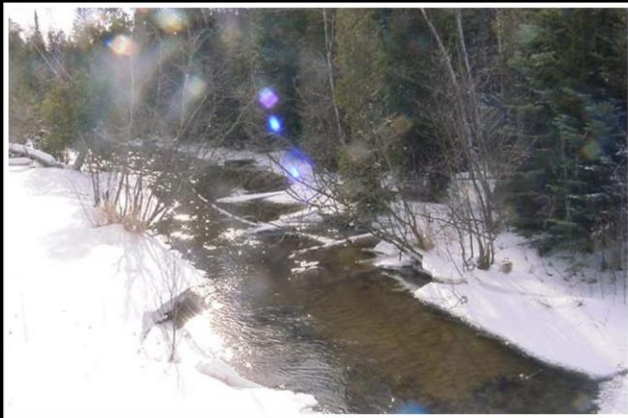


# THE CHARTER TOWNSHIP OF CHOCOLAY COMPREHENSIVE PLAN



2005

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# **The Charter Township of Chocolay COMPREHENSIVE PLAN**

Prepared Under the Direction of the  
**Charter Township of Chocolay Planning Commission**

By the

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2005

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**Photographs by Charter Township of Chocolay Staff**

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# PART ONE

## FRAMEWORK FOR PLANNING





# Chapter 1 DEMOGRAPHICS

## INTRODUCTION

A basic component of the Comprehensive Plan is an analysis of demographics. It provides a profile of the people who live, work, and play in Chocolay Township. A thorough understanding of the people of Chocolay Township is a necessary basis for determining the future needs and opportunities of the community. The residents weave the cultural fabric of Chocolay Township; they demand its services, develop its lands, pay the taxes and ultimately determine the success of the Township. This chapter will examine the trends, composition and characteristics of Chocolay Township's population, and will conclude with a discussion of relative issues and problems.

## DEMOGRAPHICS

### Total Population

A study of population trends is necessary for understanding the historic pattern of growth within communities. Past population fluctuations may provide insight to possible patterns of change in the future. The growth trends of Chocolay Township are compared with those adjoining units of government in Table 2-1.

Table 1-1  
**Population of Chocolay Township and Surrounding Communities, 1980-2000**

Community	1980	1990	2000	Total Change 1980-2000	% Change 1980-2000	Total Change 1990-2000	% Change 1990-2000
Chocolay Township	5,685	6,025	6,095	+410	7%	+70	1%
Sands Township	2,437	2,696	2,127	-310	-13%	-569	-21%
West Branch Township	2,166	2,241	1,648	-518	-24%	-593	-26%
Skandia Township	999	933	907	-92	-9%	-26	-3%
City of Marquette	23,288	21,977	20,714	-2,574	-11%	-1,263	-6%
Marquette Township	2,669	2,757	3,286	+617	23%	+529	19%
Marquette County	74,101	70,887	64,634	-9,467	-13%	-6,253	-9%
State of Michigan	9,262,078	9,295,297	9,938,444	676,366	7%	643,147	7%

Source: U.S. Census Bureau, 2004

Note: Chocolay Township and Marquette City figures based on census figures as revised regarding Marquette Branch Prison population.

The population of Chocolay Township increased by 410 persons between 1980 and 2000 to 6,095, according to the U.S. Census. See Table 1-1. This represents a 7% change during that time period. Within the same period, many of the communities that

neighbor Chocolay Township experienced declines in population. The exception was Marquette Township, which gained 617 persons – a 23% increase. Between 1990 and 2000, Chocolay Township’s population grew by 1%, adding 70 persons. As a whole, Marquette County experienced a population decline of 9,467 persons, or 13% between 1980 and 2000. This loss of population is primarily a result of the closure of the K.I. Sawyer Air Force Base. Chocolay Township’s population gain of only 1% between 1990 and 2000 may seem low when compared with the number of new houses constructed, but the number of persons per household declined 14.5% from 2.75 to 2.35 persons per household during that period.

It should also be noted that there is a discrepancy in the 2000 Census data between Marquette City and Harvey CDP (Census Designated Place). Unlike past censuses, prisoners at the Marquette Branch Prison were included in the Harvey and Chocolay Township statistics, not Marquette City. In May 2001, a resolution was adopted by the Census Bureau to correct the discrepancy. The resolution caused Chocolay Township to subtract 1,053 persons from their census figures and Marquette City to add 1,053 persons to their figures. This amount appears to be the total population of the Marquette Branch Prison (according to the fiscal year 2000 Annual Report of the Prison), inclusive of the Garden Farm prisoner population.

### **Population Projection**

By knowing the number of future residents in the Township, officials can invest in the proper community facilities needed to serve this future population. Many methods of projecting future population have been developed and tried over the years, but they all have the same shortcoming. They all use past information to predict what is going to happen in the future. Although some methods are more elaborate than others, they all make projections of future actions based on past trends.

Photo 1-1  
**Chocolay Township is Likely to Experience a Significant Portion of Marquette County Growth**



If current growth trends continue, the population of Chocolay Township could increase by 455 persons, or 7.5% between 2000 and 2020, based on the 1980, 1990 and 2000 census figures. See Table 1-2. Marquette Township is likely to see an increase of 544 persons during the same period. Countywide, Marquette County should continue to experience a population decline. Based on current trends, the County stands to lose 8,961 persons, or 13.9% over the next 20 years. Even though the County population will likely decline, Chocolay Township and a few other townships surrounding the City of Marquette are likely to grow. If the growth rate of the last ten years continues to increase, it will be important to adjust this Plan at intervals of not less than 3-4 years.

Growth within Chocolay Township depends on a variety of factors. These factors include lifestyle, commuting habits, economic influences, housing availability and more. Many of these factors are outside of the Township's control, and others may only be marginally influenced by actions of the community. However, it is likely that for at least the next decade, a portion of the population growth in Marquette County will occur in Chocolay Township. It appears that Marquette Township and Chocolay Township are the recipients of much of the growth around the City of Marquette, which is likely to include people migrating out of the City, in order to live in a more rural area. Should the economy of the area significantly improve, this projection is likely to be low. Similarly, if it were to decline, then these projections may be high.

Table 1-2  
**Population Projection for Chocolay Township and Adjoining Jurisdictions:  
 Based on 1980-2000 Census**

<b>Community</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>2020</b>	<b>Total Change 2000-2020</b>	<b>% Change 2000-2020</b>
Chocolay Township	5,685	6,025	6,095	6,345	6,550	455	7.5%
Sands Township	2,437	2,696	2,127	2,110	1,955	-172	-8.1%
West Branch Township	2,166	2,241	1,648	1,500	1,241	-407	-24.7%
Skandia Township	999	933	907	854	808	-99	-10.9%
City of Marquette	23,288	21,977	20,714	19,419	18,132	-2,582	-12.5%
Marquette Township	2,669	2,757	3,286	3,521	3,830	544	16.5%
Marquette County	74,101	70,887	64,634	60,407	55,674	-8,961	-13.9%

*Source: U.S. Census Bureau. Projections by Planning & Zoning Center, Inc. based on Linear Growth Method.  
 Note: Chocolay Township and Marquette City figures based on census figures revised regarding Marquette Branch Prison population.*

**Other Population Characteristics**

The population correction for Chocolay Township made by the U.S. Census Bureau, in which the prison population was moved from Chocolay Township to Marquette City

makes further analysis of the Chocoday Township population difficult. The correction only detailed total population number and housing units, and so a detailed breakdown and analysis of the Chocoday Township population is not possible for Age, Education, Gender, Race and Ethnicity. See Appendix A for a copy of the census correction letter and all of the basic 2000 Census data for the Township.

Photo 1-2  
**Trail Users in Chocoday Township**



## Chapter 2 ECONOMY

### INTRODUCTION

The economy of Chocoley Township is a complicated maze of ties with the surrounding area. The employers within the Township only form a small segment of the economic picture for the Township. Neighboring employers are a major income and employment source for Township residents. Within the Township itself, no single business dominates and employment is a mix of government, industry, and retail business.

### AREA ECONOMY

#### County Employment

This section will begin with a historical perspective of employment over the last several decades in Marquette County. Table 2-1 and Table 2-2 show employment figures by broad industrial categories.

Table 2-1  
**Marquette County Employment by Category, 1940-2002**

Category	1940	1950	1960	1970	1980	1988	2002
Total Labor Force	17,946	16,934	18,952	21,200	30,575	28,125	32,950
Unemployment	2,239	1,129	1,502	1,380	3,925	2,975	1,900
Govt. Employment	731	1,455	2,087	4,154	8,100	8,350	6,900*
Mining	3,074	3,408	2,830	3,210	No Data	2,700	1,675
Wholesale/Retail Trade	2,225	2,714	2,625	4,127	4,950	4,775	4,415
Finance, Ins. & Real Estate	152	294	300	597	825	900	1,114
Services	2,312	1,974	2,490	3,855	No Data	5,050	9,965

*Source: Chocoley Township 1989 Comprehensive Plan and Michigan Department of Labor and Economic Development*

*\* Figure from FedStats, year 2000*

The figures on total labor force show that there has been a fluctuation in the size of the workforce. From 1970 to 1980 the labor force grew substantially from 21,200 to 30,575, which was an increase of 44% in a ten-year period. Between the period 1980 to 1988, a drop of 8.7% was recorded in the total labor force, which is a numerical drop from 30,575 in 1980 to 28,125 in 1988. In 2002, the labor force rose to 32,950, an increase of 3,725 or 13% from 1988.

The unemployment figure, which was at 7.9% in 1960, dropped to 6.5% in 1979, but then rose to 12.8% in 1980. In 1988, it was 10.6%, in 2002 it was 5.7% and in 2004 it was again 5.7% (year-to-date January-August). During a thirty year period, government employment grew from 19.6% in 1970 to 29.6% in 1988 and down to 20.9% in 2000. The slow-down in the mining industry is represented by the fact that in 1970, mining accounted for 15.1% of the employment in Marquette County, where as in 1988, it only accounted for 9.6%.

Without doing a complete survey of the labor force not only in Marquette County, but in the central U.P. as well as Michigan and the United States, including a survey of employment of major employers in Marquette County and Chocolay Township, it is difficult to make determinations as to the trends in the economy. Suffice it to say that in Chocolay Township, much of the employment is derived outside of the Chocolay Township boundaries. For example, being located five miles outside of the city of Marquette provides a variety of employment opportunities in retail business and the government and service sectors, including personnel in the Marquette School system and Northern Michigan University. Many ancillary jobs are also created as a result of these facilities. In addition, Marquette General Hospital and the Michigan State Branch Prison employ many Township residents.

### **Chocolay Township Employment**

The Township is mostly residential in character and relies heavily on outside employment. Recent developments in and around the greater Harvey area have added to the Chocolay Township tax base and will increase local employment within the Township. In addition, these new businesses will add services desired by local residents.

Photo 2-1

### **Recent Developments in the Greater Harvey Area have Increased Local Employment**



In reviewing employment within the Township, three segments stand out. They are:

1. Government
  - A. Marquette Area Public Schools (Cherry Creek Elementary)
  - B. Michigan Department of Natural Resources (fish hatchery)
  - C. Chocolay Township
2. Retail
  - A. Grocery stores
  - B. Restaurants
  - C. Other retail stores including gas stations

- 3. Light Industry and Manufacturing
  - A. Car sales
  - B. Service contractors and trucking
  - C. Manufacturing (block plant)

The U.S. Census reported that in 2000, over half (1,713 out of a total 3,016) of the Chocolay Township workforce 16 years and over were employed as private, for-profit wage and salary workers. See Table 2-2. Over one thousand of the Chocolay Township workforce, or 22.4% were employed by the local, state or federal government. Nearly 14%, or 417 worked for private, non-profits, and 6.3% were self-employed workers. Only ten persons, or 0.3% were employed in agriculture, forestry, fishing and hunting in 2000 in Chocolay Township.

Table 2-2  
**Type of Employment in Chocolay Township, Persons 16 and Over, 2000**

<b>Class of Worker</b>	<b>Number</b>	<b>Percent</b>
Private for-profit wage and salary workers	1,713	56.8
Employees of own corporation	211	7
Private not-for-profit wage and salary workers	417	13.8
Local government workers	173	5.7
State government workers	429	14.2
Federal government workers	74	2.5
Self-employed workers	189	6.3
In agriculture, forestry, fishing and hunting	10	0.3
Unpaid family workers	21	0.7
<b>Total employed civilian population 16 and over</b>	<b>3,016</b>	<b>100</b>

*Source: U.S. Census Bureau, 2000*

**Unemployment**

Chocolay Township compares favorably with other communities in Marquette County and the Upper Peninsula in its level of unemployment. Unemployment was only 150 persons, or 4.4% of the workforce in Chocolay Township in 2004. See Table 2-3. Both Marquette City and Township were nearly the same with an unemployment rate of 4.3% and adjacent Sands Township had an unemployment rate of 4.4% in 2004. Marquette County unemployment was at 5.7% in 2004 and the unemployment rate for the Upper Peninsula was 7% in 2004. Nearby Skandia Township unemployment was at 10.3% in 2004 and West Branch Township unemployment was at 8.1% in the same period.

Table 2-3  
**Chocolay Township and Neighboring Communities  
 Labor Force, Employment and Unemployment, 2004**

<b>Community</b>	<b>Labor Force</b>	<b>Employment</b>	<b>Unemployment</b>	<b>Unemployment Rate</b>
Chocolay Township	3,175	3,050	150	4.4
Marquette City	11,650	11,075	50	4.3
Marquette Township	1,425	1,350	50	4.3
Sands Township	925	875	50	4.4
Skandia Township	400	375	50	10.3
West Branch Township	675	625	50	8.1
Marquette County	32,950	31,075	1,900	5.7
Upper Peninsula	155,100	144,200	10,800	7

*Source: Michigan Department of Labor and Economic Growth  
 Due to rounding (by MDLEG) to the nearest 25 for communities and 100 for Upper Peninsula, figures in some columns do not always appear to calculate properly.*

**Poverty**

Chocolay Township has very few families below the poverty level. According to the U.S. Census, only 52, or 3% of all families fell below the poverty level in Chocolay Township in 2000. See Table 2-4. This included 40 families with related children under 18 years of age, of which 11 had children under 5 years of age.

While the U.S. Census reported there are only 176 families with a female head of household in Chocolay Township, 35 of those, or 19.9% are below the poverty level. Of these 35 families, 28 had children under 18 years.



Table 2-4  
**Poverty Status of Persons in Chocolay Township**

Poverty Status	Number		Percent Below Poverty Level
	All Income Levels	Below Poverty Level	
<b>Families</b>	1,737	52	3
With related children under 18 years	861	40	4.6
With related children under 5 years	263	11	4.2
Householder worked in 1999	1,459	36	2.5
Full-time, year-round	982	11	1.1
Householder 65 years and over	221	0	0
Family received:			
Supplemental Social Security	79	11	13.9
Social Security Income in 1999	331	0	0
<b>Married-couple families</b>	1,446	12	0.8
With related children under 18 years	645	7	1.1
With related children under 5 years	207	0	0
Householder worked in 1999	1,213	12	1
Full-time, year-round	844	5	0.6
Householder 65 years and over	201	0	0
Family received:			
Supplemental Social Security	35	0	0
Social Security Income in 1999	297	0	0
<b>Families with female householder, no husband present</b>	176	35	19.9
With related children under 18 years	134	28	20.9
With related children under 5 years	24	6	25
Householder worked in 1999	142	24	16.9
Full-time, year-round	74	6	8.1
Householder 65 years and over	10	0	0
Family received:			
Supplemental Social Security	28	11	39.3
Social Security Income in 1999	21	0	0

Source: U.S. Census, 2000

### **SEV of Different Land Use Categories**

It is apparent from the State Equalized Value (SEV) of real property in Chocoley Township that the primary value is in residential property. Residential property accounted for nearly 92% of all real property value in the Township in 2003. See Table 2-5. While the value of residential property increased from \$74,093,216 in 1995 to \$135,365,100 in 2003, the residential category remained in about the same relative percentage of total value, with residential at 90.4% in 1995. Agricultural SEV was \$1,348,600 in 2003, or 0.9% of total real property value, and commercial SEV was \$10,989,500, or 7.4% of total real property in 2003. There was no property classified as industrial in either 1995 or 2003. The large percentage of residential property indicates that nearly all of the tax burden for public services falls on home owners. Residential property can be highly demanding of public services, compared to other uses such as agriculture, commercial, and industrial.

Photo 2-2

### **The Primary Source of Tax Base in Chocoley Township is Residential Land Use**



Total real property increased from \$81,991,114 in 1995 to \$147,703,200 in 2003, from which the Township received approximately \$505,395 in tax payments.

Table 2-5  
**Chocolay Township SEV, 1995 and 2003**

	<b>Agriculture</b>	<b>% of Total</b>	<b>Residential</b>	<b>% of Total</b>
<b>1995</b>				
Chocolay Township	\$450,000	0.5%	\$74,093,216	90.4%

<b>2003</b>				
Chocolay Township	\$1,348,600	0.9%	\$135,365,100	91.6%

	<b>Commercial</b>	<b>% of Total</b>	<b>Industrial</b>	<b>% of Total</b>	<b>Total Real Property</b>
<b>1995</b>					
Chocolay Township	\$7,447,898	9.1%	\$0	0.0%	\$81,991,114

<b>2003</b>					
Chocolay Township	\$10,989,500	7.4%	\$0	0.0%	\$147,703,200

According to the 2004 Township property tax records there are 2,384 residentially assessed buildings in the Township, as well as 71 agriculture buildings and 69 commercial or industrial buildings. This illustrates the overall dominance of residential uses, and the dearth of other land uses.

### **ISSUES AND PROBLEMS**

Area employment is based primarily on the following four industries: government, wholesale-retail trade, services, and mining.

Township employment is primarily based on jobs located outside of the Township.

Past development surveys indicated citizens would welcome more retail and service businesses in the Township. Expanded job centers in the northwestern part of the Township, primarily along the US-41/M-28 corridor were desired by participants of the Visioning Town Meeting held on August 5, 2004 and this desire is reflected in the vision statement in Chapter 10. However, the quiet, rural, low-intensity lifestyle was also important and residents did not want that lifestyle destroyed at the expense of jobs—many of which are available outside, but close to the Township.

Photo 2-3  
**Residents Desire an Expanded Job Center in the  
Northwestern Part of the Township**



A balance of residential, commercial and industrial uses can provide the tax revenue to fund adequate public services, as long as the pattern of those uses does not drive the cost of the services too high to afford. Citizen sentiment appears to favor a balance of land uses that tips more toward residential. This will continue to place more of the burden for paying for public services on the individual residential owner, with the effect of limiting the extent and variety of those public services unless citizens are willing to pay for them. This Plan addresses all land uses and seeks to provide opportunities for a more diversified tax base. However, nonresidential development is proposed to be limited to a small area of the Township and adjacent to existing nonresidential development in most cases.

## Chapter 3 HOUSING

### INTRODUCTION

This chapter describes the type, age, value and other characteristics associated with housing in Chocolay Township as of the 2000 Census. This information is helpful for the Township Planning Commission and Township Board in understanding the condition of existing housing and the need for future housing and services for residents.

### Housing Types

According to the 2000 Census, there were 2,643 total housing units in Chocolay Township in 2000. See Table 3-1. Of the total, 2,448, or 92.6% were year-around homes, while 195, or 7.4% were seasonal. This is an increase of year-around homes and a decrease of the percentage of seasonal homes from previous years. According to the 1989 Chocolay Township Comprehensive Plan, 240 or 11% of housing units were seasonal in 1980 and 23.5% were seasonal in 1970.

Table 3-1  
**Housing Characteristics, 2000**

Unit Type	Number	Percentage
Total housing units	2,643	100.0%
Year-around	2,448	92.6%
Seasonal	195	7.4%
Owner-occupied	1,974	84.9%
Renter-occupied	350	15.1%
Vacant	319	12.1%
Vacant	319	100.0%
Vacant for rent	45	14.1%
Vacant for sale	7	2.2%
Vacant, rented or sold	14	4.4%
Other vacant	58	16.6%
Seasonal	195	55.7%

*Source: U.S. Census Bureau. Note: While the number of total housing units reflects the correction memo of the U.S. Census in 2003, it is unclear if this detailed information also reflects the correction involving the prison population.*

Housing in Chocolay Township was about 85% owner-occupied in 2000, with about 15% renter-occupied. Another 12% were vacant. Of the vacant houses, over half (55.7%) were seasonal, 14% for rent and only about 2% for sale. Over 4% were vacant but committed for occupancy through rental or sale. Nearly 17% were categorized as “Other vacant.”

Photo 3-1  
Housing in Harvey



The mix of housing types in Chocolay Township suggests that the Township has become more of a bedroom community for Marquette City and less of a vacation destination. It has a high percentage of owner-occupied homes and relatively few rental units.

Nearly 85% of all housing was single-family, detached, with 1,975 units in 2000. See Table 3-2. Mobile homes were a distant second in numbers, with 163, or 7% of housing in 2000. Of the mobile homes, a majority, 126, were occupied by their owners, while 37 were occupied by renters. There were 61 duplex housing units in 2000, or 2.6%, and only 8 attached, single-family units. There were 124 multi-family units of varying numbers of units per building, or 5.4% of all housing units. While owners occupied some multiple-family housing units, only renters occupied units where there were 5 or more to a building.

Table 3-2  
**Types of Housing in Chocoday Township, 2000**

<b>Classification</b>	<b>Owner-occupied</b>	<b>Renter-occupied</b>	<b>Total</b>	<b>Percent of Total</b>
Single-family detached	1,823	152	1,975	84.7%
Single-family, attached	8	0	8	0.3%
Duplex	6	55	61	2.6%
3 or 4 units	7	48	55	2.4%
5 to 9 units	0	7	7	0.3%
10 to 19 units	0	23	23	1.0%
20 to 49 units	0	39	39	1.7%
Mobile Home	126	37	163	7.0%
<b>Total</b>	<b>1,970</b>	<b>361</b>	<b>2,331</b>	<b>100.0%</b>

*Source: U.S. Census*

Chocoday Township is a fairly stable community, with nearly 70% of owner-occupants moving into their homes between 6 and 30 years prior to the 2000 Census. See Table 3-3. Those owners gaining occupancy within the five years prior to the 2000 Census accounted for 27%. Renters were far more mobile, with nearly 40% gaining occupancy in the one year prior to the 2000 Census and a total of about 71% having moved in within five years of the 2000 Census. It is typical that renters exhibit greater mobility. A surprising percentage of renters, nearly 29%, lived in their rented units for more than 6 years.

Photo 3-2  
**Manufactured Home, Beaver Grove**



Table 3-3  
**Longevity of Occupancy of Housing in Chocoday Township, 2000**

	<b>Gained occupancy during last year</b>	<b>Gained occupancy during 1-5 years</b>	<b>Gained occupancy 6-30 years ago</b>	<b>Gained occupancy more than 30 years ago</b>
Owner-occupied	11.0%	16.0%	69.8%	8.8%
Renter-occupied	39.3%	32.1%	28.6%	0.0%

Source: U.S. Census Bureau

**Age of Housing**

Home building in Chocoday Township in recent years has focused on single-family homes, owned by their occupants. The 2000 Census revealed that 345 housing units, or 17.5% of all owner-occupied housing in the Township were built in the previous ten years. See Table 3-4. The housing stock is fairly recent, suggesting it is in good condition, with 67.2% of owner-occupied homes only 30 years old or less in 2000. The median year of owner-occupied homes was 1975.

Renter-occupied homes were slightly older than owner-occupied units, with a median age of 1973. See Table 3-4. Nearly one-third of rental occupied homes were between 20 and 30 years old as of the 2000 Census. While only about 6% of owner-occupied homes date from before 1940, almost 11% of renter-occupied homes were of that vintage. There were only 35 occupied rental units less than ten years old in 2000.

Of vacant homes in Chocoday Township in 2000, a large percentage were older homes. Nearly one quarter of vacant homes were built between 1940 and 1949, and another 16.7% of vacant homes were built before 1940. See Table 3-4. This may be a sign that many older homes need to be repaired or brought to present code in order to be occupied. A portion of these may also be seasonal units, which may be older cottages or cabins, which also may need to be upgraded if used for year-around residency.

The 1989 Comprehensive Plan reported progress in upgrading homes, with 98% of homes having indoor plumbing by 1980. According to the 2000 Census, 100% of homes in Chocoday Township had indoor plumbing.



Table 3-4  
**Age of Housing Units in Chocolay Township, 2000**

Year Structure Built	Number	Percent
<b>Owner-occupied</b>		
1990-March 2000	345	17.5%
1980-1989	250	12.7%
1970-1979	729	37.0%
1969-1969	273	13.9%
1950-1959	164	8.3%
1940-1949	100	5.1%
1939 or earlier	109	5.5%

Median year built = 1975

<b>Renter-occupied</b>		
1990-March 2000	35	9.7%
1980-1989	57	15.8%
1970-1979	118	32.7%
1969-1969	59	16.3%
1950-1959	28	7.8%
1940-1949	26	7.2%
1939 or earlier	38	10.5%

Median year built = 1973

<b>Vacant Housing Units</b>		
1990-March 2000	34	11.6%
1980-1989	17	5.8%
1970-1979	65	22.2%
1969-1969	28	9.6%
1950-1959	28	9.6%
1940-1949	72	24.6%
1939 or earlier	49	16.7%

*No median year built reported in 2000 for vacant homes  
Source: U.S. Census Bureau*

### **Housing Values**

Housing in Chocolay Township is fairly affordable. Over 70% of renters paid less than \$500 per month, with half paying between \$250 and \$499 per month, in 2000. See Table 3-5. Only about 12% paid between \$500 and \$749 per month and about 10% paid \$750 or more per month. Median rent was \$357 in 2000.

Just over half of the owner-occupied homes in Chocolay Township were valued at less than \$100,000 in 2000. See Table 3-6. About one quarter of owner-occupied homes were valued between \$100,000 and \$149,999 in 2000. Another 20% of owner-occupied homes were valued at between \$150,000 and \$749,999 in 2000. According to the 2000

Census, there were no homes valued at \$750,000 or more. The median value in 2000 was \$97,000.

Table 3-5  
**Average Rent in Chocolay Township, 2000**

Rent per month	Number	Percentage
Under \$250	98	20.4%
\$250-\$499	180	50.4%
\$500-\$749	44	12.3%
\$750-\$999	10	2.8%
\$1,000 or more	25	7.0%
No cash rent		

*Median rent = \$357*  
*Source: U.S. Census Bureau*

Table 3-6  
**Owner-occupied Housing Value in Chocolay Township, 2000**

	Number	Percentage
Under \$50,000	98	6.4%
\$50,000-\$99,999	768	48.9%
\$100,000-\$149,999	387	24.7%
\$150,000-\$199,999	191	12.2%
\$200,000-\$249,999	66	4.2%
\$250,000-\$299,999	18	1.1%
\$300,000-\$499,999	33	2.1%
\$500,000-\$749,999	6	0.4%
\$750,000 and over	0	0.0%

*Median value = \$97,000*  
*Source: U.S. Census Bureau*

### **Size of Families Occupying Chocolay Township Housing**

It appears that two person and larger sized families were the primary occupants of owner-occupied housing, while singles were the primary occupants of rental housing in 2000. Couples occupied 37.6% of owner occupied housing and families of 3 or more persons occupied 46.2% of owner-occupied housing in 2000. See Table 3-7. Nearly half of renters were singles, while about one quarter were couples and one quarter were families of 3 or more persons in 2000.

Table 3-7  
**Occupied Housing Family Size in Chocolay Township, 2000**

	Number	Percent
<b>Owner-occupied</b>		
1-person household	319	16.2%
2-person household	742	37.6%
3 or more person household	913	46.2%
<b>Renter-occupied</b>		
1-person household	168	48.0%
2-person household	86	24.6%
3 or more person household	96	27.4%

*Source: U.S. Census Bureau*

**Housing in the Future**

Chocolay Township will need more housing in the future, and a mix of housing types, but a portion of that housing may need to serve smaller families. Population projections for Chocolay Township suggest that 455 more people will reside in the Township in 2020 than did in 2000. This is a similar rise in population compared to the 20 years between 1980 and 2000, when the population rose by 410 persons. In the same period of 1980 to 2000, the number of housing units increased by 387. Ninety-two of the homes built in that 20-year period were renter-occupied, of which many may have been multi-family. Fifty-one of the housing units built between 1980 and 2000 were vacant in 2000. A portion of those may have been seasonal homes.

Photo 3-3  
**Condominium Housing at Chocolay Downs**



The Township will need to look at the level of demand for different types of housing in the future. Following national trends, there may be a greater need for homes for more

singles, young couples without children, empty nester couples and families with a single parent than in the past. This suggests smaller homes, attached town homes, and rental apartments will be important in the housing mix. The Township can provide for more multi-family housing close to its sewer system. However, the rural setting and Lake Superior shoreline will also attract people interested in buying or building larger homes for their families or as show pieces. There has also been an apparent pattern of movement of families from Marquette City into more rural, but close areas, such as Chocolay Township and Marquette Township. Generally, these are families with small children that move from city to country, and occupy detached, single family homes in mobile home parks, subdivisions, or on large lots in the country. Thus, the Township should provide for a wide range of housing types and densities to meet the needs of its population.

Photo 3-4  
**Chocolay Township Farmstead**



## Chapter 4 NATURAL FEATURES

### INTRODUCTION

The physical elements that make up Chocolay Township include its natural features and natural resources. These include its surface and bedrock geology, soil characteristics, mineral resources, topography, wetlands, groundwater, forests, and its other unique land and water formations. Analysis of this is basic to planning because each of these features yield both opportunities and constraints for development. Soil and bedrock conditions influence water supply and wastewater drainage. Steep topography can pose developmental problems, but also serve as scenic features. The presence of valuable mineral resources can positively affect the local economy, but extraction of those minerals can disrupt communities. While wetlands provide constraints to development, they provide the unique ecological setting for wildlife, help manage stormwater and serve as scenery. Many natural features are interdependent, and damage to the natural features of one part of the Township can negatively affect natural features in another area.

Photo 4-1  
**Chocolay River**



All these factors are important and in planning for a community, natural features and resources cannot be ignored. This chapter provides an analysis and inventory of Chocolay Township's natural resources. It identifies natural features, such as geology, topography, water, etc., and focuses on those characteristics which offer themselves as determinants for development. These factors, coupled with the man-made features to be identified in the following chapter, will provide a framework wherein public policies can be formulated to produce a better environment. (See Chapters 8 and 9.)

## **NATURAL FEATURES**

### **Bedrock Geology**

This is the solid rock layer usually found below the soils and surface geology. Its formation occurred during the earliest periods of the earth's history. Bedrock can be found hundreds of feet below the surface or protruding out of the soil as rock bluffs. In either case, the bedrock can help or hinder development.

The occurrence of bedrock at the surface can be a problem in constructing a septic tank drain field or public sewer line. This factor has been considered in the soils section of this chapter.

The major importance of bedrock as a resource in this investigation is its capacity to supply drinking water. The quantity and quality of a well water varies with the type of bedrock the water is retrieved from, and the layers of material through which the water has passed before reaching the bedrock. For each type of bedrock in Chocolay Township, its location and water capacity is discussed. This data was obtained from the Central Upper Peninsula Regional Water and Wastewater Plan approved September, 1971.

### ***Jacobsville Sandstone***

This sandstone occurs throughout Chocolay Township. The only area not having this bedrock is the extreme southwest corner. It is the only important source of water to wells in this area. Although this sandstone is over 1,000 feet thick, most wells tap water at less than 100 feet. As with all bedrock, permeability decreases with depth due to the tremendous pressure that squeezes together the joints and fractures. Water from Jacobsville Sandstone generally is moderately hard to hard and locally it contains objectionable amounts of iron.

### ***Cambrian Sandstones***

This is the only other bedrock formation in the Township. It occurs in a triangular shaped area in the southwest corner of the Township. If a line was drawn from County Road 480 where it leaves the Township at the west boundary and where County Road 545 leaves the Township on the south, the line would define the corner where Cambrian Sandstone is located.

Most wells drilled into this bedrock will yield enough water for domestic purposes. Large diameter wells drilled over 50 feet into bedrock may yield more than 100 gallons per minute. Some wells in bedrock will fail because of impermeable shale or crystalline igneous and metamorphic rocks encountered at a shallow depth. Water quality is good except for moderate hardness.

### **Surface Geology**

This material usually occurs between the soil at the earth's surface and the bedrock formations below surface. It is not as fine textured as the soil, but is a granular material far different from the bedrock. The different deposits of surface geology are categorized by names that relate to the particular process of formation and also variances in material content. For example, glacial deposits occurred in three main ways: material deposited directly from the ice with little or no transportation by moving water are called tills; materials deposited in and by moving streams of water are called outwash; and those deposited in glacial lakes are called lake deposits. More specifically, surface geology categorizes the deposits by the individual or combined actions of wind, water, and

glaciers that are responsible for their formation.

Each category of surface geology that occurs in Chocolay Township will be described as to location and water capacities. Map 4-1, shows the areas of Chocolay Township containing the different surface geology types.

***Bedrock***

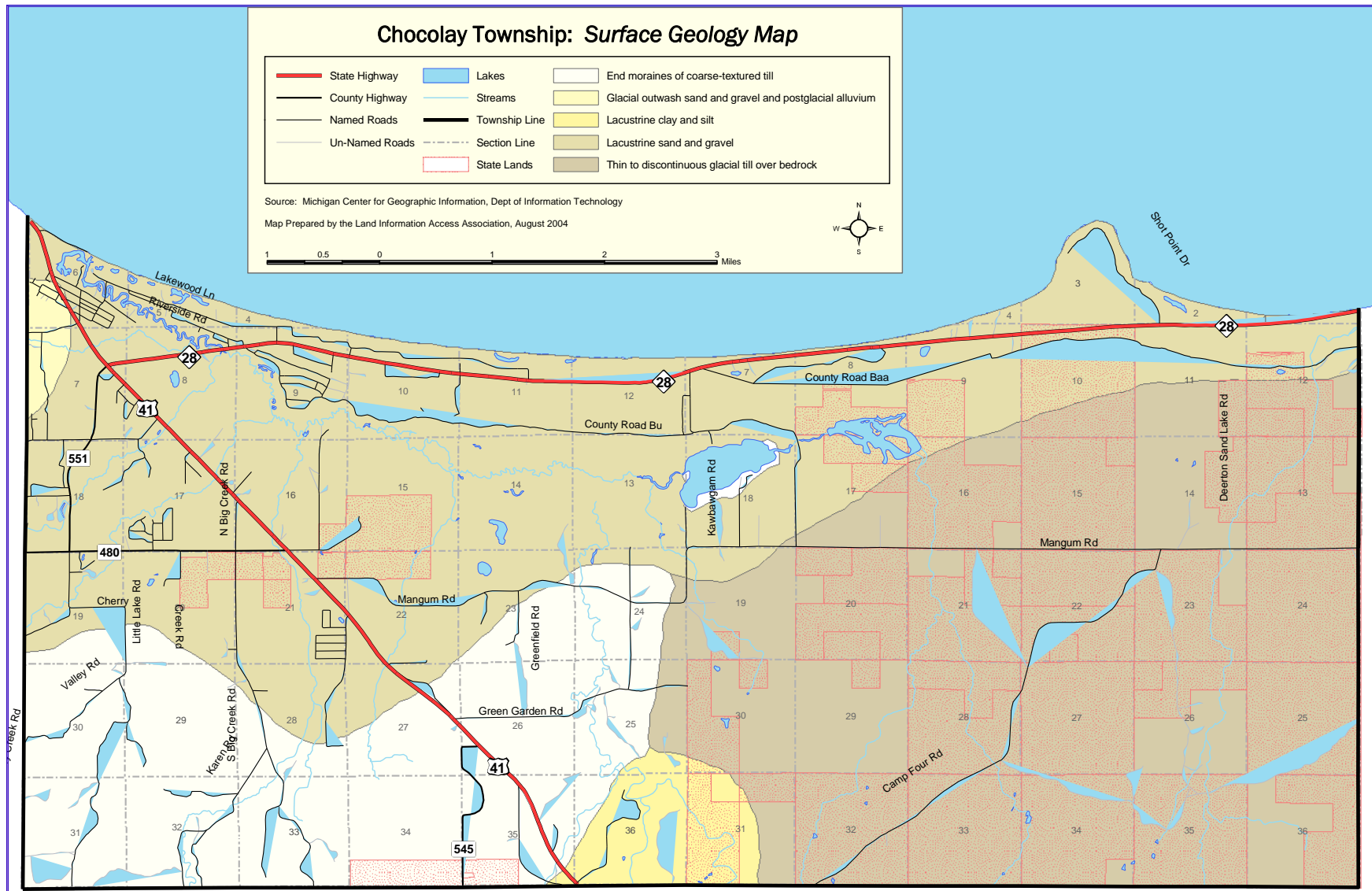
These are areas which have thin or nonexistent layers of glacial deposits over the bedrock formations. Therefore, the bedrock formation is at or near the surface. In Chocolay Township, this area of surface geology occurs along the east border as shown on Map 4-1.

Photo 4-2  
**Rocky Section of Lake Superior Shore**





## Map 4-1 Surface Geology in Chocolay Township





### **Glacial Lake Plain**

This material is usually composed of sand, but sometimes contains silt or clay. Deposits are generally well sorted and well to moderately permeable. Moderate quantities of water are generally obtainable. The amount of silt or clay in the lake plain deposit determines permeability and water yield. Concentrations of more than 25 percent silt or clay impede drainage and the effect in most cases is a swamp or marsh.

These deposits are the most predominant of the surface geology features and occur throughout the Township. The locations of these deposits are also shown on Map 4-1.

### **End or Recessional Moraine**

These deposits show where the glaciers stopped their forward progress and began receding. On the surface, these deposits appear as large hills. End or recessional moraines are composed predominantly of sands and gravel till, with small areas of sand and gravel outwash. Locally, till is clayey or silty. Permeability varies greatly, being low in clayey till and high in outwash areas. Moraines are a source of domestic water supply, and in some areas may yield moderate supplies of water. Morainal deposits can reach a depth of over 300 feet. On the surface they appear as ridges which are steep and rugged and were not exposed to wave action; elsewhere they are somewhat subdued. As shown on the surface geology map, the deposits are found in the southwest corner of the Township.

### **Glacial Till - Bedrock**

These areas are made up of bedrock with occurrences of glacial till in scattered locations. The bedrock in this area is of Precambrian origin and, like the glacial till, is a poor source of groundwater. The till is thin and bedrock appears at the surface wherever the glacial till is nonexistent. This deposit just touches the northwest corner in the Harvey area of Chocolay Township.

### **Soils**

Soil occurs at the earth's surface and has a finer texture than the bedrock or surface geology previously described. Soil is comprised of material derived from bedrock by the action of glaciers, waves, flowing water, freeze-thaw cycles and wind. It also contains organic material derived from plants and animals, plus micro-organisms, chemical precipitates, air and water.

Glaciers were the primary soil-forming force in the Great Lakes region. As these huge sheets of ice slowly forced their way over the solid rock, a grinding action took place between the ice and rock. Material was shaved off the rock and trapped under the ice as it moved forward. While the glaciers moved, these trapped materials were ground finer and finer, thus forming the soil that is found here today. The glaciers traveled over various types of rock and added each new type to the trapped material carried with it. This caused a mixing of rock types. As the rock material changed, so did the type of soil formed by the glacier. This is why there are so many different soil types.

The composition and texture of the soil was dependent on the glacier's grinding action and the underlying rock material present and to the subsequent accumulation of organic matter. However, how and where the resulting soil was deposited also contributed to its final character. The primary factor is the presence of water. The amount of surface water present, depth to water table, amount of rainfall, and size of watershed all can have a great affect on the characteristics of soils.

By identifying soil characteristics, the types of development that each can support may be cataloged. Ignoring the character of the material to be built upon can prove a mistake. For example, a soil with seasonal high water table can seem suitable for building during part of the year, but be extremely troublesome during spring or periods of continued rain. Costly engineering and building methods can be used to overcome some soil limitations, but providing public roads and utilities in such areas can cause all taxpayers to share the financial burden. Some of the factors to consider about soil types are the moisture content needed for agriculture, weight supporting capacity for structures, permeability levels affecting drainage, cohesiveness for erosion resistance, and others.

With the cooperation of the Soil Conservation Service (now Natural Resource Conservation Service), soil types in Chocolay Township were identified and categorized as to their suitability for different potential uses. Appendix B includes a brief description of each major soil series found in Chocolay Township.

Soils can be grouped according to their suitability for different uses within the Township. Two major uses are identified for study. These are urban uses and resource production. Resource production refers to farming activities and forest activities. The urban uses were rated as to their suitability for residential development without public sewer, residential development with public sewer, and those areas not suitable for any urban development. Tables 4-1 and 4-2 indicate the suitability of each soil series for the uses explained above. Tables 4-3 and 4-4 indicate prime farmland and hydric soils, respectively.

