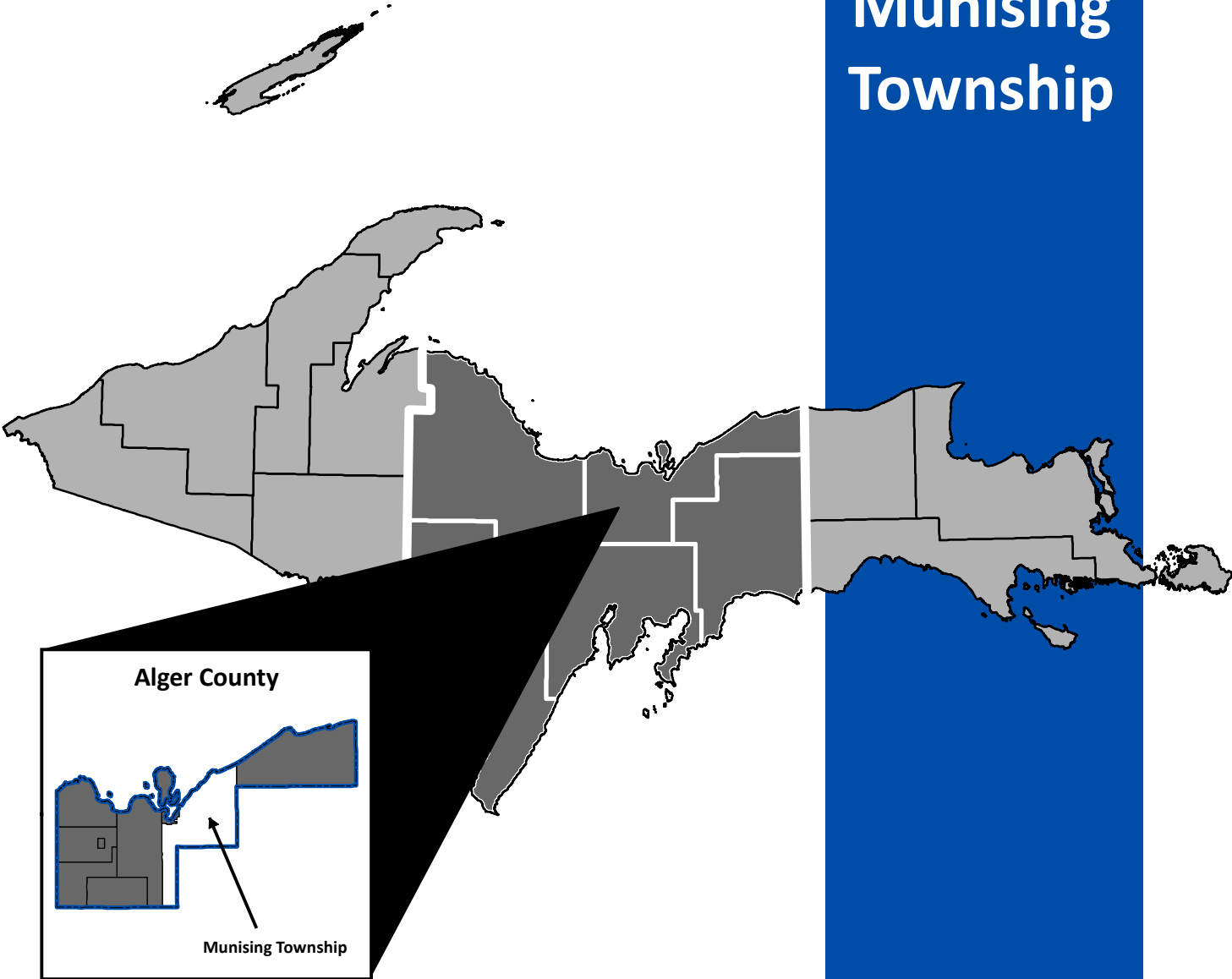


Munising Township



Master Plan

Prepared By:

Munising Township Planning Commission
&
Munising Township Board
Adopted: February 7, 2011



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CHAPTER 1.0 INTRODUCTION AND HISTORICAL BACKGROUND

1.1 Introduction

The preparation of this updated Master Plan represents many months of study, analysis and review by the Munising Township Planning Commission with technical assistance from the Central Upper Peninsula Planning and Development Regional Commission. Existing conditions and circumstances that affect Munising Township are discussed in chapters 2 through 9. Chapter 10 uses the background information as a basis to proceed through a progression of analyses culminating in goals for the future. Chapter 11 focuses on future land use and plans for zoning in the Township.

Major elements discussed in this document include: population, economic base, natural features, land use, community facilities and services, housing, recreation and transportation. Each of these chapters, or elements, includes a summary of the points having the greatest relevance to future municipal decision-making. Thus, this plan addresses the issues of present conditions, municipal needs and desired future conditions, while also providing a means to achieve future development goals and objectives.

In summary, this plan is intended for use as a guide by local officials when considering matters related to development and land use. Planning is a process that requires ongoing review and analysis. To that end, this plan will remain a “work-in-progress” and will require timely and thoughtful revision to be of the greatest value.

1.2 Munising Township Historical Background

The name “Munising” is derived from an Ojibwa Native American word, “Minissing” or “Place of the Great Island,” for the nearby Grand Island, located on the southern shore of Lake Superior in Michigan’s Upper Peninsula (Map 1-1). This area served as a home to the indigenous Ojibwa and later to early fur trading Europeans who arrived to the area as early as 1834. The first settlement occurred in 1860. Early travelers have described their visual impressions of the area’s majestic sites. Four separate sites have been called Munising over the years including: Grand Island City, the Schoolcraft/Munising Furnace site, Wetmore and the Village/City of Munising.

Munising Township came into being with the establishment of the Schoolcraft Furnace. The Upper Peninsula wilderness went through many divisions in the early days and Munising Township was organized on March 23, 1867. Further division of the Township added sections to the townships of Manistique, Seney, Thompson and Hiawatha in Schoolcraft County and Onota and Burt in Alger County. The last boundary change, in 1905, was the second formation of Grand Island Township.

Munising Township was attached to Marquette County until Schoolcraft County was organized in 1871. It has been noted that townships were often established but not organized until the region had been settled to a degree that required a local government. Roads had not yet been established in the dense forest and all supplies had to be shipped in. Transportation was very uncertain for residents at the time and they remained dependent on boat traffic, the company and the company store for contact with the outside world. Alger County was not established until March 17, 1885, through an act of the state legislature. The new county was named after Russell A. Alger, the governor of Michigan, who later became Secretary of War under President McKinley, and then a United States Senator.

The Schoolcraft Iron Company began construction of a smelting furnace in 1867. William Cox was appointed as the first postmaster in 1868 as homes and businesses were established in the village of Munising. Smelting furnaces operated in the area for over a decade. Sometime around 1900, the Cleveland Cliffs Iron Company purchased the holdings of the former Munising Iron Company. The area was served by two railroads during this time, and was experiencing development of other industries such as lumber mills, tanneries, quarries, a brickyard, and woodenware manufacturing. Paper manufacturing followed shortly thereafter in 1902.

French-Canadians dominated the early work force, but the area was made up of an international scene, including Scotch-Irish, Swedish, Welsh, Germans, English, Dutch, Swiss, Finnish and Americans. Shortly before the Schoolcraft Furnace was founded, a band of fifty to sixty Chippewa Indians from Bay Mills and Sault Ste. Marie settled south of the Washington School, building small homes. Fishing, hunting and trapping provided their livelihood and some worked at the furnace as well.

Large scale lumbering began in Alger County in 1876 and overlapped with the last days of the Schoolcraft Furnace. Lumbering continued beyond the construction of the Detroit, Mackinac and Marquette Railroad. The first huge pines were felled along Lake Superior, which provided the only means possible for shipping the logs.

Wetmore was established due to its proximity to the new Detroit, Mackinac and Marquette Railroad and it was the nearest point to the only settlement in the area- Munising. A railroad outlet was necessary even for lumber companies that sent their timber downstream to Lake Michigan. The building of Munising Station (Wetmore) began with the survey of the railroad, but it was more than 15 years before the community received a permanent name. The railroad stop was named Munising Station because of its immediacy to Munising. In 1881, the depot was built and existed for 35 years. There was little commercial activity in the area until the mid-1880s. The business

district built up along the railroad, essentially Railroad Street and its intersection, Island Street. The settlement of Wetmore reached its peak in the 1890s; in addition to the lumber industry, a set of charcoal kilns was added, as well as several more small businesses. The Wetmore Cemetery was started sometime in the early 1890s as well. In 1896, logging companies began logging south of town and the Cleveland Cliffs Iron Company began extensive cutting as well along the east branch of the Munising Railway. Business at the railroad station increased, but the boom years were passing for the community. The town finally received its permanent name of Wetmore around this time.

Timber was also the main reason for the existence of several other communities in Munising Township, including Shingleton, Van Meer and Melstrand. There was a great mix of nationalities including: Swedes, Finns, English, Scots, Irish, Poles, Croatians, Slovenians, French, German, Dutch and Danes that arrived to cut the forests, mill them and ship them. Present day generations carry on many of their names.

In 1882, the Detroit, Mackinac and Marquette Railroad established a depot and named it Jeromeville. Shingleton originated as Jeromeville, in honor of David H. Jerome, Michigan's first native-born Governor. The name was changed several years later when the first shingle mill was founded. Van Meer was likely named for James Van Meer, a camp foreman, and was established around 1917-a time when there was only a rough one lane road to Shingleton. Before highway construction, travelers had to drive to Shingleton by way of Van Meer. Shingleton was prosperous compared to its satellite communities (Melstrand and Van Meer) due to its location at a crossroads and at a junction point of the South Shore and Manistique and Lake Superior railroads. The other communities disappeared when the timber was gone¹.

Although some of the early natural resources-based industries have ceased operations, Neenah Paper remains the area's largest employer and has been a stable economic force for many decades. Moreover, the Alger Maximum Correctional Facility, the expanded Kewadin Casino, Munising Memorial Hospital, Timber Products and the emergence of many new service related businesses have helped to strengthen the overall local economy.

The area's natural resources have become a predominant force in the local economy through the expansion of tourism services and high-quality recreational opportunities. Jobs and customers created by a booming tourist industry have improved local economic conditions. The Pictured Rocks National Lakeshore, Hiawatha National Forest, Alger Underwater Preserve, and Grand Island are among the major attractions and offer

¹ Source: Alger County: A Centennial History 1885-1985: Symon, Charles

a wide variety of active and passive four-season recreational choices that compare with the best in the United States.

CHAPTER 2.0 POPULATION

2.1 Introduction

Population change is the primary component in tracking a community's past growth as well as forecasting future population trends. Population characteristics relate directly to housing, educational, community, recreational, health care, transportation, and future economic development needs. The growth and characteristics of population in a community are subject to changes in prevailing economic conditions. Such characteristics are presented throughout this chapter.

Alger Maximum Correctional Facility opened in 1990 and inmates are included in the Township's reporting for Census statistics. Munising Township is unique in that many of its population statistics may be skewed as a result of the inmates at the Alger Maximum Correctional Facility. The former Camp Cusino, located in Shingleton, was closed in June 2009. Approximately 300 inmates were transferred over to Alger Maximum Correction Facility.

2.2 Population Trends

Munising Township has experienced a large increase in population from 1940 to 2000 (Table 2-1). The Township's population grew from 1,073 in 1940 to 3,125 in 2000, representing a 191.2% increase. Many Townships in the Upper Peninsula have experienced similar growth, while cities in the region have observed a population decline over the same time period, as the City of Munising has.

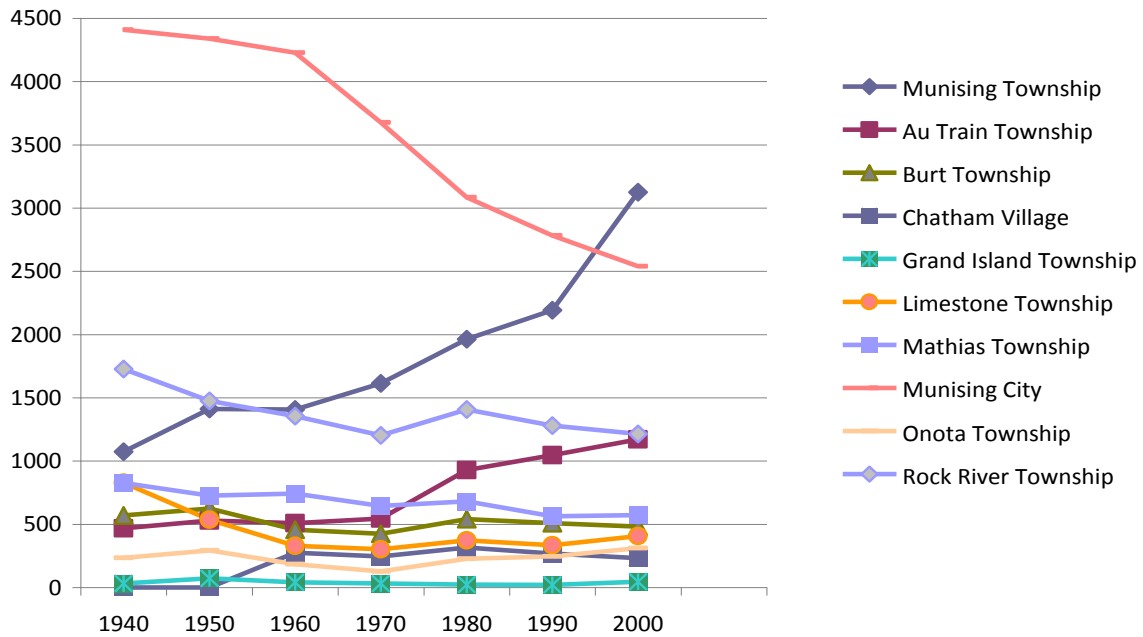
After a peak of 4,409 residents in 1940, the City has experienced a population decline of 42.4 percent to 2,539 in 2000. Munising Township is exceptional in the fact that growth has not tapered off; the Township expanded its' population 42.5 percent from 1990 to 2000. Many area township populations have increased due to an out-migration of residents from urban to rural areas. Au Train Township and Onota Township have experienced significant growth as well.

**Table 2-1
Population, Selected Areas, 1940-2000**

Governmental Unit	1940	1950	1960	1970	1980	1990	2000	% Change 1940-2000
Munising Township	1,073	1,412	1,408	1,614	1,963	2,193	3,125	+191.2
Au Train Township	467	529	508	545	928	1,047	1,172	+151.0
Burt Township	570	624	457	424	539	508	480	-15.8
Chatham Village	-	-	275	246	315	268	231	-
Grand Island Township	31	73	40	32	23	21	45	+45.2
Limestone Township	829	535	330	302	373	334	407	-50.9
Mathias Township	827	726	742	644	680	563	571	-31.0
Munising City	4,409	4,339	4,228	3,677	3,083	2,783	2,539	-42.4
Onota Township	234	293	183	128	228	244	310	+32.4
Rock River Township (w/ Village of Chatham)	1,727	1,476	1,354	1,202	1,408	1,279	1,213	-29.8
Alger County	10,167	10,007	9,250	8,568	9,225	8,972	9,862	-3.0

Source: U.S. Bureau of the Census, years cited.

Historical Population Trends, Alger County Municipalities, 1940-2000



The trend of population growth for townships that surround cities is not simply a local phenomenon. In major metropolitan areas this trend has taken the form of migration from the city to its surrounding suburbs, while in smaller urban areas people are moving into surrounding rural areas. There are many reasons for this migration, including lower taxes and user fees, lower development costs, a desire for a more rural lifestyle, lower incidences of crime, desire for larger residential lots, etc. Over the past two decades, the population growth in townships surrounding Upper Peninsula cities has been substantial.

Alger County's population declined in every decade except the 1970s in which an increase of 7.7 percent was recorded. Overall, the 1940 to 2000-period saw the county's population decrease by only 305 persons, or 3.0 percent. The State of Michigan experienced population growth in each of the decades from 1940 to 2000. An increase of 81.1 percent occurred in the state over the 60-year period. For the entire nation, the population increased by 81.1 percent during the same 60-year period.

Population change is the result of a combination of natural increase and migration. When births within a community within a period of time exceed deaths, a positive natural increase occurs. If deaths exceed births, a negative natural increase is the result. Communities with a relatively young population tend to have a high natural increase, due to a higher birth rate. Those communities with a large number of older people tend to have a small natural increase; a negative natural increase is uncommon. Net migration describes the difference between the number of people moving into a community and the number of people moving out. Net migration is positive when more people move into an area than move out. Economically depressed areas often experience significant out-migration as residents leave in pursuit of employment opportunities elsewhere.

In Alger County, births exceeded deaths in the decades of 1970 and 1980 resulting in a natural increase. During the 1970s, as a result of the natural increase together with in-migration, a population gain was experienced. In the 1990s however, deaths outnumbered births and the total natural increase was surpassed by out-migration, explaining the county's population decline during the 1990s. This information is presented in Table 2-2.

	1970-1979	1980-1989	1990-1999
Live Births	1,322	1,182	837
Deaths	1,033	1,054	1,503
Natural Increase	289	127	-144
Migration	369	-381	1,277
Total Population Change	657	-253	-1,111

Source: Michigan Information Center, Michigan Department of Management and Budget.

2.3 Age and Gender

According to data obtained in the 2000 Census, the population of Munising Township is much younger than Alger County as a whole. Munising Township’s median age in 2000 was 35.2, lower than every other municipalities in Alger County (41.2) as well as Michigan (35.5) and the United States (35.3) overall. From 1980 to 2000, the Township did experience a 6.5 year increase in the median age of its residents. While the median age rose in every municipality in Alger County, Onota Township’s 18.4 year increase was the most dramatic. Table 2-3 presents comparative data on median age.

Area	1980	1990	2000	Change 1980-2000
Munising Township	28.7	32.4	35.2	+6.5
Au Train Township	30.1	36.2	42.3	+12.2
Burt Township	42.2	48.1	56.7	+14.5
Chatham Village	--	36.2	40.8	(1990 -2000)+4.6
Grand Island Township	42.5	37.5	45.8	+3.3
Limestone Township	32.8	37.8	45.5	+12.7
Mathias Township	31.6	39.9	44.6	+13.0
Munising City	34.3	39.7	43.8	+9.5
Onota Township	31.4	38.6	49.8	+18.4
Rock River Township	29.9	36.1	42.3	+12.4
Alger County	31.6	36.7	41.2	+9.6
State of Michigan	28.8	32.6	35.5	+6.7
United States	30.0	32.9	35.3	+5.3

Source: U.S. Bureau of the Census, 2000 Census of the Population, STF 1A, Table 1; 1990 Census of the Population, General Population Characteristics, Table 44; 1980 Census of the Population, Table 33.

The examination of a community’s age structure is critical to sound decision making within a community. Persons ages five through 18 make up the school age portion of the population-which is further divided into elementary, middle and high school age groups. The working age population is generally accepted as those from 16 to 65 years

of age. Those persons 18 or older constitute the eligible voting population. Of course, not everyone between the ages of 16 and 64 is in the labor force, and not everyone 18 or older actually votes. However, this breakdown does give communities a sense of how their population is distributed for planning and comparative purposes.

An analysis of the information in Tables 2-4 and 2-5 by age cohort provides another perspective on age distribution within the population. By studying the population fluctuations within this and other groups, it is possible to evaluate the important factors of in-migration and out-migration. Data for several age groups were not completed for the 1990 Census and are absent in Table 2-4.

Table 2-4 Population Distribution by Age Group, Munising Township, 1990		
Age Group	1990	
	Number	Percent
Preschool Age		
Under 5	145	6.6
<i>Subtotal</i>	145	6.6
School Age		
5 -17	386	17.6
<i>Subtotal</i>	386	17.6
Working Age		
18 – 20	132	6.0
21 – 24	137	6.2
25 – 44	780	35.6
45 – 54	243	11.1
55 – 59	77	3.5
60 – 64	93	4.2
<i>Subtotal</i>	1,462	66.6
Retirement Age		
65 – 74	135	6.2
75 – 84	52	2.4
85 years and over	13	0.6
<i>Subtotal</i>	200	9.2
Total	2,193	

Table 2-5 Population Distribution by Age Group, Munising Township, 2000		
Age Group	2000	
	Number	Percent
Preschool Age		
Under 5	137	4.4
<i>Subtotal</i>	137	4.4
School Age		
5 -9	157	5.0
10 – 14	216	6.9
15 – 19	190	6.1
<i>Subtotal</i>	563	18.0
Working Age		
20 – 24	233	7.5
25 – 34	615	19.7
35 – 44	620	19.8
45 – 54	443	14.2
55 – 59	137	4.4
60 – 64	100	3.2
<i>Subtotal</i>	2,148	68.8
Retirement Age		
65 – 74	161	5.2
75 – 84	91	2.9
85 years and over	25	0.8
<i>Subtotal</i>	277	8.9
Total	3,125	

Source: U. S. Bureau of the Census, 1990 Census of the Population, General Population Characteristics, STF 1, 010; 2000 Census of the Population, General Population Characteristics, Table 68.

In 2000, the combined age group of 25-44 years made up the largest portion of the Township's total population, at 1,235 persons or 39.5 percent. The same age group represented the largest portion of the Township's population in 1990, at 780 persons or 35.6 percent. Many Upper Peninsula natives leave the area after high school to attend college and obtain jobs. The lack of jobs in the area is often cited as the reason for losing local youth. The relatively high proportion of residents age 25-44 may indicate a turnaround of the trend common in the Upper Peninsula. The statistics may also indicate the desire for many local residents to return to the area they grew up in and raise a family in a familiar community environment. Again, the statistics may also be slightly skewed by the large prison population in the Township; many inmates may be between the ages of 25-44.

The elderly population, which includes those 65 years and older, made up 8.9 percent of the total population in 2000, down from 9.2 percent in 1990. The data indicates that the population of the Township is aging, although slower than the surrounding municipalities. Growth of the older segment of the population influences the type and costs of services offered by the Township and other providers.

In recent decades, there has been a shift in population from the school age and working age population into the retired age group. This change has occurred almost universally across the country. The proportion of individuals in the preschool and school age groups continues to shrink which contributes declining school enrollment. Many residents in the working age population have been forced to move to areas with more employment opportunities. As the "baby boomers" begin to reach retirement age, a smaller proportion of the population is participating in the workforce. With a diminishing workforce, there are fewer people contributing to pension funds and additional programs that support retirees. As the number of working persons decreases in comparison to retirees, there is distress over the future of programs such as Social Security.

2.4 Ethnic Composition

The ethnic composition of Munising Township, consistent with the entire Upper Peninsula is overwhelmingly white. The largest non-white ethnic group was identified as black. In 2000, 593 persons identified themselves as black, up from 209 in 1990.

Race	1990		2000	
	Number	Percent	Number	Percent
White	1,841	83.9	2,282	73.0
Black	209	9.5	593	19.0
American Indian, Eskimo, & Aleut	124	5.7	134	4.3
Asian & Pacific Islander	14	0.6	11	0.3
Other Races	5	0.2	27	0.9
Total	2,193	100.0	3,125	100.0

Source: U.S. Bureau of the Census, 2000 Census of the Population, STF, 1A Table P006; 1980 Census of the Population, STF 1, Table 007.

2.5 Educational Attainment

The 2000 census indicates that over 77 percent of the Township's population 25 years and older has a high school diploma. This is slightly lower than that of Alger County (81.5 percent) and the State (83.4 percent). The Township also exhibits lower rates of college graduates (8.3 percent) when compared to the County (14.7 percent) and the State (21.8 percent). These figures are presented in Table 2-7.

Educational and training requirements have been increasing for workforce entrants. Employers who previously required little in the way of formal education are, in many instances, now looking for employees with post-high school education, due to the complexity of the equipment and methods being utilized in the workplace. A highly trained, educated workforce is an asset in attracting employers to a community.

Educational Level	Munising Township		Alger County		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent
Less than 9 th Grade	134	5.9	428	6.0	299,014	4.7
9 th - 12 th Grade, No Diploma	379	16.8	895	12.5	765,119	11.9
High School Graduate	1,018	45.2	3,035	42.3	2,010,861	31.3
Some College, No Degree	465	20.6	1,463	20.4	1,496,576	23.3
Associate Degree	70	3.1	296	4.1	448,112	7.0
Bachelor Degree	149	6.6	760	10.6	878,680	13.7
Graduate or Professional Degree	38	1.7	292	4.1	517,579	8.1
High School Graduate or Higher	--	77.2	-	81.5	-	83.4
Bachelor Degree or Higher	--	8.3	-	14.7	-	21.8

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, STF 3A, P057.

2.6 Household Characteristics

Evaluation of the changes in household characteristics in a community can often provide additional insight regarding population trends. Household relationships reflect changing social values, economic conditions, and demographic changes, such as increased lifespan and the increasing mobility of our society.

The Census defines a household as all persons who occupy a housing unit, i.e., a single family, one person living alone, two or more families living together, or any group or related or unrelated persons sharing living quarters. A family consists of a householder and one or more persons living in the same household who are related by birth, marriage, or adoption. A non-family household can be one person living alone, or any combination of people not related by blood, marriage or adoption.

From 1990 to 2000, the number of households increased by 174, as the population increased by 42.5 percent. The average household size decreased from 2.80 persons to 2.74 persons per household. Across the region and the United States, smaller household sizes have been the trend. Non-family households have also increased from 111 to 159, the majority of the increase coming from householders living alone. From 1990 to 2000, there was also a slight increase in the number of householders living alone over the age of 65.

Household Type	1990		2000	
	Number	Percent	Number	Percent
Family Households	543	83.0	669	80.8
Married-Couple Family	483	73.8	580	70.0
Female Householder	39	6.0	53	6.4
Non-Family Households	111	17.0	159	19.2
Householder Living Alone	102	15.6	120	14.5
Householder 65 years and older	41	5.0	48	5.8
Total Households	654	100.0	828	100.0
Average Household Size	2.80		2.74	

Source: U. S. Bureau of the Census, 2000 Census of the Population and Housing, STF 1A, P003, P016 and H017A; 1990 Census of the Population and Housing, STF 1, 003, 016 and 035.

The large prison population in the Township is considered to be living “in group quarters, institutionalized,” rather than being included in typical household characteristics. Again, the prison population has an effect on the reported Census data.

2.7 Population Projections

Population projections are useful for community planning endeavors. For instance, the demand for certain types of public services can be anticipated by using sound population projections. Formulating projections is complicated and fraught with unknowns such as economic conditions, which can greatly influence migration. Other considerations, like fertility and mortality data, have much less impact.

In 1996, the Michigan Department of Management and Budget prepared baseline population projections to the year 2020 for all counties of the state using a formula that includes the three main components of population change: births, deaths and migration. The 15-year population forecast for Alger County projects an increase of 200 persons from 2005 to 2020. These projections are presented in Table 2-9.

Area	2005	2010	2015	2020
Alger County	10,000	10,000	10,200	10,200
Delta County	38,900	39,100	39,200	39,400
Dickinson County	27,500	27,700	27,900	28,100
Marquette County	68,900	68,400	67,600	66,700
Menominee County	22,500	21,500	20,600	19,600
Schoolcraft County	8,900	8,900	9,000	8,900
Michigan	9,963,800	10,121,300	10,285,000	10,454,700

Source: Department of Management and Budget, Population to the Year 2020 in Michigan, 1996

2.8 Issues and Opportunities

- Alger Maximum Correctional Facility and Camp Cusino prison populations are included in all Munising Township Census data and may distort some of the Township's population trends.
- Munising Township experienced massive growth in the period from 1940 to 2000, a 291.2% increase. The Township may be experiencing growth from out-migration from the City of Munising. If the growth continues at the current rate, the Township may need to reassess infrastructure and community services and facilities. Part of the large population boost was due to the opening of the Alger Maximum Correctional Facility in 1990.
- If Alger County's population declines over the next ten years, many communities may consider looking at a consolidation of services to save money and to continue providing a high level of services.

