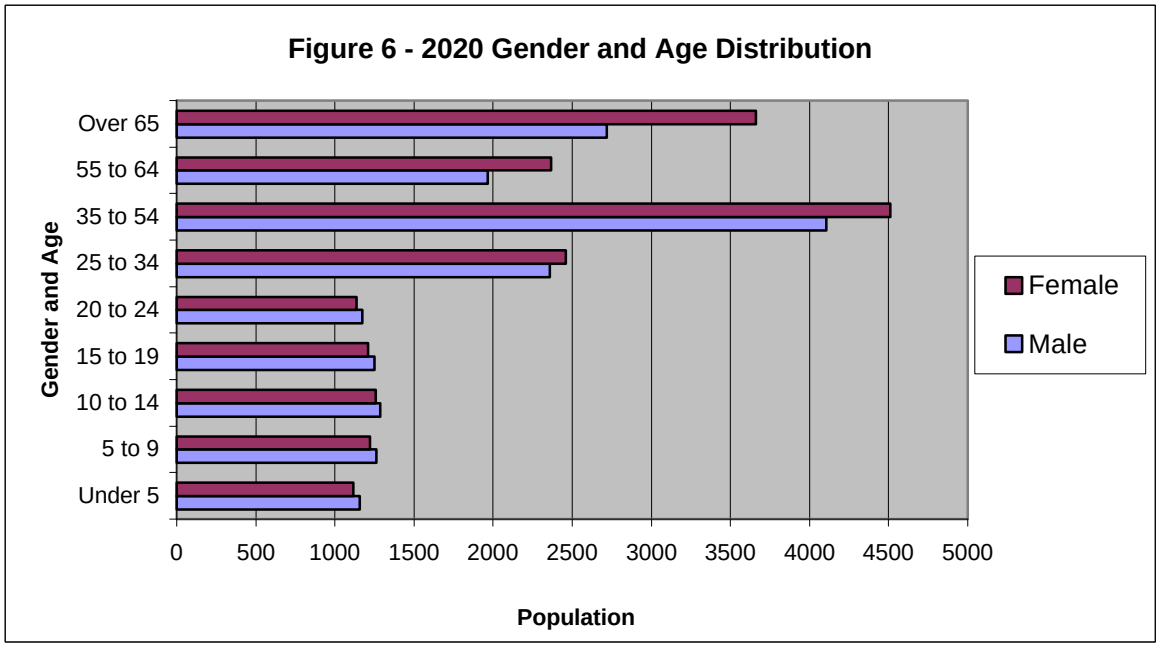
SOURCE: 1990-2000 U.S. Census, Michigan Department of Management and Budget 1996, Gove Associates, 2002.



SOURCE: 1990-2000 U.S. Census, Michigan Department of Management and Budget 1996, Gove Associates, 2002.



SOURCE: 1990-2000 U.S. Census, Michigan Department of Management and Budget 1996, Gove Associates, 2002.



SOURCE: 1990-2000 U.S. Census, Michigan Department of Management and Budget 1996, Associates, 2002.

Using Michigan Department of Management and Budget population age projections for Eaton County and applying them to the 2000-2020 population projections from Figure 2-2, a generalized picture of future population distribution by age and gender for the Township can be obtained (see Figures 3 through 6). Table 2-4 presents the estimated age distribution projected to 2020, and indicates the continuing aging of Delta Township's population. The median age will increase from 38.4 in 2000 to an estimated 40.2 in 2020, with more females than males in all age groups over 25.

Township population aging

TABLE 2-4 - PROJECTED AGE DISTRIBUTION OF DELTA TOWNSHIP 2000-2020

	Delta Township				
Age Group	2000	2005	2010	2015	2020
Under 5 Years	1,677	1,882	2,012	2,161	2,273
% of Total	5.6	6.0	6.1	6.3	6.2
5-9 Years	1,802	2,093	2,153	2,305	2,483
% of Total	6.1	6.7	6.6	6.7	6.8
10-14 Years	2,009	2,366	2,310	2.387	2,545
% of Total	6.7	7.6	7.0	6.8	7.0
15-19 Years	2,099	2,382	2,446	2,390	2,460
% of Total	7.1	7.6	7.5	7.0	6.8
20-24 Years	2,018	2,188	2,293	2,366	2,309
% of Total	6.8	7.0	7.0	6.9	6.4
25-34 Years	3,847	4,036	4,320	4,614	4,818
% of Total	12.9	13.0	13.2	13.3	13.3
35-54 Years	9,286	8,787	8,597	8,416	8,617
% of Total	31.3	28.2	26.2	24.4	23.8
55-64 Years	3,045	3,698	4,301	4,493	4,330
% of Total	10.3	11.9	13.1	13.0	11.9
65 + Years	3,899	3,689	4,387	5,398	6,381
% of Total	13.1	11.9	13.4	15.6	17.6
Total	29,682	31,121	32,819	34,518	36,216
Median Age	38.4	39.0	39.6	39.9	40.2

SOURCES: 1990-2000 U.S. Census, Michigan Department of Management and Budget, 1996, Gove Associates 2002

A decline in the 25-34 and 35-54 year age groups, along with an increase in the 55-64 and 65 and older groups, follows a national trend as the large baby boom generation of the 1950s and early 1960s continues to age. The distribution by gender indicates the proportion of males will decline slightly from about 48.1 percent in 2000 to 47.7 percent by 2020. This can be attributed to the fact that females typically live longer than males.

As the population of Delta Township grows so does the diversity of its residents. In 1990 just over 90 percent of the population was white. As of 2000 this segment of the population is down to 85 percent with the non-white population identified as Black (increasing 3%) and Asian/Pacific Islanders (increasing 1.7%), comprising almost 11 percent of the Township's residents.

TABLE 2-5 – RACIAL/ETHNIC GROUPS

	1990		2000	
White	**24,170**	**90.1%**	**25,405**	**85.6%**
Black	**1,316**	**5.0%**	**2,375**	**8.0%**
American Indian, Eskimo, Aleut	**92**	**0.4%**	**118**	**0.4%**
Asian and Pacific Islander	**241**	**0.9%**	**777**	**2.6%**
Other Race	**958**	**3.6%**	**1,007**	**3.3%**

SOURCE: 1990 and 2000 Census, Gove Associates 2002

SYNOPSIS

- The population of Delta Township has grown over the past 30 years at a pace greater than the County as a whole.

- Population projections to the year 2020 indicate a slight reversal of this trend, with Delta Township growing just over 22 percent between 2000 and 2020, while Eaton County is expected to grow approximately 23 percent during the same period.

- Age composition of Delta Township from 2000 and projected to 2020 indicates a continuing aging of the population, with the median age increasing from 38.4 to 40.2 during this period.

Median age increasing to an estimated 40.2 in 2020

HOUSING

Household Composition

The number and type of households within the Township influence the social and economic dynamics, and consequently impact the quantity and character of land development. Households are the standard unit of measurement for evaluating and projecting the number of housing units, retail sales, and community facilities and services. Table 2-6 shows a decrease in the size of Delta Township, Eaton County, and Michigan households during the 1990 to 2000 period.

Between 1990 and 2000, the number of households in the Township increased at an annual rate of 2.5 percent, which was greater than the average annual population growth during the 80s and 90s of 1.2 percent. This differentiation between household and population growth is a trend seen in many communities across Michigan and the nation, and is caused by a decrease in the number of individuals living in each household (average household size). Therefore, even while the population of a community increases slowly, stabilizes or declines, the number of households tends to increase.

TABLE 2-6 - AVERAGE HOUSEHOLD SIZE 1990 - 2000

	Census 1990	Census 2000	Change	%Change
Delta Township	**2.52**	**2.33**	**-0.19**	**-7.53**
Eaton County	**2.69**	**2.54**	**-0.15**	**-5.57**
Michigan	**2.66**	**2.56**	**-0.1**	**-3.75**

SOURCE: 1990 & 2000 U.S. Census; Gove Associates 2002

The composition of a household depends upon the number of people living within a residence as well as the relationship between residents. A household may consist of a married couple with or without children, a single parent with children, two or more unrelated people living in a dwelling and sharing household responsibilities, or a person living alone.

Table 2-7 depicts the composition of households in Delta Township in 1980, 1990, and 2000, reflecting a number of characteristics and trends to consider in planning for the future. Although the number of households has increased between the three periods, the number of traditional two-parent family households (households

comprised of a family with a husband and wife) has proportionally decreased from 88.8 percent in 1980 to 81.0 percent in 2000.

The number of married couple families with children under 18 has dropped approximately 15 percent, from 55.7 percent in 1980 to 40.8 percent in 2000. This is likely related to the maturing of the population and, therefore, the maturing of family households. The years between 1980 and 2000 also saw an increase in the number of households headed by a female, growing from 8.6 percent of family households in 1980 to 9.4 percent of family households in 2000.
Nonfamily households (households consisting of persons living alone or unrelated persons living together) also grew in number between 1980 and 2000, with the majority being single persons.

TABLE 2-7 - HOUSEHOLD COMPOSITION

	Delta Township		
	1980	1990	2000
Total Units	8,691	10,757	13,112
Number of Households/Occupied Units	8,347	10,250	12,559
Family Households	6,213	7,210	8,075
% of Total Households	74.4	70.3	64.3
Married Couples	5,518	6,088	6,545
% of Families	88.8	84.4	81.0
With Children Under 18	3,074	2,643	2,671
% of Married Couple Families	55.7	43.4	40.8
Female Head of Household	540	873	1,117
% of Families	8.6	12.1	9.4
With Children Under 18	348	565	717
% of Female Household Families	64.4	64.7	60.5
Nonfamily Households	2,134	3,752	4,484
One Person	2,134	2,495	3,697
65 and Older	388	669	1,136
% of Nonfamily	18.1	17.8	25.3

SOURCE: 1980/1990/2000 U.S. Census of Population; Gove Associates 2002

Housing Occupancy

Between 1980 and 2000, there was an increase of 4,421 units within Delta Township's housing stock, representing a 50.9 percent increase. Table 2-8 presents the Township's total units in owner- and renter-occupied housing between 1980 and 2000. The Township experienced a slight decrease in owner-occupied housing units between 1980 and 2000, declining from 66.8 percent to 64.3 percent. In many communities this can be somewhat of a negative trend, as residents who own their own homes create a more stable community, one where residents have a vested interest in their community's future. Delta Township, however, is unique and this generalization may not necessarily hold true. Seniors or empty nesters occupy a number of Delta Township's rental units with ties to the community. These individuals do have a vested interest in the community but likely prefer to rent to be free from upkeep and maintenance or they may go south during the winter months. Seniors occupying rental housing often wish to remain in the community because of their children, life-long friends or an association with a church or familiarity with businesses and services.

TABLE 2-8 - HOUSING UNITS 1980 - 2000

	1980	1990	2000	% Change 1980-2000
Total Units	8,691	10,757	13,112	50.1
Occupied Units (Year-Round)	8,347	10,250	12,559	50.4
% of Total	96.0	95.2	95.8	-0.2
Owner-Occupied Units	5,578	6,849	8,071	44.6
% of Occupied	66.8	66.8	64.3	-2.5
Renter-Occupied Units	2,769	3,401	4,488	62.1
% of Occupied	33.2	33.2	35.7	+2.5

SOURCE: 1980/1990/2000 U.S. Census of Housing & Social Characteristics;
Gove Associates 2002

Household Projection

To accommodate the projected 22 percent (6,534 persons) increase in population within the Township and the increasing number of new households (a result of the combination of households migrating into the Township and the continued decline in household size), new housing units will need to be constructed. The estimated number of new housing units needed is based on population projections, and projected average household size.

Delta Township can expect as many as 3,366 additional households/occupied units by 2020, an increase of 26.8 percent over the 12,559 households in the Township in 2000.

TABLE 2-9 - DELTA TOWNSHIP PROJECTED POPULATION, HOUSEHOLD SIZE AND NEW HOUSEHOLDS

	Census	Projections				
	2000	2005	2010	2015	2020	Change 2000-2020
Population	**29,682**	**31,121**	**32,819**	**34,518**	**36,216**	**+6,534**
Average Persons per Household	**2.33**	**2.31***	**2.27***	**2.25***	**2.24***	**-0.09**
Households/ Occupied Units	**12,559**	**13,294**	**14,259**	**15,121**	**15,925**	
5-Year Change		**+735**	**+965**	**+862**	**+804**	**+3,366**
*Projected household size based upon Delta Township as proportion of projected national trends in household size.						

SOURCE: Gove Associates 2002

Age and Value of Housing

The quality and cultural significance of a community's housing stock are affected by its age. According to Table 2-10 approximately 64 percent of the Township's housing stock has been constructed since 1970. The remaining 36 percent were built prior to 1970, with over 28 percent built between 1950 and 1969.

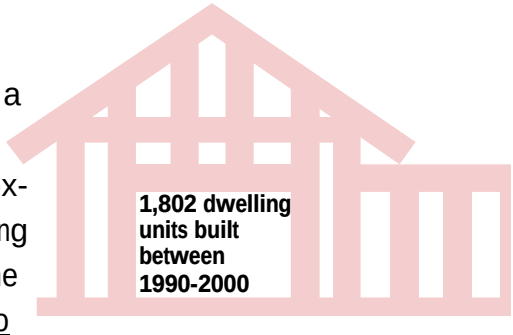


TABLE 2-10 - AGE OF HOUSING STOCK BY YEAR BUILT

Year Built	# of Dwelling Units	% of Total
1939 or earlier	**533**	**4.2**
1940-1949	**328**	**2.6**
1950-1959	**1,028**	**8.1**
1960-1969	**2,615**	**20.8**
1970-1979	**3,402**	**27.0**
1980-1989	**2,851**	**22.7**
1990-2000	**1,802***	**14.3**
*Estimated from Township records 1990-11/30/99		

SOURCE: 1990 U.S. Census of Population; Gove Associates 2002

Table 2-11 presents the median market value of owner-occupied housing in both Delta Township and Eaton County for 1990 and 2000. The median market value of owner-occupied homes is another good indicator of both housing quality and demand. In 1990, the median housing value of a home in Delta Township was 29.4 percent higher than the median value in the County.

TABLE 2-11- MEDIAN OWNER-OCCUPIED HOUSING VALUE 1990 -

	1990	2000	% Change
Delta Township	**$88,300**	**$133,800**	**+51.5**
Eaton County	**$68,200**	**$113,700**	**+66.7**

SOURCE: 1990, 2000 U.S. Census of Housing; Gove Associates 2002

By 2000, this proportion was dramatically lower, but there was still a significant differential of 17.6 percent between the Township and the County. This reflects, to some degree, a continued demand for housing in the Township that has been relatively greater than in other adjacent jurisdictions.

Rental housing can be a significant contributor to the perception of housing quality in a community. Table 2-12 highlights the median monthly contract rent paid in the Township and County in 1990 and 2000. Contract rent (rent paid for the unit excluding utilities) is an indicator of the quality, as well as the characteristics of supply and demand, for rental units.

TABLE 2-12 - MEDIAN MONTHLY GROSS CONTRACT RENT

	1990	2000	% Change
Delta Township	**$444**	**$621**	**+39.8**
Eaton County	**$376**	**$569**	**+51.3**

SOURCE: 1990, 2000 U.S. Census of Housing; Gove Associates 2002

According to Table 2-12, the median monthly contract rent rate in the Township is generally higher than rents found within the County as a whole. However, the percent change in rent between 1990 and 2000 indicates that the rents charged in other jurisdictions in the County are approaching the rental rates that can be obtained in the Township. In 1990, rent paid for housing in the County was nearly 18 percent lower than in Delta Township. By 2000, that differential was cut nearly in half.

SYNOPSIS

- Housing in Delta Township grew at an annual rate greater than the average annual rate of population growth.
- Decreasing household size continues to be a national trend, which impacts a continuing need for housing in Delta Township.
- The U.S. Census reports approximately 4,653 units were built in the Township between 1980 and 2000.
- The Median market value of owner-occupied housing in Delta Township grew by 51.5 percent between 1990 and 2000. This was lower than Eaton County's 66.7 percent increase in market value over the same period.
- Rental housing is increasing slightly as a proportion of the Township's total housing stock.

EDUCATION AND ECONOMICS

Education and Employment

Among the factors that define the ability of an individual or a household to be financially productive and contribute to the quality of life in their community are formal education and occupation. Typically, a person's employment is related to the level of formal education achieved. Table 2-13 depicts the educational attainment of Delta Township and Eaton County residents in 2000, along with the State as a whole.

Educational attainment in Delta Township in 2000, as illustrated in Table 2-13, shows a significantly higher proportion of Township residents have some college or have a degree than County residents in general. More than 33 percent of the Township's population has a Bachelors Degree or better; compared to 21.7 percent in the County and 21.8 percent for the State as a whole.

33% of the Township's residents have Bachelors Degrees or better

TABLE 2-13 - EDUCATIONAL ATTAINMENT - PERSONS 25 YEARS AND OLDER AS OF 2000 CENSUS

Highest Educational Level Attained	Delta Township	Eaton County	Tri-County	Michigan
Less than 9th Grade	**1.6%**	**2.7%**	**3.2%**	**4.7%**
9 – 12 Grade/No Diploma	**5.2%**	**7.8%**	**7.8%**	**11.9%**
High School Graduate	**21.1%**	**30.4%**	**21.8%**	**31.3%**
Some College or Associate Degree	**38.5%**	**37.5%**	**34.8%**	**30.3%**
Bachelors Degree	**22.7%**	**14.8%**	**15.7%**	**13.7%**
Graduate/Professional Degree	**11.0%**	**6.9%**	**9.5%**	**8.1%**

SOURCE: 2000 U.S. Census of Population – Table DP-2 Profile of Selected Social Characteristics; Gove Associates 2002

The higher a person's educational level, the more likely they are to be employed in a higher paying professional industry such as the Finance, Insurance, Real Estate (F.I.R.E) or Public Administration. Table 2-14 compares the number of Delta Township, Eaton County, and Tri-County residents employed by industry sectors for 1990 and 2000.

TABLE 2-14 – EMPLOYMENT BY INDUSTRY BY PLACE OF RESIDENCE

Industry	Delta Township 1990	Delta Township 2000	Eaton County 1990	Eaton County 2000	Tri-County 1990	Tri-County 2000
Agricultural, Forestry, Fishing, Construction and Mining	505	651	3,726	3,798	14,596	15,153
% of Total	3.4	4.0	11.9	7.1	7.3	7.5
Manufacturing (durable and non-durable)	2,340	1,796	3,067	9,736	26,190	30,085
% of Total	15.9	11.0	9.8	18.2	13.1	15.1
Transportation and Public Utility	520	883	608	3,139	8,426	29,309
% of Total	3.5	3.4	1.9	5.9	4.2	5.7
Wholesale Trade	608	435	1,999	1,513	7,114	6,519
% of Total	4.1	2.7	6.4	2.8	3.5	3.0
Retail Trade	2,424	1,883	6,103	6,213	36,751	25,266
% of Total	16.5	11.6	19.5	11.6	18.3	11.0
Fire, Insurance, Real Estate (F.I.R.E)	1,450	1,623	2,391	3,870	12,736	15,375
% of Total	9.8	10.0	7.6	7.2	6.4	6.8
Service	4,739	6,812	7,820	19,616	73,060	101,912
% of Total	32.2	41.8	25.0	36.7	36.5	40.8
Government/Public Administration	2,132	2,211	5,568	5,557	21,523	21,484
% of Total	14.5	13.6	17.8	10.4	10.7	9.9
TOTAL*	14,718	16,288	31,282	53,442	200,396	245,103
% of Total	100	100	100	100	100.0	100.0

* Employed persons over 16

SOURCE: 1990, 2000 U.S. Census, Gove Associates 2003

In 1990, employment in the F.I.R.E sector consisted of 9.8 percent of all residents employed in the Township – over two percent higher than in the County as a whole. By 2000, this number increased by only 0.2 percent to 10.0 percent in the Township and decreased 0.4 percent for the County. These jobs represent a more financially healthy and well-educated community population base than reflected in the County overall.

