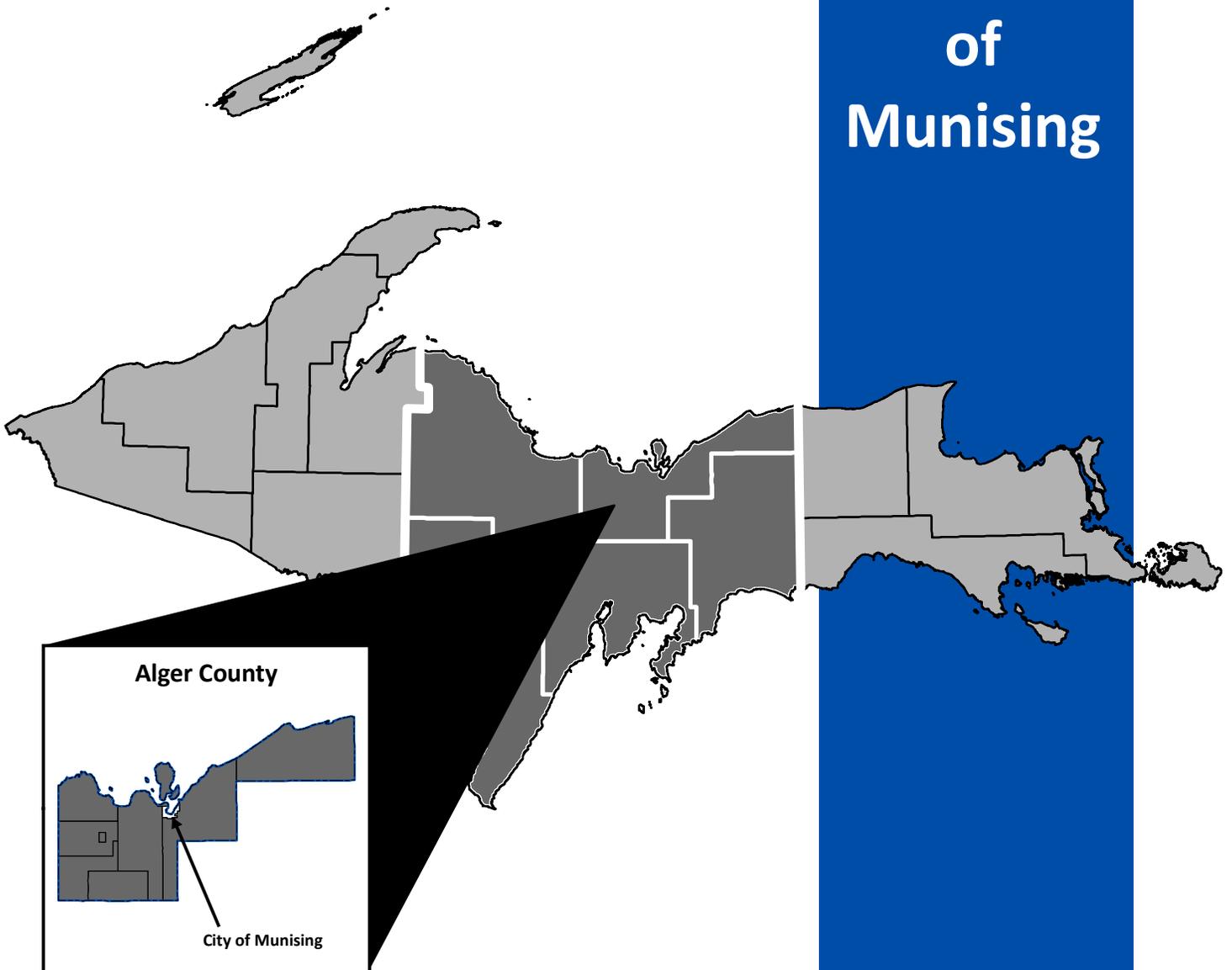


# City of Munising



**Master Plan**

**2009**

Prepared By:  
**City of Munising Planning Commission  
&  
Munising City Commission**

Adopted: December 21, 2009





# CITY OF MUNISING, MICHIGAN

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## City Commission Resolution City of Munising Master Plan Adoption

Moved by: Commission Member Beauprey, Seconded by: Commission Member Scholtz,

WHEREAS, The Michigan Planning Enabling Act, PA 33 of 2007, provides that the Planning Commission may prepare a Master Plan for the use, development and preservation of all lands in the City; and

WHEREAS, The Planning Commission notified each municipality contiguous to the City, the Alger County Board, each public utility company and railroad company owning or operating a public utility or railroad within the City, for purposes of notification, of its intent to adopt a Master Plan; and

WHEREAS, The proposed Master Plan was submitted to City Commission, who authorized distribution of the proposed plan; and

WHEREAS, The proposed Master Plan was distributed to each municipality contiguous to the City, the Alger County Board, each public utility company and railroad company owning or operating a public utility or railroad within the City, for purposes of notification, for review and comment; and

WHEREAS, On December 9<sup>th</sup>, 2009, after proper public notice, the Planning Commission held a public hearing on the proposed Master Plan, during which members of the public were given the opportunity to comment on the proposed Plan and written comments received were discussed; and

WHEREAS, On December 9<sup>th</sup>, 2009, the Planning Commission approved and adopted the Master Plan; and

WHEREAS, The City Commission has determined that the draft of the Master Plan represents the long-range vision of the City.

THEREFORE BE IT RESOLVED, The Munising City Commission hereby approves and adopts the Master Plan, as per the requirements of the Michigan Planning Enabling Act, PA 33 of 2008.

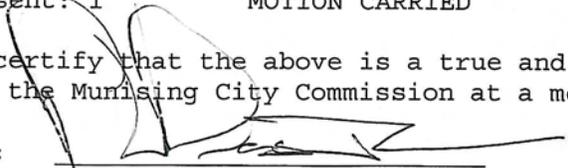
Yes: 4

No: 0

Absent: 1 MOTION CARRIED

I certify that the above is a true and complete copy of a resolution passed by the Munising City Commission at a meeting on December 21<sup>st</sup>, 2009.

By:

  
Rod DesJardins, Mayor

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**APPENDIX A - MAPS**

## **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 Planning Commission with technical assistance from the Central Upper Peninsula Planning and Development Regional Commission. Existing conditions and circumstances that affect the city of Munising 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 city.

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 Historical Background**

The name “Munising” is derived from an Ojibwe Native American word, “Minissing” or “island near a lake,” for the nearby Grand Island, located on the southern shore of Lake Superior in Michigan’s Upper Peninsula. This area served as a home to the indigenous Ojibwe and later to early fur trading Europeans that 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.

Until Alger County was organized in 1885, Munising and its surroundings were a part of Schoolcraft County. Munising, Old Munising, or East Munising, as it was known at the time, was incorporated as a village in 1897. It became the county seat in 1902 and was incorporated as a city in 1915.

Records indicate that lands comprising the community known as Old Munising were purchased by the Munising Iron Company in 1850. 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. Failure of the Munising Iron Company resulted in

closure of the post office in 1873. The post office was alternately opened and closed as other firms continued the enterprise.

In 1894, Timothy Nestor and his associates began building the present city at the foot of the harbor where it was platted in 1895. Arthur Nestor became the first postmaster of the city's permanent post office in 1896.

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.

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 and the emergence of many new service related businesses have helped to strengthen the overall local economy.

The area's natural resources have become the 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 dramatically 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 a wide variety of active and passive four-season recreational choices that compare with the best in the United States.

## 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.

### 2.2 Population Trends

The city of Munising has experienced a population change synonymous with other communities in the Upper Peninsula that have developed along major thoroughfares and near traditional smokestack industries. After peaking in 1940 with a population of 4,409, the city of Munising has been subject to a slowly declining population (Table 2-1). However, area township populations have increased due to an out-migration of residents from urban to rural areas.

1940	1950	1960	1970	1980	1990	2000	% Change 1940-2000
4,409	4,4339	4,228	3,677	3,083	2,783	2,539	-42.4

U.S. Bureau of the Census, STF 1A, P001, years cited.

Recent national studies have shown however, that both younger professionals and the elderly are seeking to reside closer to urban centers and their livelihood. This option offers affordable housing, lower maintenance responsibilities, less vehicle trips, walkability, and more choices for entertainment and service amenities.

Au Train and Munising Townships, both of which border the city, saw their populations more than double from 1940 to 2000. Onota Township also experienced significant growth. Alger County population declined 3 percent from 1940 to 2000. Populations for all Alger County units of government from 1940 to 2000 are presented in Table 2-2.

<b>Table 2-2</b>								
<b>Population, Selected Areas, 1940-2000</b>								
Governmental Unit	1940	1950	1960	1970	1980	1990	2000	% Change 1940- 2000
<b>City of Munising</b>	<b>4,409</b>	<b>4,339</b>	<b>4,228</b>	<b>3,677</b>	<b>3,083</b>	<b>2,783</b>	<b>2,539</b>	<b>-42.4</b>
Alger County	10,167	10,007	9,250	8,568	9,225	8,972	9,862	-3.0
Au Train Township	467	529	508	545	928	1,047	1,172	+251.0
Burt Township	570	624	457	424	539	508	480	-16.8
Chatham Village	-	-	275	246	315	268	231	-
Grand Island Township	31	73	40	32	23	21	45	-31.2
Limestone Township	829	535	330	302	373	334	407	-51.1
Mathias Township	827	726	742	644	680	563	571	-31.0
Munising Township	1,073	1,412	1,408	1,614	1,963	2,193	3,125	+291.2
Onota Township	234	293	183	128	228	244	310	+24.6
Rock River Township (Includes Village of Chatham)	1,727	1,476	1,354	1,202	1,408	1,279	1,213	-29.8

Source: U.S. Bureau of the Census 1940-2000.

The trend of population growth for townships that surround cities is not simply a local phenomenon. In major metropolitan areas this trend takes 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 2-3.

<b>Table 2-3</b>			
<b>Components of Population Change, Alger County, 1970-1999</b>			
	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 & Gender

According to data from the 2000 Census, the population of the city of Munising is somewhat older than that of the county overall. The city's median age in 2000 was 43.8 years, almost three years older than Alger County as a whole. The median age in the city increased from 34.3 years in 1980 to 43.8 years in 2000. While the median age rose in the surrounding areas and beyond, Au Train Township's 12.2 year median age increase was the most dramatic. Table 2-4 presents comparative data regarding median age.

<b>Table 2-4</b>				
<b>Median Age, Selected Areas, 1980-2000</b>				
Area	1980	1990	2000	Change 1980-2000
<b>City of Munising</b>	<b>34.3</b>	<b>39.7</b>	<b>43.8</b>	<b>+9.5</b>
Munising Township	28.8	32.4	35.2	+6.4
Au Train Township	30.1	36.2	42.3	+12.2
Alger County	31.7	36.7	41.2	+9.5
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 Table 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 2-5.

In 2000 the age group of 35 - 44 years made up the largest portion of the city's total population at 348 persons, or 13.7 percent. The elderly population, which is composed of those 65 years and older, made up nearly 25 percent of the population total. Among the older age groups, slight population increases have occurred despite a decline in the general population. For example, in 1990 there were 635 persons 65 or older in the city; by 2000, there were 637. Growth of the older segment of the population affects the types and costs of services offered by the city and other providers.

<b>Age Group</b>	1990		2000	
	Number	Percent	Number	Percent
Under 5	171	6.1	111	4.4
5 -9	-	-	147	5.8
10 - 14	-	-	167	6.6
15 - 19	-	-	183	7.2
20 - 24	113	4.0	104	4.1
25 - 34	-	-	249	9.8
35 - 44	-	-	348	13.7
45 - 54	275	9.9	337	13.3
55 - 59	132	4.7	121	4.8
60 - 64	182	6.5	135	5.3
65 - 74	300	10.8	275	10.8
75 - 84	231	8.3	260	10.2
85 years and over	104	3.7	102	4.0
<b>Total</b>	2,783		2,539	

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.

## 2.4 Racial Composition

The racial composition of the city of Munising, consistent with the entire Upper Peninsula, is overwhelmingly white. The largest non-white racial group was identified in the American Indian, Eskimo and Aleut category. In 2000, 20 persons identified themselves as being of Asian & Pacific Islander origin, up from four in 1990.

<b>Race</b>	1990		2000	
	Number	Percent	Number	Percent
White	2,682	96.38	2,380	93.70
Black	2	0.07	4	0.02
American Indian, Eskimo, & Aleut	95	3.41	89	3.51
Asian & Pacific Islander	4	0.14	20	0.22
Other Races	0	0.00	44	1.70
<b>Total</b>	2,783	100.00	2,539	100.00

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 81.8 percent of the city's population has a high school diploma. This is slightly higher than that of Alger County and lower than the 83.4 percent for the state overall. A higher percentage of persons attaining high school diplomas, but a lower percentage of persons with college degrees are present in comparing the city to the state. The city's older population and locally available employment have a relationship to this level of educational attainment.

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. An increase in higher educational attainment has taken place from 1990 to 2000. These figures are presented in Table 2-7.

Educational Level	City of Munising		Alger County		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent
Less than 9 <sup>th</sup> Grade	<b>118</b>	<b>6.4</b>	428	6.0	299,014	4.7
9 <sup>th</sup> - 12 <sup>th</sup> Grade, No Diploma	<b>219</b>	<b>11.8</b>	895	12.5	765,119	11.9
High School Graduate	<b>733</b>	<b>39.6</b>	3,035	42.3	2,010,861	31.3
Some College, No Degree	<b>367</b>	<b>19.8</b>	1,463	20.4	1,496,576	23.3
Associate Degree	<b>65</b>	<b>3.5</b>	296	4.1	448,112	7.0
Bachelor Degree	<b>257</b>	<b>13.9</b>	760	10.6	878,680	13.7
Graduate or Professional Degree	<b>92</b>	<b>5.0</b>	292	4.1	517,579	8.1
High School Graduate or Higher	-	<b>81.8</b>	-	81.5	-	83.4
Bachelor Degree or Higher	-	<b>18.9</b>	-	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 family households in the city decreased by 85, as the population dropped almost 10 percent. However, the average household size increased slightly from 2.0 to 2.17 persons. Non-family households, meanwhile, increased from 381 to 460 during the same period. General household characteristics are presented in Table 2-8.

<b>Table 2-8 Household Characteristics, City of Munising, 1990 - 2000</b>				
Household Type	1990		2000	
	Number	Percent	Number	Percent
Family Households	740	66.0	655	58.7
Married-Couple Family	577	78.0	499	44.8
Female Householder	124	16.7	114	10.2
Non-Family Households	381	34.0	460	41.3
Total Households	1,121	100.0	1,115	100.0
Average Household Size	2.00		2.35	

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.