- The Township experienced a median age increase of 6.5 years between 1990 and 2000. Taking into account the increase, the population of Munising Township remains much younger than the surrounding communities and Alger County overall.
- Age group data indicates that the population of the Township is aging, although much slower than the surrounding municipalities. Growth of the older segment of the population influences the type and costs of services offered by the Township and other providers.
- The Township exhibits a high proportion of residents ages 25-44. Many communities around the region are losing many residents from this age group due to lack of employment opportunities.
- The ethnic composition of the Township is mostly white, as is the entire Upper Peninsula. The Township does report a higher population identifying as black.
- The Township has reported lower high school and college graduation rates than the County and the State.
- The average household size in the Township has decreased since 1990. Most communities around the country have exhibited a decrease in household size, due to the increase in the number of households.
- The number of non-family households in the Township has increased as have the number of persons living alone.
- Alger County's population is predicted to show a slight increase over the next ten years. If population trends for the Township continue, the Township may experience a large amount of that increase.

CHAPTER 3.0 ECONOMIC BASE

3.1 Introduction

Central to a community's stability and growth is its economic base. Two major sectors make up a community's economy: one which provides goods and services for markets outside of the community (basic or export sector) and one which provides goods and services for local consumption (non-basic sector). Economic vitality and balance rely heavily on the creation and retention of local basic sector jobs. The factors that affect the economic base in a community extend beyond its boundaries; increasingly so as the effects of the global economy are realized. Therefore, this chapter will not only include information which is specific to Munising Township, but it will also include comparative data from the county and state.

3.2 Area Economy

Historically, the local economy, like that of the county, is closely related to natural resources and features. The proximity and abundance of forest products provide much of the raw material utilized in commercial enterprises such as paper and lumber mills.

Tourism has been, and continues to be, a major and growing industry in the area. Once limited primarily to the summer season, tourism has become much more of a year-around industry due at least in part, to the popularity of fall "color tours" and winter sports, especially snowmobiling (Michigan leads the nation in the number of licensed snowmobiles).

As an industry, tourism is among the leaders in Michigan. The term "tourism" is comprehensive and includes a range of activities associated with natural and man-made attractions such as products and services for leisure and recreational pleasure. Alger County has an abundance of hiking and skiing trails, snowmobile trails, waterfalls, and opportunities for fishing, boating, kayaking and swimming.

Tourism and recreation have changed over the years as transportation options have increased personal mobility. Today's tourists are more likely to travel frequently, take shorter trips and stay closer to home. Heritage-tourism and eco-tourism have increased in popularity. Heritage-tourism draws those interested in the historic and cultural offerings of a community or institution. Eco-tourism is popular among those desiring to experience nature through activities such as bird watching, hiking, and kayaking.

Major tourist attractions for Munising Township include the Pictured Rocks National Lakeshore, a diverse area encompassing over 73,000 acres and the Hiawatha National Forest, covering 880,000 acres over much of the eastern Upper Peninsula. Authorized in

1966, Pictured Rocks National Lakeshore offers spectacular scenery and an array of outdoor activities that attracted over 421,000 visitors in 2006. The Hiawatha National Forest boasts opportunities for camping, swimming, fishing, picnicking, auto tours and interpretive trails. There are also five National Forest Campgrounds in Munising Township.

The Township benefits from the limited diversity that exists among area businesses and industries. Alger Maximum Correctional Facility provides employment for many in the Township. Manufacturing industries like the Neenah Paper mill, Hiawatha Log Homes and the Timber Products Michigan sawmill and veneer mill provide a strong base of employment for the area. Hiawatha Communications, Inc. (HCI) is the locally owned and operated holding company that oversees four Incumbent Local Exchange Carriers (ILECs) across the Upper Peninsula, including Hiawatha Telephone Company, in the City of Munising.

Economic activity in the service and retail trade sectors has favorably impacted employment as the tourist industry has grown. Community groups such as the Alger Chamber of Commerce, Alger County Economic Development Corporation and the Greater Munising Bay Partnership for Commerce Development have worked to bring about infrastructure improvements and have initiated marketing programs which have benefitted the local economy.

3.3 Civilian Labor Force

The civilian labor force consists of persons currently employed and those currently seeking employment, excluding persons in the armed forces and those under the age of 16. Shifts in the age and sex characteristics of residents, seasonal changes, and employment opportunities can all cause fluctuation in the number of persons in the labor force.

In 2000, the percentage of persons within the Township, age 16 or older who were in the labor force (labor force participation rate) was 42.8 percent, lower than Alger County's rate of 51.0 percent and much lower than the state, at 64.6 percent. The relatively low labor force participation rate for the Township is most likely due to the 837 residents reported in the "group quarters, institutionalized" category (Table 4-6). These residents are inmates at Alger County Maximum Correctional Facility and Camp Cusino and therefore not eligible to participate in the civilian labor force. Table 3-1 provides comparative labor force data.

Characteristics	Munising Township		Alger County		Michigan	
	Number	Percent	Number	Percent	Number	Percent
Population 16 Years and Over	2,596	100.0	8,102	100.0	7,630,645	100.0
Civilian Labor Force	1,111	42.8	4,136	51.0	4,926,463	64.6
Employed Labor Force	1,019	39.3	3,776	46.6	4,637,461	60.8
Unemployed Labor Force	92	3.5	357	4.4	284,992	3.7

Source: U.S. Bureau of the Census, 2000, STF 3A, P070.

Workforce participation by females is presented in Table 3-2. Of the 855 females over the age of 16 in the Township, 58.1 percent are in the civilian labor force, while 55.0 are employed. Labor force participation rates for females over 16 in the Township are higher than that of the County and nearly identical to rates reported by the state. As reported by the Bureau of Labor Statistics, labor force participation rates for men have been decreasing since 1950 while the rate for women increased significantly in the 1970s and 1980s, peaking in 1999 and decreasing slightly since that time (Bureau of Labor Statistics, <http://www.bls.gov/opub/ted/2007/jan/wk2/art03.htm>).

Characteristics	Munising Township		Alger County		Michigan	
	Number	Percent	Number	Percent	Number	Percent
Females 16 Years and Over	855	100.0	3,671	100.0	3,943,137	100.0
In Civilian Labor Force	497	58.1	1,890	51.5	2,305,121	58.5
Employed in Labor Force	470	55.0	1,782	48.5	2,178,114	55.2

Source: U.S. Bureau of the Census, 2000, SF3, Table P45.

3.4 Employment by Industry Group

Table 3-3 provides comparative data derived from the 2000 Census using the Standard Industrial Classification (SIC) manual. This system allows for a classification of establishments by the type of industrial activity in which they were engaged. The census data used were collected from households rather than businesses, which may be less detailed in some categories.

The three leading employment categories for the Township included: manufacturing; educational, health and social services; and public administration. Persons employed in manufacturing and public administration divisions in the Township labor market were reported at higher rates than the County or the State.

Broad Economic Division	Munising Township		Alger County	Michigan
	Number	Percent	Percent	Percent
Agriculture, forestry, fishing & hunting, and mining	34	3.3	4.3	1.1
Construction	70	6.9	7.6	6.0
Manufacturing	294	28.9	19.4	22.5
Wholesale Trade	5	0.5	0.8	3.3
Retail Trade	92	9.0	9.6	11.9
Transportation & Public Utilities	17	1.7	3.3	4.1
Information	11	1.1	1.1	2.1
Finance, insurance, real estate, and rental and leasing	49	4.8	4.7	5.3
Professional, scientific, management, administrative, and waste management services	29	2.8	3.4	8.0
Educational, health, and social services	164	16.1	19.3	19.9
Arts, entertainment, recreation, accommodation and food service	103	10.1	11.3	7.6
Other services (except public administration)	22	2.2	4.1	4.6
Public Administration	129	12.7	11.4	3.6
Total	1,019	100.0	100.0	100.0

Source: U.S. Bureau of the Census, 2000, Table DP3.

3.5 Employment by Place of Work

Census information pertaining to where Township residents work and their commuting times is presented in Tables 3-5 and 3-6. According to the 2000 Census data, 4.6 percent of the working age population was employed outside of Alger County and about 77 percent reported commuting time of less than twenty minutes to their place of employment.

Characteristics	Number	Percent
Total Township Residents Employed	1,019	100.0
Worked in Alger County	955	93.7
Worked Outside of Alger County	47	4.6
Worked in Michigan	1,002	98.3
Worked Outside of Michigan	7	0.7

Source: U.S. Bureau of the Census, 2000, SF 3A, P26.

Residence to Work Travel Time	Number of Workers	Percent
Did Not Work at Home	981	97.2
Less than 5 Minutes	48	4.8
5 to 9 Minutes	238	23.6
10 to 14 Minutes	272	27.0
15 to 19 Minutes	221	21.9
20 to 24 Minutes	79	7.8
25 to 29 Minutes	27	2.7
30 to 34 Minutes	18	1.8
35 to 29 Minutes	2	0.2
40 to 44 Minutes	2	0.2
45 to 59 Minutes	23	2.3
60 to 89 Minutes	34	3.4
90 or More Minutes	17	1.7
Worked at Home	28	2.8
Total	1,009	100.0

Source: U.S. Bureau of the Census, 2000, SF 3A, P31.

The workplace as we have come to know it has been greatly influenced by technological advancements and economic globalization. It is predicted that fully one-third of the 21st century workforce will be independent with regard to location; electricity and phone line availability will be the only requirements. Places that can offer quality living environments will be the locations of choice for these types of work arrangements.

3.6 Unemployment

The Michigan Employment Security Agency (formerly the Michigan Employment Security Commission) collects and analyzes unemployment and labor force data by county. Prior to 1965, unemployment figures were based on Bureau of the Census data. A comparison of unemployment and labor force data is presented in Table 3-7.

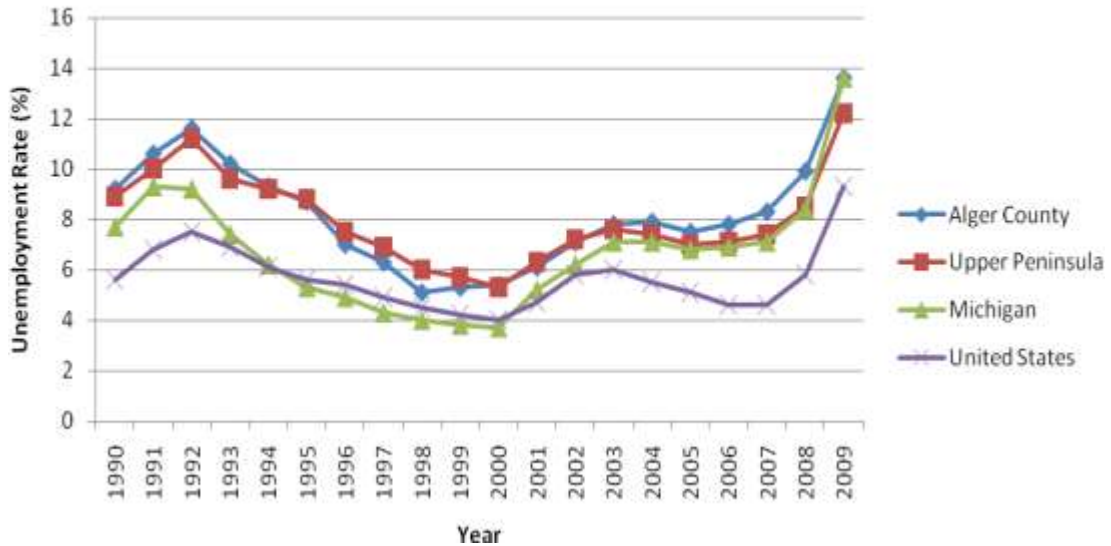
Unemployment rates in Alger County have generally followed the regional pattern. In nearly every year of the comparison, Alger County has experienced annual unemployment rates in excess of those recorded for the state and nation.

The civilian labor force fluctuates with prevailing economic conditions. Following a significant decrease recorded in 2002, the civilian labor force has grown steadily in each ensuing year.

Year	Alger County Labor Force			Unemployment Rates (Percentage)			
	Labor Force	Employed	Unemployed	Alger County	Upper Peninsula	State of Michigan	United States
1990	3,814	3,462	352	9.2	8.9	7.7	5.6
1991	3,869	3,458	411	10.6	10.0	9.3	6.8
1992	3,940	3,484	456	11.6	11.2	9.2	7.5
1993	4,008	3,600	408	10.2	9.6	7.4	6.9
1994	4,133	3,750	383	9.3	9.2	6.2	6.1
1995	4,242	3,871	371	8.7	8.8	5.3	5.6
1996	4,208	3,193	295	7.0	7.5	4.9	5.4
1997	4,273	4,003	270	6.3	6.9	4.3	4.9
1998	4,298	4,080	218	5.1	6.0	4.0	4.5
1999	4,403	4,169	234	5.3	5.7	3.8	4.2
2000	4,373	4,139	234	5.4	5.3	3.7	4.0
2001	4,432	4,161	271	6.1	6.3	5.2	4.7
2002	4,402	4,090	312	7.1	7.2	6.2	5.8
2003	4,431	4,084	347	7.8	7.6	7.1	6.0
2004	4,377	4,032	345	7.9	7.4	7.1	5.5
2005	4,381	4,052	329	7.5	7.0	6.8	5.1
2006	4,478	4,130	348	7.8	7.1	6.9	4.6
2007	4,412	4,046	366	8.3	7.4	7.1	4.6
2008	4,296	3,872	424	9.9	8.5	8.4	5.8
2009	4,288	3,705	583	13.6	12.2	13.6	9.3

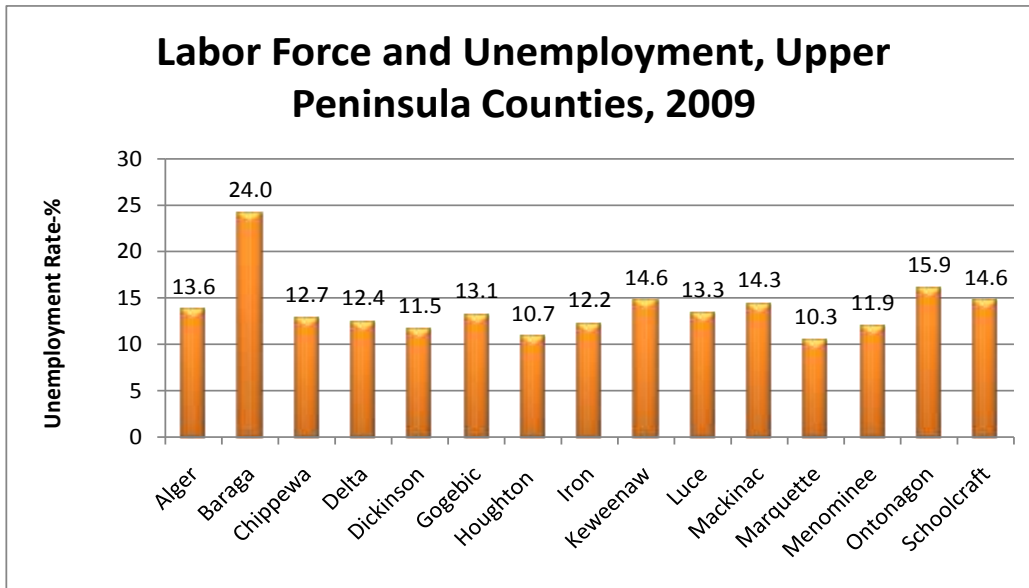
Source: Michigan Department of Labor and Economic Growth, for years cited.

Unemployment Rate, Selected Areas 1990-2009



County	Total Labor Force	Employed	Unemployed	Unemployment Rates (Percentage)
Alger	4,288	3,705	582	13.6
Baraga	4,488	3,410	1,078	24.0
Chippewa	17,152	14,971	2,181	12.7
Delta	19,461	17,057	2,404	12.4
Dickinson	14,293	12,649	1,644	11.5
Gogebic	7,440	6,468	972	13.1
Houghton	17,619	15,738	1,881	10.7
Iron	5,763	5,061	702	12.2
Keweenaw	1,088	929	159	14.6
Luce	2,715	2,355	360	13.3
Mackinac	6,115	5,240	875	14.3
Marquette	36,206	32,483	1,559	10.3
Menominee	13,100	11,541	1,559	11.9
Ontonagon	3,222	2,709	513	15.9
Schoolcraft	3,902	3,331	571	14.6

Source: Michigan Department of Labor and Economic Growth, 2009.



3.7 Major Area Employers

Alger Maximum Correctional Facility was constructed in 1990 at the cost of \$42 million. As of 2007, employment at the prison facility was 369. The Alger Maximum Correctional Facility has a total of six housing units. Five are identical, and the sixth has additional beds. Three housing units are general population and three are used for segregation. Other buildings provide food service, health care, maintenance, storage and space for administrative offices. The facility occupies 78 acres and houses around approximately 900 inmates. The state of Michigan reclassified Alger Max from a Level V prison to a Level IV, allowing prisoners to be double bunked. With the closure of Camp Cusino in 2009, an additional 300 inmates were moved to Alger Max, resulting in the current inmate population of approximately 900.

Timber Products Company, located in Munising Township, operates a sawmill and veneer mill. Over the past ten years, employment has fluctuated in a range from 250 to 300 employees. Currently, two shifts are operating in each mill. Timber Products processes hardwood logs (maple, beech, oak, cherry, ash, and basswood) into high value lumber products. Timber availability is a main concern. The company no longer finds it practical to purchase timber from U.S. Forest Service managed forests due to regulatory burdens.

Neenah Paper is the largest single employer in the Munising/Munising Township area. The manufacture of paper began in 1902 after the Munising Paper Company completed construction of a pulp mill. The facility was acquired by the Neenah Paper and remains

operational at its original location. Employment has been in the range of 300 to 315. Raw materials and other products required for making specialty papers, such as latex, chemicals and baled pulp, are delivered by rail and truck. Coal is delivered by boat.

Kewadin Casino, located in Christmas, is operated by the Sault Ste. Marie Tribe of Chippewa Indians. A 21,000 square foot expansion has elevated additional jobs to 140, as of 2007, and is now one of the area's largest employers.

Hiawatha Log Homes, located east of Wetmore, is a manufacturer of custom log homes, stair systems and furniture. The business closed in April of 2009 due to the lagging economy. The business was reopened in late 2010 by three area investors. The company is looking to diversify its product base, increase volume and cut expenses to thrive in the future. Hiawatha Log Homes intends to employ approximately 20 people at full production levels.

Hiawatha Telephone Company, located in Munising, currently employs around 55 people. Services provided by HCI include local and long distance voice, dial up and high speed internet, calling features, voicemail and web hosting services. Services provided by Hiawatha Telephone Company have the ability to provide technology needs to new businesses locating in the Munising area.

Other major employers in the area include Munising Memorial Hospital with 95 employees (2007), Tendercare Health Center with 100 employees (2007), Munising Public Schools with 126 employees (2007), and Pictured Rocks National Lakeshore and Hiawatha National Forest with 20 permanent employees and about 30 seasonal employees (2009).

The largest employers in the greater Munising area, according to MESC 2007 data, are presented in Table 3-8.

Table 3-8 Largest Employers, Munising Township and Surrounding Area, 2007			
Employer	Location	Number of Employees	Type of Business
Alger County Maximum Prison	Munising Township	371	Prison
Timber Products Company	Munising Township	280	Sawmill and Veneer Mill
Pictured Rocks National Lakeshore and Hiawatha National Forest	Munising/Munising Township	20 permanent and ~30 seasonal	National Lakeshore and National Forest
Neenah Paper	Munising	300	Paper Mill
Tender Care Health Center	Munising	100	Health Care
Munising Memorial Hospital	Munising	95	Health Care
Kewadin Casino, Inc.	Christmas	140	Gaming Casino
Hiawatha Telephone Company	Munising	55	Telecommunications
Munising Public School District	Munising	126	Public School System
People's State Bank of Munising	Munising	25	State commercial bank

Source: Michigan Employment Security Agency, ES 202, 2007 and Pictured Rocks National Lakeshore, 2009.

Munising Township is home to numerous smaller businesses that employ many local residents. These Township establishments include: Grand Island Wood Products, Bell Timber, Pamida, numerous hotels, Wood Island Landfill, Alger County Road Commission, the Michigan Department of Natural Resources office, People's State Bank, Johnson Brothers Equipment Rental, Remax real estate, a post office, Woodlands Restaurant, UP AutoTech, Gerou Excavating and Redi-Mix, Pictured Rocks Golf Club and Lakoski's Gravel Pit.

The Township is dependent on the forest and wood products industry for employment and income. There are numerous businesses mentioned above that rely on forest yields to manufacture their wood products. The Township is also heavily dependent on the security industry for employment. Diversification of the types of businesses located in the Township is a priority, to reduce dependence on only one or two types of employment. There is room for industrial growth in the areas of Township zoned for industrial uses. There is also potential for a regional recycling center in the Township should area municipalities decide to proceed with that option. The Township does not currently have so called "white collar," higher paying jobs, but does have potential for an office complex in various locations.

3.8 Income

Examination of local income trends, and comparison of local income figures to state and national averages, provides information about the amount of wealth that is available locally for expenditures on goods and services. Income figures also reflect the wages and salaries paid to local workers.

Household incomes are presented in Table 3-9 for the Township, County and State. Over 56 percent of Munising Township households reported annual incomes between \$35,000 and \$100,000 in 1999. This compares to 48.5 percent for Michigan and 40 percent for the County overall. Income levels rose in each of the categories presented in the table when compared to the 1989 figures.

Annual Income	Munising Township		Alger County		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent
Less than \$10,000	27	3.3	383	10.1	313,905	8.3
\$10,000-\$14,999	29	3.5	277	7.3	219,133	5.8
\$15,000-\$24,999	125	15.2	573	15.1	469,100	12.4
\$25,000-\$34,999	149	18.2	612	16.1	470,419	12.4
\$35,000-\$49,999	173	21.1	788	20.8	624,326	16.5
\$50,000-\$74,999	212	25.9	749	19.7	778,755	20.6
\$75,000-\$99,999	74	9.0	246	6.5	432,681	11.4
\$100,000-\$149,999	25	3.0	125	3.3	324,966	8.6
\$150,000-\$199,999	2	0.2	13	0.3	79,291	2.1
\$200,000 or More	4	0.5	31	0.8	76,204	2.0
Total	820	100.0	3,378	100.0	3,424,122	100.0

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, Table DP3.

3.9 Poverty Rates

Poverty levels are determined by the United States Bureau of the Census based on a complex formula that includes 48 different thresholds that vary by family size, number of children within the family and the age of the householder. The data provided in Table 3-10 is based on 1999 incomes as gathered for the 2000 Census. The annual income poverty level for a family of two was \$11,060; for a family of three, \$13,880. The average household size in 2000 was 2.74 for the Township.

Munising Township's 2000 poverty rate (7.8 percent) for all persons was lower than the statewide percentage of 10.5. Alger County's poverty rate was slightly lower at 10.3 percent. The most notable comparisons can be drawn from the percentage of families with children under 5. The Township's percentage of 6.5 percent is much lower than that of the state, and for Alger County as a whole. It should be noted that the 1999 percentage levels were lower in most cases across the board when compared to the 1989 figures.

Poverty Rates by Group	Munising Township	Alger County	State of Michigan
All Persons	7.8	10.3	10.5
18 years and over	6.6	9.4	9.3
Female Householder Families	23.4	27.9	24.0
Families with Children Under 5	6.5	14.9	14.7
Persons 65 or Older	6.9	8.1	8.2

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, STF 3A, Income and Poverty Status.

3.10 Issues and Opportunities

- The economy is and has historically been linked to the area's natural resources and geography. Whether used as raw materials, as in the case of the wood products industry, or for recreational activities, natural resources such as timber, lakes, shoreline and geographic features are vital to businesses in the area.
- Munising Township has the opportunity to continue to market the area as a destination for four season recreational activities. The natural surroundings provide favorable circumstances for area tourism promotion.
- Alger Maximum Correctional Facility provides employment for many Township residents.
- Significant increases in the number of women with children in the labor force affect the needs for child care, educational and recreational programs and facilities. Changes in the working environment to accommodate family needs of both men and women, such as flexible days and hours of work, job sharing, etc. may in turn affect commuting, transportation and shopping patterns.
- While there are many jobs in the area in the wood products and security sectors, jobs in other sectors are limited. Diversification of the local economy is necessary.
- About 94 percent of Township residents work in Alger County and nearly 77 percent report commuting times of less than 20 minutes to work.
- Unemployment rates for Alger County generally coincide with Upper Peninsula rates. Alger County tends to report a significantly higher unemployment rate than both the State and the country.

- Over 56 percent of Munising Township households reported annual incomes between \$35,000 and \$100,000 in 1999. This compares to 48.5 percent for Michigan and 40 percent for the County overall.
- Poverty rates for the Township are significantly lower than those reported for Alger County and for the State.

CHAPTER 4.0 HOUSING

4.1 Introduction

Housing is an important part of Munising Township's land use and economy. The type, location, availability, affordability and quality of housing will determine what kinds of neighborhoods are present in the Township. Dilapidated and deteriorated housing can depress entire neighborhoods. Conversely, charming, well-designed neighborhoods can cultivate strong communities and are an asset to the residents of Munising Township.

Housing can also impact economic development. Commercial development generally follows rooftops and major employers are concerned about having an available workforce, reasonably close to the jobsite. Construction of new housing, as well as improvement of existing units, create jobs and foster spending for construction materials and home furnishings. While the housing industry creates positive economic activity, those housing rooftops also represent new demands for government services. New residential development can intensify existing traffic, pollution and water usage problems and creates additional costs to the local government for streets, sewer lines, schools and other infrastructure.

Researching housing statistics provides Munising Township the opportunity to inventory existing housing stock and its condition, occupancy and affordability characteristics; to assess its adequacy and suitability for serving current and future population and economic development needs; to articulate community housing goals; and to formulate an associated implementation program for the adequate provision of housing for all sectors of the population.

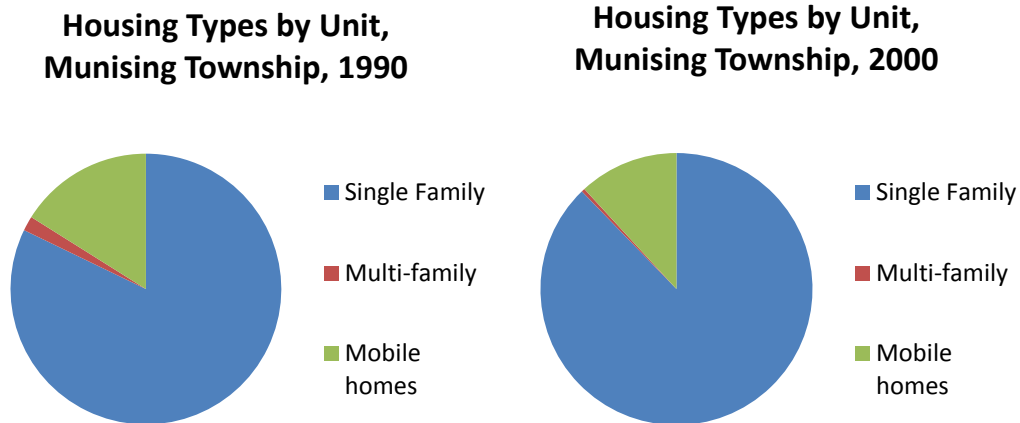
4.2 Housing Characteristics

Data on the types of housing units provides a measure of the diversity of the housing stock and can provide insight to future community housing needs and goals. The current and historic numbers of single-family, multifamily and manufactured dwellings for selected areas are listed in Table 4-1.