The greatest proportion (nearly 42 percent) of the Township's population is employed in the service sector, which tends to provide relatively lower paying entry-level jobs not requiring higher levels of education. Considering nearly 70 percent of the Township's population over the age of 25 has "some college" education or higher, many of these jobs are probably held by teenagers.

42% of Township population working in service industries

Employment in the agricultural, forestry, fishing, mining and construction related industries accounted for only 4.0 percent of Delta Township's work force in 2000. This is significantly fewer than the County (7.1%) and is reflective of the more urban-based land uses of Delta Township and its close proximity to the City of Lansing.

Location of Employment

Beyond the type of work residents do, the location of employment also contributes to the character of the Township. Table 2-15 shows the number and proportion of employed residents who work either within Delta Township (16.8%) or outside the Township (82.1%).

TABLE 2-15 - GENERAL LOCATIONS OF EMPLOYMENT FOR DELTA TOWNSHIP RESIDENTS - 1990

	#	% of Total
Employed in Township	**1,480**	**16.8**
Employed in Remainder of Region	**7,209**	**82.1**
Worked Outside of Region	**85**	**1**

SOURCE: 1990 U.S. Census of Population and Housing - STF3A; Gove Associates 2002

Travel time to work is important for anyone looking to locate within the Township. It is also used as a broad indication of employment location. Table 2-16 lists the travel times to work for Delta Township residents.

Township residents (65%) commute in 19 minutes or less

TABLE 2-16 - TRAVEL TIMES TO WORK - 1990

Minutes	#	% of Total
Less than 5	**551**	**3.8**
5 – 9	**2,243**	**15.3**
10 – 14	**3,459**	**23.8**
15 – 19	**3,163**	**21.7**
20 – 24	**2,509**	**17.2**
25 – 29	**564**	**3.9**
30 – 34	**660**	**4.5**
35 – 39	**87**	**0.6**
40 – 44	**136**	**0.9**
45 – 59	**260**	**1.8**
60 – 89	**351**	**2.4**
90 or Greater	**232**	**1.6**
Work at Home	**344**	**2.4**

SOURCE: 1990 U.S. Census of Population; Gove Associates 2002

Given the limited public transit available in the Township, the vast majority of trips to and from work are made in private vehicles. According to Table 2-16, approximately 65 percent of Delta Township residents commute to work in 19 minutes or less. At an average travel speed of 45 mph, that reflects a driving distance of about 14 miles. This indicates that most of the residents who reside in the Township have jobs in neighboring cities and townships, most likely in the cities of Lansing, East Lansing, or the MSU campus.

Income

Household income is higher in the Township than the County

Household income is an important measure of the economic well being of Delta Township, and helps to determine the quality and quantity of retail goods and services purchased both within the Township and surrounding areas. Table 2-17 lists the median household income for the Township and Eaton County, and indicates that household income in the Township is significantly higher than the County as a whole. The increase in median household income between 1990 and 2000 in Eaton County was more than 38 percent while the median household income for Delta Township increased 23 percent.

TABLE 2-17 - MEDIAN HOUSEHOLD INCOMES, 1990/2000

	1990	2000	% Change
Delta Township	**42,727**	**52,711**	**+23.3**
Eaton County	**35,734**	**49,588**	**+38.7**

SOURCE: 1980/1990 U.S. Census of Population; Gove Associates 2002

Table 2-18 identifies the median household incomes for Delta Township, Eaton County and the Tri-County area between 1990 and 2000. It is estimated that the increase in Delta Township's median household income will continue, however at a rate slower than the County as a whole and the Tri-County area. Delta Township's median household income grew by more than 20 percent between 1990 and 2000, while Eaton County saw an increase of more than 38 percent during the same period.

TABLE 2-18 - MEDIAN HOUSEHOLD INCOMES, 1990/2000

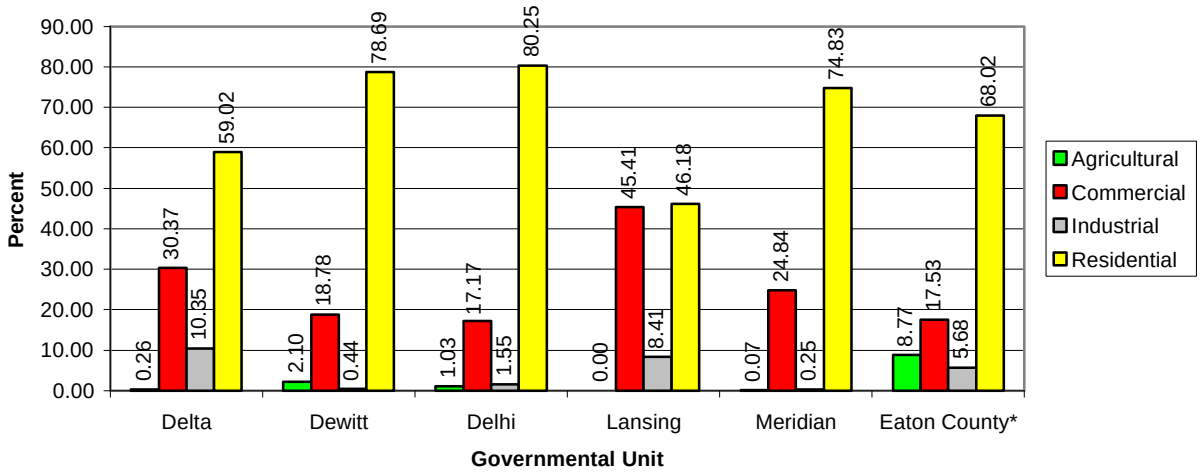
	1990	2000	% Change
Delta Township	**42,727**	**52,711**	**23.3**
Eaton County	**35,734**	**49,588**	**38.7**
Tri-County	**34,025**	**47,722**	**40.2**

SOURCE: 1990 – 2000 U.S. Census of Population, Gove Associates 2002

Property Values

The components of State Equalized Values (SEV) within Delta Township, as well as in nearby Townships, are depicted in the graph below. Each year the Township is required to report the total assessed values for each class of property to the County and State.

Figure 2-7 - 2002 Components of State Equalized Values



*Eaton County data 2001

The bar chart above illustrates that in 2002 nearly 60 percent of the Township's total assessment was within the residential class followed by commercial at just over 30 percent. Industrial property accounted for more than 10 percent of that total while agricultural consisted of less than 1 percent. This distribution in assessed values when compared to other Townships in the area or to the County, as a whole, indicates that Delta Township has a more diverse tax base than most urbanized jurisdictions within the greater Lansing area.

SYNOPSIS

- Delta Township has a relatively educated populace and a healthy income base.
- Employment statistics indicate a higher percentage of Township professionals employed in the Financial, Insurance and Real Estate sectors than in the overall County, indicating an equally higher income level due to these better paying professions.
- Median household income in Delta Township was significantly higher than Eaton County during the decade of the 1980s, and it is estimated that this trend continued through the year 2000.
- Delta Township has a more diverse property tax base than comparable communities in the greater Lansing area.

INTRODUCTION

An existing land use inventory is a necessary first step in planning for the future of Delta Township. An Existing Land Use Map has been prepared which depicts the existing distribution and location of land uses. The Existing Land Use Map, based upon a Land Use Map developed by the Land Information Access Association in 1992, was reviewed and updated by the Township Planning Staff in the Spring of 2002.

LAND USE CLASSIFICATIONS

Residential – An area in which dwellings with their accessory buildings occupy the major portion of the land:

Single-Family Residential (the most dominant housing type)
Single-Family Residential refers to one detached dwelling unit on a single parcel. Most units considered single-family are built on foundations or basements using traditional on-site building methods.

Two-Family Residential
These are typically attached (duplex) dwelling units or condominium units on a single parcel. Similar to the single-family units, these units are built on foundations or basements using traditional building methods.

Multiple-Family Residential
Multiple-Family Residential refers to residential structures containing more than two dwelling units. The most typical form of Multiple-Family Residential housing is apartment buildings, two stores or more in height.

Manufactured Housing
Manufactured housing represents factory-built, single-family structures that meet the U.S. Department of Housing and Urban Development (HUD) Code. Manufactured housing communities meet the design and building code requirements of the State of Michigan. Manufactured housing is typically a unit on an individual lot, similar to detached housing built on a foundation under the building codes adopted by Delta Township.

Commercial - An area where goods are distributed or retail services are provided. This category includes structures, adjacent land and parking areas dedicated for the use of employees and customers.

Office/Medical - An area or facility used for the treatment of health needs and services or the provision of personal or business services. This subcategory includes structures, adjacent land and parking areas dedicated for the use of employees and customers.

Institutional - An area or facility used by the Township, Public Utility, County, School District, religions, nonprofit, or State agency to meet the needs of the community. This includes Township offices, schools, and public meeting spaces, public parking lots and other public uses. Institutional also includes land uses often deemed:

> **Quasi-Public** – An area or facility used by a limited number of persons with particular interests and nonprofit organizations, such as churches, day care centers, private schools, private clubs and related activities.
>
> **Public Utility** - An area or facility not generally accessible to the public but used to provide services to the community, such as water towers, wastewater treatment areas and water pumping stations.

Cemetery - An area used for the burial and memorial of the deceased. Facilities for memorial services may also exist on the site.

Industrial - An area where raw or unfinished materials or commodities are used to produce a product or service. This can also include wholesale business activities and warehousing.

Agriculture - This category may consist of croplands, permanent pasture or orchards.

Parks, Recreation, Golf Course - An area or facility used for recreational activities (public or private). This category includes structures, adjacent land and parking areas dedicated for the use of employees and customers.

Wetlands - Areas that are wetlands include marshes, swamps and related land, which are transitional areas between water masses and upland areas.

Woodlands - Areas that are covered with deciduous and coniferous species of trees or shrubs. Lands in this category consist of both suitable and unsuitable areas for development.

Vacant Land – This category includes land that has not been developed as well as areas that cannot be placed in the other categories noted above. Undeveloped and/or vacant land may or may not be suitable for development. This category includes abandoned agricultural fields and flood plains.

LAND USE DISTRIBUTION

The following describes the existing land use distribution in Delta Township. Table 3-1 and the accompanying Existing Land Use Map (page 48) supplements this text providing land use distribution data with graphic representation.

Predominate Township Land Use – Urbanizing Residential Commercial and Strong Industrial

General Existing Land Use Description

In 2002 the character of Delta Township's land use is defined by urbanizing residential development, commercial development and a strong industrial presence. There are a number of other less prominent land uses that include agricultural activity and transportation rights-of-way. Predominant natural land cover includes open space/vacant lands, woodlands, wetlands, rivers, streams and small ponds. Undeveloped open space and wooded areas make up nearly 20 percent (4,378 acres) of the Township's existing land area, with agriculture accounting for 20.1 percent (4,632 acres), and rivers/wetlands 4.4 percent (1,021 acres). Combined, these natural resource areas account for over 23.4 percent of the Township's geographic area.

TABLE 3-1 - EXISTING LAND USE AND NATURAL RESOURCE LAND COVER- 2002

Land Use Type	Existing Acreage	% of Total Acreage
Single-Family Residential	5,582	24.2
Two-Family Residential	78	0.3
Multiple-Family Residential	571	2.5
Manufactured Home Park	38	0.1
Commercial	643	2.8
Office	281	1.2
Institutional	435	1.9
Industrial / Utility	1,644	7.1
Cemetery	47	0.2
Parks, Recreational (inc. golf courses)	1,042	4.5
Agriculture	4,632	20.1
Transportation Rights-of-way	2,716	11.8
Woodlands	2,214	9.6
Open Space / Vacant	2,164	9.4
Water / River / Wetlands	1,021	4.4
Total Acreage	23,096	100.00

SOURCE: Gove Associates 2002

Agricultural - Agricultural land uses account for 4,632 acres in the Township. The majority of the farmland within the Township is located west of Interstate 96 and south of St. Joseph Highway. As is common in most suburban communities, family farms, particularly those operated as full-time farms, are declining within the Township. Overall, land devoted to active agriculture has steadily decreased over the past several decades. As development pressures increase, the capacity to sustain large areas of agriculture becomes more difficult.

Residential - Residential uses of all types, including single-family, two-family and multiple-family housing along with manufactured homes, accounts for 6,257 acres in Delta Township, for an average gross density of 2.09 units per acre (or an average of 0.4 acres for each unit). The Existing Land Use map graphically displays the dispersion of residential land use within Delta Township. Heavy concentrations of residential development can be found in the northeast and northwest quadrants of the Township, with the heaviest concentrations in sections 1 through 8, 10 through 15, 17, 19 through 21, 23 and 24.

Township residential uses - accounts for an average gross density of 2.09 per acre

The distribution of residential land use by type of unit shows **single-family homes** are spread throughout the Township while other residential land uses are more concentrated. Within the Township **two-family residential units** occupy approximately 78 acres. Two-family housing is concentrated in the northeast quadrant of the Township particularly in sections 10, 11, 14 through 16 and 24. **Multiple-family housing units** within the Township occupy 571 acres. Again these units are concentrated in the northeast quadrant of the Township, especially in sections 10 through 15 and 22 through 24. While a number of manufactured homes may be found in the Township on individual lots they are generally considered single-family homes. Within the Township there is one manufactured home community (230 sites) occupying 38 acres and it is located on N. Canal Road in section 16.

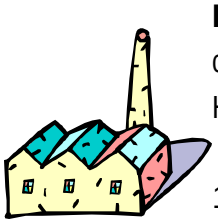
The balance of the single-family residential development is located in linear configurations along the major roads in the Township. Such perimeter development, while common in many rural areas, is not considered the most efficient approach to land utilization. Michigan's Subdivision Control Act, which was subsequently amended by the Land Division Act, facilitated splitting larger parcels into smaller lots along roadways. There are negative impacts that result from these corridor developments. Because lots are developed along County roads, which are in effect perimeter roads surrounding full sections, the interior portions of the sections are typically not used, or if they are actively farmed, the potential for residential/agricultural conflicts is enhanced. That is more likely to occur as the number of houses along the perimeter roadway increases. As perimeter lots develop, the preservation of the rural landscape becomes more difficult, in effect changing the visual character of the Township. In addition, each developed lot requires at least one driveway. As the number of lots and houses increase, so does the number of driveways. Over time, the propensity for vehicular accidents will increase. This type of development is predominant in the southwestern quadrant of the Township in sections 18 through 20, and 29 through 31.

Table 2-8 (page 29) shows that the number of housing units has increased by 4,421 (50%) since 1980. While the number of housing units has steadily increased, the overall acreage for those units has increased at a much greater rate. Table 3-2 (page 47) shows residential land uses have increased 107 percent since 1972 and 69 percent since 1984. When compared to the increase in total housing units over the past 20 years, the land allocated to residential development has increased at an accelerated rate. This is likely due to larger residential parcels, possibly aided by large-lot zoning standards.

Commercial - Commercial uses cover 643 acres of the Township representing 2.8 percent of the Township's developed land area. Commercial land uses are generally concentrated along Saginaw Highway and the Interstate 496 interchanges in sections 9, 16, 22, and 24. Commercial development is also found in sections 23, 25, 35, and 36. Commercial uses along Saginaw

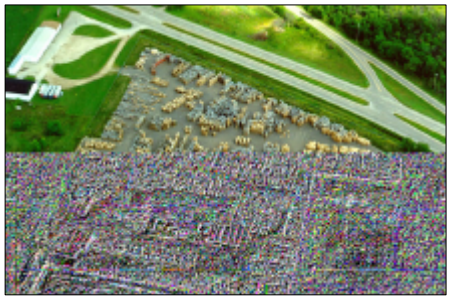
serve not only Delta Township residents but also the regional population. The commercial uses consist of a mix of a large indoor mall, small convenience retail, large big box regional retail, highway services/retail, hotels and restaurants.

Township residents do their convenience shopping in the Lansing area. Since many residents commute to work in Lansing, it is likely that a substantial amount of shopping for convenience goods is done there. Comparison shopping (appliances, clothing, sporting goods, etc.) is available in the large shopping areas in the Greater Lansing Area. Most of the stores in these larger commercial centers are within a 15 to 30 minute drive from Delta Township.



Industrial/utility land uses are concentrated in the southeast quadrant of the Township

Industrial / Utility - Industrial development and utility land uses have been neatly concentrated in the southeast quadrant of the Township, generally south of Mt. Hope Highway and east of Interstate 96, with the exception of the General Motors Manufacturing Complex located in sections 32 and 33. In all, more than 1,644 acres are devoted to a variety of industrial uses in addition to warehouse, storage and distribution facilities. Erickson Power Plant, operated by the Lansing Board of Water and Light, is also located on an industrial parcel. Built in 1973, the plant operates a single coal fired generator producing 159 MW of electricity to serve industrial, commercial and residential customers.



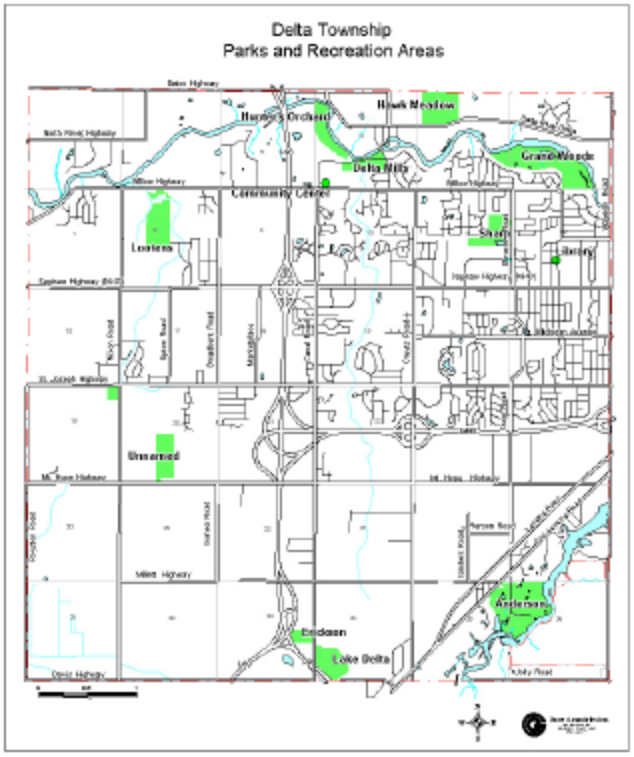
Institutional/Cemetery - The areas defined as institutional include buildings and structures that are under the ownership and jurisdiction of public and quasi-public entities. These land uses occupy over 435 acres or almost 1.9 percent of the Township's geographic area. The institutional lands consist primarily of schools, churches, municipal offices and Township support facilities such as police and fire. These facilities are located throughout the Township typically north of Interstate 496 and Saginaw Highway. There are two cemeteries within the Township - Delta Center located on St. Joe Highway east of Canal Road, and Delta Hillside, on Delta River Drive east of Webster Street, occupying approximately 20 acres. The Parks, Recreation and Cemeteries Department operates and maintains these

cemeteries. The Deepdale Cemetery, a private facility, is located at the southeast corner of the old Lansing Road/Waverly Road intersection.