### 2.7 Population Density

The city's total land area of 9.1 square miles and 2000 population of 2,539 produces a population density of 279.0 persons per square mile. Alger County's 2000 population density was 1.95 persons per square mile, while Munising Township's was 14.35. Total area, population and density information for selected local communities is presented in Table 2-9.

<b>Table 2-9 Population Densities, Selected Areas, 2000</b>			
Place	Total Area in Square Miles	Population	Persons/Square Mile
<b>City of Munising</b>	<b>9.1</b>	<b>2,539</b>	<b>279.0</b>
Au Train Township	165.5	1,172	7.08
Munising Township	217.7	3,125	14.35
Alger County	5,049	9,862	1.95

Source: Bureau of the Census, 2000 CPH 1-24, Summary Population and Housing Characteristics for Michigan, Table 15

### 2.8 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 2-10.

<b>Area</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>
<b>Alger County</b>	<b>10,000</b>	<b>10,000</b>	<b>10,200</b>	<b>10,200</b>
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

## **2.9 Issues and Opportunities**

Steadily decreasing population within the city of Munising over the past 50 years leaves fewer residents to bear the burden of municipal costs for essential services and infrastructure.

The city's median age of 43.8 years exceeds that of the county and the state. An increasing elderly population can have an effect on the type and level of services provided by the city and other entities.

The city has experienced a decline in the number of households. However, average household size has increased only slightly.

The number of family households - particularly married-couple families - decreased, while the number of single-parent households and persons living alone increased. These changes may have repercussions on services such as housing, transportation, day care, recreation and others.

The county is projected to experience a steady, but modest, population growth from 2005 to 2020.

Although the population density of the city is relatively low, further residential development is complicated due to rugged terrain and special measures may need to be addressed.

## **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 the city of Munising, 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.

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.

A major tourist attraction in the area is the Pictured Rocks National Lakeshore, a diverse area encompassing over 73,000 acres. 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 city of Munising anchors the western gateway to the park.

The city of Munising benefits from the diversity that exists among area businesses and industries. Manufacturing industries like the Neenah Paper mill and the Timber Products Michigan sawmill and veneer mill provide a strong base of employment. 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 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 Greater Munising Bay Partnership for Commerce Development, Alger County Economic Development Corporation, and the Munising Downtown Development Authority have worked to bring about infrastructure improvements and have initiated marketing programs which have benefitted the local economy. The city’s industrial park offers water, sewer, electricity, gas and the availability of all-season road access. Further discussion about economic development entities and the industrial park is provided in Chapter 6.

**3.3 Civilian Labor Force Characteristics**

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 city of Munising age 16 years and older who were in the labor force (labor force participation rate) was 91.8 percent. This compares to labor force participation rates for Alger County of 91.3 percent, and the state’s rate of 94.1 percent.

<b>Table 3-1 Civilian Labor Force Status, Selected Areas, 2000</b>			
<b>Characteristics</b>	<b>City of Munising</b>	Alger County	Michigan
Civilian Labor Force	<b>1,112</b>	4,136	4,926,463
Employed Labor Force	<b>1,021</b>	3,776	4,637,461
Unemployed Labor Force	<b>91</b>	357	284,992

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

**3.4 Employment by Industry Group**

The following employment analysis was obtained from 2000 Census data using the Standard Industrial Classification (SIC) manual. The use of this system allows for classification of establishments by the type of industrial activity in which they were engaged. The census data used were collected from

households instead of businesses, which may result in less detail in some categories.

As is shown in Table 3-2, 661 city residents working at the time of the 2000 Census were employed in the service and manufacturing sectors. The percentage employed in manufacturing was greater than that reported by the county and slightly less than that of the state. The retail sector provided 8.8 percent of the employment opportunities for city residents, which are comparable to the other selected areas. A comparison of workers engaged in public sector employment was significantly higher for city residents (8.9%) than those reported for the state (3.6%), but lower than the county (11.4%).

Broad Economic Division	City of Munising		Alger County	Michigan
	Number	Percent	Percent	Percent
Agriculture, forestry, fishing & hunting, and mining	29	2.7	4.3	1.1
Construction	49	4.6	7.6	6.0
Information	6	0.6	1.1	2.1
Manufacturing	199	18.6	19.4	22.5
Finance, insurance, real estate, and rental and leasing	50	4.7	4.7	5.3
Transportation & Public Utilities	41	3.8	3.3	4.1
Arts, entertainment, recreation, accommodation and food service	151	14.1	11.3	7.6
Other services (except public administration)	42	3.9	4.1	4.6
Wholesale Trade	0	0	0.8	3.3
Retail Trade	90	8.4	9.6	11.9
Professional, scientific, management, administrative, and waste management services	28	2.6	3.4	8.0
Educational, health, and social services	241	22.5	19.3	19.9
Public Administration	95	8.9	11.4	3.6
<b>Total</b>	<b>1,071</b>	<b>100.0</b>	100.0	100.0

Source: U.S. Bureau of the Census, 2000, STF 3A, P077.

Alger County earnings for the years 2001 through 2004 are presented in Table 3-3. Earnings derived from government employment rose slightly with a corresponding decrease from private sector employment. Farming earnings were low in 2002 and 2003 but made a significant recovery in 2004. Earnings from transportation, wholesale and retail trade, and service industries have fluctuated during this period but have recovered in recent years. Manufacturing earnings rose significantly with increases in construction, government, finance/insurance, real estate, and forestry/fisheries.

<b>Table 3-3</b>				
<b>Earnings by Industry (in Thousands of Dollars), Alger County 2001-2004</b>				
	2001	2002	2003	2004
Farm	338	0	62	322
Non-farm	123,556	127,329	132,721	137,882
<b>Private</b>	<b>82,300</b>	<b>86,231</b>	<b>91,872</b>	<b>96,051</b>
Forestry, fisheries, related activities	1,877	1,411	1,602	1,957
Mining	120	86	110	117
Construction	4,945	4,939	5,007	5,907
Manufacturing	34,935	40,498	42,632	41,406
Transportation and warehousing	1,924	1,982	1,811	0
Wholesale trade	0	0	0	2,149
Retail trade	6,161	5,850	5,782	5,766
Finance and Insurance	4,679	5,242	5,336	5,883
Professional and technical services	4,907	0	0	4,204
Real estate, rental and leasing	4,377	3,472	5,711	4,341
<b>Government</b>	<b>41,266</b>	<b>41,098</b>	<b>40,849</b>	<b>41,831</b>
Federal Civilian	5,539	5,269	5,265	5,533
Military	326	416	576	616
State and Local	35,401	35,413	35,008	35,682
<b>Total Earnings</b>	<b>352,651</b>	<b>359,236</b>	<b>374,344</b>	<b>389,647</b>

Source: MEDC, 2007.

Table 3-4 presents a comparison of employment sectors from 1990 to 2000 using census data. The overall number of employed city residents dropped by 22, or 2.1 percent from 1990 to 2000. The largest numerical change was in the Wholesale and Retail Trade sector where there were 183 fewer persons employed in 2000 than in 1990. The largest numerical increase occurred in the Finance, Insurance, and Real Estate sector with a growth of 19 employed persons, or a 61 percent increase.

	1990		2000		Change 1990-2000	
	Number	%	Number	%	Number	%
Broad Economic Division						
Agriculture, Forestry, Fisheries, Mining	111	10.6	29	2.8	-82	-73.9
Construction	50	4.8	49	4.8	-1	-2.0
Manufacturing	287	27.4	199	19.5	-88	-30.7
Transportation and Public Utilities	43	4.1	41	4.0	-2	-4.7
Wholesale and Retail Trade	183	17.4	0	0	-183	-100
Finance, Insurance, Real Estate	31	2.9	50	4.9	19	+61.2
Educational, Health and Social Services	313	29.8	241	23.6	-72	-23.0
Public Administration	113	10.8	95	9.3	-18	-15.9
<b>Total</b>	<b>1,049</b>	<b>100.0</b>	<b>1,071</b>	<b>100.0</b>	<b>22</b>	<b>2.1</b>

Source: U.S. Bureau of the Census, Characteristics of the Population, 1990 & 2000, Table 117; U.S. Bureau of the Census, STF 3A, P077.

### 3.5 Employment by Place of Work

Census information pertaining to where city residents work and their commuting times is presented in Tables 3-5 and 3-6 that follow. According to the 2000 Census data, 23 percent of the working age population was employed outside of Alger County and about 75 percent reported commuting time of less than fifteen minutes to their place of employment.

Characteristics	Number	Percent
Total City Residents Employed	1,021	100.0
Worked in Alger County	767	75.1
Worked Outside of Alger County	235	23.1
Worked in Michigan	1,021	100.0
Worked Outside of Michigan	0	0

Source: U.S. Bureau of the Census, 2000, STF 3A, P045.

Residence to Work Travel Time	Number of Workers	Percent
Less than 5 Minutes	197	19.7
5 to 9 Minutes	388	38.7
10 to 14 Minutes	179	17.9
15 to 19 Minutes	52	5.2
20 to 29 Minutes	36	3.6
30 to 39 Minutes	7	0.7
40 to 59 Minutes	53	5.3
60 Minutes or More	53	5.3
Worked at Home	37	3.7
Total	1,002	100.0

Source: U.S. Bureau of the Census, 2000, Summary File, 3

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 21<sup>st</sup> 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	County Labor Force			Unemployment Rates		
	Employed	Unemployed	Total	Alger County	Michigan	United States
2000	4,139	234	4,373	5.4	3.7	4.0
2001	4,161	271	4,432	6.1	5.2	4.7
2002	4,090	312	4,402	7.1	6.2	5.8
2003	4,089	346	4,435	7.8	7.1	6.0
2004	4,056	347	4,403	7.9	7.0	5.5
2005	4,078	330	4,408	7.5	6.8	5.1
2006	4,165	352	4,517	7.8	6.9	4.6

Source: Michigan Department of Labor & Economic Growth, 2000-2006

### 3.7 Major Employers

Neenah Paper is the largest single employer in Munising (and the 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.

Construction of the \$42 million maximum security prison in adjoining Munising Township was completed in 1990. As of 2007, employment at the prison facility was 369. The facility is connected to the city's sewer system.

Timber Products Company, located in Munising Township approximately 6 miles east of the city, operates both 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.

Kewadin Casino, located in Christmas, is operated by the Sault Ste. Marie Tribe of Chippewas. 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 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 city 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.

Employer	Location	Number of Employees	Type of Business
Alger County Max. Prison	Munising Township	369	Prison
Neenah Paper	Munising	300	Paper Mill
Timber Products Company	Munising Township	280	Sawmill and Veneer 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
Pictured Rocks National Lakeshore and Hiawatha National Forest	Munising/Munising Township	20 permanent and ~30 seasonal	National Lakeshore and National Forest

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

### **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 city, county and state. Over 43 percent of Munising households reported annual incomes between \$35,000 and \$100,000 in 1999. This compares to percent 48.5 statewide 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	City of Munising		Alger County		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent
Less than \$10,000	<b>173</b>	<b>15.1</b>	383	10.1	313,905	8.3
\$10,000-\$14,999	<b>93</b>	<b>8.1</b>	277	7.3	219,133	5.8
\$15,000-\$24,999	<b>161</b>	<b>14.0</b>	573	15.1	469,100	12.4
\$25,000-\$34,999	<b>166</b>	<b>14.4</b>	612	16.1	470,419	12.4
\$35,000-\$49,999	<b>227</b>	<b>19.8</b>	788	20.8	624,326	16.5
\$50,000-\$74,999	<b>216</b>	<b>18.8</b>	749	19.7	778,755	20.6
\$75,000-\$99,999	<b>61</b>	<b>5.3</b>	246	6.5	432,681	11.4
\$100,000-\$149,999	<b>35</b>	<b>3.0</b>	125	3.3	324,966	8.6
\$150,000-\$199,999	<b>0</b>	<b>0.0</b>	13	0.3	79,291	2.1
\$200,000 or More	<b>17</b>	<b>1.5</b>	31	0.8	76,204	2.0
Total	<b>1,133</b>	<b>100.0</b>	3,378	100.0	3,424,122	100.0

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, STF 3A, P080.

### 3.9 Poverty Rates

Poverty levels are determined by the U.S. Bureau of the Census based on a complex formula including 48 different thresholds. The analysis provided in Table 3-10 is based on 1999 incomes as gathered in the 2000 Census.

The city of Munising's 2000 poverty rate for all persons was only slightly higher to 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 city's percentage of 19.3 percent is notably more than the state, and for Alger County as a whole. It should be noted that the 1999 percentage levels when compared to the 1989 figures, were lower in most cases across the board.

Poverty Rates by Group	City of Munising	Alger County	State of Michigan
All Persons	<b>11.4</b>	10.3	10.5
18 years and over	<b>11.2</b>	9.4	9.3
Female Householder Families	<b>23.7</b>	27.9	24.0
Families with Children Under 5	<b>19.3</b>	14.9	14.7
Persons 65 or Older	<b>10.1</b>	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

About 43% of the city's working population is employed in either manufacturing or the health, educational and social service industries.

Alger County's unemployment rate of 7.8% is higher than the state of Michigan's unemployment rate of 6.9% and significantly higher than the national rate of 4.6%. Alger County's unemployment rate has been consistent with the regional trends. After a significant drop in 2002 in the civilian labor force, numbers have been steadily increasing over the last five years.

Roughly 75% of the city of Munising's residents have less than a fifteen minute drive to work and most commuters drive alone to work. Less than 25% of workers are employed outside of Alger County.

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 has the opportunity to continue to market the city as a destination for four season recreational activities. The natural surroundings provide favorable circumstances for area tourism promotion.

## **4.0 NATURAL FEATURES**

### **4.1 Introduction**

Natural features, including soils, geology, 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.

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.

### **4.2 Geology**

One of the primary factors which make 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.

### **4.3 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. 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 bedrock of Munising is made up principally of permeable sandstone (Map 4-1). The Jacobsville Sandstone has a thickness of about 1,000 feet and lies directly on top of Precambrian rocks. It is predominately sandstone, although it contains shale and conglomerate.

Munising Sandstone comprises another layer and is approximately 150 feet thick. It is a white-to-gray, friable, fine-to-medium grained sandstone and

conglomerate. It is also covered in most places by glacial deposits and has good potential as a groundwater aquifer.

Ordovician sandstone known as AuTrain Formation underlies the eastern portion of the city. AuTrain Formation is somewhat similar to Munising Sandstone in composition and is also a good source of groundwater. It is made up of layers of dolomite, dolomitic sandstone, and pure quartz sandstone.

#### **4.4 Surface Geology**

Surface geology deposits in the city of Munising 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.