Unit of Government	% 1990			% 2000			% Change 1990-2000		
	Single Family	Multi-family	Mobile Homes	Single Family	Multi-family	Mobile Homes	Single Family	Multi-family	Mobile Homes
Munising Twp.	79.7	1.7	15.6	87.4	0.4	11.8	+7.7	-1.3	-3.8
Au Train Twp.	81.1	1.0	13.1	88.8	1.2	10.3	+7.7	+0.2	-2.8
Grand Island Twp.	100.0	-	-	95.9	-	4.1	-4.1	-	+4.1
City of Munising	70.6	24.1	3.7	72.4	17.2	7.6	+1.8	-10.3	+3.9
Alger County	79.3	5.7	10.9	83.7	6.2	9.3	-4.4	+0.5	-1.6
State of Michigan	72.8	19.8	6.4	74.5	18.8	6.5	+1.7	-1.0	+0.1

Source: US Bureau of the Census, STF1 and STF 3, 1990-2000.

Figure 4-1



Current Housing Types

Over 87 percent of the housing units in Munising Township are single family homes. About 12 percent of the housing units are mobile homes, while less than one percent are multi-family homes. Housing unit data reported for surrounding Townships was similar, while the City of Munising reported a much higher percentage of multi-family homes. Alger County reported a comparable rate for single family homes (83.7 percent) and for mobile homes (9.3 percent), while the number of multi-family homes reported was much higher in the county (6.2 percent). Michigan also reported a much higher number of multi-family housing units, common in an urban setting.

The availability of multifamily units is an essential component of a diversified housing stock. The lack of a diversified housing stock can create challenges to the economic health of the community. One possible outcome is a housing supply that is inconsistent with the incomes of workers in the community. Diversification of the current housing stock may be necessary to provide viable housing stock options to all area workers.

Table 4-2 contains information on the total number of housing units, based on occupancy and tenure for Munising Township, Alger County and the state of Michigan.

Housing Units	Munising Township		Alger County		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent
Total Units	1,154	100.0	5,964	100.0	4,234,279	100.0
Occupied	828	71.8	2,785	63.5	3,785,661	89.4
Owner	756	91.3	3,121	82.5	2,793,124	65.9
Renter	72	8.7	664	17.5	992,537	23.4
Vacant	326	28.2	2,179	36.5	448,618	10.6
For Rent	9	0.78	95	12.5	72,805	1.7
For Sale	14	1.2	104	3.2	44,250	1.0
Rented/Sold, Not Occupied	10	0.87	35	0.6	27,161	0.6
Seasonal Use	285	24.7	1,842	30.9	233,922	5.5

Source: US Bureau of the Census, SF3, Table H8, 2000.

The percentage of occupied units in Munising Township is much higher (71.8 percent), than the County (63.5 percent) but much lower than the state (89.4 percent). The Township and the County have a high rate of housing units designated for seasonal use, 24.7 percent and 30.9 percent respectively. Only 5.5 percent of the housing units in the State are reported as seasonal units. The number of seasonal units reported in the Upper Peninsula is generally much higher than the number reported for the state, due to the rural nature of the area and the high use of housing for seasonal, recreational or occasional use.

Age and Condition of Housing

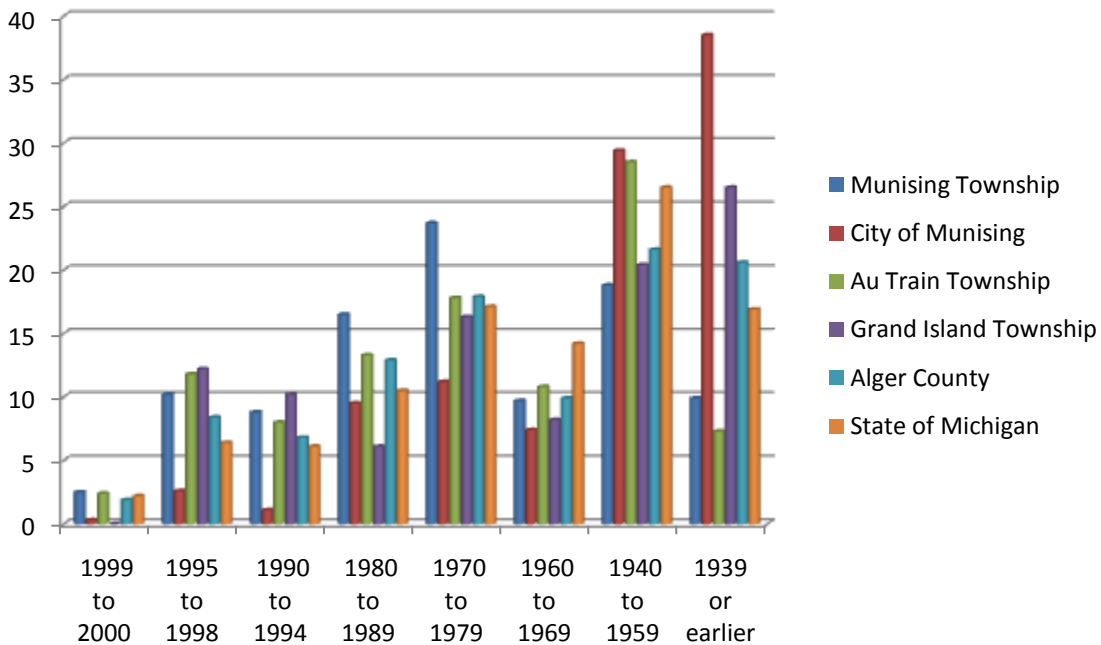
The age and condition of housing in a community can be an important indicator of housing needs and can assist in identifying housing that requires special attention to continue to provide safe and suitable shelter. Declining housing conditions can be an indication of unsafe and inadequate shelter for some residents. Table 4-3 and Figure 4-2 contain information on the age of housing units in Munising Township, surrounding townships, the City of Munising, Alger County and the state of Michigan.

Unit of Government	Percent Built from 1999 to 2000	Percent Built from 1995 to 1998	Percent Built from 1990 to 1994	Percent Built from 1980 to 1989	Percent Built from 1970 to 1979	Percent Built from 1960 to 1969	Percent Built from 1940 to 1959	Percent Built in 1939 or earlier
Munising Twp.	2.5	10.2	8.8	16.5	23.7	9.7	18.8	9.9
Au Train Twp.	2.4	11.8	8.0	13.3	17.8	10.8	28.5	7.3
Grand Island Twp.	-	12.2	10.2	6.1	16.3	8.2	20.4	26.5
City of Munising	0.3	2.6	1.1	9.5	11.2	7.4	29.4	38.5
Alger County	1.9	8.4	6.8	12.9	17.9	9.9	21.6	20.6
State of Michigan	2.2	6.4	6.1	10.5	17.1	14.2	26.5	16.9

Source: US Bureau of the Census, 2000.

Figure 4-2

Housing Units by Year Structure Was Built, Selected Areas, 2000



Nearly 62 percent of the Township’s housing stock was constructed after 1960. Au Train Township (64.1 percent) and Grand Island Township (53 percent) also reported a majority of the housing stock was less than 50 years old. Only 32.1 percent of the City’s housing stock was built after 1960, and 38.5 percent was built in 1939 or earlier. About 58 percent of the County’s and nearly 57 percent of the State’s housing stock is less than 50 years old.

The current trend of residential developments expanding outside of more densely populated areas on larger land parcels has been occurring nationwide, accounting for much of the recent construction occurring in outlying Townships. Older housing units may be more difficult to maintain; their age may create challenges in terms of housing quality and safety. Older homes are generally a source of affordable housing for many people, when compared to the high cost often associated with a newly constructed single-family home. Newly constructed housing units generally have more rooms, while older homes are much more likely to lack complete kitchen facilities and some plumbing facilities.

Table 4-4 provides information about the type of heating fuel utilized for selected areas.

Source	Munising Township		Alger County		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent
Utility Gas	349	42.8	1,815	48.0	2,961,242	78.2
Bottled, Tank or LP Gas	267	32.8	1,057	27.9	357,502	9.4
Electricity	23	2.8	141	3.7	251,208	6.6
Fuel Oil, Kerosene, etc.	54	6.6	266	7.0	130,933	3.5
Coal or Coke	--	--	-	-	659	-
Wood	120	14.7	499	13.2	54,608	1.4
Solar Energy	--	--	-	-	641	-
Other Fuel	2	0.2	4	0.1	18,413	0.5
No Fuel	--	--	3	0.1	10,455	0.3
Total Units	815	100.0	3,785	100.0	3,785,661	100.0

Source: US Bureau of the Census, Table DP-4, 2000.

Most Township residents reported using utility gas and bottled, tank or LP gas as the primary heating fuel for their homes. The same was reported for the County and the State. Munising Township and Alger County residents use wood as their source of heating fuel at much higher rates than the State as a whole, likely due to the rural nature of the area and less access to utility or bottled gas.

Table 4-5 contains information regarding the condition of housing units in the Township as well as the surrounding municipalities. Housing units lacking complete plumbing (hot and cold piped water, flush toilet and bathtub or shower) or complete kitchen facilities (an installed sink, range and other cooking appliances and refrigerator) are considered substandard. Seasonal housing units have an impact on the percentages shown for the townships, city, county and state.

Area	Lacking Complete Plumbing				Lacking Complete Kitchens				No Telephone Service			
	1990		2000		1990		2000		1990		2000	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Munising Township	33	3.1	5	0.6	50	4.7	-	-	48	7.5	11	1.3
Au Train Township	34	3.7	-	-	36	3.9	3	0.6	6	1.5	3	0.6
Grand Island Township	-	-	-	-	-	-	-	-	-	-	-	-
City of Munising	3	0.2	8	0.7	3	0.2	-	-	29	2.7	40	3.6
Alger County	219	3.8	40	1.1	178	3.1	22	0.6	146	2.5	94	2.5
State of Michigan	32,492	0.8	16,971	0.4	34,613	0.9	17,844	0.5	139,082	3.6	99,747	2.6

Source: US Bureau of the Census, Table DP-4, 2000.

Munising Township reported a decrease in the number of households lacking complete plumbing facilities, complete kitchen facilities and having no telephone service. The rates reported for 2000 in each of these categories was near 1 percent or lower for the Township. Rates for the surrounding communities, Alger County and the State were comparable to those reported for the Township. The City of Munising had an increase in the number of households reporting no telephone service from 1990 to 2000.

Household Type and Relationship

The US Bureau of the Census categorizes households into three types: family households, non-family households, and group quarters. Family households consist of a householder and one or more persons living in the same household who is related by

birth, marriage or adoption. Non-family households consist of either one person living alone or of two or more persons who share a dwelling but do not constitute a family. Group quarters refer to facilities providing living quarters that are not classified as housing units (i.e. prisons, nursing homes, dormitories).

Table 4-6 presents census data on household types and the relationships occurring in those households for the Township, the County and the State.

Composition of Households	Munising Township		Alger County		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent
Total Population in Households	2,265	100.0	9,862	100.0	9,938,444	100.0
In Family Households	669	80.0	2,587	68.3	8,189,108	82.4
Householder	828	26.5	3,785	38.4	2,575,699	25.9
Spouse	580	18.6	2,157	21.9	1,947,710	19.9
Child	704	22.5	2,362	24.0	3,037,440	30.6
Other Relatives	65	2.1	217	2.2	116,192	1.1
Non-relatives	88	2.8	355	3.6	195,189	2.0
In Non-family Households	159	19.2	1,198	31.7	1,499,537	15.1
Householder Lives Alone	120	14.5	1,016	26.8	993,607	10.0
Householder 65 Years & Over	48	5.8	477	12.6	862,730	8.7
In Group Quarters	860	27.5	986	10.0	249,889	2.5
Institutionalized	837	26.8	912	9.2	126,132	1.3
Noninstitutionalized	23	0.7	74	0.8	123,757	1.2

Source: US Bureau of the Census, Table DP-1, 2000.

In the Township, 80.0 percent of the population in households lives in a family household, higher than the County (68.3 percent) and slightly lower than the State (82.4 percent). About 19 percent of the population in Munising Township lives in a non-family household, much lower than the County (31.7 percent) and slightly higher than the State (15.1 percent). The majority of residents in non-family households are householders living alone, about 40 percent of residents living alone are 65 years and older. The Township reports a much higher rate of residents in group quarters (27.5 percent) than the County (10.0 percent) and the State (2.5 percent). The high proportion of institutionalized residents is due to the location of Alger Maximum Correctional Facility and Camp Cusino within Munising Township.

Household Size

Household size has been steadily decreasing over the past 100 years. In the early 20th century it was common to have grandparents living in the home. With the advent of better transportation and looser moral restrictions, people were able to leave the nest. Today a combination of greater wealth, individuality and mobility has led to a shrinking family size. Financial success has led to people getting married later, having fewer children and helping people live longer, all factors in leading to smaller average households. Table 4-7 compares household size for selected areas over the past 20 years.

	Persons Per Household	
	1990	2000
Munising Township	2.80	2.74
Alger County	2.69	2.35
State of Michigan	2.66	2.56

Source: US Bureau of the Census, 1990, 2000.

The number of persons per household in Munising Township has decreased slightly from 1990 to 2000, from 2.80 to 2.74. Household size in Alger County has decreased by 12 percent and has decreased by 3.8 percent in the State. Smaller households have been the trend recently, with many families delaying having children or having fewer children.

4.3 Financial Characteristics

The cost of housing should be compatible with the income of its residents. If affordable housing is not available in a community, workers may be forced to live elsewhere and commute to their jobs. Conversely, if there is not an adequate supply of middle and upper-income housing, the future economic development potential of the community may be hindered.

Median housing values have been steadily increasing nationwide. The home value is an estimate of how much the property would sell for if it were for sale. Estimates of home value are based on owner occupied units only. Following national trends, median gross rent has increased since 1990, possibly due to an increase in demand for rental units. Data for median home values and median gross rent are presented in Tables 4-8 and 4-9 respectively.

Table 4-8 Median Housing Values, Selected Areas 1990-2000		
Area	1990	2000
Munising Township	\$42,600	\$84,100
Au Train Township	\$44,100	\$103,000
Grand Island Township	\$67,500	\$162,500
City of Munising	\$38,100	\$66,500
Alger County	\$39,200	\$75,900
State of Michigan	\$60,600	\$115,600

Source: US Bureau of the Census, 1990, 2000.

Table 4-9 Median Gross Rent, Selected Areas 1990-2000		
Area	1990	2000
Munising Township	\$302	\$396
Au Train Township	\$310	\$415
Grand Island Township	\$425	-
City of Munising	\$290	\$370
Alger County	\$296	\$376
State of Michigan	\$423	\$546

Source: US Bureau of the Census, 1990, 2000.

Median housing values have nearly doubled in Munising Township from 1990 to 2000. Housing values in the surrounding townships, the City and the County have experienced rapid growth as well. Median gross rent has also increased in the Township as well as the surrounding communities. Rent in the Upper Peninsula remains relatively low when compared to the State.

The US Department of Housing and Urban Development (HUD) has determined that households should spend no more than 30% of their incomes on housing. Using definitions established by HUD, cost burden is calculated as gross housing costs, including utility costs, as a percentage of gross income. Households that pay more than 30% of their incomes on housing are considered to be cost burdened; households that pay more than 50% of their incomes are said to be severely cost burdened. Cost burdened households will find it difficult to meet all their household's needs; severely cost burdened households may be in danger of homelessness. By considering the number and characteristics of these households, the community can more easily develop a response to the need.

An analysis of the cost of housing compared to household income can provide valuable information on the availability of housing that is affordable to the workforce. Tables 4-

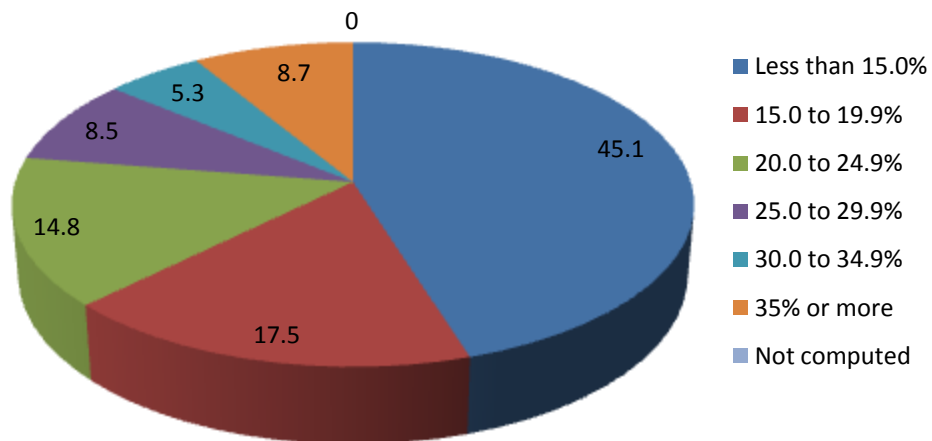
10 and 4-11 present a breakdown of the percentage of income dedicated to housing costs for owner occupied and renter occupied housing units.

Table 4-10
Monthly Owner Costs as a Percentage of Household Income, Selected Areas, 1999

Monthly Owner Costs as a % of Household Income	Munising Township	Au Train Township	Grand Island Township	City of Munising	Alger County	State of Michigan
Less than 15.0%	45.1	44.5	78.6	50.4	48.9	41.8
15.0 to 19.9%	17.5	17.7	-	14.5	15.6	18.4
20.0 to 24.9%	14.8	11.0	-	11.4	11.9	13.1
25.0 to 29.9%	8.5	2.8	-	7.6	7.1	8.3
30.0 to 34.9%	5.3	4.6	14.3	5.6	4.7	5.0
35% or more	8.7	17.0	7.1	10.0	11.0	12.7
Not Computed	-	2.5	-	0.6	0.8	0.8

Source: US Bureau of the Census, 2000.

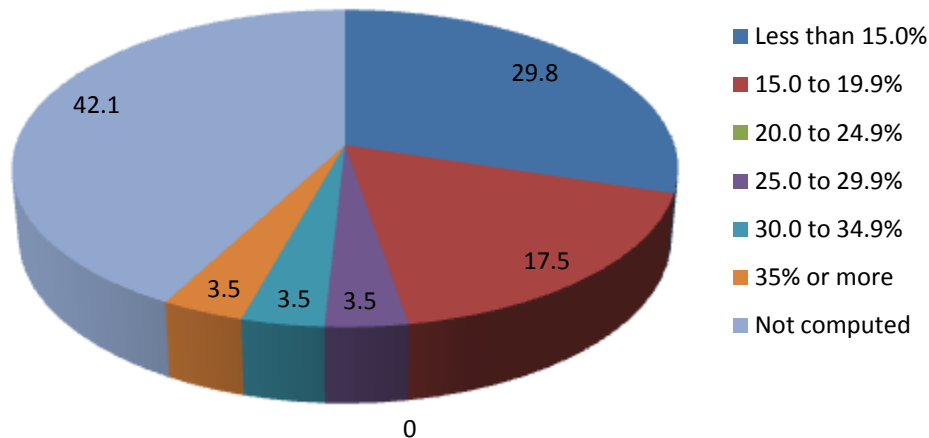
Monthly Owner Costs as a % of Household Income, Munising Township , 2000



Gross Rent as a % of Household Income	Munising Township	Au Train Township	Grand Island Township	City of Munising	Alger County	State of Michigan
Less than 15.0%	29.8	22.0	-	21.6	23.3	20.9
15.0 to 19.9%	17.5	13.6	-	19.3	17.1	14.9
20.0 to 24.9%	-	3.4	-	10.2	8.6	12.4
25.0 to 29.9%	3.5	10.2	-	10.2	8.8	10.0
30.0 to 34.9%	3.5	-	-	9.1	6.5	6.8
35% or more	3.5	22.0	-	19.0	17.1	28.4
Not Computed	42.1	28.8	-	10.7	18.7	6.7

Source: US Bureau of the Census, 2000.

Gross Rent as a % of Household Income, Munising Township, 2000



Over 77 percent of homeowners dedicate less than 30 percent of their income to a mortgage. This rate is slightly lower than that of the County, where nearly 84 percent of homeowners dedicated less than 30 percent of their income to housing. About 51 percent of renters in the Township paid dedicated less than 30 percent of their income to rent; the County reported about 58 percent. These results may not be entirely accurate, due to the high percentage of results listed as “not computed.”

Publicly Subsidized Housing

There is no publicly subsidized housing located in the Township at this time. There are several publicly subsidized housing units in the City of Munising. With the aging population, subsidized housing, especially for the elderly may be needed in the Township.

Development Name	Units	Year Built	Type
Lakeshore Manor	74	1974/1983	Elderly Low Rise
Hillside Apartments	12	1974	Family
Bay View Apartments	4	1974	Family
Jericho House	15	Remodeled 1995	Elderly Low Rise
Windjammer Apartments	24	1982	Family

4.4 Current Housing Trends

Building permits for the entire county are issued by the Alger County office of Building Code Administration. Reports are issued annually. Permitting activity for the years 2004-December 12, 2008 for Alger County and Munising Township is presented in Table 4-13. For 2008, new construction in Munising Township represented nearly 22 percent of the new construction for the County overall.

Year	<i>Number of Permits Issued Munising Township</i>	Number of Permits Issued Alger County
2004	55	262
2005	59	224
2006	40	212
2007	36	190
2008	42	191

Source: Alger County Office of Building Code Administration and Munising Township, 2009.

Housing in Munising Township is currently concentrated in Wetmore, Shingleton, Lost Lake, the Connors Road corridor, Powell Lake, Van Meer, Alger Heights and along offshoots of main traffic corridors such as M-28 and Highway 13. A great deal of residential building has occurred in recent years along the lakes and many of the lakes are platted. Many camps that were built along the lakes have been demolished in recent years, with large camps/summer homes taking their place. There has also been a

renewed interest in refurbishing older homes, which may be at a lower cost than building new. Many residents have moved to the Township seeking larger lots where a large home can be built. A future mixed use development has been proposed for the Wetmore area, providing residential as well as commercial development opportunities.

Pictured Rocks National Lakeshore, Hiawatha National Forest, numerous wetlands, two landfills, and other state/federal lands may present a barrier to residential development. There is adequate room to build new homes in areas currently designated as residential in the Township's Zoning Ordinance. Currently, water and sewer services are not offered to Township residents. Existing roads that become impassible with the spring thaw, stub end roads and the lack of sidewalks may also present obstacles to overcome for residential development. The Township recently passed a 5-year millage for road improvements.

Future housing demand to satisfy projected population growth is a critical component of the Master Plan. Housing development is typically market driven, but the market may not be providing the right types of housing for various sectors of the population. As the population ages, there will be an increased demand for housing that accommodates the associated change in lifestyle. One story dwellings with minimal outdoor maintenance requirements will likely become more desirable. Neighborhoods that provide close access to everyday goods and services will offer more opportunities to older residents.

4.5 Issues and Opportunities

- Over 87 percent of the housing units in Munising Township are single family homes, about 12 percent of the housing units are mobile homes, while less than one percent are multi-family homes. The availability of multifamily units is an essential component of a diversified housing stock. Diversification of the current housing stock may be necessary to provide viable housing stock options to all area workers.
- The percentage of occupied units in Munising Township is much higher (71.8 percent), than the County (63.5 percent) but much lower than the state (89.4 percent). Upper Peninsula communities often report much lower occupancy rates due to the large number of homes used for recreational or seasonal purposes.
- Nearly 62 percent of the Township's housing stock was constructed after 1960. Newer homes are often easier to maintain, while older homes may experience some symptoms of blight.

- Most Township residents reported using utility gas and bottled, tank or LP gas as the primary heating fuel for their homes. Wood is also used frequently as a primary heating source, especially in rural areas of the Upper Peninsula, where wood is plentiful.
- Very few homes in Munising Township have incomplete kitchen and plumbing facilities and few reported having no phone. This is likely due to the relatively young age of the Township's housing stock.
- The number of persons per household in Munising Township has decreased slightly from 1990 to 2000, from 2.80 to 2.74, following nationwide trends. With more people living alone, diversification of the Township's housing stock may be necessary.
- The Township reports a high number of institutionalized residents due to Alger Maximum Correctional Facility.
- The majority of Township residents reported paying less than 30 percent of their incomes on a mortgage or rent, falling within guidelines recommended by HUD.
- Currently the nearest publicly subsidized housing units are located in the City of Munising. With the aging population, subsidized housing may be needed, especially units catering specifically to the elderly.
- The Township has many natural barriers to development, including Pictured Rocks National Lakeshore, Hiawatha National Forest and other state/federal lands. Poor roadways may need to be improved to facilitate and encourage future development. Water and sewer services are not currently provided to residents. Future residential development in the Township is likely to occur in areas that have already experienced some development.
- Township residents have been attracted to the area by the natural surroundings, availability of large lots and a sense of community.

CHAPTER 5.0 COMMUNITY FACILITIES AND SERVICES

5.1 Introduction

Services and facilities provided by local government are vital elements of a community's progress and well-being. Services include police and fire protection, water and wastewater systems, street and park maintenance and operations, and solid waste disposal. Community facilities include government buildings, schools, hospitals, marinas, parks, and maintenance and storage facilities.

As a part of the land use planning effort, Munising Township's services and facilities are described and evaluated as to their present condition and adequacy to meet present and future needs of the Township.

5.2 Township Owned Facilities and Services

Munising Township Office Complex/Township Hall

The Munising Township Office Complex/Township Hall, located at E9360 Prospect Street in Wetmore, was constructed in 1997-1998. The complex houses the offices of the Township Supervisor, Assessor, Clerk, Treasurer and Zoning Administrator. The Township Board, Planning Commission, Zoning Board of Appeals and other municipal bodies hold meetings at the complex. The Township's annual meeting is also held at the office complex; additional meetings may be held at the complex upon request. The Township Fire Department is also attached to the complex.

The complex in Wetmore serves as a polling place for elections. The Township Hall in Shingleton is the second polling place for the Township. The complexes also serve as community centers for Munising Township. The entire complex is ADA compliant and barrier free. The meeting room is available for rent for events. Renovations and remodeling of the building have not been necessary up to this point and there are no future renovations planned for the complex at this time.

Munising Township Fire Department

Fire protection services are provided by a staff of 24 volunteer firefighters, one fire chief, one assistant fire chief and one captain. Several firefighters throughout the County are trained as EMT's as well. The Fire Department is located at E9360 Prospect Street in Wetmore and is part of the Munising Township Office Complex. The Chief's office and a training office as well as showers are located in the Fire Department. The building is in good condition and no major renovations are planned at this time.

Fire trucks include a 1999 pumper/tanker, a 2003 tanker and a 1986 utility/brush truck. New equipment for the Fire Department is always a necessity and grant funding may be pursued to aid in purchasing.

The Township's assigned fire insurance rating is a nine (9) rating as determined by the Insurance Service Office (ISO) Commercial Risk, Inc. In rating a community, total deficiency points in the areas of evaluation are used to assign a numerical rating of 1 to 10. The best protection is 1 and 10 would be a community that is essentially unprotected. Where a single number is assigned, all properties within the classified area receive that rating. Where more than one classification is indicated, the first number applies to properties located within five (5) road miles of the responding fire department and within 1,000 feet of a fire hydrant. Class 9 applies to properties located within 5 road miles of the responding fire department but over 1,000 feet from a fire hydrant. Class 10 applies to properties located more than 5 miles from the responding fire department. There are no hydrants in the Township, with the exception of hydrants located in the Industrial Park. Dry hydrants are found on Knox Street and on H-58.

The adequacy of fire protection is evaluated by ISO through the use of the Grading Schedule for Municipal Fire Protection. The schedule provides criteria to be used by insurance grading engineers in classifying the fire defenses and physical conditions of municipalities. Grading obtained under the schedule is used throughout the United States in establishing base rates for fire insurance. While ISO does not presume to dictate the level of fire protection services that should be provided by a municipality, the findings of its Municipal Survey Office are frequently used by municipal officials in planning improvements to their fire fighting services. The grading is obtained by ISO based upon analysis of fire department equipment, alarm systems, water supply, fire prevention programs, building construction, and distance of potential hazard areas (such as the central business district) from fire station.