Detailed soils maps are available from Chocolay Township and eventually from the Natural Resource Conservation Service, Marquette Service Center, 1030 Wright St., Marquette, MI 49855-1834, (906) 226-9460, (906) 228-4484 fax, ([www.nrcs.usda.gov](http://www.nrcs.usda.gov)). Whenever a specific parcel is in question, detailed data for that piece of land should be obtained from the Natural Resource Conservation Service.

The information is useful to the Township as an indicator of the best future development area for the Township. Such development decisions will include considerations of private development and related public improvements. Based on these soil ratings, the Township can encourage future growth in the appropriate locations through placing their public improvements accordingly and through the zoning ordinance.

Table 4-1  
**Soil Suitability for Urban Uses in Chocolay Township**

Suitable Uses	Soil Series Abbreviations
Suitable for all urban uses	CrA, DkB, KaB, KeB, RoB, RuB, SeB
Suitable for urban uses if public sewer available	AuA, BhB, BrA, DmB, DoA, DsB, KbA, KmA, MuB, OcB, SkA, WaA, YaB, YsA
Severe limitations for all urban uses	Ad, Bu, BwA, Ck, Cm, Da, Dt, Du, Ga, Gw, InA, Kp, Kr, OnB, Op, Ts

*Source: Natural Resource Conservation Service*

Table 4-2  
**Soil Suitability for Resource Production Uses in Chocolay Township**

Suitable Uses	Soil Series Abbreviations
Suitable for farming and forests	AuA, BhB, BrA, CrA, DmB, KaB, KbA, KeB, KmA, MuB, OcB, OnB, RoB, Seb, SkA, WaA, YaB, YsA
Suitable for forests	DkB, DoA, Ga, RuB
Severe limitations for all resource production uses	Ad, Bu, BwA, Ck, Cm, Da, DsB, Dt, Da, Gw, ImA, Kp, Kr, Op, Ts

*Source: Natural Resource Conservation Service*

Table 4-3  
**Prime Farmland Soils in Chocolay Township**

Prime Farmland Soil Key Numbers (to be used with soils map)	Soil Series
117b	Fence Very Fine Sandy Loam, 1 To 6 Percent Slopes
126b	Sundog Silt Loam, 1 To 6 Percent Slopes
34b	Onaway Fine Sandy Loam, 1 To 6 Percent Slopes
72b	Emmet Fine Sandy Loam, 1 To 6 Percent Slopes
86b	Mashek Fine Sandy Loam, 0 To 4 Percent Slopes
90b	Emmet-Escanaba Complex, 1 To 6 Percent Slopes
These are Prime Farmland if Drained	
136a	Minocqua-Channing Complex, 0 To 3 Percent Slopes
187b	Reade Silt Loam, 0 To 4 Percent Slopes
198b	Shoepac-Reade Silt Loams, 1 To 4 Percent Slopes
200a	Charlevoix-Ensley Complex, 0 To 3 Percent Slopes
32a	Charlevoix Silt Loam, 0 To 3 Percent Slopes
42	Minocqua Muck
85a	Solona Fine Sandy Loam, 0 To 3 Percent Slopes
89b	Emmet-Solona Fine Sandy Loams, 0 To 6 Percent Slopes

*Source: Natural Resource Conservation Service*

Table 4-4  
**Hydric Soils in Chocolay Township**

Hydric Soil Key Number (for use with soils map)	Soil Series
18	Kinross Muck
19	Deford Muck
27	Gay Muck, Stony
42	Minocqua Muck
46	Jacobsville Muck, Very Stony
48	Burt Muck
57	Carbondale And Tawas Soils
58	Greenwood And Dawson Soils
71b	Ewart-Pelkie-Sturgeon Complex, 0 To 4 Percent Slopes
93	Tawas-Deford Mucks
136a	Minocqua-Channing Complex, 0 To 3 Percent Slopes
166	Skandia Mucky Peat
167	Skandia-Jacobsville Complex, Stony
176b	Greenwood-Croswell Complex, 0 To 6 Percent Slopes

*Source: Natural Resource Conservation Service*

### **Mineral Deposits**

Over the years man has learned more and more about the formation of earth and the properties of the material around him. With this knowledge, new technologies to utilize the material found on earth have evolved. So, over time, the demand for various minerals has increased as the uses are expanded. Because of this demand for certain minerals and their limited supply, it is important to identify occurrences of minerals. Considering the potential for extracting these valuable minerals, development by man that would be in conflict with the extraction process should be discouraged if at all possible. It is for this reason that such deposits are investigated in Chocolay Township.

Valuable mineral deposits can be divided into two categories: 1) ferrous metals and 2) non-ferrous metals. The ferrous metals, particularly iron ore, are prominent in Marquette County. However, current mapping of the Marquette Iron Ore Range by Cleveland Cliffs Iron Ore Company shows the iron formation stopping some distance west of Chocolay Township, So far as ferrous metals are concerned, there are none in Chocolay Township of commercial value.

Non-ferrous metals include gold, silver, lead, zinc, copper, etc. There are also occurrences of these in Marquette County and gold has even been mined west of the City of Marquette. In relation to Chocolay Township, there have been some traces of copper, lead, and zinc found within the Township. These traces have appeared in test borings. The amounts found have been small and as yet are not considered large enough quantities to warrant any mining operations.

However, other low value mineral resources such as sand and gravel do exist throughout the Township. Extraction of these resources are dependent on local needs and location economies. Because the hauling costs can easily exceed the resource's market price, deposits must be located in close proximity to the user area. For this reason, these mineral resources should be preserved as Areas of Particular Concern. See Chapter 9.

## Topography

When the earth was formed, it is obvious that the resulting surface did not end up flat. There are hills, ravines, mountains, flat plains, and a thousand other shapes to the earth. This changing surface can be said to have a changing topography. The vertical distance measured above mean sea level is elevation. These elevation changes in the landscape determine the size and slope of a watershed. Map 4-2 shows the relative elevation of land in the Township.

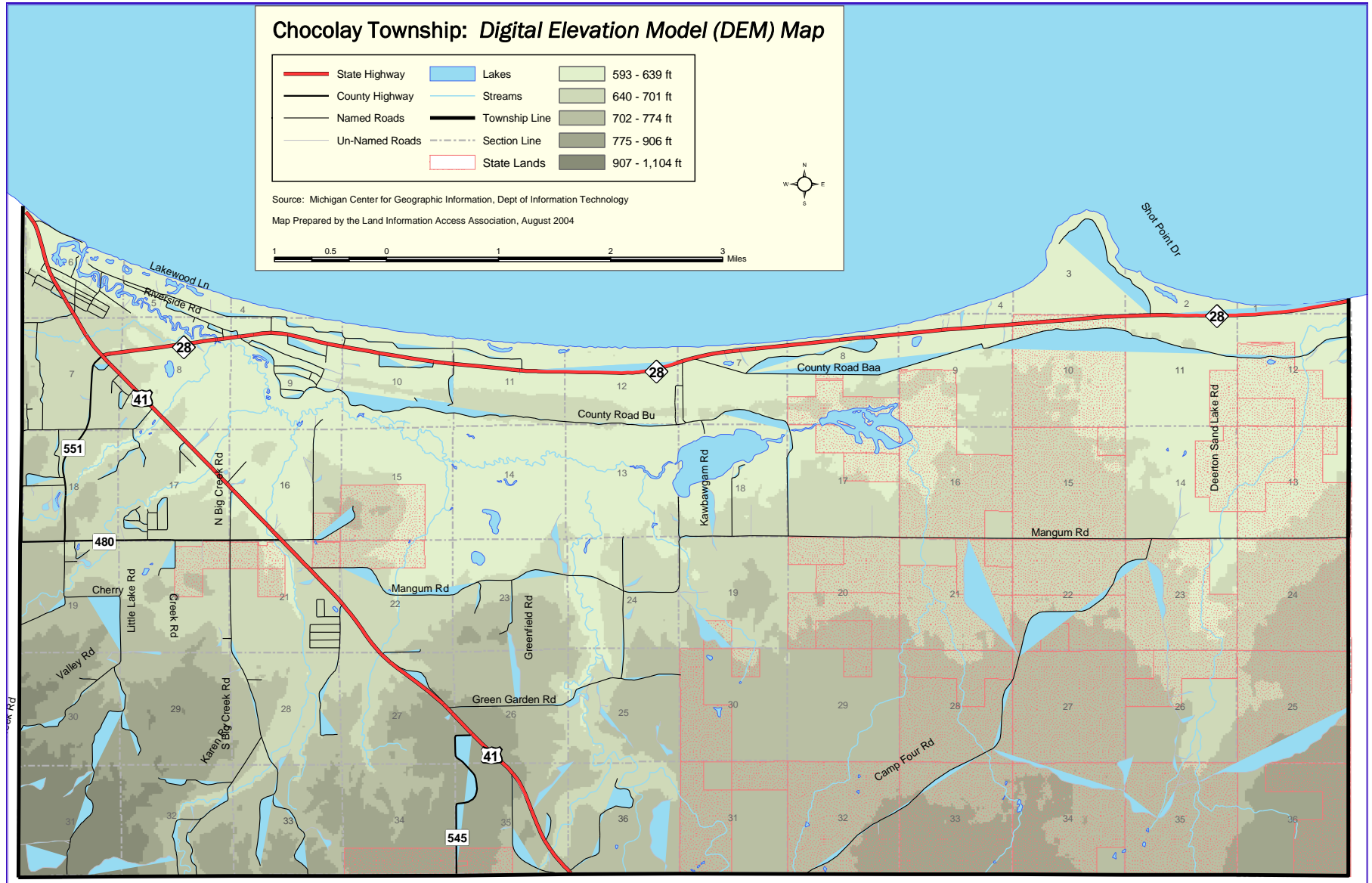
Photo 4-3  
**Hills in the Green Garden Hill Area**



The importance of looking at topography in Chocolay Township centers on identifying the best suited areas of the Township for various uses. The steep topography (10% or greater slopes) is generally thought of as not desirable for most types of development. Construction costs are usually higher, chances of erosion occurring when this soil is disturbed is very high, and if public services are provided, the steep areas can cost more in providing service. For reasons such as these, steep areas are discouraged as prime development areas, especially when the flatter locations are available.

Other significant topographic characteristics are unique geologic formations. In Chocolay Township this would include the sand bluffs along Lake Superior and the protruding bedrock formations. These areas, in addition to the steep-sloped areas, are Areas of Particular Concern. See Chapter 9.

## Map 4-2 Chocolay Township Topography





### **Water Features and Watersheds**

Streams, rivers, lakes, and wetlands all play a valuable role in Chocolay Township's natural features. Chocolay Township residents enjoy the water for domestic use, waste treatment, recreation by bathers, fishermen, boaters, and nature lovers. Water is the habitat for a wide variety of water-bound creatures. These diverse and sometimes conflicting uses can strain water quality.

It is important that all persons in the Township realize that the runoff from their properties and wastes from their septic systems can contain excessive waste and fertilizer nutrients, chemical contaminants, oil, pesticides and sediment. This also applies to persons and businesses in Forsyth, Sands, Skandia and West Branch Townships, as the Chocolay River watershed includes portions of each of those communities, in addition to Chocolay Township. If each individual, municipality, business, or land user will do their share to protect Chocolay Township water features from effluent, then no one will suffer the loss or degradation of these valuable natural features.

The major water features have been marked on Map 4-3. They include the Chocolay River, Sand River, Cedar Creek, Cherry Creek, Big Creek, Kawbawgam Lake, and Lake LeVasseur. Lake Superior is also a water feature associated with Chocolay Township. Lake Superior's water quality is influenced by the quality of the drainage from all of the above named water bodies.

Photo 4-4  
**Flowage between Lake LeVasseur and Lake Kawbawgam**



These water areas and the other lesser streams and ponds are all very important to the life cycle of both humans and animals, and deserve to be Areas of Particular Concern (see Chapter 9).

This brings us to the watersheds within Chocolay Township. Based on the topography of Chocolay Township, the surface and subsurface waters flow together in watersheds or basins. Each stream has a watershed or area of land that drains toward a central point of discharge or collection. Depending on the size of the watershed and amount of water collected within it, a body of water, usually a stream or river, will form to carry this

water off. So all impurities or effluent released into one watershed eventually becomes consolidated in a stream or river serving the watershed. This is how each individual action affects all others downstream in the same watershed. The major watersheds are delineated on Map 4-3, Watersheds and Water Features.

### **Wetlands**

Typical wetland areas include marshes, swamps, fens and bogs. Typical characteristics include the presence of water or wetland vegetation. Wetland areas differ in one major way from glacial lake plain deposits. Because of poor drainage and high water tables, an accumulation of muck and peat overlies the glacial lake plain. Water yields are similar to lake plain yields. These deposits occur in several areas in the east half of Chocoday Township. More specific locations are shown on the surface geology map.

All wetland areas possess unique environmental qualities and should be preserved as Areas of Particular Concern (see Chapter 9). Wetland regulation in Michigan is provided for by the Wetlands Protection Act, Part 303 of the Natural Resources and Environmental Protection Act, PA 451 of 1994, which is administered by the Department of Environmental Quality.

Photo 4-5  
**Wetland Area along Lake Kawbawgam**



### **Floodplains**

Typical floodplain areas occur along the shore of Lake Superior, in wetland areas, and along river and stream watershed courses. Currently, floodplains are regulated in part by Part 31 of the Natural Resources and Environmental Protection Act, PA 451 of 1994, the Floodplain Regulation Act, but also by local building and zoning codes which require special treatment for structures built in a floodplain. In addition, the Township participates in a Federal Flood Insurance Program through the Federal Emergency Management Agency (FEMA) which provides for insurance of structures within a floodplain area or near a floodplain against losses occurring as a result of flooding.

A finalized Floodplain Map was compiled in May of 1987 for the Township. See Map 4-4.



This map identifies floodplain areas based on a 100 year flood possibility. Identification of these areas is important in establishing land use development patterns.

Because the floodplain provides an area of water retention in times of flooding to prevent flooding into other areas, these floodplain areas should be preserved as Areas of Particular Concern (see Chapter 9). Indiscriminate filling of these floodplains can affect other areas by causing damage and loss of property due to flooding, and therefore efforts to manage these floodplains and flood prone properties are essential to all concerned. The Township should ensure that local zoning approval for development in a floodplain does not occur until (and if) DEQ approval has been obtained.

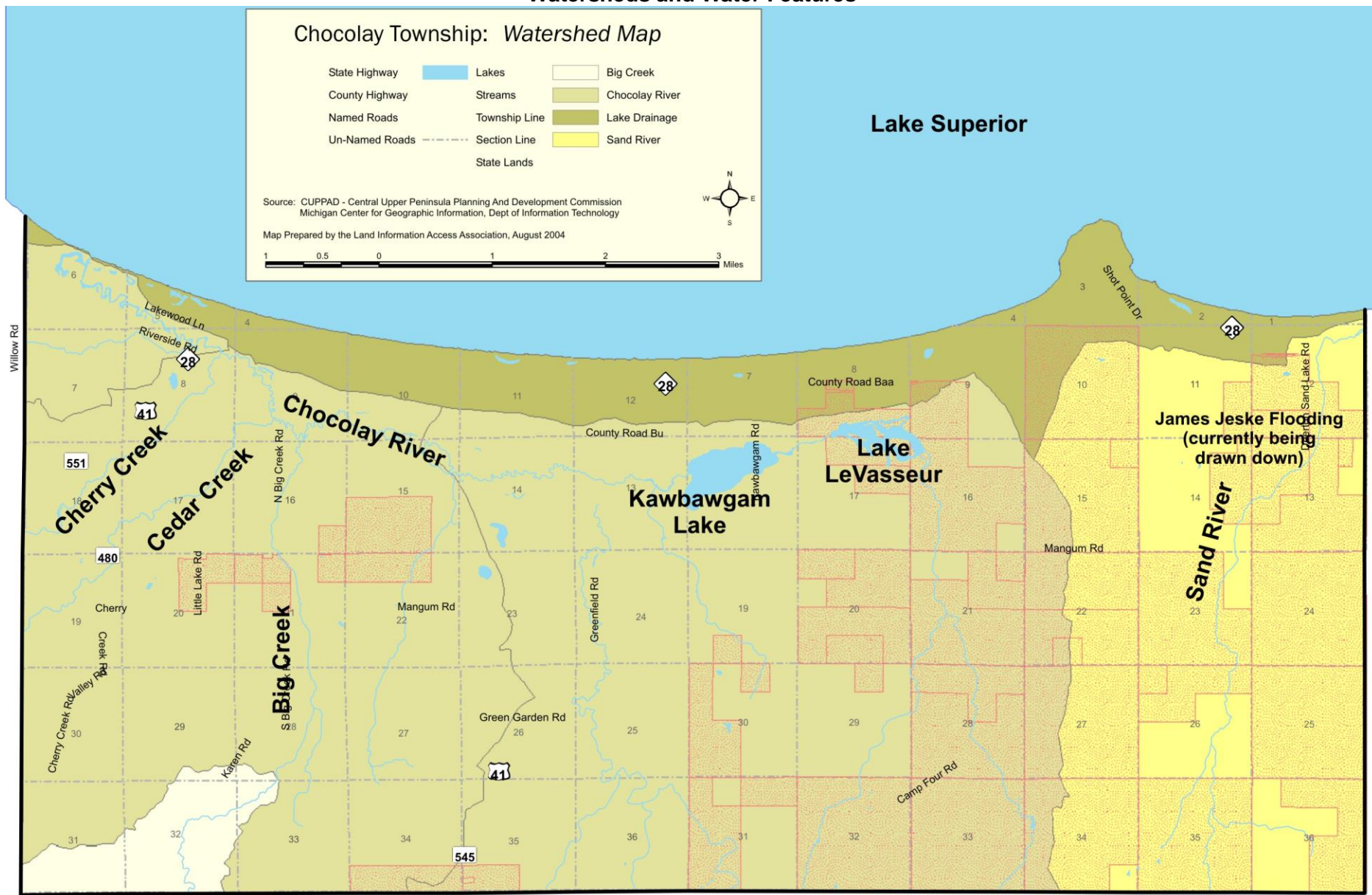
### **Shoreland Features**

Chocolay Township has approximately twelve miles of Lake Superior shoreline. This area of shoreland is looked at specifically because of legislation pertaining to the management of these areas. State consideration and finally legislation of the Great Lakes shoreline was prompted because of the high damage losses to shoreline development over the years. There is a great attraction to living along the shore. However, development constructed during low water periods that encroaches on the shore is endangered during high water years. A large amount of federal, state, and private money is invested each year in shoreland protection structures and reconstruction of damaged developments.

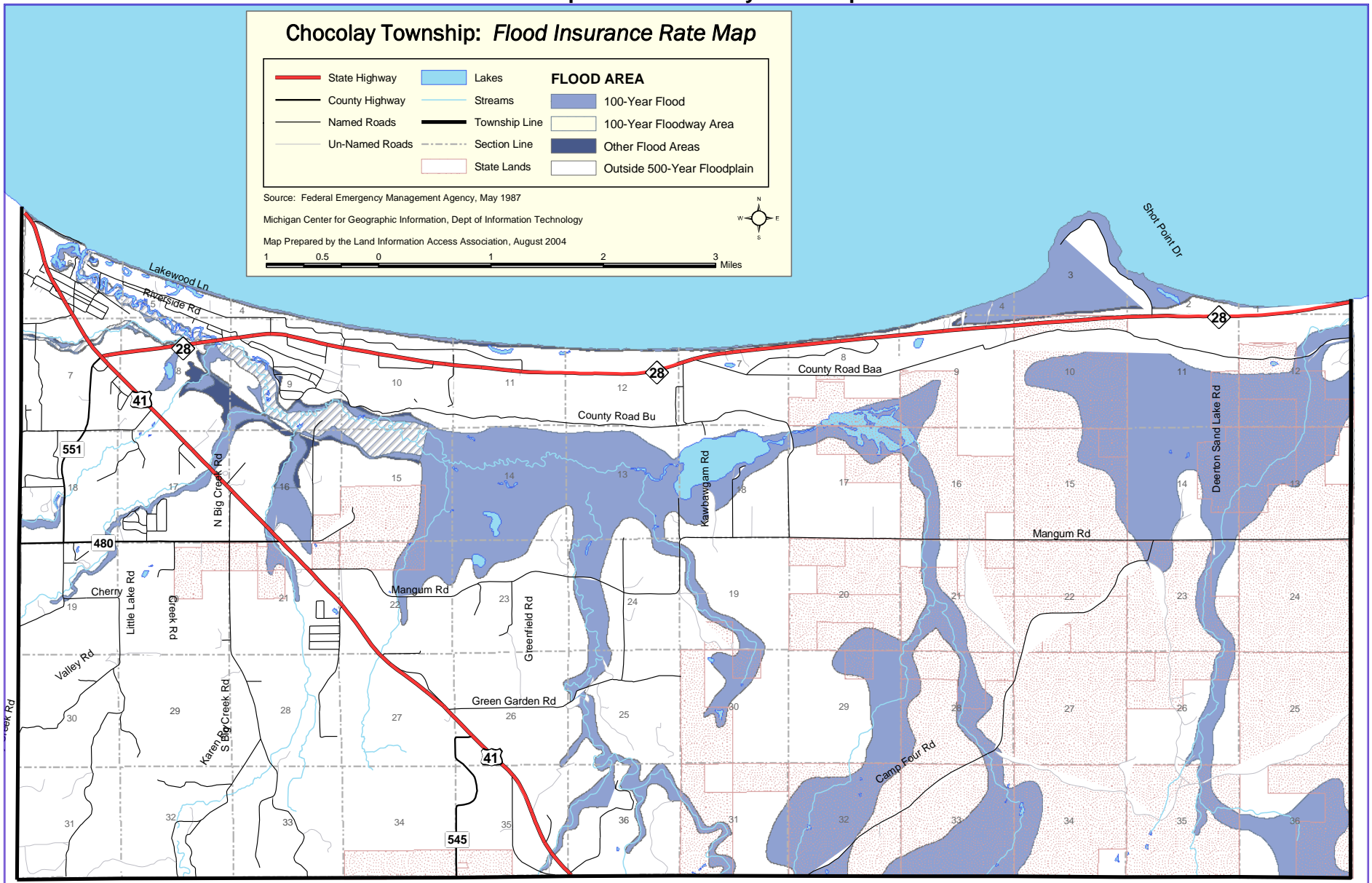
Photo 4-6  
**Lake Superior Shoreline**



Map 4-3  
**Watersheds and Water Features**



## Map 4-4 Floodplains in Chocolay Township



The intent of the 1970 Shorelands Protection and Management Act (now Part 323 of PA 451 of 1994) is to prevent future damage to permanent residential, commercial, and industrial buildings that may be built in the future in high risk erosion areas of the Great Lakes shoreline. The aim is to prevent damage to buildings, including septic systems and tile fields, for a 30-year period after their construction by requiring a setback distance from the bluff.

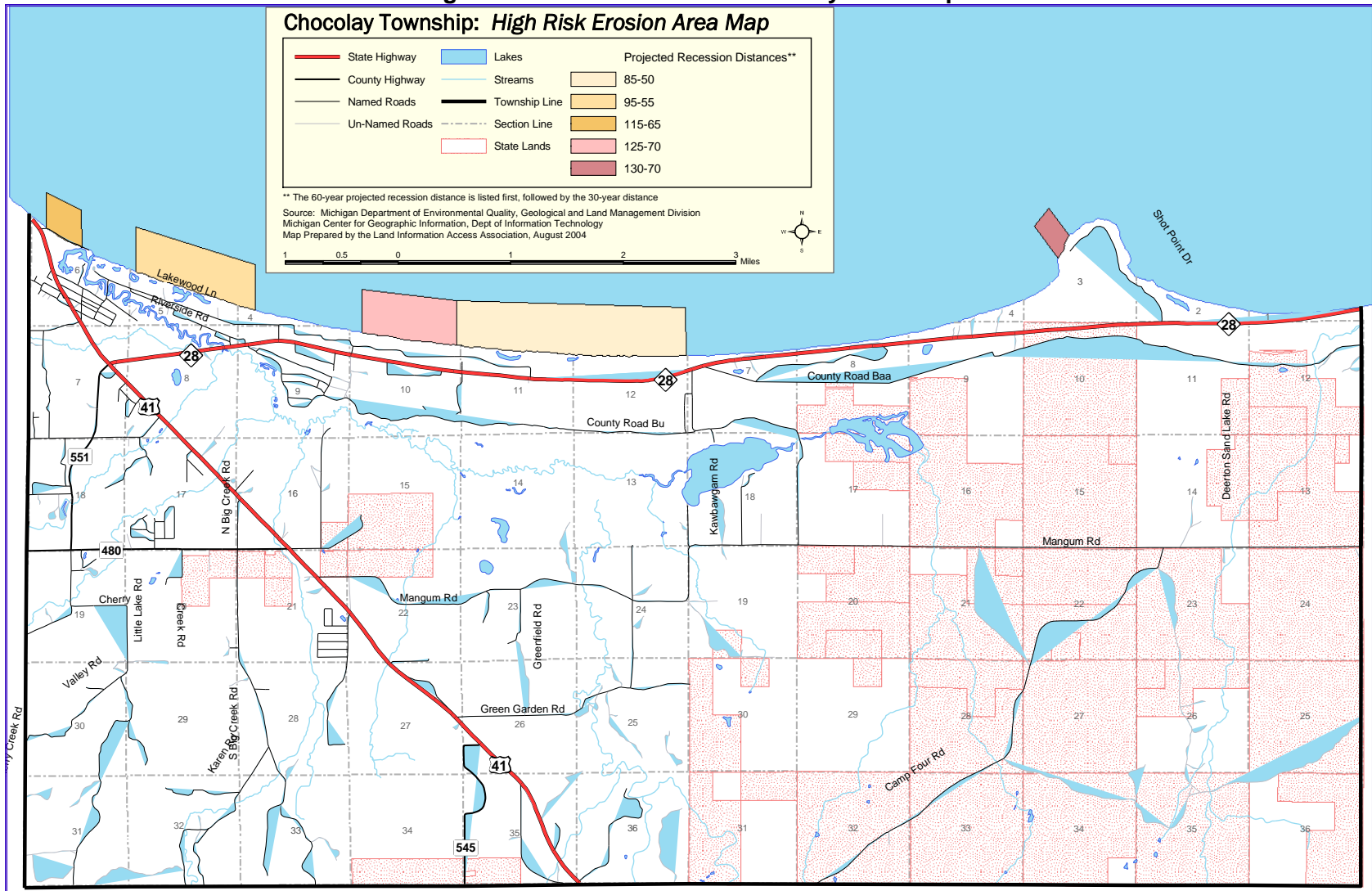
It is not the State's intention to regulate all of the Great Lakes shoreline, only to encourage deeper setbacks at locations determined to be high risk erosion areas. The Act only permits the State to regulate areas designated as high risk erosion areas and only approximately ten percent of Michigan's Great Lakes shoreline fits this designation. It is also important to mention that the Act does not give authority to ban persons from using their property, it just allows a setback requirement.

The Act pertains to undeveloped, and developed property in areas designated as having significant erosion. The Department of Environmental Quality by statute, has instituted a permit procedure for approving building setbacks in all high risk erosion areas.

Chocolay Township has approximately 6.75 miles of shoreline that are designated as high risk erosion under the DEQ guidelines, although the entire shoreline is subject to the natural forces that cause erosion. These high risk erosion areas are shown on Map 4-5. Parts of this shoreline are developed and parts are not. Therefore, the Township should consider classifying these areas as Areas of Particular Concern and ensure that local zoning approval for development in high risk erosion areas does not occur until (and if) DEQ approval has been obtained.



## Map 4-5 High Risk Erosion Areas in Chocolay Township



## **Observations**

As the previous discussion investigated key natural features within the Township, particular issues and problems have been identified. These will be listed to allow the Township to concentrate their effort in these significant areas of concern.

- The majority of soils in the Township are not suitable for urban types of development.
- A large percentage of the Township has soil suitable for forest production.
- Soil characteristics in the Township make conventional septic tank operation only workable in very limited areas of Chocoday.
- Mineral deposits in the Township have only appeared in trace amounts and are not of commercial value.
- There is an area of steep slopes (10% or greater) in the southwest corner of Chocoday Township, and development should be discouraged in this area.
- There are a large amount of wetlands and floodplains in the Township which provide valuable benefits to the community, but greatly limit development potential in those parts of the Township.
- Chocoday Township has 6.75 miles of designated high risk erosion areas.
- Areas of Particular Concern have been identified, and the Township is encouraged to take steps in preserving them (see Chapter 9).

Photo 4-7

### **Marquette State Fish Hatchery Outlet at Cherry Creek**



## Chapter 5 EXISTING LAND USE

### INTRODUCTION

The previous chapter, entitled "Natural Features" was an investigation of the land forms and water features occurring in Chocolay Township. This included all aspects of the township that were naturally occurring and could be altered by human impact.

This chapter looks at current development in the Township. This is done by an inventory of the various land uses within the Township. It shows the areas of the Township that are developing and the types of uses present. Two forms of inventory are examined in this chapter. One is a land use/land cover inventory. It is based on the interpretation of aerial photographs and mapping in a Geographic Information System (GIS). It classifies land into different land uses (how land is used, such as for residential, commercial, industrial or agricultural purposes), or land cover (the type of vegetation on it or the lack of vegetation). The second is a land use by tax class inventory. This looks at how land is classified by assessors, such as for residential, commercial, industrial and agricultural use. This classification system is parcel based does not include such land cover types as wetlands, upland conifers or dunes.

It is important to study land use and land cover, and to the extent possible, change in land use/cover over time, in order to understand how and where land is being developed in the community, where there may be important land resources that should be considered in the planning process, and to better understand the implications of current trends if they continue into the future.

The most current land use inventory was completed in 2004. See Map 5-1 and Table 5-1. It was based on the Michigan Resource Inventory System data that used 1978 aerial photography, and then was updated through a ground-level visual survey.

Photo 5-1  
**Homestead Golf Course is one Example of Many Different Land Uses**



## Map 5-1 Existing Land Use/Cover, 2004

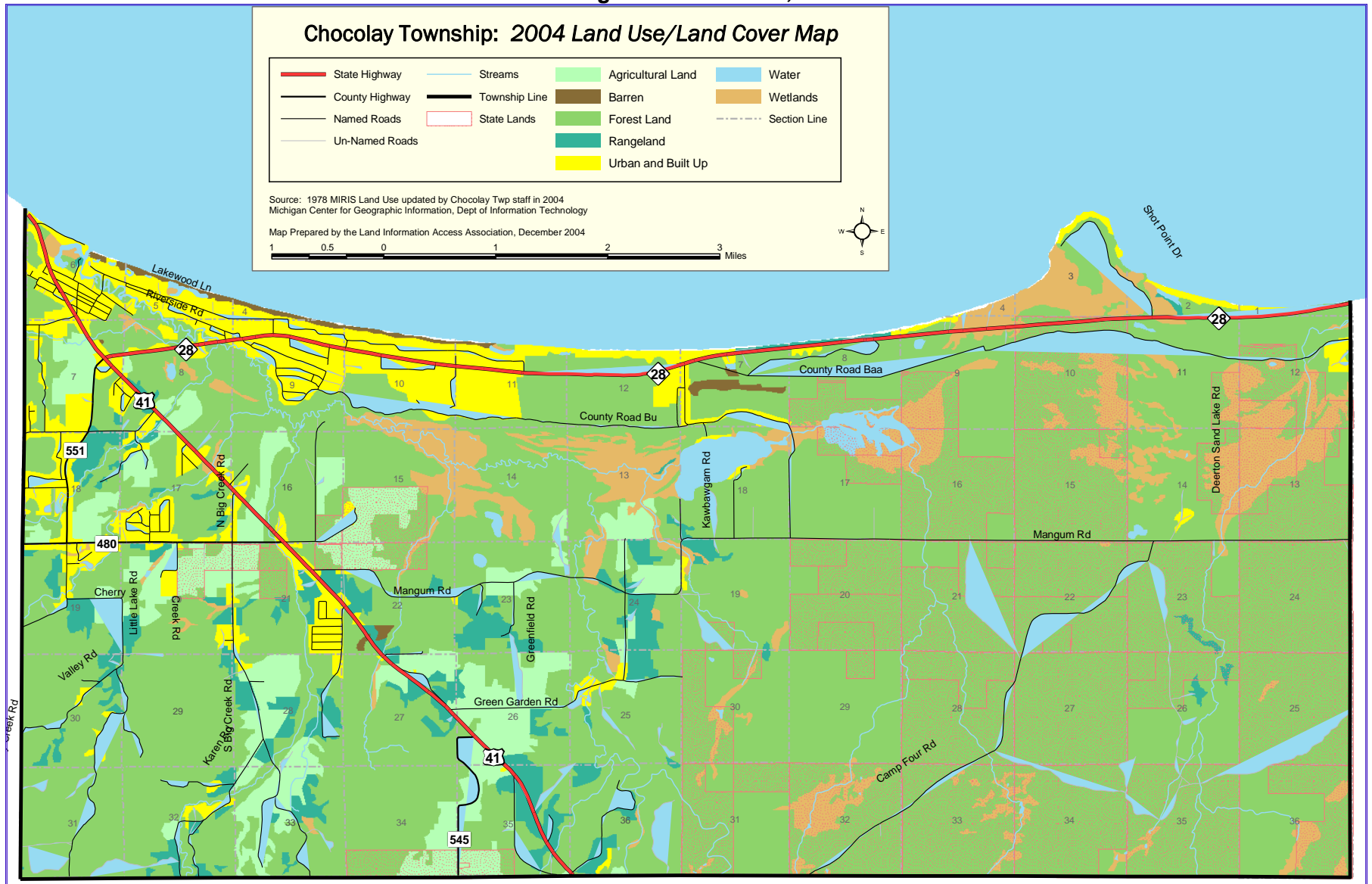




Table 5-1  
**Summary of Land Use/Cover Types for Chocolay Township**

<b>Land Use/Cover Description</b>	<b>1978 Acres</b>	<b>1978 % Total Area</b>	<b>2004 Acres</b>	<b>2004 % Total Area</b>	<b>2010 Acres</b>	<b>2010% Total Area</b>
Urban and Built Up	2,423	6.2%	2,917	7.6%		
Agricultural Land	2,684	6.9%	2,564	6.7%		
Open Land	1,896	4.9%	1,620	4.2%		
Forest Land	28,146	72.5%	27,894	72.5%		
Water	348	0.9%	348	0.9%		
Wetlands	3,186	8.2%	2,987	7.8%		
Barren	148	0.4%	145	0.4%		
<b>Total Acres in Chocolay Township</b>	<b>38,831</b>	<b>100.0%</b>	<b>38,476</b>	<b>100.0%</b>		

*Sources: 1978 Michigan Resource Information System and 2004 visual survey by Chocolay Township*

*Note: The difference in total acres between 1978 and 2004 is due to differences in the location of boundaries in the base maps from the two periods.*

## **LAND USE/LAND COVER IN CHOCOLAY TOWNSHIP**

### **Urban and Built Up**

There were 2,917 acres of urban and built-up land in Chocolay Township in 2004. While single-family residential comprises nearly 90% of all urban and built-up land, Chocolay Township also has multi-family residential, mobile home park, commercial, services, institutional, primary/central business, secondary/neighborhood business, institutional, industrial, transport, communication, utilities, open pit, sand and gravel, and outdoor recreation uses. Most of the urban and built-up lands are in the western part of the Township, along the Lake Superior shoreline or along the US-41 and M-28 corridors.

The most visible change in land use/cover in Chocolay Township occurred with an increase of about 500 acres of urban and built-up land between 1978 and 2004. At the same time there were decreases in the areas of agricultural land, forest land and wetlands. In part these decreases are due to conversion of those land uses to urban uses, and in part they may be due to conversions of agricultural land, forest land, open land and wetlands into other non-urban land cover categories, and in part they may be due to differences in interpretation between the two inventory dates.

### **Agricultural Land**

Agricultural land, totaling over 2,500 acres in Chocolay Township is mostly crop land.

### **Open Land or Rangeland**

This category comprises land that is not developed, forested or used for agriculture. It may at one time have been farmed or cleared of timber, but at the time of the land use inventory, was not actively used for either farming or forestry. This land use/land cover typically has meadows or fields of annual, biennial or perennial herbaceous plants and grasses. It may also have shrub growth and seedling trees.

Photo 5-2  
**Agricultural Land in Chocolay Township**



**Forest Land**

This category comprises the largest percentage of land in Chocolay Township, with nearly 28,000 acres, or almost 73% of the entire Township area. Forest land in Chocolay Township is primarily northern hardwood, which generally contains Maple, Beech and associated other species. Pine and other upland conifers are the next most common species group, followed by Aspen/Birch, lowland hardwoods, lowland conifers and a small area of Christmas tree plantation.

Photo 5-3  
**Forest Land Comprises the Largest Percentage of Land in Chocolay Township**



**Water**

Excluding Lake Superior, open water areas comprise nearly 350 acres of Chocolay Township. There are many rivers, streams and creeks, but most of the water area is in inland lakes, such as Lake Le Vasseur and Lake Kawbawgam. The James Jeske flooding is being drained, and is changing from open water to wetland.

**Wetlands**

Wetlands are a land cover type characterized by certain soils and vegetation types and at least the seasonal presence of water. A precise determination of whether a parcel of land contains wetlands requires expert inspection, but the interpretation of aerial photographs can be fairly accurate. In 2004 there were nearly 3,000 acres of wetlands in Chocoley Township, a decline since 1978 of almost 200 acres. Wetland types in Chocoley Township include woodland wetlands, shrub/scrub wetlands, aquatic bed wetlands, and emergent wetlands. Wetlands provide many important values, including stormwater storage, groundwater recharge, water filtering and purification, a nursery for the food chain, habitat for desired wildlife species and scenery.

**Barren**

This land cover category includes types that have very sparse vegetation. There were 145 acres of barren lands in Chocoley Township in 2004, including beaches & riverbanks, sand dunes, and a small area of bare, exposed rocks. While not a very extensive land cover type in Chocoley Township, it is an important one, due to the potential for erosion of beaches, riverbanks and sand dunes. These areas can also contain unique ecosystems and rare and fragile species.

**LAND USE BY TAX CLASS**

According to assessment records for 2003, over 21,000 acres of Chocoley Township were classed as residential, about 55% of the land. See Table 5-2 and Map 5-2. This was in striking contrast to the area of the Township that was in urban and built-up use, which was less than 3,000 acres or 7.6% (which also included commercial and industrial land uses).

Compare Tables 5-1 with 5-2. One measures existing area of land devoted to a particular use or land cover, whereas the other measures land use by tax class on a parcel basis, so if a part of a parcel is used for residential purposes, the whole parcel is classified that way.

Map 5-2  
**Chocoley Township Land Use by Tax Class**

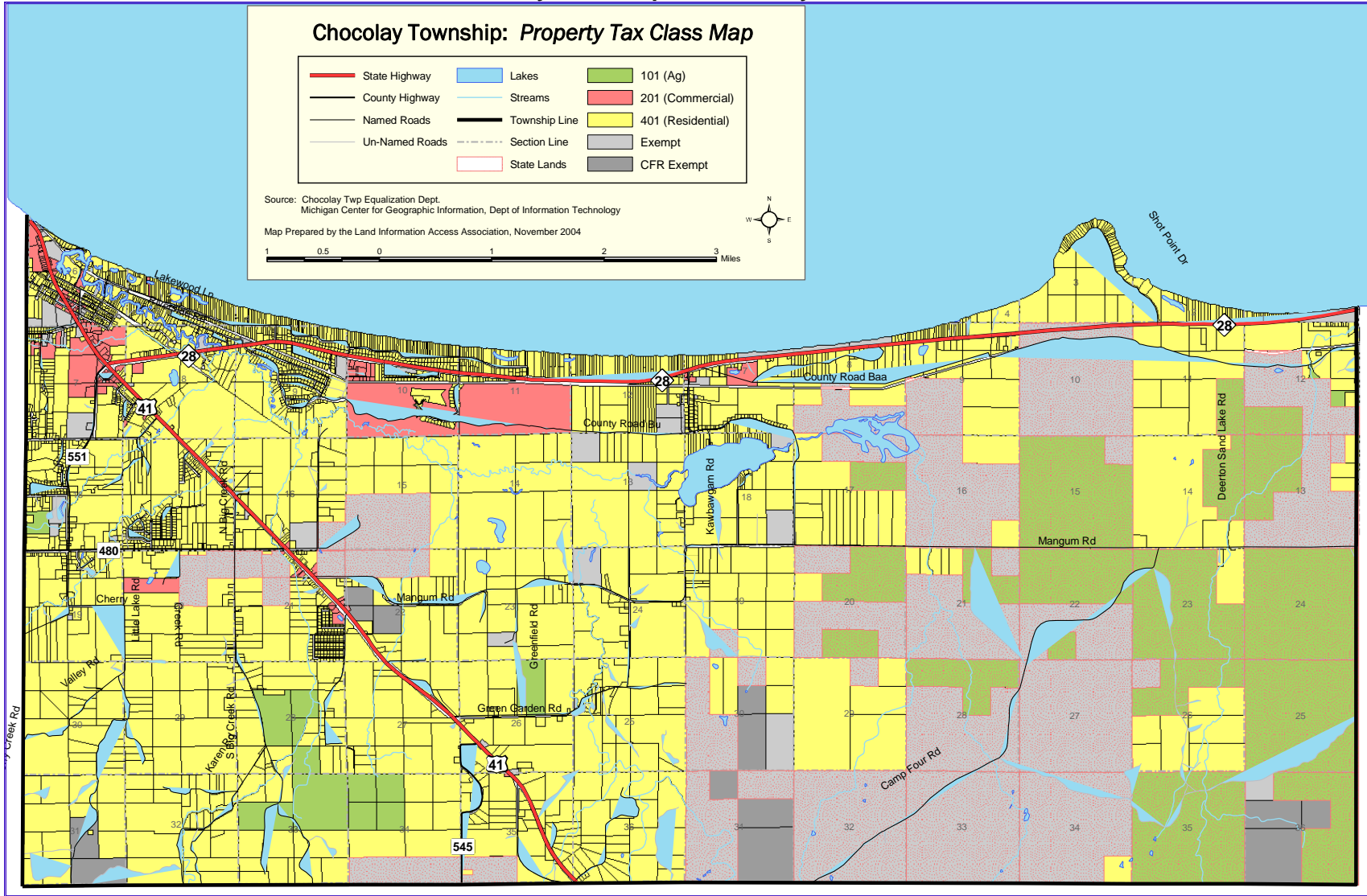


Table 5-2  
**Land Use by Tax Class in Chocolay Township, 2010**

Property Class	Acres	% of Total Acres
Agriculture		
Commercial		
Residential		
Agriculture Exempt		
Commercial Forest Reserve		
Exempt (public or non profit owned)		
ROW and lake		
Total		

*Source: Marquette County Assessor and Chocolay Township.*

*Note: The difference in the total land area between Tables 5-1 and 5-2 are due to differences in mapping.*

Parcels with the tax classification “exempt,” were second in area, with “agriculture exempt” third in 2003. These areas included state and other public lands. Most of the “exempt” and “agriculture exempt” lands were state-owned, and in the eastern half of the Township. State-owned lands included portions of the Escanaba River State Forest, the Marquette Branch Correctional Facility Mangum Farm and other Department of Corrections properties, MDOT Lake Superior shoreline and highway scenic turnouts and several smaller parcels owned by the DNR, including the Cherry Creek Fish Hatchery. A total of about 36% of the land in Chocolay Township was tax exempt.