Local bedrock is generally overlain by glacial deposition in excess of 5 feet. The morainal deposits consisting of predominately sand and gravel till form the higher elevations on the west side of the city. Some rock outcrops are found as well. Shoreline areas are generally consisting of glacial lake deposits of well sorted and permeable sand.

#### **4.5 Soils**

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 survey that was published in November 1977. The U.S. Department of Agriculture Natural Resource Conservation Service has completed an updated soil survey. The survey is still in draft status and is in the process of being digitized for mapping purposes. Thus, the survey published in 1977 is still considered the “official” soils document. Map 4-2 illustrates the soil types as reported in the “Soil Survey of Delta County and Hiawatha National Forest of Alger and Schoolcraft Counties, Michigan.”

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.

Most of the city is covered by soils of the Karlin-Blue Lake association which are level to very steep, well drained, loamy and sandy. Soils of the Munising-Steuben association are found in the remainder of the city and are dominantly loamy, moderately well drained and well drained, and of nearly level to very steep. Soils found in these soil associations have moderate to very rapid permeability which is generally favorable for septic tank absorption systems. Severe limitations exist, though, in areas that experience seasonally high water tables, or in areas where an impermeable fragipan is present below the surface. In some areas, ground water pollution is a concern due to the substratum's high rate of permeability. Runoff potential of these soils is characterized as low.

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.

#### **4.6 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 the 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 city's terrain ranges from very hilly inland to nearly level along the shoreline (Map 4-3). Lake Superior's mean elevation is 602 feet above sea level. Elevations reach as high as 960 feet above sea level on the southwestern and eastern city boundaries. Thus far, these conditions have directed development to areas of lower elevation and less severe gradient. Developed lands generally slope toward Lake Superior.

#### **4.7 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.

Water features within and adjacent to the city of Munising include the Anna River, Munising Falls Creek, Tannery Creek, Joe's Creek and Lake Superior (Map 4-4).

The Anna River originates at the Anna Marsh in the Hiawatha National Forest southwest of the city and flows along the eastern edge of the downtown area into Munising Bay of Lake Superior immediately east of the Neenah paper mill. Munising Falls Creek enters the city from the east and empties into Munising Bay just north of Tannery Creek. Tannery Creek enters Lake Superior about one-half mile northeast of the mouth of the Anna River. Joe's Creek flows from the high elevations along the west side of Brook Street and enters the Anna River east of the Wisconsin Cental, Ltd. tracks nearly due north of Sheridan Avenue.

Lake Superior is the largest body of fresh water 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. Immortalized in Gordon Lightfoot's "The Wreck of the Edmond Fitzgerald," Lake Superior is inspiring for its size, extreme power, depth, and beauty.

#### **4.8 Floodplains and Wetlands**

Floodplains and wetlands are important from a planning standpoint due to their potential limitations on future development, as well as possible impacts on existing development, in the case of floodplains. A plain that may be submerged by flood waters defines a floodplain; areas between terrestrial and aquatic systems where the water table is at, near or above the land surface for a significant part of most years, and include marshes, mudflats, wooded swamps, and wet meadows define wetlands. A wetland area may be referred to as a swamp, bog or marsh and is normally characterized by the presence of water at a frequency and duration sufficient to support wetland vegetation and aquatic life. The term is further defined in 5.3 of this document.

Wetland areas exist along and near the M-28 corridor adjacent to the Anna River. The traffic volume along the corridor has generated commercial development. The Federal Emergency Management Agency determines flood hazard areas in consonance with its administration of the National Flood Insurance Program. The city has been classified as all "Zone C" which means no special flood hazard areas have been determined within the City. Lake Superior's Open Coast Flood Level for the 100-year floodplain is 604.3 feet

above mean sea level. Use of the term “100-year floodplain” has been replaced with the newer designation of “base flood.”

#### **4.9 Shoreline Areas**

Munising has about 6.7 miles of Lake Superior shoreline and serves as the western gateway community for the Pictured Rocks National Lakeshore. The city’s shoreline surrounds Munising Bay on three sides and provides an especially scenic natural harbor. Activity along the shoreline peaks in the summer season with attractions such as Pictured Rocks boat tours, the Alger Underwater Preserve located in Munising Bay, glass-bottom boat excursions, sport fishing, varied recreational activity within the Pictured Rocks National Lakeshore and as the gateway to the Grand Island National Recreation Area.

#### **4.10 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 Munising area 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 Grand Island 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.

An active city-owned sand pit is located on St. Martin Road. Sand from the pit is used in city construction projects, as well as for road safety during the winter months.

#### **4.11 Scenic Sites**

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 city. 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 40 miles of Lake Superior shoreline. The Lakeshore includes some 736 acres within the city’s boundaries, 675 within the Shoreline Zone and 61 within the Buffer Zone. 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. It was authorized October 15, 1966, under Public Law 89-668 with subsequent amendments. Formal establishment took place on October 6, 1972.

### **Waterfalls**

- **Munising Falls:** This waterfall is part of the Pictured Rocks National Lakeshore in northeast Munising. A scenic walkway leads to the base of the waterfall. A visitor's center with restrooms is located at the entrance.
- **Horseshoe Falls:** Located in southeast Munising and privately owned, this waterfall drops 20 feet to a pool below and may be viewed from behind without getting wet.
- **Rudy Olson Memorial Falls:** Located in northeast Munising just east of Munising Avenue, this fall is accessible by stairway.
- **MNA Memorial Falls:** Located nearby Rudy Olson Memorial Falls, this small waterfall can be accessed from Munising Avenue or from Nestor Street.
- **(Unnamed falls):** An unnamed, seasonally-flowing waterfall is located in the vicinity of the terminus of High Street on the city's northeast side.
- **Nearby waterfalls:** There are 20 waterfalls in Alger County, several of which are located within close proximity to the city. They include Wagner Falls, Alger Falls and Miners Falls.

### **Munising Bay**

The city's 6.7 miles of Lake Superior shoreline provides a panoramic view of the Bay and Grand Island. Although identified as South Bay on many maps, it is locally known as Munising Bay. Attractions are discussed earlier in 4.9.

### **4.12 Climate**

Weather data is currently collected at a weather station located in the downtown area. A weather station has been located in the downtown area dating back to 1911, and at its present location since 1987. The earliest weather reporting station in the area was established in Wetmore in 1896.

Lake Superior is a major factor in the local climate. 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. As ice builds on Lake Superior, the city experiences temperature variations similar to interior locations. The prevailing wind is westerly, averaging 9 miles per hour. The mean annual temperature from

1961-2007 was 54.8 degrees Fahrenheit. Winter's temperature mean is 29.1 degrees Fahrenheit. The summer's mean temperature is 75.3 degrees Fahrenheit. Recorded extremes are -30 and +101 degrees Fahrenheit. The area is renowned for the pleasant summer climate. Precipitation averages 31 inches per year. The snowfall average is 140 inches. The average growing season is about 107 days based on the average last freezing date of June 8 and average first freeze date of September 23.

#### **4.13 Issues and Opportunities**

The natural features of the city 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 city, and indeed continue to enhance the city's livelihood as it moves into the future towards a four-season recreational activity driven community.

The sandstone bedrock underlying the city has very good potential for high-yield wells.

Soil conditions in the city 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 city 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. The topography surrounding three sides of Munising Bay provides boater-friendly ingress and egress conditions for all kinds of water craft along the shoreline.

Because of soil and natural features found in Munising, new home development does not require flood insurance.

## **5.0 LAND USE**

### **5.1 Land Use Patterns**

The city of Munising's pattern of land use has evolved over time due to economic necessity and attention given to quality of life. Trade routes were established along natural features such as lakes and streams to provide necessary economic linkages. Settlements were founded near active points of commercial activity.

A good portion of the city's development occurred in the years between 1896 and World War I. The Municipal Building (now City Hall) was built during a boom period that occurred from approximately 1896 to 1902. The courthouse and the Munising Paper Company mill (now Neenah Paper) were constructed in the same period. As many as 25 sawmills operated in the area during this time. Tannery operations were also plentiful, due to the area's abundance of hemlock trees, commonly used in the tanning process.

Natural features and cultural influences were also important determinants of how land was developed and used. The presence of rock outcrops and swampland was deemed not conducive to establishing settlements. Cultural influences are manifested in the types of buildings erected, local commercial practices and community activities.

Low density development that starts at the edges of cities and towns and spreads outward is referred to as "sprawl." Post World War II development has seen traditional urban development give way to low density urban and suburban growth. Development of this kind is often poorly planned, automobile-dependent, and designed without regard to the impact on the surrounding areas or the economic costs associated with building a new infrastructure. In addition to consuming a great deal of land, sprawl impacts traffic congestion and air quality, the economic health of downtown areas and the overall character of a community. To some degree, governmental policies and practices encourage sprawl because of requirements regarding lot size, setbacks, etc. The effects of land use patterns of this type should be incorporated into the city's planning efforts.

### **5.2 Factors Affecting Land Use**

Decisions determining a specific land use can be initiated from a number of sources: home buyers, developers, land speculators, commercial interests, or governmental entities. Home buyers and commercial interests tend to base decisions on location. Factors such as access, available public and private services, and the qualities of surroundings are often important as well. Speculators may purchase, hold, or sell property based on an anticipated future return on investment. Land developers attempt to anticipate the supply

and demand aspects of the housing, retail, commercial and industrial markets to gain financially. To be successful, speculators must accurately assess the type, size and timing of developments.

Owners of business and industrial concerns make decisions to start, expand, or close their operations based on economic probability. Many factors may be considered in determining economic feasibility such as supply and demand for the goods or services produced, adequacy and cost of transportation, and site availability. Local decisions have a bearing on all of these factors.

Local units of government have been granted authority through various laws and regulations to deal with land use issues. These legal tools allow federal, state and local governments to consider the overall compatibility and appropriateness of development and land use.

The federal government exercises a number of responsibilities that affect land use through various loan and grant programs for community facilities, water and wastewater systems, housing, economic development, and planning. Federal regulations also address environmental concerns, such as air quality, drinking water standards, etc. Although these programs and regulations do not usually directly affect land use and development, they have a significant indirect effect. For example, a community which lacks sufficient sewage disposal capacity to serve industrial uses may be able to obtain federal funding to assist with expansion of its sewage treatment facility, which in turn, may lead to industrial development.

The role of the state has traditionally been limited to providing enabling legislation for local units of government to regulate growth and development through planning and zoning. Michigan does, however, regulate land use and development in regions of environmental concern including wetlands, floodplains and coastal areas. This can directly affect local land use decisions. The state also enforces standards for municipal water systems and wastewater treatment systems, which are at least as strict as federal standards. These regulatory standards influence a community's ability to provide water and wastewater systems, as well as their user rate structures.

Local governments utilize zoning ordinances, subdivision regulations, building codes, and public investment in infrastructure to influence land uses. Infrastructure investments include water and wastewater systems, roads, parks, etc. Local planning efforts which 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. 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 habits, and consumer 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 shopping habits, housing preferences, employment patterns, and leisure time activities. From a land use standpoint, some of the pertinent issues are the preferences for larger homes situated on larger lots, 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 a portion of the year.

The transportation system that serves a community determines how efficiently raw materials and finished goods can be received and shipped. This is a critical issue for many business enterprises. The expanding network of highways in the nation, along with the growing number of private automobiles, has enabled residents of rural areas to commute to larger communities for employment, shopping and services that may not be available in their local area. In addition, the road system has increased the accessibility of many areas to tourists. Developments such as shopping centers, strip commercial areas and suburban residential areas have emerged as individual mobility has increased.

Taxation and land values play a part in many land use decisions. Families may move from urban areas because they are willing to trade off lower taxes and user fees for fewer municipal services and increased distance from employment, shopping, and schools. Land may be less expensive in rural areas, making residency decisions more attractive. 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 of concentrations of population rather than in very rural areas. Tax rates and land values are important considerations for businesses as well.

Technological advances such as computer networking, cellular telephones, facsimile machines, voice mail, teleconferencing (including video), and electronic mail, provide businesses with location options which were previously not practical. Often the quality of life associated with these rural locations is an additional attraction.

### **5.3 Current Use Inventory**

The Michigan Resource Information System (MIRIS) provides comprehensive information on land cover/uses. The analysis based on 1978 aerial photos supplemented with field verification, was completed in 1989. Continuation of the inventory process is enabled through PA 204 of 1979 that calls for Michigan's landscape to be identified, classified and mapped every five years. This updating, however, has not occurred. The information presented in this

section has been obtained by analyzing the MIRIS data in combination with a recent land use map for the city. Precise acreage by category within the city is presented in Table 5-1 and on Map 5-1 and Map 5-2. Land use patterns are described in seven broad categories, each containing subcategories for more precise classification.

**Urban and Built Up:** Land areas that are used intensively and largely covered by structures are classified as urban or built up. This category includes 688 acres, or about 20 percent of the city's land area. Most of the residential, commercial and industrial land use in the county is found in this category. The intense type of use within this category has the greatest potential to adversely impact the environment. Urban and built up lands make up 20.4 percent of the city's total. The 688 acres represent the second largest category of land use. By comparison, Alger County contains nearly 5,000 acres of urban and built up land constituting less than 1 percent of the county's land area.

The majority of the urban and built up land in the city of Munising is used for residential purposes. According to the 2000 census, 42.2 percent of the city's housing stock was constructed prior to 1950. A vast majority of the housing in Munising, 83.7 percent, consists of single-family dwellings. Many of these homes are located on small lots, with little space separation between buildings. Vehicular parking is limited due to the small lot sizes. Additional urban and built up lands in the City include commercial, industrial, transportation, utility, and outdoor recreation areas that are discussed later in the chapter.

Changing lifestyles have had a dramatic effect on land use patterns nationally. Mobility is greater than at any previous time, families are smaller, and life expectancies have increased. These changes are reflected in shopping habits, housing preferences, and employment patterns. From a land use standpoint, some of the pertinent issues are the preferences for larger homes situated on larger lots, 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 a portion of the year.

**Forest:** Slightly more than 75 percent of the city's land area, or 2,540.6 acres, is classified as forest. Forest land is defined as lands that are at least 10 percent stocked by forest trees of any size, or formerly having such tree cover, and not currently developed for non forest use. Much of the city's forest land is in corporate ownership.

The predominant forest cover type in the city is northern hardwoods (sugar and red maple, elm, beech, yellow birch, cherry, basswood and white ash). Northern hardwoods comprise 89 percent of the forest cover types. Aspen,

white birch and associated species comprise about 8 percent of the total with the remaining forest cover identified as pine, lowland hardwoods and lowland conifers.

**Agricultural:** Broadly defined as lands which are used for the production of food and fiber, only 8.4 acres are in this category representing less than 1 percent of the total land area.

**Wetlands:** About 13 acres are categorized as wetlands in the city, or less than 1 percent of the total land area. Wetland areas exist along and near the M-28 corridor adjacent to the Anna River (reference 4.7).