Recreational

Existing land uses classified as parks or recreational areas consist of both Township maintained parks and privately operated golf courses or recreation areas. Parks and recreation areas cover 1,042 acres, or 4.6 percent of the Township. Of this, 681 acres are under the supervision of the Delta Township Parks, Recreation and Cemeteries Department. Of that, 317 acres are utilized for active recreation programming, while 364 acres are undeveloped or woodlands. In addition to the public parks, the private recreational land uses in the Township include a golf course and several nature preserves (Large Map on Page 17).

Delta Township Parks

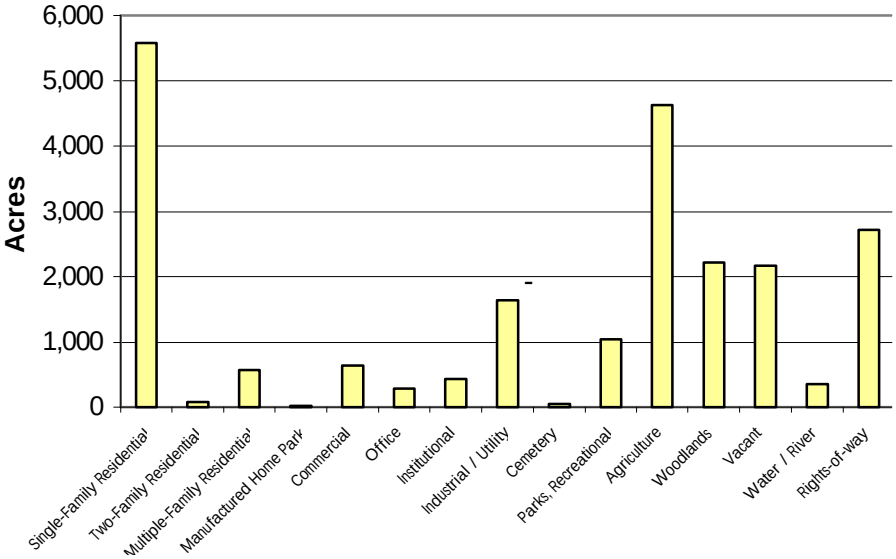


Wetlands and Water Areas - Wetlands occupy approximately 610 acres (2.6%) of Delta Township's land area. Water areas, including small ponds, rivers and creeks, account for another 412 acres (1.7%) of the Township's total existing land area. The Grand River is the largest single body of water within the Township and encompasses 348 acres. The Grand River stretches more than 10 miles in the northern and southeastern portions of the Township and represents perhaps the greatest natural resource of the Township. Two tributaries (Carrier Creek and Miller Creek) feed the Grand River. Carrier Creek is located east of Interstate 96 and flows from the south to the north through sections 27, 22, 15, 10 and 3. Miller Creek also flows from south to north through sections 17, 8 and 5, draining the western portion of the Township.

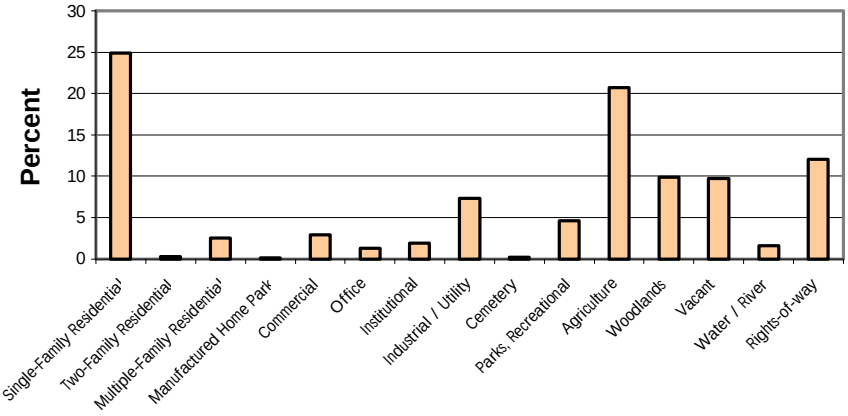
SUMMARY

Delta Township has an area of approximately 23,096 acres, of which approximately 23 percent is classified natural resources as undeveloped land (Woodlands and Open Space), agricultural and vacant lands. The following graphs highlight the distribution of the major existing land uses by acreage and percentage, as identified on the Township's Existing Land Use Map.

Graph 1 - Existing Land Use in Acres



Graph 2 - Existing Land Use in Percent



Existing Land Use Distribution

As Graphs 1 and 2 illustrate, the predominant use of the Township's developed land is single-family residential. Industrial and utility uses also occupy a significant portion of land. These types of development have a tendency to take up large tracts, which will ultimately impact the amount of undeveloped land within the

Township. The Future Land Use section will designate the most appropriate locations for future development and recommend development patterns that will help to mitigate those negative impacts.

Table 3-2 provides a comparison of land uses for the 1972 to 2002 period. Unfortunately all land uses are not represented for all years. However, the information provided in Table 3-2 illustrates the long-term decline in the amount of agricultural and vacant land and the corresponding increase in the developed land categories such as residential, commercial and industrial.

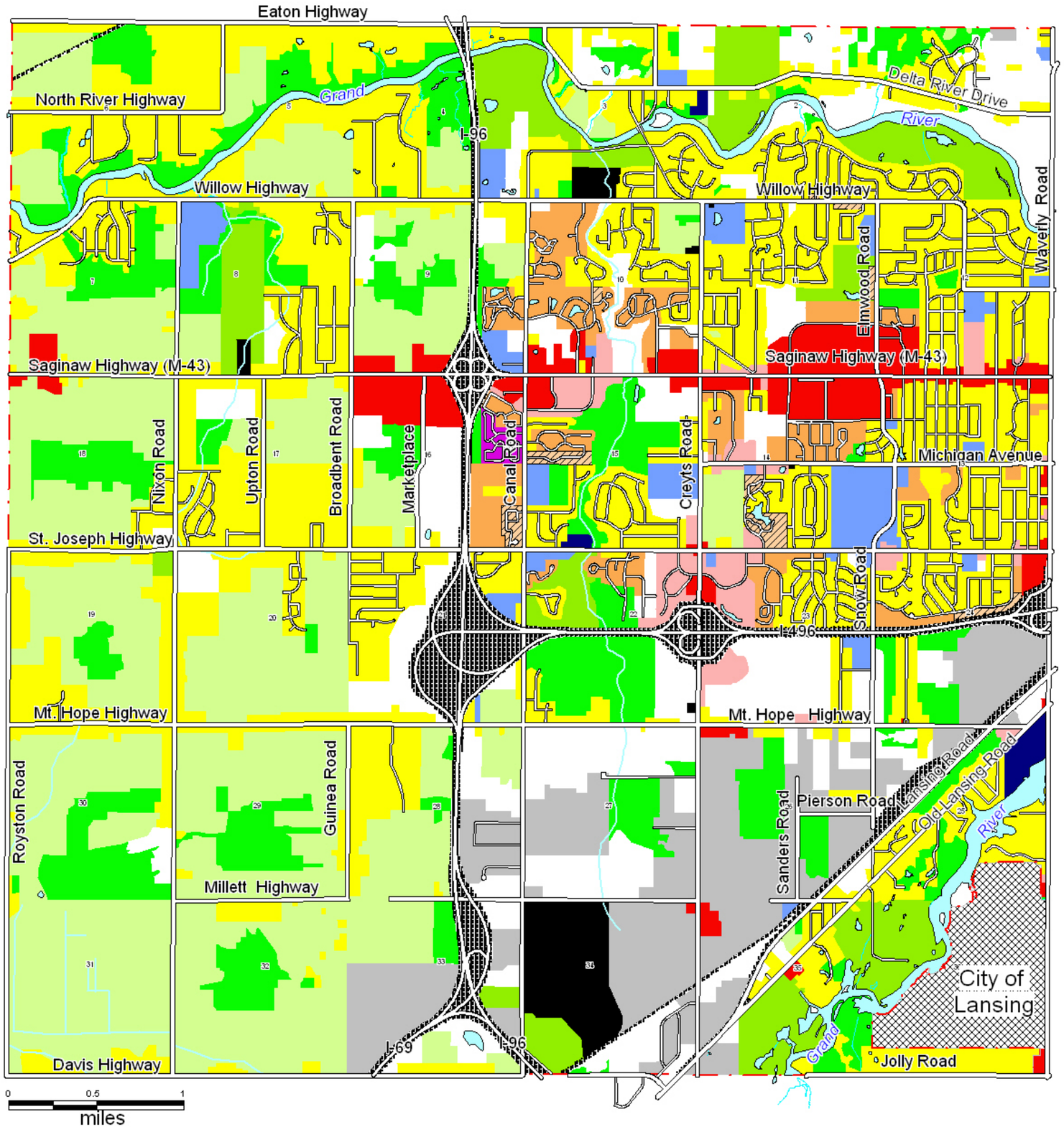
TABLE 3-2 – DELTA TOWNSHIP LAND USES – 1972, 1984 AND 2002

Land Use Type	1972 Acreage / %	1984 Acreage / %	2002 Acreage / %	% CHANGE 1972-2002
Residential	**2,961 / 12.3%**	**3,640 / 16.1%**	**6,153 / 27.4%**	**+107**
Single-Family	**2,878 / 12%**	**3,389 / 15%**	**5,582 / 24.9%**	**+94%**
Multiple-Family	**83 / 0.3%**	**251 / 1.1%**	**571 / 2.5%**	**+588%**
Office	**N/A**	**97 / 0.4%**	**281 / 1.3%**	**+189%***
Commercial	**211 / 0.9%**	**444 / 1.9%**	**643 / 2.9%**	**+204%**
Industrial	**N/A**	**644 / 2.8%**	**1,644 / 7.3%**	**+155%***
Agriculture	**N/A**	**7,712 / 34%**	**4,632 / 20.7%**	**-40%***
Vacant Land	**N/A**	**6,165 / 27%**	**2,164 / 9.7%**	**-65%***

N/A = Not Available
* = % comparisons for 1984 to 2002

SOURCE: Gove Associates, Inc. 2002, Delta Township Planning Department

Map 3-1
2002 Existing Land Use
Delta Township, Eaton County
Michigan



Legend

- Single Family Residential
- Multiple Family Residential
- Two Family Residential
- Manufactured Home Park
- Commercial
- Office
- Institutional
- Industrial
- Utility
- Highway / Railroad Right of Way
- Cemetery
- Parks and Recreation Area
- Agricultural
- Woodlands
- Vacant

N
W E
S

Gove Associates Inc.
1601 PORTAGE STREET
KALAMAZOO, MI 49001-3889
(269) 385-0011

SOURCE: Land Information Access Association
Delta Township
Adopted: June 7, 2004

PUBLIC PARTICIPATION

Delta Township has utilized several avenues to involve residents in the development of this Master Plan. Public participation included the distribution of a community opinion survey, open public workshops, public meetings and public hearings.

In December of 2001 nearly 10,000 community opinion surveys were distributed to Township residents in the Delta Magazine, a quarterly publication mailed to all housing units in the Township. Surveys were also made available to residents at the public library and online at the Delta Township website (www.deltami.gov). The goal of the survey was to assess community attitudes relating to current issues and concerns regarding future development within Delta Township. The information collected was used in the development of this master plan in order to assist the township in meeting the needs and desires of community residents. Nearly 700 surveys, or seven percent, were collected and tabulated. This is a relatively good response, providing statistical validity to the survey.

A public workshop meeting was held at the Delta Township Hall on April 24, 2002. Participants identified their general "likes and dislikes" of the Community and provided specific input regarding residential, commercial, and industrial land uses.

SURVEY OVERVIEW

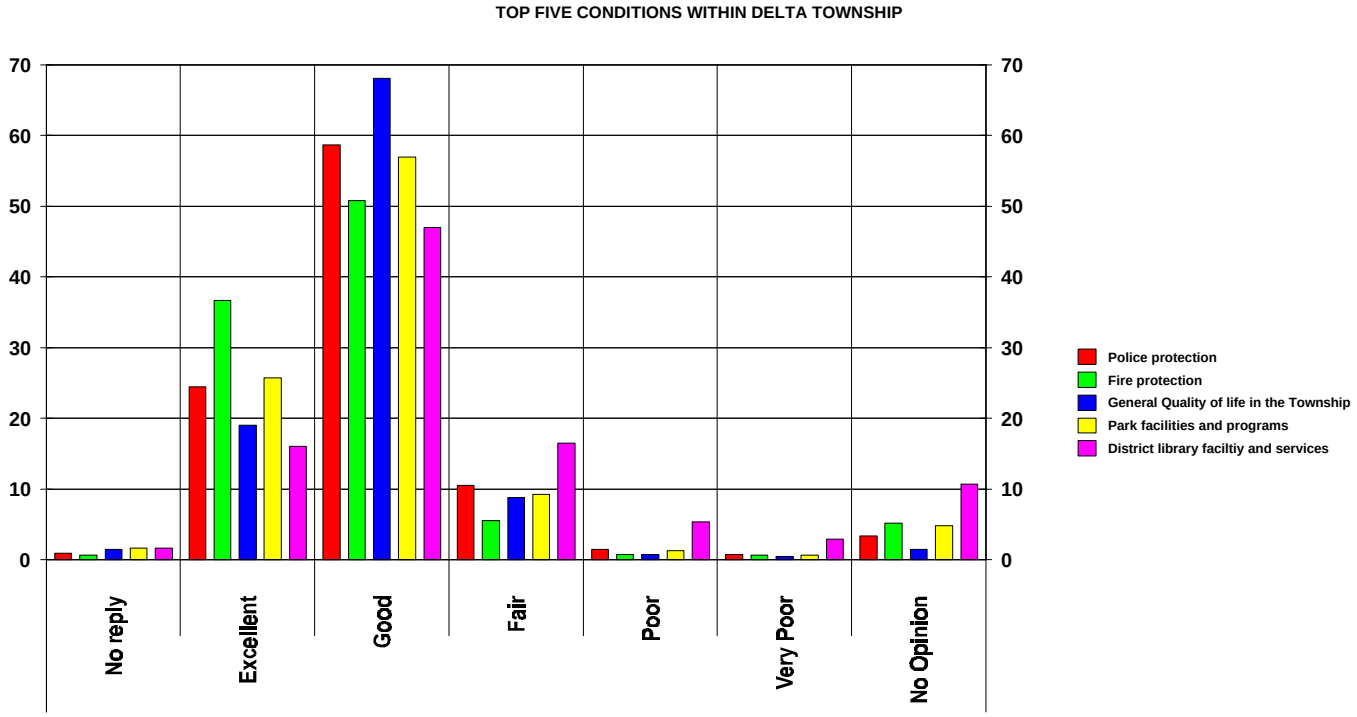
The Survey (Appendix B) provided the respondents the opportunity to rate various issues and statements by multiple choice. The respondents could choose from multiple-choice responses ranging from "Not a Problem" to "Serious Problem," "Excellent" to "Very Poor," and "Strongly Agree" to "Strongly Disagree." Respondents were also asked to provide opinions in their own words on some open-ended questions. They identified, from a list of 10 issues, five they felt were the most important. In addition, they provided information about the general characteristics of their household. An analysis of the survey responses follows:

68% stated the general quality of life in the Township is good

CONDITIONS - An analysis of the survey results identified the percentage of the responses for each multiple-choice question. Overall the community felt conditions within the Township were "Good" or "Excellent." Of the 16 conditions presented, the greatest percentage of the respondents ranked 13 of the 16 conditions within the Township as "Good." These conditions were:

- quality of drinking water
- storm drainage
- police protection
- fire protection
- ambulance services
- zoning enforcement
- building code enforcement
- recycling service
- cable service
- blight/junk enforcement
- ambulance/EMT service
- district library facility and service
- park facilities and programs

The majority of the respondents stated road maintenance was fair and most had "no opinion" about private well drinking water and the public bus service.

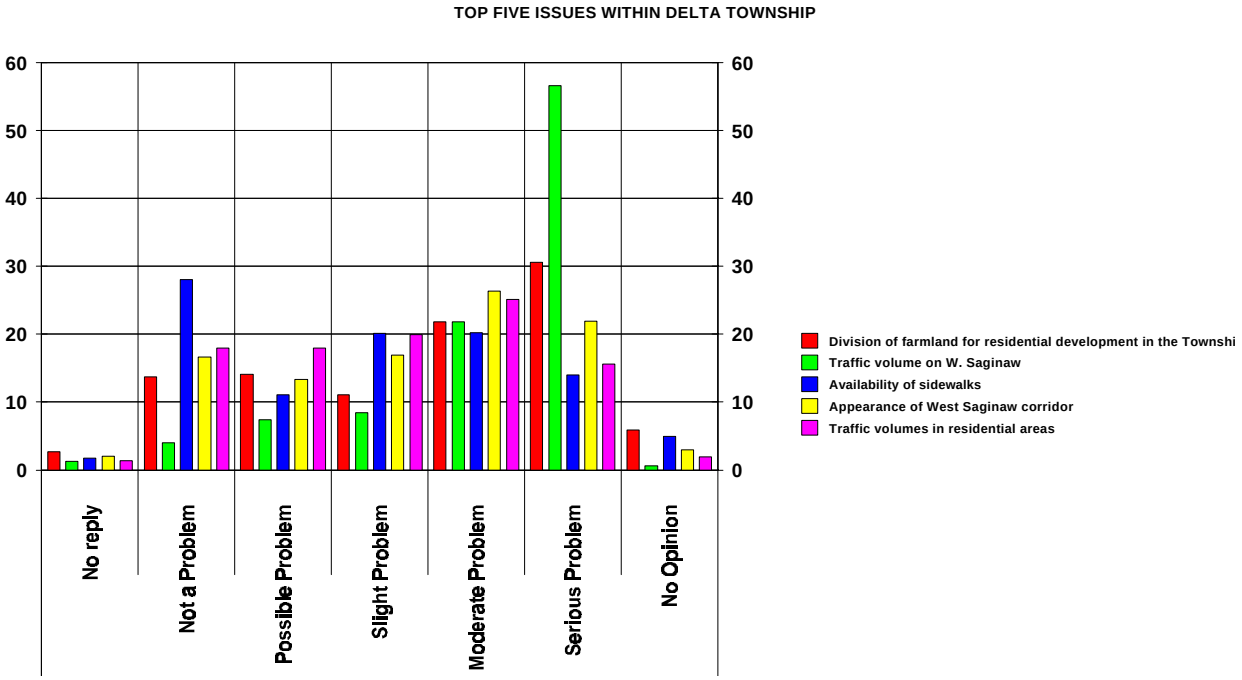


ISSUES - The survey presented 10 issues relating to the environment, traffic and infrastructure in a multiple-choice format. The respondents were asked to rank whether these issues were "Not a Problem" to a "Serious Problem" within the Township. The issues identified as "Serious Problems" within the Township included:

- division of farmland for residential development in the Township,
- amount of open space in the Township,
- traffic volumes on West Saginaw,
- traffic speeds on Township roads.

Traffic volumes on W. Saginaw are a serious problem to most respondents

The appearance of West Saginaw and traffic volumes in residential areas were identified as moderate problems. The protection of groundwater was listed as a possible problem. The amount of wetlands and the availability of sidewalks were identified as "not a problem." The chart below identifies the five issues receiving the greatest percentage of responses.