Commercial Forest Act (CFR) lands accounted for 953 acres of Chocolay Township in 2003. These are private lands, and under the CFR agreement, the owners pay a reduced tax of \$1.10 per acre on forest lands greater than 40 acres if a management plan is developed. The Department of Natural Resources, Forest, Mineral and Fire Management Division, offers the property tax incentives to owners of forested lands if they agree to properly manage their commercial forest lands for recreation or wildlife. Forest species benefit from this program, such as deer, turkey, grouse, nongame forest birds, amphibians, reptiles, etc. Cutting of trees is approved by permit only.

Properties classed as “commercial” accounted for 891 acres in 2003. Commercial parcels in the Township included two golf courses, and both large and small parcels along the US-41/M-28 corridor in the northwestern part of the Township.

There were only 690 acres with a tax classification of “agriculture” in 2003, while 2,564 acres were identified as agriculture in the land use/cover inventory in 2004. None of the 2,564 acres of agricultural land in the land use/cover inventory were tax exempt. This means that approximately 1,800 acres of agricultural lands were not classified as such. A comparison of Maps 5-1 and 5-2 shows that much of the agricultural land not classified as agricultural for tax purposes was classified as residential.

Table 5-2 displays a tax classification, “ROW and Lake,” and that it comprises about 1,000 acres in Chocolay Township. This classification includes portions of the land not within the boundaries of identified parcels. It includes the rights-of-way of roads, lakes and other land or water areas not part of a parcel. This is land that is not likely to change in area over time.

## **RELATIONSHIP OF LAND USE/COVER INVENTORY TO LAND USE BY TAX CLASS INVENTORY AND OTHER INFORMATION**

A comparison of the land use inventories, one of actual use, or type of development (as well as land cover) and the other by tax classification illustrates that far more land is assessed at a higher development level than that for which the land is used.

Already developed parcels and most of those classified as residential (and thus presumed to be developable) are in close proximity to sensitive natural features or have severe development limitations. These natural features include the Lake Superior shoreline, the Chocolay River and the many high quality streams and creeks that feed the River, inland lakes and Lake Superior. There are also large areas of floodplains, wetlands and soils with development limitations.

The natural features of Chocolay Township provide for the rural quality of life that residents prefer, and help the local economy. It will be important to ensure as land is developed, that these natural features are protected.

Photo 5-4

### **Natural Features Should be Protected in Order to Promote the Local Economy**





## Chapter 6 PUBLIC FACILITIES AND SERVICES

### INTRODUCTION

This chapter describes the public facilities and services provided to residents in Chocolay Township. These include fire and police protection, governmental administration, solid waste collection and disposal, water, sewage, recreation, education, health, library, cemeteries and others. These facilities are owned and operated by the Township and state government, and in the case of a few recreational facilities, by private owners/operators.

### TOWNSHIP ADMINISTRATION

The operation of Township business takes place at the Municipal Complex, on a nearly 2.8 acre parcel at 5010 US-41 South, located on the corner of Silver Creek Road and U.S. 41 South, in Harvey. See Map 6-1. A staff of 12.5 full-time, ¾ time or on-call staff members use the office complex 8:00 a.m. to 5:00 p.m. Monday through Friday. See Table 6-1

Photo 6-1  
**Chocolay Township Hall**



The municipal complex was built in 1978 by remodeling an old schoolhouse and adding a large addition. It contains offices for all Township departments, including the Supervisor's office, the Clerk's office, the Department of Public Works office, the Community Development Department office, and a front office area utilized by the Treasurer's Department and the secretarial/receptionist support staff. In the old schoolhouse portion of the building, there is a meeting room that is used for board and commission meetings, community groups, and the general public. The Police Department has an office adjacent to the meeting room. Two storage areas are located off of the meeting room. There is an outside storage building for use by the Public Works Department. Funds are set aside annually in the Capital Improvements Fund for major building maintenance.

Table 6-1  
**Chocolay Township Employees**

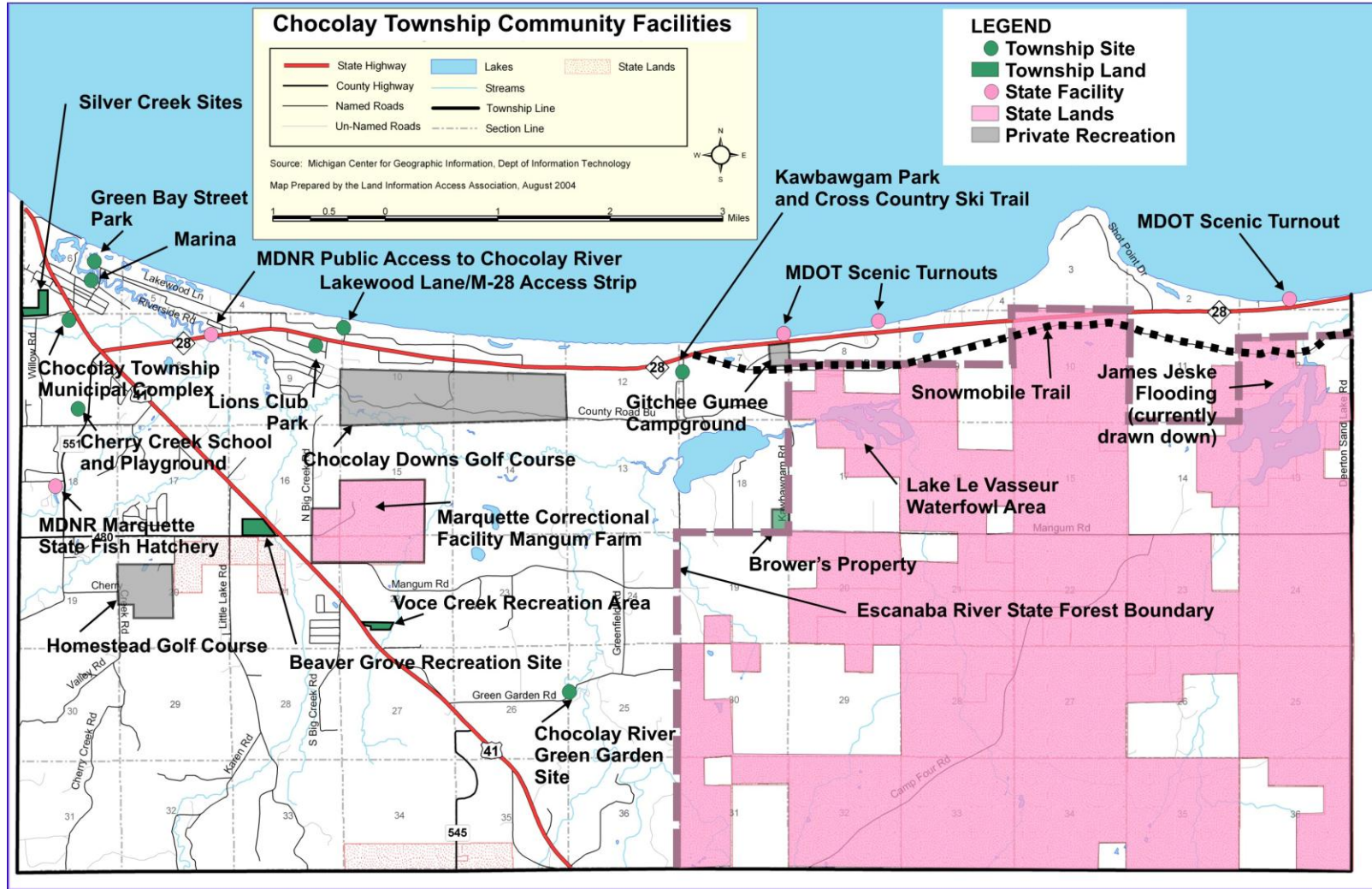
Department	Number of Employees
Office staff (1 Director of Planning and Community Development, 1 Zoning Administrator (3/4 time), 1 Director of Assessing, 1 Secretary/Records Clerk, 1 Deputy Clerk & 3/4 time Deputy Treasurer, 1 Director of Recreation and Grants, and 1 on-call Temporary Secretary)	8.5 full-time, ¾ time and on-call
Department of Public Works (1 DPW Supervisor, 1 Lead Maintenance Worker, 1 General Maintenance Worker I and 1 General Maintenance Worker II)	4.0
Police Department (4 full-time police officers, two part-time officers, 1 administrative assistant and 1 secretary)	8.0 full-time and part-time
<b>Total Employees</b>	<b>20.5</b>

Photo 6-2  
**Chocolay Township Vehicle**





## Map 6-1 Chocoley Township Public Facilities



### **Community Center**

Several efforts have been initiated to establish a permanent community center in Chocolay Township. The Township purchased the Silver Creek Elementary School in 2001 and has used it occasionally as a community center. There is a playground and tot lot outside and basketball courts inside, plus meeting rooms. Millage elections to fund operation of the community center have failed, and the building has been sold.

### **PUBLIC WORKS**

The Chocolay Township Public Works Department oversees maintenance of the Township Municipal Complex, Township-owned recreation lands and facilities and the wastewater collection facilities. The Public Works Department has 4 employees.

### **Wastewater Facilities**

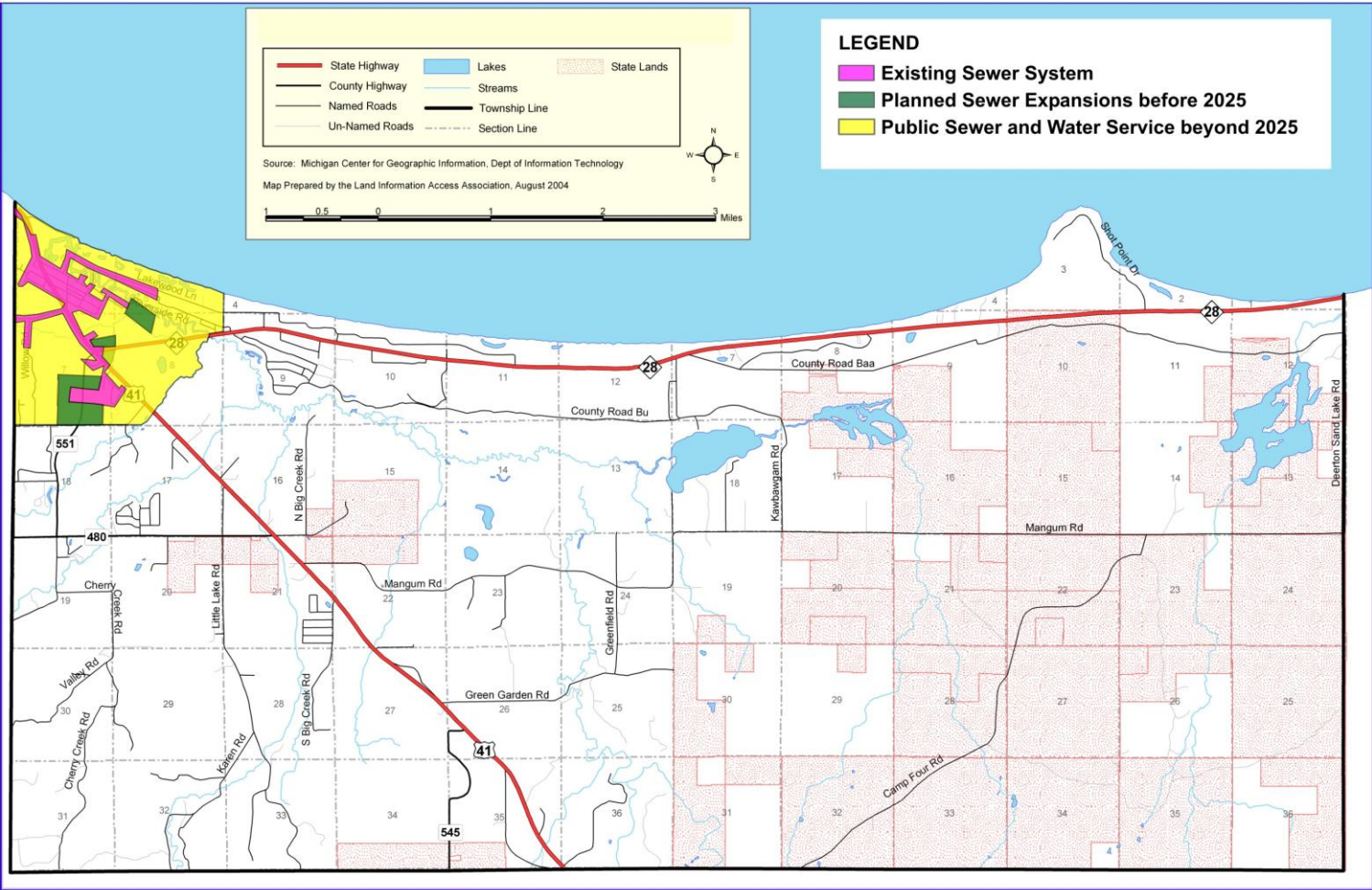
There is a Township installed a sanitary sewer collection system servicing the greater village of Harvey area, built in 1975. The system was extended in 1976 to serve the Ewing Plaza commercial area and in 1977 to the Ewing Park residential subdivision. The latter extension included a pump station. The system consists of gravity lines as well as five large pump stations and three small grinder stations. A large force main was installed to connect the collection system to the Marquette City Treatment Plant where the wastewater receives final treatment.

Capacity of the wastewater plant in Marquette City is 12.6 million gallons per day (mgd). The Township's share of plant capacity is 2.5 mgd. The Township's flow capacity is greater than 1.5 mgd. Pump station #1 has a capacity of 1.1 mgd, but can be upgraded through the addition of another pump.

The area of existing sewer service and areas of planned expansion are shown on Map 6-2. Extensions will be made at the request of and expense of landowners who request the extension.

In rural areas of the Township and in outlying areas of Harvey, private septic systems are utilized. The County Health Department inspects all new systems to verify that soil conditions will allow the system to operate properly and not contaminate streams or wells in the vicinity.

Map 6-2  
**Chocolay Township Existing and Planned Sewer Service Area**





### **Water Facilities**

At present, all Township residents and businesses are served by private wells, each varying in quality and capacity. The Township provides no public system for distribution of water. In 1975, when the sewer was constructed, in anticipation of future needs, crossing pipes were placed under the U.S. 41 highway in Harvey so that the highway would not have to be disturbed when and if water lines are utilized in the future.

Concern over petroleum contamination of several wells in the Harvey area has led to discussion of a municipal water system. Contaminated wells in this area were replaced by drilling to a deeper aquifer, through State of Michigan funding. Mitigation of the contamination plume was also initiated. Chocolay Township has had studies prepared several times in the past 25 years to investigate the potential and costs for the development of a municipal water system to serve the more populated areas of the Township. The latest study was prepared in 2001 by the consulting firm of STS Consultants, Ltd.

The study found that for the vast majority of Township residents and businesses, individual wells provide an adequate quality and quantity of water. The cost to provide municipal water remains prohibitive for the current population size. However, in the future, it may become feasible to provide a water distribution system to the more populated areas, and the US-41/M-28 commercial corridor. Until that time, those areas with groundwater contamination should continue to be monitored. If contamination spreads, a public water supply may need to be constructed.

Photo 6-3

**It may be Possible to Provide Public Water to the US-41/M-28 Corridor in the Future**



### **SOLID WASTE/RECYCLING**

Township residents generate about 25 pounds of solid waste per resident per month. Total residential solid waste is between 65-75 tons per month, depending on the time of year. The Township contracts with private haulers to provide curb-side garbage collection at a rate of \$7.50 for 5 garbage bags. Businesses hire private waste haulers

for their solid waste.

Solid waste is deposited in the Marquette County Landfill, which is located about 9 miles west of the Township. Residents may haul their own waste to the landfill after purchasing a permit from the Township.

Weekly curbside recycling is available and takes place along with garbage collection. Residents are encouraged to recycle clear glass, newspapers, magazines, tin cans and number two plastics. There are no figures on the amount recycled, but sanitation workers report that there are recyclables put out at every nearly home on garbage collection day.

In addition, brush can be dropped off in the spring, fall and in January for Christmas trees. Brush is chipped and provided to residents for landscaping.

### **UTILITIES**

The Marquette Board of Light and Power and the Alger-Delta Cooperative Electric Association provide electricity to Chocolay Township. SEMCO Energy provides natural gas to homes in the most densely populated areas of the Township. There are no major gas lines through the Township.

### **EMERGENCY SERVICES**

#### **Police**

The Chocolay Township Police Department consists of a staff of four full-time officers, two part-time officers, and administrative assistant and a secretary. The Township currently utilizes two patrol cars, one four-wheel drive sport utility vehicle used exclusively in the winter, and two snowmobiles, equipped for a rescue sled if needed, which is used for patrolling the DNR Trail. The Township is purchasing an additional snowmobile.

The nearest State Police post is about twelve miles west of Chocolay Township in Negaunee Township.

Photo 6-4  
**Chocolay Police Department Vehicle**



## **Fire**

The Township Fire Department has 26 volunteers, including officers. There are two pumpers, one tanker and one unit equipped for extrication and rescue. Because the Township does not have a municipal water system, all water used in fighting a fire must be transported by tanker and mutual aid trucks, or extracted from dry hydrants located along creeks and rivers. There are no plans for expansion of equipment or personnel.

The firehall is located in the municipal complex. It is a 36' by 50' building with a 20' by 50' addition. The Township has mutual aid agreements with surrounding communities. These agreements allow equipment and manpower to assist in fire calls reciprocally with these units of government.

There are no Township regulations regarding open burning. Yard waste, but not building materials, can be burned in a container without a permit and in the open with a permit obtained by calling a toll-free number.

Photo 6-5

### **Dry Hydrant along Lake Kawbawgam for Use in Fighting Fires**



Homeowner and business insurance is tied to ratings of the fire suppression capability of the community. The Insurance Services Organization (ISO) rating for all of Chocolay Township is 9. This is a high number, and is likely reflected in relatively high insurance premiums. The Fire Department continually works to reduce the ISO rating, which would indicate safer conditions for residents and lowered insurance premiums. Reduction in the ISO rating could come from the installation of an elevated water storage tank or other options for rapid filling of fire fighting equipment, or the installation of a municipal water system in the Harvey area. A reduction of the ISO rating from 9 to 8 may come with the purchase of the next tanker truck, but there would be no reduction in insurance premiums for commercial properties as a result.

## **Ambulance**

Marquette General Hospital provides Ambulance service. Marquette General is the nearest hospital to Chocolay Township and is located in the City of Marquette, about five miles west of the Township.

## **HEALTH CARE**

Marquette General Hospital contains over 300 beds. It offers a wide array of emergency, surgical, treatment and wellness services.

Family medicine and obstetrics/gynecology services are offered at Lakewood Medical Associates in Harvey.

## **EDUCATION**

Children in Chocolay Township attending public schools do so in the Marquette Area Public School system. The entire Township is within the Marquette Area Public School District. Total enrollment in the fall of 2004 was 3,655. This was down from the 2003 enrollment of 3,757. Enrollment totaled 992 in the four elementary schools (Cherry Creek, Sandy Knoll, Superior Hills and Vandebloom) offering grades K-3, 476 in grades 4 and 5 at Graveraet School, 849 in grades 6-8 at Bothwell School and 1,338 at the High School.

Cherry Creek Elementary School is located on Ortman Road in Chocolay Township. It had an enrollment of 343 in 2004. It is the only public school in the Township.

Photo 6-6  
**Cherry Creek Elementary School**



## **RECREATION FACILITIES**

In 2004, the Township updated its Recreation Plan. The Plan is reviewed by the Planning Commission annually in order to review, prioritize, and budget for recreation activities, and updated every five years in order to obtain certification from the Michigan Department of Natural Resources. The Recreation Plan provides an inventory of existing recreation-related facilities and lays out plans for improvements and expansions. In the past, the Township has relied heavily upon grants to fund recreational facilities, such as the Lawcon grant for the Silver Creek Recreation Area and the Michigan Natural Resources Trust Fund grant for the Beaver Grove Recreation Area. For a complete description of recreation facilities in the Township, please refer to the Recreation Plan, which is kept on file in the office of the Department of Land Use Management. Table 6-2 and the following text provide a brief overview of recreation facilities and their features.

Photo 6-7  
**Beaver Grove Recreation Area**





Table 6-2  
**Chocolay Township Recreation Facilities**

<b>Chocolay Township Recreation Facilities Matrix</b>	<b>Silver Creek Recreation Area</b>	<b>Beaver Grove</b>	<b>Twp. Marina</b>	<b>Green Garden Site</b>	<b>Lions Park</b>	<b>M-28 Turnouts</b>	<b>G.G. Campground</b>	<b>DN4R River Access</b>	<b>Chocolay Downs</b>	<b>Homestead Golf</b>	<b>Community Ctr.</b>	<b>Cherry Creek Sch.</b>	<b>Jeske Flooding</b>	<b>Voce Creek</b>	<b>Twp. Municipal Complex</b>	<b>Pocket Park</b>	<b>Browers Rec. Area</b>	<b>Lake LaVassuer</b>
Soccer Field	X	X																
Playground/Tot Lot	X	X									X	X				X		
Picnic Facilities	X	X	X	F		X									X	X		
Ice Skating Rink					X										X			
Open Space		X										X						
Restrooms	X	X	X	F	X	X	X	X	X	X						X		
Horse Shoe Court		X																
Hiking/Nature Trail	X	X										X	F				X	X
X-Country Skiing	X												F				X	X
Boat Launch Access			X	F									X					X
Swimming				F		X												
Fishing			X	F				X					X					X
Basketball Court		X			X						X	X				X		
Baseball Diamond	X	X			X													
Tennis Court	X	F																
Warming House																		
Primitive Camping							X						X					
Camping Utilities			F				X											
Showers							X											
Golf Course									X	X								
Covered Pavilion		X													X			
Hunting													X					X

Source: Chocolay Township 2004 Recreation Plan  
 Note: "X" = existing and "F" = future.

**Township Owned Recreation Properties** (from 2004 Recreation Plan)

This section summarizes Township-owned properties used for active and passive recreation. See Map 6-1 for their locations.

**Chocolay River – Green Garden Site**

This property is located on Green Garden Road approximately 1.5 miles from US-41 in the south central part of the Township. It is approximately 1.08 acres in size and currently undeveloped but is used as a local swimming and fishing spot. The site also offers a primitive carry-down boat launch to the river. Both of the parcels that comprise the site are zoned Rural Residential-2 (RR-2). The RR-2 district allows for parks as a conditional use on parcels consisting of a minimum of 20 acres. The deed giving title to Chocolay Township requires that the property be used exclusively for providing a park and other recreational facilities for the children and the members of the public in and

about the Township of Chocolay.

**Silver Creek Recreation Area (SCRA)**

The SCRA encompasses 23.7 acres in the northwest corner of the Township. The size and location of this recreation site make it especially suited as a “community play field.” Due to its central location the SCRA, is the most widely used recreation facility the Township owns and is in a Public Lands district. Existing facilities at SCRA consist of the following: four tennis courts, soccer field, baseball diamond, basketball hoop, tot-lot/playground, picnic area, restrooms, and paved drives. The developed portion of the site utilizes the southern 1/2 of the property while a primitive trail system is interspersed throughout the western and forested northern 1/2.

The SCRA is extensively used for organized baseball, softball, little league and soccer throughout the spring, summer and fall. The trail system is utilized year-round. The tennis courts, tot-lot/playground, and picnic area are used extensively from late spring to late fall.

**Chocolay Township Marina**

The Township’s only marina is located along Main Street in the northwestern corner in the village of Harvey. The marina is situated on the Chocolay River approximately 1500 feet from Lake Superior. The site contains an improved skid pier boat launch, pit toilet and picnic area. It provides boat access to the Chocolay River and to Lake Superior. Unfortunately, the river mouth is often too shallow to permit easy access to Lake Superior, resulting in limited public use. It is located in an R-1 zoning district that allows parks as a conditional use subject to Township Planning Commission approval.

In 1999, the Township purchased a small island adjacent to the marina shoreline. This island is recommended as a possible campsite of the NTN Water Trail and open for passive recreation use.

Photo 6-8  
**Chocolay Township Marina and Boat Launch**



**The Voce Creek Open Space Area**

This undeveloped 12.33 acres, located east of US-41, is approximately 1 mile south and east of the Beaver Grove location. Its soils, topography, and location severely limit its

use for active recreational opportunities. It contains a considerable sand blowout and low land areas that would be very costly to develop into a conventional recreation facility. The area has been identified as a passive recreation tract.

The parcel is in a RR-2 zoning district that does not conform to local zoning in terms of lot size. Its distance and lack of a bike path from the developing areas of Harvey and Beaver Grove pose traffic and accessibility problems for children in the Township. The Marquette County Soil Conservation District, in cooperation with the Township, currently is using a portion of the property as an experimental American Beachgrass planting and sand dune stabilization project.

***The Chocolay Township Municipal Complex***

The Chocolay Township Municipal Complex is located on a 2.79 acre parcel with frontage on the west of US-41 in the village of Harvey. Besides housing the Township's governmental facilities, the property supports a 30' by 50' pavilion on its northeast corner. Supplied with a number of picnic tables, a permanent grill, and nestled among towering pines, this location provides an ideal passive recreation site for tourists and residents alike. During the winter months the pavilion is flooded and used as an ice skating rink. It conforms to existing permitted uses since it is located in the Public Lands district. At the time of this Plan update it was listed for sale.

***Beaver Grove Recreation Area (BGRA)***

This is a combination of two adjoining parcels making up a 29.1 acre recreation site. The property is located west of US-41 and north of County Road 480 and is accessible from either road.

The site has considerable frontage on Big Creek that flows along its eastern border. Direct access to the river from a recently developed hiking trail provides fishing opportunities, as well as unique passive recreational outlets. Facilities at this site consist of a baseball field, soccer field, basketball court, pavilion, tot-lot/playground, horseshoe courts, picnic facilities, multi-use open space, hiking trail, improved parking and restrooms.

Photo 6-9  
**Beaver Grove Recreation Area**



These facilities are all concentrated on the original 15.11 acres. The adjoining 14 acre parcel was purchased in 1990 and is currently undeveloped. It is currently leased for agricultural purposes. This site is in the R-1 zoning district.

In January of 2001, Chocolay Township received a matching grant from the Clean Michigan Initiative (CMI) Recreation Bond Project of the Department of Natural Resources. This grant provided 65% of the total cost required for the purchase/construction of the following upgrades: basketball court, pavilion, fencing, irrigation, spectator seating, entrance signs, scoreboard, display cases, additional parking and covered dugouts.

At present, a strategic plan for the undeveloped acreage has yet to be established. Residential development in the south central region of the Township makes this section of the BGRA an ideal location for future recreational development.

### ***Brower's Property***

The Brower property is located on 50 acres, approximately 8 miles southeast of Harvey, Michigan. It is predominately lowland with a mix of trees dominated by spruce, cedar, hemlock, birch and maple. There is a small stream that bisects the property. This parcel was donated in 1999 to the Township with the stipulation that it will be used exclusively for educational and recreational activities.

In 2002, the Township received a DNR grant to develop the Brower property as a demonstration area that promotes forest stewardship, while providing passive recreational opportunities. It is in a Resource Production zoning district that allows trails and management activities subject to Planning Commission approval.

### ***Lions Club Park***

This 10.7- acre recreation area is located on M-28, approximately 2.5 miles east of the US-41/M-28 intersection. It is situated in the Varvil Center area and is currently zoned R-1. In 2000, this property was purchased from the Marquette Area Public Schools.

The Lions Club Park has a baseball field, ice-skating rink, 1/2 basketball court, pit toilet and large parking lot. Approximately 5 acres remain undeveloped.

Photo 6-10  
**Skating Rink at Lions Club Park**



***Community Center***

The Marquette Area Public Schools sold Silver Creek Elementary School to Chocolay Township in 2001. This one-story masonry building, containing 28,227 square feet, is located on 10 acres on the north side of Silver Creek Road.

Millage elections to fund operation of the community center were defeated. The building has been sold.

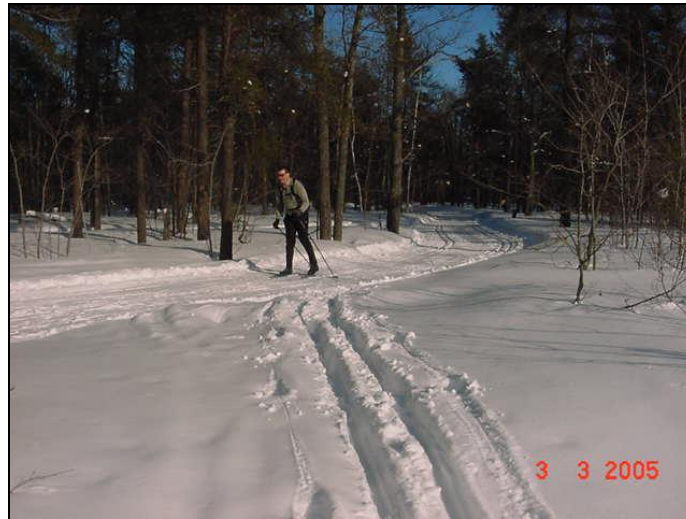
***Kawbawgam Cross Country Ski Trail***

The Kawbawgam Cross Country Ski Trail is located on state land and is approximately 2 miles south of M-28. The parking area is located on the Lake Le Vasseur public access road.

This trail has 2 loops. The beginning loop is 1.5 miles long and rated easy. The LeVasseur loop is 3.9 miles long and rated difficult. The Kawbawgam Cross County Ski Trail is groomed and offers spectacular views of forested hills overlooking Lake Le Vasseur.

Photo 6-11

**Kawbawgam Cross Country Ski Trail**



***Kawbawgam Pocket Park***

The Pocket Park is located on Kawbawgam Road just south of M-28. This small neighborhood park contains a basketball court, swings, picnic table, pit toilet and parking lot.

Photo 6-12  
**Kawbawgam Pocket Park**



***Green Bay Street Park***

This property on the corner of Green Bay Street and Lakewood Lane runs along the Chocolay River and was donated to the Township in 2001. It has functioned as a fishing site for residents for many years.

The Township requested, and received, a conditional use permit for a "park" designation in 2002. A grant was obtained through the Marquette County Conservation District and the Lake Superior Watershed Partnership to address critical erosion problems. Funds were used to stabilize the stream bank, install stairways and fencing, and establish plants to help control erosion.

These improvements have curtailed further erosion and enhanced access for residents, especially seniors.

**Other Public and Private Recreation Sites (See Map 6-1)**

Michigan Department of Transportation Scenic Turnouts

MDOT owns 3 roadside scenic turnouts by the M-28 corridor along the Lake Superior shoreline. The Township maintains these facilities under contract with MDOT. Site #1 is approximately 6 miles east of the US-41/M-28 intersection near Kawbawgam Road. It consists of ½ mile of frontage on Lake Superior. It has restrooms, map display case, picnic area, well water, and a stairway accessing the beach.

Sites #2 and #3 are located approximately 7 and 11 miles east of the US-41/M-28 intersection. These turnouts are a 1.5 mile strip overlooking Lake Superior. Together they have 2 small picnic areas.

These turnouts are very popular with residents since they provide the only public access to Lake Superior in the Township. They also offer convenient, yet scenic, rest stops for tourists.

***Chocolay River Public Access Fishing Site***

The Michigan Department of Natural Resources developed this 5.7 acre site on M-28 approximately one mile east of the US-41/M-28 intersection. It is situated in a R-1



zoning district. This handicap accessible site has restroom facilities, expanded parking, a public fishing pier, and carry-down boat launch. It is currently only 1 of 2 handicap accessible fishing sites located in Marquette County.

### ***Lake Le Vasseur Waterfowl Area***

The Michigan DNR constructed this public access site to Lake Le Vasseur off Kawbawgam Road. It is approximately 8 miles from the US-41/M-28 intersection and situated in a Resource Production zoning district. The DNR also rebuilt the dam on the west-end of the lake to provide improved hunting and fishing opportunities for the public.

Photo 6-13

### **DNR Dam that forms Lake Le Vasseur Waterfowl Area**



### ***James Jeske Flooding at Sand River***

The Michigan DNR built this wildlife flooding area on the Sand River approximately 11 miles from the US-41/M-28 intersection. Located just south of the mouth of the Sand River and Lake Superior it covers more than 700 acres of land. It has become a popular fishing and hunting location as well as a passive scenic site. The dam was opened in 2004, and while the flooded area will be reduced dramatically, it will remain a natural area.

### ***Cherry Creek School Playground***

The Cherry Creek Elementary School is located near the intersection of Cherry Creek Road and Ortman Road, 1 mile west from the US-41/M-28 intersection. This playground has a variety of recreation equipment for school children. It also has a soccer field and large open space area for general recreation activities, a portion of which has been developed as an interpretative nature trail supported by classroom projects.

### ***Gitchee Gumee Campground***

This privately owned campground is located 7 miles east of the US-41/M-28 intersection. Constructed in 1980, it consists of a restroom/shower/laundry complex, an office, and 100 campsites. Nearly 1/2 of the sites support water, sewer, electrical service, while the remaining sites are considered primitive. It is the only campground in the Township and is a popular tourist stop.

### ***Chocolay Downs Golf Course***

This planned 36 hole golf course is located on M-28 about 3 miles east of the US-41/M-

28 intersection. Several holes are completed and the remaining holes are under construction. Privately owned and operated, it is expected to fill a large void in offering residents and visitors a modern golfing facility.

Photo 6-14  
**Chocolay Downs Golf Course**



#### ***Homestead Golf Course***

This privately owned 18 hole golf course is currently under construction with 9 holes completed and operational. It is located on County Road 480 approximately 1 mile west of the US-41 and County Road 480 intersection. It is situated very close to Beaver Grove Recreation Area and complements all of the recreation opportunities offered in this section of the Township.

#### **COUNTY LANDS AND FACILITIES**

There are no county facilities in the Township.

#### **STATE LANDS AND FACILITIES**

##### **Escanaba River State Forest**

The largest state holding in Chocolay Township is the Escanaba River State Forest. The area within the State Forest boundary in Chocolay Township is about 16,000 acres, but only about 11,000 acres are in State ownership. The remainder is in private in-holdings. The State Forest is used primarily for recreational activities such as hunting, hiking and skiing.

##### **Marquette Branch Correctional Facility, Mangum Farm**

The Michigan Department of Corrections runs a prison farm in Chocolay Township. The main farm property is about 400 acres along US-41. The Michigan Department of Corrections also owns another 480 acres in two sites in Chocolay Township.

Photo 6-15  
**Mangum Prison Farm**



**Michigan Department of Transportation (MDOT)**

MDOT owns nearly 2 miles of Lake Superior shoreline in two parcels in Chocolay Township. These are along M-28 in the eastern part of the Township. Within the two parcels are 3 scenic turnouts. The Township maintains picnic facilities at the three sites and these are the primary source of public access to Lake Superior in the Township.

**Department of Natural Resources Marquette State Fish Hatchery**

The fish hatchery is located at the far western edge of Chocolay Township on Cherry Creek Road. It is the primary broodstock and rearing facility for brook and lake trout that are used in both inland and Great Lakes waters. The facility also rears brown trout and splake (a brook trout – lake trout hybrid) for both Great Lakes and inland waters. This hatchery has both indoor and outdoor rearing facilities. The hatchery uses both well water and water from Cherry Creek for use in the rearing tanks.

The hatchery is open to the public and has interpretive facilities.

Photo 6-16  
**Marquette State Fish Hatchery on Cherry Creek**



**FEDERAL FACILITIES**

There is only one federal facility in Chocolay Township, the U.S. Army Reserve Center. The nearest Post Office is in the City of Marquette. Many Township residents would like a Post Office in the Township.

Photo 6-17

**U.S. Army Reserve Center in Harvey**



## Chapter 7 TRANSPORTATION

### INTRODUCTION

In Chocolay Township, as in all communities today, the economy is heavily dependent on the transportation system. US-41 and M-28 serve not only local residents, but long distance travelers. Chapter 2 noted that the large majority of Township residents work outside the Township and drive to work. Therefore, the growth of the area becomes largely dependent upon a safe, convenient, and economical transportation system to facilitate the easy movement of people, goods, and services both within and outside the Township. This makes the local transportation system, including highways, railroads, airports, and harbors, even when outside the Township, key elements in the future of Chocolay Township.

This chapter examines existing transportation modes, presents several road classification systems, reviews key access management issues and identifies major needed road improvements.

### TRANSPORTATION MODES

Within the Township there is only one principal transportation mode, and four minor alternate modes. The principal mode is vehicular movement on public roads. The alternate modes include Marq-Tran transit service, and seasonally, snowmobile, bicycle and walking which are largely recreational modes.

However, other modes nearby provide important transportation services to Township residents. These include air and water transportation.

Photo 7-1  
**The Primary Transportation Mode in Chocolay Township  
is Vehicles on Public Roads**



Air transportation services are available at the Sawyer International Airport. The facility has a 12,300 foot main runway with an instrument landing system. The site also contains a new passenger terminal building and new air crash protection facility currently under construction. Service is provided by regional carrier aircraft with most airplanes carrying

less than fifty seats. Three major services are provided by American Eagle, Midwest Connect, and Northwest Air Link, which provide a three service hub from Chicago, Detroit and Milwaukee.

The area is also served by water transportation from nearby harbor facilities in Marquette. Both recreational and commercial use is made of these local harbors. There are two deep-draft harbors within Marquette. The lower harbor contains a public marina with access to a municipal park and various other cultural features. The south end of the lower harbor is also a coal unloading facility that supplies fuel for the local electric utility. Portions of Chocolay Township receive power from this utility. The lower harbor also receives large quantities of limestone used in the pelletizing of iron ore. The second deep-draft harbor, the upper harbor, is used to ship iron ore from Marquette to the steel mills and for unloading coal for the Wisconsin Electric power plant. The merchandise dock is available for receiving bulky items, the mooring of larger boats and off loading of equipment. Recreational use by local boaters is made of both the upper and lower harbors. Sport fishing and general pleasure boating are primary activities of the recreational boaters. There is also a marina on the Chocolay River in the Township.

Bus transportation is another mode without a facility based in the Township, but serves the community through the transfer of people and a limited amount of goods. The Greyhound line has one run daily to Calumet and two daily to Chicago. Southbound pickup includes a stop in Harvey on the way to Escanaba/Chicago. In addition, westbound pickup is also made at the Escanaba connection. There is also a local mass transit system (Marq-Tran) that will be discussed in detail in a later section.

The transportation mode that everyone is familiar with is the road system. It is the primary transporter of goods, services, and people. Each of the roads within the Township has a specific traffic capacity, design standard, and design use. The road classification system will first be discussed and then the Township roads will be inventoried as to how they fit into the system.