Wetlands are defined as those areas between terrestrial and aquatic systems where the water table is at, near or above the land surface for a significant part of most years, and include marshes, mudflats, wooded swamps and wet meadows. There are several classifications of wetlands in the inventory. Those identified in the city are considered wooded wetlands which are dominated by trees more than 20 feet tall. The soil surface is seasonally flooded with up to 12 inches of water. Several levels of vegetation are usually present, including trees, shrubs and herbaceous plants. Ash, elm, red maple, cedar, black spruce, tamarack, and balsam fir are the most common tree species present.

**Nonforested:** These are open or range lands characterized by grasses and shrubs, but not including those lands showing obvious evidence of seeding, fertilizing or other agricultural practices. Nonforested lands comprise nearly 3 percent or 92.1 acres of the city's land area.

**Water:** Less than 1 percent of the city is classified as predominately or persistently water covered. Streams, impoundments and lakes are included in this category.

**Barren:** About 5 acres of barren land can be identified within the city, or less than 1 percent of the total land area. These lands have limited ability to support life and little or no vegetation. Beaches and riverbanks are included in this category.

Category	Acreage	Percentage of Total Acreage
<b>Urban and Built Up Lands</b>	688.0	20.55
Residential	432.0	12.9
Commercial	147.0	4.39
Industrial	73.0	2.18
Transportation	8.0	0.24
Outdoor Recreation	28.0	0.84
<b>Agricultural</b>	8.4	0.25
Cropland	0.4	0.01
Permanent Pasture	8.0	0.24
<b>Non Forested Lands</b>	92.1	2.75
Herbaceous Openland	46	1.37
Shrubland	46.1	1.38
<b>Forest Land</b>	2540.6	76.49
Northern Hardwoods	2262.0	67.6
Aspen, White Birch, etc.	201.0	6.0
Lowland hardwoods	12.6	0.38
Pine	20.0	0.60
Lowland Conifers	45.0	1.34
<b>Water Bodies</b>	1.0	0.03
<b>Wetlands</b>	13.0	0.39
<b>Barren Land</b>	5.0	0.15
TOTALS	3348.1	100.0

Source: Michigan Resource Information System/Munising Current Land Use Map, 2006.

#### **5.4 Residential Land Use**

Discussion of residential land use includes single-family, multi-family dwelling units, and mobile homes. According to 2000 census data, there are 1,254 total housing units in the city of Munising. 72.3 percent of the total housing units are designated as single-family homes. Comparisons with other central Upper Peninsula cities show similar use percentages and are presented in Table 5-2. The city of Marquette exhibits a much lower single-family unit percentage, likely due to the increased need for rental units for university students.

City	Total Housing Units	Single-Family Units	Percent of Residential Units Designated as Single-Family Units
Munising	1,254	907	72.4
Escanaba	6,250	3,849	61.6
Gladstone	2,284	1,769	77.5
Iron Mountain	3,816	2,968	77.8
Ishpeming	3,207	2,098	65.4
Manistique	1,611	1,212	75.2
Marquette	8,398	4,470	53.3
Negaunee	2,069	1,443	69.7

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

Housing units are concentrated in the area as far west as Walnut Street to M-28/Cedar Street on the east and from Munising Bay extending to the hilly terrain that lies in the range of 600 to 3,000 feet inland. Most of these homes are well-maintained and capable of serving their original use, while some of the homes no longer satisfy the preferences of homebuyers in a competitive market. The residential units located in this area typically occupy small lots with very limited yard areas and scant space for off-street vehicular parking. Very few residential units located in this area include either attached or detached garages or other accessory structures. While keeping these homes occupied has not yet become a problem, smaller, older homes may slowly convert to rental stock and may not be maintained with the level of pride that accompanies home ownership. Developers and prospective home owners may recognize an opportunity to convert the land occupied by one or two houses to support new housing, resulting in direct replacement.

The city's lone mobile home park is located between Bell Avenue and Sheridan Avenue on the east side. The park contains approximately 30 units.

Publicly-funded apartment developments are located in various parts of the city. Jericho House (formerly the Sacred Heart School) includes 15 single bedroom units for elderly residents. Lakeshore Manor, a facility designed for elderly tenants, includes 56 single bedroom units and two units with two bedrooms. Additionally, the Hillside and Bay View complexes contain a total of 16 two and three bedroom units. The Windjammer Apartments on Center Street include 24 one and two bedroom family units.

A condominium development is located on the waterfront in the area of the Old Timber Dock. The development, known as West Bay Condominiums, includes

10 two-bedroom units. Garages for each unit are provided in two detached facilities. There has also been new condominium development on East Munising Avenue.

Other recent condominium development has occurred along Connors Road on the city's eastern boundary with Munising Township. Residences located on the west side of Connors Road bear Munising Township fire numbers although located within the corporate city limits. Due to the meandering nature of the boundary, an agreement to use Munising Township's fire numbering system was implemented to minimize confusion for emergency responders.

A discussion of development trends adjacent to the city is presented in 5.11.

### **5.5 Commercial Land Use**

Lodging facilities, restaurants, bars, retail establishments, professional offices, gas stations, etc. are commercial uses of land. Also included are neighborhood (secondary) businesses and institutional buildings, grounds, and parking lots. Secondary businesses are located on major streets and are surrounded by noncommercial uses. The institutional category includes education, government, religious, health and correctional facilities and related grounds. Approximately 147 acres of commercial land use were identified within the city.

The primary commercial area/central business district includes about 95 acres and extends generally from Spruce Street on the west to Cedar Street on the east and between Onota Street and the developments along the north side of Munising Avenue. Additional commercial development has occurred along M-28 east of Cedar Street, along M-28 west in the vicinity of Brown's Addition, and along the east side of Munising Bay northward from the Neenah mill. Businesses that located along M-28 east sought the benefits of maximum daily traffic flow and the larger land parcels that were available. This corridor is heavily traveled and presents a growing safety concern.

A variety of new businesses have opened within the last five years, including: Cellular One, Kelly Marketing, a new chiropractic office, a craft shop on Maple Street, the Salvation Army, and the Munising Area Partnership for Development.

### **5.6 Industrial Land Use**

The majority of the city's approximate 72 acres of land used for industrial purposes is owned by Neenah Paper and is contiguous to their paper manufacturing facility on Munising Avenue. About 8 acres belonging to the Upper Peninsula Power Company is located along the southern border of Neenah Paper's property.

The city's 37-acre industrial park is located in Munising Township approximately 1.5 miles southeast of the city limits. The industrial park is currently occupied by seven local businesses and one site is being utilized for storage. The Munising Industrial Park Board regulates the industrial park.

### **5.7 Public and Quasi-Public Land Use**

Public land uses in the city include parks, public buildings, schools and tracts of land in public ownership. Many of these uses are discussed in later chapters of this plan dealing with community facilities and recreation.

The city holds title to a considerable number of platted parcels, many of which are not conducive to development due to their size and/or access difficulty. Property numbers from the July 2007 index by taxpayer lists 82 property numbers as city-owned. Potential uses and disposition of these platted parcels have been under review by the city. Two tracts of unplatted property located on the city's west side have been designated for sale. Sale of these properties could result in additional residential development.

Generally, public buildings do not occupy large land parcels. Land use issues in these instances pertain mainly to traffic and parking.

Churches and other privately-owned facilities that are generally open to the public are examples of quasi-public land uses. These types of facilities generate traffic on a seasonal, occasional or intermittent basis and contribute to the quality of life within communities and neighborhoods. There are ten churches in the Munising area.

### **5.8 Contaminated Sites**

The Michigan Department of Environmental Quality maintains a current listing of environmentally contaminated sites statewide. Leaking underground fuel storage tanks have become a concern throughout the country in recent years. Many fuel tanks that complied with guidelines enforced at the time of installation have deteriorated, leaking fuel into the surrounding soil. There are nine sites within the city currently on the DEQ's Leaking Underground Storage Tanks (LUST) listing. An open LUST site is a location where a release has occurred from an underground storage tank system and where corrective actions have not been completed to meet the appropriate land use criteria. The LUST sites identified by the DEQ are presented in Table 5-3.

Site Identification Number	Site Name	Location
00035154	Bob's IGA-Munising	127 W. Superior Street
00012675	Holiday Stationstore #155	301 E. Munising Avenue
00005475	Klosowski Oil	109 E. Munising Avenue
00039169	Lamourias Body Shop M-28	601 W. Munising Avenue
00034475	Munising DPW Garage	131 W. Munising Avenue
00008487	Nelson Oil of Munising Inc.	203 E. Munising Avenue
00034245	Superior Shell Munising	401 E. Hwy-28

Source: Michigan Department of Environmental Quality, 2007.

### **5.9 Land Ownership**

A substantial amount of the developed land within the city is exempt from local property taxation due to its public ownership. This includes some of the most valuable property along the lakeshore and affects the city's ability to maintain infrastructures and services.

About 1,100 acres located in the forested upland areas of the city are owned by Heartland Forest Products. Currently, these lands are used for timber production only and are zoned within the "Deferred Development District". This area has been renamed the Heartland Forest Estate. The stated intent of this designation is to preserve larger parcels, limit unplanned and intensive development until utilities and services can be provided, and maintain the area's natural features.

Large parcels located within Sections 1, 3, and 34 were first leased and later deeded to the city by the Cleveland-Cliffs Iron Company in 1974 (Liber 90, page 528) for recreational purposes. The lands were commonly referred to as the "green belt" and contained deed restrictions that prohibited conveyance or leasing to a third party, commercial tree cutting, and the erection of buildings or other structures. These restrictions were waived in a subsequent quit-claim deed executed in 1992 (Liber 140, page 199).

Ownership, in combination with topography, poses severe limits on land development. Essentially, development is sandwiched between Lake Superior and the steeply wooded hills that lie inland. Development is limited to approximately 20 percent of the city's 5.4 square miles.

A proposal to annex 18.5 square miles of adjacent land in Munising Township was filed in 1972 as part of an overall development plan. Hanley Airport, Maple Grove Cemetery, the sanitary landfill and the industrial park were included in the proposed annexation. The State Boundary Commission ultimately denied the proposal stating that the plan's feasibility was not

adequately supported. Earlier versions of the annexation proposal included contiguous portions of Grand Island Township, Grand Island and Wood Island in addition to portions of Munising Township.

A second annexation was pursued in 1989 and 1990 involving a smaller land area of Munising Township. It was met with considerable opposition and was not approved. There have been no recent attempts at annexation.

The National Park Service holds title to 675 acres within the city that are part of the Pictured Rocks National Lakeshore. This represents 20 percent of the city's total acreage. An additional 61 acres, or nearly 2 percent, of the total city acreage are situated within the inland buffer zone of the Pictured Rocks National Lakeshore. These 61 acres are not owned by the National Park Service. Use of these lands and waters is, however, governed by provisions of the city's Zoning Ordinance (Section 313) which are specific to promoting protection of the natural resources of the Pictured Rocks National Lakeshore.

### **5.10 City Ownership**

In addition to the properties cited in 5.7 and properties used for public purposes, the city owns a considerable amount of land outside of its boundaries in Grand Island and Munising Townships. A discussion of these properties follows.

#### **Grand Island Township**

The city of Munising maintains ownership of 142.18 acres in Grand Island Township. Presently, a portion of the area is developed as a park (Tourist Park) with 92 campsites and picnic facilities. Modernization of the facility is planned for 2008 and is further discussed in Chapter 8.3.

Prior to 1980 all of the city's water supply was drawn from Lake Superior at a point about 1 mile east of Christmas. Pumping and chlorination equipment was housed in a building near Lake Superior at the present-day Tourist Park. Faced with building a filtration plant or converting to a well supply system, the city chose the latter. Groundwater supplies now serve as the sole public water supply source. The conversion began in 1980 and was completed in 1990 resulting in the closure of the pumping station.

#### **Munising Township**

Maple Grove Cemetery is located on an 80-acre parcel on Lehnen Road.

The Industrial Park is situated on a 37-acre parcel on Industrial Park Road. The park was originally proposed in 1973 following acquisition of the land for \$30,000. It became a reality in 1979 with the assistance of a variety of federal grants at a cost of about \$1,090,000.

In addition to the eight tenants currently located at the facility, one of the city's four water storage tanks is located here. The facility is connected to municipal water and wastewater systems.

Alger County Maximum Security Correctional Facility is located immediately to the west of the industrial park and is also connected to the city's water and wastewater systems.

### **5.11 Land Use Trends**

Despite experiencing a population decline over the past 50 years of nearly 42 percent, the community has not experienced widespread deterioration in existing housing or commercial development.

Development has been limited by the availability of suitable land of sufficient parcel size. Recent commercial development has occurred along the M-28 corridor north of the Anna River where traffic volume is greatest and larger land areas were available. A variety of businesses have located in this area.

Neighboring townships have experienced considerable residential development. A substantial amount of development has occurred in the areas outside of subdivisions, such as in the areas along and around Miller Road, where large lots allow for spacious yards, garages and housing that is typically larger than 1,500 square feet.

Considerable commercial development associated with tourism has occurred east and west of the city.

Growth, as measured in terms of state equalized valuation (SEV) is shown in Table 5-4 for all governmental units in Alger County. SEV is the assessed value as finalized by the county and state equalization process. In most municipalities the SEV is the same as the assessed value for the property. The city of Munising's SEV in 2007 was \$63,577,250, a 23.5% increase since 2000. Munising's SEV accounts for 14.6 percent of the total for Alger County. Of the surrounding communities, Munising Township experienced a similar SEV growth rate during the period of comparison.

**Table 5-4**  
**State Equalized Valuations, Alger County, 2000 and 2007**

Jurisdiction	2000 SEV Real Property	2000 SEV Personal Property	2000 Total SEV	2007 SEV Real Property	2007 SEV Personal Property	2007 Total SEV	Percent Change 2000- 2007
City of Munising	\$46,175,900	\$12,573,100	\$58,749,000	\$63,577,250	\$13,174,680	\$76,751,930	23.5%
Au Train Township	\$41,487,600	\$1,953,100	\$43,440,700	\$78,042,507	\$1,757,200	\$79,799,707	45.6%
Burt Township	\$28,670,900	\$617,600	\$29,288,500	\$58,264,350	\$695,250	\$58,959,600	50.1%
Grand Island Township	\$1,762,300	\$284,000	\$2,046,300	\$4,759,400	\$253,400	\$5,012,800	59.2%
Limestone Township	\$12,370,400	\$278,000	\$12,398,200	\$21,684,920	\$362,000	\$22,046,920	43.8%
Mathias Township	\$15,536,400	\$587,500	\$16,123,900	\$28,457,900	\$565,100	\$29,023,000	44.4%
Munising Township	\$51,973,000	\$5,344,300	\$57,317,300	\$83,678,785	\$6,397,916	\$90,076,701	36.4%
Onota Township	\$18,873,500	\$252,000	\$19,125,500	\$56,106,350	\$318,800	\$56,425,150	66.1%
Rock River Township	\$22,413,100	\$1,744,500	\$24,157,600	\$41,166,400	\$1,495,500	\$42,661,900	43.4%
Alger County	\$239,012,900	\$23,634,100	\$262,647,000	\$435,737,862	\$25,019,846	\$460,757,708	43.0%

Source: Alger County Equalization, 2007.