FUTURE ISSUES AND CONCERNS - A series of 28 statements were presented covering a variety of future issues and concerns relating to development, housing, transportation, parks and recreation facilities, the environment, and government/planning issues. The statements were presented in a multiple-choice format allowing respondents to identify how they felt about the statement ranging from "Strongly Agree" to " Strongly Disagree."

Development

Several statements concerning the development of industry, commercial areas, infrastructure, housing and park facilities were presented. The bulk of responses received regarding future development in the Township either "Strongly Agree," "Agree" or are "Neutral" to the statement.

Respondents (45.7%) "Strongly Agree" single-family housing should be encouraged

Adopt a housing code (47.5%)

The statement "Single-family housing should be encouraged in the Township" is the only statement the majority of the respondents "Strongly Agree" with at 45.7 percent. Issues for which the majority of the respondents "Agree" with include development of more parks and recreation, preservation of open space, encourage infill commercial development rather than conversion of open space, and grant tax abatements to attract industrial development into the Township. When questioned about whether the Township should promote expansion of water mains and sanitary sewers to unserved areas, 40.7 percent were "Neutral" in their opinions

The overall results are that more single-family housing is needed and additional parks and recreation facilities should be encouraged. Furthermore, the survey respondents feel the Township should consider tax abatements to attract industrial development and encourage infill commercial development over the conversion of open space for commercial development.

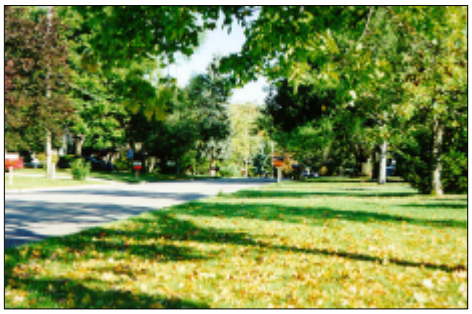
Housing

Delta Township is a growing community and housing is an integral part of this growth. More than eighty-two percent of the respondents either "Strongly Agree" or "Agree" that single-family housing should be encouraged within the Township. The community also has strong opinions regarding a housing code and

maintenance. Twenty-eight percent "Strongly Agreed" and 47.5 percent "Agreed" that the Township should adopt a housing code to encourage property maintenance.

Transportation

Several statements on the survey dealt with transportation related issues including roads, sidewalks, and West Saginaw Highway. These issues raised interest among respondents and broad ranges of opinions were received. The median response was "Neutral" on the issues of creating a boulevard and burying the power lines along West Saginaw Highway, the Township financing the paving of gravel roads, and the construction of more east – west roads. More than two-thirds of the respondents "Strongly Agree" or "Agree" that sidewalks should be mandated in all new developments and that the Township roads are generally in good condition. A strong negative or "Disagree" response was received regarding the issue of the Township financing the installation of sidewalks where they presently don't existent.



The overall community opinion regarding transportation related issues appears to be undecided or negative toward the Township financing transportation projects and the creation or modification of the existing road system. The one issue strongly supported by the community is mandating sidewalk construction in all new developments.

Respondents strongly support sidewalks for all new developments

Environment

Two environmental statements on the survey pertained to the preservation of farmland and open space in the Township. While both issues receive strong support, more than 80 percent are in favor of open space preservation, while just over 71 percent feel that farmland in the Township should be preserved.

The preservation of farmland and open space is important to residents living within Delta Township.

Parks, Recreation and Library Facilities

Overall, 61.8 percent of those surveyed "Strongly Agree" or "Agree" that development of more parks and recreation facilities should be encouraged in the Township. This was followed by 28.0 percent who were "Neutral." The survey asked respondents if library facilities in the Township are adequate. Of those responding to this statement, 55.3 percent either "Strongly Agree" or "Agree," followed by 21.6 percent being "Neutral" and 21.5 percent who "Disagree" or "Strongly Disagree."

In general, the community supports additional park and recreation facilities. However, the need for additional library facilities among respondents is somewhat more questionable. While more than half of the respondents believe the library facilities are adequate, the relatively large number of respondents who feel the library is not adequate or are neutral on this issue indicates that there still may be a need for additional library facilities in the Township.

Government/Planning

Residents were questioned on issues such as police and fire protection and ambulance service, in addition to Township planning and government-related issues such as zoning/building code enforcement, Township communication with businesses, with residents, and taxes. A majority feel that emergency services are adequate while at the same time zoning and communication issues along with Township services did not receive as high a mark.

Police and fire protection are considered to be adequate or satisfactory with responses of 87.6 percent and 91.2 percent respectively, while 79.4 percent of respondents believe ambulance services are adequate. A number of zoning and code enforcement issues including the regulation of signs, housing codes to encourage property maintenance and the regulation of communication towers were also addressed. A plurality of respondents (47%) feel that signs within the Township are being adequately regulated, while 30 percent are "Neutral" and 18.5 percent believe signs are not being regulated enough. Respondents want the

Township to adopt a Housing Code to encourage property maintenance and to stringently regulate the installation of communication towers.

Several issues regarding Township services, communication and cooperation between Township officials and residents were also included in the survey. More than half of the respondents would support Township yard waste pickup, while the remainder are either neutral or not in favor of yard waste pickup. A slightly more positive response was received regarding the recycling services provided by the Township. Overall, nearly 60 percent consider the recycling services provided by the Township to be reasonable. When asked about whether the Township should assist in organizing neighborhoods so residents could better represent themselves, a "neutral" response was most prevalent. This was followed by "yes - they should assist in organizing neighborhoods". Creating a recognizable identity within the Township is important to 48 percent, while 33 percent are neutral on this issue. A large number of respondents also believe that the Township should support items of regional interest such as solid waste, CATA, the Potter Park Zoo and the Capital City Airport. Communication between Township officials and residents is considered good by 61 percent of those surveyed. Property taxes within the Township are felt to be reasonable by 46 percent of the respondents, while 28 percent do not feel taxes are reasonable and 23 percent are "neutral" on taxes.

– Respondents support yard waste pickup

– 60% felt recycling services reasonable

– Communication between officials and residents good

Overall, resident's opinions regarding the Township's government and planning issues are positive. While, emergency services are perceived to be very adequate, zoning and code enforcement did not receive as high a mark and could be improved - specifically sign regulations, communication towers and the adoption of a housing code. In terms of Township services and communication between the Township and residents, opinions are mixed. Residents are happy with the existing recycling services while they also cite a need for yard waste pick-up. More than half of the respondents feel that communication between the Township and residents is good while fewer than half consider taxes to be reasonable.

Top Five Future Issues

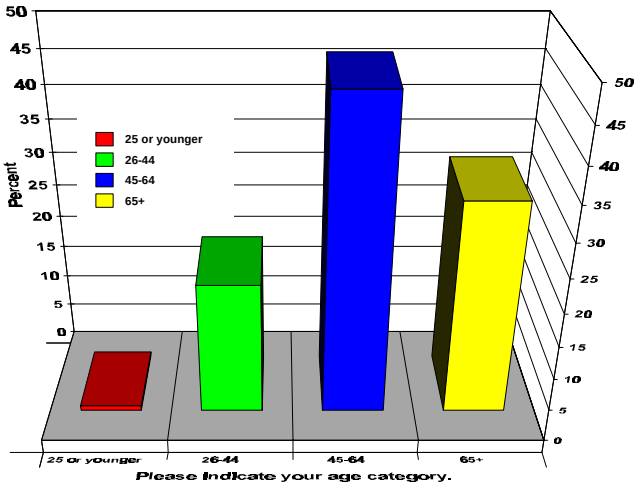
The respondents were presented 10 issues and asked to identify the five issues they felt were most important on a scale of 1 to 5, with 1 being most important and 5 being least important. The primary issue to be addressed is clear. However, other issues are not as clear. Respondents identified and ranked traffic congestion as the most important issue to be addressed by the Township. Following traffic congestion, road maintenance is also one of the top issues. However, most respondents gave it a score of "4" stating it as an important issue but not a top priority. Police protection received the third highest number of responses, yet the majority of those responding gave it a score of "1" indicating that it is one of the most important issues in the Township. Rounding out the top five issues are fire protection and drainage. The following are the issues in order of importance based upon the composite scores. It should be noted that several of the issues aside from traffic congestion also received number 1 priority votes.

Issues:
- Traffic Congestion
- Road Maintenance
- Police protection
- Fire protection
- Drainage

Household and Demographic Information

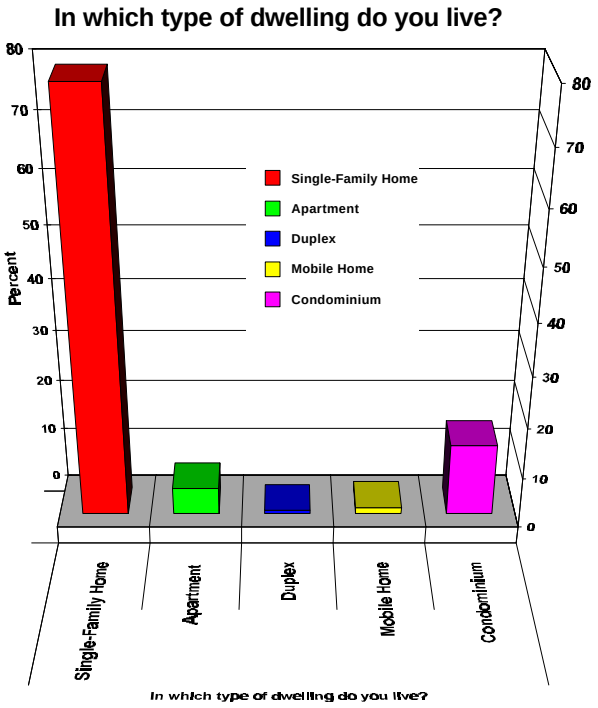
A portion of the survey included some general questions regarding household characteristics. This information is not necessary in the development of the master plan, however, it provides Township officials with a better understanding of whose voices are being heard.

Please indicate your age category.



The majority of Township respondents live in either the Grand Ledge or the Waverly School District. More than three quarters of the respondents are over the age of 45, with the greatest number of respondents being between the age of 45 and 64. Just over 36 percent of those surveyed were either unemployed or retired. If the individual was employed, he or she likely worked within the City of Lansing (26.3%) or in Delta Township (17.1).

The average household size among respondents is 2.3 persons, with 1.5 persons employed full-time and 1.2 persons part-time. More than 73 percent of respondent households do not have any children under the age of 18, while 63 percent have someone over the age of 65 in their household.



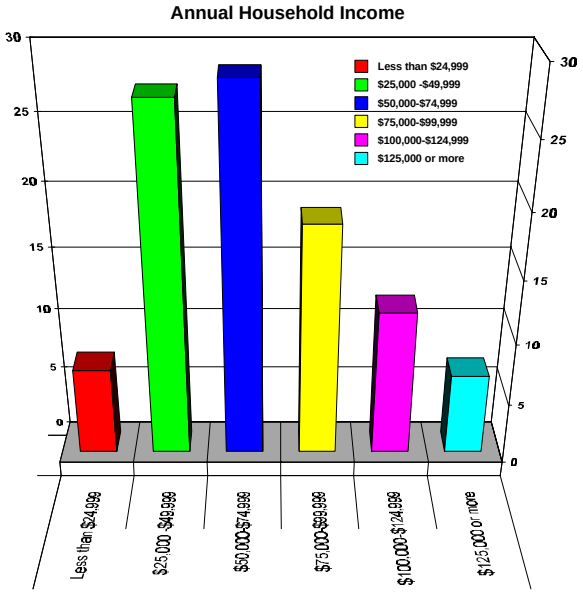
Twenty-eight percent of those surveyed reported having school aged children, while 6.7 percent have children attending a 2 or 4-year college. Overall, most respondents' school-aged children attended public schools rather than private/parochial, charter schools or are home schooled. Additionally, more than 53 percent of those surveyed have no children in school. This is likely a result of the high proportion of individuals over the age of 65 completing the survey.

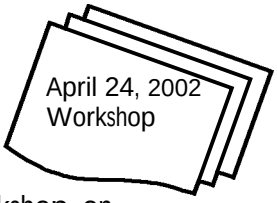
90% of respondents own the home they live in

Nearly 90 percent of those surveyed lived in a home they owned, while 7.5 percent were renters. More than three-quarters live in a single-family home, followed by 14 percent living in a condominium, 5.2 percent living in an apartment and 1.8 percent live in either a mobile home or a duplex unit.

Forty-one percent of the respondents have lived at their present address for more than 20 years, while 23 percent have lived in their home for 10 to 20 years, indicating a stable residential base that has a vested interest in the community.

The distribution of household incomes among survey respondents is generally representative of the household income distribution of the Township as a whole. Households having incomes between $50,000 and $74,999 made up the largest proportion of those surveyed followed by those in the $25,000 to $49,999 income group. Just over 6 percent of those surveyed reported household incomes of less than $24,999, while 16.6 percent earned between $75,000 and $99,999, 10.5 percent earned $100,000 to $124,999 and 5.9 percent earned more than $125,000.

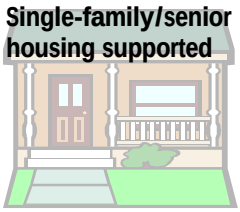




WORKSHOP OVERVIEW - In an effort to gather additional community input on future land use issues and public facilities, Delta Township held a community roundtable or futuring workshop on April 24, 2002. The workshop was held at the Township Hall and was attended by 21 Delta Township residents. Statistical information on past population and housing growth trends was presented to the group, as well as a number of maps including water and sewer service areas and the existing land uses in Delta Township. Using a Community Issues worksheet, participants were encouraged to give input on Residential, Commercial and Industrial development, Public Lands and Facilities, Open Space, Agriculture and any other future land use issues. The following is a summary of issues discussed:

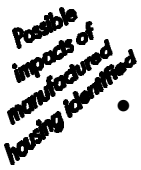
Residential Development

- Statements were made in support of single-family and senior housing.



- Discussion took place regarding the minimum lot size requirements in residential areas.

- Those in attendance felt strip residential development along section-line roads was undesirable.

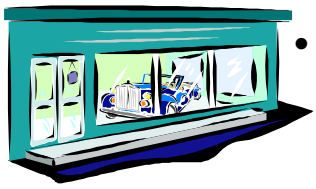


- The possible impacts of manufactured housing on the community were identified and discussed.

- Several participants expressed concerns regarding the number of multiple-family housing units that had been constructed in the Township during the 1990s.

Commercial Development

- The general consensus of those present was that commercial development should continue to be limited to West Saginaw Highway and that such development should not extend west of Broadbent Road.



- Participants identified the existence of vacant retail buildings in the Township and the need to fill these buildings rather than convert farmland to commercial uses.

- A statement was made that commercial development generates significant volumes of traffic that is negatively impacting the quality of life.

Industrial Development

- The general consensus of the group was that the industrial development in the southeastern corner of the Township had been well planned and should be left “as is”.

Agricultural Land Use

- Varying opinions were expressed as to how best to preserve the remaining agricultural land in the Township.

Public Land/facilities

- A comment was made that there is a need for additional parkland west of I-96 due to residential development in the area.

- An individual requested that Township officials consider providing a community recreation center which would house year-round, indoor activities.

Transportation/Roadway Network

Collector Streets a Concern

- Concerns were expressed regarding the proposed east-west collector roads in the Township and the possible negative impacts these roads could have on adjacent residential neighborhoods.

- It was suggested that traffic-calming techniques be considered to address "cut-through" and speeding traffic in residential areas in the eastern portion of the Township.

Environmental Issues/Concerns

- Support was expressed for the continued enhancement of the Carrier Creek through the center of Delta Township.

Respondents support continued enhancement of Carrier Creek

The goals presented in this section are intended to reflect local attitudes and aspirations with respect to growth and development within Delta Township. The goals were developed following a review of goals in the former Comprehensive Plan, an evaluation of existing conditions within the Township, and input received from a community opinion survey and public workshop.

The goals and objectives are identified by subject matter for clarification. However, this does not mean that each goal or objective is mutually exclusive from another goal or objective. It is acknowledged that both must be adaptable to changing conditions, balanced against competing priorities, and subject to regulatory constraints and fiscal limits. The goals and objectives will form the basis of more detailed policies that will be defined in the Implementation Section.

Goals

Residential

Goal: Facilitate residential development that will fulfill the needs of the various population segments in the Township while maintaining a balance between the existing urban and rural character.

Objectives:

- Identify areas for future residential development that are within close proximity to existing developed areas and necessary infrastructure, with preference for infill sites.

- Ensure higher and lower density housing is compatibly located to eliminate/minimize conflicts.

- Ensure smooth transitions between residential and non-residential uses by open space, buffered thoroughfares, and placement of the appropriate zoning districts.

- Enhance the older residential neighborhoods in the eastern portion of the Township through code enforcement, maintenance of public infrastructure, and implementation of traffic calming techniques.

- Maintain control over development of new single-family homes within agricultural areas.

Commercial

Goal: Provide adequate commercial facilities, appropriately located and scaled, to serve regional, community and neighborhood needs.

Objectives:

- Encourage infill development or the redevelopment of vacant commercial land and/or buildings along the Saginaw Highway corridor, and other older commercial areas.

- Limit new commercial development on Saginaw Highway to areas east of Broadbent Road.

- Design commercial areas that are compatible with adjacent residential land uses relating to such items as lighting, traffic circulation, parking, signage, landscaping and solid waste disposal.

- Identify commercial areas exhibiting early signs of blight and create action plans to address the problems.

- Attempt to contain strip commercial development within the existing boundaries along Saginaw Highway.

- Continue efforts to improve the aesthetics along Saginaw Highway via signage improvements, overhead power lines placed underground, service drives and driveway consolidations.

Industrial

Goal: Maintain an attractive industrial area which provides a diversified tax base and employment opportunities.

Objectives:

- Prevent encroachment on existing and planned industrial areas from incompatible land uses.

- Ensure that the Township has an ample supply of properly located and appropriately sized industrial sites that are adequately served by public utilities and transportation systems.

- Leverage private investments in the industrial tracts with tax incentives by the Township as appropriate.

- Continue the Township's efforts to retain existing industries via retention calls and industrial newsletters and recruit new industrial firms through marketing efforts.

- Support the improvement of roads in the industrial tract to all-weather status.

Public Services and Facilities

Goal: Encourage sufficient and available public services and facilities to meet the growing needs of the Township.

Objectives:

- Provide law enforcement and fire protection services that meet the needs of the Township to ensure the safety and well-being of Delta Township residents and property.

- Mandate residential properties and commercial and industrial businesses connect to public water systems when available.

- Explore the benefits of privatizing and/or sharing facilities and services with other communities.

- Develop procedures for greater collaboration and coordination of efforts between school districts and the Township.

- Identify valuable historic assets within the Township and develop programs and societies to preserve and promote those assets.

- Develop infrastructure (water, sanitary sewer) in phased expansions, concurrent with new construction.

- Develop an approach to planning and development that emphasizes coordination and cooperation between Delta Township and surrounding communities through mutual financing and operation of area-wide and regional facilities.

Land Use Planning

Goal: Encourage managed growth and provide contemporary land use regulations.

Objectives:

- Keep development codes up to date in accordance with case law.
- Pursue a policy of managed growth and explore new and innovative methods of achieving beneficial results.
- Coordinate the Township's land use planning efforts with adjacent communities and the efforts of the Tri-County Regional Planning Commission.
- Recognize the needs of a diversifying Township population and identify programs to address specific needs.
- Identify emerging socio-economic trends, such as an aging population, and respond with appropriate planning and zoning techniques.
- Encourage public involvement when reviewing land development proposals and strive to improve communication between public officials and Township residents and property owners.
- Take a proactive role in the redevelopment of Brownfield sites.
- Encourage new development within the Township to follow Smart Growth Concepts, Smart Growth is not "no-growth" – it is sustainable growth.