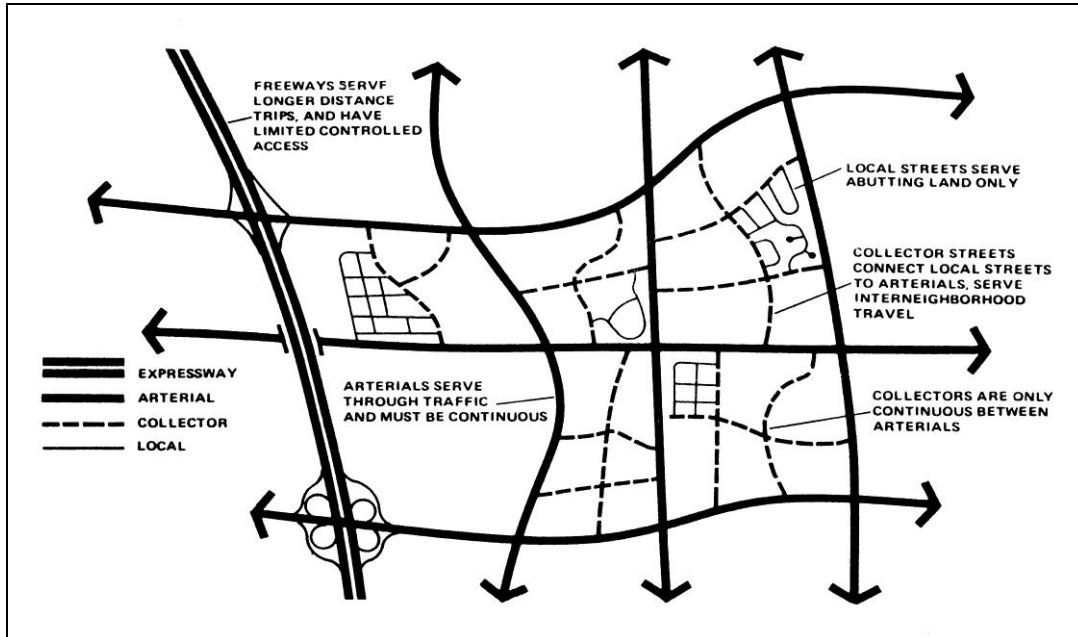
### **CLASSIFICATION OF ROADS**

Roads have a two-fold purpose: The movement of traffic and the provision of access to adjoining property. All roads in the Township serve these two purposes to some degree. Through the process of defining road functions and correlating these with land use policies, several benefits should be realized by the local or even state government responsible for their operation. By defining the function of roads and their service to the community, the appropriate land uses can be encouraged adjacent to these roads and with proper access management, the public investment in these roads can be preserved.

The design of a road depends principally on its functional classification and the traffic volume it is expected to carry at some future time. Such design factors as the number of lanes, width and surfacing of shoulders, width of structures, type of surface, and design speed all depend on traffic volume and functional classification. See Figure 7-1 which depicts the typical range of road types within a metropolitan area.



Figure 7-1  
**Design Characteristics of Types of Roads**



Source: Arterial Street Access Control Study, Tri County Regional Planning Commission, 1981, p.3.

Since land use patterns are largely determined by transportation facilities, functional classification is important because it permits coordination of land use policies with the transportation system. Once a functional classification is adopted, zoning regulations can be structured to ensure that specific land uses are guided to locations on the road network which are consistent with the existing or planned capacity of the network to accommodate the traffic generated. Access controls can be employed along arterial and collector routes whose principal function is to carry traffic. This will ensure that traffic carrying capacities are not usurped by turning movements to and from uses located along these routes. Similarly, subdivision regulations can provide for the dedication of sufficient right-of-ways, and in some cases, the installation of improvements based on the design standards outlined above.

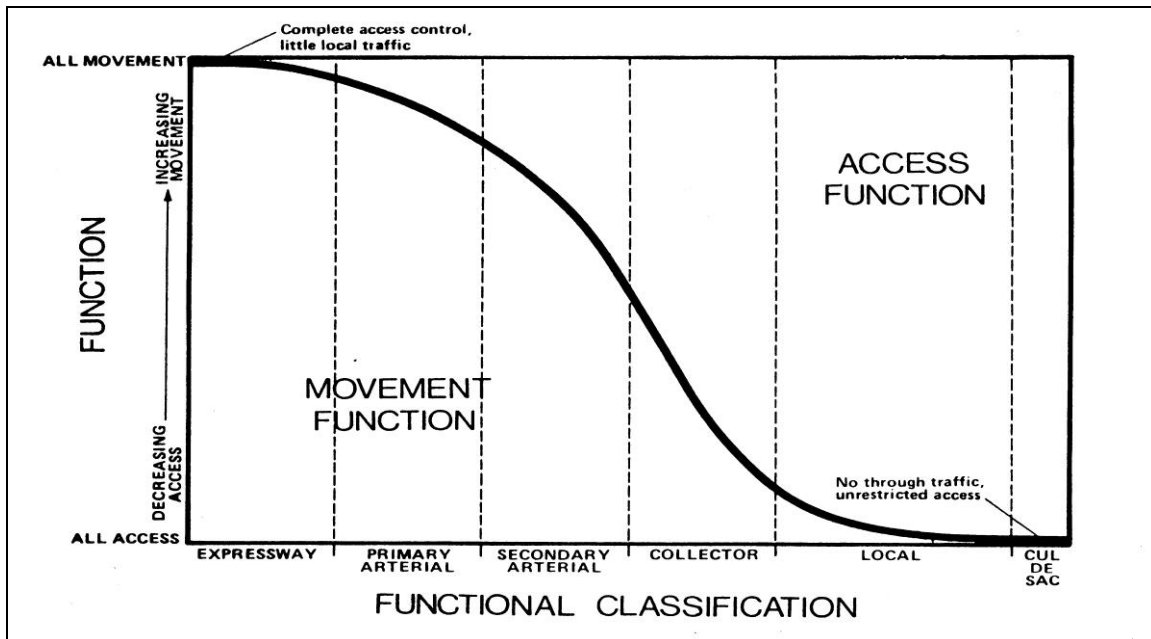
A typical road classification system includes the following road types:

1. Limited Access Highway -- Major highways providing no direct property access that are designed primarily for through traffic. These are also called freeways.
2. Major Arterial -- Arterials are roadways of regional importance intended to serve moderate to high volumes of traffic traveling relatively long distances. A major arterial is intended primarily to serve through traffic where access is carefully controlled. Some major arterials are referred to as "regional arterials".
3. Minor Arterial -- A roadway that is similar in function to major arterials, but operates under lower traffic volumes, over shorter distances, and provides a higher degree of property access than major arterials.
4. Major Collector -- A roadway that provides for traffic movement between arterials and local streets and carries moderate traffic volumes over moderate distances. Collectors may also provide direct access to abutting properties.

5. Minor Collector -- A roadway similar in function to a major collector but which carries lower traffic volumes over shorter distances and provides a higher degree of property access than a major collector.
6. Local Street -- A street or road intended to provide access to abutting properties, which tends to accommodate lower traffic volumes and serves to provide mobility within that neighborhood.

Figure 7-2 shows the relationship of the movement function of roads relative to the access function. Freeways absolutely preserve the movement function while local streets primarily serve as access to abutting property. Arterials and collectors provide some of both, with arterials primarily there for the movement function. It is very important to preserve the movement function of arterials and collectors or congestion will greatly reduce the utility of such roads for safe travel over a distance. When communities poorly plan and regulate land uses next to arterials and collectors, then considerable tax dollars must be spent that would not have had to be spent to try and remedy the resulting congestion and unsafe conditions.

Figure 7-2  
**Functional Classification of Roads**

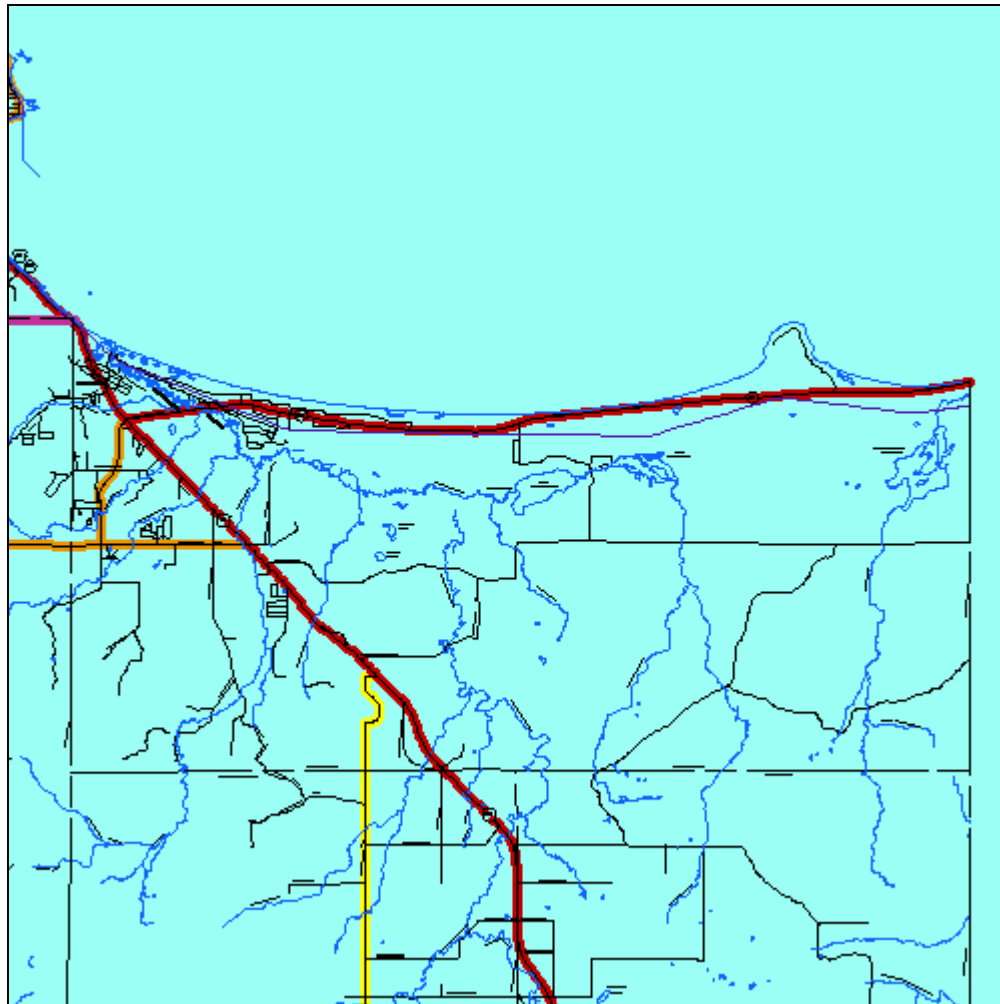


Source: Arterial Street Access Control Study, Tri County Regional Planning Commission, 1981, p.3.

The major roads in Michigan are included in the National Functional Classification System in order to be eligible for federal road funds. Under this system, roads are classified into the following categories:

- Rural or Urban Interstate (analogous to “limited access highway” above)
- Rural or Urban Other Freeway (analogous to “limited access highway” above)
- Rural or Urban Other Principal Arterial (analogous to “major arterial” above)
- Rural or Urban Minor Arterial (analogous to “minor arterial” above)
- Rural Major Collector or Urban Collector (analogous to “major collector” above)
- Rural Minor Collector (analogous to “minor collector” above).

Map 7-1  
**Roads in Chocolay Township**  
**According to the National Functional Classification System**



**Red** = Rural Principal Arterial **Orange** = Rural Major Collector **Yellow** = Rural Minor Collector

Collector  
Source: Michigan Department of Transportation [Note: the pink in the upper left corner is the urban boundary line for urban aid highways, it is not a road.]

Within Chocolay Township, only three of these classifications apply (as follows and as illustrated on Map 7-1:

1. Rural Principal Arterial - These arterials provide the next to the highest level of traffic mobility available on the total highway system. US-41 and M-28 are statewide arterials as well as major arterials.
2. Rural Major Collector - These interconnect and augment the statewide and regional arterial system. County Road 480 and 551 from US-41 to 480 are major collectors. The primary function is to interconnect people in the economic activity centers not served by statewide arterial highways.

3. Rural Minor Collectors - These function primarily as collector- distributor roads. County Road 545 (West Branch Road) from U.S. 41 South is a minor collector. These roads provide service between minor population and economic centers within the County. Traffic mobility and trip continuity are not as essential as on arterials. Serving through traffic may not be a major consideration.

Photo 7-2  
**M-28 is a Statewide Arterial**



The remaining roads in the Township are grouped as Local Access Streets/Roads. These provide access to adjacent properties and these streets and roads carry practically no through traffic since traffic desires are mostly local in nature. The best route continuity is not important. The major functions of these streets and roads are to:

- Provide access and service to the residential developments adjacent to them.
- Provide access to homes, farms, and other uses, or to provide access to commercial and/or industrial establishments (these streets should be constructed to carry heavy vehicles if the conditions warrant).

For road funding purposes, three systems of road classification are used. The National Functional Classification system was listed above. Only classified roads are eligible for federal highway aid. It is used to determine whether federal aid can be obtained for these roads. Funds originate with the federal portion of the gasoline tax paid by motorists on each gallon of gas.

The State classification system is tied to Act 51. It includes five categories: state trunklines, county primary roads, county local roads, city and village major streets, and city and village local streets. Funds originate from the state portion of the gasoline tax. A statutory formula determines how much goes to MDOT, how much to County Road Commissions, and how much to cities and villages. Townships are not eligible for federal or state highway funds.

The county road system includes only two categories: primary and local roads. County road commissions also receive Act 51 funds and sometimes federal aid highway funds for special projects on certain roads. Within the Township, County roads 480, 545, and

551 are the only county primary roads and they are also on the federal National Functional Classification system. All other public roads in the Township are county local roads.

Gravel roads serve large parts of the Township. Such local roads do a good job of meeting access needs when traffic volumes are low. However, once traffic exceeds 500-600 vehicles/day on an average quality gravel road, then maintenance demands go up sharply. Paving is often not an option because of the high construction cost (often \$300,000 plus per mile), even though the maintenance cost is much less. In addition, a paved road often has a capacity of 12-15,000 vehicles/day, which is far more than needed in many rural areas and may induce more development into the area (sprawl). Thus, it is very important that Township zoning regulations keep density lower than 1 dwelling unit per 10 acres in areas served by gravel roads. This density reflects the highest traffic volume a gravel road can accommodate without constantly needing grading, and even then it assumes the gravel road is of the highest quality possible with a proper sub-base and a good gravel surface.

Photo 7-3  
**Kawbawgam Road, a Gravel Road in Chocolay Township**



#### **TRANSPORTATION DECISION MAKING**

All of the decisions on roads in the Township are made either by the Michigan Department of Transportation (on US-41 and M-28) or the Marquette County Road Commission (which is responsible for all other public roads in the Township). MDOT has a five year plan that lists priority road and bridge improvements throughout the state. Local governments provide input on priority road and bridge needs directly to MDOT through the local TSC office in Ishpeming.

The federal government through the Federal Highway Administration and the state government through the Michigan Department of Transportation have input on county level road decisions primarily through the funds they provide and the strings they attach in the form of regulations and guidelines. The Township has input on the Road Commission's decisions in any of the following three ways.

First, each year the Township Board decides its priorities for the roads in the Township: what roads need work, where, and when. This procedure is outlined in Appendix C. The Township Board, in an advisory role, then meets with the Road Commission to present

their priorities and to exchange other pertinent information. The Road Commission, to a large extent, follows the Township's desires fairly closely. Since the Township participates fifty percent (50%) in the funding of construction projects on roads in the Township, the Township has a significant role in determining which roads are fixed, providing the County is willing to provide their fifty percent (50%) match. It should be noted that the Township's road needs are always greater than either its or the Road Commission's financial and physical abilities to meet those needs. Thus, the degree to which the Township's priorities are acted on will depend in part on how much money the Township has to help provide funding for those priorities, and the funds available to the County Road Commission.

The second way the Township can affect Road Commission decisions is through the County Board of Commissioners who appoint the County Road Commissioners.

The third way is for Township officials or citizens to call the Road Commission directly to provide information or make a complaint. When used, this approach provides valuable information directly and immediately. Further, the number of calls can give a rough indication of the magnitude of a problem. In addition, the Township often receives road complaints from citizens, and it can provide valuable information to the Road Commission in managing these complaints.

## **ACCESS MANAGEMENT**

### **What are the Consequences of Poor Site Access and Circulation Design?**

- Inadequate access capacity
- On-site congestion
- Congestion on the public street system
- High crash experience on the public street
- High crash experience on-site
- Pedestrian-auto crashes
- Limited flexibility to adjust the design or operation to changed conditions
- Loss of customers
- Frustrated motorists
- Unstable land use – declining commercial corridor stability
- Decrease in property value
- Decreased tax revenues
- Diverts motorists onto neighborhood streets.

In 2004, the Michigan Department of Transportation with input from representatives of each of eight jurisdictions along the US-41/M-28 corridor (from Chocoley Township west through Ely Township), prepared an access management plan for the corridor. Entitled **US-41/M-28 Comprehensive Corridor & Access Management Plan**, the Plan sets forth a series of proposed road and intersection improvements, as well as driveway redesigns and closures proposed to be implemented as the opportunity presents itself. Those elements of the **US-41/M-28 Comprehensive Corridor and Access Management Plan** that apply within Chocoley Township are hereby adopted by reference as the guide for future corridor and access management improvements.

In order to implement the **US-41/M-28 Corridor and Access Management Plan** and the Memorandum of Understanding all the participating jurisdictions signed to be a part



of the project leading to the creation of the **US-41/M-28 Corridor and Access Management Plan**, the Chocolay Township Zoning Ordinance should be amended to reflect the uniform approach to access management advocated by the Plan and being adopted in each of the eight jurisdictions that helped to create the Plan. Those zoning amendments are based on the model access management ordinance sanctioned and promoted by the Michigan Department of Transportation in the **Access Management Guidebook** published by MDOT in 2001.

In addition, implementation of the recommendations in the **US-41/M-28 Corridor and Access Management Plan** will be further facilitated by active participation by Chocolay Township in future joint site plan review meetings as they relate to a particular site plan pending in Chocolay Township or an adjoining jurisdiction. These meetings will involve review of access management issues and corridor improvement issues related to a particular site plan. Such joint meetings will include representatives of Chocolay Township, MDOT, Marquette County, and other corridor communities, as pertinent.

### **15 ACCESS MANAGEMENT PRINCIPLES**

1. "Reasonable access" to property abutting a state highway or county road is protected by state law. (Act 200 of 1969). Direct access is not mandated if other access options are available.
2. Proper application of access management techniques assures businesses and drivers of safe and convenient access and taxpayers of more cost-effective use of their money spent on roads.
3. The more important the roadway (the higher its functional classification) the higher the degree of access management that should be applied so that the road continues to perform according to the function it was designed to serve.
4. Interconnections between adjacent sites and between new subdivisions and the existing street system is important in maintaining safe and efficient traffic flow.
5. Limit the number of driveways and other conflict points.
6. Separate driveways and other conflict points.
7. Improve driveway operation by fitting the best design to the need.
8. Remove turning vehicles from through traffic lanes.
9. Reduce conflicting traffic volumes.
10. Improve roadway operations on arterials by achieving the proper balance between traffic flow and access to abutting property.
11. Lay the foundation for correcting existing access management problems and preventing future ones in the local comprehensive plan and/or an access or corridor management plan.
12. To optimize the benefits of access management, coordination with all appropriate transportation agencies is essential when preparing access management plans, design techniques and the elements of local access management regulations.
13. To optimize the benefits of access management, multi-jurisdictional coordination with all appropriate transportation agencies is essential when applying access management standards on lot split, subdivision, site plan and other zoning reviews.
14. Educate the public about the benefits of access management and involve them in development of access management plans and implementation activities.
15. Many access management techniques are best implemented through zoning and others through local lot split, subdivision, condominium and private road regulations.

*Source: MDOT Access Management Guidebook, 2001, pg.2-2.*

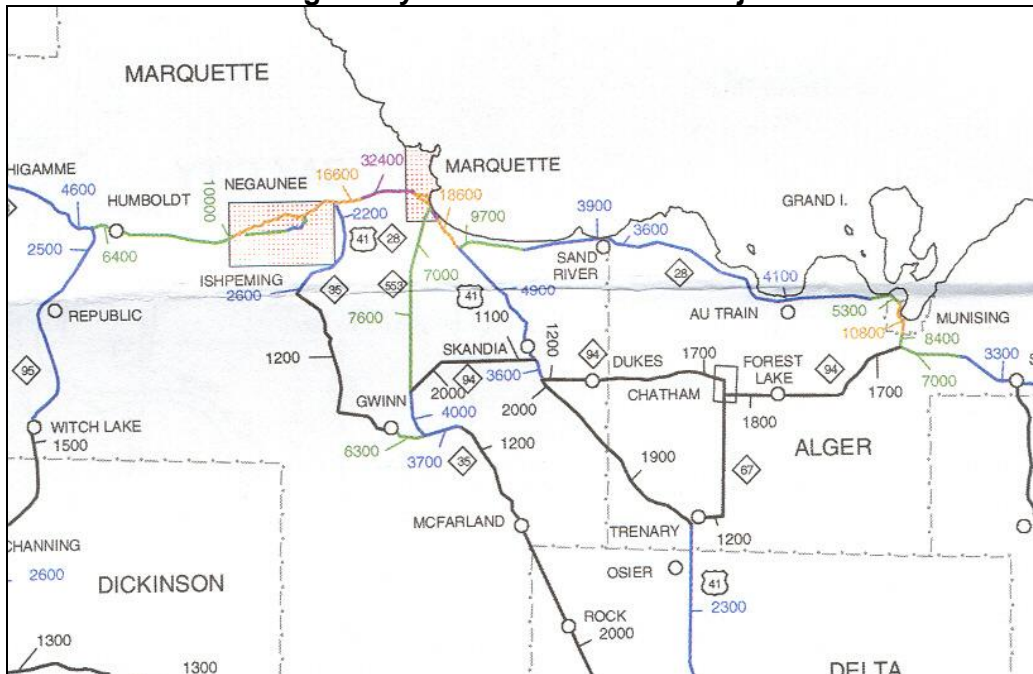
## Traffic Volumes

Average daily traffic (ADT) volumes on M-28 range from 3,900 vehicles on the east end of the Township to 9,700 vehicles at US-41. This is up sharply from 1994 when it was 5,900 vehicles/day. About 450 vehicles/day are commercial trucks.

Average daily traffic volumes on US-41 are about 4,900 vehicles/day from the south end of the Township to M-28. This is down from about 5,600 vehicles/day in 1994. About 330 commercial trucks travel this stretch daily.

From the intersection of US-41/M-28/Cherry Creek Road north to the Township line by the Visitor's Center, traffic builds to about 18,600 vehicles/day. This is slightly less than in 1994 when it was 19,000 vehicles/day. Map 7-2 depicts 2003 ADT's on these roads.

**Map 7-2**  
**2003 Average Daily Traffic Volumes on Major Arterials**



Source: MDOT, Michigan 2003 Annual Average 24-hour Traffic Volumes

## Traffic Crashes

The **US-41/M-28 Corridor and Access Management Plan** includes an analysis of high crash intersections of which there are two in the Township. The first is at Silver Creek Road and US-41/M-28, and the second is at the junction of US-41, M-28 and Cherry Creek Road. Neither intersection has marked pedestrian markings or crosswalks, although the Silver Creek intersection has an overhead pedestrian bridge on the north leg of the intersection. On Silver Creek Road there were 21 crashes in the three years from 2000-2002. Eight were southbound rear ends, 5 were angle and 4 were head-on left-turn crashes. Visibility of the signal may be affected by the pedestrian bridge. Improved clearance intervals may reduce left-turn crashes. There should also be pedestrian crossing markings on Silver Creek Road and on Corning Street, but not across US-41 because of the pedestrian bridge. Corning Street should be realigned so it

squares with the intersection. On Cherry Creek Road there were 23 crashes from 2000-2002. Nine were southbound to eastbound left-turn collisions. An intersection operations study was recommended to provide safer left-turn opportunities. Since there are pedestrian pathways on both sides of US-41 at M-28, there should be pedestrian crossing markings on all four legs of the roadway surface and pedestrian crossing lights should be considered.

### **Driveway Closures/Consolidations**

The **US-41/M-28 Corridor and Access Management Plan** also identifies several driveway closures or consolidations that should occur as the opportunity presents itself. This is one of the most fundamental access management principles (see sidebar in gray). Driveway closures or consolidations reduce the number of conflict points at which crashes could occur. Crashes go up with the number of driveways if the separation distance between driveways is substandard. As a result, where there are two or more driveways on the same parcel, and they are not properly separated for the speed of the roadway, driveways should be closed or combined to meet the MDOT safety requirements. Exceptions may apply for driveways serving semi-trucks but even then, not more than two driveways on US-41 or M-28 should be permitted. Driveway closures or consolidations are most easily accomplished when a landowner comes in for development approval on a new development, expansion of an existing development or a redevelopment of property. Opportunities to combine driveways and gain access via a frontage or rear service road should also be capitalized upon.

Photo 7-4

### **Very Few Businesses Need Two Driveways Restricting Access on US-41 and M-28 Will Improve Safety and Traffic Flow**

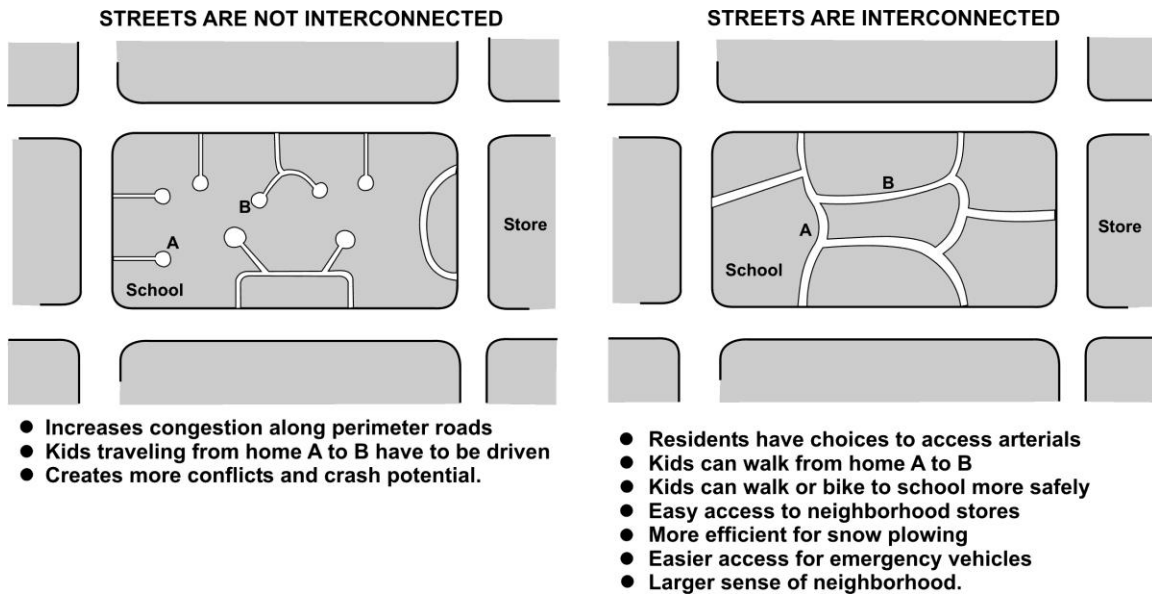


### **INTERCONNECTED STREETS**

The emerging system of streets and roads in the Township is characteristic of one that will present major problems in the future. That is because many of the new, especially residential, developments are built in subdivisions or site condo projects with an independent street design that is not connected to abutting property, nor leaves stub street openings for future connections. This is not only more difficult for residents or users of those developments, it is also not nearly as safe. If a bad storm blocks the

entrance, then fire trucks, ambulances, electric or telephone utility trucks or police cannot get down the street, and that is when residents are more likely to overdo themselves and have a heart attack or get injured. The Township should require in its subdivision and zoning regulations that all developments have an interconnected street system, or include stub roads for a future connection as abutting property is developed.

Figure 7-3  
Interconnected Streets



Source: MDOT Access Management Guidebook, 2001, pg. 2-7.

### PUBLIC ROAD CONDITIONS AND IMPROVEMENTS

The county road network consists of 283.85 miles of county primary roads and about 988.39 miles of county local roads. The County plows about 67.7% or about 861.6 miles of roads. There are 5.58 miles of county primary road and 73.59 miles of county local roads in Chocolay Township. The Road Commission plows 83.2% of it, or all but 13.31 miles. Improvements to the county primary roads, both maintenance and construction, are scheduled by the Road Commission as their funds allow. As mentioned above, the County Road Commission bears the responsibility of construction and maintenance on both the primary and local road systems. The Township, however, must contribute 50% of the cost of construction on the local road system. The Road Commission must finance all maintenance costs on both the primary and local road system. In addition, the Road Commission is responsible for preliminary signing on the roads under their jurisdiction.

On local roads, the Township is often the determining factor of when the roads get worked on, mainly because Township funds are usually scarce. The Township's share of construction projects may be anywhere from \$10,000 to \$80,000 for one project. Because of the tight budget that the Township operates under, a payment schedule is usually worked out over several years. This payment system is 5% on the unpaid balance and is not a practice the Road Commission is required to do by statute. In the past, this arrangement has been very successful in improving county roads within the Township. While the Township is not required to participate in this type of arrangement, the general budget constraints necessitate this type of cooperative venture to handle priority projects as desired by the Township. Design standards should be adhered to.

Improvements to the Township road system fall into two categories: 1) upgrading existing roads, and 2) future roads. As far as the existing roads are concerned, their general routes and locations are established. But as the roads carry increased traffic volume, their level of construction should correspondingly increase. Some of the first streets in the area were much narrower than current design standards would allow and their base is not as sturdy as present design would provide. A gradual improvement of the existing roads should take place so that they also meet contemporary design specifications

### **Existing Road Improvements**

The state highways and the county primary roads in the Township are in fair to good shape.

According to the Five Year Highway and Bridge Program, published by MDOT, there is scheduled repair work on state road M-28 to be constructed in 2005. Beginning at US-41 heading easterly to the Alger county line, M-28 is to be resurfaced. Also M-28 is to be widened between Kawbawgam Road to Scenic Turn Out road. There is one bridge repair scheduled on M-28 located at the crossing over the Chocoley River.

Relative to county primary roads, County Road 545 contains an extreme ninety degree corner and is a curvy road. County Road 480 contains residential strip development. This strip development and the large number of driveways accessing onto this road decreases the safety of this road system.

Relative to local roads, there are some problem areas (not ranked). These include:

1. Wright Place is breaking up at the intersection with US 41 and has linear cracking on the section west of US-41. The east side has pot holes at the intersection with US 41 and heaving from Corning Street to Green Bay Street.
2. Terrace Street west of US-41 has linear cracking from Ripley Street to US-41 and is breaking up at the intersection with US-41.
3. Terrace Street east of US-41 has heaving in areas and is breaking up at the approach to US-41.
4. Corning Street is chunking in the vicinity of the Day Care and the corners are deteriorating at the intersection with Wright Place.
5. East Main Street has heaving from the house at 145 E. Main to the end of the street.
6. Lakewood Lane has minor linear cracking from Green Bay Street to Superior Street.
7. Shot Point Drive has been breaking up in the low swampy areas and continues to do so.
8. Riverland Drive is starting to lose the inside shoulders on the corners.
9. Riverside Road is deteriorating on all of the inside corner radii and there are pot holes at the intersection with US-41 and where the street meets the old railroad grade.
10. Carmen Drive is breaking up at the US-41 intersection.
11. Juliet Street is starting to pothole at the intersection with US-41.
12. Ortman Road from Cherry Creek to US-41 has linear cracking and is starting to break up (alligator pattern).
13. Ortman Road from Cherry Creek north has minor linear cracking and heaving.
14. Woodvale Drive is starting to heave at the corner of the "s" curve.

15. Ford Road is starting to develop cracks on its entire surface.
16. Cherry Creek Road south of Co. Rd. 480 and past Old Kiln Road is starting to break apart at the corner radii.
17. Co. Rd. 545 is in very poor condition throughout.
18. Foster Creek Road is starting to break up in places.
19. Orchard Lane has minor linear cracking.
20. South Big Creek Road's shoulders are breaking down.
21. Green Garden and Greenfield Roads are in very poor condition from the Green Garden hill to Mangum Road and Mangum Road's first ¼ mile from US-41.

### **Boulevard on US-41/M-28**

One idea put forth by the Township Planning Commission as the **US-41/M-28 Corridor and Access Management Plan** was being prepared called for converting the current 5-lane section between the northwest corner of the Township at the rock outcrop/MDOT Visitor's Center to the US-41/M-28/Cherry Creek Intersection into a boulevard. MDOT seriously considered this suggestion since boulevards are generally a safer roadway design, but rejected it for numerous reasons, including:

- The low incidence of crashes along this stretch,
- The lack of right-of-way for a boulevard built to MDOT design standards,
- The high cost to purchase ROW and rebuild the road, relative to other roadway needs in the area,
- The adequacy of the existing capacity of the roadway.

Photo 7-5

### **One Proposal Calls for Converting Part of US-41/M-28 to a Boulevard**



Upon further examination of existing MDOT right-of-way (which is largely 100 feet) and physical inspection of the US-41/M-28 roadway and the location of adjoining buildings, the Planning Commission still desires the installation of a boulevard along this stretch of road. It will greatly help improve the physical character of this stretch of road and provide an aesthetic focal point to the one place in the Township passed over by most Township residents every day. To that end, the Township will prepare and analyze a drawing with the following information:

- Right-of way (ROW)
- Existing pavement location
- Existing building footprints



- Existing zoning setback lines
- Topography
- Future ROW line at 150' width
- Zoning setback from new ROW
- Tree line and spacing for a tree lined boulevard
- Other related information as needed.

The Township will identify the number of structures affected by such a change and make an initial determination if it is practical to proceed with a boulevard design. If it is, the Township will convene a meeting at which all landowners along US-41/M-28 will be invited, as well as the general public, to review the information with them and receive feedback. If interest remains and a boulevard appears desirable and feasible, the Township will begin a series of other actions.

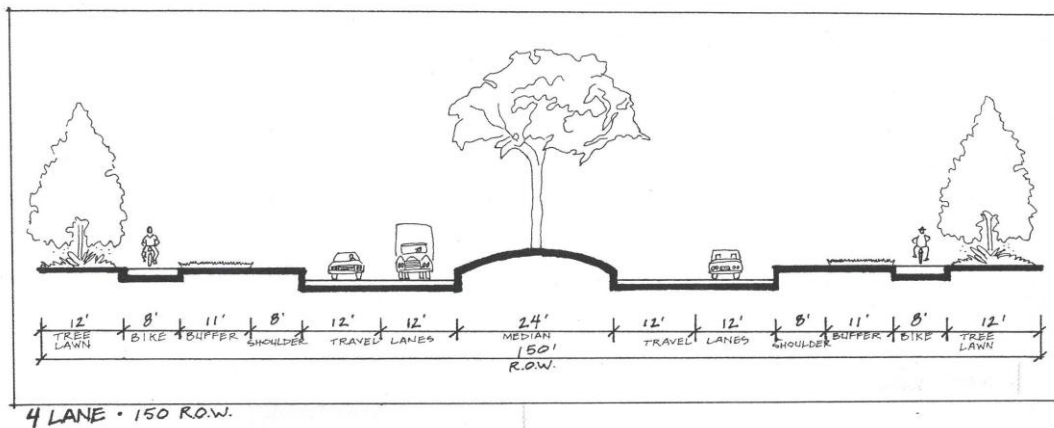
- First it will contact MDOT about its intentions. The Township fully understands that this might be a project with a time line 10 or more years in the future.
- Second, to help facilitate the construction of such a boulevard, the Township will work with MDOT on establishing a cross section for the boulevard and a new tree line for each side. At 150' for ROW, the cross section would be characterized by MDOT as a "narrow width" boulevard, with very few median crossovers. It is not intended to accommodate the U-turning movements of large semi-trucks, so alternate routing for such vehicles will need to be found. Jug handle (turn right to circle around instead of making a left turn, like one leaf of a cloverleaf intersection on a freeway) and other indirect U-turn designs should be explored for their feasibility where semi-truck turning movements are needed. Figure 7-4 illustrates one possible cross section. It is similar to that on M-43 as it goes through East Lansing. If Figure 7-4 were used as the cross section design, then the new tree line is the 12 foot area on both sides of the right-of-way. If another cross section design is selected, then the tree line will need to be established and should be added as an element to the Zoning Map so everyone remains aware of it.
- The Township will attempt to acquire as much of the right-of-way as feasible through voluntary donations by landowners, either associated with new development or redevelopment, or simply as tax deductible donations.
- Once the tree line has been established, the Township will initiate a major tree planting program to green the corridor. This is anticipated to begin long before any road reconstruction occurred. The Township will seek enhancement grant funds from MDOT to help pay for such enhancements, as well as new sidewalks on both sides of the road.
- The Township should seek assistance from MDOT for seeking funding for some of the other road improvements described below, as they will help with some of the truck turning issues created by installation of a boulevard.

A list of potential plants for use along the boulevard and other streets in Chocoday Township appears at the end of this Chapter.

If it turns out to not be feasible to establish a boulevard design along US-41/M-28, then the Township should go forward with establishing a tree line outside the existing right-of-way. This will require working closely with property owners to ensure it is implemented as soon as possible.

Also, the current pedestrian overpass on US-41/M-28 at Silver Creek Road should be relocated so it is not so close to the intersection and so that a bicycle can be easily transported across it. Now, children must carry their bikes up and down the steps which is a struggle for small children. Some may choose instead to try and cross the highway instead of using the overpass.

Figure 7-4  
**Proposed Boulevard Cross Section for US-41/M-28 as it goes through Harvey**



### New Roads

Future roads should also meet these design specifications. Consideration should particularly be given to where these roads should be located. An improved road can be a great attraction for development. But the development should be where it can be conveniently served by local services, such as the sewer and water, ease of maintenance, access to public facilities, schools, recreation facilities, and other goods and services. Therefore, determination of where development should occur should be a major determinant to deciding where the new roads should be built. The other major determinants for new roads are:

- Providing missing links on an interconnected road pattern
- Relieving and preventing congestion
- Providing alternative means of access for certain types of traffic.

There are five locations that should be considered for new roads (plus some small connectors) in the Township over the next twenty years. Each meets the three criteria above. They are very generally depicted on Map 7-3. Specific route alignments would be determined following detailed study in each area. Future land use along these new roads is depicted and described on the Future Land Use Map in Chapter 10.

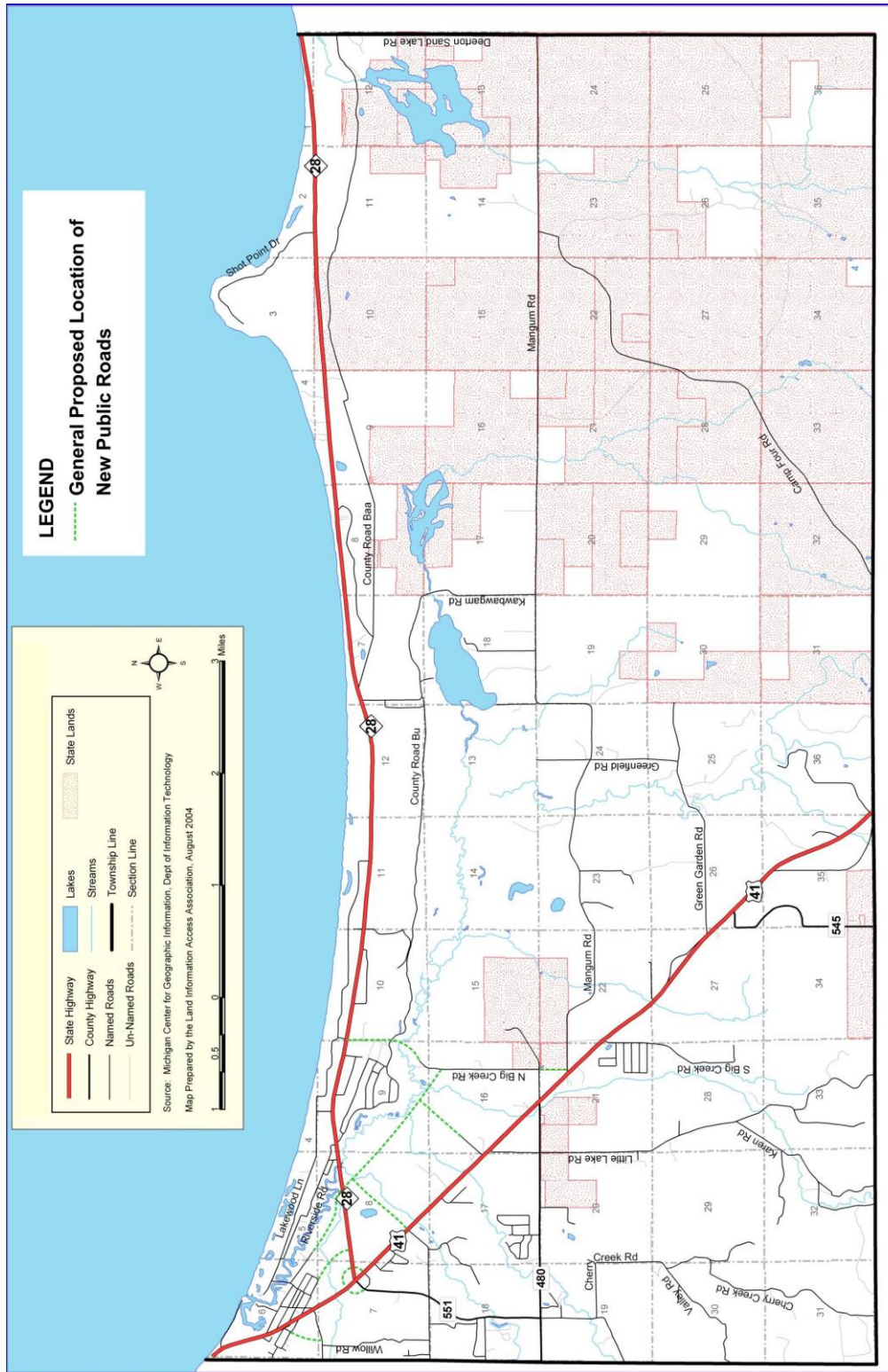
- The first is a north/south connection between US-41 and M-28. This would be an expensive road as a river crossing is involved. Several locations should be explored, but extending the North Big Creek Road to M-28 would be the shortest distance and would come out at an existing commercial area and is a good distance away from the US-41/M-28/Cherry Creek Road intersection.
- The second involves use of the old Lake Superior and Ishpeming railroad line east of M-28 all the way to North Big Creek Road. This would put a connection to M-28 about a half mile from the US-41/M-28/Cherry Creek Road intersection, and an effort should be made to keep it at least that far away if possible.
- The third is a connecting road from Harvey behind existing businesses to M-28.