Mutual aid agreements currently exist between the Munising Township Fire Department, the City of Munising and the fire departments of the surrounding townships in Alger County, as well as the Tri-County Volunteer Fire Department. The Township also has a mutual aid agreement with Hiawatha Township in Schoolcraft County. Mutual aid agreements between fire departments provide for cooperation in the use of personnel and fire equipment for the safety, health and welfare of the people of the respective units of government in times of emergency.

Public Works/Water/Wastewater Systems

Munising Township does not currently have a Department of Public Works, Water or Wastewater System. Water and wastewater services are provided by private wells and septic systems throughout the Township. There are no future plans to provide water and wastewater facilities at this time. The City of Munising maintains two wells located at the City-owned industrial park located within the Township. The two wells serve Alger Maximum Security Correctional Facility as well as the industrial park.

Parks and Recreation

Recreational facilities and programs are discussed in detail in Chapter 6 of this plan.

Park facilities owned by the Township include:

- The Robert McQuisten Munising Township Recreational Area in Wetmore. The Recreational Area currently has a Little League Field, two (2) full basketball courts, playground, boardwalk, pavilion and a parking lot.
- The Wetmore Community Park is located in Wetmore adjacent to the Munising Township Office complex (site of the Munising Township Hall). The park contains two tennis courts.
- The Shingleton Community Park is located in Shingleton. The park contains a softball diamond, tot lot, basketball court, community building and parking area.

Zoning Permits

The Township's Zoning Ordinance is administered by the Township Zoning Administrator. Requests for site plan review are heard by the Planning Commission. Requests for variances to current zoning requirements are heard by the Zoning Board of Appeals.

Building permits are issued by the Alger County Building Code Administrator, located at 100 Court Street in Munising. A zoning compliance permit from the Township is required to receive a building permit from Alger County.

5.3 Additional Facilities and Services

Solid Waste Disposal/Recycling

Residential solid waste is collected each week by Great American Disposal, a private company. The frequency of commercial solid waste pickup is scheduled by the customer. Many Township residents haul their own garbage to the Wood Island Landfill.

Recycling efforts are coordinated through Alger Community Recycling; the Township has a member on the committee. Recycling efforts are accomplished by volunteers, the

MSU Extension office, Hiawatha National Forest Service and the Pictured Rocks National Lakeshore Park Service. These materials are transported to Manistique Paper for recycling. Materials acceptable for recycling include: corrugated cardboard, magazines, catalogues, newspapers and office paper. A drop-off for recycling is located on the Altran Road across from the City of Munising Wastewater Treatment Plant. Metals and many other materials are accepted at the Wood Island Landfill.

A solid waste transfer station owned by Waste Management is located in the Industrial Park (City-owned). However, waste generally is transported directly to a transfer station in Marquette. Ultimately, the waste is hauled to Menominee County for disposal in a licensed landfill facility.

Wood Island Landfill

Wood Island Landfill is located at 1008 M-28 in Wetmore. The landfill covers approximately 313 acres. The landfill was established in 1994 and is owned and managed by Great American Disposal. In 2008, Wood Island disposed of 199,006 cubic yards of Type II waste and 12,076 cubic yards of Type III waste. Type II waste is municipal solid waste and Type III waste are certain wastes generated in industrial and construction/demolition activities.

Industrial Park

The City of Munising's 37-acre industrial park is located in Munising Township. It was established in 1979 and currently has six business entities. Lease amounts vary according to the property size involved. A current stipulation for a lease agreement is the creation of a minimum of on site jobs. There are twelve lots at the Industrial Park, eight of which are currently being leased. Seven of the sites are active and one is being utilized for storage.

Water and sewer service is provided at the industrial park, as well as natural gas. The water supply for the facility, as well as the Alger Maximum Correctional Facility, is pumped from two wells located at the site that serve these two facilities exclusively. A three-phase power supply is also available at the industrial park.

Electrical Service

Electrical power is provided by the Upper Peninsula Power Company (UPPCO), a subsidiary of Wisconsin Public Service Company. UPPCO owns and operates the distribution system within the Township, including poles, wires, etc.

Natural Gas

DTE Energy provides natural gas services to the Industrial Park. Natural gas services are also offered to limited portions of the Township, including Wetmore and along Connors Road and Lehnen Road.

Telephone Service

Telephone service throughout the entire Township is provided by the Hiawatha Telephone Company, a division of Hiawatha Communications, Inc. Information regarding the number of customers is considered proprietary and is not permitted under federal law.

Long distance and 800/888 are available through several providers. Cellular service for the area is provided by Verizon and AT & T. The construction of additional cell towers would provide improved service to area cellular users.

Internet

High speed DSL and dial-up internet service is available through the Hiawatha Telephone Company or Charter Communications.

Cable Television Service

Cable television service is provided by American Cable and Charter Communications for portions of the Township. Many Township residents rely on satellite television provided by Dish Network and DirecTV.

Greater Munising Bay Partnership for Commerce Development

The Greater Munising Bay Partnership for Commerce Development is comprised of the former Alger Chamber of Commerce and the Munising Area Partnership for Development. The Partnership is working to create a strong local economy by actively promoting the community, providing networking opportunities, service as the voice of business and spearheading political action (<http://www.algercounty.org/GMBPCD%20UD.pdf>).

Tri-County Volunteer Fire Department

The Tri-County Volunteer Fire Department maintains a fire hall on Forest Service land (2181 Federal Forest Highway 13) in Munising Township and assists with fires in Alger, Delta and Schoolcraft Counties. The Tri-County Volunteer Fire Department is a private volunteer department with approximately 11 members. The Fire Department participates in a mutual aid agreement with the Munising Township Fire Department. The Fire Department hosts an annual Bazaar and Junque Fair as a fundraiser.

5.4 County and Other Facilities and Services

Alger County Building/Courthouse

County offices including Probate, District and Circuit Courts, Prosecuting Attorney, Clerk & Register of Deeds, Treasurer, Friend of the Court, Juvenile Officer, Equalization Office, Extension Service, and Building Code Administration are located in the County Building located at 101 Court Street.

Sheriff's Office/County Jail

The Alger County Sheriff's Office is composed of 12 full time and 4 part time officers who perform road patrol, jail and ambulance services. The jail facility can house up to 24 inmates at full capacity. Ambulance service is provided chiefly by trained volunteers who are compensated on a "per call" basis by the county. The Sheriff's Office includes an Advanced Life Support EMS System as well as medical first responders in outlying areas of the County. A paramedic works on every shift. The Office also maintains a Water and Land Search and Rescue, which includes a canine unit.

Michigan State Police Post

Currently seven troopers, two uniformed Sergeants, one Detective Sergeant and one Post Commander are assigned to the Munising post with a geographical service area that includes all of Alger County and a portion of Schoolcraft County. The Detective Sergeant and Post Commander cover the Munising Post as well as the Manistique post. The post is located next to the Pictured Rocks National Lakeshore/Hiawatha National Forest Interagency Visitor Center on Munising Avenue in the City of Munising.

Alger County Transit Authority (ALTRAN)

Countywide public transit services were initiated in January 1982. The Alger/Marquette Community Action Board was the third-party operator of transit services for Alger County until March 1990. ALTRAN, an Act 196 transit authority, was created in March 1990 to provide countywide transit services.

ALTRAN currently occupies a 14,000 square foot facility located at 520 East Munising Avenue in Munising. The facility was completed and occupied in 1991. 8,000 square feet were recently added to the Altran building's maintenance facility. A new wash bay should be completed by 2010.

ALTRAN currently has five full-time and fourteen part-time employees. A fleet of fourteen buses provide demand-response service Monday through Saturday within Alger County between the normal operating hours of 5:30 am and 6:00 pm. All buses are lift-equipped vehicles. Passenger vans are also used for transportation. Extended hours of operation are available for weekends and holidays. Senior citizens and

handicapped citizens comprise 60 percent of ALTRAN's annual ridership.

ALTRAN remains as the sole provider active in the regional (R-Tran) arrangement launched in 1998 to connect the areas of Iron Mountain, Escanaba, Manistique, Marquette, and Munising. ALTRAN provides 3 trips from Munising to Marquette daily. Medical appointment trips to the Peninsula Medical Center and Marquette General Hospital are provided free of charge to passengers. Work trip runs are provided to Harvey twice a day. School transportation is also provided.

Daily tours of Grand Island are available beginning June 15 and continuing until October 5. From July 1 through Labor Day, tours are offered twice daily. The tours are about two and one-half hours in duration and feature the history and natural features of Grand Island. Shuttle service to the island ferry landing is available every day. Beginning in 2010, an environmentally friendly hybrid bus will be available for tours on the island. In addition, Altran provides extended and flexible shuttle service to accommodate persons backpacking along the Pictured Rocks National Lakeshore. A grant has also been applied for to provide a hybrid bus for Pictured Rocks National Lakeshore.

Alger County Animal Shelter

Temporary housing for dogs and cats and pet adoption services are provided at the Alger County Animal Shelter located on East Munising Avenue in Munising. The nonprofit shelter organization is supported by donations and fundraising. Currently the shelter is operated by volunteers.

The county-owned facility is situated on property leased from the City and can house up to 16 dogs and up to 35 cats. Hours of operation are from 9:00 am to noon daily. Evening hours are based on volunteer availability, generally from around 5:30 pm to 8:00 pm. A recent upgrade to the facility included: new flooring, air conditioning and the construction of a large outdoor cat pen.

Alger County Road Commission

The main office of the Alger County Road Commission is located on E9264 M-28 in Munising Township. The new building is 30,000 square feet including office space and garage area. The Alger County Road Commission moved into the new facility in 2002. The building also serves as one of three district garages located within the county. There are 3 office personnel, 3 mechanics and 12 maintenance employees working in the office.

Alger County Heritage Center

Historical records, memorabilia, and artifacts are available for public viewing at this facility. Formerly the Washington School, the building has been renovated to capture the original design features. The most recent addition to the center is an authentic blacksmith's shop.

The center is open throughout the year on Tuesday through Saturday during the hours of 10:00 a.m. to 4:00 p.m. It is supported entirely through membership contributions and community donations.

Airport

Hanley Field is located on leased U.S. Forest Service land south of Wetmore in Munising Township. This site has been used as an airfield since at least 1928. Hanley Field is licensed as a "basic utility airport" by the Michigan Department of Transportation, Bureau of Aeronautics.

The 4,000 foot turf runway is 120 feet wide and was used by an estimated 300 airplanes in 2007. It is operated seasonally from May 15 through November 1. The facility is owned by the U.S. Forest Service and is leased to Alger County. The county is considering purchasing Hanley Field and upgrading the runway and facility. Upgrading the airport has the potential to encourage aircraft related businesses to move to the area.

Commercial passenger service is available from Sawyer International Airport in Marquette County approximately 45 miles away, or from the Delta County Airport in Escanaba, which is located approximately 70 miles from the Township.

Munising Public Schools

Munising Township is served by Munising Public Schools. Student enrollment has fluctuated widely over the years from 1,037 in the 1990-2000 school year to the current enrollment of 705 in 2008-09.

The high school building is located along the shoreline on M-28 west and was constructed in 1980. Grades 7-12 and the district's administrative offices are housed in this 110,600 square foot facility.

The Munising School Board voted unanimously in spring 2009 to close Central Elementary School, with students moving to the Mather Building. Central Elementary was built in 1960 and housed students in grades K-6. Enrollment also includes an early

childhood program. The 45,500 square foot facility is located at 124 East Chocoday Street and is currently for sale.

The William G. Mather Elementary School, formerly Mather Middle School was constructed in 1921 and is located at 411 Elm Avenue. The multi-purpose facility contains 80,000 square feet. The building will house Preschool-6th grade students beginning in the 2009-10 school year. Mather Auditorium is a publicly utilized facility, offering the community the opportunity for theater productions, concerts, awards ceremonies and a movie house.

Other facilities of the district include a 3,000 square foot bus garage, athletic field and a high school practice field.

Private Schools

Area private schools include the Munising Baptist School and the Munising Seventh-Day Adventist Elementary School.

The Munising Baptist School facility is located in Munising Township. Approximately 66 students are enrolled at this K-12 facility.

Munising Seventh-Day Adventist Elementary School is located in Grand Island Township and provides instruction in grades 1- 8. Annual enrollment averages about 12 students.

Home schooling is also an option for area students.

Post-Secondary Education and Training

The campus of Northern Michigan University is located approximately 45 miles away in the City of Marquette. Lake Superior State University is located in Sault Ste. Marie, about 125 miles east of the Township. Bay de Noc Community College in Escanaba is located about 65 miles southwest of the Township. A wide range of technical, vocational and professional programs are offered at all of these facilities.

Library

The Munising School Public Library is a combination school/public library. It serves students in grades 7-12 of the Munising Middle/High School and the public for all of Alger County. The library is currently located on the first floor of the Munising High School.

The facility is open most weekdays at 10:00 a.m. The library is currently closed on Saturdays. Hours of operation are limited during the summer months to weekdays.

Extended hours of operation are observed during the school year and include Sunday afternoons.

The library is a modern facility complete with barrier free access, a computer learning lab and automated circulation. Special services include Internet access with public use computers, copier and fax service, a large print collection and audio books, newspapers, magazines, local newspapers for the past 100 years, and genealogy microfiche records. Special programs include children's story hours and a summer reading program.

Health Care

In October 2008 Munising Memorial Hospital opened a brand new, state-of-the art health care facility. The existing medical office building, which is now attached to the new facility, will house several specialists. The new facility spans 59,000 square feet and incorporates all aspects of patient care under one roof. Features of the new facility include:

- A completely digitalized radiology department, with a general X-ray room, CT, Floroscopy, Ultrasound, Dexascan and mammography. There are also future plans for a mobile MRI unit to complete diagnostic testing locally.
- An operating room comprised of one main suite, a scope room and a five bed recovery area. The new OR will allow for same day outpatient surgery.
- Laboratory services received upgrades to equipment, computers and space.
- The Outpatient Rehabilitation department was moved into new building, allowing easier patient access and includes a new and updated gym. There are four treatment rooms and a hydrotherapy room.
- The new Emergency Room is three times the size of the old facility. The ER includes a walk-in area, three private exam rooms and a three-bay trauma room. The new building has also allowed for an enlarged ambulance garage. The two-bay garage also includes a decontamination area.
- Two conference centers are used for support groups, educational programs and administrative meetings.

Bay Care Medical Center is located within the hospital building. The medical office has 15 exam rooms, 6 physician offices and 2 procedures rooms. Electronic Medical Records have been implemented at Bay Care Medical.

Harbour View, a 20 bed assisted living facility built in 1999, is also located on the facility grounds. For those seniors that are not ready for assisted living, senior housing will be built. The construction of six duplexes on the lake shore is planned to begin in 2010. Plans for the twelve units are to be two bedrooms, one bath homes with a one car garage included.

Shingleton Field Office (Cusino Wildlife Research Station and Field Office)

The Shingleton Management Unit administers roughly 380,000 acres of state-owned land in the Alger, Delta and Schoolcraft Counties and is part of the Michigan Department of Natural Resources. The Shingleton Field Office, locally known as the Cusino Wildlife Research Station, serves as the Unit's primary operations center, and there are two satellite offices. One is located in Manistique at the Wyman Nursery; and the other is in Seney, which is staffed only for fire control and recreation. The border stretches northward to Grand Marais, on the shore of Lake Superior, and southward to Summer Island, which lies in Lake Michigan off the tip of the Garden Peninsula. The Shingleton Unit's ownership is very contiguous in the north with large blocks of state land. The southern portion of the Unit is more fragmented with private ownership.

Munising Range Lights Station

In June 2002, the Munising Light Station was transferred from the U.S. Coast Guard's jurisdiction under the National Historic Lighthouse Preservation Act of 2000. The Act, created by Congress, authorizes the transfer of historic lighthouses and stations at no cost to federal agencies, state and local governments, nonprofit corporations and community development organizations. The Munising Range Lights Station is managed by the Pictured Rocks National Lakeshore.

U.S. Forest Service

The Forest Service, a division of the Department of Agriculture, maintains a District Ranger Station at 400 East Munising Avenue in the City of Munising. The Munising District is one of three within the western section of the Hiawatha National Forest. Forest Service personnel are responsible for management and maintenance of national forest lands and facilities. Shop facilities for repair work and equipment storage are located 601 Cedar Street. Visitor information is available at the District Ranger Station. Chapter 6 deals with the recreational facilities and opportunities available nearby in the Hiawatha National Forest.

U.S. Department of the Interior, National Park Service

National Park Service personnel manage and maintain the lands and facilities of the Pictured Rocks National Lakeshore, a unit of the National Park Service. Park

headquarters is located in the former Coast Guard station on Sand Point. Information is available at the barrier-free Munising Falls Interpretive Center or at the year-round information center operated in conjunction with the Forest Service at the District Ranger Station. Facilities and types of recreation available within the Pictured Rocks National Lakeshore are described in Chapter 6.

Post Office

Munising Township residents are served by three post office locations; 9714 M-28 in Wetmore, E12503 M-28 in Shingleton and 220 Elm Avenue in Munising.

5.5 Issues and Opportunities

- The Munising Township Office Complex/Township Hall is fully accessible and provides space for meetings and functions as a polling place and community center for Township residents.
- New equipment for the Township Fire Department is always a necessity and grant funding may be pursued to aid in purchasing the equipment.
- Munising Township participates in mutual aid agreements with the other Townships in Alger County as well as Hiawatha Township. Mutual aid agreements are an excellent example of intergovernmental cooperation.
- Township residents rely on private water wells and septic systems. There are no plans for Munising Township to provide water/wastewater facilities at this time.
- The Township owns three recreational facilities; two in Wetmore and one in Shingleton.
- Construction of additional cellular towers in the Township would help improve continuous cellular service in the area.
- ALTRAN is the only provider of public transportation in the area and offers three trips from Munising to Marquette daily.
- Hanley Field is licensed as a “basic utility airport” and is located south of Wetmore in Munising Township. Area residents must travel to Sawyer International Airport in Marquette County or Delta County Airport in Escanaba for commercial flights.

- Munising Township is served by the Munising Public School System. Due to declining enrollment, the school board chose to close Central Elementary. K-6 students will now be housed in the Mather Building.
- Munising Township residents have several local options for private school as well as nearby post-secondary educational opportunities.
- Township residents may also make use of the fully accessible Munising School Public Library.
- Munising Memorial Hospital recently opened a new state of the art facility, providing modern health care opportunities locally.

CHAPTER 6.0 RECREATION

6.1 Introduction

Information provided in this chapter is intended to provide current and comprehensive data to guide Township decision makers regarding future park development and/or acquisition. Much of the information was provided by the updated Munising Township Recreation Plan, prepared by the Director of the Alger Parks and Recreation Department. Existing parks, open space sites and other recreational facilities are discussed in the context of location, condition, features and use.

Recreation related to tourism is vital to area economics and is an expanding industry nationwide. Attractions and facilities located in close proximity to the Township present many opportunities for active and passive recreation. Alger County is exceptionally rich in natural resources which draw a growing number of visitors each year. Munising Township is bordered by the Pictured Rocks National Lakeshore to the north and Hiawatha National Forest to the south. In addition to the shoreline, the Township benefits from many waterfalls, forests and an abundance of wild game, birds and fish that lend themselves to recreational opportunities. The local tourism industry that was previously limited to a short summer season has evolved into a four season business enterprise. Having adequate recreational facilities to meet the needs of visitors and as well as residents, is vital to the community.

6.2 Recreational Space Definitions

In order to better understand the different types of recreational facilities that exist in the community, it is necessary to define the terms that will be used throughout the chapter.

Active Recreation Site: A park designed primarily for active recreation of one or more age groups. Such a design may have as its primary feature play fields, playground apparatuses, ball fields, or a combination thereof.

Baseball/Sandlot: A small grassed area with a primitive backstop designed to serve the needs of children less than 12 years of age. Such a park is usually inadequate for organized softball or baseball leagues because of the size of the field.

Combination Park: A park containing two or more types of recreation areas. For example, a passive recreation site and a play field within the boundaries of one facility.

Community Park: An area of diverse environmental quality that may include areas suited for intense recreational facilities such as athletic complexes and large swimming

pools. Such facilities may offer natural qualities suited for outdoor recreational activities such as walking, viewing, sitting, and picnicking.

Land-based Recreation: Those activities which can be pursued without requiring a recreational water supply. Examples include camping, hiking, picnicking and field sports.

Mini-Park or Pocket Park: A park of specialized facilities that serves a concentrated or limited population or specific group such as tots or elderly persons.

Neighborhood Park/Playground: An active recreation site incorporating one or more open space areas designed for field sport and providing play apparatuses. The open space areas should be able to serve the needs of both youth and adults. The neighborhood park remains the basic unit of the park system and serves as the recreational and social focus of the neighborhood.

Passive Recreation Site: A park primarily designed for picnicking, walking, and other non organized recreation interests. Such a facility often places more emphasis on the natural setting as opposed to active types of recreational activity.

Service Areas: A service area reflects the average distance users are willing to travel to a facility, a zone of influence. Although usually expressed in terms of a service radius, the influence is affected by features such as traffic arteries and rivers. A unique facility, or feature of a facility, may extend the normal zone of influence.

Skate Park: A purpose built recreation environment for skateboarders, BMX riders and in line skaters to ride and develop their sport and technique. A skate park may contain half-pipes, quarter pipes, handrails, trick boxes, vert ramps, pyramids, banked ramps, full pipes, stairs, and any number of other trick-oriented objects.

Tot Lot: A tot lot is part of a playground designed for very young children.

Water-based Recreation: Recreation based on the availability of a water supply for such activities as boating, swimming, fishing, and ice skating are examples of water-based recreation.

6.3 Recreation Administration

The Munising Township Recreation Committee drafted the most recent revision of Munising Township's Recreation Plan with assistance from the Munising Township Board. APRD contacted recreational user groups including the Munising Little League, Munising Hockey Association, Shingleton Recreation Authority, Volleyball League

participants and other interested parties to gather information for the plan. The recreation plan was adopted May 6, 2006 and subsequently approved by the Michigan Department of Natural Resources.

Munising Township, Au Train Township, Grand Island Township, the City of Munising and APRD entered into a joint agreement to provide for a public recreation system in September of 1998. This agreement also involves cooperation from other recreation related organizations and ex-officio members, including: Munising Public Schools, the National Park Service, the U.S. Forest Service and the Department of Natural Resources. The agreement maintains that APRD shall have full responsibility and authority to provide full-time, year-round, broad based recreation programs to the residents of Munising, Au Train and Grand Island Townships and the City of Munising. The APRD committee has the power to make all programming, financial and staffing decisions. The APRD Commission includes representatives from each of the cooperating agencies.

The Munising Township Board works in cooperation with the APRD and Recreation Committee to provide recreational opportunities to Munising Township residents. The Director of Parks and Recreation advises and contacts various community recreation user groups in the area and works in coordination with the groups.

The APRD is funded by the General Funds of Munising Township, Au Train Township, Grand Island Township and the City of Munising. The maintenance on Munising Township owned recreational facilities is the responsibility of the Township and is performed by Township volunteers or is contracted out. Programming of recreational classes, leagues and activities is administered through the APRD Director and staff. These programs include activities such as athletics, enrichment and parks for seniors, adults, youth and families.

Figure 6-1 illustrates the organizations chart for the joint recreational partnership agreement.

Figure 6-1



6.4 Township Owned Recreation Facilities

Township owned parks and recreational facilities are discussed in this section. Condition, maintenance provisions and other relevant factors are presented, including future projects for each recreational area.

Robert McQuisten Munising Township Recreational Area

The Wetmore area has the greatest concentration of population; therefore the Robert McQuisten Munising Township Recreational Area is being developed into an organized recreational area. Accessible development of the park is the number one priority for the Munising Township Board as well as residents.

- **Size:** 28 acres total, 10 acres developed
- The Robert McQuisten Munising Township Recreational Area currently has a Little League Field, two (2) full basketball courts, playground, boardwalk, pavilion and a parking lot. The pavilion was constructed in 2008, utilizing a MDNR Trust Fund Grant to pay for 74 percent of the cost. The Township covered the remaining 26 percent. Grills for the picnic area were installed in 2009. The Munising Township Building was designed and constructed to meet all applicable accessibility standards at the time of construction.

- **Future development plans:**
 - Construct paved multipurpose path
 - Construct horseshoe and shuffleboard courts
 - Construct two (2) vault toilets

Wetmore Community Park

The Wetmore Community Park is located in Wetmore adjacent to the Munising Township Office complex (site of the Munising Township Hall). The park is somewhat small and is used frequently. The community park is beginning to show its age; the equipment is in need of repair and replacement.

- **Size:** .75 acres
- The park contains two (2) tennis courts. The tennis court cracks were repaired in 2007.
- **Future Development Plans:**
 - Replace fencing/netting for tennis court

Shingleton Community Park

The Shingleton Community Park is located in Shingleton on Park Street and is bounded by state land and H-15. The park is in need of completion and updates in order to be used to its full capabilities. The community building is handicapped accessible.

- **Size:** Ten (10) acres
- The park contains a softball diamond, tot lot, basketball court, community building and parking area. The baseball field playing surface was repaired in 2007.
- **Future Development Plans:**
 - Develop horseshoe court
 - Develop picnic area and construct pavilion

6.5 Recreation Development Schedule

During the drafting of the current Munising Township Recreation Plan, an action plan for development was completed. The need for improvements was surveyed, a recreation committee comprised of residents and Munising Township Board members was formed, community input was obtained through open meetings meeting announcements and surveys, funds available were researched and the plan was presented for approval at a public Township Board meeting. A capital improvement schedule for recreation plan implementation was developed based on the needs and recreational deficiencies identified by residents.

6.6 Additional Recreational Facilities

The Township also boasts several recreational facilities that are administered by other entities. The recreational areas are discussed below.

Hiawatha National Forest

- United States Forest Service
- Size: 37,959 acres in Munising Township
- Hiawatha National Forest is an 880,000-acre National Forest. Commercial logging is conducted in some areas. There are over 100 miles of shoreline within the National Forest.

Hovey Lake Campground

- United States Forest Service
- Size: 5 acres
- Hovey Lake Camping is an isolated family type camping area located 8 miles southwest of Munising on M-94, then 4 miles southeast on FR-2254, and south on FR-2473. Toilets and drinking water are available. This small campground, located on the east side of the lake, is a good place for canoeing, bird watching, or just enjoying nature's surroundings. There are 5 campsites, each with a table and fire ring. Hovey Lake Campground is a no fee area.

Island Lake Campground

- United States Forest Service
- Size: 5 acres
- The campground is located south of Wetmore on Forest Route 2557. The campground, composed of two unnamed loops, is located on Island Lake. Some sites overlook the lake but most do not. Canoeing and boating on this small lake are favorite activities. A very tranquil campground that is convenient to many of the area's sights such as Wagner Falls Scenic Site, Grand Island National Recreation Area and one of several historic lighthouses.

Pete's Lake Campground

- United States Forest Service
- Size: Not Available
- The campground has 41 private and forested sites and is located on Forest Road 2173. Each site is equipped with a picnic table and grill. Vault toilets and drinking water sources are conveniently located throughout the campground. The campground is handicapped accessible. Surrounded by many lakes, this recreation area offers much in the way of camping, hiking, fishing, and swimming, boating, and picnicking. All roads are black topped (perfect for bike riding).

Moccasin Lake Campground

- United States Forest Service
- Size: Two areas of three acres in size
- The Moccasin Lake rest area is located on FH-13 and has a picnic area with a boat launch.