Transportation

Goal: Support efforts to improve transportation services and infrastructure in the Township in order to facilitate safe and efficient motorized and non-motorized transportation.

Objectives:

- Continue to support the Township's efforts to encourage the establishment of a boulevard on Saginaw Highway west of I-96 via right-of-way acquisition, the preparation of a boulevard design, and continued dialogue with MDOT officials.

- Support MDOT in their efforts to reconstruct the I-96/Saginaw interchange.

- Continue to support the Eaton County Road Commission's street resurfacing program for residential streets.

- Encourage sufficient funding to repair sidewalks, fill in gaps in the sidewalk system, provide sidewalks and/or bike lanes in conjunction with new/rebuilt roadways and mandate the provision of sidewalks in conjunction with new development.

- Encourage the provision of public transit service to the Township's residential, commercial and industrial areas.

- Land uses generating significant amounts of traffic shall be served by thoroughfares that can safely and adequately handle the traffic.

- Examine the need for a road crossing of the Grand River, west of I-96.

Open Space and Recreation

Goal: Provide adequate open space areas, recreational facilities and programs for passive and active use by Township residents.

Objectives:

- Support linkages (walkable pathways, and sidewalks) between residential areas and recreational facilities whenever reasonably feasible.

- Support the development of bicycle/pedestrian corridors (linear parks) within the Township with linkages to pathways in adjacent communities.

- Promote the recreational facilities offered at the Township's parks and other recreational areas such as the Woldumar Nature Center and Audubon properties.

- Encourage new residential developments to provide open space for their residents.

- Pursue a timely and economic open space acquisition and development program as the Township's population increases.

Environment

Goal: Protect the quality of the Township's natural resources and environmentally sensitive areas.

Objectives:

- Assist the Eaton County Drain Commissioner in efforts to promote storm water management practices.

- Continue the Township's Well Head Protection efforts including the adoption/enforcement of zoning regulations and providing assistance in the capping of abandoned wells.

- Identify soils highly conducive to agricultural production, such as those found in southwestern Delta Township, and attempt to preserve farming activities in such areas.

- Support the Township's Flood Plain Management efforts.
- Promote the use of the Grand River for recreation.
- Promote the extension of public water and sanitary sewer services to those areas in the Township where the public health is threatened by on-site systems.
- Preserve prime farmland through zoning regulations and other applicable methods.

FUTURE DEVELOPMENT CONCEPT

The overriding concepts for the future distribution of land uses in Delta Township are embodied within Section 5 - Goals and Objectives. Future land use will be based upon controlled and managed growth `with the preservation of the Township's natural resources, including the conservation of agricultural activities, open space preservation around future residential development and concentrated, well-managed commercial and service districts with sufficient infrastructure. These concepts have to be realized while the Township accommodates an estimated 3,366 additional housing units by the year 2020, based upon the projections provided in Table 6-1. This represents a 26.8 percent increase in units between the years 2000 and 2020, using the data in Table 2-8.

The proposed future land use patterns were developed utilizing previous community reports and surveys. That includes the January, 2002 Delta Township Community Survey, the Master Plan Futuring Session held at the Township Hall on April 24th, 2002, and direction from the Township Planning Commission, all of which resulted in Goals and Objectives (Section 5). Overall, the future land use patterns proposed in this Plan consist of the following:

The existing concentrations of residential development north of I-496 and east of I-96 will remain, and new development will be focused as infill north of Mount Hope Highway, west of I-96. New developments should avoid the traditional residential linear pattern along Township roads typical of the preceding decades. That pattern created medium and large size lots that were inefficient, depleted usable agricultural resources, increased driveway/street access conflicts, and diminished the sense of "openness" that defines rural character. An even more desirable approach to attaining the desired land use vision is to go beyond the standard types of residential subdivisions and concentrate development in "clusters," separated by expansive open space areas. These development clusters should be located so as to minimize consumption of open space and agricultural land while being easily accessible to public facilities and utilities.

Industrial growth will continue to be concentrated in the southeast quadrant of the Township. Continued industrial development is anticipated in the GM 425 area west of I-96 as well as the 100-acre triangle area north of Davis Highway and west of Canal Road. Controls over future commercial and retail development will

remain consistent with past planning efforts, concentrating commercial and retail enterprises along Saginaw Highway. Overall, development should be consistent with the Township Zoning Ordinance and the road classification requirements outlined in the Ordinance for specific land uses, such as golf courses being located on arterial roads. For road requirements by land use see the Township Zoning Ordinance and for road classifications within the Township see the National Functional Classification map provided by MDOT in Appendix A of this plan.

FUTURE LAND USE

Agriculture/Open Space

The history of Delta Township is defined by its natural resources, particularly the Grand River and its tributaries, as well as agriculture, most notably row crop and sod production. Many residents of the Township want to retain as much of the existing agricultural land use as possible in an effort to maintain some of the Township's rural character. This Plan promotes the preservation of as much open space and wetlands as possible, along with the retention of agricultural land within the framework of the residential growth that is expected to occur.

The lands proposed to remain in agriculture are primarily located in the southwest corner of the Township in sections 29, 30, and 31 (see Map 6-1 on page 82). While most of these larger parcels are in active agriculture, there is no guarantee they will remain so. This plan recommends that the 20 acre minimum lot size requirement which has been enforced in these three sections for nearly 30 years be continued. Individual property owners may intend to ultimately develop these lands as residential. Beyond the outright purchase of these parcels for the purposes of preserving them as agriculture or open space, the only options for controlling the location and pace of development (and preservation) is through public or nonprofit land use controls.

Residential

The tremendous increase in the Township's residential growth has been the greatest single impact upon agricultural lands, with new industrial and commercial development close behind. The supply of vacant land in Delta Township has decreased significantly in the 1970 to 2000 period. Many areas in the western portion of the Township have been divided into "country estate" home sites of 2-5

acres. These large acreage parcels will most likely not be subdivided or used for higher density development and extending utilities to such areas will be challenging. The supply of 40+ acre parcels in western Delta Township, which are the most conducive to residential development, is dwindling. The need to accommodate the number of additional households forecasted to move to, or be created within, the Township while retaining agricultural land and preserving open spaces, requires a new approach to residential development. This approach differs slightly from some of the development patterns and practices that have taken place in the past. It should also be sensitive to the conditions that have resulted from that development. The lot splits that have occurred and the land use patterns that now exist cannot be easily changed, nor should they. Although redevelopment of residential properties is likely to occur over the next 20 years, the primary emphasis of this Plan is on addressing new development.

The process for defining the character of future residential development within the Township is based upon two major factors: 1) the number and size of parcels required to accommodate expected growth and 2) the geographic distribution of those parcels. The projected distribution of housing units through 2020 is proposed to be similar to the same general proportion by type that existed in the 1980s and 1990s (being approximately two-thirds site-built single-family homes and one-third attached multiple-family units). The Township experienced a substantial increase in the number of multiple-family housing units in the late 1990s; therefore, the projected distribution of new units will utilize an average of the 1980, 1990 and 2000 distribution.

The Plan calls for the concentration of housing in the areas designated on the Future Land Use map (page 82). It is recommended that substantial open spaces be set aside within each development, and larger parcels be reserved for open space preservation in developing areas of the Township. Such concentration may require that the average size of parcels proposed in this Plan be smaller than historically platted to accommodate common open space.

To provide for rational, efficient residential development, to facilitate the retention of agricultural lands on the west side of the Township, and preservation of open space in developing areas, this Plan calls for the concentration of planned

residential development within defined development areas, and to a lesser extent, individual single-family homes constructed within traditional development patterns.

As an alternative to those traditional linear and subdivision developments that have characterized some areas of the Township, the distribution of residential activities in the form of "clustered" open space developments are preferred. This form of development essentially concentrates housing at higher densities and provides for common open spaces within designated project areas. It is more efficient, aesthetic, and environmentally sensitive than the standard subdivision, which typically allocates the entire development to private lots and easements for streets and sidewalks. A clustered open space project also contains streets and private lots, as well as large open spaces that are allocated to recreation, trails, protection of unique environmental features, or other natural areas. The same number of units, or even more units, can be built in a clustered development as a traditional subdivision, because the developer is allowed to decrease the lot size as defined in the zoning ordinance, thereby increasing the density of the developed portion of the project and decreasing the amount and cost of necessary infrastructure. As a result, the balance of the project will create open/natural recreational spaces.

The combination of smaller lots, the projected number of housing units, and the incorporation of clustered developments will define the parameters for the number of acres that should be devoted to new residential development within the Township. Following these concepts, the average lot size for inclusion within cluster developments could be slightly smaller than traditional subdivision lots in the Township. Each cluster development should attempt to designate a notable portion of the development as undeveloped land (open space, trails, etc.).

Traditionally clustered developments have not been common in Delta Township. A separate study may be necessary to determine why clustered developments have been underutilized within the Township, and an evaluation of the Township Zoning Ordinance, as it relates to density bonus in residential developments may be necessary. This plan advocates an increase in the number of clustered developments within the Township during the 20-year planning period.

The following figures depict samples of cluster/open space development. Figure 1 shows a traditional subdivision where the entire parcel is developed with single-family lots. Figure 2 shows the same parcel as a residential cluster development with each lot area reduced in size, and the balance of the parcel allocated to natural open space. Figure 3 is another sample cluster/open space development similar to the type that could potentially be established within the Township.

FIGURE 1 –Traditional Subdivision Development

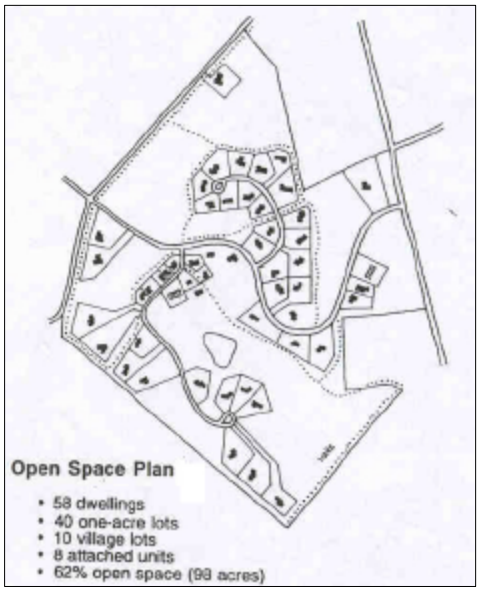


FIGURE 2 – Cluster Development

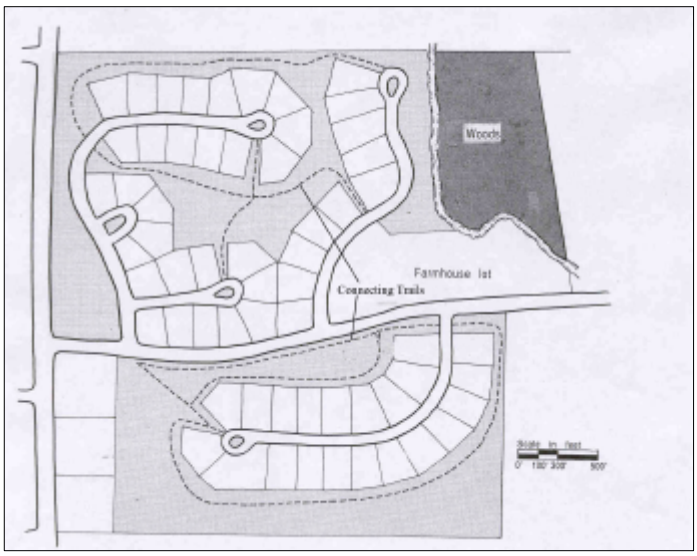


FIGURE 3 – Cluster Development

Calculating Gross Acreage for Future Residential Development - The following describes the calculations used to determine the gross acreage devoted to new residential development within the Township.

As noted earlier (page 71), the Township plans to encourage a similar proportion by type of housing unit mix that currently exists within Delta Township. That is, two thirds site-built single-family homes and one-third attached multiple-family and other units. Combining this housing unit mix, with the need to accommodate an estimated 3,366 additional housing units by the year 2020, calculations can be made for various types of housing and the gross acreage needed for new residential development. (The 3,366 units are projected to be needed to accommodate an additional 6,534 residents (3,366 households) over the next 20 years, in accordance with the 2020 "target" population of 36,216).

Single-Family Housing

Following past trends for the distribution of future residential development projects 2,244 new site-built single-family homes (3,366 units x .6666) are projected in 2020. In the interest of developing land efficiently within Delta Township future single-family housing should be encouraged in more compact forms of residential development. The proposed solution would be to encourage development in both traditional clusters/open space developments where average densities would be between 2.5 and 5.0 units per acre.

The concept behind clustered/open space development results in increasing densities on land zoned for a lower density in exchange for preserving tracts of land as undeveloped and open space.

While the number of new site-built single-family homes can be estimated with some certainty, the specific number of homes to be developed using cluster/open space development methods and the projected land area necessary to accommodate the new housing units is more difficult. The following calculation presents a range for an estimate of the amount of land that will be necessary for future site-built single-family homes.

Units Required: 2,244 projected additional single-family site built units.

Acres Required:
Traditional subdivision development 2,244 units at an average net density of 2.5 units per acre = 898 acres plus 20% for infrastructure (180 acres) = **1,078 acres**

Clustered/Open Space subdivision development 2,244 units at an average net density of 5.0 units per acre = 449 acres plus 20% for infrastructure (90 acres) **= 539** acres.

PLUS Open Space Requirement = Clustered/Open Space Developments require land to be left as perpetual open space and be undeveloped. The amount of land left should be at a minimum 10% of the total development, while as much as 30% of the development in some subdivisions could be left as open space.

Therefore, the additional land required for open space, should some or all of the 2,244 units be developed in clustered/open space subdivision developments, would be between 60 acres (10% open space) and 180 acres (30% open space).

Total acres to accommodate 2,244 open space residential units would be **between 659 and 779 acres. (539 + 60 = 599 and 539 + 180 = 719)**

Therefore, between 599 and 1,078 acres of land will be required to accommodate the development of 2,244 site built single family homes by 2020. These units should be distributed between traditional and clustered/open space developments at densities between 2.5/5.0 units per acre.

Attached Multiple Family and Other Housing Units
For the purpose of distributing future housing units into two-thirds site-built single-family and one-third attached multiple-family or other housing units, the future distribution of attached multiple-family, duplex and manufactured homes are calculated together. The detailed distribution of these units by unit type should be consistent with the quantity of land available in the respective zoning districts.

Of the projected 3,366 new housing units, 1,122 units are allocated for development as “non-site built single-family homes” and be developed as either attached multiple-family units, duplex units or manufactured housing units.

Future "non-site built single-family home" developments will occur in densities ranging from 6 units per acre to 15 units per acre depending on the zoning districts and allowed densities. Therefore, a range of future land use distributions for new units in these categories have been calculated to present an estimate of the land needed to accommodate the 1,122 units.

Acres Required:
Based on Development density of 6 units per acre 1,122 units at a density of 6 units per acre = 187 acres, plus 20% for infrastructure (37 acres) **= 224 acres**

Based on development density of 15 units per acre 1,122 units at a density of 15 units per acre = 75 acres, plus 20% for infrastructure (15 acres) **= 90 acres.**

The total land area the Township should anticipate to be developed for future "non-site built single-family homes" such as attached multiple-family units, duplex units or manufactured housing units by the end of the planning period of 2020 would be between 90 and 224 acres.

The total minimum land area that should be allocated to all expected residential development of all types over the next 20 years is therefore 689 acres (599+90). The formula used for determining the amount of acreage needed for site built single-family homes and attached multiple-family units, duplex units or manufactured housing units is identified in Table 6-1 along with the projected housing need in five-year increments, based upon the target 2020 population of 36,216 and a housing need of 3,366 units.

In Table 6-1, the total numbers of projected additional site-built single-family units are allocated according to whether the development patterns proposed are traditional subdivisions or clustered/open space developments. Also, the projected numbers of additional attached multiple-family, duplex and manufactured units along with their associated required acreage are illustrated at two development densities. Providing ranges based on different units per acre densities allows for some flexibility when residential developments are proposed.

TABLE 6-1 – DELTA TOWNSHIP POPULATION – LAND AREA PROJECTIONS

Total Population 2000	29,682
Total Target Population 2020	36,216
Total Additional Population 2000-2020	6,534

Total Additional Population Per Five Year Increments	2000-2005	2006-2010	2011-2015	2016-2020	Total 2001-2020#
5 Year Increment	1,439	1,698	1,699	1,698	6,534
New Total Population	31,121	32,819	34,518	36,216	6,534
Average Person Per Household	2.31*	2.27*	2.25*	2.24*	
Total New Housing Units	735	965	862	804	3,366
66.66% Site-Built Single-Family Units	490	643	575	536	2,244
33.33 % Multiple-Family, Duplex, Manufactured Home Units (non-site built single family)	245	322	287	268	1,122
New Site-Built Single-Family Units					
Acres Needed at 2.5 Units/Acre includes 20% for streets (traditional development)	235	309	276	258	1,078
Acres Needed at 5.0 Units/Acre includes 20% for streets (clustered/open space)	118	155	138	128	539
Additional Open Space					
10% Open Space	12	15	14	15	54
30% Open Space	35	46	41	38	160
Total Acres for clustered/open space	130-153	170-201	152-179	141-166	593-699
Total Additional Acres New Site-Built Single-Family Units	130-235	170-309	152-276	141-258	593-1,078
New Non Site-Built Single Family Units	245	322	287	268	1,122
Acres Needed at 6 Units/Acre includes 20% for streets	49	64	57	53	224
Acres Needed at 15 Units/Acre includes 20% for streets	19	25	23	21	90
Total Additional Acres New Non Site-Built Single-Family Units	19-49	25-64	23-57	21-53	90-224
TOTAL NEW RESIDENTIAL ACRES NEEDED	149-284	195-373	175-333	162-311	683-1,301

*Projected household size based upon Delta Township as proportion of projected national trends in household size.

Calculations have been rounded

SOURCE: Gove Associates 2003

The additional acreage required for all types of residential development (single-family clustered or unclustered, duplex, multiple-family and manufactured homes) are added together to determine the minimum acreage required. This total acreage is then compared to the future land use allocations depicted in Table 6-2. The comparison indicates that the Future Land Use map, which contains an additional 3,972 acres set aside for residential development over what was existing in 2002, is significantly more than the projected 746 - 1,301acres of land required to accommodate the 2020 target population of 36,216. The table depicts the allocation of units and associated acreages in five-year increments. This will allow the Township to identify the amount of land that should be developed or zoned accordingly within a long-term phased process.

The geographic distribution of these developments should be based upon factors that impact some of the more important criteria that need to be considered. Those criteria consist of achieving the policies defined in this Plan, project affordability, public costs, feasibility and sustainability. Some of the major factors that are related to those criteria are retention of agriculture and open space, capacity of the soils to sustain development, protection of surface water and ground water, the need to be served by public utilities (sewer and/or water) and access via existing primary roads.

The potential creation of clustered residential developments in the Township should be located in areas that are being considered for planned residential development on larger parcels that have been assembled or can be assembled. These parcels should be in areas that will have the least impact on the depletion of prime agricultural lands, are on soils that are not conducive to wetness or flooding, and in locations that will minimize the need for additional public expenditures in infrastructure (utilities and roadway expansion). While each location factor may not be completely satisfied in those areas identified for residential development on the Future Land Use Map, these locations represent the areas where residential development should occur and clustered development should occur, where the "best fit" of the composite of these factors is present.