Routing the road adjacent to the old railroad right-of-way (which is in private ownership for this segment) may be a possible location, but that would take the road farther east than necessary (but would align it with the second option described above). If that was not feasible, a new road from the east end of Wright Place (or perhaps another street) in Harvey that paralleled US-41/M-28 all the way to US-28 would give another connection option to M-28 from Harvey and hopefully permit a connection from the trucking company property so east bound trucks would not have to do a left-turn onto US-41/M-28 and could instead do a left-turn onto M-28 which has a lower volume. In any event, this road should connect to M-28 at least 1/3 mile east of the existing US-41/M-28 intersection and ½ or more miles east is better. With any option, the Township is strongly encouraged to balance the needs of the transportation network with the potential intrusion of commercial vehicle traffic within a close proximity of a residential area.

- The fourth is continuation of the radial street design already in place on the south quadrant of the US-41/M-28/Cherry Creek intersection, on the other three corners. A large part of this continuation on the north side of the intersection would be accomplished by the third suggestion above. The other two corners are of a lower priority and should occur as the opportunity presents itself. It is essential that all the new streets line up with one another, but it is likely that as traffic grows at the intersection that only right-turns in and out of these new streets would be permitted on all legs.
- The fifth is connection between streets on the west end of Harvey, south of US-41/M-28 to Willow Road. There appear to be several possibilities that should be explored. Going through the Township owned property is likely the most feasible. This will help continue the interconnected street pattern in this area and facilitate future residential infill development in this area. This may be feasible to accomplish with developer contribution of at least a portion of the ROW as part of the approval of a new project. The developer would also construct that portion of the road serving his development.

If the railroad right-of-way is to be used for the second option, efforts should be made soon to determine the ownership of the ROW and the potential for public acquisition. Consideration should also be given to acquisition of the ROW for recreational trail purposes as well. Construction of a road and recreational trail in the same ROW may be more eligible for state or federal funds, than just the road itself. If so, the rest of the ROW to the southeast should also be considered for acquisition for trail purposes at the same time.

## Map 7-3 Proposed General Location of New Public Roads



## **PRIVATE ROAD CONDITIONS AND IMPROVEMENTS**

Another significant part of the road system in Chocolay Township is private roads. Unfortunately, private roads are frequently laid out and constructed without any consideration of road design standards. The result is that private roads are often located where geologic conditions are unsuitable, roads have insufficient or no roadbed preparation, and have inadequate drainage, inadequate right-of-way, etc. They are also often overgrown with vegetation. This makes it difficult or impossible to safely bring a fire truck, trash truck or delivery truck down them. Because of safety concerns, many communities do not permit the construction of new private roads. Such roads are also often costly to maintain.

However, unless the road contains a 66 foot right-of-way and is built or brought up to County Road Commission specifications, the County will not take over the road and provide maintenance. The result is generally after-the-fact hard feelings on the part of residents who may not have realized the responsibility of living on a private road and who feel they are being denied public services that others take for granted.

In the 1977 Zoning Ordinance, the Township provided requirements for private roads. These standards originally provided for approved private streets to have a minimum 66 foot right-of-way, an 18 foot width and be paved with gravel or similar material. Since then, however, the requirements have increased to insure that private roads are developed properly. Services such as public school buses will typically not travel on private roads and some Township services such as refuse collection will not be provided to the property owners on a private road unless the road is properly maintained and passable. Improvements to private roads, as well as construction and maintenance, is totally the responsibility of the property owners. However, the additional regulations have not resulted in private roads with the same quality as public roads and the Township should require that all future roads in the Township serving more than a single residence or business, be public roads. This may pose a problem in implementation however, when open space developments are concerned. These are projects where dwellings are clustered on a small part of the site and the balance is left in permanent open space. These projects attract residents who want to be in the country and enjoy a natural setting. When trees are cleared for a full 66 feet (as is often required for public roads), then the rural character of open space developments is often badly undermined. Speeds are slow on these roads and few homes are served, so a narrower pavement width and clearing of vegetation for only one car width (and to 12' in height) on either side of the pavement is all that is necessary.

The Planning Commission should work with other area Planning Commission's and the County Road Commission to create a new set of public road standards for open space developments serving a small number of lots. If this does not happen, the Township will either have to accept public roads with current standards, or substantially beef up its private road standards to ensure the design, construction and maintenance is much higher (i.e. up to public road standards). This will require new standards on road design and construction and number of lots served. It will require imposing road maintenance agreements that are signed by the developer and Township and recorded with the Register of Deeds for all property affected. It will also require a special assessment clause permitting the Township to special assess all properties served by the private road if it is not adequately maintained.

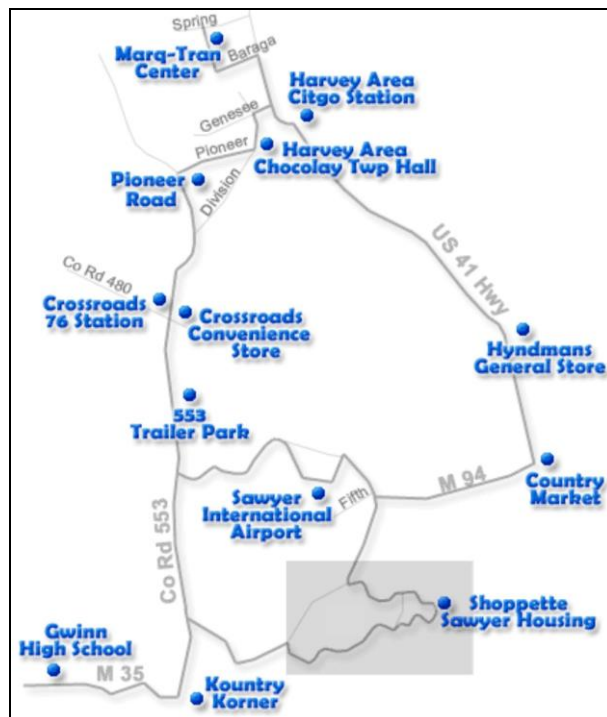
Following is a list of the private roads in Chocolay Township as of early 2005: Acorn Trail, Acre Trail, Anna's Trail, Apple Trail, Autumn Trail, Bayou Street, Cedar Lane, Cheryl Court, Chocolay River Trail, Cindy Lane, Deerview Trail, Dock Street, Edgewood Trail, East Chocolay River Trail, Hidden Creek, Hillcrest Trail, Hotel Place, Industrial Drive, JH Lane, Keweenaw Trail, Lara Lei Trail, Morning Meadow Drive, Norway Trail, Ojibwa Trail, Pine Cone Trail, part of Poplar Trail, Red Fox Trail, part of Sandy Lane, part of Shimon Court, South Willow Road, Tia Trail, Vista View Trail, Wanda Street, Welsh Trail, and Willow Road.

The Township does not currently have a program to monitor the maintenance of private roads and the responsibility lies with the residents located on the private road. However, because not all private roads have been properly maintained, the Township needs to be more assertive to ensure that emergency vehicles and fire trucks can always access dwellings and businesses along private roads. The changes to the Township private road ordinance outlined above will go a long way to solving this problem, but only conversion of all private roads to public will completely ensure this.

**MASS TRANSIT**

Marq-Tran provides a fixed Marquette/ Sawyer International Airport/ Gwinn route, which stops in Harvey and travels north and southbound US-41 through Chocolay Township. It passes through Harvey 12 times a day, seven days a week. In addition to this service, Marq-Tran also provides a Door-to-Door service, which provides service to township residents seven days a week.

Figure 7-5  
**Marquette/Sawyer/Gwinn Route of Marq-Tran**



Source: Marq-Tran website, 2004.  
 Note: The Marq-Tran Center shown on this map has moved.  
 A new map was not available as of August 2005.



## **FUTURE TRAILS**

Chocolay Township is the home of several all-season trails that provide important recreational opportunities for residents and nonresidents. However, existing trails were not planned with the kind of citizen and property owner input that is typical of Township initiatives and any future trails must be—irrespective of the entity proposing the trail. The nuisance effects of snowmobiles very near single family dwellings is considerable, and while future 4-cycle engines are expected to cut noise considerably, there are other issues that need to be addressed as well, including speed, clear vision at intersections and driveways, and travel off of designated trails. In particular, the Riverside Road – Lakewood Lane intersection and the Green Bay Street – Lakewood Lane Intersection with the existing trail have bad sight distances and poor stopping distances and these safety issues need to be addressed in the near future, and similar problems need to be prevented by better trail planning in the future. Increased monitoring and enforcement of public safety laws should also be a key component of future trail planning and development.

Photo 7-6

### **All-Season Trails need Improvements to Address Safety and Noise Issues**



## **CAPITAL IMPROVEMENTS PROGRAM**

The Township should use a capital improvements program (CIP) to schedule all future public improvements. A CIP is a timetable or schedule of all future capital improvements to be carried out during a specific period and listed in order of priority, together with cost estimates and the anticipated means and sources of financing each project. Usually the time period is six years with the first year being a capital budget.

The Township enters into contracts with the County Road Commission for reconstruction and repaving on local roads on a 50-50 match basis. As discussed earlier, this type of arrangement has been beneficial to the Township as well as to the Road Commission in prioritizing which roads in the Township need reconstruction or repaving. This type of an effort should be continued. The County Road Commission ranks all paved roads every four years. 1996, 2000 and 2004 data are available. The Township Planning Commission should review this data when available as well as other road needs. Appendix C includes a road ranking system that was included in the original Township Plan. It may need updating, but is a relevant starting point for a contemporary ranking

system. Road improvement recommendations should be considered annually as part of the CIP process in order to allow the Planning Commission to identify transportation needs and to recommend projects consistent with this Plan.

In addition, the Township should pay additional attention in the future to construction projects such as bridges, culverts, drainage, etc. that have previously not been considered a priority for funding. Similarly, more attention should go to constructing new pedestrian and bicycle paths now that a path runs from the US-41/M-28/Cherry Creek Road intersection all the way to Marquette.

### POTENTIAL PLANTS FOR USE ALONG STREETS AND HIGHWAYS

The following plants are suitable for planting along public streets and highways in Chocolay Township. Some are more salt tolerant than others and care should be given to selection of plants that are best suited to the conditions they will face when planted.

#### Deciduous Trees:

Common Name	Scientific Name
Shademaster Locust	Gleditsia triacanthose 'Shademaster'
Larch*	Larix species (a deciduous conifer)
Ornamental Pears	Pyrus species
Red Oak*	Quercus rubra
White Oak*	Quercus alba
Black Locust*	Robinia pseudoacacia
Paper Birch*	Betula papyrifera
Basswood	Tilia Americana
Shrub Maple	Acer ginnala
Ginkgo	Ginkgo biloba
Serviceberry*	Amelanchier species

#### Evergreen Trees:

Common Name	Scientific Name
White Spruce*	Picea glauca
Colorado Spruce	Picea pungens
Austrian Pine	Pinus nigra
Junipers (*Eastern Red Cedar is native)	Juniperus species (*Juniperous virginiana)
Norway Spruce	Picea abies

#### Shrubs:

Common Name	Scientific Name
Alpine Current	Ribes alpinum
Siberian Pea	Caragana arborescens
Honeysuckle	Lonicera species
Bridalwreath Spirea	Spirea Vanhouttei
Snowberry	Symphoricarpus species
Lilacs	Syringa species
Forsythia	Forsythia species
American Cranberrybush Viburnum*	Viburnum trilobum
Mockorange	Philadelphus species
Arrowwood Viburnum*	Viburnum dentatum

*\*Native species. These plants may be more likely to survive than ornamental species and can more favorably contribute to a natural, rural visual character.*

# PART TWO

## GROWTH POLICY



## Chapter 8

# VISION, GOALS, POLICIES, AND OBJECTIVES

### INTRODUCTION

The bulk of the Comprehensive Plan is composed of statistics, maps, figures, projections, and hundreds of details ranging from specific land use criteria and local soil conditions to the locations of Areas of Particular Concern. This information, when digested properly, will provide a framework for understanding the Township's planning needs and a rational growth strategy. To implement the growth strategy, decisions must be made by Township leaders. This chapter will assist those decision-makers in determining what directions the Township could take by outlining specific goals, policies, and objectives for each of the functional decision areas.

To assist in a complete understanding of this chapter, four basic terms must be explained:

Vision: This is a description of what residents of the community want it to be like in the future, usually about 20 years into the future. It is based on a series of exercises conducted with residents at a public, visioning or futuring meeting.

Goal: (Long term) The generalized end toward which all efforts are directed. It is normally stated in terms of fulfilling broad public needs or the alleviation of major problems. Goals tend to not be immediately attainable because they are generally unmeasurable and idealistic.

Policy: A statement of position or course of action which provides a means to attaining the stated goal. They are factual rather than value-laden, and can be measured by the impact it has on existing conditions. Since it is an adopted strategy, it must be periodically evaluated and revised. It must also be within the Township's authority and resource capabilities.

Objective: (Short term) A specific alternative towards which effort is directed, derived from goals. It is expressed in measurable terms and is quantifiable. It must therefore be attainable and realistic considering the Township's resources. Objectives are targets to be achieved, relating what has to be completed to achieve the goal.

### VISION STATEMENT

#### Introduction

The Township website ([www.upsell.com/choctwp.htm](http://www.upsell.com/choctwp.htm)) opens with the following:

Our vision for Chocolay Township is a community:

- Which is forward thinking,
- Where there is a strong sense of place, belonging and pride,
- Where development is compatible with the maintenance of our "quality of life",
- Where development is "park-like",
- Where quality of development is favored over quantity of development,
- Where the community is environmentally conscious,

- Where water is clean and accessible,
- Where sound forestry and agricultural land use is encouraged,
- Where the community is known for its beauty,
- Where there are green zones which include parks, corridors and naturally buffered activity areas throughout,
- Where we develop along the “village concept”, and
- Where the total community (public and private) supports the vision.

This vision was developed for the Chocolay Township Strategic Plan in October 1995 and remains a succinct description of the future desired for the Township.

Following is a vision statement that describes Chocolay Township as residents in 2005 want it to be in the year 2025. This statement was prepared based on a Visioning Town Meeting conducted on August 5, 2004 and a leadership survey two months earlier. It was refined following subsequent Planning Commission, Township Board and public input.

Photo 8-1

**Chocolay Residents Help Create the Vision for a Sustainable Community in 2025**



The vision statement is organized into topic areas that separately focus on key elements of the Township and the process of planning for and managing its future. It is consistent with the vision on the Township website, and attempts to give a clearer view of the desired future. Following the vision statement are goals and policies to chart a path for achieving the vision statement. These provide a clear direction for future decisions, both short and long term, to achieve the vision.

When reading this vision, it is necessary to mentally “transport” yourself into the future. Thus, there are references “back” to the early 2000’s. This approach is intended to give the reader a clearer sense of the desired future.

**Proactive Planning and Sustainability**

Chocolay Township has moved into the third decade of the 21st century as one of the most desirable places to live within the Upper Peninsula of Michigan. Residents and businesses in Chocolay Township enjoy a rich, diversified quality of life and are reaping the benefits of proactive planning

and commitments started in the 1990's and refined in the early part of this new century.

Chocolay Township has become a true reflection of sustainability. Sustainability means meeting the needs of all the people of the present generation, in all parts of the Township, without compromising the ability of future generations to meet their own needs. Neighborhoods, businesses, local government, parks and natural resources are healthy and self-sustaining in 2025. Reaching sustainability required the community to look beyond short-term gains in order to plan for a better life for its children and grandchildren.

Growth in Chocolay Township has been characterized by a mix of land uses, that have helped balance the tax base, with commercial and limited industrial growth helping to support services desired by both businesses and the residential population. Some of the stores that Chocolay residents had to drive a considerable distance to reach have now located in Chocolay Township.

Where business development has occurred, it has done so in a character that has maintained or enhanced the visual character of the community, and has been built close to existing population centers.

**Quality of Life: Impressions, Standards and Visual Character**

When asked about Chocolay Township, residents use descriptive terms like "lots of green," "sense of space," "avoids problems of city," "good schools," "quick work commute," "great recreational opportunities," "no sprawl," "woods and forests," and "clean water." In Chocolay Township, large-scale changes to the landscape have been minimized by the consensus decision of community leaders to permit growth that meets standards of sustainability, maintenance of the natural resource base and visual character.

Photo 8-2

**Chocolay Residents Envision "Lots of Green"  
as a Measure of a High Quality of Life**





The major corridors within Chocolay Township have a vegetated, natural, visual character, with well-designed and well-kept businesses, homes and signs.

Special efforts to improve areas of decline have paid off with a turnaround in those neighborhoods and business areas.

**Quality of Life: Close to the City but Retaining Rural Qualities**

Chocolay has the advantages of close proximity to Marquette, which provides jobs and many stores, health care services and cultural attractions, and a quiet, low-intensity, rural quality of life.

The vegetated landscape does more than simply provide scenery, as the benefits of nature, quiet and nature-based recreation to citizen mental well-being are recognized as very important. The large area of state-owned land in the eastern half of the Township ensures that natural landscapes will continue. Farming continues as a viable economic enterprise for those landowners interested in continuing in agriculture. Woods and fields help with water infiltration, maintain biological diversity, provide habitat for wildlife and serve as hunting and snowmobiling recreational areas. Property owners have coordinated the retention of natural areas, forming connections to create ecological corridors, enhance recreation and provide a more continuous natural scenic view along transportation corridors. Lakes, streams, wetlands and ponds have buffer plantings that help protect water quality.

The Lake Superior shoreline remains one of the major visual, recreational and environmental features of Chocolay Township. Views of the Lake Superior shoreline have not deteriorated over the past two decades and improved public access is now available.

Photo 8-3  
**Visual and Recreational Access to the  
Lake Superior Shoreline Remains a Major Quality of Life Feature**



Citizens, well-versed in land and water protection approaches, have been deeply involved in making decisions about preservation. Key recreation and natural features parcels have been preserved in the western part of the Township to complement the extensive state holdings in the eastern part. This has occurred by working with landowners, conservancies, developers, Marquette County and the State. Many approaches have been used over the past two decades, including donations, conservation easements and development rights purchases and transfers from willing landowners. As a result, wetlands, forests, farmland and green spaces that comprise the scenic character and ecosystem of the Township have been permanently protected while protecting the property rights of affected landowners.

**Quality of Life: Neighborhoods**

Chocoday Township residential neighborhoods are well-kept and provide a variety of housing choices, especially with the expansion of opportunities for seniors over the past two decades. Neighborhoods that had once suffered deterioration have been improved. There is greater pedestrian access within and between neighborhoods than at any previous time, leading to a safer and healthier lifestyle.

**Quality of Life: Access to Opportunities**

Commercial and industrial employment centers have expanded in Chocoday Township in carefully planned locations that are easily accessed from the county and state road system. These job centers provide new opportunities for some residents to live close to work. Transportation corridors to existing job centers both within and outside the Township have been improved and access has been managed in order to provide for safe and efficient commutes and an attractive and

largely natural view from the road.

**Quality of Life: Recreation**

The Township has long held recreational opportunity as an important aspect of quality of life. Recreational opportunities abound in all seasons, both indoors and outdoors. Chocoley Township is an important destination for snowmobiling, cross-country skiing, hunting and fishing, plus wildlife viewing. A community center, established through creative partnerships, provides indoor recreational opportunities for people of all ages, including youth and seniors. Township parks have been maintained and expanded.

Chocoley Township is known as a walkable and bikable community, providing safe connections for recreation, enjoying nature and for a transportation alternative to driving. These connections are part of a Township-wide greenspace system that includes greenway trails and undeveloped open spaces. There are also links to greenways with trails that extend beyond Chocoley Township into other communities throughout the region. Through manufacturing improvements, appropriate trail siting and new bridge crossings, snowmobiles are no longer a noise nuisance. Recreational riders enjoy their ATVs in designated areas within well-enforced laws.

Photo 8-4  
**Recreational Opportunity Abounds in Chocoley Township**



**Quality of Life: Urban Infrastructure**

Beginning in the early 2000s, the Township carefully planned for the extension of utilities and the expansion of roads in order to foster pockets of growth where appropriate, while preserving uncongested travel and using designs that protect community character. Good quality County primary roads help move people around and through the Township and access management has helped preserve the public investment in roads. In order to maintain a rural character many roads in the rural parts of the Township remain gravel.

### **Quality of Life: Enrichment**

Chocolay Township has gained many of the features and amenities of a city while maintaining its low-intensity quality of life. Township residents have been enriched by new restaurants and unique shops, as growth in the Township population has occurred to support them. These have been clustered where they are convenient to residents, as part of walkable communities and so they do not contribute to sprawl. They fit with the character of the community.

## **GOALS, POLICIES AND OBJECTIVES**

### **Balanced Growth**

#### Goal:

1. Guide development in a manner which is orderly, consistent with the planned improvement of the transportation system and expansion of public facilities, and strives to preserve the quality of life, scenic beauty, foster the wise use of natural resources, protect areas of particular concern, and enhance the special, low intensity character of Chocolay Township.

#### Policies:

1. The Township shall carefully plan for a balanced mix of land uses so that the tax burden of public services is not all borne by residential landowners.
2. Development should occur in locations that are consistent with the capacity of existing and planned public services and facilities, and are cost effective in relation to service extensions.
3. All new development should be consistent with this Plan, the Township Zoning Ordinance and all related ordinances.
4. New development should occur in compact increments adjacent to existing development.
5. The Township should review and comment on all draft plans by other public entities for expansion and improvement of existing road and street networks for impacts on growth patterns and for consistency with the goals and policies of this Plan.
6. Consider the impact of land use planning and zoning changes along the borders of the Township on neighboring jurisdictions, and discuss proposed changes with the affected jurisdiction(s) prior to making such changes. A common procedure for such communication shall be established and followed.
7. Ensure that private property rights are both respected and protected in the implementation of this Plan and related Township ordinances.

Photo 8-5  
**New Development Should Occur Near Existing Development**



Objectives:

1. Update the Zoning Ordinance to reflect the updated goals and objectives of this Plan.
2. Approve infrastructure improvements and development projects that require increased services according to the capacity of the Township to pay for those improvements with as much of the cost of the new improvements borne by those who will directly benefit as possible.
3. Provide educational opportunities and materials for Township residents on the fiscal and quality of life reasons for guiding growth in a planned manner and steps the Township is taking to guide growth.

Explanation:

The goal and the accompanying policies and objectives recognize that the Township has a responsibility to protect and enhance the quality of life of its residents, and to be fiscally prudent in doing so. Unmanaged growth could overextend public services, raising the cost to provide them, and could also destroy the character of the community that resident's value. This Plan and the Township Zoning Ordinance are designed to prevent the negative impacts of unmanaged growth.

**Housing/Residential**

Goal:

1. Encourage a variety of residential dwelling types in a wide range of prices which are consistent with the needs of a changing population and compatible with the character of existing residences in the vicinity.

Policies:

1. Recognize through the administration of land use controls and other development policies that the provision of housing is a public as well as private responsibility.
2. New housing should be located in areas without significant environmental hazards.

3. Encourage variety in the housing stock through revision and enforcement of the Zoning Ordinance, subdivision regulations, and other land use controls.

Photo 8-6  
**Encourage Variety in the Housing Stock**



4. Encourage energy-efficient housing types.
5. Encourage improvement of housing and subdivision design.
6. Encourage improvement of the numbering system to improve emergency vehicle accessibility.
7. Stabilize property values by protecting residential areas from the encroachment of incompatible land uses.
8. Encourage the upgrading and improvement of residential dwelling units showing signs of deterioration.
9. Discourage the pattern of scattered, rural housing in areas of important and prime farmland.
10. Maintain within the Zoning Ordinance acreage for multi-family and mobile home development.
11. Consideration should be given to the need for housing assistance for the elderly, low income, and handicapped families and other segments of the Township population.
12. Maintain “rural residential” with a large minimum lot size as the primary residential land use in the Township in those areas where sewer and water are not available or planned. Encourage the clustering of such dwellings where the land is suitable for such a design and it would help preserve the rural character of the area, especially as viewed from the road.
13. Explore alternative measures to reduce housing costs and make home ownership



more affordable, such as zoning regulations and other programs which are designed to reduce the cost of constructing new housing, provided the exercise of these measures still preserves the character of the area in which the housing is to be built.

14. Expansion of existing mobile home parks or construction of new mobile home parks adjacent to existing mobile home parks should be encouraged over the creation of new mobile home parks elsewhere in the Township.

15. Allow only quiet, low traffic, low intensity home occupations in residential areas to preserve the stability of existing neighborhoods.

16. Consider, adopt and enforce a basic property maintenance code.

17. Encourage the preservation and retention of older homes to maintain community character and history and utilize zoning regulations to prevent homeowners from splitting older single family homes in neighborhoods of exclusively single family homes into multiple family apartment or condominium units.

18. Encourage eligible landowners to participate in federal, state or county housing rehabilitation grant programs.

#### Objectives

1. Annually review changes which have occurred in the Township's housing stock (new construction, demolition, conversions, etc.) to determine the extent to which adequate choices exist with respect to housing type and price range.

2. Perform an evaluation of the Zoning Ordinance and other codes and regulations and modify them if necessary to insure that a wide variety of housing types and prices is enabled.

3. Foster educational opportunities for Township residents on increasing the energy efficiency of their homes.

4. Foster educational opportunities for Township residents on building maintenance codes and any changes in Township codes, and in assistance programs available to improve deteriorating structures.

#### Explanation

The goal and the accompanying policies and objectives recognize that currently there exists little variety in housing types within the Township. The predominant housing type is the single-family home. The second most prevalent is the mobile home. While the Township does not directly decide the precise mix of housing types, it does have an influence through the administration of zoning and other land use controls. Housing prices are also influenced by land use controls.

The strategy set forth above will help ensure that land use regulations do not present an obstacle to the construction of a variety of housing types and price ranges on a variety of different sized lots and via ownership or rental means.

Goal:

2. Housing needs are met in Chocoley Township without straining the capacity of local governments to provide essential public services.

Policies:

1. New developments should pay for the full cost of sewer and water extensions (if a public water system is created) and densities will be sufficient for the long-term cost-effective support of those systems in areas where these services will be extended.

2. The Township should ensure new residential subdivisions and site condominium projects are permitted of a size and scale that does not exceed the capacity of roads serving the development.

Photo 8-7

**Residential Developments Should Not Exceed Road Capacity**



3. Residential development patterns throughout the Township should reflect economical and efficient use of land and be especially mindful of the value of protecting renewable resource lands such as agricultural, forestry and other land-based resources from premature conversion or land fragmentation.

Objectives:

1. Local officials, developers, realtors and residents understand housing trends and the relationship between different residential development patterns and their fiscal, environmental and scenic quality effects.

2. The Zoning Ordinance will be updated to direct new, higher density residential developments to areas where roads and infrastructure are available or are planned to accommodate such density, with larger lot sizes away from Harvey and other settlements.

3. The Township Planning Commission, in cooperation with local jurisdictions, realtors, developers and other interest groups will develop educational materials for citizens and home buyers on housing trends in the Township, and the potential impact of those trends with alternatives that provide for residential development that minimize adverse

effects on community finances, the transportation system, scenic character and the environment.

4. New developments should be discouraged in areas where there are not all season roads. The Township will adopt zoning regulations limiting development on gravel roads to a level that does not exceed gravel road capacity.

5. The Township will strongly encourage that all roads in new developments be public roads, and adopt regulations that require whenever more than two dwelling units are served, the road shall be public. However, since there are already nearly three-dozen private roads in the Township, the Township will maintain private road standards that require adequate emergency vehicle access without excessive surface water runoff or damage to rural character and which ensures proper long term maintenance of the road.

6. The Zoning Ordinance will be updated to zone rural areas of the Township with a density based standard to prevent over development. Overall density will be tied to maximum lot sizes to encourage clustering and the retention of open space.

Explanation:

This goal, objectives and policies recognizes that an unplanned pattern of new housing development can place a tremendous strain on the capacity of the Township to provide a variety of services to residents. In order for the Township to continue to be fiscally responsible, it will need to guide intensive development in a compact pattern the taxpayers can afford to service.

Goal:

3. Land is not divided into parcels of a number and/or size that negatively affect transportation, the environment, areas of particular concern, provision of services by local governments and rural character.

Policies:

1. The regulation of land division is actively and thoroughly implemented to the full extent of the law by Chocolay Township.

2. Appropriate land division standards prevent unbuildable lots or those that create traffic hazards, harm the environment, limit agricultural activities, create unnecessary public service burdens or contribute to the destruction of rural character.

Objectives:

1. Land division regulations are periodically reviewed to ensure they remain consistent with state law, this Plan and the Zoning Ordinance.

2. The Township land division standards are posted on its website, so they are readily available to land owners, realtors and persons interested in buying land in Chocolay Township.

3. The Township makes available educational materials on appropriate land division practices.

Explanation:

The goals, policies and objectives recognize that how land is divided—the size and

shape of a parcel and the capacity of the land to support development of that parcel— affects the use of roads, the health of the environment and the cost for the community to provide services compared to the revenue generated by those parcels. It also affects the range and type of land uses that might be built there. Thus, it is an important tool for managing growth and needs to be periodically reviewed and updated.

Goal:

4. Residential development fits the scenic, rural character of Chocolay Township.

Policies:

1. The Township should adopt rural residential development standards that set aside open space and employ vegetative buffers along roadsides and where there are sensitive environments, greenways and potential trail and wildlife corridors. These standards should be adopted as part of site plan review, cluster ordinances, conservation subdivision ordinances, site condominium ordinances and planned unit development ordinances.

2. The Township should adopt and promote design guidelines for residential development, both for single parcels and for large parcels developed with multiple homes, that promote roadside open space and buffers to protect or enhance scenic quality.

3. The Township will employ capital improvements planning to phase investment in new infrastructure and improvements.

Objectives:

1. Chocolay Township will identify important open space and scenic resources, including public lands, focus attention on protecting open space, rural character, scenic views and provide a package of tools to accomplish this.

Photo 8-8  
**Vegetative Buffering can Protect Scenic Quality**



2. The Zoning Ordinance will be updated to ensure new residential development respects the natural conditions and characteristics existing in the Township.

3. Design guidelines (such as the extensively illustrated **Grand Traverse Bay Region Development Guidebook**) will be used to educate landowners and developers on how residential development can protect scenic quality through vegetative buffering and other techniques.

Explanation:

This goal, policies and objectives recognize that the Township Comprehensive Plan, Zoning Ordinance and other regulations and actions foster a style of compatible development that is not self implementing and that without the Plan and appropriate regulations, new development can destroy the visual character of the Township. The Township can modify its regulations and actions to better protect Chocolay Township scenery and visual character.

Goal:

5. New residential development enhances Harvey and existing concentrated settlement areas and is compatible with historic sites.

Policies:

1. The Township Planning Commission will help develop design guidelines for historic preservation within the Township.
2. The Township Planning Commission will help develop design guidelines for residential development that identifies local architectural character.
3. The Township will require that new subdivisions and site condominium projects include provision for bicycle and pedestrian circulation between residential areas, town centers and important natural features.
4. The Township Planning Commission will encourage new residential development to occur adjacent to and to be of the same character as existing neighborhoods of Harvey and other settlements.

Objectives:

1. Actively encourage redevelopment and expansion of existing neighborhoods, reinforcing and strengthening the small town character in the Township.
2. Encourage new residential development that creates a sense of place and achieves harmony with existing development and historic sites.
3. Create new neighborhoods which are pedestrian oriented and interconnected with the larger community by non-motorized forms of transportation.

Explanation:

This goal, policies and objectives recognize that both the pattern and the design of new development will affect the quality of life for community residents, and new development that provides for efficient movement of cars and pedestrians, protects the visual identity of historic and newer places, and protects the environment will fit most comfortably into the life of Chocolay residents.

## **Commercial**

### Goal:

1. Encourage the development of commercial land uses in appropriate locations which serve the current and future needs of residents and visitors, are of a character consistent with community design guidelines, and which promote public safety through prevention of traffic hazards and other threats to public health, safety, and general welfare.

### Policies:

1. Encourage new commercial development to locate adjacent to existing commercial areas, with the only concentration of commercial development at the US-41/M-28 intersection and west to the MDOT Visitor's Center (the west Township line) along only the east side of US-41 (except at the intersection with M-28).
2. Promote the development of small commercial centers off M-28 and US-41 adjacent to existing commercial development, rather than as lot-by-lot commercial strips.

Photo 8-9

### **Promote the Development of Small Commercial Centers Adjacent to Existing Commercial Development, Such as Beaver Grove**



3. Encourage the design and location of commercial development in a manner which complements and does not conflict with adjoining residential areas. This will require separate regulations for neighborhood commercial development and general commercial development.
4. Encourage a compatible and desirable mix of commercial uses.
5. Provide design guidelines to commercial landowners which promote similarity in the height and design of storefronts and buildings and which prevent the creation of structures whose mass is too great for the lot and structures on adjoining lots.
6. Improve unsafe and unsightly strip commercial development along the M-28/US-41 corridor through design and landscaping requirements such as maintaining existing large trees, creating berms, planting, and providing shared access and shared parking when possible.



7. Encourage landowners to maintain and where necessary improve the condition of commercial structures and parking lots.

8. Avoid separate parking lots for each business and encourage centrally placed lots which serve several businesses, where feasible.

Photo 8-10

**Encourage Centrally Placed Parking Lots that Serve Several Businesses**



9. Implement access management regulations along both US-41 and M-28 consistent with the Access Management Plan for US-41/M-28.

Objectives:

1. Assist in the design and creation of a commercial center in Harvey, from the west Township line to the US-41 and M-28 intersection.

2. Acquire the right-of-way for the eventual construction of a boulevard on M-28/US-41 from the west Township line to the US-41 and M-28 Intersection. Ensure appropriate context-sensitive design standards are used to respect and enhance community character.

3. Foster the visual enhancement of, safety and pedestrian and bicycle access to the small commercial nodes at the intersection of County-480 and US-41, the intersection of Hiawatha Road and M-28, at the Varvil Center and at the Casino.

4. Create and distribute commercial development design guidelines.

Photo 8-11  
**Foster Visual Enhancement, Safety and  
Pedestrian and Bicycle Access at the Varvil Center**



Explanation:

This goal, policies and objectives recognize that in order for the Township to diversify land uses, and tax base it is necessary to include commercial uses in a pattern and design that has a positive impact on the community. The Township will have to take an active role in the process, helping to acquire rights-of-way for a transportation corridor, adopting access management measures and revising the Zoning Ordinance to promote attractive and efficient designs.

**Industrial**

Goal:

1. Encourage the location of non-polluting light industry in the Township without damaging the environment, spoiling the scenic beauty of the area, or overburdening local roads, utilities, or other public services.

Policies:

1. New industries should locate contiguous to existing industrial facilities and in new locations with appropriate public utilities and adequate roads to minimize service costs, traffic problems and negative impacts on other land uses.
2. Implement site plan requirements for light industries which are designed to incorporate generous amounts of open space, attractive landscaping, and buffering from adjacent non-industrial uses.
3. Require the separation of industrial sites from residential areas through buffers made up of any combination of parking, commercial or office uses, parks, parkways, open space, forests, tree plantings or farmland.

Objectives:

1. Provide opportunities for an industrial park in the Township.
2. Attract appropriate industries to the Township in order to expand the tax base and increase jobs.

### Explanation:

The goal, policies and objectives recognize that diversification of the tax base and expanding jobs is important to the community, along with insuring that new industrial development fits into the existing pattern of the community without placing a burden on residential areas, transportation networks and the environment.

## **Transportation**

### Goal

1. To provide for the safe and efficient movement of people and goods with a balanced transportation network at minimal environmental and fiscal cost.
2. To coordinate the improvement of the transportation network with the overall development of the Township.

### Policies

1. All road construction, whether public or private, should meet appropriate minimum design standards.
2. Encourage alternative uses for abandoned rail and road facilities, such as pedestrian/bike trails in the summer and ski pathways and snowmobile trails in the winter.
3. Encourage and properly provide for the use of alternative forms of transportation, such as bicycles, car-pooling, etc.
4. Discourage the proliferation of curbcuts and driveway intersections so that the capacity of major traffic corridors can be maintained and public safety improved.
5. Establish the maximum capacity of existing gravel roads and zone contiguous land at densities that do not exceed gravel road capacity and in a manner consistent with this Plan.

### Objectives

1. Develop the M-28/US-41 corridor from the Township line to the M-28/US-41 intersection as a boulevard which is tree-lined and appropriately landscaped.
2. Develop a ring-road around the M-28/US-41 intersection in order to safely accommodate local commercial and industrial traffic, off the main road.
3. Develop a new road into Harvey on the east side of US-41, to link to the downtown.
4. Implement access management regulations on the M-28 and US-41 corridors.
5. Provide pedestrian cross-walk signals at the M-28/US 41 intersection in order to improve pedestrian safety and access.

Photo 8-12  
**Improve Pedestrian Safety and Access Along US-41/M-28**



6. Continually revise and strengthen the Township's Zoning Ordinance, subdivision regulations, and other land use controls to reflect the Township's transportation needs and design standards.
7. In cooperation with the Marquette County Road Commission and the State, adopt and implement an annual Capital Improvements Program for road improvements. Target roads and intersections for improvement in areas with recent and planned increases in development.
8. Annually review road conditions throughout the Township and recommend a priority for road improvements. Gravel roads should remain gravel until such time as the density or intensity of development requires paving.
9. Identify and classify roadways within the Township as suggested by the State Department of Transportation.
10. Periodically review the potential for providing public transportation service in the Township.
11. Seek methods of reducing the number and length of unused county road right-of-ways.

Explanation

Since the Township is inhabited by a number of persons who commute to adjacent areas to work, shop, etc., the automobile is the most important transportation mode. For this reason, the goals, policies, and objectives strongly emphasize appropriate improvements to the road system and the coordination of these improvements with the overall development of the Township. This will ensure that future development, which will be influenced by the road network, and will occur in areas which are consistent with the desires of the Township as expressed in the Comprehensive Plan.

## **Economy**

### Goal

1. To provide an environment within which a diverse and stable economic base may be developed.

### Policies

1. New economic development should be limited to that which will significantly increase local employment, tax revenues, and/or commercial services in relationship to the cost of providing services to the development.

2. Balance the supply of public services provided by the Township with the demand and willingness to pay for those services.

3. Wherever possible, services should be financed by users of the service through special assessment districts, user fees, etc.

4. Encourage well designed, safe, convenient, well landscaped and attractive commercial plaza type developments.

### Objectives

1. Annually review the area economy to identify emerging trends and work with other governments in the area to expand employment opportunities.

2. Encourage expansion of retail-wholesale and service industries within the Township to meet the needs and services desired by Township residents and study the use of limited special tax incentives without competition with the City of Marquette for big box retailers.

Photo 8-13

### **Encourage the Expansion of Retail, Wholesale and Service Businesses**



3. Encourage conversion of noncommercial land use within existing commercial zones to commercial uses.

4. Encourage carefully designed commercial areas which are safe, convenient, environmentally sound, well landscaped and attractive.

### Explanation

Taken together, the above statements express the realization that further economic

development is important, but that the character of the Township should not be sacrificed for the sake of short term economic gains. Similarly, the relationship between the Township's ability to provide services and the people's demand for services, and willingness to pay for them, is acknowledged. Lastly, it is suggested that the Township make use of special assessment districts and user fees whenever possible so that only the benefiting landowners pay for the cost of the expanded services.