## 5.12 Issues and Opportunities

Munising has a relatively low population density but future residential development within the city is constrained by rugged terrain. A strong demand exists for large lot sites and large dwellings. New single-family homes are typically situated on larger parcels and often include more than 2,000 square feet of living area. Future development sites located in the St. Martin's Hill area have the potential to provide larger lots that buyers are currently seeking.

Land suitable for commercial development is limited within the city. The opportunity exists to reuse existing abandoned buildings for redevelopment. Reuse of abandoned buildings reduces the risk of blight and loss of investment within the community. Redevelopment in existing residential and commercial areas has resulted in major improvements to formerly dilapidated structures.

While about 20 percent of the city's total land area is intensely developed, 75 percent is in forest land with the remaining 5 percent considered marginal for intense development. The majority of the city's forest land is corporately owned.

The city's 6.7 miles of shoreline with rugged hills inland some 600 to 3,000 feet have brought about limited development within the expanse of the city.

The city owns a large number of parcels that are not currently generating property tax revenues. Typically, these parcels are limited for use due to size or rugged terrain. A thorough evaluation of potential uses for these parcels would be beneficial.

Significant commercial development has occurred in the southeastern portion of the city. A number of commercial establishments have undergone upgrading in recent years.

Land use decisions can have a profound effect on virtually every aspect of a community's future. The concept of sustainable land use, or managing land use in such a way that current needs are met without compromising the needs of future generations, is gaining favor.

## **6.0 COMMUNITY FACILITIES AND SERVICES**

### **6.1 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 comprehensive planning effort, Munising's services and facilities are described and evaluated as to their present condition and adequacy to meet present and future needs of the city. Map 6-1 identifies major community facilities in the city, as well as city-owned facilities located in the townships of Munising and Grand Island.

### **6.2 City Facilities and Services**

#### **City Hall**

The Municipal Building, located at the northwest corner of Elm Avenue and Munising Avenue, was constructed during a boom period in 1896 at a cost of \$15,000. It originally housed the First National Bank of Alger County. Located along with the bank on the first floor was the city post office. Over the years, the second floor has been used as office space for doctors, dentists, lawyers, newspaper reporters, radio station operators and employees of various county departments. A lower level is used primarily for storage. Each level contains about 2,900 square feet of floor space.

Following occupancy of a new facility across the street, the First National Bank of Alger County donated the site to the City in 1975. The building was placed on the State Register of Historical Sites by the Michigan Historical Commission in 1976 at the city's request. Besides affording the building protection from demolition, the city hoped the special status would be helpful in obtaining grant money for extensive restorative work.

The Municipal Building has undergone several upgrades within the past five years. The roof has been repaired and the entire building now has wireless internet capability. A barrier-free restroom is situated on the same level as the meeting room and the building has a barrier-free ramped rear entrance.

The building houses offices of the manager and clerk on the ground floor. The treasurer's office is also located in the Municipal Building. The City Commission and other municipal bodies meet in the larger of two conference rooms. All elections are also held in the Municipal Building.

## **Police Department**

A municipal police force of four officers and a chief provides 24 hour service within the city. The department station occupies about 600 square feet of space on the first floor, west side of the Municipal Building. A main station room, an office for the police chief, and an evidence room are included in the facility. Ramping has been installed to provide accessibility. Three sport utility vehicles are provided for police work, one of which is equipped with four wheel drive.

Officers are cross-deputized to assist the Alger County Sheriff's Department in emergency situations. The city contributes a share of 50 percent to the county for equipment necessary to utilize the Law Enforcement Information Network (LEIN) system. All dispatch is handled by the Alger County Sheriff's Department using an enhanced 911 system.

Munising police officers are not assigned firefighting duties. One of the current officers has Emergency Medical Technician certification.

## **Fire Department**

Fire protection services are provided by a staff of 23 volunteer firefighters and one fire chief. Compensation for firefighters is \$15.00 per hour for all calls.

Fire trucks include a 1999 Pierce Saber Custom pumper, 2002 Pierce Contender pumper and a 2000 Ford F350 4x4 utility/brush truck.

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.

The city's assigned fire insurance rating is a combined six/nine 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. Fire insurance ratings for the city, neighboring townships and other cities in the region are presented in Table 6-1.

<b>Table 6-1</b>		
<b>Fire Protection Classification, Selected Areas</b>		
Local Governmental Unit	Classification	Comments
City of Munising	6/9	None
Au Train Township	9/10	Protected by Au Train Township (Au Train & Christmas Fire Stations) and Rock River Township (Chatham Fire Station). Au Train Township provides protection for Grand Island Township.
Grand Island Township	9/10	Protected by Au Train Township (Christmas Fire Station). Rating applies to mainland portion of the township only. Class 10 applies to Grand Island due to all areas beyond 5 road miles of the fire station.
Munising Township	9/9	Protected by Munising Township Fire Department.
City of Escanaba	6	None
City of Gladstone	6	None
City of Manistique	7	None
City of Marquette	5	None

Source: Insurance Services Office, Inc., 2007.

The fire station is located in the former Public Works Building. The facility (fire station and former public works portions) was constructed in 1939 and is considered to be in “poor” condition. Much of the facility must be accessed by steps or stairs and, therefore, is not barrier-free. The city is considering the complete replacement of the fire hall, as the cost of an overhaul and upgrade would exceed the cost of a new facility.

Mutual aid agreements currently exist between the city of Munising Fire Department and the fire departments of the surrounding townships. 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**

The Department of Public Works (DPW) encompasses a wide array of city services which include the repair, maintenance, sweeping and snow plowing an average of over 250 inches of snow annually. The DPW also performs gravel street maintenance, pavement marking, pavement patching, sidewalk plowing, downtown street light replacement, downtown seasonal decorating, restoration

of utility excavations and annual residential spring and fall compost collections city wide. The DPW performs the grounds keeping, refuse collection and moving for the entire City tot lots, Bayshore Park, Brown's Addition boat launch and approximately ten miles of right-of-way in the city. In addition to all of these duties, DPW maintains the grounds, nonpotable water supply and burials at the Maple Grove Cemetery.

The Department of Public Works has moved out of the building it shared with the Munising Fire Department and into a building in the Munising Industrial Park. Twelve trucks are stored in the public works facility in addition to smaller equipment such as welders, mowers, etc. Heavy equipment such as the city's grader, front end loaders, and backhoes are stored outside. The DPW employs seven staff members as well as the department director.

### **Wastewater Treatment Plant and Sanitary Sewer System**

The city's first primary treatment plant was constructed in 1959 just south of Munising Avenue between the Wisconsin Central, Ltd. trackage and the Anna River. As a part of the same project, the Anna River and Tannery Creek pump stations were constructed, as well as a septic tank to serve the Brown's Addition area. The current facility was constructed in 1973 and expanded in 1990 to accommodate service to the Alger Maximum Correctional Facility.

Operated by a staff of four, the plant has a rated capacity of .933 million gallons per day of activated sludge. Current unused capacity is in the range of 200,000 to 300,000 gallons daily. User rates are currently \$8.17 per thousand gallons plus a \$2.18 per month fixed charge.

In 2008, the wastewater treatment plant is scheduled for a \$3.7 million dollar upgrade. Plans for the upgrade include: an oxidation ditch, UV disinfection, a new headwork fine screen, a new grit removal system, four new pumps, an upgrade to the laboratory, and a new Supervisory Control and Data Acquisition (SCADA) system to monitor and control the wastewater treatment plant. The proposed improvements should prolong the current plant's use for an additional 20 years, with added improvements continuing over that time period.

The Water Distribution/Sewer Collection Department maintains over 35+ miles of water main, 25 miles of sanitary sewer mains and 20 miles of storm sewer mains. Two employees respond to sanitary sewer backups, water leaks, ditching and storm water drainage problems. They repair broken mains, structures and appurtenances relating to the city's portion of these systems according to state and federal guidelines. They also service and maintain over 1,000 water meters and exercising the 100+ water main valves and hydrants in the system. A \$9.5 million dollar water main, sewer and storm sewer upgrade is also scheduled for 2008.

The Water System Foreman and the Director of Operations are the MDEQ licensed operators for the city's water distribution system. This department also performs all the Miss Dig utility staking requests within the city, cross connection inspections, a submission of the required reports to MDEQ for compliance purposes. Site plan review for replacement, installation and/or repair of water, sanitary and storm sewer is also reviewed and inspected by the water department. During the winter month this department may also be called upon for thawing water mains and services laterals outside homes throughout the city. The water distribution department's primary goal is continuing to supply safe water to all of the city's water utility customers.

Sanitary wastewater and storm sewer systems are separate. There are still portions of the wastewater collection system that carry both - some of which is due to the infiltration that occurs due to the poor condition of distribution lines. In order to reduce total infiltration levels, the 2008 upgrade will also include grouting and replacing existing lines. The volume of infiltration and/or inflow is estimated to range from 300,000 gallons per day during dry periods to 600,000 gallons per day during wet periods. System improvements were completed along Superior Street in 1999, reducing inflow by about 100,000 gallons per day. The improvements scheduled for the 2008 upgrade should further reduce inflow.

Some areas of the City are not connected to the sewer system and use on-site septic systems. This arrangement is permitted if the dwelling is located more than 200 feet from the existing infrastructure. Those areas north of the hospital, along Connors Road, Cemetery Road, St. Martin Road, Gage Road and West Shore Drive are using on-site systems.

Results of a survey completed by the Michigan Department of Environmental Quality are presented in Table 6-2. In terms of user costs per 5,000 gallons, the city of Negaunee was the most expensive at \$44.55. The least expensive user cost in this comparison was the system serving the cities of Iron Mountain and Kingsford at \$5.50 per 5,000 gallons. The average among the communities in this comparison was \$25.01. The rate per 5,000 gallons for the city of Munising was \$43.03.

### **Public Water Supply System**

Six wells with a capacity of 1,180 gallons per minute are augmented by four storage tanks located in various parts of the city. Four wells provide drinking water to approximately 1,100 metered customers within the city. Two wells are located at the industrial park and serve Alger Maximum Security Correctional Facility as well as the industrial park. Some areas of the city are served by private wells. These are the same areas described in the foregoing discussion of the city's sewer system, except that city water service is available in areas north of the hospital along Sand Point Road.

Water customers currently are charged \$2.79 per thousand gallons used plus a fixed charge of \$15.85 per month. Water system use rates and characteristics vary widely among communities. From 2003 data compiled by the Michigan Department of Environmental Quality, residential water supply information is presented in Table 6-3. Based on typical household consumption of 5,000 gallons per month, Munising customers will pay \$29.80. Typical household consumption (5,000 gallons per month) costs ranged from a high of \$49.70 in the city of Negaunee to a low of \$6.90 in the Village of Newberry. The average monthly cost per 5,000 gallons among the communities shown in Table 6-3 was \$23.94.

In addition to improving the wastewater treatment plant and sanitary sewer system for city residents, taxes for residents will be lowered, due to the elimination of a 4 ½ mil levy.

<b>Table 6-2</b>					
<b>Wastewater User Rates, Selected Communities</b>					
Community	Population	Fixed Charge	Cost Per 1,000 Gallons	Cost Per 5,000 Gallons	Year of Last Upgrade
<b>City of Munising</b>	<b>2,539</b>	<b>\$2.18</b>	<b>\$8.17</b>	<b>\$43.03</b>	<b>2008</b>
Baraga & KBIC	1,300	\$18.00	\$0.00	\$18.55	1991
City of Bessemer	2,148	\$14.15	\$3.95	\$33.90	1998
Village of Chatham	138	\$17.00	\$0.00	\$17.00	1993
City of Crystal Falls	1,900	\$24.00	-	\$31.75	1999-2001
Village of Detour	460	\$13.35	N/A	\$13.35	None
City of Escanaba	14,000	\$3.58	\$1.51	\$11.13	1999
Forsyth Township	2,022	\$14.00	No	\$14.00	2001
City of Gladstone	5,200	\$7.50	\$2.56	\$20.30	Continuously
Iron Mnt. & Kingsford	15,000	No	\$1.10	\$5.50	1980
City of Ironwood	6,200	\$16.41	\$5.13	\$42.06	1994
City of Ishpeming	6,686	\$4.85	\$3.36	\$10.93	1984
Village of L'Anse	2,100	\$25.00	\$3.60	\$43.00	2002
City of Manistique	3,583	\$5.00	\$6.23	\$36.15	2000
City of Marquette	20,714	\$5.00	\$2.85	\$19.25	2007
City of Menominee	9,131	\$9.62	\$2.51	\$22.17	2003
City of Negaunee	4,576	\$23.55	\$5.25	\$44.55	1979
Village of Newberry	1,752	\$9.47	\$3.30	\$24.97	1999
Village of Ontonagon	1,769	\$10.00	\$1.70	\$18.50	1996
City of St. Ignace	2,900	\$15.00	\$2.93	\$29.65	2000
City of Stephenson	875	\$30.00	\$2.00	\$30.00	1997

Source: Michigan Department of Environmental Quality Survey, 2003.

Community	Population	Monthly Charge	Cost Per 1,000 Gallons	Cost Per 5,000 Gallons
<b>City of Munising</b>	<b>2,539</b>	<b>\$15.85</b>	<b>\$2.79</b>	<b>\$29.80</b>
Baraga & KBIC	1,300	\$24.00	\$3.55	\$24.00
City of Bessemer	2,148	\$16.00	\$3.50	\$33.50
Village of Chatham	138	\$17.00	\$2.96	\$19.96
City of Crystal Falls	1,900	\$25.00	\$0.67	\$25.84
Village of Detour	460	\$9.50	\$2.00	\$16.50
City of Escanaba	14,000	\$5.91	\$1.35	\$12.66
Forsyth Township	2,022	\$20.35	\$0.00	\$20.35
City of Gladstone	5,200	\$7.50	\$1.92	\$17.10
City of Iron Mountain	15,000	\$1.25	\$1.87	\$10.60
City of Ironwood	6,200	\$7.70	\$3.11	\$23.25
City of Ishpeming	6,686	\$12.60	\$6.30	\$31.50
Village of L'Anse	2,100	\$15.60	\$5.35	\$26.30
City of Manistique	3,583	\$8.00	\$4.62	\$31.10
City of Marquette	20,714	\$5.00	\$3.40	\$22.00
City of Menominee	9,131	\$4.28	\$1.83	\$13.43
City of Negaunee	4,576	\$16.50	\$8.30	\$49.70
Village of Newberry	1,752	\$4.60	\$0.46	\$6.90
Village of Ontonagon	1,769	\$10.00	\$6.50	\$32.50
City of St. Ignace	2,900	\$16.00	\$2.36	\$27.80
City of Stephenson	875	\$16.00	\$1.50	\$16.00

Source: Michigan Department of Environmental Quality Survey, 2003.