TABLE 6-2 - LONG-RANGE FUTURE LAND USE (YEAR 2020) LAND USE ACREAGE

	Existing	% of Total	Future	% of Total	Change	% Change
Single-Family Residential	5,582	24.6	9,161	40.3	3,579	64.1
Two-Family Residential	78	0.3	122	0.5	44	57.7
Multiple-Family Residential	571	2.5	836	3.7	265	46.4
Manufactured Home Park	26	0.1	35	0.1	9	34.6
Commercial	649	2.9	1,018	4.5	369	56.8
Office	293	1.3	667	2.9	374	127.6
Institutional	426	1.9	490	2.2	67	13.6
Industrial / Utility	1,680	7.4	3,622	15.9	1,942	115.6
Cemetery	55	0.2	55	0.2	0	0.0
Parks, Recreational (inc. golf courses)	1,042	4.6	1,110	4.9	68	6.05
Agriculture	4,617	20.3	1,604	7.1	-3,013	-65.3
Transportation Rights-of-Way	2,926	12.9	2,928	12.9	2	0.0
Natural Resource Land Cover						
Woodlands*	2,200	9.7	0	0.00	-2,200	-100
Open Space / Undeveloped / Preservation Corridor	2,152	9.5	648	2.9	-1,504	69.8
Water / River / Wetlands	412	1.8	412	1.8	0	0.0
Total Acreage	22,709	100	22,709	100	0	

*While the table illustrates a loss of 2,200 acres of woodlands by 2020, neither the plan nor the map advocate the total elimination of woodlands in Delta Township. For the purpose of allocating future land use in areas currently occupied by woodlands the map depicts woodlands as an overlay to the land use best suited for that area. In the event development occurs in woodland areas, efforts should be taken to preserve as much woodlands as possible in those areas.

SOURCE: Gove Associates, Inc. 2003

The Future Land Use map allocates a total of 9,037 acres for existing and future low density (clustered or unclustered) single-family residential development (at 1 to 3 units per acre), 122 acres for medium density (clustered) single-family residential development or duplex units (at approximately 4.8 units per acre), and 946 acres for high density multiple-family (apartments and mobile home parks at 6 to 15 units per acre) residential development.

Commercial

An additional 369 acres of retail/service commercial development will be added to the Township's land use inventory. This expanded commercial development would be concentrated along West Saginaw Highway (M-43). The West Saginaw Highway area, serves as the commercial corridor for the Township, and the bulk of

the new commercial development should be concentrated as infill development. Further commercial development in this area could be structured with a relatively higher density mix of retail stores, and offices. New development utilizing neo-traditional design concepts can promote specific pedestrian-friendly architectural requirements and could be applied and strictly controlled within the framework of a parallel code (like a Planned Unit Development ordinance) relative to access, landscaping, parking, and other site and corridor design and safety considerations. Along with an additional 369 acres being added to the Township's commercial land use inventory, redevelopment of existing vacant or underutilized commercial areas will result in sufficient commercial and retail land through the year 2020.

Recreation

In 2002, Delta Township maintained over 1,000 acres of land as parks or open space for recreation use. Based on guidelines set by the Michigan Department of Natural Resources, the Township maintains sufficient parkland to accommodate the present population. However, when comparing the distribution of parkland throughout the Township (Map 1-7) with standards addressing community-wide spatial distribution of parklands, it is apparent there is a lack of parkland in some areas. Future acquisitions of land for parks or open space preservation should occur as key parcels become available in the southwestern quadrant of the Township or those areas with unique natural features. New bike lanes should be placed along County roads and a linear hiking/biking trail could be potentially developed along the Grand River, running the entire east/west length of the Township.

Specific goals, objectives and recommendations related to parks, recreation and non-motorized pathways are outlined in the Delta Township Parks, Recreation and Cemeteries Open Space Plan 2000, the 2003 Delta Township Non-Motorized Transportation Plan and the 1986 Delta Township Sidewalk Plan, and 2003 Plan update. While these documents should be referenced when planning for future parks, recreation facilities and non-motorized pathways within the Township, a map illustrating the existing and proposed sidewalks and trails within the Township is located in Appendix C.

Industrial

Delta Township has a strong history of well-planned industrial development. Future industrial development should be limited primarily to the industrial tracts located in the southeastern quadrant of the Township generally bounded by I-496 to the north, I-96/I-69 to the west and Lansing Road to the east and south. This area, in addition to the GM 425 parcels west of I-96/I-69, encompasses more than 3,670 acres in sections 24 through 28 and 32 through 35. Future industrial development in this area should include appropriate site planning that regulates building design, setback, landscaping, signage, parking and environmental impacts, preferably in a Planned Business Park Development format.

Utilities/Road Improvements

When public sanitary sewer or water systems are required for a particular development within the Township, they should be supplied on the basis of "concurrency." Concurrency is an approach that ensures that public facilities and services are provided at the same time that development occurs. These services are planned well in the future within a phased approach and are constructed on a "pay-as-you-go" basis. If public utilities are not scheduled for an area proposed for development, development cannot occur, unless the developer pays for the extension of utilities. This helps to prevent wasteful "leapfrogging" of utilities (when utility lines are placed in rights-of-way adjacent to large undeveloped areas to serve a development further down the road) and promotes orderly, more efficient use of land and resources.

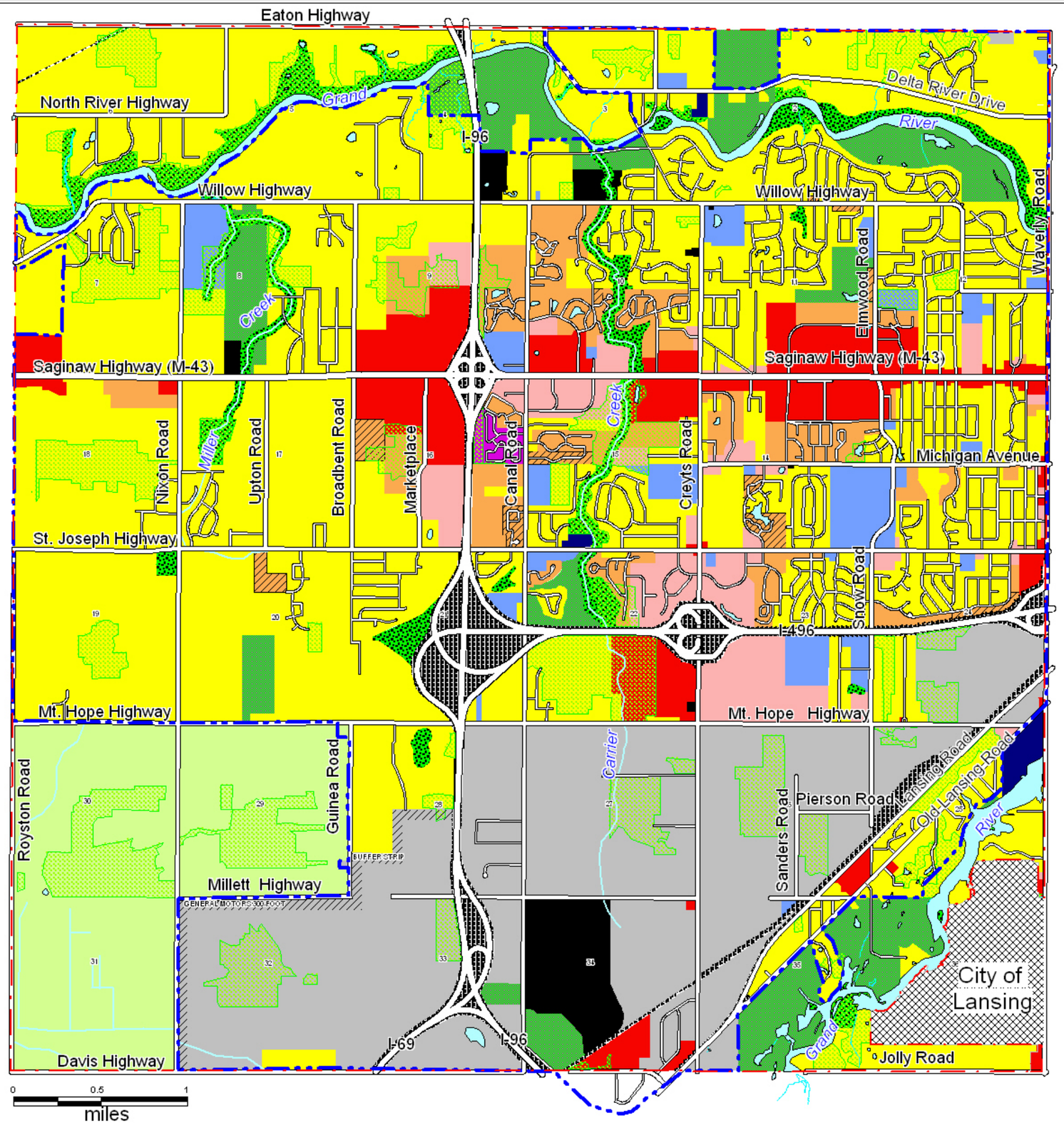
It is important to recognize that the extension of utilities (particularly public sanitary sewer and water service) to serve an area can have unintended consequences. If provided within a logical framework of planned, incremental development, public sanitary sewer and water utilities can guide growth to meet the goals and objectives set forth by the Township.

The construction of new roads and improvements to existing roads within the Township are identified in the Delta Township Road Improvement Program. This program is reviewed frequently by Township officials and updated as projects are completed and new projects are identified. Information regarding road projects in Delta Township can be obtained by referring to the Road Improvement Program which is available at the Delta Township Planning Department.

MAP 6-1

Official Future Land Use

Delta Township, Eaton County
Michigan



Legend

- Single Family Residential
- Multiple Family Residential
- Two Family Residential
- Manufactured Home Park
- Commercial
- Office
- Institutional
- Industrial
- Utility
- Highway / Railroad Right of Way
- Cemetery
- Agricultural
- Parks and Recreation Area
- Open Space/ Preserve Corridor
- Woodland Overlay Areas*
- Future Water and Sanitary SewerService Area
- Township Boundary

* Woodland Overlay Areas depict existing (2002) stands of trees and do not consitiute a specific zoning district or a particular set of regulatory standards

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(269) 386-0011
Adopted: June 7, 2004

SOURCE: Land Information Access Association
Delta Township

INTRODUCTION

This section of the Plan presents tools and processes that are currently available to Delta Township to help make this Plan a reality. Also, it contains a schedule that depicts the objectives that should be accomplished along with the recommended parties, general timing, and potential funding sources to achieve the objectives when applicable.

The following approaches are viable in terms of being implemented under current state enabling legislation and federal programs. Some approaches will have more important impacts upon the development of the Township than others.

Public Investment Strategies represent the most pro-active mechanism to foster development in the Township in accordance with this Plan. Both public and private sector investments in infrastructure are required for new development, particularly in higher density areas and in areas currently not served by public infrastructure such as sanitary sewer and water. The location and timing of such development is dependent upon the capacity of the Township to pay for the necessary infrastructure and, in the case of private sector (developer) developments, the required approvals from the Township and other public agencies.

Location and timing of infrastructure development are integral parts of the Plan's implementation program and the smart growth approach advocated for the Township. It is recommended that Township officials closely follow the recommendations in the Delta Township Sanitary Sewer and Water System Long Range Study from 1998 as a mechanism and guide to infrastructure development.

Cooperation between the Township and other public and quasi-public entities is also critical to the success of the Plan. This is in large-part due to the Township's proximity to the City of Lansing and the regional services the residents of Delta Township are provided by agencies such as Capital City Airport, CATA and EATRAN, and Grand Ledge and Waverly Public Schools. These entities and many others will play a key role in the use of land within the Township and communication among agencies needs to be facilitated in order to enable the Township (and each entity) to properly plan for the future. In addition, Eaton County government, the County Road and Drain Commissions, the Barry-Eaton District Health Department, the Michigan Department of Environmental Quality and the Michigan

Department of Transportation all have legal authority and responsibilities for programs and projects that occur in, and impact upon, the development of the Township. Coordination between these agencies and the Township is important for planning and programming and as such, needs to be maintained.

Finally, the activities occurring within surrounding townships and the City of Lansing, particularly those related to land use planning, zoning, and other development controls, can have a direct impact upon planning within Delta Township, particularly those units of government abutting Delta Township. Coordination and communication should be ongoing among these jurisdictions and plans and programs of these surrounding communities shared. Amendments (P.A. 265 of 2001) to the Municipal Planning Act under which Delta Township operates, require this intergovernmental communication on land use and development issues.

Information and Education is fundamental to the implementation of this Plan. Without the concurrence of residents, businesses and developers, the success of this plan will be less successful and more prone to setbacks during the long range planning process.

To help garner that concurrence and contribute to the success of the Plan, the Township should disseminate information and, if necessary, host educational programs. The dissemination of information can include sending a small flyer, or tri-fold, that briefly describes the main components of the Plan and possibly include a small copy of the future land use map. This information can also be included on the Township's website, or in the Delta Magazine.

In 1997 the Delta Township Board of Trustees adopted the Township's first Strategic Plan. The Strategic Plan contains 10 goals and identifies objectives for achieving each of the goals. Among the goals that are included in the Strategic Plan are the preservation of residential and business districts, the efficient provision of public services, and the expansion of recreation opportunities. The Board reviews the Plan approximately every five years to determine whether the objectives have been accomplished and to identify new goals and objectives. The Strategic Plan was reviewed and updated by the Board in 2003.

The Township might also consider conducting a community survey every several years which would make known resident's impressions, attitudes, and opinions about specific issues related to current or proposed developments. This will help provide a forum for Township officials to better understand the opinions of residents. Furthermore, the survey information will provide the Township with the necessary information they need when reviewing the Plan every five years as required by P.A. 265 of 2001.

The Township's Capital Improvements Program is a vehicle to tie the Plan into the Township's budgeting process. The Township's Capital Improvements Program identifies the capital projects that the Township proposes to undertake within the next six years, and the agency responsible for implementation. The Capital Improvements Program should generally follow the development recommendations of this Plan and phase those improvements accordingly. The Township's one year Capital Improvements Budget is intended to address those projects that comport with the overall CIP.

The Tri-County Regional Planning Commission recently completed work on a document entitled "Tri-County Regional Growth: Choices For Our Future". The purpose of the project is to seek citizen input into the implications of regional land use and growth trends and to formulate a shared vision of regional growth. Delta Township officials have served on work committees and attended public hearings and should continue their participation in the future. It is recognized that presently local jurisdictions in the Tri-County Region are making individual land use decisions with little oversight or coordination regarding the collective, long-term regional impacts of these decisions. Representatives of the Tri-County Regional Planning Commission intend to present the findings of the regional growth study to each community in the region over the next several years. Delta officials will consider how best to implement the Plan's recommendations, consistent with the Township's goals and objectives.

There are many similarities between the contents of the Delta Township Comprehensive Plan and the findings of the Regional Growth Project. Both documents advocate Smart Growth concepts such as cluster development, the provision of open space, the concurrency of utilities, and non-motorized transportation planning.

Delta Township has in place methods to control growth and development within the Township which include the following:

Zoning Ordinance – the Delta Township Zoning Ordinance is used to regulate the use of land as the primary regulatory tool for shaping local growth and development. The ordinance segregates uses into different zoning districts according to their function. A zoning map illustrates all of the zones (residential, office, commercial, industrial). The zoning ordinance establishes development standards for each district.

Land Division and Subdivisions – The Delta Township Land Division Ordinance regulates the division of land outside of subdivisions. Property is typically divided into metes and bounds parcels. Personnel from the Township's Assessing and Planning Departments review each land division application to ensure compliance with state and Township laws.

The Delta Township Subdivision regulations guide the division of land into multiple lots and are illustrated on a plat. The regulations ensure that the minimum lot size and width requirements are complied with and that issues relating to access, drainage, and utilities are addressed. The Planning Commission reviews subdivision plats with final authority granted to the Township Board of Trustees.

Sign Ordinance – Regulations pertaining to signs are contained in a free-standing ordinance being the Delta Township Sign Ordinance. The ordinance is administered by the Township's Code Enforcement Officer and contains provisions regulating the size, height and location of signs.

IMPLEMENTATION SCHEDULE

This Section complements the Plan's Goals and Actions. The Implementation Schedule groups the Actions of each of the Goals with the participants responsible for completing the actions and identifies timing and potential funding sources for each action. The Implementation Schedule quickly identifies time frames and permits comparisons between the many actions identified in the Plan. The Township should regularly review the Schedule to ensure actions are accomplished and goals are met.

This list of objectives is not a comprehensive list of all actions needed over the next 20 years, but it is a list of the primary actions needed to accomplish the Plan's general goals.

The Implementation Schedule also lists participants that include local and state agencies or groups. Quite often an action has several participants marked due to the team effort required to accomplish many actions. The Schedule identifies primary and secondary participants.

The Schedule's timing section identifies actions as short-range/ongoing actions (one to three years), medium-range actions (four to ten years) or long-range actions (more than 10 years). Actions often take a considerable length of time to complete, therefore, two or three time periods may be identified.

The funding portion of the Schedule identifies potential sources. Funding sources often change as time passes, as do organizations and priorities. Each of these should be periodically reviewed to ensure they are up to date.

The following schedule identifies the Implementation Program established in the Plan.