### **Natural Features**

#### Goal

1. Preserve and enhance Chocolay Township's natural environment by utilizing the natural resources in an orderly and prudent manner.

#### Policies

1. Ensure that the use of land and the intensity of use is suitable to the natural environment.
2. Encourage the preservation of prime agricultural and forest production areas from more intense types of land use.

Photo 8-14

### **Encourage the Preservation of Agricultural and Forest Production Areas**



3. Avoid further development of land in designated "areas of particular concern."
4. Encourage the preservation of high quality fish and wildlife habitat.
5. Coordinate watershed management activities with the Chocolay River Watershed Advisory Council and the Marquette County Soil and Water Conservation District.

#### Objectives

1. Periodically review designated "areas of particular concern" and enact strict controls on development in those areas of high risk erosion, steep slopes, wetlands, and other natural and cultural "areas of particular concern."
2. Encourage the state Department of Natural Resources and the Marquette County Soil and Water Conservation District to further study the sedimentation problem in the Chocolay River and its tributaries, and to work with the Chocolay River Watershed Advisory Council to recommend solutions.



3. Enforce high risk erosion area and floodplain regulations by including in the Zoning Ordinance.
4. Continue to enforce the sand dune protection regulations in the Zoning Ordinance.

Photo 8-15  
**Continue to Protect Sand Dune,  
High Risk Erosion Areas and Floodplains**



5. Annually evaluate the performance of the Zoning Ordinance, subdivision regulations, and other land use controlling ordinances to protect natural features.
6. Prepare educational materials for Township residents and business owners featuring the "areas of particular concern," and best management practices to protect those resources.

#### Explanation

Several concerns are embodied in the above statements. First, there is the need and desire to give full consideration to the natural character and qualities of the land and water resources in making development decisions. The vehicles for accomplishing this include: the designation of "particular areas of concern," zoning and subdivision regulations, and the provision or non-provision of utilities and services. Secondly, there is the need to learn more about the nature of the problems associated with the Chocoday River in particular, which the Chocoday River Watershed Advisory Committee seeks to understand and correct. Lastly, it is recognized that the Township is growing and developing, and therefore development controls must be reviewed periodically to assure that they are producing the desired results.

#### **Recreation**

##### Goal:

1. Enhance the well-being of area residents by providing a variety of opportunities for relaxation, rest, activity, and education through a well-balanced system of private and public park and recreational facilities and activities located to serve identified needs of

the area.

Policies:

1. Identify and explore opportunities to cooperate with other jurisdictions, with county and state agencies, including Marquette County and the Department of Natural Resources, as well as with other local organizations, on recreation projects which would benefit area residents and strengthen the tourism industry.
2. Examine the feasibility of, and establish if feasible, a shared use building to house a community center to serve residents of all ages.
3. Examine the feasibility of expanding low cost opportunities for public beach facilities for area citizens.
4. Promote a system of non-motorized, biking, hiking and cross-country ski trails with other jurisdictions or agencies if possible, through the use of local funds, grants and loans, and coordinated long-term capital improvement programming.

Photo 8-16

**Promote a System of Non-Motorized Trails with Other Jurisdictions,  
Such as on this Abandoned Railroad Right-of-Way**



5. Encourage local government participation in activities designed to enhance the area's seasonal festivals.
6. Retain, maintain, and improve all existing publicly owned parks so that they continue to meet the diverse recreation needs of area citizens and tourists.

Objectives:

1. Implement the recommendations of the 2004 Recreation Plan, and those of subsequent Recreation Plans.
2. Prepare a non-motorized transportation and recreation plan for the Township.
3. Expand trail opportunities for bicycle and pedestrian use of the snowmobile trail by providing a smooth surface that will make it usable for persons with disabilities or a wide

variety of users and seeking funds to acquire and develop other trail routes.

4. Prepare educational materials for citizens and developers on the health benefits of having a walkable community and on techniques to make new and existing developments more walkable and bikable.

Explanation:

This goal, policies and objectives recognize the importance of recreation sites in general, and walking, biking and other activity trails specifically in the well-being of residents, and seeks to foster an expanded recreation system and a trail system connected to residential, commercial, governmental and recreation sites.

**Community Facilities**

Goal

1. Provide public facilities and services as requested by Township residents, and at the best value for the expenditures.

Policies

1. Continue to provide adequate administrative facilities for governmental and community use.
2. Provide a sewage collection system in accordance with decisions based on environmental needs and public cost.
3. Encourage the Township to pursue planning and financing for future, phased water facilities.
4. Encourage conservation and maintenance of the existing quality of the water supply.
5. Continue to provide solid waste collection with an economically equitable system and consider expanding recycling opportunities.
6. Provide adequate recreational facilities to meet Township needs.
7. Provide adequate police and fire protection for the Township.
8. Develop, annually update and implement a Capital Improvements program which meets the Township's needs and is consistent with this Plan.
9. Provide other services to the Township in accordance with the ability and willingness of the people to pay for them.
10. Update the Township's Recreation Plan every five years in order to qualify for Natural Resources Trust Fund grants.
11. Whenever feasible, expand recycling opportunities.

Objectives

1. Prepare a plan for the future expansion of the Township Offices.
2. Prepare design plans for development of local park areas and public access to water

areas.

3. Obtain advice from the state Department of Natural Resources and the Army Corps of Engineers on the feasibility of keeping the Chocolay River mouth open.

Photo 8-17

**Study the Feasibility of Keeping the Chocolay River Mouth Open**



4. Encourage the state Department of Natural Resources and Natural Resources Conservation Service to assist the Marquette County Soil and Water Conservation District to implement action items in the Chocolay River Watershed Plan.

5. Develop a mapping and numbering system of the Township to provide adequate fire protection and other emergency services.

6. Consider installing an elevated storage tank or other options for rapid filling of fire fighting equipment and construct a public water system to serve Harvey and US-41/M-28 from the west Township line to the area served by the intersection of the two highways.

7. Study and adopt special assessment districts to fairly distribute public costs in critical service areas where deemed necessary.

8. Annually review and prioritize a program of capital improvements.

Explanation:

This goal, policies and objectives recognize that the Township needs to provide facilities and services for a relatively small, residential population spread over a large area, which requires careful use of limited funds, while at the same time, residents increasingly desire more elaborate and sophisticated services. Thus, it focuses on providing and expanding services first in the Harvey area, where the bulk of the Township residents and most businesses are located.

## **Community Character**

### Goals:

1. Retain and enhance the quiet, scenic, and small town/rural character of Chocolay Township.
2. Preserve the established character of neighborhoods within Chocolay Township.

### Policies:

1. Encourage architectural and site design that complements, rather than detracts from existing development on neighboring parcels.
2. Encourage the preservation and restoration of historically significant structures.

Photo 8-18

### **Encourage Preservation and Restoration of Historically Significant Structures**



3. Preserve the character of the area by encouraging land uses and densities/intensities of development which are consistent with and complement the character, economic base, and image of the area.
4. Improve the appearance of entrances into the Township through landscape designs, signs, and land development which promote the vitality and character of each community, without unnecessary clutter or safety hazards.
5. Manage the trees lining streets in residential and commercial areas to provide a continuous green canopy. Plant indigenous trees along the M-28/US-41 corridor and maintain them along other roads in the Township. Encourage the use of “context sensitive design” on roads in Chocolay Township.
6. Discourage the development of “bigfoot” homes that restrict views, block light and the free flow of air for neighbors, detract from the charm of a neighborhood, and serve as a catalyst for sending excess stormwater runoff onto abutting properties and into lakes and streams.
7. Discourage designs which would block significant views and vistas.
8. Ensure enforcement of existing ordinances and regulations to better preserve the

established character of Chocoley Township and promote the goals and policies of this Plan.

9. Consider the adoption of “dark sky” provisions to the Zoning Ordinance that will provide for adequate down lighting of streets, parking lots, sidewalks, yards and signs in order to prevent the creation of a halo of dispersed light over the Township that can diminish the view of stars and the northern lights.

Objectives:

1. Prepare and implement a Scenic Character Preservation Plan for Chocoley Township with mapped scenic areas and design guidelines for property owners on how to manage their properties in order to protect the scenic quality of the Township.

Photo 8-19

**Prepare and Implement a Scenic Character Preservation Plan for Chocoley Township**



2. Update the sign ordinance to insure it helps protect the visual quality of the Township as viewed from Township roads and highways.

3. Provide residents with educational materials on the historic structures in Chocoley Township and on approaches to protecting them.

4. Update the Zoning Ordinance to provide for setbacks, natural landscaping, buffers and other provisions to protect scenic visual character.

5. Consider creating and enforcing property maintenance codes for the upkeep and maintenance of homes and businesses.

Explanation:

These goals, policies and objectives recognize that the appearance of Chocoley Township, which has both natural scenery and small town charm, is important to the quality of life of the community, and that it will require an active involvement of the Township and knowledgeable, committed citizens in order to preserve the community's visual character.



## Chapter 9 AREAS OF PARTICULAR CONCERN

### INTRODUCTION

Throughout this Plan, mention has been made of "areas of particular concern." Originally an environmental planning concept used by the Michigan Department of Natural Resources to indicate potentially threatened habitat areas, the term, "Areas of Particular Concern" was expanded in the 1989 Chocolay Township Comprehensive Plan to include both cultural and natural resource areas. In this update of the Comprehensive Plan, Areas of Particular Concern are defined as those geographic areas which are significant because of their importance to a quality of human living and the enrichment of the human experience. This may be due to unique values, resources, problems, or conflicts. They incorporate these key concepts: a) they are limited in quantity either in total amount or within any given geographic area; b) they are irreplaceable; once destroyed or altered, the resources will not or cannot be replaced, c) they are sensitive and fragile areas, and d) Township growth patterns place a unique burden on the land, water, infrastructure or existing or future occupants of the area.

Photo 9-1

**Areas of Particular Concern Include Areas that are Irreplaceable, Fragile, Limited and have Unique Value – Many are Natural Areas**



For areas identified as such, the underlying objective is to express some measure of concern, and to manage these areas so as to conserve resources, resolve conflicts, and foster preferable land and water uses. It is inevitable that the expanding needs for development will impact Areas of Particular Concern, either directly or indirectly. However, to provide for the orderly and coherent development of those areas and surrounding lands, this Plan should incorporate the appropriate management principles for Township Areas of Particular Concern, including measures to coordinate with agencies at various levels of government.

This chapter will attempt to provide a guide in identifying and dealing with Areas of Particular Concern. This discussion will include natural, and cultural Areas of Particular Concern. It will consist of those areas previously mentioned in this Plan and other significant Areas of Particular Concern found within the Township. This chapter then concludes with suggestions for specifically managing Chocolay Township's proposed Areas of Particular Concern.

The 1989 Plan included a Decision Map to indicate areas used, suitable or suitable with limitations for different purposes. Instead of a Decision Map, an Areas of Concern Map (Map 9-1) has been created to reflect current important issues, including areas of particular concern. Many other special areas, especially environmental ones, are depicted on maps in other chapters (especially Chapter 4).

### **PROPOSED AREAS OF PARTICULAR CONCERN IN CHOCOLAY TOWNSHIP**

The list below is an inventory of those areas deserving classification as an Area of Particular Concern. It is separated into natural areas and cultural areas. Natural areas are those characterized by a lack of human land change activity even though they may or may not be under human control now. Cultural Areas of Particular Concern are man-made or developed artifacts. Other areas include those involving infrastructure or recent and anticipated settlements. The categories are clear-cut and self-explanatory. The following listing is by no means conclusive, and should continue to be periodically updated.

#### **Natural Areas of Particular Concern**

1. Environmental (wetlands, wildlife, plant life areas, etc.)
  - Cherry Creek watershed
  - Waterfowl area on Lake LeVasseur
  - Escanaba River State Forest
  - Jeske Flooding
  - Natural features as identified in the Marquette County Natural Features Inventory
  - All wetlands within the Township as identified in the Comprehensive Plan or as determined by the DNR or Zoning Administrator

Photo 9-2

#### **Chocolay Township has Significant Natural Areas of Particular Concern, such as Lake Le Vasseur**



2. Wilderness and Natural/Scientific Area

- Fish hatchery on Cherry Creek
- Waterfowl area on Lake LeVasseur

3. Geologic Formations

- Steep sloped areas as identified in the Comprehensive Plan
- Protruding bedrock areas as identified in the Comprehensive Plan
- Rock Bluff area. See Map 9-1, Areas of Particular Concern Map.

4. Flood Areas

- All flood areas identified in the Federal Emergency Management Agency (FEMA) Flood Rate, Flood Hazard Areas Map, Map for Chocolay Township. See Map 4-4 in Chapter 4.

5. Erosion Areas

- High-risk erosion areas on Lake Superior shoreline as identified on Map 4-5 in Chapter 5.

6. Shorelands

- High-risk erosion areas as designated on the Lake Superior shoreline. See Map 4-5.
- Chocolay River mouth
- Coastal shores of Lake Superior (Harvey and Shot Point area)
- All Lake Superior waters and bottomlands

7. Lakes (inland)

- Lake Kawbawgam and Lake LeVasseur

8. Rivers and Streams

- All rivers and streams within the Township
- In particular, the Chocolay River Watershed.

Photo 9-3  
**Stream Crossing Stabilization on Chocolay River**



*Source: Chocolay River Watershed Project*

9. Agricultural Lands

- All land currently under cultivation.

10. Prime Forestry Lands

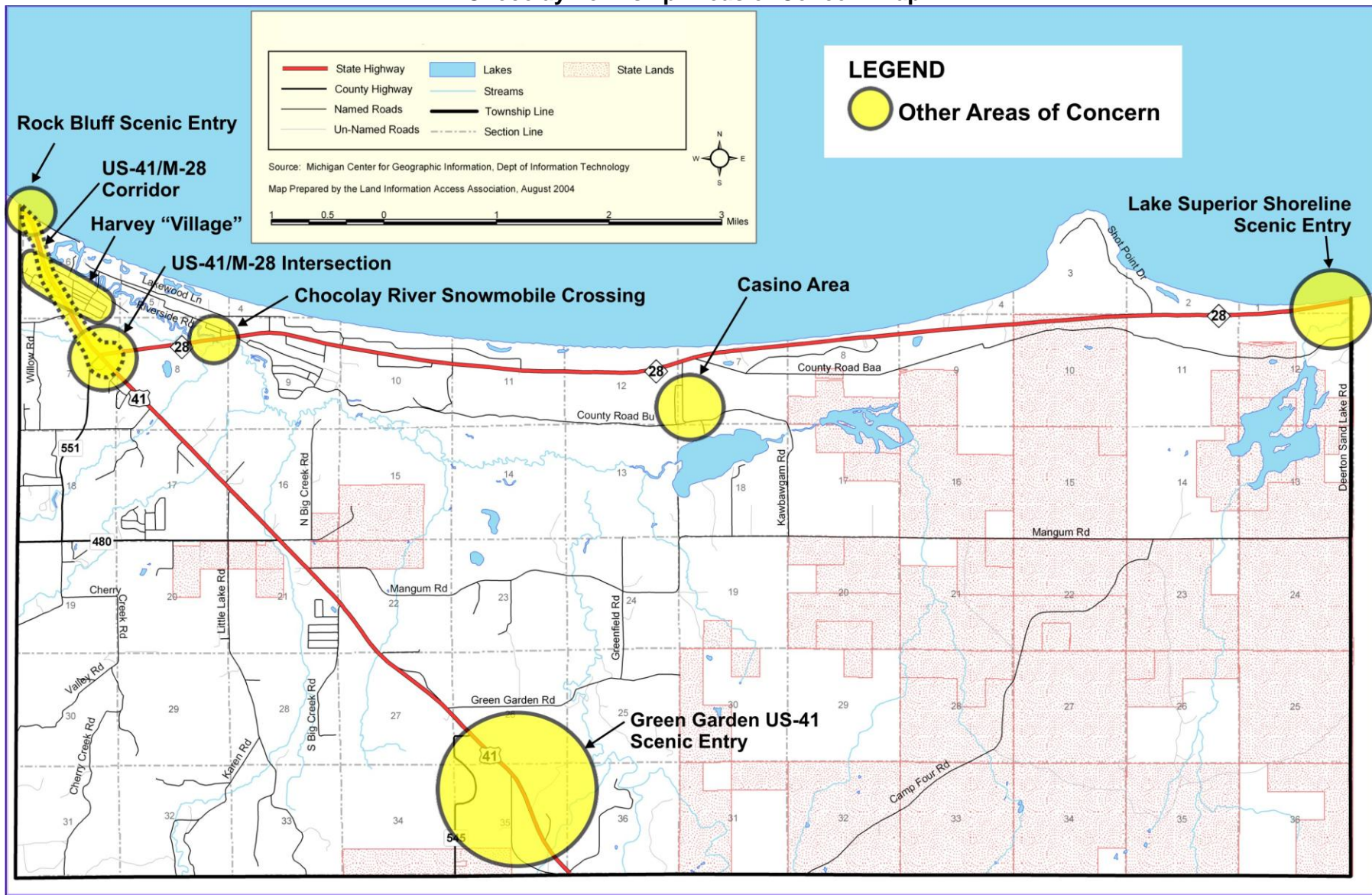
- Forested areas on steep slope areas
- Forested area in southeastern part of Township along M-28

11. Mineral Resources

- Existing gravel and sand operations in the Township.



Map 9-1  
**Chocoley Township Areas of Concern Map**



## Cultural Areas of Particular Concern

### 1. Aesthetic Areas

- US-41 corridor from the Township line south toward Green Garden.
- Eastern entry and highway scenic turnouts on M-28 along Lake Superior.
- Natural scenery along highways and local roads in general

Photo 9-4

### Green Garden Area is an Aesthetic Area of Particular Concern



### 2. Recreation Areas

- Marina on Chocolay River.
- Snowmobile trail and Chocolay River crossing.
- Rock Bluff Area (privately owned).
- State forest lands. The Escanaba River State Forest occupies a large portion of Chocolay Township, but primarily in the sparsely settled eastern part of the Township. It provides a variety of recreational opportunities, including hunting, hiking, and fishing.
- Highway scenic turnouts on M-28
- State roadside park on M-28
- Public access site on Lake LeVasseur and Jeske Flooding

### 3. Historic Sites

- Those areas identified by the Marquette County Historical Society

### 4. Urbanizing Areas

- Shot Point residential area
- Kawbawgam Lake
- Lakewood Lane area east of Harvey
- Harvey—nonconforming Zoning with regards to lot dimensions.
- Intersection of M-28 and US-41.
- The commercial corridor of M-28/US-41 from the west Township Line to the Intersection of M-28/US-41.
- Casino Area.



Photo 9-5  
**The Casino Area is an Urbanizing Area of Particular Concern**



### **MANAGEMENT TECHNIQUES FOR CHOCOLAY TOWNSHIP'S PROPOSED AREAS OF PARTICULAR CONCERN**

For those potential Areas of Particular Concern identified in Chocolay Township, a program of management and preservation must be explored. The kinds of management techniques employed are dependent on local decisions. To assist in this decision making, Chocolay must make a concerted effort to officially identify and develop an inventory of Areas of Particular Concern on a regular basis. The inventory in this chapter is intended to begin the process. The discussion on the Criteria for Areas of Particular Concern will provide a minimum basis for the identification process of any other, or new areas. Once identified, the Township must prioritize its listing, recognizing that each area represents a certain "value." Areas will vary in importance. Those given a higher priority will require more stringent protection. Those less important will have less rigorous regulations or be put off to a later point in the implementation process.

For the most part, the Township's management program will be limited to use of zoning and development controls as described previously. It is recommended that they participate with County, State, or Federal programs geared towards preserving these unique areas. They should continue to enforce the traditional protective ordinances, such as the county health codes, building permits, zoning permits, etc.

The following discussion will identify possible management programs for those Areas of Particular Concern in Chocolay Township. Parts of this discussion will be more detailed than others. That is because many of the Areas of Particular Concern identified were general in nature - rivers and streams, lakes, wetlands, etc. - while others are more specific - the waterfowl area, fish hatchery, etc. - requiring specific management techniques. The DEQ has a helpful local guidebook available that addresses many of these areas. It is entitled **Filling the Gaps: Environmental Protection Options for Local Governments**, 2003. It is available for downloading at [http://www.michigan.gov/deq/0,1607,7-135-3313\\_3677\\_3696-73358--,00.html](http://www.michigan.gov/deq/0,1607,7-135-3313_3677_3696-73358--,00.html), and the appendix to the report includes sample zoning regulations.

## Natural Areas of Particular Concern

### 1. Environmental Areas

#### A. Cherry Creek Watershed, Lake LeVasseur Waterfowl Area and Escanaba River State Forest

The Cherry Creek Watershed, which supports the State Fish Hatchery, and waterfowl area on Lake LeVasseur are both outside the jurisdiction of the Township. They are in State ownership and are presently under a management program. The Township should actively participate in management planning for these areas. However, for zoning purposes, it is recommended that both areas remain zoned Open Space. The Township should take steps to safeguard the Cherry Creek watershed area by supporting the activities of the Chocolay River Watershed Project, which benefits the Cherry Creek watershed.

#### B. Chocolay Township Wetlands

A management program for the Township wetlands should include enforcement of county health codes, state building codes, and Land Division Act, (formerly the Subdivision Control Act), P.A. 288 of 1967 as amended, as well as the Wetlands Protection Act, Part 303 of the Natural Resources and Environmental Protection Act, PA 451 of 1994. The Farmlands and Open Space Preservation Act, Part 361 of PA 451 of 1994, offers certain tax deferral options to property owners who enter into an open space agreement with the State or local unit for at least ten years. The Township should also endorse and enforce where appropriate those sections of the Inland Lakes and Streams Act, Part 301 of PA 451 of 1994 of 1972, the Endangered Species Act, Part 365 of PA 451 of 1994, the Shorelands Protection and Management Act, Part 323 of PA 451 of 1994, and the Wetlands Protection Act, Part 303 of PA 451 of 1994, related to the preservation and utilization of wetlands. For zoning purposes, all large wetlands should fall into the Open Space and Resource Production districts.

C. Natural Features. A wide variety of management techniques are available for protecting natural features on private lands. Primarily, education of landowners is needed in order to raise their consciousness about the existence and importance of natural features. A landowner's guide is available from the DNR (**Managing Michigan's Wildlife: A Landowner's Guide**, available from the Michigan Department of Natural Resources at [www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/landowners\\_Guide/Resource\\_Dir/Acrobat/index.htm](http://www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/landowners_Guide/Resource_Dir/Acrobat/index.htm)), plus the assistance of staff of the Marquette County Soil and Water Conservation District should be promoted. In addition a publication targeted to both citizens and Township officials is also available. Entitled **Your Upper Peninsula: A Guide to Planning for Tomorrow's Shorelines**, it presents a variety of shoreline planning tools that can help preserve a natural appearing shoreline as well as water quality. It is available from the National Wildlife Federation ([www.nwf.org](http://www.nwf.org)) and the Central Lake Superior Watershed Partnership ([www.superiorwatersheds.org](http://www.superiorwatersheds.org)).

### 2. Wilderness and Natural/Scientific Areas

See the discussion under subsection "A" under Environmental Areas for the areas identified under this section, the State Fish Hatchery, the Lake LeVasseur Waterfowl Area and Escanaba River State Forest.

Photo 9-6

**Management Concerns over Wilderness and Natural/Scientific Areas, such as the Lake LeVasseur Wetland Project Involves Working with State Agencies**



**3. Geologic Formations**

A. Steep Sloped Areas: The steeped sloped areas of the Township are generally less desirable for most types of development because of the higher construction costs, high erosion possibilities when soils are disrupted, and the high cost of providing public services like road construction, snow plowing, sewage collection, etc. Therefore, intense types of development should be limited. The two larger areas in the southwestern portion of the Township can support good timber production; this is encouraged to avoid erosion problems. The area should be zoned Open Space.

Photo 9-7

**Protruding Bedrock Areas are Notable in Good and Bad Weather**



B. Protruding Bedrock Areas: Protruding bedrock can create development problems in construction of septic tank drain fields, public sewer lines, or construction on its rock bluffs. It is recommended that intense development be limited in those areas because of those problems; and if development occurs, it can be monitored by enforcing the health, building, and subdivision controls. Most of the bedrock areas on

the eastern portion of the Township is on State-owned lands and should remain zoned for Open Space. The rock bluffs in the northwest corner of the Township should be closely monitored because the pressure for intense development exists.

**4. Flood Areas**

The Federal Emergency Management Agency has issued a final Flood Hazard Boundary Map identifying those lands lying within the one hundred year floodplain. It is recommended that the Township prohibit any new construction, expansion of existing structures or fill within the floodplain areas and that they participate in the Federal Flood Insurance Program to provide proper protection for those areas affected by floods. Most major flood areas should remain zoned for Open Space or Resource Production.

**5. Erosion Areas**

Management efforts to curtail Lake Superior shoreline erosion stem originally from the Shorelands Protection and Management Act (now Part 323 of PA 451 of 1994). The State has performed a study of the High Risk Erosion areas and has developed a management program of which Chocolay Township is a part. The DEQ has established setbacks by calculating the known receding rate of the banks. Permits must be obtained from the DEQ for construction on properties designated as high risk erosion areas. Those lands not developed should be zoned Open Space. Map 4-5 identifies all High Risk Erosion areas in the Township.

**6. Shorelands**

A. High Risk Erosion Areas: Refer to the high risk erosion discussion above.

B. Chocolay River Mouth: The Chocolay River mouth is experiencing a sedimentation problem, sometimes restricting access to Lake Superior. Keeping the mouth open for public use would help boating access from the marina. It is also a problem identified by the Chocolay River Watershed Project. The Township should contact the Army Corps of Engineers to determine what procedures would be necessary to keep it free flowing, and promote best management practices identified by the Chocolay River Watershed Management Project to help reduce sedimentation.

C. Coastal Lakes, Lake Superior Waters and Bottom Lands: Coastal lakes and rivers are covered by the Shorelands Protection and Management Act, Part 323 of PA 451 of 1994 and Great Lakes Submerged Lands, Part 325 of PA 451 of 1994. It is recommended that reasonable setbacks be established in the Zoning Ordinance to provide protection of water quality, aesthetic quality, and resource integrity.

Photo 9-8  
**Protect Water Quality, Aesthetic Quality,  
and Resource Integrity of Coastal Lakes and Rivers**



**7. Lakes (Inland)**

Lake LeVasseur is wholly within the jurisdiction of the State and is discussed in Subsection "A" of Environmental Areas. Kawbawgam Lake is in private ownership and is experiencing rapid development along its shores. The area surrounding the eastern, western and southern sides of the lake is within the proposed flood hazard area and wetland area, and should follow those recommendations, as discussed above. For those developed areas, it is recommended that reasonable setbacks be established in the Zoning Ordinance to preserve their integrity. The Township should enforce all developmental controls, the Subdivision Controls, State Building Code, and Health Code, as well as the Inland Lakes and Streams Act.

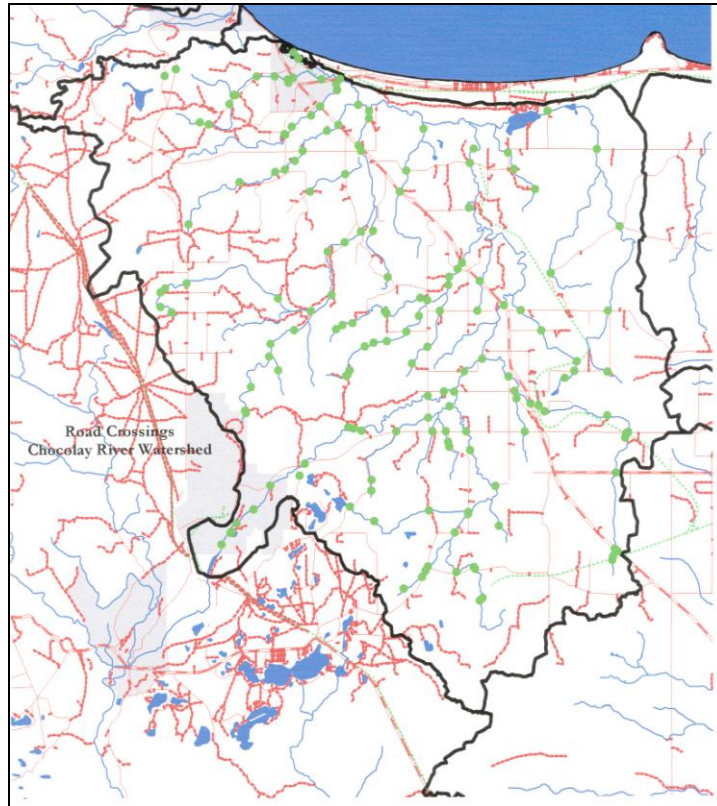
**8. Rivers and Streams**

All streams and rivers should be afforded a minimum amount of protection from overuse and intense development. Those portions surrounded by wetlands or flood hazard areas should follow the recommendations for those areas. Reasonable setbacks should be established through the Zoning Ordinance. The Township should enforce developmental controls, as well as honoring the Inland Lakes and Streams Act, Part 301 of PA 451 of 1994 and the Local River Management Act, Part 311 of PA 451 of 1994.

The Chocolay River Watershed Project, managed by the Marquette County Soil and Water Conservation District along with many partners, developed a program of restoration, education and conservation in order to protect this valuable water resource. The Chocolay River Watershed Management Plan is available by contacting the Marquette County Soil and Water Conservation District or online at <http://www.portup.com/%7Elindq/>. The Watershed Project has been involved in the clean-up of contamination, stream restoration, dam removal, implementing forestry best management practices and other stewardship activities. There are many road crossings of streams in the watershed, and these are of particular concern as possible sites of sediment and other contamination. See Map 9-1.



Map 9-2.  
**Road Crossings of Streams in the Chocolay River Watershed**



*From Updates to the Chocolay River Watershed Restoration and Management Plan, Chocolay River Watershed Project.*

**9. Prime Agricultural Lands**

Only agricultural lands under current cultivation have been identified as prime agricultural lands for Chocolay Township. It is recommended that the Township work closely with the Marquette County Soil and Water Conservation District to continually redefine Chocolay's responsibility to agricultural production needs. Zoning agricultural land as Open Space or Resource Production can provide the necessary protection from unwanted development. The Farmlands and Open Space Act will also prevent development for the period of the PA 116 contract, as discussed earlier, if property owners were inclined to enroll.

**10. Prime Forested Lands**

Chocolay Township has no major commercial timber production even though it is extensively forested. Much of the eastern portion of the Township is within the Escanaba River State Forest and therefore is outside the Township's jurisdiction. It is recommended that Chocolay work closely with the Natural Resources Conservation Service and DNR to determine the potential productivity of the private forested lands. To preserve the quality and quantity of forested lands along roadway, rivers, streams, lakes and ponds, reasonable setbacks could be utilized. To preserve larger tracts of forested lands the Private Forest Reserve Act, Part 5 of PA 451 of 1994, could be instituted. If commercial land is involved, the Commercial Forest Act, Part



511 of PA 451 of 1994, would be involved. Lands intended to be preserved for its timber resources should be zoned Open Space (timber resource) or Resource Production.

#### **11. Mineral Resources**

Existing gravel and sand operations are the only mineral resource areas in Chocolay. More valuable mineral resources only exist in trace amounts and are not economically feasible for extraction at this time. To ensure protection to those resource areas and provide maximum limits on how much extraction should occur, it is recommended that an industrial mining zoning classification be used on only those specified areas, if and when they are ever formally identified.

#### **Cultural Areas of Particular Concern**

The location of some of the cultural areas of concern identified below can be found on Map 9-1, Areas of Concern and maps in other chapters should be referenced where indicated.

##### **1. Aesthetic Areas**

A. US-41 corridor from the Township line north toward Green Garden. This area lies in the viewshed along both sides of US-41 as it slopes down toward the north, allowing distant views of relatively undeveloped scenery. Most of the area is in private ownership and protecting this scenic resource will be a challenge if conservation easements are not obtained. An overlook at a high point along the highway should be developed. MDOT grant funds should be explored.

B. Eastern entry and highway scenic turnouts on east M-28. These are valuable public assets owned by MDOT and maintained by Chocolay Township and should be protected. They provide stunning views of the Lake Superior shoreline. (See scenic turnouts on Map 6-1).

C. Natural scenic areas in general. Scenic roadsides in all areas of the Township can be protected by adequate setbacks, appropriate sign regulations, and design guidelines that promote the use of scenic easements (can be donated instead of purchased if owners are willing) and natural vegetative screening, either left standing during the construction process or restored in roadside areas already cleared. A scenic protection plan should be prepared to identify areas worthy of long term protection.

Photo 9-9

**Many Roads in Chocolay Township are Scenic, such as CR 480**



**2. Recreation Areas**

For the location of recreation areas, see Map 6-1, Chocolay Township Public Facilities in Chapter 6. The state forested lands, highway turnouts, and Lake LeVasseur public access site are out of the jurisdiction of the Township. For zoning purposes, they should remain zoned Open Space.

A. Marina. The marina, which is primarily a boat ramp, is located on the Chocolay River about 1,500 feet from Lake Superior, and shallow water is sometimes a problem for boaters seeking access to the big lake. The 2004 Recreation Plan proposes minor improvements to this site.

B. Snowmobile trail and Chocolay River crossing. Snowmobile owners can use their machines on a trail in the northern part of the Township. However, there are problems with the trail. It passes through a residential area, with resulting conflicts over noise, late night use and speeds. There is no separate snowmobile crossing of the Chocolay River, so snowmobilers use the M-28 bridge, which is not designed for safe snowmobile use. A separate bridge should be constructed. The trail could be used by pedestrians and bicyclists in the warmer seasons if it were surfaced with crushed compacted limestone.

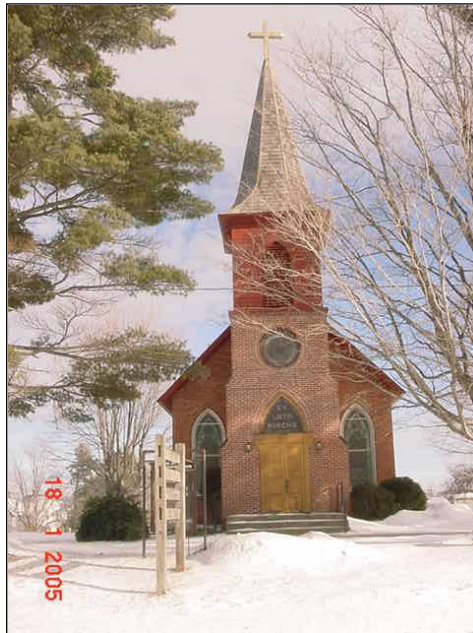
C. Rock Bluff Area. The Lake Superior shoreline across from the Michigan Department of Transportation Welcome Center on US-41/M-28 has a scenic rock bluff. This is a natural location for a viewing place, which could be a tourism draw. Development of a scenic viewing place would require coordination with the property owner and Sands Township. Access to the site may pose some challenges.

**3. Historic Areas**

Current protection for all state and federal registered sites come from the Historic Division of Michigan's Department of State. All local preservation efforts (funding and enforcement) should go through their office or the Marquette County Historical Commission. Each area identified is unique unto itself so will require individual attention in its management.

Photo 9-10

**Each Unique Historic Area Requires Individual Management**



**4. Urbanizing Areas**

A. Shot Point. The Shot Point area development is within the Flood Hazard Area of Lake Superior. See Map 4-4 in Chapter 4. Since development exists, zoning and developmental control ordinance should be rigidly enforced to preserve the quality of the resources and protect existing and future development. Setbacks would be most useful here. Zoning in this area should be Lake Shore/Residential. Undeveloped areas and environmentally sensitive areas should be rezoned Open Space.

B. Kawbawgam Lake. Although not an immediate problem, the Kawbawgam Lake area is a potential candidate. As an Area of Particular Concern, development is spreading in an area that is both wetlands and a Flood Hazard Area. Here too, zoning and developmental control ordinances should be rigidly enforced.

C. Lakewood Lane. The Lakewood Lane area development consists of areas designated as High Risk Erosion Areas. Since development exists, the Residential-One single family zoning should be maintained, and coordination with the DEQ should occur for all proposed developments.

D. Harvey—Nonconforming Zoning. Most of the lots in the Harvey settlement are non-conforming according to current zoning with regards to lot size. This places an unnecessary burden on property owners, on the Planning Commission and on the Zoning Board of Appeals. Zoning needs to be updated for this area in order to remove the non-conforming status of most parcels.

E. Intersection of M-28 and US-41. This intersection, located just southeast of Harvey, is of particular concern due to the two major highways that intersect at this point, generating traffic conflicts, and because of the existing growth and the likelihood for more growth immediately adjacent to it. Due to the location of a major

trucking terminal just northwest of the intersection on US-41/M-28, the intersection receives substantial truck traffic. A ring road that would allow local traffic, especially trucks, to by-pass the intersection may relieve some congestion, improve safety and help manage access to existing and future businesses in the area. Pedestrian crossings also need to be improved in the area of this intersection. Sidewalks exist, but pedestrian signals do not.

F. The Commercial Corridor of M-28/US-41 from the Township Line to the Intersection of M-28/US-41. The US-41/M-28 corridor from the Township line, southeast to the intersection of the two highways currently has a mix of uses, but its location suggests development as a commercial corridor. It is the main route for people in Chocolay Township entering and exiting from the city of Marquette. Major existing businesses include a trucking depot, which is more industrial than commercial. This corridor is a prime location for businesses serving commuters, rather than industrial uses. Conflicts between trucks, commuters and users of future commercial development will need to be avoided by access management solutions put in place before more growth or redevelopment occurs. Buffers between commercial and industrial uses and residential uses should be provided. There are challenges to development of this segment of highway as a commercial corridor. The existing pattern of residential streets crossing US-41/M-28 and the shallow setback of many homes to the highway will make acquisition of additional right-of-way and access management difficult. The lack of a municipal water supply is also a problem. A water supply study has been completed by STS Consultants, Ltd., which recommended that if a public water system were needed, a connection with the Marquette City system for the developed area of Sands Township and this area of Chocolay Township is the most feasible alternative to a new, separate public water system involving new wells. The cost of development of a public water system could be at least \$5 million, and community sentiment was against using public funds for its development at the time this Plan was prepared. However, expanded commercial development and redevelopment along this corridor is unlikely to occur without it.

Photo 9-11

**The Commercial Corridor of US-41/M-28 is an Area of Particular Concern**



G. Casino Area. The Marquette Ojibwa Casino is located at 105 Acre Trail, accessed by Kawbawgan Road, south off of M-28 about midway between the east and west borders of Chocolay Township. The casino is operated by the Keweenaw Bay Indian Community. It is a relatively small casino, and there is interest by the Indian Community in expanding the operation, either at its present site or at another site in Negaunee Township. There is room to expand at the present location, but if the casino relocates to Negaunee Township, the Indian settlement surrounding the existing casino may be able to use the existing building for another use, related to the community.

The present casino site has little frontage on M-28, where there are a number of privately held, undeveloped parcels. This presents the opportunity for commercial development related to the casino, such as motels and restaurants, but such development should only occur if the casino is expanded and with appropriate access management and visual character protections. A zoning change from the present residential classifications would also be required.

Photo 9-12

**The Casino Site has Little Frontage on M-28**



## **Chapter 10 FUTURE LAND USE & INFRASTRUCTURE MANAGEMENT**

### **INTRODUCTION**

This chapter opens with a general description of the purpose of this chapter. It is followed by a description of future land uses in the Township. Then the key infrastructure management strategies necessary to implement the future land use arrangement are described. The last section addresses issues associated with ensuring consistency with the plans and zoning regulations of adjoining jurisdictions. This chapter is directly related to the next chapter which presents the Zoning Plan for the Township and the two should be read and used together.