Water quantity and water quality are strong points of the overall system. Engineering reports indicate that there are inadequacies in the distribution system due to undersized water mains. Undersized water mains can lead to inadequate pressure for residential water services. The affected areas are located on the city's east and west sides. The undersized water mains are scheduled to be replaced during the 2008 upgrade project. Table 6-4 provides the location and other information regarding Munising's municipal wells.

Table 6-5 provides locations, capacities, and characteristics of city water storage tanks. Newer storage tanks are generally installed in-ground and are concrete. The cost of constructing and maintaining in-ground storage tanks is significantly lower than elevated storage tanks. In-ground tanks are also less susceptible to freezing.

Well #	Location	Depth	Area of Distribution
1	Harbor Area	168' Artesian	Citywide*
2	Harbor Area	175' Artesian	Citywide*
3	Varnum (near ice arena)	300' Artesian	Citywide*
4	Varnum (near ice arena)	297' Artesian	Citywide*
5	Industrial Park	158'	Industrial Park and Alger Maximum Correctional Facility
6	Industrial Park	158'	Industrial Park and Alger Maximum Correctional Facility

\*Fluoride added

Location	Capacity	Service Area	Construction Type
Brown's Addition Area	100,000 Gallons	Citywide	In-ground concrete
Brown's Addition Area	100,000 Gallons	Citywide	Steel standpipe
Athletic Field Area	400,000 Gallons	Citywide	In-ground concrete
Cox Addition Area	100,000 Gallons	Citywide	In-ground concrete
Industrial Park	200,000 Gallons	Industrial Park and Alger Maximum Correctional Facility	Elevated steel

### **Marina**

The city-owned marina is located at the northern end of Elm Street adjoining Bayshore Park. It contains ten transient slips and nine seasonal slips. The marina is capable of mooring boats of up to 30 feet in length with additional capacity of about 300 feet for broadside mooring. In addition, approximately 300 feet of usable space is available on the adjacent L-dock. Fuel (gasoline only), electricity (20, 30 and 50 amp), restrooms, showers, ice, grills/picnic tables, day-use docking and public parking are available. Transient boater fees are collected by the Marina Director. The city maintains a long-term contract with the Pictured Rocks Boat Cruises that allows the company to utilize the marina.

The city is currently working on a harbor upgrade study. The results of the study will potentially be used to obtain grant funds to expand the marina.

Bayshore Park recently installed an underground sprinkler system, planted flowers and added historical signage. Through local fundraising efforts, a new pavilion was completed in the park to better accommodate the city's seasonal

band concerts.

### **Parks and Recreation**

Recreational facilities and programs are discussed in detail in Chapter 8 of this plan.

Park facilities owned by the city include: an outdoor ice rink, Tourist Park in Grand Island Township, Bayshore Park, the ballfield at Brown's Addition, the tot lot at Brown's Addition, and the boat launching facility at Brown's Addition. In the summer of 2007, the city installed all new equipment at the Lynn street tot lot. Also in 2007, the city removed non-standard tennis courts from the Washington Street Park and replaced them with a picnic area and wooden deck overlooking scenic Munising Bay. This area was recently named Tannery Park.

The city is scheduled to receive grant money for an upgrade to the public boat launch area, to be completed in the summer of 2009. Improvements will include: new restroom facilities, repaving and new boat launches. A renovation and expansion of Tourist Park was completed in the summer of 2008.

A 97-acre recreation complex is proposed for property located on St. Martin's Hill. If the anticipated development is completed, the recreation complex would include multiple baseball fields, a soccer field, tennis courts, cross country skiing trails, a trailhead for a nonmotorized path and a concession area.

A bike path project has also been proposed which may extend from Munising Falls to the west end of Tourist Park. A portion of the bike bath is expected to be completed in 2009, with a portion of the funds coming from a Michigan Department of Transportation Enhancement Grant.

### **Alger Centennial Arena**

Located at Varnum and Park, the 24,000 square foot Alger Centennial Arena was constructed in 1985. Until 1995, the facility was weather-dependent, with a natural ice making capability only. With the installation of a compressor system, the facility affords a longer skating season with consistent ice surface quality. The ice sheet complies with established hockey standards. Open skate times are available during varying hours throughout the week.

During the months when no ice surface is being maintained, the facility is rented for large gatherings such as receptions, reunions, conventions, etc. The city has taken over management of the arena. The arena is in need of major renovations. Portions of the arena's operational funds are generated through rental charges, fundraisers and donations. The city absorbs any additional expenses or profits generated by the arena.

### **Solid Waste Disposal/Recycling**

Residential solid waste is collected each week on Tuesdays by Great American Disposal, a private company. Refuse bags of up to a 30 gallon capacity must have authorized city tags attached for collection. Tags may be purchased from the city. The per bag charge covers a portion of the city's cost for solid waste collection.

The frequency of commercial solid waste pickup is scheduled by the customer.

Recycling efforts are accomplished by volunteers, including city employees, the MSU Extension office, Hiawatha National Forest Service and the Pictured Rocks National Lakeshore Park Service. Materials acceptable for recycling include: corrugated cardboard, magazines, catalogues, newspapers and office paper. These materials are transported to Manistique Paper for recycling. Metals and many other materials are accepted at the Wood Island Landfill in Munising Township.

Yard waste (leaves, clippings, branches, etc.) may not be placed in regular landfills and are not collected by the city's disposal provider. City Public Works Department crews collect yard waste during the spring and fall. These materials are deposited on city-owned property adjacent to the cemetery in Munising Township.

A solid waste transfer station owned by Waste Management is located in the Industrial Park. 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.

### **Maple Grove Cemetery**

The city cemetery is located within an 80-acre parcel owned by the city in Munising Township. The existing masonry building was constructed in 1949 and contains a vault and storage area for equipment related to cemetery operations. Maintenance and sexton services are performed by city employees assigned to the Public Works Department. Administrative functions such as cemetery lot sales and record keeping are performed by the City Clerk.

Maple Grove Cemetery buildings have recently been repainted and other general maintenance is continuing. There is an ongoing fundraising effort to install a sprinkler system throughout the cemetery.

### **Industrial Park**

The city's 37-acre industrial park is located in Munising Township. It was established in 1979 and currently has six business entities located there. Originally, leases were executed for \$1.00 per year and ranged from three to 20 years in length. Lease terms and amounts have since changed to reflect "fair

market” value. 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 sights are active and one is being utilized for storage.

A voluntary certification program sponsored by the Michigan Economic Development Corporation (formerly the Michigan Jobs Commission) registers industrial parks meeting size, zoning, and other criteria as site-ready locations.

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. Each well is 158 feet deep. A three-phase power supply is also available at the industrial park.

### **Electrical Service**

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

### **Natural Gas**

MichCon, a subsidiary of DTE Energy, provides natural gas services within the city and to the Industrial Park.

### **Telephone Service**

Telephone service throughout the entire city 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 Alltel and AT & T.

### **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 throughout the entire city by Charter Communications.

### **Munising Area Partnership for Development, Inc.**

The Munising Area Partnership for Development, Inc. was organized in 2006 by

four participating members: The city of Munising, the Downtown Development Authority, Alger Chamber of Commerce and the Munising Visitor's Bureau, Inc. The mission of the organization is to promote and market the Munising area, attract small industry and commercial retail establishments and through tourism make the Munising area a destination place.

The organization has developed a website that is a source of economic development information and advocates area tourism. Area hiking and biking maps and lighthouse and waterfall maps have also been produced, promoting the region. Additional marketing pieces have been designed for promotion in accordance with the objectives of the organization, which include: natural wonders, tourism, economic growth and sustainability of business in the area.

### **6.3 County and Other Public Facilities and Services**

#### **The 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 Department, Extension Service, and Building Code Administration are located in the County Building.

#### **Sheriff's Department/County Jail**

The Alger County Sheriff's Department is composed of 12 full time and 4 part time officers who perform road patrol, jail and ambulance services. 2 temporary officers are also currently employed. Ambulance service is provided chiefly by trained volunteers who are compensated on a "per call" basis by the county.

The jail facility can house up to 27 inmates. A trustee wing includes 8 beds with the remaining 19 beds used for minimum, medium and maximum security prisoners.

#### **Michigan State Police Post**

Currently, one temporary and eight permanent troopers are assigned to this post with a geographical service area that includes all of Alger County and a portion of Schoolcraft County. The post is located next to the Munising District Ranger Station on Munising Avenue.

#### **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. 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 in the summer of 2008.

Altran has 21 employees, including 7 full time employees, 12 part time employees and 2 seasonal workers. A fleet of 17 buses provide demand-response service Monday through Saturday within Alger County between the normal operating hours of 5:30 am and 6:00 pm. 14 buses are lift-equipped vehicles. 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 2008, 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.

### **Alger County Animal Shelter**

Temporary housing for dogs and cats, as well as pet adoption services, is provided at the Alger County Animal Shelter located on East Munising Avenue. The nonprofit shelter organization is support by donations, fund-raising and assistance from both Alger County and the city. Currently the shelter is operated by about 14 volunteers.

The county-owned facility is situated on property leased from the city and can house between 15 and 16 dogs and 30-35 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. 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. Once the Washington School, the building has been renovated to capture the original design features. The main museum is barrier-free, with an elevator to all floors. 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 40 miles away, or from the Delta County Airport which is located approximately 65 miles from the City.

### **Munising Public Schools**

Student enrollment has fluctuated widely over the years from 1,788 in the 1962-63 school year to the current enrollment of 784 in 2007-08.

The high school building is located along the shoreline on M-28 west and was constructed in 1980. Grades 7-12 are housed in this 110,600 square foot facility. 390 students were enrolled in 2007.

Munising Elementary was built in 1960 and houses students in grades K-6. Enrollment for the current year, 2007, was 394 students. Enrollment also includes an early childhood program. The 45,500 square foot facility is located at 124 East Chocolate Street.

The Mather Building, 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 former school is now comprised of the school district administrative offices and several other commercial offices.

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

The first renovation stage of Mather Auditorium has been completed. Continuing renovations are planned. Mather Auditorium is a publicly utilized facility, offering the community the opportunity for theater productions, concerts, awards ceremonies and a movie house.

### **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 45 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.

### **Post-Secondary Education and Training**

The campus of Northern Michigan University is located approximately 40 miles away in the city of Marquette. Lake Superior State University is located in Sault Ste. Marie, about 120 miles east of the city. Bay de Noc Community College in Escanaba is located about 60 miles southwest of the city. 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.

## **Hospital**

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 incorporate 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, Fluoroscopy, 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 will be moved into new building, allowing easier patient access and includes a new and updated gym. There will be 4 treatment rooms and a hydrotherapy room.
- The new Emergency Room will be 3 times the size of the old facility. The ER will include a walk-in area, 3 private exam rooms and a 3-bay trauma room. The new building has also allowed for an enlarged ambulance garage. The 2-bay garage also includes a decontamination area.
- Two conference centers can be used for support groups, educational programs and administrative meetings.

Bay Care Medical Center will be 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. Senior housing is also being built. The construction of 6 duplexes on the lakeshore will begin in the spring of 2008. Plans for the 12 units are to be 2 bedroom-1 bath homes with a one-car garage included.

### **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 federal agencies, state and local governments, nonprofit corporations and community development organizations. It was recommended that the Munising Range Lights Station be 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. 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 8 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 8.

### **Community Services**

In addition to the facilities and services discussed in the preceding, various local agencies serve the community by providing specialized services. Table 6-6 provides a brief description of some of these agencies.

<b>Table 6-6 Community Agencies, Munising Area</b>			
Agency Name	Type of Service(s)	Location/Phone	Website (if available)
Alger County Builders Exchange	Proposed Construction Information	501 East M-28 906.387.2138	N/A
Alger County Chamber of Commerce	Business and tourist information	501 East M-28 906.387.2138	<a href="http://www.algercounty.org">www.algercounty.org</a>
Alger County Commission on Aging	Information and referral	413 ½ Elm Avenue 906.387.2439	N/A
Alger County Heritage Center	Historical records and displays	1496 Washington Street 906.387.4308	<a href="http://www.hsmichigan.org/munising">www.hsmichigan.org/munising</a>
Alger-Marquette Community Action Board	Senior citizen programs, low-income services, housing services, Headstart	530 East Munising Avenue 906.387.2243	<a href="http://www.amcab.org">www.amcab.org</a>
Downtown Development Authority	Business improvement/expansion	100 West Munising Ave. 906.387.2095	<a href="http://www.cityofmunising.org/dda.html">www.cityofmunising.org/dda.html</a>
Family Independence Agency	Child and family services support	101 Court Street 906.387.4440	<a href="http://www.michigan.gov/dhs">www.michigan.gov/dhs</a>
Hospice of Alger County	Counseling and support services	E9526 Prospect Street, Wetmore 906.387.2297	<a href="http://www.lmasdhd.org/index.php?page=hospice-of-alger-county">www.lmasdhd.org/index.php?page=hospice-of-alger-county</a>
LMAS Health Department	Public health	E9526 Prospect Street, Wetmore 906.387.2297	<a href="http://www.lmasdhd.org">www.lmasdhd.org</a>
Michigan State Police	Public safety	414 East Munising Avenue 906.387.4551	<a href="http://www.michigan.gov/msp">www.michigan.gov/msp</a>
Michigan Works!	Employment services	114 West Superior Street 906.387.4397	<a href="http://www.michiganworks.org">www.michiganworks.org</a>
Munising Area Partnership for Development	Economic development, business improvement, expansion, retention	114 West Superior Street 906.387.1818	<a href="http://www.munisinginfo.com">www.munisinginfo.com</a>
Munising Area Visitors Bureau	Tourist information	422 E. Munising Avenue	<a href="http://www.munising.org">www.munising.org</a>
Munising Senior Nutrition Site	Nutrition program/services	200 West City Park Drive 906.387.4084	<a href="http://www.upcapservices.com/docs/Senior_Center_Directory.pdf">http://www.upcapservices.com/docs/Senior_Center_Directory.pdf</a>

<b>Table 6-6 Community Agencies, Munising Area</b>			
Agency Name	Type of Service(s)	Location/Phone	Website (if available)
National Park Service	Information and management of Pictured Rocks National Lakeshore	Sand Point Road 906.387.2607	<a href="http://www.nps.gov/piro">www.nps.gov/piro</a>
Pathways, Inc. (Community Mental Health)	Adult support services, activities, counseling	601 West Superior Street 906.387.3251	<a href="http://www.pathwaysup.org">www.pathwaysup.org</a>
Secretary of State	Licensing, vehicle and watercraft registration	418-A Mill Street	<a href="http://www.michigan.gov/sos/">www.michigan.gov/sos/</a>
U.S. Forest Service District Ranger Station	Hiawatha National Forest management	400 East Munising Avenue 906.387.2512	<a href="http://www.fs.fed.us/r9/forests/hiawatha/">http://www.fs.fed.us/r9/forests/hiawatha/</a>
United States Post Office	Letter and package delivery	220 Elm Avenue 1.800.275.8777	<a href="http://www.usps.com">www.usps.com</a>
Upper Peninsula Committee for Area Progress (UPCAP)	Community-based services, area agency on aging	2501 14 <sup>th</sup> Avenue South, Escanaba 906.786.4701 (serves entire UP)	<a href="http://www.upcap.org">www.upcap.org</a>
Women's Center	Counseling and support services	101 Court Street 906.387.4554	<a href="http://www.wcmqt.org">www.wcmqt.org</a>

#### 6.4 Issues and Opportunities

A necessity for the city of Munising is the replacement of the current fire hall. A renovation of the current facility is not practical. Due to the nature of necessary improvements, a renovation will cost more than a new facility. A contemporary facility is needed and will greatly benefit the community.