Widewaters Campground

- United States Forest Service
- Size: Two areas of 13 acres in size
- Widewaters Campground is situated on the Indian Wild and Scenic River, 13 miles south of Munising, on Highway H-13, then 1/2 mile NW on FR-2262. There are opportunities for canoeing, fishing and hiking. The campground boasts 34 campsites and two boat launches. Approved drinking water pumps and vault toilets are conveniently placed throughout the campground. Tables and grills are also located at each site.

Pictured Rocks National Lakeshore

- United States National Park Service
- Size: 28,000 total acres in buffer zone; 73,000 total acres in Lakeshore
- More than 73,000 acres extending from Munising to Grand Marais are included in the National Park Service's Pictured Rocks National Lakeshore. An interpretive center is located at Munising Falls and is open from May through October. A year-round interagency visitor center, operated in partnership with the U.S. Forest Service, is located at the junction of M-28 and H-58 (East Munising Avenue). Park headquarters are located at Sand Point.

Among the park's most popular features is the North Country National Scenic Trail. Campsites are located along the trail every two to five miles. Only foot and boat traffic is allowed in the backcountry. Twenty-one single and group campsites are found along the trail. Non-hikers can access three campgrounds from road H-58. These campsites at Hurricane River, Twelvemile Beach and Little Beaver campgrounds have water, tables, grills and primitive toilets available for users.

Visitors to the PRNL enjoy sightseeing, picnicking, boating, kayaking, canoeing, swimming, hiking, fishing and hunting. Cross-country skiing, snowshoeing, snowmobiling and ice fishing are popular during the winter months. There are over twenty miles of cross-country ski trails throughout PRNL. Fifty miles of designated snowmobile routes and 100 miles of hiking trails are contained within the PRNL.

Pictured Rocks Golf Club

- Privately owned 18-hole golf course
- The front nine at Pictured Rocks Golf Club was the original nine when the course opened in 1968, the back nine opened in 1995. The golf club offers a variety of memberships for any age. There is a driving range, practice putting green, powered golf cart and club rentals, a pro shop and restaurant/bar.

6.7 Area Recreational Facilities

Sand Point Beach: Sand Point beach is located on Lake Superior just east of Munising and is part of Pictured Rocks National Lakeshore. Sand Point was named one of the “Top 5 Summer Beaches in America” by the Weather Channel. The undeveloped sand beach is ideal for children and a perfect place for kayaking launching. The beach is also a popular spot for watching the sunset over Munising Bay. A boardwalk is also located at Sand Point.

Grand Island: All except 44 of the island’s 13,500 acres are part of the Hiawatha National Forest since being acquired in 1990 from the Cleveland Cliffs Iron Company. The island is accessible by private boat or Forest Service ferry service. Visitors can hike, camp, fish, sightsee, bike or kayak. ALTRAN provides a bus tour of the island from beginning June 15th and continuing into October. The ferry departs from the Grand Island landing. The landing is located one mile west of the Munising city limits. A 23-mile trail for biking and hiking follows the shoreline of the island. Campsites include fire rings picnic tables, and bear poles. A day use area has been developed at Murray Bay that includes toilets, benches and pedestal grills. Two cabins were constructed in 2008.

Munising Falls: Located across from Munising Memorial Hospital on Washington Street in Munising, Munising Falls is a part of the Pictured Rocks National Lakeshore. This is a fully accessible site with parking and picnic areas, restrooms, the Munising Falls Interpretive Center, and a scenic 0.5 miles walk to the base of the 50-foot waterfall.

Wagner Falls: This scenic site is owned and maintained by the Michigan Department of Natural Resources. It is located approximately 1.5 miles south of Munising on M-94. A short walking trail begins at the parking area and leads to a series of small waterfalls that stretch for about 100 feet.

Alger Falls: This site is located about 1 mile south of Munising at the junction of M-28 and M-94. The waterfall cascades down about 30 feet of rock and is visible along the east side of M-28.

Horseshoe Falls: This privately-owned site is located within the Munising city limits and small admission fee is required. It is open daily from May 1 through October 15 and is accessible from Bell Avenue near the southern city limit.

Rudy Olson Memorial Falls: This site (formerly known as Tannery Falls) was donated to the Michigan Nature Association by the widow of Mr. Olson in 1987. It features a drop of about 40 feet from a rock shelf to its canyon below. It can be accessed from road H-58 at the base of Washington Street. There are no provisions for visitor parking.

MNA Memorial Falls: The Michigan Nature Association acquired this site in 1987. It is located about 500 feet from the Rudy Olson Memorial Falls, but on a different stream. Access to the top of the falls requires a walk of only a few hundred feet off of Nestor Street on the City of Munising's east side.

Grand Island Harbor Scenic Turnout: This Michigan Department of Transportation rest area provides vaulted toilets, drinking water, a picnic table, information and a short pathway leading to an overlook of Grand Island and Munising Bay.

Valley Spur Cross-country Ski Trail: Located within the Hiawatha National Forest, Valley Spur features 12 groomed and marked trails that cover 42 miles. Rental equipment and food are available in the warming shelter located along M-94 about 5 miles southwest of Munising.

Beginning with the 2007-2008 season, the Valley Spur trail system now falls under the Noguemanon Trail Network organizational umbrella. However, grooming and maintenance as well as the lodge operations are the responsibility of the non-profit group, Friends of Valley Spur.

In addition to wintertime activities, Valley Spur offers 26 miles of biking trails for mountain biking enthusiasts. All of the trails are shared with hikers.

Bay Furnace Campground and Picnic Area: This facility is a Hiawatha National Forest campground and provides 50 campsites, vaulted toilet facilities, a sanitation station, and a lighted cross-country ski trail. It is located about 5 miles northwest of the City of Munising on M-28 on Lake Superior.

Alger County Underwater Preserve: In 1981, the Michigan DNR declared the 113 square mile area an underwater preserve, protecting its underwater natural resources. This preserve extends from Au Train Point to Au Sable Point and was the first underwater preserve selected in the state. Thirteen dive sites have been designated

where varying features can be viewed at depths ranging from six to 100 feet. Diving enthusiasts can explore sunken ships, artifacts, large colorful rocks and sea caves. An extensive historical record of the shipwrecks has been compiled. Among the shipwrecks is the *BERMUDA*, a 150-foot wooden hull schooner; the *MANHATTAN*, a 252-foot wooden hull freighter; the *HERMAN H. HETTLER*, a 210-foot wooden steamer; a 230-foot wooden hull steam barge, the *SMITH MOORE*; the steamer, *SUPERIOR*; the freighter, *KIOWA*; and a steel tug, the *STEVEN M. SELVICK*, the first vessel intentionally sunk within the Michigan underwater preserve system as a dive site.

U.S. Forest Service Pathways: Many trails have been developed by the U.S. Forest Service to accommodate recreational activities such as cross-country skiing, biking, hiking, and horseback riding.

6.8 Park Accessibility

The Americans with Disabilities Act (ADA) identified specific standards that would insure that persons with disabilities have an equal opportunity to participate fully, live independently, and be economically self-sufficient within society. The ADA consists of five sections: Employment, Public Accommodations, Transportation, State and Local Government Operations and Telecommunications.

Title II of the ADA, Public Accommodations, is relevant to the level of accessibility and equal provisions of service at publicly owned outdoor recreation sites. This title states that discrimination against persons with disabilities is prohibited in all services, programs, or activities provided by public entities. The general requirements set forth under this section became effective January 26, 1992. Remodeling or new construction of facilities and buildings had the same deadline date to become accessible to disabled persons. In existing buildings and facilities, nonstructural changes to improve accessibility were required by January 26, 1992, while all structural improvements of the facilities and buildings were required by January 26, 1995.

The ADA of 1990 requires that “reasonable accommodation” be made to the needs of the estimated one in five people nationally who are disabled. That is, all public and private providers of goods and services, along with all employers, must remove all structural and communication barriers from facilities or provide alternative access where feasible. Munising Township has identified accessible development as the number one priority when considering future recreation plans.

6.9 Issues and Opportunities

- Munising Township’s natural features offer an abundance of passive and active recreational opportunities throughout the year. Expansion of recreational

activities and facilities promoting the natural beauty of the surrounding area may be beneficial to residents and visitors.

- Munising Township, in cooperation with the City of Munising, Au Train Township and Grand Island Township and APRD entered into a joint agreement to provide recreational programming for the area. The joint agreement serves a small population spread over a large land area. The consolidated group efforts make recreation programming feasible for the area.
- The age and condition of some Township-owned recreational facilities will involve capital investment in the near future. The Township has planned improvements to each Township-owned recreational facility.
- The Township currently has an updated and Michigan Department of Natural Resources-approved recreation plan. Therefore, the Township is eligible to pursue grant funding available through the DNR.
- There are several sites of historic importance within the Township that could be marked with signage or developed into recognized historic sites.

CHAPTER 7.0 TRANSPORTATION

7.1 Introduction

Communities depend on the effective movement of people and goods to sustain a functioning economy. Broadly speaking, a transportation system can be defined as any means used to move people and/or products. A major goal of a transportation system is to move goods and people through and within local, regional, national and international economies safely and efficiently. Transportation efficiency is a key factor in decisions affecting land use and development.

A region's employment base and quality of life is closely linked to the effectiveness of the transportation system. A compilation of needs and goals is necessary to guide the future development of various modes of transportation including: highways, local roads, public transportation, railroads, airports, marinas, and non-motorized trail systems. Transportation services and facilities must be maintained and developed to achieve a community's overall vision.

Roads and other transportation systems have been largely influenced by the physical barriers present, primarily Lake Superior and the rugged terrain. Therefore, transportation routes were often established along areas presenting the least physical resistance.

An inventory of the existing transportation facilities in the Township, along with a discussion of future transportation needs and concerns is presented in this chapter. Descriptions of the various elements of the road system, port facilities, airport and air service, railroad facilities and public transit service are included. Identification and prioritization of vital traffic corridors has become an increasingly important part of regional commerce enhancement.

According to data from the Michigan Department of Transportation, there are 220.63 miles of roadway in Munising Township, including the state public roadways and private roads.

7.2 Road System

Michigan Public Act 51 of 1951 requires that all counties and incorporated cities and villages establish and maintain road systems under their jurisdiction, as distinct from state jurisdiction. Roads within the Township, classified under Act 51, are identified on Map 7-1. The Township does not own, control, or have responsibility for any roads in the Township. All bridges and local roads are the responsibility of the Alger County

Road Commission, the state or the federal government.

Counties, cities and villages receive approximately 61 percent of the funding allocated through Act 51 for local roads. State highways under the jurisdiction of the Michigan Department of Transportation receive the remaining 39 percent. Road funding allocations are determined by a formula that includes mileages.

The five roads for roads categorized by Act 51 include, state trunkline, county primary, county local, city/village major, and city/village minor.

A description of the categories applicable to roads within Munising Township follows.

State Trunkline Highway

Road prefix "M" indicates state highways and "US" signifies federal highways. Both types of highways are included in the state trunkline highway category. State trunklines provide the highest level of traffic mobility for the public. While the highway system carries more than half the total statewide traffic, it makes up less than 10 percent of the Michigan roadway network length.

M-28 is an east-west state trunkline highway that almost completely traverses the Upper Peninsula, from Wakefield to near Sault Ste. Marie. Along with US-2, M-28 forms a pair of primary highways linking the Upper Peninsula from end to end, providing a major access route for traffic from Michigan and Canada along the southern shore of Lake Superior. M-28 is the longest state trunkline in Michigan numbered with the "M-" prefix at 290.43 miles. The entire highway is listed on the National Highway System, while three sections of M-28 are part of the Lake Superior Circle Tour. M-28 also carries two memorial highway designations along its route.

Throughout its course across the Upper Peninsula, M-28 passes through forested woodlands, bog swamps, urbanized areas, and along the Lake Superior shoreline. Sections of roadway cross the Ottawa National Forest and both units of the Hiawatha National Forest. Some of the other landmarks accessible from M-28 include the Seney Stretch, Seney National Wildlife Refuge and several historic bridges. M-28 in Munising Township extends from the eastern boundary northwest through the Township to the Munising Township/City of Munising border for approximately 17.8 miles.

There are 4,275 miles of state highway that compose the Priority Commercial Network (PCN). State highways given this designation are recognized for their importance to agriculture, forestry, wholesale trade, manufacturing and tourism. Highway M-28 is

included in the Priority Commercial Network.

M-94 also runs through Munising Township. M-94 is a state trunkline that runs for 89.16 miles from K. I. Sawyer to Manistique. The highway is part of the Lake Superior Circle Tour during a concurrency with M-28. In the City of Munising, M-94 joins a concurrency with M-28 and the Lake Superior Circle Tour from Munising to Shingleton. Until the turn at Shingleton, the route travels east-west rather than north-south. Between Shingleton and Manistique, M-94 is travels a north-south route.

South of Shingleton, M-94 runs through forest lands as a part of the Great Manistique Swamp. There are several national forest campgrounds located near Steuben in Schoolcraft County along M-94.

County Road System

County roads are classified as either primary or local. Primary roads facilitate the movement of traffic from areas of smaller population to larger population centers within a county that are not served by state trunklines. The primary system also serves as an important supportive road network to the state trunkline system.

There are 46.93 miles of primary roads located within Munising Township. Primary roads within the township are paved and examples include the portions of the following roads (See Map 7-1):

- Buckhorn Road
- Cusino Trail
- FF-13
- Connors Road
- FF-2268
- H-58
- Miners Castle Road
- H-15 (formerly known as Munising-Van Meer-Shingleton Road)
- Prospect Street

Roads not classified as primary are considered local. Local roads comprise the most miles in the county system, but have the lowest level of traffic. The roads in this system are often referred to as “Township roads,” though the county road commission maintains jurisdiction of those roads. There are a total of 50.68 miles of local roads within Munising Township.

County Designated Highways

The County-Designated (Intercounty) Highway system is the second statewide, county-based route numbering system used in Michigan. While several of Michigan's 83 counties utilize a locally-determined county road numbering system, the Intercounty Highway program was started in 1970 in order to provide a consistent, statewide county numbering system for identifying primary county roads which retained their designations across county lines. Many of the County Road Commissions have let their signage along the County-Designated (Intercounty) Highway system to lapse, while many others only partially initiated the system or never did so at all. As the system is completely funded at the county level, no specific state funding is earmarked for the program.

County Designated Highway H-09 runs from the southern terminus at FFH-13/H-13 (at Buckhorn Rd and Forest Highway 13), approximately 8.6 miles south of Wetmore to the northern terminus at M-94 at Sixteen Mile Lake Rd, approximately 7.8 miles southwest of Munising for a length of 8.56 miles. H-09 has never been indicated on the Official Michigan Transportation Map and only appears on few other maps. Route markers pointing to this route have never been posted by MDOT along M-94 southwest of Munising; thus, very little is known about this route.

County Designated Highway H-11 runs from the southern terminus at H-58 (at H-15 & Miners Castle Rd [aka Pictured Rocks Trail]), approximately 5.3 miles east of downtown Munising to the northern terminus at the end of County Maintenance, approximately 3.5 miles north of H-58, south of the Miners Castle area of the Pictured Rocks National Lakeshore. H-11 runs for 3.5 miles. H-11 is Michigan's newest County-Designated Highway designation, being first signed in the field in either 2004 or 2005 and showing up for the first time on the Official Michigan Transportation Map produced by MDOT in 2005.

County Designated Highway H-15 runs from the southern terminus at the junction of M-28 and M-94 in Shingleton to the northern terminus at H-58 in Van Meer (H-15 and Melstrand Road). The entire length of H-15 runs along a portion of a former routing of M-94. H-15 also runs along H-15 for its entire length.

Federal Roads

Federal Forest Highway 13/County Designated Highway H-13 in Munising Township is part of the Federal Forest Roads system. County Designated Highway H-13 is a road which runs north-south through the Hiawatha National Forest. It is concurrently-designated as Federal Forest Highway 13 for nearly its entire length. The northern

terminus is at H-58 in Wetmore. The southern terminus is at US-2 at Nahma Junction. Highway 13 is considered the main north-south artery of the Hiawatha National Forest and travels north from the Nahma Junction in Delta County to Wetmore for approximately 38 miles. There are additional Federal Forest Roads throughout the Hiawatha National Forest; many are not paved.

7.3 Private Roads

Within Munising Township, a number of private roads serve residential areas. Approximately 21.7 miles of private roads exist within the Township. The maintenance of these roads (snow plowing, grading, dust control, drainage ditch maintenance, etc.) becomes the responsibility of the residents living along these roads, who usually accomplish these tasks either on their own or through a contract agreement with a private entity.

The Road Commission does not provide any maintenance service to privately owned roads. The condition and location of private roads may affect some of the services provided to the residents such as fire protection, garbage collection, and emergency services. Residents living on private roads need to be aware that school bus service may not be provided. Generally, school buses will pick-up students only on public roadways. Access for fire and emergency vehicles on private roads can be difficult, especially if the roads are badly maintained, narrow, and/or lack enough space for turning around. As further development occurs along private roads, the possibility of conflicts between residents living along these roads with ongoing maintenance may occur. Often residents will request the Township Board or the Road Commission to pay for maintenance of private roads.

Munising Township has included stipulations in its zoning ordinance that require private roads serving more than one lot to conform to certain dimensional and maintenance standards. It is also possible to prohibit subdivision and development of property unless the resulting parcels have direct access to public roads. However, even if a road is constructed to county road commission standards, the Alger County Road Commission may not accept it into the county road network.

Applicants for private road development must submit an application for a special use permit through the Zoning Administrator to the Planning Commission. In addition to the special use permit application, a typical cross-section of the private roadway, all existing and proposed grades and drainage patterns, the location, size and depth of any proposed drainage facilities or structures, the location of all lots and the situation of proposed buildings on said lots and at least two proposed names for the private road

must also be provided.

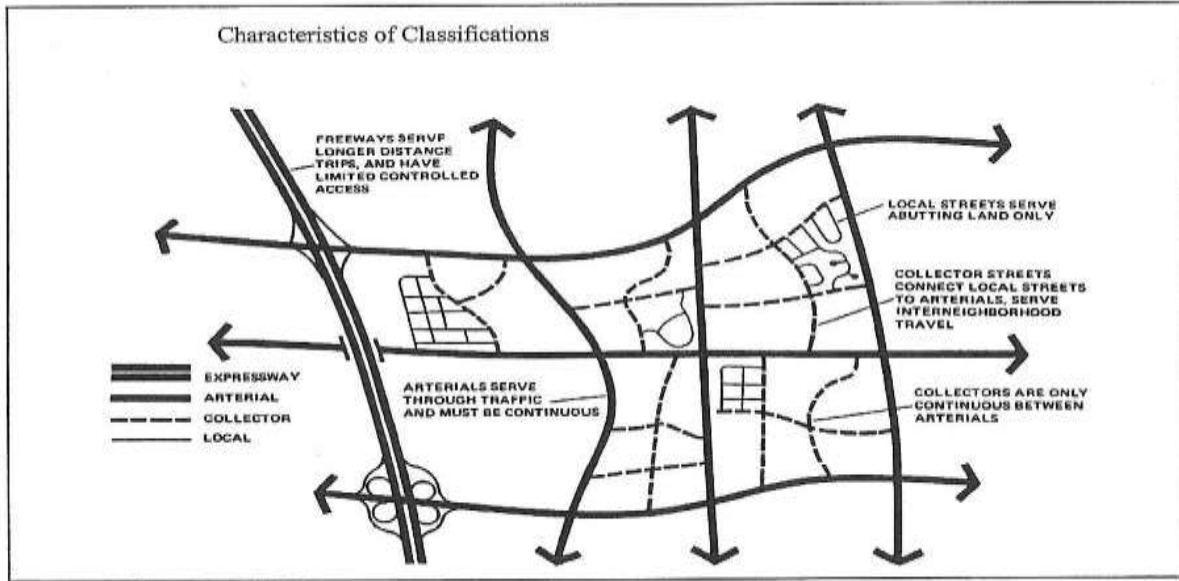
The applicant must also provide a set of deed restrictions which shall provide for the creation of a private road easement and the creation of a homeowners association whose members shall be the only property owners served by the private road. A document must be provided that the Township shall not be held liable for the cost of road signs, traffic control signals, maintenance, lighting or snow removal. Easements for construction and maintenance of various utilities must also be provided. A permit must be obtained from the Alger County Road Commission for construction within the right-of-way of county roads. Building permits will not be issued until all roadway, ditching and drainage improvements are installed.

7.4 National Classification of Roads

Federal, state and local transportation agencies use the National Functional Classification as a planning tool. Developed by the Federal Highway Administration, the system classifies roads according to their function as it relates to greatest mobility/greatest access. Principal arterials provide the greatest mobility. In order of functional importance; principal arterials are followed by minor arterials, major collectors, and then minor collectors. Local roads provide the greatest access to property.

The functional system creates more categories than is provided under Act 51 (Map 7-2). All roads in the functional road classification system that are arterials and collectors are considered either state trunklines or primary roads in the county road system under Act 51.

The following graphic shows the characteristics of road classifications.



Source for Figure 2-2 and 2-3: *Arterial Street Access Control Study*, Tri County Regional Planning Commission, 1981, p.3.

Principal Arterial

Roads within this classification function to move traffic over medium to longer distances quickly, safely and efficiently. Often the movement is between regions or major economic centers. In Munising Township, the segment of M-28 through the Township is classified as a principal arterial. There are approximately 14.9 miles of principal arterial roads in the Township.

Minor Arterial

Roads within this classification function to move traffic over medium distances within a community or larger area at a moderate to a quick rate. M-94 is considered this classification in Munising Township.

Collector Roads

A collector road provides access between residential neighborhood and commercial/industrial areas. Its function is to provide a more general service, such as area-to-area rather than point-to-point. A collector usually serves medium trip lengths between neighborhoods on moderate to low traffic routes at moderate speeds and distributes traffic between local and arterial roads. Usually, this involves trips from home to places of work, worship, education and areas where business and commerce are conducted.

Within Munising Township, portions of Buckhorn Road, FF-13, FF-2268, H-58, Miners Castle Road, H-15 and Prospect Street are considered “major collector roads” and

portions of Cusino Trail, FF-2254 and FF-2268 are considered “minor collector roads.” Together portions of these roads are a part of a network that encompasses 12.9 miles of collector roadways classified in the Township.

Local Roads

All roads not serving as arterials or collectors are classified as local. The predominant function of roads in this classification is to provide direct access to adjacent land uses. A local road serves as the end for most trips within a community. Local roads include all streets not classified as arterials or collectors. The Township’s 50.6 miles of local roads provide direct access to adjacent land uses and should be designed to move traffic from an individual land parcel to places of business and employment via collector roads.

7.5 Road Condition Evaluation

Roads under the jurisdiction of the Michigan Department of Transportation are evaluated on the basis of pavement condition, ride quality, friction and rutting. Surface conditions are determined by the amount of deterioration such as cracking, faulting, wheel tracking, patching, etc. Determining ride quality is subjective, but is based on the degree of comfort experienced by drivers and passengers.

Roads within Munising Township have been evaluated using the PASER (*Pavement Surface and Evaluation and Rating*) system. Every year, a survey team consisting of road commission members and CUPPAD staff drives a portion of the roads and the PASER system is used to evaluate the pavement surface condition. A portion of the results is listed in Table 7-1 below.

Asphalt PASER descriptions range from 1-Failed to 10-Excellent. The scale is as follows:

- Asphalt 10-Excellent
- Asphalt 9-Excellent
- Asphalt 8-Very Good
- Asphalt 7-Good
- Asphalt 6-Good
- Asphalt 5-Fair
- Asphalt 4-Fair
- Asphalt 3-Poor
- Asphalt 2-Very Poor
- Asphalt 1-Failed

Road Segment	From	To	PASER Rating
M-28	City/Twp Line	M-94	4
M-94	City/Twp Line	M-28	9
H-15	M-28	--	8
Buckhorn Road	City/Twp Line	Doe Lake Road	8
FF-13	County Line	Red Jack Lake Road	6
FF-13	Kentucky Trail/FF2254	County Line	6
FF-13	Prospect Street	Connors Road	4
H-58	Carmody Road	Wood Drive	4
H-58	Chapel Road	County Road 690	6
Miners Castle Road	H-58	Carmody Road	3
Prospect Street	Balko Street	FF-13	2

Source: PASER Rating, CUPPAD, 2009.

7.6 Road Improvements

Planning for transportation improvements takes place at both the state and local level. The Michigan Department of Transportation maintains a statewide long-range transportation plan, and holds hearings around the state to gather input regarding residents' needs and desires. In addition to the long-range plan, MDOT prepares a five-year program for road improvements statewide. Improvements are listed in the five-year plan, which allows the state to budget for the various phases of each improvement. The various phases, such as right-of-way acquisition, design, and construction, are scheduled over a multi-year period so as to keep these large projects on track.

Local planning efforts consist of the Township's annual prioritizing of street improvement projects. The Township Board has compiled a priority listing of roads needing improvements. Several projects listed in the table have been completed at this time. An updated road improvement priority list will be completed by the Township Board in 2011.

County Local to Paved Surfaces	
Priority Number	Road Name
1	Wetmore Streets
2	R & M Subdivision
3	Lost Lake Road
4	Lehnen Road
5	Miller and Gates Roads
6	Shingleton Streets
7	Hilltop Road
8	Johnson & Carlson Roads
County Primary Roads	
1	County Road 440
2	Connors Road

Source: Munising Township Board, 2009

7.7 Financing

Local Funding

Munising Township voters approved 2 mils for five years for upgrading and maintaining roads within the Township. The levy is expected to generate approximately \$120,000 in the first year. General fund dollars may be spent to supplement the millage if necessary.

Michigan Transportation Fund

Revenues collected from fuel taxes and motor vehicle registration fees are distributed to county road commissions, cities, and villages by formula through the Michigan Transportation Fund, established under Public Act 51 of 1951. Road classification, road mileage, and population are factored into a formula to distribute funds to all the county road commissions. A percentage of the funding received by each road commission is also set aside for engineering, snow removal, and urban roads.

Michigan Transportation Economic Development Fund

The establishment of this fund in 1987 set forth a mission “to enhance the ability of the state to compete in an international economy, to serve as a catalyst for economic growth of the state, and to improve the quality of life in the state.” Investment in highway, road and street projects necessary to support economic expansion is the purpose of the TEDF. The six funding categories of the TEDF are as follows:

- | | | | |
|----|------------|---|--------------------------|
| 1. | Category A | - | Target Industries |
| 2. | Category B | - | State Trunkline Takeover |
| 3. | Category C | - | Urban Congestion |
| 4. | Category D | - | Rural Primary |
| 5. | Category E | - | Forest Road |
| 6. | Category F | - | Urban Area |

Other

Federal assistance for state highways is supported mainly through motor fuel taxes. Construction and repair funding associated with state trunkline systems are generated from these taxes. On August 10, 2005, President George W. Bush signed the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 5-year period 2005-2009.

SAFETEA-LU addresses the many challenges facing our transportation system today – challenges such as improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, and protecting the environment – as well as laying the groundwork for addressing future challenges. SAFETEA-LU promotes more efficient and effective Federal surface transportation programs by focusing on transportation issues of national significance, while giving State and local transportation decision makers more flexibility for solving transportation problems in their communities.

Ten percent of each state’s Surface Transportation Program (STP) funding is set aside for transportation enhancement projects. Enhancement activities are meant to be such things as landscaping, bicycle paths, historic preservation, storm water runoff mitigation and other quality-of-life projects. A formal process of application has been established by the Michigan Department of Transportation to afford local and state jurisdictions an opportunity to pursue this funding.

SAFETEA-LU legislation expires in 2009. The federal government is currently in the process of drafting new transportation legislation.