### **PURPOSE OF THE CHAPTER**

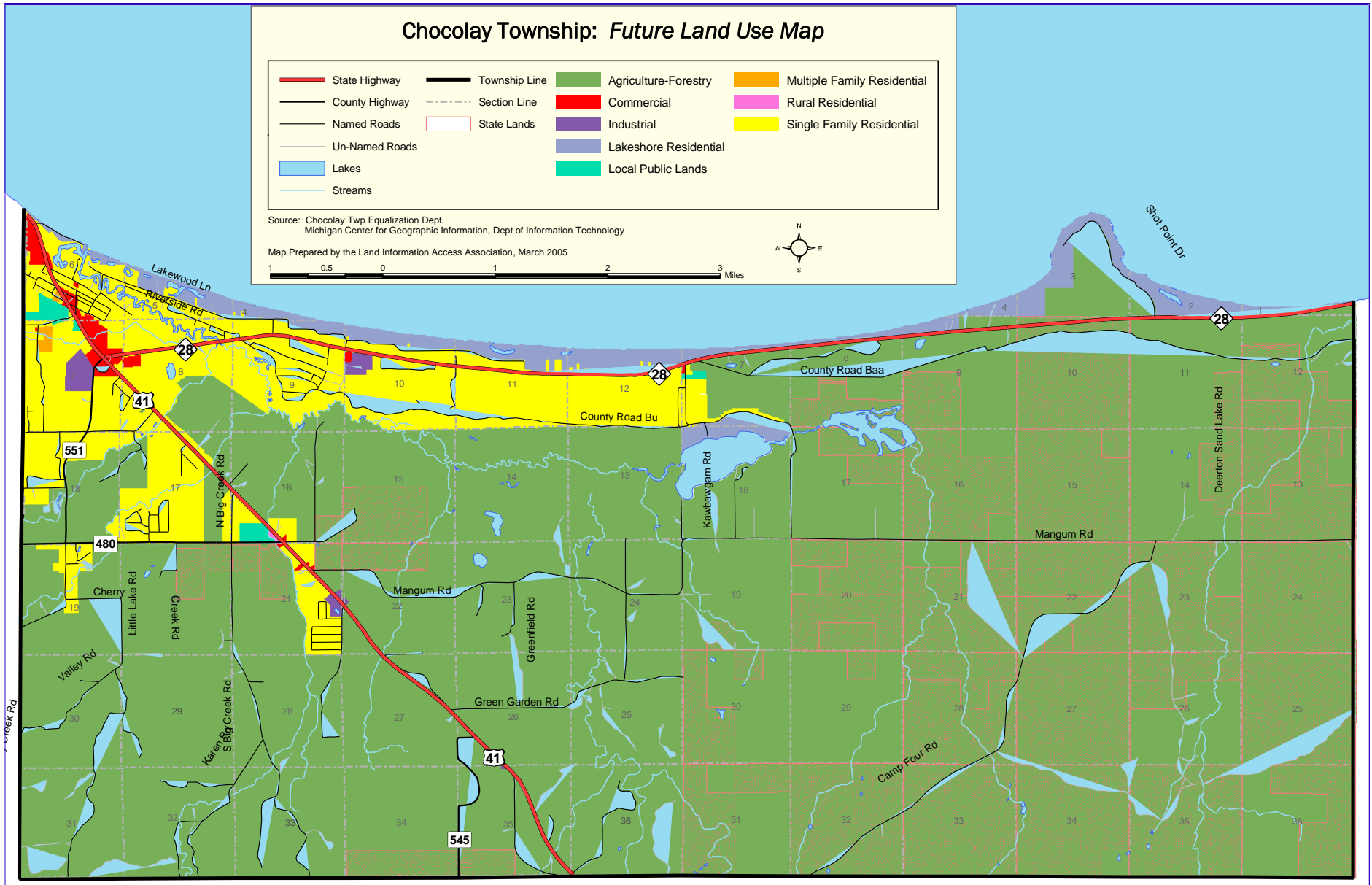
This chapter presents the arrangement of future land uses in the Township for at least the next twenty years. This arrangement is intended to implement the vision, goals, policies and objectives presented in Chapter 8, in a manner that properly respects the areas of particular concern described in Chapter 9.

In some parts of the Township, proposed future land use is merely the continuation of existing land uses. In others, more intensive use is proposed. Where more intensive use is proposed, as around Harvey, it is because a higher level of public services already exist there, and additional public services are both needed, and most economical to provide because of economies of scale in this area.

Future land uses are depicted on Map 10-1, entitled the Future Land Use Map. Each future land use category corresponds to one or more zoning districts which are described in the next chapter. The density of all land is as permitted by the corresponding zoning district. Where land is presently used and zoned for a low intensity use, like farming or forestry, and a more intensive use is proposed, approval of the more intensive use should not occur unless a determination is first made that all the public infrastructure and services necessary to adequately serve that development are in place, and that the environmental impacts of the change to a more intensive use are minimal or properly mitigated according to applicable federal, state, county and Township laws.



# Map 10-1 Future Land Use



**FUTURE LAND USES**

Map 10-1 depicts future land use in the following categories which correspond to existing and future zoning districts as listed on Table 10-1 below:

Table 10-1  
**Relationship Between Future Land Use and Zoning District Categories**

<b>Future Land Use Map 10-1</b>	<b>Existing Zoning Districts (early in 2005)</b>	<b>Proposed Future Zoning Districts</b>
Agriculture and Forestry	RP – Resource Production OS – Open Space RR-2 – Rural Residential 2 RR-1 – Rural Residential 1	AF – Agriculture and Forestry
Lakeshore Residential	LS/R – Lakeshore River R-1 - Residential	LS/R – Lakeshore Residential
Single Family Residential	R-1 Residential R-2 Residential R-3 Residential RR-1 Rural Residential 1	R-25 Residential R-12 Residential
Multiple Family Residential	R-4 Residential	MFR Multiple Family Residential
Commercial	C-1 Commercial C-2 Commercial	C-1 Commercial C-2 Commercial
Industrial	C-3 Commercial	I – Industrial
Local Public Lands	PL – Public Lands	PL – Public Lands

Generally these proposed changes to the zoning districts would accomplish the following:

- Streamline the number of zoning districts by consolidating similar districts
- Once the revised districts were created, the Zoning Map would be changed. Many properties, especially in Harvey, would then be conforming with the dimensional regulations of the district, because the zoning standards would match the most common lot sizes in the district. Currently, there are many nonconforming lots in the Township, especially in Harvey. This will reduce administrative burdens and hassles for the property owners.

Following is a description of each of the categories of land use on Map 10-1.

**Agriculture-Forestry**

This future land use category is made up of two major types of land use: agriculture and forests. In addition, many wetlands are associated with each of these land uses. Most of the eastern half of the Township is either forested or wetlands (or both) and much of it is publicly owned and managed by the Michigan Department of Natural Resources. This category is comprised of all lands in early 2005 zoned as RP and OS, plus all lands zoned as RR-2. All lands in this category would principally be permitted to be used for Agriculture-Forestry activities as principal uses by right, such as agriculture and forest management. The minimum lot size would continue to be 20 acres. A single family home would also be permitted as a use by right in this area. In the portion of this category presently zoned RR-2, zoning district standards would be changed to allow one single family home by right on 20 acres and additional dwellings at a density of one dwelling

unit per 5 acres, only if clustered on a part of the property and at least 50 percent of the property maintained as permanently protected open space by means of a conservation easement or other protection acceptable to the Township. For example a 100 acre parcel would be permitted to have 20 lots (100 divided by 5), which would be clustered on not more than 50% of the property. The minimum lot size of each clustered unit would be not smaller than that required by the Public Health Department, nor on average, more than 2.5 acres in size (or else more than 50 acres would be used up for the residences). A new cluster ordinance provision would have to be added to the Zoning Ordinance to permit this and it would allow such developments by right.

Photo 10-1  
**Agriculture and Forestry**



### ***Agriculture***

In addition to the above changes to the Zoning Ordinance, the following strategies should be pursued to encourage continued agriculture in the Agriculture-Forestry area:

- Encourage farmers to farm as long as they want to
- Encourage farmers to participate in PA 116, the state Farmland and Open Space Protection program which gives an income tax benefit to farmers who agree to keep their land in agriculture for a period of at least 10 years.
- Special attention should be paid to future residential development along gravel roads in this area, because once the number of dwellings exceeds about 80 with no other road users (fewer homes if there are other road users), then the gravel road capacity will be exceeded and it will either have to be frequently graded, or paved, and if paved, it will serve to attract additional residences. Thus, the density of development along gravel roads should be kept low to preserve gravel road capacity, while still permitting Agriculture-Forestry activities. Higher density residential development should be permitted where roads are paved, and at levels commensurate with the need for other public facilities, such as sewer and water.

### **Forest Management**

In addition to the above changes to the Zoning Ordinance, the following strategies should be pursued to encourage continued forest management in the Agriculture-Forestry area:

- Encourage private owner participation in Commercial Forest Reserve Act. Landowners of forested property managed for long term forest production can receive significant tax benefits by participating in the Commercial Forest Reserve Act. Several landowners in the Township already participate in the program. Others should be encouraged to.
- All forested landowners should be encouraged to use sustainable forestry management practices consistent with state policy and industry guidelines.
- Work with landowners to stage tree harvesting in key viewsheds. This will require identification of key viewsheds and then private landowners who plan to harvest trees. By staging harvesting and avoiding large clearcut areas, the impacts on key viewsheds will be greatly reduced. The most important area to target for viewshed protection is the view of the Green Garden valley from westbound US-41 at the south central portion of the Township.

### **Residential**

Citizens and local leaders strongly believe it is important to provide for a wide variety of types and densities of residential dwellings. All homes are desired to be sited in surroundings which permit quiet enjoyment of the property, whether or not the lot or dwelling is large is small. Some is expected in more urban small lot settings, while others are expected on large lots in the country surrounded by large quantities of open space.

Photo 10-2

### **Single Family is Expected to Continue as the Largest Housing Type**



Single family housing is and is expected to continue to be the largest type of residential housing, but it could be provided in many forms, such as detached site constructed single family homes and detached manufactured homes. At the same time multiple family dwellings could be provided in apartments and attached site constructed single family homes and condominiums. Large and small lot development could be involved. To accomplish this goal will require some modification of residential zoning districts in the Zoning Ordinance to create new options. It is critical that accompanying such districts be a strong set of subdivision regulations and if necessary incentives to

encourage subdivision development (as opposed to lot split and metes and bounds development) so that over time, the interconnected street system in Harvey is continued to serve all the most intensely developed parts of the Township (present and future). Four categories of residential development are depicted on the Future Land Use Map and each is discussed below.

### ***Rural Residential***

These are areas planned for low density residential development surrounded by open space. As of early 2005 there were two rural residential zones. The RR-2, 5 acre minimum area was addressed above in the Resource Conservation category. It would be retained as a district in the Zoning Ordinance, but would be developed as either one dwelling unit per 20 acres, or using cluster zoning, at a density of one dwelling unit per five acres. It is shown on the Future Land Use Map as part of the Agriculture-Forestry category because it would have the same base density. Figure 10-1 shows a comparison of conventional land division, conventional subdivision and a conservation subdivision based on a 5 acre minimum lot size. In addition to permanent preservation of open space for buyers and the community, there are substantial benefits to the developer in the form of lower costs to develop.

The RR1 area is presently a 2 acre minimum lot size. Consideration should be given to rezoning undeveloped portions of this district into the AF classification, or the R-12/R-25 category to be consistent with abutting property. If this was done, then the RR-1 category would be eliminated, or revised, so that no new lands would be zoned into this category.

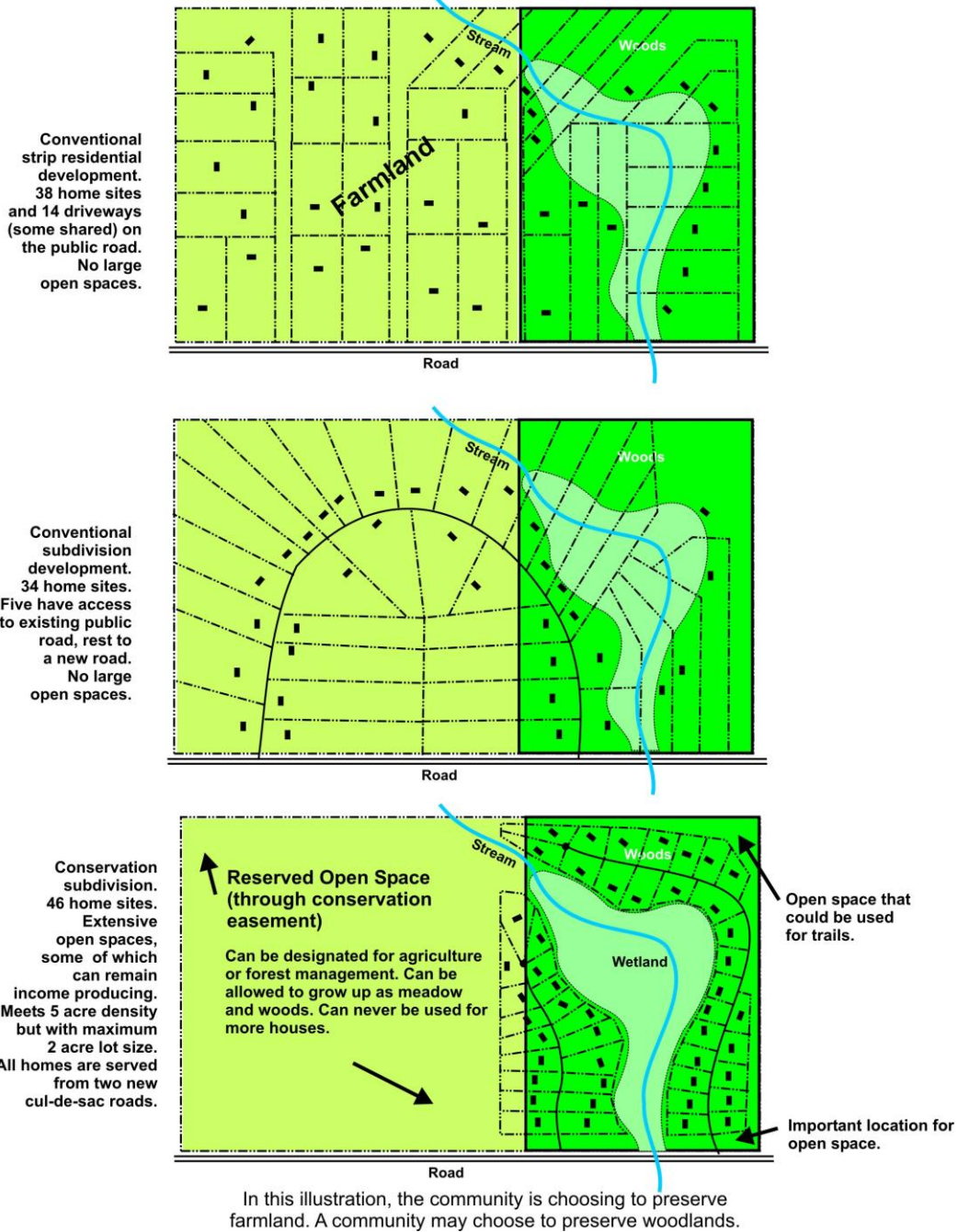
### ***Lakeshore Residential***

The existing title of this district is Lakeshore/River District, yet in spite of miles of lakeshore and riverfront properties, there is a limited amount of land zoned LS/R in the Township. This district is specifically targeted to all waterfront property but in reality, is only applied to some lakefront property. While most of the lakefront property has already been developed and it is appropriate that all residential lakeshore property be zoned into this classification, it makes less sense that all riverfront property be so zoned unless, following a careful review, it is determined the existing regulations make sense on all the riverfront property and all the lakeshore property. It may be that a separate Riverfront District is more appropriate for those properties. Permitted uses in the LS/R are residential and recreational uses. If this district is renamed and applied to all lakeshore property, then existing resorts would be permitted to continue and new buildings or alterations would be regulated through the special use permit process. New resorts, except perhaps B&B's under special use permit conditions, would not be allowed. Rezoning some RP, some RR-2, and some R1 lands into the LS/R classification would be necessary to achieve this goal. Some new special use permit standards would also need to be adopted. This change should be carefully considered and the boundary lines between districts carefully studied before making any change.



Figure 10-1  
**Cluster Subdivision Compared to Other Land Division Options on the Same Land**

230 Acre parcel with density = 1 dwelling unit per 5 acres.



**Single Family Residential**

As of early 2005 there are three residential districts that require a 25,000 square foot minimum lot size. There is no material difference between these districts and they should be combined into a single district. In addition, a new single family residential district should be created that has minimum lot size and setback requirements that are



consistent with what has already been built upon in Harvey. Presently most lots in that hamlet are nonconforming which requires property owners to obtain waivers or variances before making any changes to property. This is an unnecessary burden on property owners and zoning administrators. A new district should be created that has standards which would make the overwhelming bulk of existing lots in Harvey conforming. Land abutting those lots should be permitted to be divided with the same dimensions as existing lots, if served by public sewer (and public water if available). This will increase the likelihood of the construction of more affordable housing and the efficient provision of sewer services in the Township. Implementation of these two changes would result in the elimination of the R1, R2 and R3 districts and the rezoning of all lands in those districts to one of two new districts: R-12 (for Harvey) and R-25 (abbreviation for 25,000 square foot lots) reflecting where they were located.

### ***Multiple Family Residential***

As of early 2005, the R-4 district is used exclusively for lands zoned for mobile home parks. This is a similar density to multiple family dwellings or apartments. The R-4 district should be renamed MFR and the text revised to accommodate both manufactured homes in parks and apartments. All such residences should be required to be served by public sewers, and if available, by public water.

### **Nonresidential**

There are three types of nonresidential lands in the Township. The first are commercial, the second are industrial and the third are local public lands. These lands are important to the creation of a balanced tax base and a complete community.

Photo 10-3

### **Small Expansions are Proposed to Existing Commercial Areas**



### ***Commercial***

The lands zoned C-1 and C-2 commercial in early 2005 represent the bulk of commercial property in the Township. They include both traditional retail commercial businesses, personal, home and business services and highway services. The lands presently zoned into these districts are proposed to be retained in those uses and small expansions may be appropriate depending on the circumstances described in the

special corridor analysis below. Expansion of nonresidential tax base should only be permitted along US-41/M-28 from the west township line to the intersection of these two roads and to 500 feet either side of the intersection, with the exception of possible small expansions along M-28 in front of the Casino and adjacent to the Varvil Center on M-28, and at Kassel's Korner (corner of US-41 and County Road 480).

***Industrial***

Lands zoned as C-3 are permitted to be used for both commercial and light industrial uses, but most such lands are used for light industrial purposes. Since there is no separately described industrial zone, and on first glance, this may appear to be exclusionary, the Township should consider renaming the C-3 zone as I Industrial (or I-1 Industrial), and permit certain heavier intensity, but not retail commercial uses in this zone. That would include commercial wholesale and highway service, but not retail commercial uses, along with light industrial uses.

***Local Public Lands***

This is a category limited only to lands in Township ownership as the large amount of state land is included in the Agriculture-Forestry category. This designation identifies these park and Township Hall lands separately because of the significance they have on community development and services. All local public lands (except for trails) should be similarly included and depicted on the Zoning Map or allowed as uses in all zoning districts.

Photo 10-4  
**All Public Lands, such as the Beaver Grove Recreation Area  
Should be Depicted on the Zoning Map**



**Areas of Particular Concern**

Chapter 9 identified a number of areas of particular concern that deserve special attention as new development takes place in the Township. Most are natural areas with special natural features that are desired to be maintained. Some are cultural areas. The following recommendations relate to future actions that should be taken to protect these areas of particular concern.

***Natural Areas of Particular Concern***

Zoning regulations should be updated to ensure that the natural areas of particular concern in Chapter 9 are adequately addressed. This is most important with regard to: floodplains, wetlands, high risk erosion areas, sand dunes, ground water, surface water,

shorelands, areas with endangered plants and animals and the exposure of soil as new development occurs. These areas are already subject to state laws which seek to protect them, but separate local regulations can also be adopted (see **Filling the Gaps: Environmental Protection Options for Local Governments**, DEQ, 2003). At a minimum, zoning regulations should be updated to ensure Township approval of development is linked with approval by other governmental entities such as the DEQ, County Health Department, MDOT and the County Road Commission.

Beyond that, the Township should consider preparing and adopting a separate greenspace plan which identifies important ecosystems and viewsheds and includes recommendations on specific measures that could be implemented to protect those areas.

### ***Cultural Areas of Particular Concern***

Areas with special aesthetic features and recreation areas can be identified for linkage in a greenspace plan with a greenways element. Greenways could be public or private land planned for active or passive human use, but must respect private ownership. Viewshed protections can be a part of such a plan, as could protection of key historic structures or areas. A comprehensive trail system for hiking, biking, cross-country skiing and snowmobiles (on certain trails) should be an integral part of the greenspace plan.

There were a number of urbanizing areas of particular concern identified in Chapter 9 as well. Key future land use issues associated with most of them are addressed in the description of future land use along and/or near key corridors are discussed in the next section.

### **Special Corridors**

#### ***Land use in area along M-28 east of the intersection of US-41/M-28***

There are three subareas along this corridor that should be the focus of special attention in the future and following detailed study, may result in future rezoning if done consistent with this Plan.

- There is already considerable strip residential development along this corridor which adds unnecessarily to crash risks. All new residential lots should be required to have at least 300 feet of frontage unless access comes from a parallel road (such as in a double frontage lot in a subdivision). Subdivisions should be strongly encouraged instead of lot splits, with no new residential lots fronting on M-28.
- Additional but limited, traveler related commercial services (like hotels and restaurants) should be permitted contiguous to the existing Casino if the tribe makes a decision to expand the casino here. However, if there is no casino expansion, there should be no additional nonresidential development permitted in this area.
- The nonresidential services area at the Varvil Center could be expanded if a connecting road between US-41 and M-28 is created with the M-28 connection contiguous to or very near here. Otherwise, expansion of nonresidential development in this area should only occur if not incompatible with development of adjacent lands for residential purposes.

***Land use in area along US-41 south of the intersection of US-41/M-28***

There are two subareas along this corridor that should be the focus of special attention in the future and following detailed study, may result in future rezoning if done consistent with this Plan.

- There is already considerable strip residential development along this corridor which adds unnecessarily to crash risks. All new residential lots should be required to have at least 300 feet of frontage unless access comes from a parallel road (such as in a double frontage lot in a subdivision). Subdivisions should be strongly encouraged instead of lot splits with no new residential lots fronting on US-41.
- No additional land area should be approved for commercial (or industrial) development along this segment for the next 20 years, except perhaps adjacent to existing neighborhood service commercial uses at the corner of US-41 and County Road 480. These should be permitted only in the face of significant residential development in the area, and not in response to increased traffic on US-41. The commercial needs of through traffic should be met by commercial land uses in the next corridor segment.

Photo 10-5

**Land Use Along US-41 South of the US-41/M-28 Intersection**



***US-41/M-28 west of the intersection*** (business strip through Harvey)

There are three subareas along this corridor that should be the focus of special attention in the future and following detailed study, may result in future rezoning if done consistent with this Plan.

- First, a special residential zoning district should be created in the hamlet of Harvey so homes are on lots that are not nonconforming and homeowners can more easily use and improve their properties.
- The second subarea includes all lands abutting US-41/M-28. A study to determine the feasibility of a boulevard should be the first initiative (see Chapter 7). If a safe boulevard design is not feasible, then a major and dense tree planting program should be initiated to both green up and close in this corridor. This will help to both improve aesthetics and slow traffic through this, the densest part of the Township.

- Third, based on the results of the boulevard feasibility analysis (above), a detailed land use/transportation plan should be prepared for this subarea and for all abutting lands. New connecting roads should be planned and constructed and new residential development should be encouraged off the corridor. Commercial and service uses should be planned and permitted along the corridor. A mix of highway service and community service businesses should be sought. The provision of public water service should continue to be examined and if a financially feasible way is found to provide it, then it should be provided. Nothing else has more potential to facilitate the appropriate expansion of planned development in the Harvey area, than a new public water system and planned interconnected streets. These infrastructure management issues are discussed in more detail in the next section.

## **INFRASTRUCTURE MANAGEMENT**

The efforts the Township makes to support future road, sewer, water and recreation services in the Township consistent with this Plan will have more to do with the location and type of development in the Township than anything else beyond merely zoning the land for various uses, densities and intensities. Properly conceived and executed, the following strategies will both support and stimulate land use change consistent with this Plan.

### **Road Improvement Strategies**

Following is a list of strategies that should be implemented to improve roads and highways in the Township:

- Adopt access management regulations consistent with the **US-41/M-28 Comprehensive Corridor & Access Management Plan** cooperatively completed with the cooperation of MDOT and seven other adjacent units of government along the corridor in 2004.
- Following further study, if it is feasible, adopt new expanded right-of-way line along US-41/M-28 to accommodate a future right-of-way of 150 feet and establish a new setback in the Zoning Ordinance from the future right-of-way line.
  - If feasible, work with MDOT to adopt a cross section boulevard design similar to that in Figure 7-4.
  - Develop a right-of-way acquisition program and local funds for use to acquire right-of-way as the need/opportunity exists. Acquire as much as possible through voluntary donations by landowners as new development or redevelopment of properties along the corridor occurs.
  - Develop an enhancement grant application for additional vegetation, stylish street lamps, improved sidewalks and related features if boulevard plan is feasible, and even if it is not (but not until a firm determination is made).
  - Initiate a comprehensive tree planting program along this corridor to create a solid green canopy from the US-41/M-28 intersection west to the rock bluff.
- Add vegetation requirements and buffer standards to the Zoning Ordinance for all new development along state highways and county primaries in the Township.
- Increase driveway separation distances for all lots fronting on and taking their access from US-41 or M-28 or a County Primary Road, by increasing lot width to 300 feet. Consider increasing lot width requirement in the Commercial Districts to a similar amount when they front on these roads, unless they use shared access, frontage roads, or rear service roads.

- Support intersection improvements and new pedestrian crossing alternatives as described in Chapter 7 on Silver Creek Road and Corning Street at US-41/M-28.
- Support installation of pedestrian crossing markings and pedestrian signals at the intersection of US-41/M-28.
- Support efforts to redesign the ninety degree corner on County Road 545 and improve road condition throughout its length.
- Build a connector road between US-41 and M-28 following the guidelines in Chapter 7.
- Build a connector between east end of Harvey and M-28 following the guidelines in Chapter 7.
- Continue the radial street design on the other corners of the intersection of US-41 and M-28 as the need and opportunity exists.
- Update Township subdivision regulations and require interconnected streets and stub connections to permit future interconnection between new streets.
- Encourage all existing private roads to be upgraded and converted to public roads when they meet public road standards.
- Increase maintenance responsibilities of landowners on existing private roads. This may require a new separate ordinance that uses special assessments to require private road maintenance.
- Require all new roads serving more than two dwellings to be public. As discussed in Chapter 7, private roads are proliferating in the Township, as are requests for conversion to a public road. However, it is often financially difficult, if not impossible to do so after the fact. Many private roads are not well enough maintained to permit safe emergency vehicle access. Public roads are much better over time, especially when it becomes necessary to connect roads.

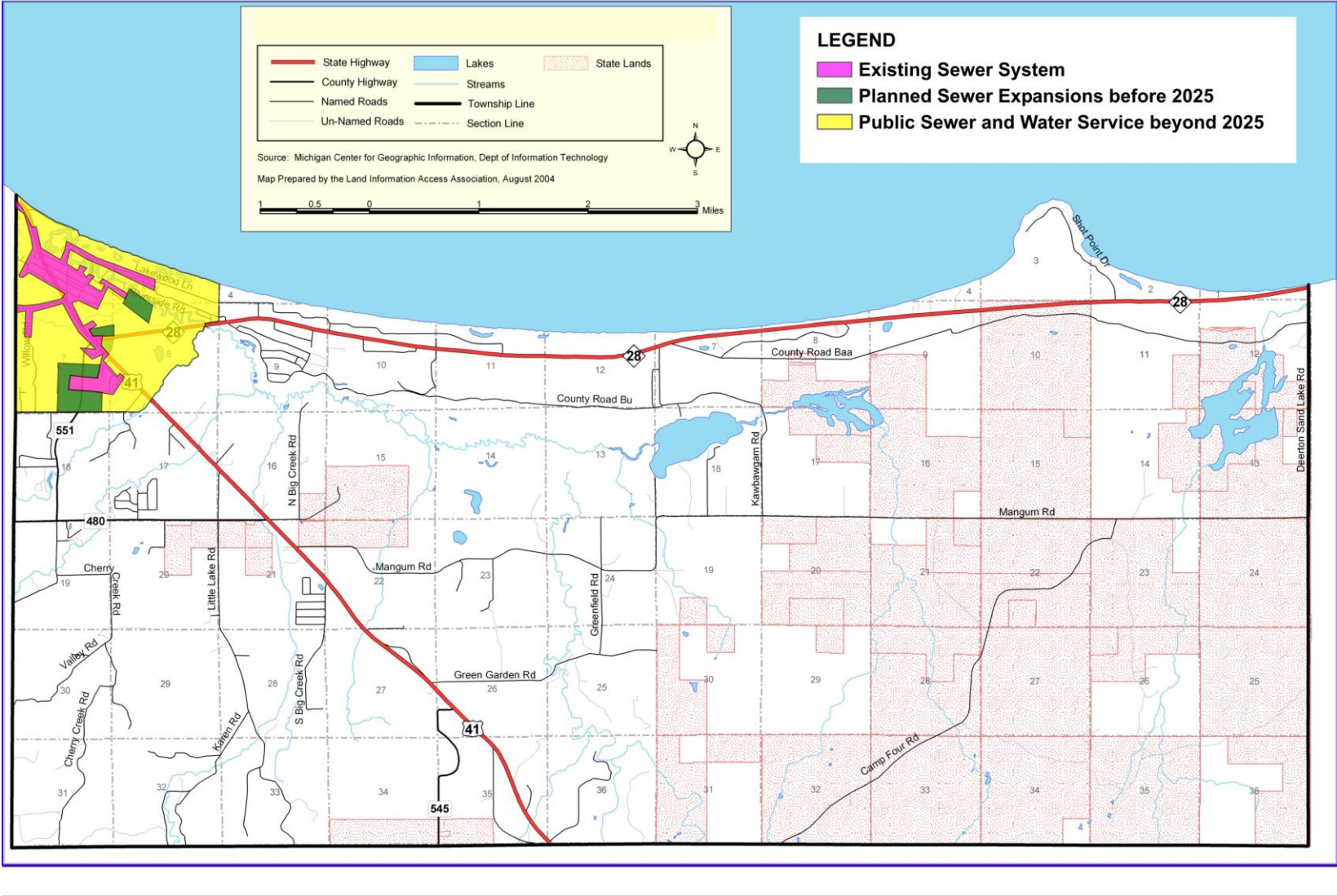
### **Sewer and Water Strategies**

Following is a list of strategies that should be implemented to improve sewer services and add water service in the Township:

- Sewer service will continue to be expanded upon request and at the expense of the benefiting property owners.
- Sewer service will be expanded only within the area illustrated on Map 10-2 over the next 20 years.
- A means to provide economical water service should continue to be explored for the Harvey area and from the west Township line along US-41/M-28 to one-quarter mile from the US-41/M-28 intersection. The market demand for a broader range of commercial and personal service businesses along US-41/M-28 will not be likely to be met without a municipal water supply.
- Water service will only be provided within the area illustrated on Map 10-2 over the next 20 years if a water system is established in the Township.



# Map 10-2 Public Sewer and Water Service Area Map Beyond 2025



## Recreation

Following is a list of strategies that should be implemented to improve park and recreation services in the Township:

- Existing park and recreation facilities should continue to be improved per the Township Parks and Recreation Plan.
- New park and recreation land should be acquired consistent with the Parks and Recreation Plan, or in response to a unique opportunity presented to the Township which is approved by the Township Planning Commission and Township Board.
- Expansion of existing snowmobile and non-motorized trails should be undertaken consistent with a Township Greenspace Plan with a greenways element, and such plan should be consistent with the Township Park and Recreation Plan.
- The Township Park and Recreation Plan should be updated every 5 years to continue to be eligible for state and federal park and recreation improvement funds.

Photo 10-6  
**Township Staff Works to Maintain and Improve Park and Recreation Services**



## Entryway Strategies

Following is a list of strategies that should be implemented to improve entryways into the Township:

- Work with MDOT and private land owners to maintain where good and improve where needed the aesthetic character of the lands at the entry to Chocolay Township.
- Create and install a quality sign with appropriate landscaping at each entryway to the Township.
- Work with MDOT to construct a scenic turnoff at the south end of the Township on US-41 where it overlooks the Green Garden area. The Township may desire to help acquire the land necessary for the turnout in order to ensure a quality design and use by Township residents as well as travelers.

- Explore the potential for a scenic viewing area on the top of the Rock Bluff at the western end of the Township. This needs to be done in conjunction with the Michigan Tourist Center, Sands Township and the landowners involved.

### Budgeting Strategies

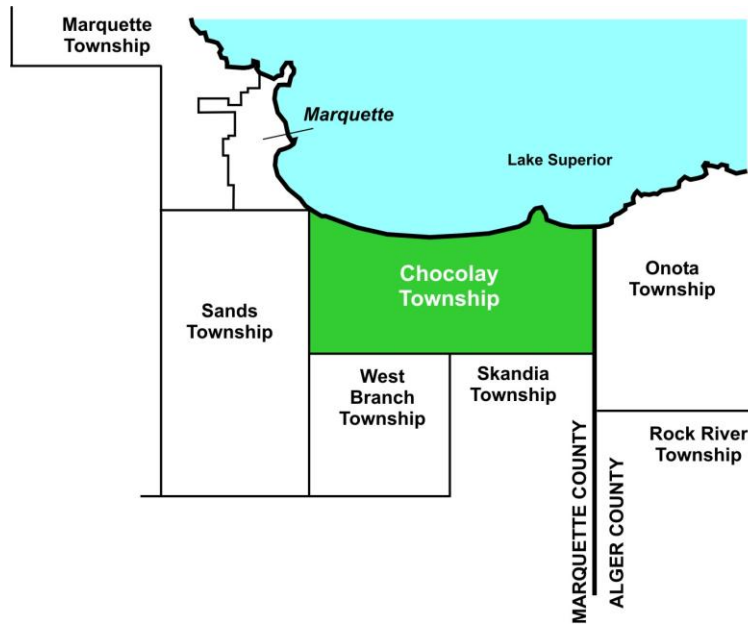
Most of the above strategies will require careful budgeting for the preparation of special studies and subarea plans, as well as for some major capital improvements. As a result it is important that the Township Board, with input and support of the Planning Commission:

- Adopt an annually update a capital improvements plan to aid in implementing the infrastructure strategies in this Plan.
- Annually incorporate into the general fund budget, or other special budgets, adequate funds for conducting special planning studies, preparing updates to zoning or other related land regulations, or for the design of other implementation tools consistent with this Plan.

### RELATIONSHIP TO FUTURE LAND USE PLANS AND ZONING IN ADJOINING JURISDICTIONS

Chocloy Township shares a border with six jurisdictions. Adjoining jurisdictions are illustrated on Figure 10-2.

Figure 10-2  
Adjoining Jurisdictions



The comprehensive or future land use plans and zoning ordinances of each of the six communities adjoining Chocloy Township were requested at the start of the Plan update process. The intent was to examine them for their potential to affect land use in Chocloy Township. The Onota Township Policy Plan and Marquette City Plan were obtained and examined. Future land use plans and zoning ordinances were not provided for Skandia and West Branch Townships, however, the County Planning Department and the Skandia Township Zoning Administrator provided some basic zoning information.

### **Onota Township Plan**

Onota Township and Chocolay Township share a common boundary on the east side of the Township. Onota Township is in Alger County. There were only 146 occupied dwellings in the Township in 2000 and most were along M-28. The Township worked with CUPPAD and prepared a draft Policy Plan in October 2004. It does not include a future land use map, but focuses on preservation of rural character and future residential as opposed to nonresidential development in the Township. It is difficult to say more about the degree of compatibility between planned future land uses. No copy of a zoning map was provided and it is unclear what zoning controls are being implemented along the Onota Township border with Chocolay Township. The present land uses are compatible with Chocolay Township zoning for that area.

### **Rock River Township**

No response was received from Rock River Township and nothing is known about proposed plans or zoning in the Township. Chocolay and Rock River only touch at a point and no major road is located there, so the likelihood of any land use incompatibilities are small. Existing land uses are compatible.

### **Skandia Township Zoning**

Skandia Township and Chocolay Township share a border along half of the southern boundary of the Township. Sections 1 through 5 are zoned TP-40 which is Timber Production and has a 40-acre minimum lot size. This zoning classification occurs on land of which a majority is owned by the State of Michigan. Section 6 is zoned RP-20 which is resource production on 20-acre lots. Each of these zoning classifications appear to be consistent with proposed future land uses in Chocolay Township.

### **West Branch Township Zoning**

West Branch Township and Chocolay Township share a border along half of the southern boundary of the Township. A portion of Section 4 and Sections 5 and 6 are zoned RP-20 which is resource production on 20-acre parcels. A portion of Sections 3 and 4 are zoned RR-10 which is rural residential on 10-acre lots. The rest of the property is zoned RR-5 except for a small portion of Sections 1 and 2 which is zoned RR-2. Each of these zoning classifications appear to be consistent with the future land uses in Chocolay Township except for the RR-2 and RR-5 districts which may promote a higher density than what is desired in this part of the Township, although this density will not have a significant negative effect on the Chocolay Township RR-2 and RP districts.

### **Sands Township Zoning**

Sands Township shares a border with Chocolay Township along the west side of the Township. There is no future land use plan in Sands Township. The Zoning Map has four different zoning categories on lands abutting Chocolay Township. In Section 1, and parts of Sections 12 and 13 the land is predominantly zoned R-1A which permits residential development on 30,000 sq.ft. lots (0.688 dwelling units/acre). In parts of Sections 12, 13 and 24, the land is zoned R-1B which also permits residential development on 30,000 sq. ft. lots. In the lower half of Section 24 the land is zoned F-1 which permits one dwelling per 2.5 acres. In Section 25, the land is zoned for Forestry and Recreation (F-2) which permits dwellings at one dwelling per 5 acres. Each of these zoning categories are compatible with proposed future land uses in that portion of Chocolay Township.

**City of Marquette Plan and Zoning**

The City of Marquette touches Chocolay Township only at the point that Sands Township and Chocolay also meet at the rock bluff on the northwestern edge of the Township. The City has the area at the point along the Lake Superior shore planned for residential use, and the area on the south side of US-41/M-28 planned for recreation/open space. These are compatible land uses. However, land in this area is currently zoned General Business and, if developed as currently zoned, may create a conflict with the future land uses provided for in this Plan.

**Marquette County Comprehensive Plan**

The Marquette County Comprehensive Plan was adopted in July 1982 and has been amended several times. The Plan is a general policy plan and does not contain a future land use map, however, the Goals and Policies outlined in the Marquette County Comprehensive Plan support the future land use recommendations in this Plan.

# Chapter 11

## ZONING PLAN

### INTRODUCTION

This chapter opens with a general description of a zoning plan. It is followed by a brief explanation of the relationship between this Comprehensive Plan and the Zoning Ordinance of Chocolay Township. Next, the intent and key dimensional standards of the zoning districts in the Zoning Ordinance are briefly described. As they exist, the districts are consistent with the Future Land Use Map and land use descriptions in Chapter 10, but they could be revised to be significantly closer to that proposed in Chapter 10. If the districts are changed, this chapter should be updated to reflect the changes made.

### WHAT IS A ZONING PLAN?

A “zoning plan” is another term for a “zone plan” which is used in the Michigan planning and zoning enabling acts. Section 1(a) of the Township Planning Act, PA 168 of 1959, as amended, requires that the plan prepared under that act serve as the basis for the zoning plan. Section 7 of the Township Zoning Act, PA 184 of 1943, as amended, requires a zoning plan be prepared as the basis for the zoning ordinance. The zoning plan identifies the zoning districts and their purposes, as well as the basic standards proposed to control the height, area, bulk, location, and use of buildings and premises in the township. It must be based on an inventory of conditions pertinent to zoning in the township and the purposes for which zoning may be adopted (as described in Section 3 of the Township Zoning Act).

### RELATIONSHIP TO COMPREHENSIVE PLAN UPDATE

This Comprehensive Plan Update sets forth the vision, goals and policies for growth and development in Chocolay Township for approximately the next twenty years. It includes a specific strategy for managing growth and change in land uses and infrastructure in Chocolay Township over this period, and will be periodically reviewed and updated at least once each five years. This chapter presenting the Zoning Plan, along with the rest of the relevant parts of this Comprehensive Plan, is intended to guide the implementation of and future changes to the Zoning Ordinance. However, existing permitted uses of land, including density, setbacks and other related standards are as established in the Zoning Ordinance.

### DISTRICTS AND DIMENSIONAL STANDARDS

Following are the general purposes and characteristics of zoning within Chocolay Township. The specific purpose of each zoning district and permitted land uses are listed in the Chocolay Township Zoning Ordinance. The Section references indicate where detailed ordinance language is located within the ordinance. Table 11-1 presents a summary of key dimensional standards under the Zoning Ordinance requirements as they existed in Chocolay Township in early 2005.

### ZONING DISTRICTS

#### Residential Districts

The following zoning districts are considered “residential districts.”

Section 202	R-1 Residential 1 District
Section 203	R-2 Residential 2 District



Section 204	R-3 Residential 3 District
Section 205	R-4 Residential 4 District
Section 206	LS/R Lakeshore-River District
Section 207	RR-1 Rural Residential 1 District
Section 208	RR-2 Rural Residential 2 District

The principal purpose of these districts is to provide for a range of residential dwelling types at various densities within individual zones tailored for specific uses. Minimum lot areas range from 25,000 square feet to 20 acres. R-1 and R-2 districts, address detached single family residences in a low density setting. The R-3 district is similar to R-1 and R-2 but encourages medium density by allowing multiple residences. The minimum lot area for all three districts is 25,000 square feet. The R-4 district addresses mobile home parks where the density is limited to 7 mobile homes per acre. The Lakeshore-River district borders portions of Lake Superior and Lake Kawbawgam and accommodates both residential and recreational uses. The minimum lot area for this district is 25,000 square feet. The RR-1 district is a low density district established to maintain the integrity of the rural environment in an alternative residential setting. The minimum lot area for this district is 2 acres. The RR-2 district is a low density district with limited accessibility and infrastructure. This area of the Township is where farming, dairying, forestry operations and other similar rural-type land uses exist and are intended to be encouraged and/or preserved. Detached single family residences are allowed in the RR-2 district on lots with a minimum area of 5 acres and a minimum lot width of 300 feet.