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DELTA CHARTER TOWNSHIP
COMPREHENSIVE PLAN
IMPLEMENTATION SCHEDULE

	PARTICIPANTS: PRIMARY ■ SECONDARY □															TIMING			FUNDING: PRIMARY ○ SECONDARY ●									
	Township Board	Township Planning Commission	Township Staff	Nonprofit Organization	Transportation Committee	Economic Development Corporation	Public School District	County/Neighborhood Township Depts.	MDOT	MDNR / MDEQ	Outside Assistance	Citizen Committees / Volunteers	Other / Private Sector	Eaton County Road Commission	Eaton County Drain Commissioner	1-3 (Short-Term, Ongoing)	4-10 (Medium Range)	10+ (Long-Range)	General Revenues	Special Assessment District	RevenueBonds	CDBG	MDNR / MDEQ	MDOT (ISTEA AND OTHER)	Other Federal or State Funding	MSHDA	Foundations, Grants, Contributions	Private and Other
GOAL STATEMENT # 1 RESIDENTIAL GROWTH AND DEVELOPMENT																												
FACILITATE RESIDENTIAL DEVELOPMENT THAT WILL FULFILL THE NEEDS OF THE VARIOUS POPULATION SEGMENTS IN THE TOWNSHIP WHILE MAINTAINING A BALANCE BETWEEN THE EXISTING URBAN AND RURAL CHARACTER																												
-Identify areas for future residential development that are within close proximity to existing developed areas and already have the necessary infrastructure with preferences to infill sites	■	■	□				□						□						●									
-Ensure higher and lower density housing is compatibly located to eliminate/minimize conflicts	□	■	■	□			□	□				□	□						●									
-Ensure smooth transitions between residential and non-residential uses by open space, buffered thoroughfares, and placement of appropriate zoning districts	□	■	■		□	□		□	□										●									
-Enhance the older residential neighborhoods in the eastern portion of the Township through code enforcement, maintenance of public infrastructure, and implementation of traffic calming techniques	□	■	■	□							□	□	□						●			○			○	○	○	○
-Maintain control over development of new single-family homes within agricultural areas		■	■		□			□		□	□	□							●	○								
GOAL STATEMENT #2 COMMERCIAL GROWTH AND DEVELOPMENT																												
PROVIDE ADEQUATE COMMERCIAL FACILITIES, APPROPRIATELY LOCATED AND TO SCALE, TO SERVE REGIONAL, COMMUNITY AND NEIGHBORHOOD NEEDS																												
-Encourage infill development or the redevelopment of vacant commercial land and/or buildings along the Saginaw Highway corridor, and other older commercial areas	□	■	■	□	□				□		□	□	□						●	○	○	○		○	○	○	○	○
-Limit new development on Saginaw Highway to areas east of Broadbent Road	■	■	■			□		□	□	□		□							●		●	○	○	○	○	○		
-Design commercial areas so that they are compatible with adjacent residential land uses relating to such items as lighting, traffic circulation, parking, signage, landscaping and solid waste disposal	□	■	■			□		□			□		□						●	○	○	●		●		○		○
-Identify commercial areas exhibiting early signs of blight and create action plans to address the problems	□	■	■	□		□			□	□		□	□						●	○		○		○	○	○	○	
-Attempt to contain strip commercial development within the existing boundaries along Saginaw Highway	■	■	■						■		□	□							●	○		○		○	○	○	○	○
-Conduct an annual meeting with the Delta-Side Business Group and the Planning Commission to obtain input from local businesses		■	■	□		□						■	■						●									○

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	Township Board	Township Planning Commission	Township Staff	Nonprofit Organization	Transportation Committee	Economic Development Corporation	Public School District	County/Neighborhood Township Depts.	MDOT	MDNR / MDEQ	Outside Assistance	Citizen Committees / Volunteers	Other / Private Sector	Eaton County Road Commission	Eaton County Drain Commissioner	1-3 (Short-Term, Ongoing)	4-10 (Medium Range)	10+ (Long-Range)	General Revenues	Special Assessment District	RevenueBonds	CDBG	MDNR / MDEQ	MDOT (ISTEA AND OTHER)	Other Federal or State Funding	MSHDA	Foundations, Grants, Contributions	Private and Other
-Continue efforts to improve the aesthetics along Saginaw Highway via signage improvements, overhead power lines placed underground, service drives and driveway consolidations	■	■	■			□		■	□		□	□	□						●	○		○		●	●		○	○
GOAL STATEMENT #3 INDUSTRIAL																												
MAINTAIN AN ATTRACTIVE INDUSTRIAL AREA WHICH PROVIDES A DIVERSIFIED TAX BASE AND EMPLOYMENT OPPORTUNITIES																												
-Prevent encroachment of existing and planned industrial areas from incompatible land uses	□	■	■		□	■		□	□			□	□						●	○	○	○	○				○	○
-Ensure that the Township has an ample supply of property located and appropriately sized industrial sites that are adequately served by public utilities and transportation systems	□	□	■		□	■			□	□	□								●	○	○		○				○	○
-Leverage private investment in the industrial tract with tax incentives by the Township as appropriate	■	□	□			■		□			□								●	○			●					○
-Continue the Township's efforts to retain existing industrial firms through marketing efforts	□	□	■	□		■	□				□	□							●		●		●		○			○
-Support the improvement of roads in the industrial tract to all-weather status	□	□	■		■	■		■	□				□	■					●		●		●	○			○	
GOAL STATEMENT #4 OPEN SPACE AND RECREATION																												
PROVIDE ADEQUATE OPEN SPACE AREAS, RECREATIONAL FACILITIES AND PROGRAMS FOR PASSIVE AND ACTIVE USE BY TOWNSHIP RESIDENTS																												
-Support linkages (walkable-pathways, and sidewalks) between residential areas and recreational facilities whenever reasonably feasible	□	■	■	□	□		□	□	□	□		□							●		○		○	○	○		○	
-Support the development of bicycle/pedestrian corridors (linear parks) within the Township with linkages to pathways in adjacent communities	□	■	■		□			□	□	□			□						●			○	○	○	○		○	
-Promote the recreational facilities offered at the Township's parks and other recreational areas such as the Woldumar Nature Center and Audubon properties	□	■	■		□			□		□		□							●	○			○	○			○	
-Encourage new residential developments to provide open space for their residents	□	■	■					□		□									●			○		○		○		
-Pursue a timely and economic open space acquisition and development program as the Township's population increases	■	■	■	□						□		□							●	○			○		○		○	
SUPPORT THE IMPLEMENTATION OF THE DELTA TOWNSHIP NON-MOTORIZED TRANSPORTATION PLAN																												
-Identify and secure funding sources for non-motorized transportation	□	□	■		□				□	□									●				●	●	●		○	○
-Township Board and Parks Commission continue to develop non-motorized trails parallel to Carrier Creek	■	□	■		□							■	□						●			○	○				○	

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DELTA CHARTER TOWNSHIP
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	PARTICIPANTS: PRIMARY ■ SECONDARY □															TIMING			FUNDING: PRIMARY ○ SECONDARY ●									
	Township Board	Township Planning Commission	Township Staff	Nonprofit Organization	Transportation Committee	Economic Development Corporation	Public School District	County/Neighborhood Township Depts.	MDOT	MDNR / MDEQ	Outside Assistance	Citizen Committees / Volunteers	Other / Private Sector	Eaton County Road Commission	Eaton County Drain Commissioner	1-3 (Short-Term, Ongoing)	4-10 (Medium Range)	10+ (Long-Range)	General Revenues	Special Assessment District	RevenueBonds	CDBG	MDNR / MDEQ	MDOT (ISTEA AND OTHER)	Other Federal or State Funding	MSHDA	Foundations, Grants, Contributions	Private and Other
-Support the efforts of the Parks Commission to connect Hunter Orchard Park with Delta Mills Park	□	□	■		□					□		■							●		○	○	○					○
-Develop linear trailway along the Grand River connecting to Lansing, Grand Ledge and Portland Trail	□	□	■		□			□	□	□		■							●		○	○	○					○
IDENTIFY AND ESTABLISH PUBLIC ACCESS POINTS TO WATER RESOURCES																												
-Work with the Eaton County Drain Commissioner regarding possible recreational uses of public storm water detention facilities (Broadbent Road ponds, Nixon/St. Joe pond, Carrier Creek pond south of 1-496)			■					■							■				●				○					
-Contact DEQ representatives and inquire of the status of the Willow Highway access to the Grand River			■		□					■									●					○	○			
GOAL STATEMENT #5 LAND USE PLANNING																												
ENCOURAGE MANAGED GROWTH AND PROVIDE CONTEMPORARY LAND USE REGULATIONS																												
-Keep development codes up-to-date in accordance with case law	■	■	■							□		□							●		○	○					○	
-Pursue a policy of managed growth and explore new and innovative methods of achieving beneficial results	■	■	■									□							●									
-Coordinate the Township's land use planning efforts with adjacent communities and the efforts of the Tri-County Regional Planning Commission		■	■						□		□	□	□						●									
-Recognize the needs of the diversifying Township population and identify programs to address specific needs	□	□	■																●									
-Identify emerging socio-economic trends, such as an aging population, and respond with appropriate planning and zoning techniques	□	□	■	□			□				□	□	□						●									
-Encourage public involvement when reviewing land development proposals and strive to improve communication between public officials and Township residents and property owners	□	□	■									□	□						●									
-Take a proactive role in the redevelopment of Brownfield sites	□	□	■			■													●			○	●		●		○	
-Encourage new development within the Township to follow Smart Growth Concepts, Smart Growth is not "no-growth" – it is sustainable growth	■	■	■		□	□	□	□				□							●									
PRESERVE AND PROTECT OPEN SPACE AND FARMLAND WITH VARIOUS PROGRAMS AND POLICIES																												
-Consider creation of a Purchase of Development Rights (PDR) program, which could include a millage proposal for financing	■	■	■	□				□				□							●			●		○		○	○	
-Recognize and encourage private efforts to preserve open space in Delta Township		□	■	□						□	□	□	□						●	○	○	○		○			○	

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	Township Board	Township Planning Commission	Township Staff	Nonprofit Organization	Transportation Committee	Economic Development Corporation	Public School District	County/Neighborhood Township Depts.	MDOT	MDNR / MDEQ	Outside Assistance	Citizen Committees / Volunteers	Other / Private Sector	Eaton County Road Commission	Eaton County Drain Commissioner	1-3 (Short-Term, Ongoing)	4-10 (Medium Range)	10+ (Long-Range)	General Revenues	Special Assessment District	RevenueBonds	CDBG	MDNR / MDEQ	MDOT (ISTEA AND OTHER)	Other Federal or State Funding	MSHDA	Foundations, Grants, Contributions	Private and Other
-Meet with the Parks & Recreation Commission to obtain their comments and concerns regarding open space preservation/ acquisition		□	■	□			□					□							●									
-Research the pros and cons of a possible millage for an open space acquisition program		□	■									□							●									○
-Conduct legal research as to the possibility of mandating preservation of a percentage of subdivision sites as open space		□	■									□							●									
-Consider mandating that a percentage of office/commercial sites be preserved as open space		□	■																●				○				○	
ESTABLISH "REDEVELOPMENT" POLICIES THAT ENCOURAGE REDEVELOPMENT AND PRESERVATION OF EXISTING STRUCTURES AND PROPERTIES																												
-Investigate the creation of an Urban Service Boundary to encourage development/redevelopment in the existing developed areas of the Township	□	□	■			□						□							●									
-Determine if there are barriers to adaptive re-use of existing buildings in Delta Township			■			□				□			□						●								○	
-Identify vacant non-residential sites and strategies to facilitate their redevelopment			■			□													●		○	○					○	
-Meet with the Delta Township Economic Development Corporation (EDC) to share items of a mutual interest regarding the redevelopment of retail sites			■			■													●	○	○							
FACILITATE SERVICE FUNCTIONS BETWEEN DELTA TOWNSHIP AND OTHER AGENCIES																												
-Continue the policy of a Delta Township representative attending meetings of the Eaton County Road Commission and EATRAN	□		■		■			■	□			□		■					●									
-Review the Strategic Plans for Grand Ledge and Waverly Schools			■				■												●									
-Initiate a review of the Delta Township Strategic Plan by the Planning Commission	□	■	■																●									
-Continue promotion of shared recreational programs between Grand Ledge and Waverly Schools and Delta Township			■				■						□						●			○	○					
-Correlate the Township's Capital Improvements Program with the goals & objectives in the Comprehensive Plan	■	■	■		□														●									
-Conduct an annual meeting of Delta Township decision-makers with elected officials of adjoining Townships to identify & discuss items of a mutual interest	■	■	■					■											●						○		○	
-Recognize the need to approach specific issues such as transit, airport, solid waste, cultural programs (arts), Potter Park Zoo on a regional basis	■	■	■					□				■							●									

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DELTA CHARTER TOWNSHIP
COMPREHENSIVE PLAN
IMPLEMENTATION SCHEDULE

	PARTICIPANTS: PRIMARY ■ SECONDARY □															TIMING			FUNDING: PRIMARY ○ SECONDARY ●									
	Township Board	Township Planning Commission	Township Staff	Nonprofit Organization	Transportation Committee	Economic Development Corporation	Public School District	County/Neighborhood Township Depts.	MDOT	MDNR / MDEQ	Outside Assistance	Citizen Committees / Volunteers	Other / Private Sector	Eaton County Road Commission	Eaton County Drain Commissioner	1-3 (Short-Term, Ongoing)	4-10 (Medium Range)	10+ (Long-Range)	General Revenues	Special Assessment District	RevenueBonds	CDBG	MDNR / MDEQ	MDOT (ISTEA AND OTHER)	Other Federal or State Funding	MSHDA	Foundations, Grants, Contributions	Private and Other
REVIEW THE PREDOMINANCE OF LARGE LOT, LOW DENSITY RESIDENTIAL DEVELOPMENT IN DELTA TOWNSHIP AND THE IMPACT, WHICH IT HAS																												
-Review the Township's existing Planned Unit Development regulations and suggest changes which would promote its use. Encourage input from the development community		□	■	□									□						●									
-Consider the possible reduction of minimum lot sizes and widths in each zoning district	■	■	■																●									
-Consider reducing the minimum floor area requirements in the residential zoning districts	■	■	■																●									
-Identify possible sites for higher density residential development where vacant land exists, public transit is available, utilities adequate, arterial roads available, etc.	□	□	■								□								●									
MAINTAIN A HIGH QUALITY OF LIFE IN EXISTING RESIDENTIAL AREAS																												
-Promote a "demonstration project" for traffic calming in a neighborhood experiencing speeding or cut-thru traffic			■		■			□	□			□		■					●					○	○			
-Promote/support the Property Maintenance Code which was adopted in 2002	□	□	■									□							●									
-Meet with Eaton County Sheriffs Department and inquire as to their needs. Discuss speed enforcement, identify traffic congestion areas, discuss manpower, etc.	□		■					■			□	□							●									
-Provide input into the Township Hazard Mitigation Plan required by November 2004	□	□	■							□		□							●									○
-Consider establishing a tree nursery on Township land to eventually plant native trees along public streets			■		□			□	□										●				●	○	○		○	
-Consider hiring the services of a landscape architect to assist staff in site plan reviews, help the Parks Department, review Township properties, etc.			■					□			□		□						●									○
-Establish a tool loan program for low and moderate income households	□		■									□							●						○	●		
-Resist commercial/office development intrusions into residential neighborhoods	□	□	■	□								□							●									
-Inform/encourage residents to erect pedestrian scale streetlights in existing residential neighborhoods per the Township's established procedures			■									■							●	○		○						○
-Investigate the possibility of Delta Township assisting the Eaton County Habitat for Humanity in constructing affordable homes in the Township	□	□	■	■				■											●						○	○	○	○
-Address the problem of maintaining common areas in residential subdivisions	□	□	■									□							●	○								○
PRESERVE AND PROTECT CULTURAL AND HISTORICAL SITES																												
-Inventory Delta Township's historical sites (Grange Hall, Moon Log Cabin)			■	□							□	□	■						●			○			○			○

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DELTA CHARTER TOWNSHIP
COMPREHENSIVE PLAN
IMPLEMENTATION SCHEDULE

	PARTICIPANTS: PRIMARY ■ SECONDARY □															TIMING			FUNDING: PRIMARY ○ SECONDARY ●									
	Township Board	Township Planning Commission	Township Staff	Nonprofit Organization	Transportation Committee	Economic Development Corporation	Public School District	County/Neighborhood Township Depts.	MDOT	MDNR / MDEQ	Outside Assistance	Citizen Committees / Volunteers	Other / Private Sector	Eaton County Road Commission	Eaton County Drain Commissioner	1-3 (Short-Term, Ongoing)	4-10 (Medium Range)	10+ (Long-Range)	General Revenues	Special Assessment District	RevenueBonds	CDBG	MDNR / MDEQ	MDOT (ISTEA AND OTHER)	Other Federal or State Funding	MSHDA	Foundations, Grants, Contributions	Private and Other
GOAL STATEMENT #6 TRANSPORTATION																												
SUPPORT EFFORTS TO IMPROVE TRANSPORTATION SERVICES AND INFRASTRUCTURE IN THE TOWNSHIP IN ORDER TO FACILITATE SAFE AND EFFICIENT MOTORIZED AND NON-MOTORIZED TRANSPORTATION																												
-Continue to support the Township's efforts to encourage the establishment of a boulevard on Saginaw Highway west of I-96 via right-of-way acquisition, the preparation of a boulevard design, and continued dialogue with MDOT officials	□	□	■		■				■										●	○				○				
-Support MDOT in their efforts to reconstruct the I-96/Saginaw interchange	■	□	■		■				■	■									●					○				
-Continue to support the Eaton County Road Commission's street resurfacing program for residential streets	□		■		□			■						■					●		○	○						
-Encourage sufficient funding to repair sidewalks, fill in gaps in the sidewalk system, provide sidewalks and/or bike lanes in conjunction with new/rebuilt roadways and mandate the provision of sidewalks in conjunction with new development	□		■		□								□	□					●			○		○				○
-Encourage the provision of public transit service to the Township's residential, commercial and industrial areas	□		■		■			■											●									
-Land uses generating significant amounts of traffic shall be served by thoroughfares that can safely and adequately handle the traffic	□	□	■		□			□	□					□					●			○		○				
PROMOTE THE USE OF PUBLIC TRANSIT SERVICES																												
-Locate public facilities in close proximity to public transit	□	□	■		□		□		□			□							●			○		○	○			
IMPROVE THE WEST SAGINAW HIGHWAY STREETSCAPE																												
-Support efforts to bury the overhead electrical lines on West Saginaw Highway	□	□	■		□				□			□							●			○					○	
-Create and fund a program for driveway closures on West Saginaw Highway	□	□	■		□				□										●			○		○				
-Continue to support stringent enforcement of the Township's Sign Ordinance	□	□	■										□						●									
GOAL STATEMENT #7 PUBLIC SERVICES AND FACILITIES																												
ENCOURAGE SUFFICIENT AND AVAILABLE PUBLIC SERVICES AND FACILITIES TO MEET THE GROWING NEEDS OF THE TOWNSHIP																												
-Provide law enforcement and fire protection that meet the needs of the Township to ensure the safety and well-being of Delta Township residents and property	□	□	■				□	□				□							●		○				●		○	
-Mandate residential properties and commercial and industrial businesses connect to public water systems when available	■	■	■			□				■		□							●									
-Explore the benefits of privatizing and/or sharing facilities and services with other communities	□		■					■				□							●									
-Develop procedures for greater collaboration and coordination of efforts between school districts and the Township	□		■				■					□							●									

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IMPLEMENTATION SCHEDULE

	PARTICIPANTS: PRIMARY ■ SECONDARY □															TIMING			FUNDING: PRIMARY ○ SECONDARY ●									
	Township Board	Township Planning Commission	Township Staff	Nonprofit Organization	Transportation Committee	Economic Development Corporation	Public School District	County/Neighborhood Township Depts.	MDOT	MDNR / MDEQ	Outside Assistance	Citizen Committees / Volunteers	Other / Private Sector	Eaton County Road Commission	Eaton County Drain Commissioner	1-3 (Short-Term, Ongoing)	4-10 (Medium Range)	10+ (Long-Range)	General Revenues	Special Assessment District	RevenueBonds	CDBG	MDNR / MDEQ	MDOT (ISTEA AND OTHER)	Other Federal or State Funding	MSHDA	Foundations, Grants, Contributions	Private and Other
-Identify valuable historic assets within the Township and develop programs and societies to preserve and promote those assets	□	□	■								□	■							●								○	
-Develop infrastructure (water, sanitary sewer) in phased expansion, concurrent with new construction	□	□	■										□						●		○							○
-Develop an approach to planning and development that emphasizes coordination and cooperation between Delta Township and surrounding communities through mutual financing and operation of area-wide and regional facilities	□	■	■					■											●		○							○
PROMOTE THE EXTENSION OF PUBLIC WATER AND SANITARY SEWER SERVICE																												
-Promote the Township Subdivision Ordinance's requirement that mandates public sanitary sewer and water service for new subdivisions	□	□	■							□	□	□							●									
-Support the proposed mandatory water main connection ordinance	□	□	■							□									●									
-Support the utility extensions recommended in the Delta Township Sanitary Sewer and Water System Long Range Study, February 1998	□	□	■							□									●									
GOAL STATEMENT #8 ENVIRONMENTAL																												
PROTECT THE QUALITY OF THE TOWNSHIP'S NATURAL RESOURCES AND ENVIRONMENTALLY SENSITIVE AREAS																												
-Assist the Eaton County Drain Commissioner in efforts to promote storm water management practices	□		■					■		□					■				●									
-Identify soils highly conducive to agricultural production, such as those found in southwestern Delta Township, and attempt to preserve farming activities in such areas			■					□			■		□						●				○		○		○	
-Support the Township's Flood Plain Management efforts	□	□	■							□									●									
-Promote the use of the Grand River for recreation and build upon this valuable asset		□	■							□		□							●				○					
-Promote the extension of public water and sanitary sewer services to those areas in the Township where the public health is threatened by on-site systems	□	□	■							□									●									
-Preserve prime farmland through zoning regulations and other applicable methods	□	□	■							□		□							●									
PROTECT AND ENHANCE GROUNDWATER AQUIFERS, NATURAL RECHARGE AREAS, AND SURFACE WATER RESOURCES FROM CONTAMINATION																												
-Inventory Delta Township's water resources including wetlands, streams, ponds, etc. via the GIS System	□	□	■				□						□						●		○	○			○		○	○
-Adopt the TCRPC Well Head Management Plan and Ordinance Amendments	■	■	■					■			□								●									
-Consider adoption of zoning ordinance amendments that would limit the amount of impervious surfaces in commercial developments. Consider a limit on the maximum number of parking spaces above the minimum that can be provided on a site	□	■	■			□						□			□				●									