7.8 Traffic Flow and Volume

It is anticipated that travel demand may grow by 50 percent in the next decade. Each year there are more cars, more drivers and fewer carpoolers. Nationally, two car households increased from 10 million in 1960 to 40 million in 2000. According to Experian Automotive, the average household in the United States owns 2.28 cars, with

nearly 35 percent of households owning three or more cars. The largest population growth is occurring in suburbs where dependence on private automobiles is greatest. New road construction is not keeping pace with this growth and roads are becoming increasingly crowded.

According to the Michigan Department of Transportation, highway travel in Michigan is increasing at a far greater rate than the state population. Michigan roads have experienced an increase in traffic volume. In 1940, travel logged on Michigan roads totaled 14.6 billion miles. The total travel volume in 2006 was 103.3 billion miles, seven times more miles traveled than in 1940. Volumes are usually presented as an average daily traffic (ADT) figure, and are calculated for a particular intersection or section of roadway.

As the number of vehicles on a roadway increases, turning onto or off of the roadway becomes more difficult. At the same time, as the traffic level increases, frontage along the road becomes more desirable for development. Often, such development occurs with little, if any, attention to how entrances and exits will affect traffic movement and safety.

Congestion created by strips of roadside commercial land uses is one of the most objectionable impacts of development. Businesses naturally locate on the most accessible land, but the many driveways they require and the congested intersections they create impede travel to all locations. Road users, landowners, and businesses then suffer from reduced accessibility.

Access management consolidates driveways, provides better vehicle and pedestrian circulation and otherwise reduces the impact of roadside land use on the efficiency of the road system. It requires a good relationship among road agencies, local government and property owners to develop an access plan and possibly adopt an overlay zoning district. This approach has yielded successes for some communities. Such a strategy may be useful along the M-28 corridor.

7.9 Public Transportation

Public transportation is provided by the Alger County Transportation Authority (Altran). Altran, an Act 196 transit authority, was created in March 1990 to provide countywide transit services. Senior citizens and disabled persons comprise 60 percent of the system's annual ridership. In 2008, the system transported 86,596 passengers and logged 421,348 miles with a fleet of 14 vehicles. Altran is discussed in detail in Chapter 5, Section 5.4.

7.10 Rail Service

There is an active industrial rail line along the M-28 corridor in Munising Township owned and operated by Canadian National. No passenger rail service is available in the Township.

7.11 Air Transportation

Commercial passenger service is not available in Alger County. Hanley Field is located on leased U.S. Forest Service land south of Wetmore in Munising Township. This site has been used as an airfield since at least 1928. Hanley Field is licensed as a “basic utility airport” by the Michigan Department of Transportation, Bureau of Aeronautics. Commercial passenger service is available from Sawyer International Airport in Marquette County approximately 45 miles away, or from the Delta County Airport in Escanaba, which is located approximately 70 miles from the Township.

7.12 Port Facilities

Munising Bay affords a natural deep-draft harbor (24' depth) that is used to off-load coal at the Neenah Paper mill in the City of Munising. Munising is among the 38 Michigan ports that regularly accommodate commercial cargoes.

Bayshore Marina in the City of Munising offers ten transient slips and nine seasonal slips. Amenities include: water, electricity (20, 30 and 50 amp), restrooms, showers, gasoline, pump out, ice, boat launch, long-term parking, public phone, day-use dockage and grills/picnic tables.

7.13 Non-motorized Transportation Facilities

In recent years, the construction of non-motorized facilities has increased in response to public interest. Walking and bicycling are among the top five individual exercise activities according to a national survey (walking is number one). Alternate modes of transportation are encouraged and made safer by facilities such as bike lanes and walking paths.

Sidewalks have served to connect residents to their neighborhoods, schools, stores and workplaces for as long as they have been around. In the absence of sidewalks, people will either drive to where they need to go or use the street as they would a sidewalk. Sidewalks are pedestrian transportation corridors. The recommended standard for requiring sidewalks is where lot sizes are 10,000 square feet and smaller. Sidewalks do not currently exist in the Township. The Township maintains a boardwalk in the Cox Ponds area in Wetmore.

7.14 Issues and Opportunities

- The Township Board and the Planning Commission should continue to work with the Alger County Road Commission and MDOT to ensure that transportation deficiencies are not impediments to investment in the Township.
- Munising Township should continue to prioritize local road improvement projects and work with the Alger County Road Commission to schedule these projects as local and road commission funds become available.
- The Township should take the proper steps to avoid future conflicts with residents living along private roads, especially when it comes to maintaining these roads and providing certain community services to these residents.
- The opportunity may exist to work with MDOT to develop access management plans for areas along M-28 in the Township, in order to reduce the potential for future safety hazards and to preserve the current road conditions while spending less money to do so.
- The aging of the local population could result in future needs for additional transportation services for the elderly and/or disabled.
- Trends indicate that traffic volume will increase by 50 percent in the next decade.
- Limited public transportation is available locally on a demand-response basis. Daily bus transportation is available by Altran.

CHAPTER 8.0 NATURAL FEATURES

8.1 Introduction

Natural features, including geology, soils, topography, water features and other natural resources, not only enhance the aesthetic quality of the area but, they also have a profound effect on a community's development. These physical features directly or indirectly constrain or encourage growth; for example, soil types and geology often affect the ability of a community to provide high quality water and wastewater services. The natural resources, such as timber or minerals, which occur in certain areas are often a primary factor in the establishment and growth (or decline) of communities. For instance, many areas in the Upper Peninsula were settled as a result of logging or mining operations in the late 1800s. The region is dominated by northern hardwood and mixed conifer forests; Alger County has over 531,000 acres of forest.

These natural features are often interrelated, and disturbance in one area can potentially affect other areas. From a planning standpoint, it is important to understand these interrelationships, and the role that natural features play in determining a community's future development endeavors.

8.2 Geology

One of the primary factors that makes geology important to a community's development is its ability to supply groundwater. The quality and quantity of groundwater are influenced by the types of bedrock in which it is found, and the layers through which the water passes before it is extracted. Certain types of bedrock increase the potential for groundwater contamination, particularly when such bedrock is close to the surface. Surface runoff is filtered through the soil, sand, and gravel which overlay bedrock. When bedrock is close to the surface there is less opportunity to filter out contaminants and the polluted runoff can enter the groundwater table. If the bedrock is highly permeable, contaminants can quickly enter the same layers of groundwater used for domestic purposes.

8.3 Bedrock Geology

Bedrock geology consists of solid rock formations found below the soil which were formed during the early periods of the earth's evolution; some bedrock may be exposed at the earth's surface. Bedrock underlies loose material such as soil, sand, clay and gravel. These formations have undergone extensive folding, uplifting, eroding, and weathering during the millions of years which have since passed, and are now overlain by surface geology and soil.

The landforms of the Upper Peninsula are a product of the glaciers that occupied the region during the Pleistocene Epoch. During the Wisconsin glacial stage, the entire Upper Peninsula was covered with a thick sheet of ice that went as far south as southern Indiana and Ohio. A massive deposition of glacial drift and the subsequent melting of the ice combined to create a variety of landforms. Most of the landforms are a result of the last major glacial stage known as the Greatlakean.

One of the most common glacial deposits found in the Upper Peninsula is till. Glacial till refers to generally unconsolidated deposits deposited directly by and underneath a glacier without subsequent reworking by melt water. It is typically a heterogeneous mix of sand, silt, clay, gravel and stones. Several large areas of till deposits called ground moraines occur throughout the Upper Peninsula.

The bedrock of Munising Township is made up principally of the Prairie du Chien Group (Map 8-1) of the early Ordovician stage. The Prairie du Chien Group consists of upper and lower dolomite units with an intervening sandstone unit and shale. The dolomite is unevenly bedded. The Prairie du Chien group is present throughout most of the Upper Peninsula.

Other groups represented in Munising Township's bedrock geology include: the Black River Group (limestone), Collingwood Shale Member (limestone and black shale), Munising Formation (sandstone and shale), Trempealeau Formation (sandstone, shale and dolomite), Trenton Group (limestone, dolomite and shale) and Utica Shale Member (black shale).

8.4 Surface Geology

Surface geology deposits in Munising Township are primarily the result of glacial activity. The categories of surface geology are based on the material content and formation process of the various deposits. Glacial deposition occurred in one of three ways: 1) by materials deposited directly by glaciers with little or further movement as a result of surface water (till) or, 2) by outwash or, 3) by materials deposited by glacial lakes known as lake deposits. End or recessional moraines are a type of till, deposited at the edge of a glacier, or left as the glacier melts and recedes.

8.5 Soils

Soil is a naturally occurring mixture of mineral and organic ingredients with a definite form, structure and composition. The exact composition of soil changes from one location to another. Parent materials are the result of glacial deposition or outwash from meltwater. Glaciers, moving slowly over bedrock material and exerting massive pressure, created finely ground material. The different types of soil created from the

contractions of these glacial sheets were deposited throughout the area in no particular order.

The soils information comes from the U.S. Department of Agriculture Soil Conservation Service Web Soil Survey. Map 8-2 illustrates the soil types as reported by the U.S. Department of Agriculture.

Soils are grouped into associations based on common characteristics such as drainage, slope, and texture. The soils in these associations respond similarly to the various uses to which they may be subjected. Development should be planned in such a way as to take into account the suitability of the soils for the type of development being planned. For example, residential subdivisions should avoid areas of shallow and/or poorly drained soils or areas where the water table is close to the surface, since such soils are unsuitable for septic drain fields and problematic for roads.

Much of the Township is covered with the state soil, Kalkaska Sand. Alger County is approximately 31 percent covered with the Kalkaska association. The soil may be described as dominantly sand but the texture of the surface layer ranges from sand to loamy sand. The soil is typically well drained with a low water holding capacity and is usually very dry. Water is absorbed rapidly and quickly flows through the soil. The soil is formed under supporting hardwood forest cover and is dominantly woodlands, but also used for building sites and recreation areas. These soils are generally suitable for septic tank absorption systems, with limitations caused by slope.

Soils of the Rubicon association are also found in the Township. These soils are generally deep, nearly level and gently sloping and well drained soils that have coarse textured subsoils. The Township also has areas of the Karlin-Blue Lake-Kalkaska association. These soils are generally deep, gently sloping to strong sloping, well drained and moderately well drained soils that have coarse textured subsoils; and nearly level, very poorly drained organic soils. The Township also has areas of Tawas-Carbondale, Lupton and Rifle-Roscommon association soils. These soils are nearly level, very poorly drained, organic soils, and deep, nearly level poorly drained soils with coarse textured subsoils. Soils of the Munising-Steuben association are found in the remainder of the Township and are dominantly loamy, moderately well drained and well drained, and of nearly level to very steep.

Ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation of construction costs. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the

soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. “Somewhat limited” indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design or installation. “Very limited” indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design or expensive installation procedures.

Areas around Shingleton and Melstrand are listed as very limited for the construction of dwellings with basements. The majority of the land around Wetmore is not limited for the construction of dwellings with basements. Approximately 58 percent of Alger County is very limited for dwellings with basements, while 26 percent is not limited and 13 percent is somewhat limited. Approximately 95.3 percent of Alger County is very limited for septic tank absorption fields, while 2.5 percent is somewhat limited and 2.2 percent is not rated. Most of Alger County utilizes onsite sewage systems despite the soil being limited. Where access to a public sewer system is unfeasible or too expensive, proper siting and design of an onsite sewage system is critical to avoid premature failure of the system.

Engineering and construction techniques can be used to overcome soil limitations. The long-term implications of such techniques should be carefully considered, however, since development in areas of marginal suitability may lead to high costs to local governments, and hence to taxpayers, in order to provide services to these areas.

8.6 Topography

The physical features of the landscape provide an area with its own unique character. Topography describes this character in terms of elevation above mean sea level. This reveals the size and shape of watersheds as well as places to avoid with development because of grades in excess of recommended standards.

Steep topography or slopes of 10 percent or greater (a rise in gradient of more than 10 feet in a horizontal distance of 100 feet) can be aesthetically attractive for residential development as well as some commercial establishments. However, the steep grade increases the likelihood of soil movement or slides, and the weight of structures is an added force which encourages this movement. Beside such dangers, there is an added expense if development occurs on the sloping surface itself. Excavation of a hillside and/or building of retaining walls can greatly increase construction costs. There is also a problem of erosion as the water rushes down the steep grades. Natural water courses provide the pathway for such water and should be maintained in this capacity.

The Township's terrain ranges from 594 feet to 1,050 feet (Map 8-3). Lake Superior's mean elevation is 602 feet above sea level. Elevations reach as high as 1,050 feet above sea level in the Township. Thus far, these conditions have directed development to areas of lower elevation and less severe gradient. Developed lands generally slope toward Lake Superior.

8.7 Water Features

More than 70 percent of the earth's surface is water. Water features, i.e., lakes, streams and rivers, have very important functions as natural resources. Among those important functions is as the source of water for residential and commercial development. Munising Township boasts an abundance of lakes, rivers and creeks. The northern boundary of the Township is along Lake Superior.

Water features within the Township include numerous lakes, mainly concentrated in the southeastern portion of the Township (Map 8-4). Several lakes have established pockets of residential development, including Powell Lake, Lost Lake, Upper Twin Lake, Big Twin Lake, Tie Lake and Baldy Lake. A limited amount of the development is for year round residences, many of the dwellings are for seasonal use.

There are many additional lakes in the Township including: Wetmore Lake, Swede Lake, Bar Lake, Fish Lake, Blue Lake, Three Lakes, Man Lake, Macomb Lake, Little Beaver Lake, Town Lake, Island Lake, Nobel Lake, Upper Shoe Lake, Miners Lake, Little Chapel Lake and Section 36 Lake.

Rivers and creeks include: the Indian River, Arsenault Creek, Little Beaver Creek, Star Creek, Mosquito River, Chapel Creek, Spray Creek, Hickey Creek, Stutts Creek, Miners River, Stoney Creek and the Anna River.

The Anna River originates at the Anna Marsh in the Hiawatha National Forest in the northwest portion of the Township and flows along the eastern edge of the City's downtown area into Munising Bay of Lake Superior immediately east of the Neenah Paper Mill.

Lake Superior is the largest body of fresh water in volume on the planet and the largest of the Great Lakes. It is about 350 miles in length, 160 miles wide at a depth as great as 1,300 feet.

8.8 Mineral Resources

Sandstone formations along the Lake Superior shoreline extend from Sault Ste. Marie to Duluth. Quarrying of Jacobsville sandstone began in the late 1800s at multiple locations along the shoreline.

Several quarries mined red and tan colored sandstone in the areas in and around Munising Township, including at Sand Point. Nearby sandstone quarries were located in Grand Island Township at Powell's Point, the Bay Furnace area, and on the southwest end of Munising Bay. Stone from Powell's Point was used to build the Lincoln School (now known as the Tribal Center) and the Sacred Heart Convent/School (now known as the Jericho House) in Munising. Iron blast furnaces were constructed of sandstone mined from the Grand Island and Powell's Point quarries. The Schoolcraft Iron Company and the Bay Furnace Company opened these quarries in the 1860's and operations flourished through the early 1900's.

There are two operating gravel pits located within the Township, both located on Percy Road.

8.9 Scenic Sites and Forests

Determining scenic sites is somewhat of a subjective exercise. The hills, forests, and water features, viewed individually or together, present uncommonly picturesque scenes throughout the Township. Some of the most notable sites are described briefly below:

Pictured Rocks National Lakeshore

The Pictured Rocks National Lakeshore is a major attraction that features dunes, cliffs, beaches, waterfalls, wildlife and forests. In total, the Lakeshore encompasses about 73,000 acres and 42 miles of Lake Superior shoreline. The National Park Service, which manages the Pictured Rocks National Lakeshore, Munising Falls and Miners Castle, maintains a visitor information center at the junction of M-28 and H-58 in the City of Munising.

On October 15, 1966, Congress passed Public Law 89-668 authorizing establishment of the United States first national lakeshore, Pictured Rocks National Lakeshore in Alger County. The Lakeshore is comprised of two distinct acquisition, development and management zones; a shoreline zone; and an inland buffer zone. The shoreline zone was established to preserve the Lakeshore's scenery and natural features and to provide the benefits of public recreation. The inland buffer zone was created to stabilize and protect the existing character and uses of the land, waters and other properties as they were on December 31, 1964. Sustained yield timber harvesting and other resource

management activities compatible with the preservation and recreational use purposes outlined in the legislation were also permitted within the inland buffer zone. Park legislation was amended in 1996 to add former Grand Marais U.S. Coast Guard facilities to the park.

The shoreline zone was acquired in its entirety by the National Park Service. The inland buffer zone was to remain in private and state ownership. With sufficient lands in federal ownership to provide a manageable Park Service area, Pictured Rocks National Lakeshore was formally established as a unit of the National Park System on October 6, 1972. Initial steps to improve road access to the National Lakeshore occurred in 1985-86. In 1998 the Alger County Road Commission completed realignment and paving of H-58 from the Grand Sable Visitor Center to the Grand Sable Lake overlook. For years, Alger County Road Commission, Michigan Department of Transportation and National Park Service officials have worked together to provide a hard surface road from Grand Marais to Munising, a distance of more than 40 miles. The final phase of construction, which includes a bridge over the Hurricane River and 1.2 miles of approach road, will finish the link between Munising and Grand Marais. The project is scheduled to be completed in late 2010.

The Lakeshore is the only unit of the National Park Service that has a legislated buffer zone, and zoning has evolved over the years in order to meet the intent of Congress. Munising Township and the City of Munising have adopted Zoning Ordinances for the inland buffer zone based on recommendations contained in the National Park Service "Land Protection Plan." These regulations permit property development while ensuring the "stabilization and protection of the existing character and uses of the land, water and other properties."

Pictured Rocks has fourteen named inland lakes, ranging in size from 9.94 acres (Sevenmile Lake) to 766.03 acres (Beaver Lake). Four of these lakes are located in the inland buffer zone (Section 36 Lake, Kingston Lake and Upper and Lower Shore Lakes). The inland lakes are shallow, approximately 9 to 18 feet in depth, with the exceptions of Beaver, Chapel and Grand Sable Lakes. The National Lakeshore also contains 19 named streams. Miners River is the largest and has the greatest discharge. In general, the streams in the Lakeshore are short and have steep gradients. A number of waterfalls are found within the Lakeshore, including: Munising, Miners, Mosquito, Little Mosquito, Bridalveil, Chapel, Spray and Sable Falls (waterfalls are discussed further below). Pictured Rocks watersheds drain into Lake Superior, with the exception of the closed basin watersheds containing Legion, Section 36 and the Shoe Lakes, which are in the Lake Michigan drainage basin.

Development and population pressures are not currently a major concern for Pictured Rocks at this time. Alger County's population is static and the inland buffer zone allows for review of developments that may affect the park. The Shoe Lakes are the only lakes in the inland buffer zone with potential for development. Public use of the National Lakeshore has grown from approximately 272,000 visitors in 1972, to over 383,000 visitors in 2004. The Pictured Rocks National Lakeshore is extremely important to the residents of Alger County, in being the first National Lakeshore, the opportunities it offers through its facilities for visitor recreation and its use by hundreds of thousands of visitors yearly, combined with the associated benefits those visitors bring to the local economy. With the completion of the paving of H-58 in 2010, park visitation may increase.

Area Waterfalls

- Chapel Falls: Located approximately 5 miles northwest of Melstrand. There is a 1.3 mile marked trail from the parking lot that leads to a viewing platform.
- Mosquito Falls: Located approximately 5 miles northwest of Melstrand. Can be reached by the same parking area as Chapel Falls.
- Miners Falls: Located approximately 6 miles northeast of the City of Munising, along Miners Castle Road. There is a half-mile trail to a viewing platform for the falls.
- Wagner Falls: Located on M-94. There is a roadside area marked by a Wagner Falls sign. The Wagner Creek cascades over rock ledges in this area before emptying into the Anna River and is designated as a State Scenic Site.
- Nearby waterfalls: Alger Falls, Au Train Falls, Bridalveil Falls, MNA Memorial Falls, Memorial Falls, Miner Falls, Laughing Whitefish, Munising Falls, Rock River Falls, Miners Beach Falls, Scott Falls, Spray Falls, Sable Falls, Whitefish Falls, and Rudy Olson Memorial Falls can all be found in the area.

Hiawatha National Forest

The Hiawatha National Forest is an 880,000 acre National Forest covering much of the eastern Upper Peninsula. The U.S. Forest Service administers the Hiawatha; it is physically divided into two subunits, commonly called the Eastside and Westside. In descending order of land area it lies in parts of Chippewa, Delta, Mackinac, Alger, Schoolcraft, and Marquette counties. Chippewa and Mackinac counties are in the Eastside, whereas the rest are in the Westside. Forest headquarters are located in Escanaba, Michigan. Eastside ranger district offices are located in Sault Ste. Marie and St. Ignace, while Westside offices are in Manistique, Munising, and Rapid River.

By the 1930's much of the Upper Peninsula was devoid of timber. Most of the area's pine had been cut in the late 19th century and much of the hardwood was cut during the first decades of the 20th century. The Westside was designated as Hiawatha National Forest in 1931. It was extensively replanted by the Civilian Conservation Corps (CCC). In 1962 the Marquette National Forest (east unit) became part of the west unit.

Over time, the pines planted by the CCC became a valuable source of timber. The harvest of forest products continues in parts of the Hiawatha in accordance with new forestry practices that emphasize the creation and maintenance of healthy ecosystems.

The forest has over 100 miles of shoreline. Both east and west units have shoreline on both Lake Superior and Lake Michigan; the east unit also has shoreline on Lake Huron. The west unit borders Pictured Rocks National Lakeshore and Grand Island National Recreation Area. The Forest Service manages the Hiawatha by using a diverse range of management tools and techniques. Prescribed fire, clear-cutting, tree planting, seeding and natural regeneration are all methods utilized at times by the Forest Service. The Hiawatha National Forest has over 400 lakes and many rivers and streams. Hundreds of miles of trails are open to the public for hiking, mountain biking, cross country skiing and horseback riding.

Longfellow's "Song of Hiawatha" provided the name for the Hiawatha National Forest, which touches the shores of Lake Superior, Lake Michigan, and Lake Huron. Opportunities may be found for camping, swimming, fishing, picnicking, auto tours and interpretive trails. There are five National Forest Campgrounds in Munising Township; Island Lake Campground with 45 sites, Widewaters Campground with 34 sites, Colwell Lake Campground with 34 sites, Indian River Campground with 11 sites and Little Bass Lake Campground with 12 sites.

Lake Superior State Forest

The Lake Superior State Forest (LSSF) covers more than a million acres of land in the eastern Upper Peninsula and is operated by the Michigan Department of Natural Resources. The LSSF is divided into three forest units; Shingleton, Newberry and Naub-Sault. 72% of LSSF is considered forest, while 13% is wetlands and 8% is brush. The LSSF is also considered a managed forest. The Shingleton Management Unit administers roughly 380,000 acres of state-owned land in the Central Upper Peninsula, including the LSSF. The Shingleton Field Office, locally known as the Cusino Wildlife Research Station, serves as the Unit's primary operations center, and there are two satellite offices in Schoolcraft County. One is located in Manistique at the Wyman Nursery; and the other is in Seney, which is staffed only for fire control and recreation.

8.10 Climate

The earliest weather reporting station in the area was established in Wetmore in 1896. An additional weather station has been located in the downtown Munising area dating back to 1911.

Lake Superior is a major factor in the local climate. Prevailing winds and cool air masses from the north, combined with the warmth of Lake Superior create lake effect snow, resulting in much higher snow totals for the northern half of the Upper Peninsula. The lake effect increases cloudiness and snowfall during the fall and winter and also modifies temperatures, keeping them cooler during the late spring and early summer, and warmer during the late fall and early winter. July is, on average, the sunniest month while November and December average the least amount of potential sunshine.

Average minimum temperature for the area is 7.5 degrees in January and the average minimum temperature in July is 53.6 degrees, while the average max temperature in January is 23.9 degrees and the average maximum temperature in July is 76.1 degrees. Precipitation averages approximately 36 inches per year. The snowfall average is 161 inches. The local climate is ideal for a variety of recreational activities throughout the year.

8.11 Issues and Opportunities

- The natural features of the Township are important to the local quality of life. The natural resources and natural features were responsible for the original settlement and land uses within the Township.
- Soil conditions in the Township are generally well drained. There are areas subject to seasonally high water tables and high rates of permeability that place constraints on certain types of development.
- The Township's numerous lakes provide areas for prime residential development as well as various recreational opportunities.
- The Township has two gravel pits in operation.
- The Township and surrounding areas are rich in uniquely scenic areas and vistas that attract an increasing number of tourists each year and that also offer unique opportunities for recreational and/or residential developments.

- A large percentage of the Township's land area is part of the Pictured Rocks National Lakeshore, the Hiawatha National Forest or the Lake Superior State Forest. Land use and development is restricted in many areas.
- The local climate is ideal for a variety of recreational activities throughout the year.

CHAPTER 9.0 LAND USE

9.1 Introduction

Patterns of land use evolved from economic necessity. The economy was firmly linked to trade routes that often followed natural features such as lakes and streams. The general historic land use patterns which are common to the Upper Peninsula are reflected in the land use patterns that have developed in Alger County. Settlements were established at, or close by, active points of commercial activity.

The general historic land uses common to the Upper Peninsula are reflected in the land use patterns that have developed in Munising Township. Logging and timber production were common throughout Munising Township, and still are today. An abundance of inexpensive land became available following the removal of valuable timber resources during the lumbering boom. Families interested in farming were attracted by the affordable land. Where good soil conditions existed, agriculture was successful. Agriculture is now present on a much more limited basis.

Large scale lumbering began in Alger County in 1876 and overlapped with the last days of the Schoolcraft Furnace. Lumbering continued beyond the construction of the Detroit, Mackinac and Marquette Railroad. The first huge pines were felled along Lake Superior, which provided the only means possible for shipping the logs. Timber was also the main reason for the existence of several communities in Munising Township, including Wetmore, Shingleton, Van Meer and Melstrand. Lumbering remains an important factor in land use development in the Township today.

Railroads were constructed to transport iron ore to lake ports such as Escanaba and Marquette for delivery to steel mills at the lower end of the Great Lakes. Completion of rail lines provided transportation for products other than iron ore, such as lumber and the supplies necessary to sustain a community and its people. The importance of railroads is evident in the settlement patterns that followed their construction.

The establishment of the Pictured Rocks National Lakeshore in 1966 has also had an enormous impact on land use in the Township. Land development is limited within the National Lakeshore's inland buffer zone and regulated by the Township's Zoning Ordinance. Land development is also limited by the Hiawatha National Forest.

Natural features and cultural influences were also important determinants of how land was used. Rugged terrain and swampland, for instance, were not inviting for the establishment of settlements. Cultural influences are reflected in the types of buildings constructed, local commercial practices and community traditions and activities. It is

important for communities to understand how past land uses and patterns have an effect on land use today.

9.2 Factors Affecting Land Use

Land use is never a static process; change is always occurring. Choices affecting land use can come from a variety of sources. Changes in land use have been the result of various decisions made by individuals, families, businesses, or governmental/public agencies. It is important to note, however, that land use changes cannot be attributed to a single set of decisions made by one group or individual. Rather it is a combination of decisions made by a number of individuals, organizations or public agencies.

Location tends to be the most important factor for home buyers and commercial interests. The availability of public and private services, accessibility, existing conditions of the area and price are other important considerations. Speculators may purchase, hold or sell property based on an anticipated future profit. Land developers also attempt to anticipate market conditions, i.e., supply and demand for housing, goods and services or industrial needs. They strive to accurately assess the type, scope and optimum time of development that will produce a profitable outcome.

Owners of business and industrial interests decide to start, expand or close their operations based on economic probability. Many factors may be considered in determining economic feasibility including: supply and demand for the goods or services produced, cost and quality of transportation and site availability. Local decisions have a bearing on these factors.