The city ice arena is also in need of renovations. The arena requires modernization and will be costly to upgrade. A considerable number of residents use the arena and would benefit from the renovation.

The 2008 upgrade of the wastewater treatment facility and sanitary sewer system, including improvements to water, sewer, storm sewer and streets will provide enhanced wastewater and water service. An added bonus provided by the upgrades is the potential for lower taxes due to the elimination of the millage.

Upon completion of a harbor upgrade study, the city will have the opportunity to pursue grant money to help fund a harbor expansion. A possible harbor expansion, combined with the upcoming enhancements to the public boat

launch and Tourist Park and the recently completed improvements to Bayshore Park will continue to bring in recreational boaters and provide residents with a picturesque harbor setting.

The multitude of parks and recreation enhancements, including Tannery Park, and the Lynn Street tot lot are a benefit to residents and tourists alike.

Munising Memorial Hospital completed construction on a modern, state-of-the-art facility in the fall of 2008. Residents throughout Alger County will benefit from the amenities the hospital will provide.

## **7.0 HOUSING**

### **7.1 Introduction**

Housing is an important part of the city of Munising's land use and economy. The type, location, availability, affordability and quality of housing will determine what kinds of neighborhoods are present in the city. 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.

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 the city of Munising 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.

### **7.2 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 7-1.

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
<b>City of Munising</b>	<b>70.6</b>	<b>24.1</b>	<b>3.7</b>	<b>72.4</b>	<b>17.2</b>	<b>7.6</b>	<b>+1.8</b>	<b>-10.3</b>	<b>+3.9</b>
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
Munising Twp.	79.7	1.7	15.6	87.4	0.4	11.8	+7.7	-1.3	-3.8
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, 1990-2000.

### **Current Housing Types**

From 1990 to 2000, multifamily units have experienced a decline in the city of Munising, from 24.1% to 17.2% of the total housing stock. Over the same time period, Alger County has experienced a slight increase of 0.5% in the number of multifamily housing units. 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. With 17.2% of the total housing stock remaining multifamily units, the city of Munising is in a much better position to accommodate all income levels than the surrounding townships, Alger County and the state. The current housing stock ensures that all area workers have viable housing options in the community.

Table 7-2 contains information on the total number of housing units, based on occupancy and tenure for the city of Munising, Alger County and the state of Michigan.

Housing Units	City of Munising		Alger County		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent
Total Units	<b>1,249</b>	<b>100.0</b>	5,964	100.0	4,234,279	100.0
Occupied	<b>1,115</b>	<b>89.3</b>	2,785	63.5	3,785,661	89.4
Owner	<b>722</b>	<b>64.8</b>	3,121	82.5	2,793,124	65.9
Renter	<b>393</b>	<b>35.2</b>	664	17.5	992,537	23.4
Vacant	<b>134</b>	<b>10.7</b>	2,179	36.5	448,618	10.6
For Rent	<b>38</b>	<b>8.8</b>	95	12.5	72,805	1.7
For Sale	<b>29</b>	<b>3.9</b>	104	3.2	44,250	1.0
Rented or Sold, Not Occupied	<b>15</b>	<b>1.2</b>	35	0.6	27,161	0.6
Seasonal Use	<b>40</b>	<b>3.2</b>	1,842	30.9	233,922	5.5

Source: US Bureau of the Census, 2000.

The percentage of occupied units in the city of Munising far surpasses the percentage of Alger County and is nearly identical to the state of Michigan. Alger County has a much higher percentage of vacant properties (36.5%) compared to the city and the state. The lower occupancy rate is most likely due to the high percentage of homes that are used 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 7-3 contains information on the age of housing units in the city of Munising, surrounding townships, Alger County and the state of Michigan.

Unit of Government	%1999 to 2000	%1995 to 1998	%1990 to 1994	%1980 to 1989	%1970 to 1979	%1960 to 1969	%1940 to 1959	%1939 or earlier
<b>City of Munising</b>	<b>0.3</b>	<b>2.6</b>	<b>1.1</b>	<b>9.5</b>	<b>11.2</b>	<b>7.4</b>	<b>29.4</b>	<b>38.5</b>
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
Munising Twp.	2.5	10.2	8.8	16.5	23.7	9.7	18.8	9.9
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.

Census data indicates that 38.5 percent of the city's housing stock was constructed before 1940. An additional 29.4 percent was constructed before 1960, making 67.9 percent of the city's housing units nearly fifty years old or older. This is significantly higher than the surrounding townships, Alger County and the state.

Sixty-four percent of Au Train Township's housing units were constructed after 1960; the figures for Grand Island Township is near fifty-three percent and Munising Township hovers near seventy-two percent of housing constructed after 1960. This compares to thirty-two percent for the city. The current trend of residential developments expanding rapidly outside of more densely populated areas on larger land parcels has been occurring nationwide.

Table 7-4 provides information about the type of heating fuel utilized for selected areas.

Source	City of Munising		Alger County		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent
Utility Gas	1,001	89.1	1,815	48.0	2,961,242	78.2
Bottled, Tank or LP Gas	26	2.3	1,057	27.9	357,502	9.4
Electricity	68	6.0	141	3.7	251,208	6.6
Fuel Oil, Kerosene, etc.	22	2.0	266	7.0	130,933	3.5
Coal or Coke	-	-	-	-	659	-
Wood	7	0.6	499	13.2	54,608	1.4
Solar Energy	-	-	-	-	641	-
Other Fuel	-	-	4	0.1	18,413	0.5
No Fuel	-	-	3	0.1	10,455	0.3
<b>Total Units</b>	<b>1,124</b>	<b>100.0</b>	<b>3,785</b>	<b>100.0</b>	<b>3,785,661</b>	<b>100.0</b>

Source: US Bureau of the Census, 2000.

Nearly 90 percent of city residents employ utility gas as their home heat source. For the county, the percentage was only 48 percent and for the state, 78.2 percent. Alger County reported 13.2 percent of occupied housing units utilized wood as their heat source, much higher than they city or the state.

Table 7-5 contains information regarding the condition of housing units in the city of Munising and the surrounding area. 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 city, townships, county and state.

Area	Lacking Complete Plumbing				Lacking Complete Kitchens				No Telephone Service			
	1990		2000		1990		2000		1990		2000	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
<b>City of Munising</b>	<b>3</b>	<b>0.2</b>	<b>8</b>	<b>0.7</b>	<b>3</b>	<b>0.2</b>	-	-	<b>29</b>	<b>2.7</b>	<b>40</b>	<b>3.6</b>
Au Train Township	34	3.7	-	-	36	3.9	3	0.6	6	1.5	3	0.6
Grand Island Township	-	-	-	-	-	-	-	-	-	-	-	-
Munising Township	33	3.1	5	0.6	50	4.7	-	-	48	7.5	11	1.3
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, 2000.

The city of Munising had an increase in the number of households reporting no telephone service from 1990 to 2000. This may be due to the prevalence of households that only use cell phones for telephone service which may have led to respondents checking the “no telephone service” box on the questionnaire, resulting in misleading findings.

### **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 7-6 presents census data on household types and the relationships occurring in those households for the city, the county and the state.

Composition of Households	City of Munising		Alger County		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent
Total Population in Households	<b>2,539</b>	<b>100.0</b>	9,862	100.0	9,938,444	100.0
<b>In Family Households</b>	<b>655</b>	<b>58.7</b>	2,587	68.3	8,189,108	82.4
Householder	<b>1,115</b>	<b>43.9</b>	3,785	38.4	2,575,699	25.9
Spouse	<b>499</b>	<b>19.7</b>	2,157	21.9	1,947,710	19.9
Child	<b>636</b>	<b>25.0</b>	2,362	24.0	3,037,440	30.6
Other Relatives	<b>59</b>	<b>2.3</b>	217	2.2	116,192	1.1
Non-relatives	<b>111</b>	<b>4.4</b>	355	3.6	195,189	2.0
<b>In Non-family Households</b>	<b>460</b>	<b>41.3</b>	1,198	31.7	1,499,537	15.1
Householder Lives Alone	<b>405</b>	<b>36.3</b>	1,016	26.8	993,607	10.0
Householder 65 Years & Over	<b>217</b>	<b>19.5</b>	477	12.6	862,730	8.7
<b>In Group Quarters</b>	<b>119</b>	<b>4.7</b>	986	10.0	249,889	2.5
Institutionalized	<b>75</b>	<b>3.0</b>	912	9.2	126,132	1.3
Noninstitutionalized	<b>44</b>	<b>1.7</b>	74	0.8	123,757	1.2

Source: US Bureau of the Census, 2000.

In 2000, 58.7 percent of Munising residents living in family households, which was less than Alger County (68.3) and the state of Michigan (82.4). The percentage of children living in family households represented 25.0 percent of the total population of the city.

The city's percentage of non-family households was greater than other comparative units and a higher percentage of householders were found to be living alone. Non-family households represented 41.3 percent of Munising's 2000 population.

Group quarters comprised 4.7 percent of Munising's 2000 population, which was greater than the state, but less than Alger County. Alger County's higher percentage (10.0) is due to the prison population at Alger Maximum Correctional Facility. Nursing homes are also included in this category.

### **Household Size**

Household size has been steadily decreasing over the past 100 years. In the early 20<sup>th</sup> 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 7-7 compares household size for selected areas over the past 30 years.

Area	Persons Per Household		
	1980	1990	2000
<b>Munising</b>	<b>2.64</b>	<b>2.48</b>	<b>2.17</b>
Alger County	2.81	2.69	2.35
State of Michigan	2.84	2.66	2.56

Source: US Bureau of the Census, 1980, 1990, 2000.

### 7.3 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 7-8 and 7-9 respectively.

Area	1990	2000
<b>City of Munising</b>	<b>\$38,100</b>	<b>\$66,500</b>
Au Train Township	\$44,100	\$103,000
Grand Island Township	\$67,500	\$162,500
Munising Township	\$42,600	\$84,100
Alger County	\$39,200	\$75,900
State of Michigan	\$60,600	\$115,600

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

Area	1990	2000
<b>City of Munising</b>	<b>\$290</b>	<b>\$370</b>
Au Train Township	\$310	\$415
Grand Island Township	\$425	-
Munising Township	\$302	\$396
Alger County	\$296	\$376
State of Michigan	\$423	\$546

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

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 7-10 and 7-11 present a breakdown of the percentage of income dedicated to housing costs for owner occupied and renter occupied housing units.

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

Source: US Bureau of the Census, 2000.

**Table 7-11**  
**Gross Rent as a Percentage of Household Income, Selected Areas, 1999**

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

Source: US Bureau of the Census, 2000.

In each of the selected areas, renter occupied households are more likely to be cost burdened than owner occupied households. Nearly 84% of owner occupied households are not cost burdened, while only 60% of renter occupied units fall into the same category.

### Publicly Subsidized Housing

Publicly subsidized housing units within the city are identified in Table 7-12 and referenced in Chapter 5, Section 5.4.

**Table 7-12**  
**Subsidized Housing, City of Munising, 2007**

Development Name	Administration	Units	Year Built	Type
Lakeshore Manor	Public Housing	74	1974/1983	Elderly Low Rise
Hillside Apartments	Public Housing	12	1974	Family
Bay View Apartments	Public Housing	4	1974	Family
Jericho House	HUD 202	15	Remodeled 1995	Elderly Low Rise
Windjammer Apartments	Rural Housing 515	24	1982	Family

Source: Michigan State Housing Development Authority Subsidized Housing Directory, 2007.

### 7.4 New Housing Development

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 is presented in Table 7-13.

Year	Number of Permits Issued City of Munising	Number of Permits Issued Alger County
2004	27	262
2005	21	224
2006	26	212
2007	20	190
2008	16	191

Source: Alger County Office of Building Code Administration, 2008.

Property parcels within the city limits suitable for new housing construction are limited. Small lot sizes, rugged terrain, lack of off-street parking and existing high density residential development are additional limiting factors that pertain to new housing unit construction. Building permits issued for the city mainly include remodeling, upgrading or repairs to existing structures.

Future housing demand to satisfy projected population growth is a critical component of the comprehensive 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.

### **7.5 Issues and Opportunities**

The adjoining townships and state have experienced a period of much greater housing growth than the city. This is most likely due to the current preference for larger lot sizes and larger homes. Although the number of multifamily units in the city of Munising has declined since 1990, the city is continuing to provide adequate housing options for residents.

Nearly 90% of Munising's housing units are occupied, which compares favorably with the state and far surpasses Alger County's rate of 63.5%. A partial explanation for this difference is the large number of seasonal dwellings that are located in rural areas.

Almost 70% of the housing stock in Munising is nearly fifty years old or older. Aging structures are more likely to require extensive maintenance due to deterioration. The surrounding townships contain housing stock that was built much more recently. Again, this is due to residents preferring larger lots available in the township. The housing stock available in Munising is in good

condition, with nearly all units having complete kitchen and plumbing facilities and available telephone service.

Average household size has decreased from 2.64 persons per household in 1980 to 2.17 persons per household in 2000. This decrease in average household size in the city of Munising follows the nationwide trend.