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	PARTICIPANTS: PRIMARY ■ SECONDARY □															TIMING			FUNDING: PRIMARY ○ SECONDARY ●									
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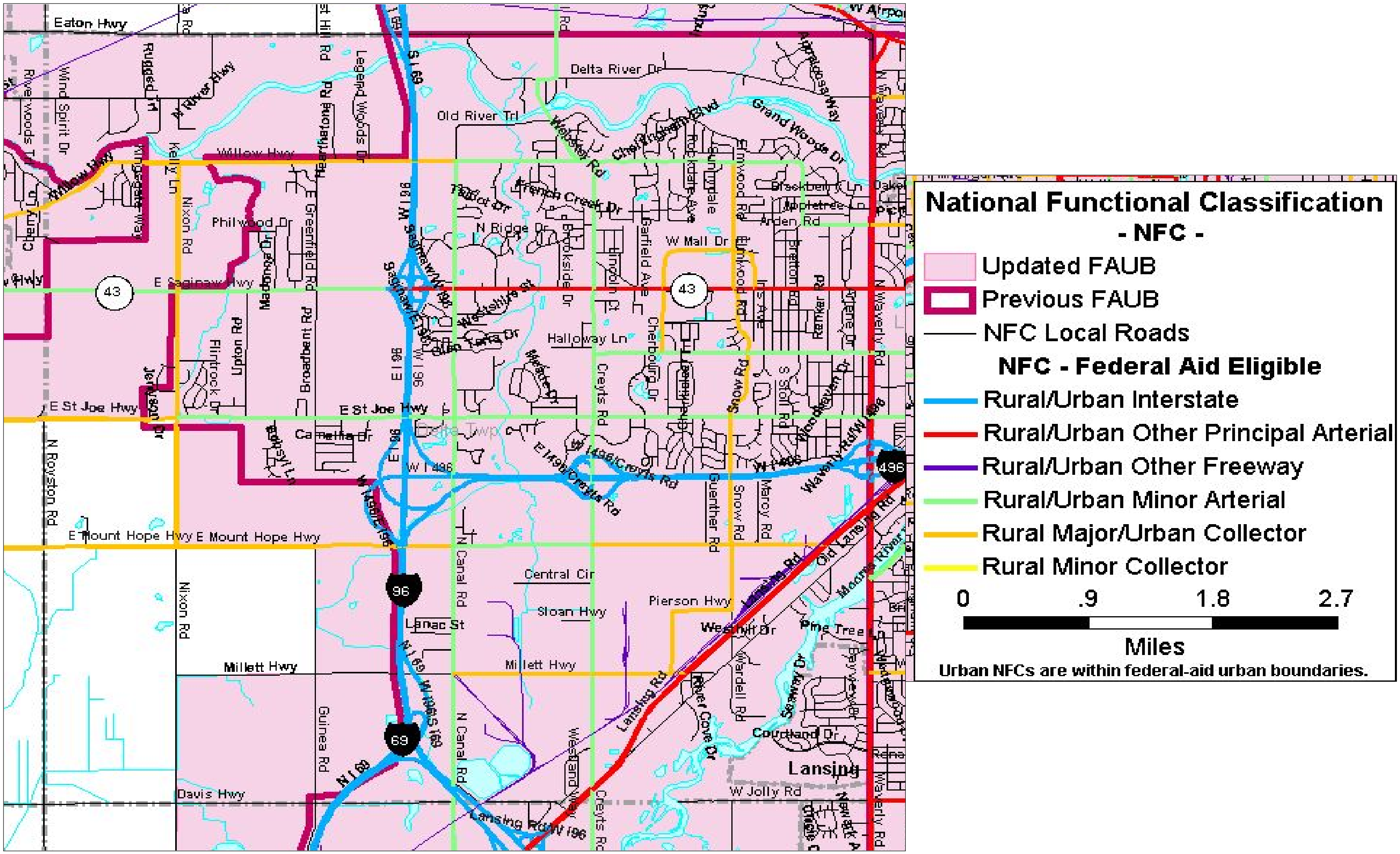
-Consider a stream buffer ordinance to reduce pollution from run-off and erosion	□	■	■					□		□					□				●						○			
-Consider the adoption of a Township Wetlands Protection Ordinance	□	■	■							□					□				●						○			
-Recommend Township financing of a well capping program for abandoned private wells	□		■					■											●	○			○					
-Participate in phase II of the Federal Stormwater Management Program in an effort to improve the quality of stormwater runoff	□		■							□		□			■				●				●					○
-Support the Eaton County Drain Commissioner in the enforcement of Compiled Rules			■					□			□				■				●									
CREATE PROGRAMS PERTAINING TO TREE PRESERVATION																												
-Analyze the pros and cons of a Delta Township tree preservation ordinance	□	□	■				□					□							●	○					○			
-Consider inserting incentives in the Zoning Ordinance which would grant a "bonus" for preservation of mature trees	□	□	■			□							□						●									
-Consider mandating the installation of one street tree per subdivision lot at time of house construction	□	□	■		□									■					●									

APPENDIX A

National Functional Classification Map

National Functional Classification



APPENDIX B

Delta Township Community Opinion Survey

DELTA TOWNSHIP OPINION SURVEY

Dear Delta Township Resident; The Township is developing a Master Plan to guide community development over the next 20 years. While change is inevitable, how that change occurs is up to the residents of the Township. What follows is a community questionnaire that asks demographic, economic, social and environmental questions to help determine both present community concerns and future community needs. LET US KNOW YOUR OPINIONS BY ANSWERING THIS IMPORTANT SURVEY. There are no wrong answers or opinions. All responses will be tabulated anonymously by an independent consulting firm to get a comprehensive overview of how residents feel about these issues.

When mailing, please tri-fold and staple or tape the survey and send it with the attached address visible. If you wish to avoid the cost of mailing the survey you can drop it off at the Township's drop box on the north side of the Township Hall. We will make the results known as soon as possible. Thank you for participating in this important effort.
Joseph Drolett, Delta Township Supervisor

Please indicate how you feel about each of the following Current Issues/Conditions in the Township

1

ISSUES

	Not a Problem	Possible Problem	Slight Problem	Moderate Problem	Serious Problem	No Opinion
Protection of groundwater	❑	❑	❑	❑	❑	❑
Division of farmland for residential development in the Township	❑	❑	❑	❑	❑	❑
Amount of open space in the Township	❑	❑	❑	❑	❑	❑
Amount of wetlands in the Township	❑	❑	❑	❑	❑	❑
Soil protection measures in the Township	❑	❑	❑	❑	❑	❑
Traffic volume on W. Saginaw	❑	❑	❑	❑	❑	❑
Traffic speeds on Township roads	❑	❑	❑	❑	❑	❑
Availability of sidewalks	❑	❑	❑	❑	❑	❑
Appearance of West Saginaw corridor	❑	❑	❑	❑	❑	❑
Traffic volumes in residential areas	❑	❑	❑	❑	❑	❑

2

CONDITIONS

	Excellent	Good	Fair	Poor	Very Poor	No Opinion
Quality of drinking water (private well)	❑	❑	❑	❑	❑	❑
Quality of drinking water (public water service)	❑	❑	❑	❑	❑	❑
Storm Drainage	❑	❑	❑	❑	❑	❑
Police protection	❑	❑	❑	❑	❑	❑
Fire protection	❑	❑	❑	❑	❑	❑
Zoning code enforcement	❑	❑	❑	❑	❑	❑
Building code enforcement	❑	❑	❑	❑	❑	❑
Recycling services	❑	❑	❑	❑	❑	❑
Road maintenance	❑	❑	❑	❑	❑	❑
Cablevision Service	❑	❑	❑	❑	❑	❑
Public bus service (CATA & EATRAN)	❑	❑	❑	❑	❑	❑
Blight/Junk Enforcement	❑	❑	❑	❑	❑	❑
General Quality of life in the Township	❑	❑	❑	❑	❑	❑
Park facilities and programs	❑	❑	❑	❑	❑	❑
District library faciltiy and services	❑	❑	❑	❑	❑	❑
Ambulance/EMT Service	❑	❑	❑	❑	❑	❑

Please indicate how you feel about each of the following Future Issues/Concerns

3

Future Issues and Concerns

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Single family housing should be encouraged in the Township.	❑	❑	❑	❑	❑
Tax abatements should be granted to attract industrial development into the Township.	❑	❑	❑	❑	❑
Development of more parks and recreation facilities should be encouraged in the Township.	❑	❑	❑	❑	❑
Farmland in the Township should be preserved.	❑	❑	❑	❑	❑
Open space in the Township should be preserved.	❑	❑	❑	❑	❑
Signs in the Township are being adequatelyregulated.	❑	❑	❑	❑	❑
Township roads are generally in good condition.	❑	❑	❑	❑	❑
Police protection in the Township is satisfactory.	❑	❑	❑	❑	❑
Fire protection in the Township is adequate.	❑	❑	❑	❑	❑
Ambulance service in the Township is acceptable.	❑	❑	❑	❑	❑
The Township should provide yard waste pickup.	❑	❑	❑	❑	❑
Recycling services offered by the Township are reasonable.	❑	❑	❑	❑	❑
The Township should promote expansion of water mains and sanitary sewers to unserved areas.	❑	❑	❑	❑	❑
Property taxes in the Township are reasonable.	❑	❑	❑	❑	❑
The Township should assist in organizing neighborhoods so residents can better represent themselves.	❑	❑	❑	❑	❑
The Township needs to encourage MDOT to create a boulevard on West Saginaw Highway.	❑	❑	❑	❑	❑
The Township needs to take steps to create a recognizable identity.	❑	❑	❑	❑	❑
Sidewalks should be mandated in all new developments.	❑	❑	❑	❑	❑
The Township should finance the installation of sidewalks where they're presently non-existent.	❑	❑	❑	❑	❑
The Township should adopt a Housing Code to encourage property maintenance.	❑	❑	❑	❑	❑
The Township should stringently regulate the installation of communication towers.	❑	❑	❑	❑	❑
Township officials are doing a satisfactory job communicating with residents.	❑	❑	❑	❑	❑
The Township needs to finance the paving of gravel roads.	❑	❑	❑	❑	❑
Power lines along West Saginaw Highway should be buried .	❑	❑	❑	❑	❑
Infill commercial development should be encouraged rather than the conversion of open space.	❑	❑	❑	❑	❑
The Twp. needs to support items of regional interest such as solid waste, CATA, the Zoo and Airport.	❑	❑	❑	❑	❑
The Township should encourage the construction of more east-west roads.	❑	❑	❑	❑	❑
Library facilities in the Township are adequate.	❑	❑	❑	❑	❑

4 Which of the following issues in the Township do you feel are the MOST important and should be addressed? Please mark only five, 1 being most important, 5 being least important of the five.

- Drainage ☐
- Police Protection ☐
- Traffic Congestion ☐
- Road maintenance ☐
- Public Acquisition of Open Space ☐
- Fire Protection ☐
- Sidewalk Construction ☐
- Library Facilities ☐
- Communication with Residents ☐
- Parks/Recreation Facilities ☐

5 Would you be willing to pay additional taxes to address one or all of those five issues?

Yes ❑ No ❑

6 If not all, list ones for which you stated "Yes".

_____

_____

7 Are there conditions at a particular location in the Township you feel should be improved? If so, what and where?

_____

_____

8 Additional comments on these and or other Delta Township issues.

_____

_____

The following section asks general household information. All information provided will be kept confidential and surveys will be tabulated anonymously.

9 On which street in the Township do you live?

_____

10 Where do you work?

- Delta Township ❑
- Eaton County other than Delta Township ❑
- City of Lansing ❑
- City of East Lansing ❑
- Ingham County other than the City of Lansing & East Lansing ❑
- Clinton County ❑
- At Home ❑
- Retired or not employed ❑
- All around Michigan or the U.S. ❑
- Elsewhere (not identified above) ❑

11 Please name the community if you selected "elsewhere"

_____

12 Please indicate your age category.

25 or younger ❑ 26-44 ❑ 45-64 ❑ 65+ ❑

13 Including yourself, how many people live in your household? (Please check only one)

1 ❑ 2 ❑ 3 ❑ 4 ❑ 5 ❑ 6 ❑ 7 ❑ 8 or more ❑

14 How many persons in your household are currently employed Full Time?

1 ❑ 2 ❑ 3 ❑ 4 or more ❑ None ❑

15 How many persons in your household are currently employed Part Time?

1 ❑ 2 ❑ 3 ❑ 4 or more ❑ None ❑

16 Do you have any children under 18 living at home?

Yes ❑ No ❑

17 Is anyone in your household over 65?

Yes ❑ No ❑

18 In which type of dwelling do you live?

- Single-Family Home ☐
- Duplex ☐
- Condominium ☐
- Apartment ☐
- Mobile Home ☐

19 Do you own or rent your dwelling?

- Own ☐
- Rent ☐

20 How long have you owned/rented property in Delta Township?

- Less than 3 years ☐
- 6 to 9 years ☐
- More than 20 years ☐
- 3 to 5 years ☐
- 10 to 20 years ☐

21 Annual Household Income (Please check the applicable range). NOTE: THIS INFORMATION IS FOR STATISTICAL PURPOSES ONLY. REMEMBER, YOUR RESPONSE IS ANONYMOUS.

- Less than $24,999 ☐
- $50,000-$74,999 ☐
- $100,000-$124,999 ☐
- $25,000 -$49,999 ☐
- $75,000-$99,999 ☐
- $125,000 or more ☐

22 Please indicate the type of school your child/children attend? - if any?

- preschool ☐
- charter ☐
- Davenport University/Lansing Community College ☐
- Michigan State University ☐
- public ☐
- home school ☐
- private/parochial ☐
- no children in school ☐

23 What school district are you in?

- Waverly ☐
- Grand Ledge ☐
- Lansing ☐
- Holt ☐

- fold here -

Delta Township
7710 W. Saginaw Highway
Lansing, Michigan 48917-9712

Delta Township
7710 W. Saginaw Highway
Lansing, Michigan 48917-9712

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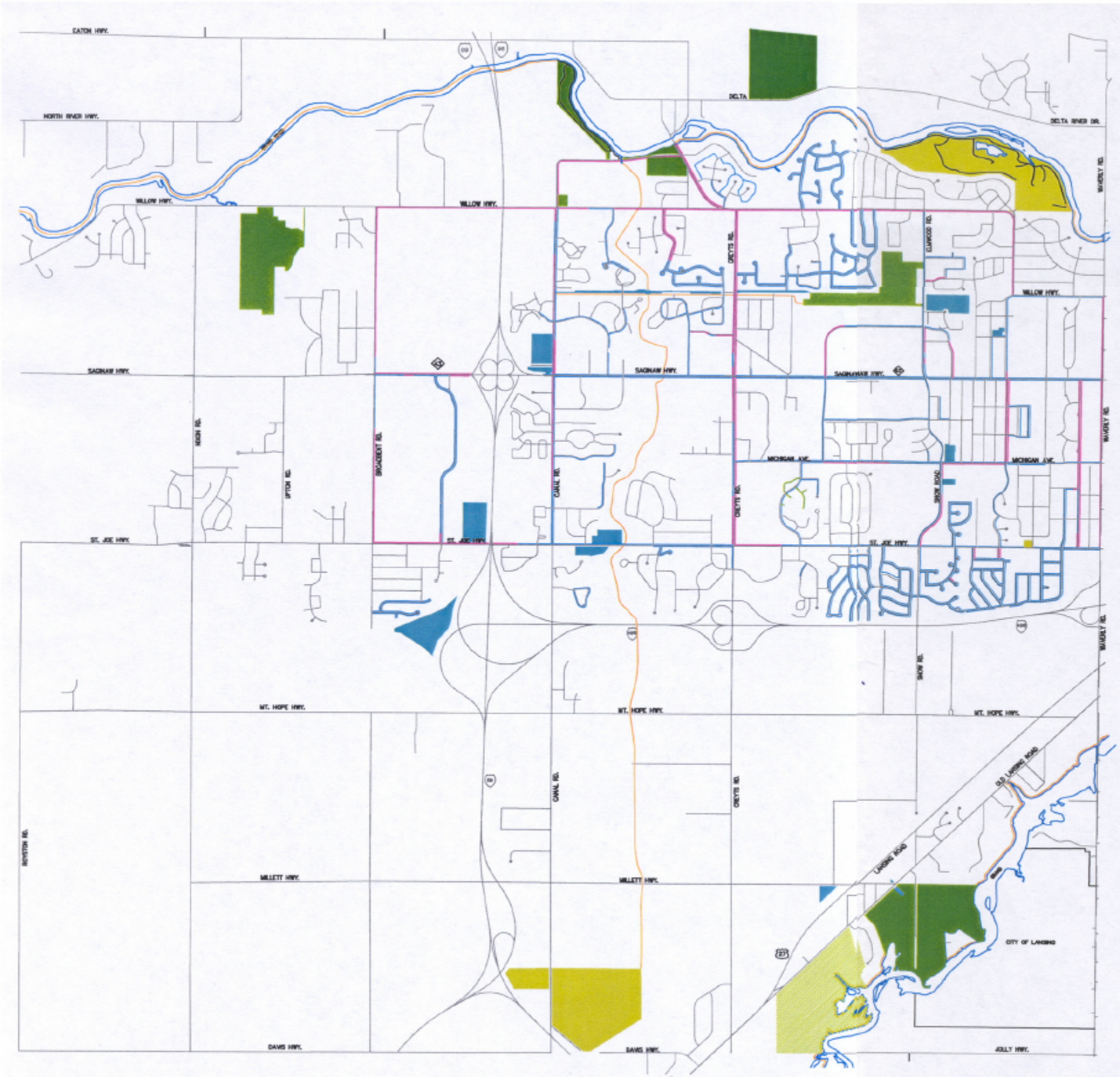
APPENDIX C

Proposed Sidewalks and Trails Map

DELTA CHARTER TOWNSHIP

NON-MOTORIZED TRANSPORTATION



KEY

- EXISTING SIDEWALK
- PROPOSED SIDEWALK
- EXISTING TRAILS
- PROPOSED TRAILS

No Scale