Generally, the immediate self-interest of the individual or organization making a land use decision supersedes what impact the use may have on the surrounding lands. Decisions determined in this fashion can potentially result in incongruous or incompatible development since the community's overall pattern of development is not necessarily among the factors considered. Laws and regulations have been enacted giving local units of government the means to deal with land use issues. These legal tools allow federal, state and local governments to address the overall compatibility and appropriateness of development and land use.

Federal legislative actions have created a number of loans and grant programs for community facilities, water and wastewater systems, housing, economic development and planning. Drinking water standards, air quality and many other environmental factors are addressed in federal regulations. These laws, regulations and programs do have direct and indirect effects on land use and development. For example, an indirect effect may result if a community that lacks sufficient sewage disposal capacity to serve

industrial uses is able to obtain federal funding to assist with expansion of its sewer treatment facility, which in turn, may lead to industrial development.

The traditional role of the state has been limited to providing the enabling legislation for local units of government to regulate growth and development through planning and zoning. The State of Michigan does, however, regulate land use and development in regions of environmental concern including wetlands, floodplains and coastal areas. These regulations have a direct effect on local land use. The state also enforces standards for municipal water systems and wastewater systems that are at least as strict as federal standards. A community's ability to provide water and wastewater treatment systems is directly affected by these regulatory standards.

Local governments can exert the most effective influence on land use changes through zoning ordinances, subdivision regulations, building codes and public investment in roads, water and sewer systems, parks, etc. Local planning efforts that seek to define the most desirable and appropriate uses for the various parts of a community and anticipate and prepare for growth can serve to guide future land use decision-making. The Township utilizes a zoning ordinance to regulate land use and will use the Master Plan to guide future zoning changes and future land use.

Other factors affecting land use include the existing transportation system, taxation, land values, natural features, changing technology and market conditions. Changes in lifestyles, family size, shopping preferences and customer attitudes also affect land use decisions. Mobility is greater than at any previous time, families are smaller and life expectancies have increased. These changes are reflected in employment patterns and housing and shopping preferences. From a land use standpoint, some pertinent issues are the preferences for larger homes situated on larger parcels, the apparent willingness to endure longer commuting distances to work and the growing market for housing specifically designed for elderly residents - particularly those residing for only part of the year.

The transportation system that serves a community determines how quickly and easily raw materials and finished goods can be received and shipped. It also is directly related to product cost, a crucial factor for business. The expanding network of roadways in the U.S., together with the proliferation of private automobiles, has enabled residents of rural areas to commute to larger communities for employment and shopping and has increased the accessibility of many areas to tourists. This increased mobility has, in many cases, facilitated development of strip commercial areas, large shopping malls, and suburban residential development. Referred to as "urban sprawl," such development frequently converts open space and agricultural land to more intensive uses. Communities are now experiencing the closure of many strip commercial areas

and the vacating of shopping malls. Adaptive reuse strategies may be used to convert obsolete buildings for new, more productive purposes.

Taxation and land values play a part in many land use decisions. Families may move from urban areas because they feel they are willing to trade off lower taxes and/or user fees for fewer municipal services and increased distance from employment, shopping and schools. Land values in rural areas may also be lower, thus more attractive to residents. Commercial and industrial enterprises are generally less willing to forego municipal services such as water and sewer. They are also more likely to locate in areas with a concentrated population base rather than in very rural areas. Tax rates and land values are important considerations for businesses as well.

Changing technology, including computer networking, cellular telephones, fax machines, voice mail, teleconferencing, video conferencing and electronic mail provide businesses with location options that were previously not practical. Often, the quality of life associated with these rural locations is an additional attraction.

9.3 Land Use Inventory

The categories of current land use in this section are taken from Map 9-1, Land Use. This map is based on the interpretation of the current Zoning Map, using the thirteen zoning districts represented in the Township (the Seasonal Commercial District-IBZ is not represented on the map). Table 9-1 below breaks down the acreage represented by each land use district in the Township.

Land Usage	Acreage
Commercial	815.96
Industrial	1,479.56
Lakeshore/Residential 1	3,407.73
Lakeshore/Residential 2	340.14
Residential 1	268.34
Residential 2	720.24
Rural Residential	11,310.12
Town Development	323.90
Resource Production	93,534.19
Resource Management (IBZ)	1,376.33
Rural Residential (IBZ)	634.78
Seasonal Dwelling/Timber Production (IBZ)	17,129.44

Source: Munising Township Land Use Map

Residential 1: The R-1 District is intended for the establishment and preservation of quiet neighborhoods for single-family dwellings; free from other uses except those compatible with and convenient to the residents in this district. This district accounts for approximately 268 acres, or 0.2 percent of the Township's land area.

Residential 2: The R-2 District is intended for the establishment and preservation of quiet neighborhoods for single- and two-family dwellings, free from other uses except those that are both compatible with and convenient to the residents in this district. This district accounts for approximately 720 acres, or 0.5 percent of the Township's land area.

Rural Residential: The RR District is established to provide for a transition zone between more densely settled residential areas and the more sparsely developed rural, agricultural and forested areas of the Township. Such areas provide for a mix of moderately intensive compatible uses. The RR District is designed to provide rural residential opportunities for those who are willing to assume the costs of providing their own services. This district accounts for approximately 11,310 acres, or 8.6 percent of the Township's land area.

Town Development: The TD District is intended to preserve a district for residential, retail, and service establishments, and certain governmental uses that are compatible with a small town setting, serving residents and tourists. This district is designed for small unincorporated town areas where a mix of residential and retail is in accord with established patterns of land use and the needs of nearby residents. This district accounts for approximately 323 acres, or 0.2 percent of the Township's land area.

Lakeshore and River 1: The LS/R 1 District is intended for the establishment and preservation of existing commercial resort developments and single-family and two family residential use. This district accounts for approximately 3,407 acres, or 2.6 percent of the Township's land area.

Lakeshore and River 2: The LS/R 2 District is intended for the preservation of existing quiet neighborhoods free from other uses, except those which are compatible with and convenient to the residents in this district. This district accounts for approximately 340 acres, or 0.3 percent of the Township's land area.

Resource Production: The RP District is established to maintain low-density rural areas which, because of their rural character and locations, accessibility, natural characteristics, and the potentially high cost of providing public services, are suitable for a wide range of forestry, agriculture, natural resource, and recreational uses. This

district accounts for approximately 95,534 acres, or 72.7 percent of the Township's land area.

Commercial: The C District is intended to establish and preserve area for commercial uses, and for light industrial uses which are more compatible with commercial activity than other industrial uses. This district accounts for approximately 816 acres, or 0.6 percent of the Township's land area.

Industrial: The I District is designed and intended for manufacturing, assembling, fabricating, and processing businesses, storage, and other commercial activities which may require larger sites and isolation from many kinds of other land uses and to make provisions for commercial uses necessary to service the immediate needs of an industrial area. This district accounts for approximately 1,479 acres, or 1.1 percent of the Township's land area.

Inland Buffer Zone - Resource Management District: The IBZ - RM District is intended to establish and maintain for low intensity use those areas of the Pictured Rocks National Lakeshore Inland Buffer Zone, as established by PL 89-668, which, because of their location, accessibility, soils, drainage, and other characteristics, are suitable for the development of single-family seasonal and year-round residences, for timber management and agricultural purposes, and for outdoor recreational uses. This district accounts for approximately 1,376 acres, or 1.0 percent of the Township's land area.

Inland Buffer Zone - Rural Residential District: The IBZ-RR District is intended to establish and maintain a low-intensity use, rural residential environment for those areas of the Pictured Rocks National Lakeshore Inland Buffer Zone, as established by PL 89-668, which, because of their location, accessibility, soils, drainage, and other characteristics, are suitable for the development of single-family, year-round dwellings. This district accounts for approximately 635 acres, or 0.5 percent of the Township's land area.

Inland Buffer Zone - Seasonal Dwelling/Timber Production District: The IBZ-SD/TP District is established to maintain low intensity and seasonal use those areas of the Pictured Rocks National Lakeshore Inland Buffer Zone, as established by PL 89-668, which, because of their location, accessibility, soils, drainage, and other characteristics are suited for recreational uses. This district accounts for approximately 17,129 acres, or 13.0 percent of the Township's land area.

Inland Buffer Zone - Seasonal Commercial District: The IBZ-SC District is established to maintain areas of the Pictured Rocks National Lakeshore Inland Buffer Zone, as

established by PL 89-668, to service the needs of Lakeshore visitors and other tourists in rural areas. Uses should be conceived and planned so that they will not require year-round road access and other services commonly found in more accessible areas. Commercial uses should be limited to those needed to provide necessary services to the Lakeshore visitor and so located so as not to detract from the visitor's enjoyment of the Lakeshore. This district is reserved for future use.

Land cover refers to data concerning the state of the land in terms of its cover and use. Land cover use may include, but is not limited to, data about agricultural, urban, industrial, set aside, and pasture acres; building sites, forested areas, septic systems, wells, or feedlots. Land cover for Munising Township is depicted on Map 9-2. The land cover data demonstrates that the Township is mainly covered by deciduous, evergreen and mixed forests; much of the Township is undeveloped. There are patches of land that are developed, mainly at low to medium intensities, near the communities of Shingleton and Wetmore.

9.5 Residential Land Use

Residential land use in Alger County occurs primarily near the Munising-Wetmore corridor, with other residential concentrations located in smaller communities throughout the County, such as Shingleton, Chatham and Trenary.

A majority of the Township's residential development is concentrated on or around transportation corridors. Residential land use in Munising Township occurs primarily along the length of M-28 or near highway offshoots. Residences are concentrated in the communities of Wetmore and Shingleton, as well as between the two communities along M-28 and in Van Meer and Melstrand. Most of the homes are single-family residences. The limited number of apartments that exist in the Township are concentrated in the Wetmore area. There may be a need in the future for residential units developed specifically for the aging population.

A great deal of residential development has occurred along available waterfront property in the Township. Waterfront development has become increasingly desirable. Zoning regulations such as setbacks and minimum lot size should be reviewed periodically to maintain balanced and appropriate levels of waterfront development.

Many subdivisions and housing units have been developed in recent decades. There are several named subdivisions in Wetmore, identified as: Irish Hills, Maple Valley Estates, P & M Estates, Woodridge Estates as well as an additional subdivision that is unnamed at this time. Development overflow from the City of Munising has been pushed east into the Township, due to the City's development limitations bordering Lake Superior.

Another factor in the development of residential housing has been the desire to develop larger homes on larger lots, which are often available in the Township. Taxes are generally lower in the outlying Townships as well, due to the lesser amount of services provided.

9.6 Inland Buffer Zone

Approximately 19,140 acres or 14.6 percent of the total Township acreage are situated within the inland buffer zone of the Pictured Rocks National Lakeshore. This land is not owned by the National Park Service, but by private landowners. Use of these lands and waters is, however, governed by provisions of the Township's Zoning Ordinance which are specific to promoting protection of the natural resources of the Pictured Rocks National Lakeshore. Four zoning districts with distinct regulations deal with the Inland Buffer Zone, three of the districts are used at this time. Land use and development is somewhat limited in the inland buffer zone in order to protect the National Lakeshore.

9.7 Commercial Land Use

As with most of the residential development in the Township, the majority of commercial development is concentrated near transportation corridors. Land is designated for commercial use north of M-28 in the Alger Heights/Wetmore area. Access and high traffic volumes along the M-28 corridor make this location ideal for commercial enterprises.

The commercial uses in Munising Township are quite diverse. Commercial uses include: several hotels, a bank, a retail store, the post office, a flooring company, a gas company, a campground, auto repair, mini-golf, a gas station, storage units, a realtor and a lumber company. Land use impacts from smaller commercial establishments are usually minimal. These businesses often require smaller lots to accommodate space for parking.

There is not significant room for infill in the commercial district at this time. The commercial district may be in need of expansion to continue to encourage and accommodate future commercial development. Expansion of the commercial district could shift down Connors Road or along the newly paved H-58. Commercial development along H-58 would be somewhat limited due to the land being located in the inland buffer zone and the Hiawatha National Forest.

9.8 Industrial Land Use

The Industrial District is designed and intended for manufacturing, assembling, fabricating, and processing businesses, storage, and other commercial activities which may require larger sites and isolation from many kinds of other land uses, and to make provisions for commercial uses necessary to service the immediate needs of an

industrial area. Industrial operations include paper mills, lumberyards, gravel/sand extraction areas and construction companies. Lands designated for industrial uses usually require extra land use planning considerations, such as transportation needs, emergency services and site-specific development standards.

Land is designated for industrial uses along the south side of the M-28 corridor in the Alger Heights/Wetmore area and in Shingleton. The industrial district west of Wetmore encompasses the City of Munising Industrial Park. There are twelve lots at the Industrial Park, eight of which are currently being leased. Seven of the sights are active and one is being utilized for storage.

The large industrial district east of Wetmore, also south of M-28, includes the Wood Island Landfill, Hiawatha Log Homes and the Gerou Cement Plant. A large industrial area has also been designated north of M-28 between Indian Town Road and Forest Center Road. Industrial enterprises in this area include Timber Products, a wood product manufacturer. Forest Center Road is used as the entrance to Timber Products. The final major industrial area is located south of M-28, on either side of the M-94/M-28 intersection in Shingleton. Industrial uses in the area include Bell Timber, a saw mill and Iverson's, a snowshoe manufacturer.

9.9 Forest and Agricultural Land Use

The vast majority of forested land in Munising Township is designated as Resource Production. Resource production land is designated to maintain low density rural areas often suitable for forestry, agricultural, natural resource and recreational uses. Access by established roads is often limited. Primary land owners of the Resource Production district include the State of Michigan (Michigan Department of Natural Resources) and the U.S. Forest Service. A large amount of land formerly owned by Cleveland Cliffs (now Cliffs Natural Resources) is held in a trust and is designated as commercial forest reserve. Much of the forested land in the Township is part of the Lake Superior State Forest, Hiawatha National Forest or the Pictured Rocks National Lakeshore.

Portions of the Resource Production district are designated as Commercial Forest Reserve, or commercial forest land. The commercial forest program provides a property tax reduction to private landowners as an incentive to retain and manage forestland for long-term timber production. Landowners participating in this program pay a reduced property tax. Additionally, the State of Michigan pays \$1.20 per acre annually to each county where land is listed in the program.

Lands listed in this program are open to the public for hunting, trapping and fishing only. Commercial forest lands are private lands under the control of private owners. Landowners include private individuals, clubs, forest industry, and other businesses.

There are approximately 2.2 million acres listed in this program under the ownership of nearly 1,700 private landowners in the State of Michigan. Landowners in this program agree to develop, maintain and manage the land as commercial forest through planting, natural reproduction, or other silvicultural practices. Landowners are required to have an approved forest management plan. Not all public lands are available for commercial timber production; harvest in some areas is restricted or prohibited in order to protect wildlife, recreational, wilderness or research values.

Commercial forest land is dispersed throughout the Township. Substantial tracts of commercial forest reserve lands include: the land surrounding the Wagner Falls Scenic site, south of the City of Munising, west of Wetmore; land east of Wetmore and north of M-28, including lands surrounding Indian Town, continuing eastward throughout the north/central portion of the Township; pockets of land near Melstrand; and lands within the Pictured Rocks National Lakeshore.

There is extremely limited agricultural development in the Township at this time.

9.10 Public and Quasi-Public Land Use

Public land uses include parks, public buildings, airports, schools and publicly owned lands. Many of these uses are discussed in detail in other parts of this plan; the land use consideration of these uses will be discussed here.

Public buildings in the Township include the Munising Township Municipal Complex. This building, located at E9630 Prospect Street in Wetmore does not occupy a large tract of land. The primary impact of this building on land use is related to traffic and parking.

An area of land adjacent to the Municipal Complex is reserved for the Wetmore Community Park. The area currently has a two tennis courts. The Wetmore area has the greatest concentration of population; therefore the Robert McQuisten Munising Township Recreational Area is being developed into an organized recreational area in Wetmore. Accessible development of the park is the number one priority for the Munising Township Board as well as residents. The park is 28 acres; currently approximately 10 acres are developed. The Shingleton Community Park is located in Shingleton on Park Street and is bounded by state land and H-15 and is approximately 10 acres in size. Township goals include expanding the recreational opportunities in the Township. A complete discussion of recreational areas is discussed in Chapter 6.

Examples of quasi-public land uses include churches, golf courses and similar facilities that are owned by private enterprise, but are open to the public. These uses generate increased traffic on a seasonal, occasional or intermittent basis, and by providing

facilities and services, which meet the needs of local residents, contribute to the quality of life of communities and neighborhoods. The presence of quasi-public facilities such as golf courses can also affect property values.

Currently, the Township has approximately five churches located throughout the area, and one golf course, the Pictured Rocks Golf Club, located on H-58 in the Township. The course is open to the public and is a non-profit corporation.

9.11 Land Ownership

Land ownership in Alger County and Munising Township has a significant effect on land use. Large tracts of land in public ownership mean that less land is available for private development. However, public lands often provide many of the amenities that attract residents to rural areas in the first place - wildlife habitats, green space, scenic beauty, etc. While public land is not available for private development, a great deal of these types of land is often not suitable for development. Many areas contain wetlands, swamps, unsuitable soils, and other environmental limitations.

The state and federal forestland, as well as the National Lakeshore are managed for active recreational purposes such as hiking, canoeing, fishing, hunting, and the cutting of second-growth wood for paper pulp, see Map 9-3. These large tracts of land are open for public use; visitors are normally attracted to the area. This in turn provides potential customers for retail and service businesses and impacts transportation patterns. Therefore, even though the use of these lands does not include intensive development, development in other areas may be encouraged as a result of the presence of public lands.

As discussed in Section 7.9, large tracts of land are designated as Commercial Forest Reserve, or commercial forest land. These lands are privately held, but open to the public for recreational use. Land designated under this program is limited for use. Listed land cannot be used for agriculture, mineral extraction, grazing, industry, developed recreation, residences, resorts, commercial purposes, or developmental purposes.

9.12 Contaminated Sites

The Michigan Department of Environmental Quality maintains a listing of contaminated sites in accordance with Part 201 of the Natural Resources and Environmental Protection Act, Public Act 451 of 1994, as amended. These environmental contamination sites are locations at which contamination of soil, groundwater, surface water, air or other environmental resources is confirmed, or where there is the

potential for contamination of those resources due to site conditions, site use or management practices.

Table 9-2 Sites of Environmental Contamination, Munising Township, 2009			
Site Name	Site Address	Source of Pollution	Status
H-13 Groundwater Contamination	H-13, Wetmore	Petroleum Products	Interim response conducted-no further activities anticipated
Shingleton Groundwater Contamination	Mill Street (PO Box 124)	Unknown	Interim response conducted-no further activities anticipated

Source: Michigan Department of Environmental Quality, 2009.

From a land use standpoint, the presence of environmental contamination represents a constraint on future development, as well as a threat to human health and safety. In addition to affecting a specific site, some contaminants can enter groundwater and cause more widespread problems, such as water well contamination. It is desirable to identify and remediate contaminated sites in a timely manner, in order that potential hazards and land use constraints be removed.

In terms of future land use decisions, it is important that decision makers are aware of the potential for certain types of land use to cause environmental contamination. Most of the sites of environmental contamination identified in Alger County are the result of past land use practices and this illustrates that even when legal and accepted land uses are undertaken, the possibility of future impacts exists. Leaking underground fuel storage tanks have become a concern throughout the country in recent years. Many fuel tanks, which were in compliance with all installation guidelines at the time they were installed, have deteriorated and allowed fuel to contaminate the surrounding soil. New guidelines for installing underground fuel tanks have been implemented, and efforts are underway to identify and clean up leaking tanks.

Table 9-3 Leaking Underground Storage Tanks, Munising Township, 2009		
Site Name	Site Address	Owner
Camp Cusino	CR-653 (Percy Road), Shingleton	MDOC-Pugsley Correctional Facility
Melstrand General Store	N8501 County Road H-58, Shingleton	Kingston Stores LLC

***Owner name may not reflect the current owner and is not necessarily the LUST liable party.**

Source: Michigan Department of Environmental Quality, 2009.

9.13 Issues and Opportunities

- Changing lifestyles and family structure, residential development, commercial businesses and Township needs will all affect future land use patterns. The desire for increased development of residential and commercial properties will further the growth of the Township.
- Zoning and supplementary ordinances can assist local units of government in guiding current and future development.
- The availability of public and private services, accessibility, existing conditions of the area and price are other important considerations for residential development.
- Munising Township appears to be absorbing some of the residential growth from the City of Munising. This trend could continue in the future and adequate housing opportunities must be made available, especially for the elderly and for residents who may reside in the Township for part of the year.
- Commercial and industrial land uses in the Township are concentrated along the M-28 corridor. There is little room for infill in the commercial district and expansion may be necessary. There is room for expansion in the Industrial Park and at other industrial locations.
- Much of Munising Township's forested land is held in the Pictured Rocks National Lakeshore, Hiawatha National Forest and the Lake Superior State Forest, where development is limited.
- Land ownership in Alger County and Munising Township has a significant effect on land use. Large tracts of land in public ownership mean that less land is available for private development.
- Munising Township has contaminated sites listed by the MDEQ-interim responses have been completed.

CHAPTER 10.0 GOALS AND RECOMMENDATIONS

10.1 Introduction

Throughout the preceding chapters of this Master Plan, detailed information has been presented defining the historical trends and current situation in Munising Township. This background information has helped the Planning Commission gain an understanding of the forces which have shaped the growth and development of the Township to this point.

In order for a community to have a sound plan for growth and development, it is essential that goals be set. These goals are broad statements which reflect the desired future conditions and are based on the background information, assumptions, alternatives and policy variables presented in earlier chapters. More specific recommendations are then developed, defining actions that can be taken to implement the goals.

The final stage of the planning process, implementation, begins once the goals and objectives have been defined. The first step in implementation is the adoption of this plan by the Planning Commission and the Township Board following a public hearing and consideration of any public comments received.

Plan implementation continues through adherence to the goals and recommendations set forth in this plan. It should be emphasized, however, that these goals and recommendations are only a guide and provide a long-term vision; ideas and projects mentioned are adjustable per a community's needs. While the Planning Commission has developed these goals and recommendations based on the best information available, and the needs of the community at a point in time, changing needs and desires within the community, or changes in the local population or economy may mean that these goals and recommendations will need to be re-evaluated. This plan must remain flexible enough to respond to changing needs and conditions, while still providing a strong guiding mechanism for future development. The Planning Commission and Township Board, together with other groups, organizations and individuals, can use this plan as a dynamic decision making tool and should assure that the plan is referred to frequently and updated periodically.

To assist in understanding the nature of the goals and recommendations presented on the following pages, the following definitions are presented:

Goal: A broad statement of a desired future condition, the generalized end toward which all efforts are directed. Goals are often stated in terms of fulfilling broad public needs, or alleviating major problems. Goals are generally difficult to measure and are idealistic.

Recommendation: A course of action that is advisable. Recommendations are opinions about what could or should be done about a situation or a problem to achieve desired goals. Many recommendations stated in the plan are long-term and may need to be reevaluated periodically to meet new goals developed by the Township.

10.2 Population

Discussion:

Population change is a primary component in tracking a community's past growth as well as forecasting future population trends. Munising Township, like other townships in Alger County has experienced population growth in recent decades, while population numbers in the cities has declined. Over the past forty years, Munising Township has experienced a massive population surge of 191.2 percent; there has been considerable growth within the last twenty years. The Township has experienced an increase in the median age, but remains younger than the surrounding municipalities. The Township exhibits a high proportion of residents ages 25-44; many communities around the region are losing residents from this age group due to lack of employment opportunities. Munising Township has shown a decrease in household size, comparable to most communities across the country.

Goal: Retain current population and manage future growth in the Township.

Recommendation:

- Incorporate new Census information into the Master Plan when data becomes available.
- Continuously monitor population trends as part of the Master Planning process.
- Encourage new commercial and residential development in appropriate districts.
- Designate and reserve potential areas for residential and commercial development on the Future Land Use map, particularly for multi-family housing.
- Plan for necessary roads and other infrastructure needed to support new residential growth.

- Periodically review, revise and develop regulations that are practical for developers, but also provide quality development.

10.3 Economic Base

Discussion:

Central to a community's stability and growth is its economic base. Population changes in an area are generally closely related to changes in the amount of economic activity in the area. The economy is and has historically been linked to the area's natural resources and geography. Whether used as raw materials, as in the case of the wood products industry, or for recreational activities, natural resources such as timber, lakes, shoreline and geographic features are vital to businesses in the area. Alger Maximum Correctional Facility provides employment for many in the Township. Manufacturing industries like the Neenah Paper mill and the Timber Products Michigan sawmill and veneer mill provide a strong base of employment for the area. The Township also benefits from tourist attractions such as Pictured Rocks National Lakeshore and the Hiawatha National Forest. While there are many jobs in the area in the wood products and security sectors, jobs in other sectors are limited.

Approximately 94 percent of Township residents work in Alger County and about 77 percent reported travel times to work under 20 minutes. There have been significant increases in the number of women in the workforce. Median incomes reported for the Township are significantly higher than Alger County and the State. Poverty rates for the Township are significantly lower than those reported for Alger County and for the State.

Goal: Maintain a diverse, healthy economy in Munising Township.

Goal: Increase tourist visits to Munising Township.

Recommendations:

- Provide reasonable opportunities for the establishment of commercial and industrial uses which meet the needs of Township residents.
- Continue to enhance the physical appearance of the community.

- Explore reuse options for vacant properties throughout the Township.
- Support the renovation and reuse of vacant or underused buildings.
- Continue to develop compatible businesses along the M-28 corridor.
- Encourage mixed-use development where feasible in the Township.
- Encourage commercial and industrial development where infrastructure already exists or where infrastructure could be easily extended.
- Collaborate with the Greater Munising Bay Partnership for Development to develop a plan to attract compatible businesses to the area.
- Continue to promote the natural features of Munising Township, including Pictured Rocks National Lakeshore and Hiawatha National Forest.
- Encourage infill development in the Industrial Park.

10.4 Housing

Discussion:

Housing is one of the key factors to consider when planning for a community's future. The location and type of housing available establishes where public infrastructure must be provided. Housing characteristics can also reveal information about a community's history and its economic and social situation. Residents have been attracted to the area by the natural surroundings, availability of large lots and a sense of community. The overwhelming majority of housing units in the Township are single-family homes, with very few multi-family units available. The percentage of occupied units in Munising Township is much higher (71.8 percent), than the County (63.5 percent) but much lower than the state (89.4 percent). Many of the vacant units are used for seasonal, recreational or occasional use.

Nearly 62 percent of the Township's housing stock was constructed after 1960; the median value of housing in the Township has nearly doubled since 1990. Housing is affordable in the Township; the majority of Township residents reported paying less than 30 percent of their incomes on a mortgage or rent, falling within guidelines recommended by HUD.

Residential building has occurred in recent years along the lakes and many of the lakes are platted. There has also been a renewed interest in refurbishing older homes. The Township has many natural barriers to development, including Pictured Rocks National Lakeshore, Hiawatha National Forest and additional state/federal lands.

Goal: Develop a housing stock offering a range of cost, type and location to meet the needs, preferences and financial capabilities of the local population.

Goal: Promote safe and sanitary housing in the Township, as well as a pleasant living environment.

Recommendations:

- Encourage the location of multi-family residential development in the Township.
- Designate areas on the Future Land Use map for multi-family residential development.
- Continue to upgrade Township owned recreational areas to provide a quality living environment.
- Preserve and enhance existing housing stock to offer residents a quality neighborhood environment.
- Encourage neighborhood beautification programs.
- Encourage participation in the spring-clean up for Township residents.
- Encourage property owners to clean up dilapidated properties.
- Target grant funds (USDA/MSHDA) to assist eligible homeowners.