Chapter 10 proposed that the R-1, R-2 and R-3 districts be consolidated into a new R-25 zone in recognition of the minimum lot size and that a new R-12 district be established. It would be applied to lots within Harvey where most lots are nonconforming under existing zoning. The R-12 district with a 12,000 square foot minimum lot size would make them conforming. The R-4 district is proposed to be renamed to MFR to reflect a permitted density appropriate for mobile home parks and apartments. The RR-1 district is also proposed for possible elimination (see related text in Chapter 10). The RR-2 district is proposed for revision to establish 1 dwelling unit/20 acres as the base density (like the OS and RP districts), but land could be developed at 1 dwelling unit/5 acres if done using cluster zoning with a minimum of 50% of the land preserved as permanent open space. The zoning map is proposed for changes (see related text in Chapter 10) consistent with the above changes, plus the LS/R district is proposed to be extended along the entire Lake Superior Shoreline and along Lake Kawbawgam, and be renamed to Lakeshore District.

**Commercial and Industrial Districts**

The following zoning districts are presently considered “commercial districts.”

Section 209	C-1 Commercial 1 District
Section 210	C-2 Commercial 2 District
Section 211	C-3 Commercial 3 District

The basic purpose of these districts is to provide opportunities for regulated commercial or office activities serving both local and area shopping needs. Minimum lot areas range from 25,000 square feet to one acre in size. The C-1 district provides small retail and service establishments designed to promote convenient pedestrian shopping and stability of retail development by targeting local and area residents and minimizing heavy commercial impact. The C-2 and C-3 districts are located along the main highway

corridors and are designed to promote automobile-oriented shopping with on-site parking. In addition, the C-3 district promotes light industrial use and locations are most compatible when adjacent to C-2 districts. Motor vehicle sales, rental of farm equipment, food packing and bottling works are typical uses for this C-3 district. Minimum lot area for both the C-1 and C-2 districts are 25,000 square feet and the minimum lot area for the C-3 district is 1 acre. Chapter 10 proposes renaming the C-3 district I-Industrial, revising the purpose statement to more closely match light and perhaps heavier industrial uses. Commercial, wholesale and highway service uses would also be permitted, but not general retail uses.

### **Resource Production District**

The following zoning district is considered a “resource production district”.

Section 212      RP Resource Production District

This district is designed for low intensity use due to its location and environmental surroundings. It is best suited for agricultural, forestry, and recreational uses. Single family housing is allowed on lots or parcels that are 20 acres or more in size.

### **Open Space District**

The following zoning district is considered an “open space district.”

Section 213      OS Open Space District

This district is designed to maximize preservation of existing environments by discouraging development on land that because of their soil, drainage or topographic characteristics, have been deemed unsuitable for intensive development. The minimum lot area for a single family home in this district is 20 acres. There is very little difference between the OS and RP districts and they are proposed to be merged and renamed Agriculture-Forestry (A-F).

### **Public Lands Zoning District**

The following zoning district is considered a “public lands zoning district.”

Section 214      Public Lands District

The purpose of the Public Lands district is to provide adequate land resources for the purposes of administering and performing necessary public services by the Township of Chocolay and other public agencies. Land in this zoning district is intended solely for public buildings and related uses. There is no minimum lot area within this district. Not all public lands are in this district. Lands managed by the DNR for forestry, wildlife or recreation are in the RP or OS districts. Chapter 10 recommends that only Township owned lands be permitted in the PL district. Schools would be permitted in any residential or commercial district.

### **Planned Unit Development District**

The following zoning district is considered a “planned unit development district.”

Section 215      PUD Planned Unit Development District

The Planned Unit Development district was established to incorporate mixed residential and commercial land uses. The goal of the district is to encourage innovative ways to develop this land by having more flexibility in the zoning than the other zoning districts, although the predominant use is residential, except in the case of golf course PUDs where it both recreation and residential. The district also encourages open space for

recreational activities and preservation of the existing environment. The minimum lot area within this district is 2 acres. The lands in this district are reflected on the future land use map in the land use category most dominant in the PUD—single family residential.

Table 11-1  
**Chocolay Township  
 Zoning District Regulations  
 2005**

	Minimum Lot Area	Minimum Lot Width	Maximum Ground Coverage Ratio	Maximum Floor Area Ratio	Front Setback	Side Setback	Rear Setback	Maximum Building Height
R-1	25,000 s.f. <sup>D</sup>	125 ft.	None	None	30 ft.	10 ft. <sup>B</sup>	35 ft.	30 ft. <sup>F</sup>
R-2	25,000 s.f. <sup>D</sup>	125 ft.	None	None	30 ft.	10 ft. <sup>B</sup>	25 ft.	30 ft. <sup>F</sup>
R-3	25,000 s.f.	125 ft.	30%	25%	30 ft.	10 ft. <sup>B</sup>	25 ft.	30 ft. <sup>F</sup>
R-4	20 acres <sup>**</sup>	None	None	None	30 ft.	30 ft.	30 ft.	30 ft. <sup>F</sup>
LS/R	25,000 s.f.	125 ft.	None	None	30 ft.	10 ft. <sup>B</sup>	30 ft.	30 ft. <sup>F</sup>
RR-1	2 acres	200 ft.	None	None	30 ft.	30 ft.	30 ft.	30 ft.
RR-2	5 acres	300 ft.	None	None	30 ft.	30 ft.	30 ft.	<sup>A</sup>
C-1*	25,000 s.f.	125 ft.	40%	80%	30 ft.	5 ft.	20 ft.	30 ft. <sup>F</sup>
C-2*	25,000 s.f.	125 ft.	40%	80%	40 ft.	5 ft.	20 ft.	30 ft. <sup>F</sup>
C-3*	1 acre	150 ft.	40%	80%	40 ft.	5 ft.	20 ft.	30 ft.
RP	20 acres	None	None	None	30 ft.	30 ft.	30 ft.	<sup>A</sup>
OS	20 acres	None	None	None	30 ft.	30 ft.	30 ft.	<sup>A</sup>
PUD	2 acres	200 ft.	None	None	<sup>E</sup>	<sup>E</sup>	<sup>E</sup>	<sup>E</sup>
Public Lands	None	None	None	None	40 ft.	20 ft.	30 ft.	30 ft.

s.f. = square feet, ft. = feet

**Footnotes:**

- A. Height at any point on a structure shall not exceed the horizontal distance to any lot line.
- B. A detached accessory building not exceeding 14 feet in height and not exceeding 720 square feet may be located within six feet of a side lot line and 20 feet from a rear lot line.  
A detached accessory building less than 100 square feet and so located that no portion is located in the front yard setback is exempt from the provisions of the zoning ordinance.
- C. Lot width shall be measured at front setback line.
- D. 18,750 sq.ft. where lot is served by public sewer and/or water supply
- E. Setbacks and height limits are to be determined as required by the original zoning district. Any modifications are subject to the final approval of the PUD.
- F. No detached accessory building shall exceed fifteen (15) feet in height nor exceed the exterior perimeter dimensions of the principal structure on the lot.

\* See Section 400 of the Chocolay Township Zoning Ordinance

\*\* See Section 205 (D) (1) of the Chocolay Township Zoning Ordinance

**RECOMMENDATIONS**

Chapter 10 set forth a number of recommendations for changes to the Zoning Ordinance and Zoning Map to best implement this Plan. Those recommendations are incorporated into this Chapter by reference and are summarized briefly below. In addition, other proposed changes to the Zoning Ordinance are proposed to address day-to-day problems encountered with zoning administration.

1. Consolidate the RP and OS districts into a new district named Agriculture-Forestry and keep the same dimensional standards as presently exist, with a continuation of the 300 front footage requirement.
2. Eliminate the RR-2 district as a separate district, but modify the AF district to continue allowing a minimum lot size for uses by right of 20 acres, and permit rural clustering with a minimum of 50% open space based on a density of one dwelling unit per 5 acres by special use permit. The ordinance should specifically acknowledge that any existing 5 acre lots are not nonconforming.
3. Eliminate the RR-1 District by consolidating portions of the district into AF or R-12/R-25 Districts to be consistent with abutting property, per the guidelines in Chapter 10.
4. Rename the LS/R district to Lakeshore Residential and rezone all the privately owned lots on Lake Superior into that zone. Allow single family uses by right and resorts or other recreation uses by special use permit. Consider creating a separate Riverfront Residential district, if warranted.
5. Consolidate the R-1, R-2 and R-3 districts into a single district since they all have the same minimum lot size and setbacks and call it R-25.
6. Create a new district for all lots in Harvey with dimensional standards that match existing lot lines and call it R-12.
7. Rename the R-4 district to MFR to permit both manufactured homes and multiple family uses at the same density, and consistent with the other dimensional regulations presently allowed.
8. Rename the C-3 district as I-1 and permit industrial uses and some commercial uses by right, and possibly other commercial uses by special use permit.
9. Retain the PL district, and put all Township public lands used for a structural use in the district, but keep all DNR lands in the Agriculture-Forestry district. Allow schools as a use by right in any residential district.
10. Amend the private road regulations in Section 402, to add better design, construction, and maintenance standards, including authority to require a special assessment for improvements on private roads that have been neglected, per the recommendations in Chapter 10.
11. Provide a maximum length for cul-de-sacs, require stub streets for future connections to streets on abutting property and require all developments with more than thirty lots to have two or more means of public ingress and egress.
12. Consider adding a section regulating fences, and if added, be sure to require that the finished side of the fence must face abutting property.
13. Add snow storage requirements to Section 500 – Off-Street Parking.
14. Change the last sentence in the first paragraph of Section 403 to require ordinance setbacks be applied to nonconforming parcels.
15. Consider adding additional flag lot (20' requirement in Section 402), requirements to greatly limit where they can be created, or prohibit flag lots altogether. If prohibited, decide how best to address land-locked parcels.
16. The general standards of the Ordinance need to be updated along the lines of Section 80.60 of the City of Marquette Zoning Ordinance.
17. Definitions in the Zoning Ordinance need to be updated to reflect all of the terms used in the ordinance. At a minimum there needs to be a definition for a trail (motorized and non-motorized), junkyard, and park.
18. Create guidelines that address the placement of temporary storage structures used as accessory buildings.

# PART THREE

## CONTINUING PLANNING



## Chapter 12

# PLAN IMPLEMENTATION

### INTRODUCTION

As important a benchmark as this updated Comprehensive Plan represents, the initiatives proposed in this Plan will not implement themselves. It will take continued support and commitment for many years.

The central ingredients to successful Plan implementation will be:

- Commitment by the Planning Commission, the Board of Trustees, and staff of the Township.
- A citizenry better educated on the vision in this Plan.

### FOCUSING ON PRIORITIES

As the body principally responsible for preparing and maintaining a land use plan for a community, but one which also has substantial responsibilities in review of proposed developments for zoning compliance, it is easy for a Planning Commission to become distracted with ongoing tasks or ad hoc, controversial issues. Still, the Commission needs to prioritize its tasks relative to implementation of this Plan. Time needs to be set aside for high priority items. These include the preparation of an annual report and work program for the next year, drafting updates to the Zoning Ordinance and Subdivision Regulations, assisting the Township Board with any capital improvements or public land acquisitions or disposals, and the five-year Plan update. These are discussed below.

### ANNUAL TASKS

As required by the Township Planning Act, the Planning Commission should prepare an annual report to the Board of Trustees on all the activities it undertook in the previous year, with a special focus on actions taken to implement the Plan. A proposed work program that identifies priorities and projected expenses for the next year should also be prepared and submitted in time to be included in the annual Township budget process.

### TOP PRIORITIES

The Planning Commission cannot be expected to implement all of the measures listed Chapter Eight (Vision, Goals, Objectives, and Policies), Chapter Ten (Future Land Use & Infrastructure Management) and Chapter Eleven (Zoning Plan) alone. Many of these can only be accomplished with support from the Township Board and with help from other agencies or groups. It is essential that discussions begin with each of these entities so that they understand the goals, find agreeable common ground as well as where there are differences, and obtain a commitment to a common action.

One approach to establishing priorities is to use the following guidelines:

- Establish as a high priority those actions that are the precursor to other actions or initiatives. One example is the action to reexamine the residential zoning



districts with an eye to eliminating or consolidating some, and rezoning some lands.

- Those actions that are assigned to a particular group (like the Planning Commission) elsewhere in this Plan are a high priority.
- A lower priority may be those actions that are not assigned to a group or broadly identify the "Township" as the responsible party.
- If an action does not list a responsible party, it remains a lower priority until a group or agency steps forward.

Photo 12-1

**A Key Priority is to Study the Feasibility and Timing of Provision of a Public Water System to Serve the Northwest Portion of the Township, Such as this Home in Harvey**



The following activities should be the key priorities of the Planning Commission for the next five years:

- Educate all citizens about the vision, goals, objectives, and policies of the updated Comprehensive Plan and provide technical assistance in the integration of these elements into property owner development and redevelopment efforts.
- Undertake the ROW study along US-41/M-28 to determine the feasibility of a 150' boulevard, and if feasible, change zoning standards to assist with ROW acquisition, as well as creating a budget element to acquire ROW as the opportunity exists. Be sure to retain the portion of land in front of the existing Township Hall for future ROW in the event of any sale of that property. See the guidelines in Chapter 7.
- Update the Township Zoning Ordinance to be consistent with this Plan as outlined in Chapter 10 and 11.
- Adopt access management regulations as part of the Zoning Ordinance and implement the recommendations of the US-41/M-28 Comprehensive Corridor Access Management Plan.

- Review other land development regulations in the Township (such as land division and subdivision regulations) and update as necessary to be consistent with this Plan.
- Review the private road regulations and revise to require a maintenance agreement whereby landowners served by the private road pick up all future maintenance and improvement costs, and require connections to other existing private or public roads in the area wherever feasible.
- Conduct a feasibility study for the creation of the new roads depicted on Map 7-3 and develop the best mechanisms to pursue development of those roads at the appropriate times
- Continue to study the feasibility and appropriate timing for development of a water system to serve the northwest developed part of the Township.
- Assist the Township Board with decisions on public land acquisition, development or disposition.
- Develop a Township Greenspace Plan with a Trails Plan sub-element in conjunction with the Township Board, the Park and Recreation Commission, the DNR, MDOT and the County Road Commission. The Trails Plan sub-element would identify trail locations and options for creating the trails, as well as identify and implement tools for acquisition of title or development rights from willing sellers, and set up funding mechanisms for implementation.
- Use this Plan in the analysis and review of proposed rezonings, zoning text amendments, site plans, and new or amended master plans of adjoining jurisdictions submitted to the Township for statutory review and comment.
- Exercise the inter-jurisdictional review authority of draft plans and plan amendments in ways to improve local decisions by guiding decisions toward integrated and coordinated solutions based on the core policies in this Plan.
- Monitor neighboring jurisdiction and County agency decisions and periodically inform other local governments and the County Board of Commissioners on the status of efforts to implement this Comprehensive Plan.
- Join efforts with others outside the Township to modernize planning and zoning enabling legislation and to authorize or use new tools to better manage growth and preserve open space.
- At least once each five years, the Comprehensive Plan should be thoroughly reviewed and updated by the Planning Commission with support from the Township Board.
- Develop a Capital Improvements Plan
- Consider developing sub-area plans in conjunction with large scale property owners in the Township.

# Appendix A

# 2000 Census Demographic Profile

# Chocolay township

## Marquette County MCD's

	Number	Percent		Number	Percent
<b>TOTAL POPULATION</b>	7,148		<b>PERSONS BY RACE</b>		
<b>SEX AND AGE</b>			One Race	7,023	98.3%
Male	4,157	58.2%	White	6,193	86.6%
Female	2,991	41.8%	Black or African American	619	8.7%
<b>TOTAL POPULATION</b>			American Indian/Alaska Native	144	2.0%
Under 5 Years	320	4.5%	Asian	41	0.6%
5 to 9 years	421	5.9%	Native Hawaiian/Pacific Islander	5	0.1%
10 to 14 years	499	7.0%	Some Other Race	21	0.3%
15 to 17 years	330	4.6%	Two or More Races	125	1.7%
18 and 19 years	158	2.2%			
20 to 24 years	425	5.9%	<b>PERSONS BY HISPANIC ORIGIN AND RACE</b>		
25 to 29 years	458	6.4%	Hispanic or Latino(of any race)	57	0.8%
30 to 34 years	546	7.6%	Not Hispanic or Latino	7,091	99.2%
35 to 39 years	696	9.7%	One Race		
40 to 44 years	731	10.2%	White	6,162	86.2%
45 to 49 years	710	9.9%	Black or African American	616	8.6%
50 to 54 years	588	8.2%	American Indian/Alaska Native	143	2.0%
55 to 59 years	402	5.6%	Asian	41	0.6%
60 to 64 years	288	4.0%	Native Hawaiian/Pacific Islander	5	0.1%
65 to 74 years	371	5.2%	Some Other Race	5	0.1%
75 to 84 years	172	2.4%	Two or more races	119	1.7%
85 years and over	33	0.5%			
Persons under 18 years	1,570	22.0%	<b>PERSONS BY RELATIONSHIP TO HOUSEHOLDER</b>		
Persons 21 years and over	5,344	74.8%	Spouse	1,479	20.7%
Persons 65 years and over	576	8.1%	Child	1,883	26.3%
<b>FEMALE</b>			Natural born or adopted	1,799	25.2%
Under 5 Years	149	2.1%	Step	84	1.2%
5 to 9 years	208	2.9%	Grandchild	40	0.6%
10 to 14 years	252	3.5%	Brother or sister	26	0.4%
15 to 17 years	155	2.2%	Parent	20	0.3%
18 and 19 years	56	0.8%	Other relatives	31	0.4%
20 to 24 years	115	1.6%	Nonrelatives	229	3.2%
25 to 29 years	143	2.0%	Roomer or boarder	16	0.2%
30 to 34 years	179	2.5%	Housemate or roommate	36	0.5%
35 to 39 years	277	3.9%	Foster child	14	0.2%
40 to 44 years	288	4.0%	Other nonrelatives	163	2.3%
45 to 49 years	317	4.4%			
50 to 54 years	254	3.6%	<b>CHILDREN BY LIVING ARRANGEMENT</b>		
55 to 59 years	186	2.6%	Total children	1,570	
60 to 64 years	132	1.8%	In households	1,566	99.7%
65 to 74 years	171	2.4%	In group quarters	4	0.3%
75 to 84 years	88	1.2%	Institutionalized population	4	0.3%
85 years and over	21	0.3%	Noninstitutionalized	0	0.0%
Females under 18 years	764	10.7%	<b>PERSONS 65 YEARS+ BY LIVING ARRANGEMENT</b>		
Females 21 years and over	2,146	30.0%	Total persons 65 years and over	576	
Females 65 years and over	280	3.9%	In households	568	98.6%
<b>MEDIAN AGE</b>			In group quarters	8	1.4%
Total	38.1		Institutionalized population	8	1.4%
Male	37.2		Noninstitutionalized	0	0.0%
Female	39.4		<b>POPULATION IN OCCUPIED HOUSING UNITS</b>		
			Population in owner-occupied units	5,329	74.6%
			Population in renter-occupied units	703	9.8%

# 2000 Census Demographic Profile

# Chocolay township

## Marquette County MCD's

	Number	Percent		Number	Percent
<b>HOUSEHOLDS AND FAMILIES</b>			<b>HOUSING OCCUPANCY</b>		
Total households	2,324		<b>Total housing units</b>	2,643	
Total persons in households	6,032		Occupied housing units	2,324	87.9%
Average household size	2.60		Vacant housing units	319	12.1%
Total families	1,742		For rent	45	1.7%
Total persons in families	5,221		For sale only	7	0.3%
Average family size	3.00		For seasonal, recreational, or occasional use	195	7.4%
All percents in this column are based on total households			<b>HOUSING TENURE</b>		
<b>HOUSEHOLDS BY TYPE (related children)</b>			<b>Occupied housing units</b>		
Family Households (families)	1,742	75.0%	Owner-occupied housing units	1,974	84.9%
With related children under 18	863	37.1%	Renter-occupied housing units	350	15.1%
With related children under 6	298	12.8%	<b>AVERAGE HOUSEHOLD SIZE BY TENURE</b>		
Married-couple family	1,479	63.6%	Average size of owner-occupied units	2.70	
With related children under 18	671	28.9%	Average size of renter-occupied units	2.01	
With related children under 6	237	10.2%	<b>HOUSEHOLDS BY TENURE AND AGE OF HOUSEHOLDER</b>		
Male householder, no wife present	91	3.9%	<b>Owner-occupied units</b>	1,974	
With related children under 18	61	2.6%	Householder 15 to 24 years	18	0.8%
With related children under 6	24	1.0%	Householder 25 to 34 years	201	8.6%
Female householder, no husband present	172	7.4%	Householder 35 to 44 years	489	21.0%
With related children under 18	131	5.6%	Householder 45 to 54 years	576	24.8%
With related children under 6	37	1.6%	Householder 55 to 64 years	363	15.6%
<b>UNMARRIED-PARTNER HOUSEHOLDS</b>			Householder 65 to 74 years	207	8.9%
Total unmarried-partner households	113	4.9%	Householder 75 to 84 years	98	4.2%
Male householder and male partner	4	0.2%	Householder 85 years and over	22	0.9%
Female householder and female partner	8	0.3%	<b>Renter-occupied units</b>		
Male and female partners	101	4.3%	Householder 15 to 24 years	40	1.7%
<b>NONFAMILY HOUSEHOLDS</b>			Householder 25 to 34 years	92	4.0%
Total nonfamily households	582	25.0%	Householder 35 to 44 years	77	3.3%
Householder living alone	487	21.0%	Householder 45 to 54 years	57	2.5%
Male householder	252	10.8%	Householder 55 to 64 years	34	1.5%
Female householder	235	10.1%	Householder 65 to 74 years	25	1.1%
Householder 60 years and over	175	7.5%	Householder 75 to 84 years	21	0.9%
Householder 65 years and over	139	6.0%	Householder 85 years and over	4	0.2%
Householder 75 years and over	70	3.0%	<b>GROUP QUARTERS POPULATION</b>		
<b>HOUSEHOLDS WITH CHILDREN</b>			Institutionalized population	1,116	100.0%
Total households with children	884	38.0%	Correctional institutions	1,112	99.6%
Family households	865	37.2%	Nursing Homes	0	0.0%
Married-couple families	673	29.0%	Other institutions	4	0.4%
Other families	192	8.3%	Noninstitutionalized population	0	0.0%
Nonfamily households	19	0.8%	College dormitories	0	0.0%
<b>HOUSEHOLDS WITH PERSONS 65 YEARS AND OVER</b>			Military quarters	0	0.0%
Total households with person(s) 65 years+	408	17.6%	Other group quarters	0	0.0%
Family households	261	11.2%	<b>HOUSEHOLD BY SIZE</b>		
Nonfamily households	147	6.3%	1-person household	487	21.0%
<b>HOUSEHOLD BY SIZE</b>			2-person household	828	35.6%
1-person household	487	21.0%	3-person household	428	18.4%
2-person household	828	35.6%	4-person household	370	15.9%
3-person household	428	18.4%	5-person household	165	7.1%
4-person household	370	15.9%	6-person household	31	1.3%
5-person household	165	7.1%	7-or-more person household	15	0.6%
6-person household	31	1.3%			
7-or-more person household	15	0.6%			

WSU/Center for Urban Studies/MIMIC

2

Source: 2000 Census



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Economics and Statistics Administration**  
**U.S. Census Bureau**  
Washington, DC 20233-0001  
OFFICE OF THE DIRECTOR

March 11, 2002

FROM THE ACTING DIRECTOR  
U.S. CENSUS BUREAU

This is an official statement of the revised Census 2000 population and housing unit counts for Chocolay township, Marquette County, Michigan, including corrections made through March 4, 2002.

According to the official returns of the TWENTY-SECOND DECENNIAL CENSUS OF THE UNITED STATES, on file in the U.S. Census Bureau, the counts as of April 1, 2000, for Chocolay township, Marquette County, Michigan, are:

Population . . . . .	6,095
Housing Units . . . . .	2,643

Sincerely,

William G. Barron, Jr.

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This statement is being sent to the highest elected official of this governmental unit, the Secretary of State, and other state officials.

Census counts used for Congressional apportionment and legislative redistricting and the Census 2000 data products will remain unchanged. The Census Bureau will include the corrections in the errata information to be made available via the Internet on the *American FactFinder* system and used specifically to modify the decennial census file for use in yearly postcensal estimates beginning in December 2002.

Details regarding the Census Bureau's calculation of these figures are attached. If you require additional information, please call the Census Bureau's Count Question Resolution program staff, toll-free, on 1 (866) 546-0527.

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## **Appendix B**

## **APPENDIX B**

### **Summary of Major Soil Series in Chocolay Township**

**Au Gres (AuA):** Somewhat poorly drained soils developed in sixty inches or more of sand. Occurs in outwash and till plains. Water table fluctuates between two and ten feet.

**Alluvial (Ad):** This is a soil that occurs along streams. It is subject to flooding by stream overflow. Drainage is variable. The water table fluctuates with the level of the stream. Textures are variable in short distances, but the sandiest material is usually closest to the stream. Water movement through the soil is variable.

**Bohemian (BhB):** Well to moderately well-drained soils with loamy surface layer over loam to light silty clay loam, which in turn is underlain with calcareous, stratified silts and very fine sands. Occurs in lake plains. Thickness and texture of layers variable.

**Brimley (BrA):** Somewhat poorly drained soils with loamy surface very fine layer over loamy material. Calcareous, stratified sandy loamsilts and very fine sands at a depth ranging from 24 to 42 inches. Nearly level lake plains. Water table fluctuates between two and ten feet. Texture and thickness of layers variable.

**Burt (Bu):** Poorly drained soils with less than 20 inches of mucky sand sandy loam sand over sandstone bedrock. Numerous sandstone fragments and slabs on surface and in profile. Water table at or near the surface unless drained. Subject to ponding.

**Burt (BwA):** This is a somewhat poorly drained sandy soil loamy sand underlain by sandstone bedrock at 10 to 20 inches. It has a seasonally high water table which fluctuates between about six inches to below the bedrock. Water movement through the soil is rapid in the soil material. Natural fertility is low.

**Carbondale (Ck):** Very poorly drained soils with more than 42 inches of muck and peat. Derived from coniferous woody plants mixed with fibrous materials. Nearly level and depressional areas subject to water ponding. Water table at or near surface unless drained.

**Chippeny (Cm):** Very poorly drained soils with 12 to 15 inches of muck or peat over limestone bedrock. Organic material derived from wood material mixed with fibrous material. Subject to ponding. Water table at or near surface unless drained. Thin mineral layer is common between organic material and bedrock.

**Crosswell (CrA):** Moderately well-drained soils with sandy surface sand layer over acid sands to 60 inches or more. Found in low dunes, outwash and lake plains. Drouthy and subject to wind erosion. Water table commonly below five feet, but can be within three feet of surface in wet periods.

**Dawson (Da):** Very poorly drained soils with 12 to 42 inches of muck extremely to strongly acid muck and peat over sands. Level and depressional areas subject to water ponding. Water table at or near surface unless drained.

**Deer Park (DkB):** Well-drained soils with sandy surface layer over acid sandsands to 60 inches or more. Found in low dunes, outwash, and lake plains. Drouthy and subject to wind erosion.

Deerton (DmB): Well or moderately well-drained sand or loamy sand soils 20 to 40 inches deep over acid sandstone bedrock of 20 to 40 inches. Occurs in till plains and bedrock benches.

Deerton (DoA): This is a somewhat poorly drained sandy soil sand wet underlain by sandstone bedrock of 20 to 40 inches. It variant has a seasonally high water table which fluctuates between about one foot to below the sandstone. Water movement through the soil is moderately rapid to rapid in the soil materials.

Deerton (DsB) This is a well-drained sandy soil underlain by sand shale-sandstone bedrock at 10 to 20 inches. Water movement low variant through the soil is moderately rapid to rapid.

Deford (Dt): Poorly drained to very poorly drained soils with loamy fine loamy fine sand surface soil over stratified fine sand, very fine sand and loamy fine sand. Thickness and texture of layers vary greatly. Nearly level and depressional areas of outwash and lake plains. Water table at or near surface unless drained.

Dune land (Du): This miscellaneous land type consists of long narrow strips of sand dunes which occur along the shore lines of Lake Superior. The areas of dune land comprise partly stabilized dunes which lie immediately inland from the lake beach. The dunes have slopes that range from 8 - 40%. Soil profiles developed in these areas are virtually absent. Vegetation is sparse and consists of beach grass, yew, and scattered jack pines.

Gay muck (Ga): Poorly and very poorly drained soils with loamy sandy loam surface layers over sandy loam or light sandy clay loam. Acid sandy loam at a depth ranging from 33 to 48 inches. Depressional areas on till plains and moraines. Water at or near surface unless drained. Subject to water ponding.

Greenwood (Gw): Very poorly drained soils with more than 42 inches of peat strongly acid muck and peat. Derived from mosses and sedges in leatherleaf bogs. Nearly level and depressional areas subject to water ponding. Water table at or near surface unless drained.

Ingalls (InA): Somewhat poorly drained soils with 18 to 42 inches of sand, loamy sand or sand over calcareous stratified silts and very fine sands. Occurs in lake plains. Water table fluctuates between two and ten feet.

Kalkaska (KaB): Well-drained soils with sandy surface layer over acid sands to 60 inches or more. Found in low dunes, outwash and lake plains. Weakly cemented at 10 to 24 inches in some area. Drouthy and subject to wind erosion.

Kawbawgam (KbA): Somewhat poorly drained soils with 20 to 40 inches of sandy loamsandy loam over sandstone bedrock. Sandstone fragments on the surface and throughout the profile in some areas.

Keweenaw (KmA): Well-drained or moderately well-drained soils having loamy, sandy loamy, sand surface layer over loamy sand with a thin sandy loam layer and a very weak to moderate fragipan. Acid loamy sand at about 30 inches. Occurs in till plains and

moraines. Strata of sand or sandy loam below 24 inches in some area.

Keweenaw (KmA): This is a somewhat poorly drained predominantly sandy loamy sand soil. It has a seasonally high water table which wet variant fluctuates between about one and six feet. Water movement through the soil is moderately rapid.

Keweenaw (Kp): This is a poorly drained predominantly sandy soil. It has a seasonally high water table which fluctuates poorly between the surface and about three feet. Water drained movement through the soil is moderately rapid.

Kinross (Kr): Poorly to very poorly drained soils having a sandy mucky sand surface layer over very strongly to strongly acid sands. Depressions and nearly level areas of outwash and lake plains. Water table at or near surface unless drained. Subject to water ponding.

Munising (MuB): Well-drained to moderately well-drained soils with sandy loam, loamy surface layer over sandy clay to sandy loam. Acid sandy loam glacial till at a depth ranging from 30 to about 50 inches. Occurs in till plains and moraines. Stony in some areas. Moderate to strong fragipan at about 18 inches.

Ocqueoc (OcB): Well-drained and moderately well-drained soils with fine sand 18 to 42 inches of sand or loamy sand, over calcareous stratified silts and very fine sands. Occurs in lake plains.

Onota sand (OnB): Well-drained and moderately well-drained soils having loam 20 to 40 inches of sandy loam glacial material over sandstone bedrock. Numerous sandstone fragments and slabs on surface and throughout profile in some areas.

Onota sandy (Op): This is a poorly drained loamy soil underlain by loam poorly sandstone bedrock at 20 to 40 inches. It has a drained seasonally high water table which fluctuates from the variant surface to about three feet. Water movement through the soil is moderate.

Rousseau (RoB): Well-drained soils with fine sandy surface layer over fine sand. Acid stratified fine and very fine sands to 60 inches or more. Found in low dunes, outwash and lake plains. Drouthy and subject to wind erosion.

Rubicon (RuB): Well-drained soils with sandy surface layer over acid sand. Sands to 60 inches or more. Found in low dunes, outwash and lake plains. Drouthy and subject to wind erosion.

Seney sand (SeB): This is a well-drained sandy soil. Water movement through the soil is rapid.

Skanee (SkA): Somewhat poorly drained soils with loamy surface sandy loam layer over sandy loam or sandy clay loam. Acid sandy loam glacial till at a depth ranging from 24 to about 36 inches. Occurs in till plains an moraines. Water table fluctuates between two and ten feet. Weak to moderate fragipan, 5 to 18 inches thick, at about 24 inches.

Tawas muck (Ts): Very poorly drained soils with 12 to 42 inches of muck and peat over sands. Organic material derived from coniferous woody plants mixed with fibrous

material. Level and depressional areas subject to water ponding. Water table at or near surface unless drained.

Wainola (WaA): Somewhat poorly drained soils with loamy fine sand fine sand surface soil over stratified fine sand, very fine sand and loamy fine sand. Thickness and texture of layers varies greatly. Nearly level areas of outwash and lake plains. Water table fluctuates between one and ten feet.

Yalmer (Ya): This is a well-drained sandy soil underlain by loamy material at 20 inches to 40 inches. It has a hardpan (fragipan) in the upper 4 to 16 inches of the loamy material. Water movement through the soil is rapid in the sandy layers, moderately slow in the pan and moderate below the pan.

Yalmer (YaB): This is a poorly drained sandy soil underlain by loamy sand. Loamy material at 20 to 40 inches. It has a seasonally high loamy sand water table which fluctuates between the surface and about three feet. Water movement through the soil is rapid in the sandy layers and moderate in the loamy layers.

Yalmer (YsA): This is a somewhat poorly drained sandy soil wet underlain by loamy material at 20 to 40 inches. It has a seasonally high water table which fluctuates between one and five feet. It has a hardpan (fragipan) in the upper 4 to 12 inches of the loamy material. Water movement through the soil is rapid in the sandy layers, moderately slow in the pan and moderate in the remainder of the soil.

# Appendix C



## CHOCOLAY TOWNSHIP TRANSPORTATION PLANNING

### Criteria and the Plan

The transportation goals, policies and objectives expressed in the Comprehensive Plan should provide the basis for developing a set of criteria to prioritize future road improvement projects. Of course, the actual criteria design will necessitate considerable amplification of the goals, policies, and objectives to obtain enough detail for point assignment. This process relies heavily upon the judgment of the Planning Commission and their understanding of the Comprehensive Plan. The actual criteria to be used for this sample Capital Improvements Program grew out of policies and objectives of Chocolay Township as contained in the plan.

One of the plan's transportation goals is "to coordinate the improvement of the transportation network with the overall development of the Township." This recognizes the close relationship between road improvement and increased development and the need to use road improvement expenditures to influence development patterns. The plan further states that new development should primarily "occur in areas where it can conveniently be served by local services, such as the sewer system, schools, school bus, recreation facilities, etc." It was felt that the utilization of zoning district boundaries would adequately represent future growth areas and areas where better roads should be encouraged (refer to zoning map). Points were allocated according to which district a project fell into. That is, a proposed road improvement in a R-1 zoning district would receive more points than one in a Rural Residential zoning district, since it would occur in a more developed, service-accessible district. The result of this criterion will be more road investment in areas where growth is encouraged.

One transportation policy of the plan states that, "all road construction, whether public or private, should meet minimum design standards." This is done to ensure that roads are able to accommodate traffic quickly and safely. Standards for each road upon which a project was proposed were established from the Road Design Manual of the County Road Association of Michigan. A proposed project was given four points if it brought a road into compliance with surface design standards, or two points for other design standards. The effect of this criterion will be to eventually bring all roads up to a specified standard, a design standard which varies by type of road. Because these standards are assigned to make road design and construction reflect road use, the end result will be wise expenditure of public road investment dollars.

The final criterion stems from the plan objective, "to annually review road conditions throughout the Township and recommend a priority for road improvements." Under the system developed, a project receives points in an inverse relationship to the condition of the road for which it is proposed. For example, a road judged to be in good condition will receive zero points, since any improvements needed certainly are not urgent. A project on a road in fair condition will receive two points, and one on a road in poor condition, since repairs are so vitally needed, will get four points.

### **Procedure**

The procedure for establishing eligibility for consideration of ranking for road projects shall require an annual review of all existing public roads in the Township by the Supervisor of the Department of Public Works, Police Chief, and the Zoning

Administrator. A listing of roads and associated problems and/or improvements needed shall then be forwarded to the Marquette county road Commission. The Road Commission will then review the list and break projects into major and minor categories. Major improvements shall be those so designated as to require a 50/50 local match for the improvements.

Minor improvements are those which are maintenance projects which are part of normal maintenance conducted by the Road Commission. A project shall be listed as a maintenance project unless resurfacing or reconstruction is requested. This list is then analyzed and forwarded to the Township Planning Commission to rank the major projects into the point allocation system. This list is then forwarded to the Township Board to be used in formulating budget priorities.

## **Goals, Policies and Objectives**

### **Goals**

To provide for the efficient movement of people and goods with a balanced transportation network, accommodating travel patterns safely and efficiently at minimal environmental and fiscal cost and with a maximum conservation of resources.

#### **Sub-Goals**

1. Maximization of energy conservation.
2. Utilization of transportation facilities and planning to implement and guide land use planning.
3. Avoid proliferation of curbcuts and driveway intersections, especially along M-28 and U.S. 41, which are statewide arterials.

### **Policies**

1. All road construction, whether public or private, should meet specified minimum design standards. For roads located in the RP and OS zoning districts, the minimum design standards shall not include paving with a bituminous material.
2. Encourage the use of alternative forms of transportation such as bicycles.
3. Encourage participation in regional, state and county transportation planning.
4. Encourage improvement of transportation safety and convenience and maximize the mobility of road systems within the Township consistent with other portions of the plan.
5. Minimize traffic conflicts between abutting land uses and the principal roadway along statewide arterials and principal collectors by means of land use controls, such as zoning and roadway access point geometrics.
6. Discourage continuing ownership and maintenance of portions of county roads serving areas not suitable for development.
7. Encourage use of public transit, van or car pooling.

### **Objectives**

Continually revise and strengthen the Township's Zoning Ordinance, subdivision regulations, and other land use controls to reflect the Township's transportation needs

and design standards.

In cooperation with the Marquette County Road Commission and the State, adopt and implement an annual Capital Improvements Program for road improvements.

Annually review road conditions throughout the Township and recommend a priority for road improvements.

Identify and classify roadways within the Township and suggested by the Department of State Highways.

Periodically review the potential for providing public transportation services in the Township.

<b>Location</b>	<b>Points</b>
1. Project occurs on a road located within an R-1, R-2, R-3, R-4, C-1, C-2, C-3 zoning district.	*4
2. Project occurs on a road located in an RR-1 zoning district	*3
3. Project occurs on a road located in an RR-2 zoning district.	*2
4. Project occurs on a road located in an RP or an OS zoning district.	*1

\*If project occurs on a road which is determined to serve as a collector/distributor, an additional two points shall be given.

If project occurs on a secondary residential street, an additional point shall be given. If project occurs on a dead end road, no additional points shall be given.

<b>Road Conditions</b>	<b>Points</b>
1. Project occurs on a road in good condition (can be traveled year round 80-100% of length at design speed).	0
2. Project occurs on a road in fair condition (can be traveled year round, 50-80% of length at design speed).	2
3. Project occurs on a road in poor condition (cannot be traveled year round and/or only 0-50% can be traveled at design speed).	4

<b>Design Standards</b>	<b>Points</b>
1. Project brings a road into compliance with standards in terms of surface design.	4
2. Project brings road into compliance in terms of resurfacing design	3
3. Project brings a road into compliance with other design standards.	2

<b>Density</b>	<b>Points</b>
1. Project occurs on a road located with a density of 25 or more houses per mile.	4
2. Project occurs on a road located with a density of 20 or more houses per mile.	3
3. Project occurs on a road located with a density of 10 or more houses per mile..	2
4. Project occurs on a road located with a density of less than 10 houses per mile.	1
5. Project occurs on a road located with a less than 5 houses per mile.	0

**Administrative Considerations**

A Capital Improvements Program requires a significant commitment by the Planning Commission in terms of time and effort. Annually, the Planning Commission should review and update policies within the Comprehensive Plan, as needed. If policies are changed, then criteria (outgrowth of policies) must also be altered to properly reflect those changes.

Of course, the Planning Commission cannot hope to do all of this by itself. Strong staff support is needed, along with the assistance of various outside professionals. For example, very detailed information will be needed from the Road Commission or township supervisor in order to evaluate road condition criteria.

Lastly, it can be mentioned that a Capital Improvements Program for the area of transportation is relatively more difficult than for recreation, for example. This is due to the fact that many of the proposed projects are very similar, and require very technical criteria.