10.5 Community Facilities and Services

Discussion:

Services and facilities provided by local government are vital elements of a community's progress and well-being. The Township Hall is currently in good condition; the Munising Township Office Complex/Township Hall is fully accessible and provides space for meetings and functions as a polling place and community center for Township residents. New fire equipment is always needed. Township residents rely on private water wells and septic systems. There are no plans for Munising Township to provide water/wastewater facilities at this time. The Township owns three recreational facilities; two in Wetmore and one in Shingleton.

Munising Township residents have a variety of educational opportunities to choose from and also use the Munising School/Public Library. School enrollments have been

declining in recent years; consolidation of districts may be necessary in the future. Township residents have the opportunity to utilize modern health care facilities, with the opening of the new Munising Memorial Hospital. Cable, cellular phone, natural gas and recycling services are limited throughout the Township.

Goal: Provide, maintain and continuously improve the efficiency and quality of community facilities and services in a cost-effective manner.

Recommendations:

- Continue to utilize the Munising Township Office Complex/Township Hall for meetings and as a polling place and community center for Township residents, upgrading when necessary.
- Continue to participate in mutual aid agreements with other communities.
- Pursue continued decreased Fire Insurance Rating (ISO).
- Continue regular maintenance of all Township facilities.
- Explore additional recycling opportunities.
- Pursue grant funding for fire department equipment, gear and vehicles when possible.
- Continue to develop long-range street improvement plans.
- Support meeting ADA standards for all Township buildings and facilities when feasible.
- Encourage the construction of additional cellular towers in well-suited Township locations.
- Continue to support the Munising School Public Library.
- Encourage the expansion of natural gas service in the Township.
- Encourage alternative energy resources.
- Explore potential uses for methane gas produced by the Wood Island Landfill.
- Continue to support expanded internet access.

10.6 Transportation

Discussion:

Transportation allows for the movement of people and goods within and outside an area. It is vital to the economy and development of an area and central to land use

patterns. The Alger County Road Commission has seen a decrease in the amount of funding they receive in recent years. Munising Township voters approved 2 mills for five years for upgrading and maintaining roads within the Township. The levy is expected to generate approximately \$120,000 in the first year. General fund dollars may be spent to supplement the millage if necessary.

Limited public transportation is available locally on a demand-response basis. Daily bus transportation is available by Al-Tran. The aging of the local population could result in future needs for additional transportation services for the elderly and/or disabled. The Township currently maintains the Robert McQuisten boardwalk in the Cox Ponds area. Residents have expressed an interest in developing more of these types of trails in the future.

Goal: Provide a safe, well maintained and efficient multi-modal transportation network.

Recommendations:

- Continue to develop long-range street improvement plans.
- Pursue non-motorized transportation opportunities.
- Pursue compatible uses for non-motorized facilities along existing roadways.
- When major road construction occurs, develop non-motorized paths or lanes where feasible.
- Pursue grant funding for non-motorized facilities when feasible.
- Continue to review and enforce private road regulations in the Township.
- Continue to utilize PASER rating to determine quality of local roads.
- Continue to make the best use of millage funds by repairing and upgrading roads according to the priority list.
- Work with MDOT to develop access management standards for the M-28 corridor.
- Support Munising Public Schools Safe Routes to School initiative.
- Support area ATV clubs with trail maintenance efforts.
- Support the development of official ATV and snowmobile trails, including adequate signage.
- Pursue upgrades to Hanley Field.

10.7 Recreation

Discussion:

Natural features throughout the Township provide a variety of year-round active and passive recreational opportunities for residents and visitors, including hunting, fishing and boating. Public and private facilities provide additional recreational opportunities for all ages. Munising Township is bordered by the Pictured Rocks National Lakeshore to the north and bordered by Hiawatha National Forest to the south. In addition to the shoreline, the Township benefits from many waterfalls, forests and an abundance of wild game, birds and fish that lend themselves to recreational opportunities. The local tourism industry that was previously limited to a short summer season has evolved into a four season business enterprise.

Munising Township, Au Train Township, Grand Island Township, the City of Munising and Alger Parks and Recreation Department (APRD) work jointly to provide a recreation system for the area. The Township's Recreation Committee drafted the most recent version of the Recreation Plan. The Township owns three recreational facilities, one in Shingleton and two in Wetmore. The age and condition of some Township-owned recreational facilities will involve capital investment in the near future. The Township has planned improvements to each Township-owned recreational facility in the future.

Goal: Maintain and improve recreational opportunities for residents and visitors of all ages.

Recommendations:

- Continue to work in cooperation with APRD, the City of Munising, Au Train Township and Grand Island Township to provide recreational opportunities to area residents and visitors.
- Continue to survey residents and encourage participation for recreational opportunities.
- Research local historic sites and discuss potential for signage or develop into recognized historical sites.
- Improve Township owned recreation sites according to the recreational development schedule.

- Consider universal design properties in addition to designs that meet all ADA requirements when upgrading recreational facilities.
- Continue to support trail and other non-motorized development opportunities.
- Support the development of official ATV and snowmobile trails, including adequate signage.
- Continue to maintain the Robert McQuisten boardwalk in the Cox Ponds area.
- Support area ATV clubs with trail maintenance efforts.

10.8 Natural Features

Discussion:

Natural features are one of the primary determinants of land use. The natural features of the Township are important to the local quality of life. The natural resources and natural features were responsible for the original settlement and land uses within the Township. The Township's numerous lakes provide areas for prime residential development as well as various recreational opportunities. Natural features throughout the Township provide a variety of year-round active and passive recreational opportunities for residents and visitors, including hunting, fishing, snowmobiling and boating.

Goal: Enhance the natural environment while providing for compatible development.

Goal: Maintain the Township's scenic character by minimizing the impact of development on natural and wooded features such as but not limited to, wetlands, steep slopes, shoreline and wildlife habitat.

Recommendations:

- Preserve environmentally sensitive/important lands through regulatory protections.
- Discourage development in sensitive areas.
- Continue to promote the area's natural features as a draw to residents and visitors.
- Continue to monitor residential developments on the Township's many lakes.

- Continue to market the area as a four-season recreation destination.
- Continue to provide for natural resource extraction in appropriate locations in the Township.

10.9 Land Use

Discussion:

The general historic land uses common to the Upper Peninsula are reflected in the land use patterns that have developed in Munising Township. Logging and timber production were common throughout Munising Township, and still are today. Changing lifestyles and family structure, residential development, commercial businesses and Township needs will all affect future land use patterns. The desire for increased development of residential and commercial properties will further the growth of the Township. Munising Township appears to be absorbing some of the residential growth from the City of Munising. The availability of public and private services, accessibility, existing conditions of the area and price are other important considerations for residential development.

Commercial and industrial land uses are concentrated along the M-28 corridor through Wetmore. Agricultural land use has declined in the Township when compared to past usage. Large tracts of land in public ownership mean that less land is available for private development. The Township includes a significant amount of federal and state lands which present limited usage opportunities.

Goal: Establish land use patterns in the Township that provide for development in areas where adequate facilities exist or can be extended, maintain the overall character of the community and ensure the health, safety and welfare of Township residents.

Recommendations:

- Continue to seek development opportunities for vacant properties.
- Develop regulations for alternative energy resources.
- Support the renovation and reuse of existing buildings.
- Review the Township Master Plan on a regular basis.
- Review the Zoning Ordinance on a regular basis.
- Encourage commercial development along the M-28 corridor.
- Encourage the use of alternative energy resources.
- Encourage property owners to improve dilapidated properties.

- Ensure that there is adequate room for expansion of the commercial district adjacent to the existing commercial districts along M-28 on the Future Land Use map.
- Continue to support controlled residential density around the Township's inland lakes.
- Amend Zoning Ordinance to provide adequate space and provision for multi-family, commercial and other types of development.
- Encourage infill of vacant, platted lots and construction of multi-family units where appropriate.
- Revise regulations ensuring adequate provision of safe and convenient pedestrian and vehicular traffic access.
- Encourage infill development at the Industrial Park.
- Encourage continued clean up of contaminated sites.

CHAPTER 11.0 FUTURE LAND USE AND ZONING PLAN

11.1 Introduction

The previous chapters of the Master Plan provide an overview of the existing conditions in Munising Township and the surrounding area. A future land use plan is representative of the “preferred future” of how the community would like to grow and includes recommendations on how development could be carried out. It is based on analyses of environmental opportunities and constraints, existing trends and conditions and projected future land use needs. While developing the Future Land Use/Zoning Plan, the Planning Commission was asked to take on the difficult task of envisioning development in the Township over the next 5, 10 and 20 years. The Goals and Objectives presented in the Chapter 10, the Citizen Survey as well as principals of sound land use planning are the foundation upon which the Future Land Use Chapter is based. The Future Land Use Plan consists of the text within this chapter as well as the Future Land Use Map (Map 11-1).

Future land use planning establishes the desired amounts and locations of residential, commercial, and industrial development; public facilities; open space; environmental conservation and recreational areas; and changes or improvements to the local traffic circulation systems. This Chapter also presents the Zoning Plan, which along with the rest of the relevant parts of this Future Land Use Plan, is intended to guide the implementation of and future changes to the Township’s Zoning Ordinance.

The Michigan Zoning Enabling Act (MZEA) requires in Sec. 203 (1) that zoning be based on a plan. Similarly, Sec. 7 (2) of the Michigan Planning Enabling Act (MPEA) sets forth the purposes for which a Master Plan must be created. In order for a Master Plan to serve as the basis for zoning, it should promote the purposes in the MZEA and MPEA. The zoning plan identifies the zoning districts and their purposes, as well as the basic standards proposed for each district. Current zoning districts utilized in the Township’s zoning ordinance and any potential modifications to the districts will also be discussed in this chapter.

The relationship between the Master Plan and Zoning Ordinance is often misunderstood. The Master Plan is a guide for land use for the future; the Zoning Ordinance regulates the use of land in the present. The Master Plan is not a binding, legal document; the Zoning Ordinance is a law that must be followed by the community’s residents and others wishing to develop or do business in the Township. The future land use recommended for an area may be the same as the existing zoning for that area, while in some cases the future land use recommended is different from

the existing zoning. The Future Land Use Map does not change the existing zoning in an area. A property owner must use the property as it is currently zoned.

Munising Township covers a total land area of approximately 206 square miles and according to 2000 Census data, has a population of 3,125. The Township is sparsely populated with a density of 15.4 persons per square mile. According to the land cover/use data presented in Chapter 9, about 14 percent of the Township's land is designated for residential, commercial and industrial uses. Slightly more than 70 percent of the Township's land area is classified as resource production, much of it owned by the State of Michigan and the federal government.

Map 11-1, Future Land Use, reflects the assumption that land use patterns in Munising Township will continue to be heavily influenced by transportation corridors, particularly along M-28. Other major considerations which helped shape the future land use map are a desire to establish appropriate uses and densities along inland lakes, provide adequate areas for commercial development and to develop a consistent land use pattern throughout the Township.

Potential updates to the Munising Township Zoning Ordinance are discussed throughout the following sections. These changes can be pursued as the need or opportunity presents itself. The Planning Commission can identify major policies it wishes to implement and begin to work on the corresponding zoning changes at the same time.

11.2 Zoning Districts and Zoning Plan

Munising Township is currently divided into thirteen zoning districts. The intent and general purpose will be depicted for each district. A schedule of regulations is also included. Munising Township completed a total revision of the zoning ordinance within the last several years and modifications to the number or type of current zoning districts are not anticipated. At this time, no new zoning districts are proposed and all districts on Map 11-1 coincide with the districts on the Munising Township Official Zoning Map.

R-1, Residential One District

The R-1 (Residential 1) District is intended for the establishment and preservation of quiet neighborhoods for single-family dwellings, free from other uses except those that are both compatible with and convenient to the residents in this district.

R-2, Residential Two District

The R-2 (Residential 2) District is intended for the establishment and preservation of quiet neighborhoods for single- and two-family dwellings, free from other uses except those that are both compatible with and convenient to the residents in this district.

RR, Rural Residential District

The RR (Rural Residential) District is established to provide for a transition zone between more densely settled residential areas and the more sparsely developed rural, agricultural and forested areas of the Township. Such areas provide for a mix of moderately intensive compatible uses. The RR District is designed to provide rural residential opportunities for those who are willing to assume the costs of providing their own services.

TD, Town Development District

The TD (Town Development) District is intended to preserve a district for residential, retail, and service establishments, and certain governmental uses that are compatible with a small town setting, serving residents and tourists. This district is designed for small unincorporated town areas where a mix of residential and retail is in accord with established patterns of land use and the needs of nearby residents.

LS/R 1, Lake Shore and River One District

The LS/R 1 (Lake Shore and River One) District is intended for the establishment and preservation of existing commercial resort developments and single-family and two family residential use. The development at those parcels will also be subject to existing state regulations, including PA 451 of 1994, and PL 92-500.

LS/R 2, Lake Shore and River Two District

The LS/R 2 (Lake Shore and River Two) District is intended for the preservation of existing quiet neighborhoods free from other uses, except those which are compatible with and convenient to the residents in this district. The development at those parcels will be subject to existing state regulations, including PA 451 of 1994, and PL 92-500.

RP, Resource Production District

The RP (Resource Production) District is established to maintain low-density rural areas which, because of their rural character and locations, accessibility, natural characteristics, and the potentially high cost of providing public services, are suitable for a wide range of forestry, agriculture, natural resource, and recreational uses.

C, Commercial District

The C (Commercial) District is intended to establish and preserve area for commercial uses, and for light industrial uses which are more compatible with commercial activity than other industrial uses.

I, Industrial District

The I (Industrial) District is designed and intended for manufacturing, assembling, fabricating, and processing businesses, storage, and other commercial activities which may require larger sites and isolation from many kinds of other land uses, and to make provisions for commercial uses necessary to service the immediate needs of an industrial area.

IBZ-RM, Inland Buffer Zone - Resource Management District

The IBZ - RM (Inland Buffer Zone - Resource Management) District is intended to establish and maintain for low intensity use those areas of the Pictured Rocks National Lakeshore Inland Buffer Zone, as established by PL 89-668, which, because of their location, accessibility, soils, drainage, and other characteristics, are suitable for the development of single-family seasonal and year-round residences, for timber management and agricultural purposes, and for outdoor recreational uses.

IBZ-RR, Inland Buffer Zone - Rural Residential District

The IBZ-RR (Inland Buffer Zone - Rural Residential) District is intended to establish and maintain a low-intensity use, rural residential environment for those areas of the Pictured Rocks National Lakeshore Inland Buffer Zone, as established by PL 89-668, which, because of their location, accessibility, soils, drainage, and other characteristics, are suitable for the development of single-family, year-round dwellings.

IBZ-SD/TP, Inland Buffer Zone - Seasonal Dwelling/Timber Production District

The IBZ-SD/TP (Inland Buffer Zone - Seasonal Dwelling/Timber Production) District is established to maintain low intensity and seasonal use those areas of the Pictured Rocks National Lakeshore Inland Buffer Zone, as established by PL 89-668, which, because of their location, accessibility, soils, drainage, and other characteristics, are suited for recreational uses.

IBZ-SC, Inland Buffer Zone - Seasonal Commercial District

The IBZ-SC (Inland Buffer Zone - Seasonal Commercial) District is established to maintain areas of the Pictured Rocks National Lakeshore Inland Buffer Zone, as established by PL 89-668, to service the needs of Lakeshore visitors and other tourists in rural areas. Uses should be conceived and planned so that they will not require year-round road access and other services commonly found in more accessible areas. Commercial uses should be limited to those needed to provide necessary services to the Lakeshore visitor, and so located so as not to detract from the visitor's enjoyment of the Lakeshore.

Schedule of Regulations						
District	Minimum Lot Size (Square Feet or Acreage)	Minimum Lot Width (Feet)	Minimum Setback (Feet)			Maximum Height (Feet)
			Front ^{C,D}	Side	Rear	
R-1	20,000 sq. ft	100	30	20 ^{A,B}	20 ^{A,B}	30
R-2	20,000 sq. ft.	150	30	20 ^{A,B}	20 ^{A,B}	30
RR	2 acres	165	30	30	30	30
TD	20,000 sq. ft.	100	30	20	20	30
LS/R 1	1 acre	100	25	20	30	30
LS/R 2	1 acre	100	25	20	30	30
RP	10 acres	300	30	30	30	30
C	20,000	100	30 ^E	20	20	30
I	20,000	100	30 ^E	20	20	50
RM-IBZ	10 acres	330	100	50	50	30
RR-IBZ	2 acres	200	50	30	30	30
SD/TP-IBZ	20 acres	660	150	50	50	30
SC-IBZ	10 acres	330	200	50	50	30

Footnotes to the Table

- (A) An accessory building or structure which is ten feet or less in height may be located 6 feet from a side or rear lot line in the R-1 and R-2 Districts.
- (B) An accessory building or structure which is greater than ten feet in height may be located 20 feet from a side or rear lot line in the R-1 and R-2 Districts.
- (C) The front setback shall be measured from the road right of way, except where a parcel abuts a water body. In that case the front setback shall be measured from the ordinary high water mark.
- (D) Where a lot in a LS/R District does not abut a body of water, the front lot line setback shall be 30 feet measured from the road right of way.
- (E) The front setback for all structures located along Highway M-28 shall be 50 feet from the road right-of way.

Planned Unit Development

The intent of the Planned Unit Development requirements is to permit greater flexibility in the use and design of structures and land in situations where modifications of specific provisions of the Zoning Ordinance will not be contrary to its intent and purpose or

significantly inconsistent with the planning on which it is based and will not be harmful to the neighborhood in which they occur. A Planned Unit Development (PUD) should result in development which maximizes the provision of open space, preserves natural features, and provides a harmonious arrangement of structures and uses. In order to receive consideration by the Planning Commission, a proposed Planned Unit Development shall:

In order to be approved by the Planning Commission, a proposed Planned Unit Development shall be on parcels of at least two acres in size and shall meet the following requirements:

- A. Provide for open space and preservation of natural features; clustered development and similar design methods are encouraged.
- B. Minimize the amount of impervious surfaces created.
- C. Provide a harmonious and efficient arrangement of all structures and uses in relation to topography, the size and type of plot, the character of adjoining property, and the type and size of buildings. Arrangements of buildings shall be done in such a way to utilize natural topography, existing vegetation and views within and beyond the site.

The applicant shall submit an application to the Planning Commission. After submittal; the applicant shall attend a preliminary conference with the Planning Commission to discuss the application process and proposed development. After a preliminary application and site plan are submitted the Planning Commission shall hold a public hearing to review the preliminary application. All applications will be evaluated according to the standards in Section 808 of the Zoning Ordinance. After preliminary approval, the applicant must submit the final site plan and application within 12 months, unless the Zoning Administrator has granted a waiver of the final application. The Planning Commission may then grant a PUD Conditional Use Permit.

11.3 Sensitive Areas

Within the Township, there are few sensitive areas of land in need of protection. The Miners River and Anna River watersheds are environments that should be monitored for overall health. A watershed is the area of land where all of the water that is under it or drains off of it goes into the same place, where all living things are linked by their common water course. The Miners River flows through the Township, Miners Falls is located in the northern end of the Township, off of H-13 and Miners Lake is also along the river. The Anna River rises from the Anna Marsh in Munising Township and the mouth of the river is in the City on the southern end of Munising Bay on Lake Superior.

Several area waterfalls in the Anna River's watershed are local attractions, including Horseshoe Falls, Wagner Falls and Alger Falls.

The Munising Bay watershed has a total surface area of about 30,350 acres, encompassing portions of Munising and Au Train Townships as well as the City of Munising. The Munising Bay Watershed Restoration Project has worked to protect and restore its rivers and streams by closing abandoned wells, repairing, replacing, or stabilizing erosion sites and road or rail stream crossings, and planting forested buffer zones, wildlife corridors, and filter strips. These improvements combined with in-stream fisheries enhancements have helped to restore, create, and improve lost fish and wildlife habitat and help rid streams of tons of accumulated sediments, while sustaining the local economy, environmental health, and enhancing recreational opportunities. The Township's zoning ordinance employs four zoning districts to regulate development throughout the Pictured Rocks National Lakeshore lands. These regulations should be strictly followed to ensure protection of an important natural resource.

11.4 Commercial Development

Commercial development is encouraged within properly zoned districts. Currently, there are a few sporadic parcels available for commercial use within existing commercial district in the Township. Land designated for commercial use is concentrated along the M-28 corridor through Wetmore. The commercial district may be in need of expansion to continue to encourage and accommodate future commercial development. Expansion could occur east along M-28 from the current commercial district in Wetmore, to the industrial area east of Indian Town Road. Additional commercial activity may be appropriate west of Shingleton, along M-28. The former Camp Cusino may also be appropriate for commercial development, utilizing adaptive reuse strategies.

Expansion of the commercial district could potentially shift down Connors Road or along the newly paved H-58. Commercial development along H-58 would be somewhat limited due to the land being located in the inland buffer zone and the Hiawatha National Forest. Appropriate buffering or landscaping of commercial properties, depending on the use, may be necessary to provide for a pleasant aesthetic along the M-28 corridor.

Redevelopment of existing properties should be promoted within the Township. There is a push for mixed use development, especially within local business districts. Mixed use development would consist of commercial space on the ground floor of buildings, with residential space above.

11.5 Industrial Development

The industrial park in Munising Township contains 12 lots, eight of which are currently being leased. Seven of the sites are active and one is being utilized for storage. A current stipulation for a lease agreement is the creation of a minimum of five on site jobs. Water and sewer service is provided at the industrial park, as well as natural gas. A three-phase power supply is also available at the industrial park.

There is room in the industrial park and the space should be actively promoted for light industry. A marketing strategy for attracting industry to the park would be valuable. After the park has been filled, the opportunity for expansion exists. Infill development within the Industrial Park should be encouraged before expanding land zoned for industrial development in the Township.

Active sites in the industrial park are used for commercial activities at this time. Should the industrial park be unsuccessful in attracting industrial businesses to locate in the park, the Township could consider rezoning the area to commercial.

11.6 Residential Development

Residential land use in Alger County occurs primarily near the Munising-Wetmore corridor, with other residential concentrations located in smaller communities throughout the County, such as Shingleton, Chatham and Trenary.

A majority of the Township's residential development is concentrated on or around transportation corridors. Residential land use in Munising Township occurs primarily on along the length of M-28 or near highway offshoots. Residences are concentrated in the communities of Wetmore and Shingleton, as well as between the two communities along M-28 and in Van Meer and Melstrand. Most of the homes are single-family residences. The limited number of apartments that exist in the Township are concentrated in the Wetmore area. There may be a need in the future for residential units developed specifically for the aging population. Multi-family dwellings are allowed as a conditional use in the Residential Two District at this time; altering the Zoning Ordinance to allow multi-family dwellings as a permitted use in the Residential Two District or in other districts could be considered.

A great deal of residential development has occurred along available waterfront property in the Township. Waterfront development has become increasingly desirable and the density of homes around the inland lakes has increased exponentially over the last twenty years. Zoning regulations such as setbacks and minimum lot size should be reviewed periodically to maintain balanced and appropriate levels of waterfront development.

Areas currently zoned as rural residential, that exhibit the potential to serve as a mixed use town development area include land along H-58 between Pictured Rocks Golf Club and Miners Castle Road. There are currently smaller (2-3 acres) lots for sale in the area and retail development is possible in the future. The Melstrand area may also have the potential for the mixed use development. These areas have the potential for retail development mixed in with the current residential uses to serve residents and tourists.

Housing rehabilitation assistance programs should be utilized where aging or substandard housing exists to ensure safe living conditions and preserve the character of older neighborhoods. Establishing a network of trails, parks and open space systems that connect residential sites, schools and commercial districts creates a pedestrian friendly environment that can serve recreation as well as transportation needs. Standards could be created requiring new residential developments to set aside a percentage of land dedicated to open space and trail corridors, similar to Planned Unit Development standards.

11.7 Recreational Development

Natural features throughout the Township provide a variety of year-round active and passive recreational opportunities for residents and visitors, including hunting, fishing and boating. Public and private facilities provide additional recreational opportunities for all ages. Munising Township is bordered by the Pictured Rocks National Lakeshore to the north and Hiawatha National Forest to the south. The Township owns and maintains three sites designated for recreation within the Township, two in Wetmore and one in Shingleton. The sites are in need of upgrades and will require capital investment in the future. The Robert McQuisten Munising Township Recreation Area has approximately 18 acres remaining for development; upgrading and further accessible development of existing facilities is a priority for the Township.

Resident feedback from the citizen survey indicated a desire to improve the availability of non-motorized facilities in the Township, particularly trail development. Trail development should be pursued when feasible; there is potential to work cooperatively with the City of Munising and other Alger County communities to provide for area trail development.

11.8 Transportation

An access management plan for M-28, where strips of commercial areas are located, may provide strategies for turning the highway into an increasingly safe and efficient traffic route. An access road to serve businesses along M-28 could be constructed, particularly in the Wetmore area. The purpose of an access road is to reduce conflict points associated with traffic turning into or leaving properties abutting the highway.

Conflict points may be eliminated or reduced with techniques such as consolidating driveways, providing left-turn lanes, frontage roads and proper driveway design.

Special provisions for recreational vehicles such as RV's are necessary to encourage longer visits and enhance shopping convenience. This may include adding sufficient parking areas, improving access points and designing intersections capable of handling vehicles with large turning radiuses.

The Township's millage funds will be used to upgrade roads within the Township. The funds should be used to upgrade roads according to the Township Board's priority schedule. If possible, when roads are upgraded, the Township should consider incorporating non-motorized facilities into the projects. Residents have expressed a desire for additional non-motorized trails, as well as additional ATV and snowmobile trails in the Township. There is potential to coordinate trail development with the City of Munising.

11.9 Alternative Energy Resources

The Township recognizes the importance of alternative energy resources. The Township would like to encourage residents to utilize alternative forms of energy such solar panels and small wind energy systems where appropriate. Rural Residential and Timber/Resource Production districts could serve as prime areas for alternative energy uses, particularly wind energy. To the greatest extent possible, zoning standards for developing alternative energy resources should be based on industry norms and standards. Regulations regarding alternative energy sources will continue to be reviewed by the Township and incorporated into the Zoning Ordinance as appropriate.

Wind energy is an emerging technology that may require the Township to consider updates to the zoning ordinance. Currently, the Township requires a conditional use permit for wind turbines in all districts, with the exception of the Inland Buffer Zones. Updated regulations may need to be considered for both small and large scale wind turbines. Small wind generally serves private homes, farms or small businesses. Zoning definitions will need to be also added and updated. The types of turbines may differ by use, height or capacity. Appropriate development standards could be created and adopted for each type of wind energy facility. Site plan review requirements may also need to be revised.

11.10 Conclusion

Planning is intended to guide the forces of change in ways that encourage desirable outcomes while striking an appropriate balance with development and preservation. The Master Plan should be reviewed on a yearly basis and amending the plan as

necessary will maintain its use as a reliable planning tool. State law requires that the Master Plan must be revised at least every five years to establish if updating is necessary.

As the developers and most frequent users of this document, the Planning Commission will be responsible for reviewing the recommendations and progress of the Plan. An outdated Plan that is not frequently reviewed can diminish the decision making process. Therefore, the Planning Commission should conduct an annual review of the Plan and amend it as appropriate. Amendments that should occur include:

- Delete goals and recommendations that have been accomplished and add new recommendations as needs and desires arise.
- Modify the Future Land Use Map to reflect any zoning decisions that have changed the direction of development in the Township.

This Master Plan represents over a year of effort by the Planning Commission, Township staff and residents. Development of the plan involved collection and analysis of data on population, housing, land use, transportation, infrastructure and socioeconomic conditions. The Master Plan process also included a Citizen Survey to obtain suggestions and comments from residents to incorporate ideas into the Plan. The Plan sets forth several recommendations, and as such, this Plan will only be as successful as the implementation measures taken to achieve the vision set forth in previous chapters.