Median housing values in the city of Munising and surrounding townships have increased dramatically from 1990 to 2000. Again, this is following a nationwide trend. Median gross rent in the city has also increased due to the rise in demand for rental units. Rental costs for residents in Munising still remain affordable. Over one-fifth of renters spend less than 15% of their income on rent per month, half of what HUD suggests as the maximum amount.

The majority of building permits issued is for remodeling, upgrading or repairing existing structures. There are limited opportunities and space for the construction of new houses within the city limits.

## 8.0 RECREATION

### 8.1 Introduction

Information provided in this chapter is intended to provide current and comprehensive data to guide city decision makers regarding future park development and/or acquisition. Existing parks, open space sites and other recreational facilities and events are discussed in the context of location, condition, features and use. Standards established by the National Recreation and Park Association and requirements set forth under the Americans with Disabilities Act (ADA) of 1990 will also be presented.

Recreation related to tourism is vital to area economics and is an expanding industry nationwide. Attractions and facilities located in close proximity to the city present many opportunities for active and passive recreation. Munising is exceptionally rich in natural resources which draw a growing number of visitors each year. Heritage based tourism and ecology based tourism are becoming increasingly popular. 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.

A comparative look at the number of recreational vehicle registrations in the state and Alger County in Table 8-1 illustrates the rising popularity of outdoor activities common to the Munising area.

Year	Alger County		State of Michigan	
	Watercraft	Snowmobile	Watercraft	Snowmobile
1996	1,667	1,371	786,030	219,307
1997	1,714	1,411	800,783	230,150
1998	1,831	1,414	818,637	236,291
1999	1,827	1,465	825,842	256,540
2000	1,845	1,558	829,210	278,473
2001	1,792	1,614	827,555	302,860
2002	1,797	1,659	824,460	296,551
2003	1,806	1,518	825,736	291,046
2004	1,776	1,472	822,969	292,644
2005	1,798	1,428	821,703	289,717
2006	1,785	1,441	825,585	279,295
% Change 1996 to 2006	+7.1%	+5.1%	+5.0%	+27.4%

Source: Michigan Secretary of State, 2007.

## 8.2 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. The city of Munising utilizes the term for several of its neighborhood parks which are defined above.

**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.

### 8.3 City Owned Parks and Recreational Facilities

City owned parks and recreational facilities are discussed in this section. Ownership, condition, maintenance provisions and other relevant factors are presented.

**Bayshore Park:** Situated at the harbor area, the park features water, electricity, picnic tables and a fireplace. Bayshore Park has recently installed an underground sprinkler system, planted flowers and added historical signage. Increased tree planting has occurred throughout Bayshore Park. A new pavilion is being constructed in 2008 to better accommodate concerts held in the park. Local fundraising efforts have supported the creation of the new pavilion.

Accessible restrooms and a drinking fountain are located in the Harbor Master's building. The area has picnic tables (14), grills (5), and benches (3) available for day use. The beachfront provides an unsupervised area for swimming and wading. A parking lot located on the south side of Veterans Memorial Drive supplements available street parking. The parking lot can accommodate motor homes and vehicles with trailers carrying campers or boats. An informational kiosk is located near the pavilion. At the east end of Veterans Memorial Drive is All Veterans Memorial, an impressive tribute to area veterans. Special events are scheduled at the park during the summer months such as the Independence Day celebration with fireworks and music concerts in the pavilion.

The city is requesting a small amount of adjacent property to expand the park. Ideally the city would like to enlarge the park boundary about 250 feet. The city could obtain the property through several types of agreements, including but not limited to: grant, purchase or lease.

**City Marina:** The marina currently contains 19 slips designed for boats of up to 30 feet in length. An additional 300 feet of dock is available for broadside mooring, with another 300 feet of usable docking space along the adjacent L-dock to accommodate large boats. Fuel (gasoline only), electricity (20, 30 and 50 amp), restrooms, showers, ice, grills/picnic tables, day-use docking and public parking are available. Slip space is rented on an annual basis and transient boaters pay a daily dockage rate. The popular boat excursions along the Pictured Rocks operate from the marina's L-dock. There are also wayside exhibits on dock history and anchors.

The city is currently developing a harbor upgrade study. The results of the study may potentially be used to acquire grant funding to expand the marina. Ideally an expansion of the marina would include an extension of the north break wall, the addition of an east break wall, additional finger piers, a diesel fuel depot and completion of necessary dredging.

**Munising Municipal Boat Ramp:** Located in the Brown's Addition area, this facility features a hard-surfaced ramp, two courtesy piers, and a parking capacity of 71. This site does not provide toilet facilities, but restrooms are located at the adjacent ballfield.

Possible improvements to be scheduled in 2008 include: two new restrooms, an all weather pavilion, repaving of the parking lot and entrance road and underwater improvements to the ramp. The city is scheduled to install two new boat launch ramps, utilizing grant funding for the project.

Future enhancements for the boat ramp could include a fish cleaning station and a building to house a hovercraft for the Sheriff's Department. Another option includes converting the adjacent softball field to a marina-related use if additional fields are constructed elsewhere in the city.

**Tot Lot at Brown's Addition:** A paved basketball court, several playground apparatuses and picnic tables are present at the mini-park. In 2005, portions of the playground equipment were replaced as a result of a successful community fundraising effort. The Munising Lions Club has installed fencing around the tot lot. Increased flower planting has occurred, further enhancing the attractiveness of the park. Off-street parking is available for park-goers. Future plans for the tot lot may involve installing additional playground equipment on the extra park property. Additional equipment would help the city proceed with the goal of varied equipment and options throughout the city.

**Tot Lot at Lynn Street:** This city-owned facility includes five individual playground apparatuses and a sandbox in the play lot area with two fenced and unlit tennis courts adjoining. A bench is located on the side of each court. The tennis courts appear to be in good playing condition and are maintained by

the Tennis Association with assistance from the city. Street parking is available.

In 2007, the playground equipment was upgraded and the tot lot was greatly expanded and landscaped. The improvements were again accomplished through a local fundraising effort.

**Tannery Park:** In 2007, the city removed nonstandard size tennis courts from the Washington Street Park and replaced them with a picnic area and wooden deck overlooking scenic Munising Bay.

**Alger Centennial Arena:** A concession area, kitchen, changing rooms, restrooms, and artificial ice surface (seasonal) are contained within this facility. The 24,000 square foot building was constructed in 1985. Until 1995 the facility was weather-dependent, with a natural ice making capability only. During the winter months, the arena is mainly utilized by the local hockey program with alternative hours set aside for open skate. Off-season recreational opportunities are also available at the arena. The facility is also rented for group events such as wedding receptions and community gatherings.

Operational responsibility for the arena was taken over by the city in 2007. The arena is in need of major renovations. Overhead structural beams need to be improved. An addition to house the zamboni at an alternate location is necessary, as is a new zamboni. Several grants will be pursued to make these significant changes.

Ultimately the city would like to make renovations to the lockerooms, restrooms and the kitchen/concession area. A possible upgrade to the balcony area, with a glass enclosure for viewing is also being considered for the future.

**Skate Park:** The skate park is located across from the Alger Centennial Arena and provides a recreational area for skateboarders to develop their sport and technique. The land the park is situated on was donated to the city. The city then granted permission for the construction of the skate park. Local fundraising provided equipment for the skate park.

**Heroes Field:** This facility is the only city-owned ballfield and is located at Brown's Addition. As such, it serves as the "home" field for teams of many age groups and is located on city property. A masonry building containing grade-level restroom facilities and storage is located on the site, along with two sets of portable bleachers, dugouts, backstop, and lights for night games. Fencing surrounds the playing area and limited parking is available. Heroes Field has installed a new scoreboard and has benefited from other minor improvements. The local softball group has participated in fundraising for the field upgrades. One of the major projects was installation of the

underground sprinkler system. Ultimately, the lighting for the field will need to be replaced.

In the winter months, the field is converted into an outdoor skating rink. The Munising Department of Public Works creates and maintains the outdoor rink.

**Tourist Park:** Located in Grand Island Township on Lake Superior, Tourist Park has 67 modern campsites with electricity and water. 13 rustic tents sites on Lake Superior are also available. The lakefront provides a beautiful sand beach. An office for registration and snacks, a pavilion structure and a building housing restrooms and showers serve the park's visitors. The city-owned facility is operated through a concessionaire contract for which competitive bids are solicited annually.

Tourist Park completed a \$286,500 renovation and expansion in the summer of 2008. The renovation and expansion are expected to have a significant impact on the quality of the park. A new water well was completed, as well as two new restrooms in combination with a pavilion. New shower facilities were also added to the park. Twelve new modern sites were completed that provide a direct sewage connection. A bridge crossing the small creek was constructed to unite the two sides of the property. A boardwalk and new deck were built on the west side.

An eventual goal of the city involves replacing the playground equipment, the renovation of the showers and restrooms and increasing the amount of tree planting in Tourist Park.

#### **8.4 Nearby Community Parks and Recreational Facilities**

**Anna River Fishing Pier:** This facility includes an accessible pier that extends into Munising Bay and a parking capacity of 62. Picnic tables are also present at the site. The fishing pier is located on Neenah Paper property. Currently the area is in a state of disrepair and would benefit from several improvements.

**Kid's Connection Playground:** This facility is located on property of the Munising Public Schools adjacent to the Central Elementary School on Jewell Street. The playground features a rustic fort-like motif within a fenced area. Unsupervised play is allowed from 8:00 a.m. to 10:00 p.m. as posted at the site. The facility appears to be in good condition.

**R.W. Nebel Field:** This facility serves as Munising High School's football stadium (also known as Mustang Stadium). Track and field events are held here as well. Recent upgrades include improvements to the lighting system and concession area and the resurfacing of the track.

**Pictured Rocks National 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.

**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 15<sup>th</sup> and continuing into October. The ferry departs from the Grand Island landing. The landing is located one mile west of the 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.

The East Channel Lighthouse is easily viewed from the city's east side and is a prominent local landmark situated on private property. Restoration of the structure, including painting and the construction of a protective wooden crib, was carried out by volunteers in 2001.

**Munising Falls:** Located across from the hospital on Washington Street, 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 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'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.

**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 Munising on M-28 on Lake Superior.

**Munising Snowmobile Trail:** As part of a network of trails used heavily throughout the winter months, the Munising Trail branches from the Christmas Trail south of Christmas and extends through the city's highlands before entering the residential area at Grand Street. Snowmobiles and ATVs are permitted to use designated city roadways with restrictions applied to speed, as well as hours of operation.

**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 Noquemanon 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.

**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.

Many of the outdoor activities available in the area coincide with ecology based tourism. Ecology based tourism can be defined as travel to observe the wildlife and flora of an area. The beautiful surroundings of the Munising area are a natural draw to entertain visitors and residents.

## **8.5 Local Recreation Activities**

**Grand Island Marathon:** The Grand Island Marathon and 10K are held in July on Grand Island. The competitions are billed as trail races on a wilderness island. Approximately 300 runners participated in 2007's marathon. Runners have the opportunity to experience the natural beauty of island. Much of the trail is shaded by lush hardwood forests and portions of the race are along the Lake Superior shoreline.

**Ice Climbing:** Ice climbing is becoming a popular winter sport in the Munising area. Curtains and columns of ice are common in the area due to the abundance of lake effect snow showers, numerous waterfalls, porous sandstone cliffs, and water seeping out of rock layers. The most accessible ice columns in the area are found along the ice escarpment between Munising Falls and Sand Point along Sand Point Road. Additional columns are located at Miners Falls and on the east side of the Miners Basin.

Ice Fest is held in Munising every February. Over 400 climbers are drawn to the Munising area every year to climb. 2008 marks the 25<sup>th</sup> year of the group gathering to climb. The event offers a kid's climb, instructional climbing clinics, climbing competitions, speakers and demos.

**Munising 300:** In February, the U.S. Cross Country Snowmobile Association holds the Munising 300 snowmobile race in Munising. The professional and amateur event began in 2005. The event draws approximately 2,000 spectators. In 2007, there were around 120 entries, with an increase expected for 2008.

**Midnight Run (UP 200 Sled Dog Race):** The 8-dog Midnight Run takes place in February each year and draws competitors from across the country. The Midnight Run begins in Gwinn and the finish line is currently located in downtown Munising.

**Kayaking:** In the Munising area, several guided tour companies provide opportunities for kayakers to explore Lake Superior. There is also potential for kayak races in the area. Sand Point Beach is an excellent spot to launch kayaks.

**Scuba diving:** Dive charters are widespread in the Munising area. Divers also have a unique opportunity to view unusual diving attractions within the Alger Underwater Preserve.

**Taste and Glide:** The annual Taste & Glide is an "eat and ski" event and is held on the first Saturday in March. Participants pay a fee and then ski from one trailside buffet table to the next. The trailside buffets are accessible from both the traditional and the skating trails. This family event has earned a favorable reputation over a decade.

## 8.6 Heritage Recreation

Heritage recreation and tourism can be defined as traveling to experience the places, artifacts, culture and activities that authentically represent the stories and people of the past and present. The popularity of heritage recreation and tourism has greatly increased over the past decade. Munising and the surrounding area have much to offer residents and tourists alike in historical destinations.

The State Register of Historic Places or the National Register of Historic Places may designate properties for recognition of their special historic significance.

Those places in the city of Munising with such designation are as follows:

- The First National Bank and Post Office (now City Hall), located on Elm Street, was state registered 02/27/1980.
- The Lobb House, located at 203 West Onota Street, was state registered 12/11/1973. It was listed on the National Register 10/08/1976. A marker was erected at the site 04/09/1980.

Nearby registered historical sites include the following:

- American Fur Company Log Cabin #3 on Grand Island
- Grand Island
- Grand Island North Light Station
- Pictured Rocks
- Lake Superior Information Designation along M-28 West
- Bay Furnace
- Grand Island Harbor Rear Range Light
- Schoolcraft Furnace Site

Munising Bay Shipwreck Tours also provide an opportunity for an historical recreation experience. The tours offer a chance to view boats that traveled the Great Lakes before the turn of the century. Three shipwrecks can be seen through the glass-bottom viewing area and the tour is the only one in the United States offering a view of shipwrecks.

### **8.7 Recreation Needs Standards**

One of the methods used to assess a community's recreation needs has been developed by the National Recreation and Park Association (NRPA). Under this system, space standards are used as the measure of a recreation system's adequacy. Total park and recreation space is usually expressed as acres per population. These space standards, presented in Table 8-2, are useful when assessing current and future open space needs and demand.

Under NRPA standards, a community's park system should have a minimum of 6.25 to 10.5 total acres of developed open space per 1,000 population. According to these standards, the city should be providing 17.5 to 29.25 acres of parks based on its population of 2,783 (Table 8-3). The city's park acreage is within the recommended range. However, it is important to consider the vast amount of open space managed by state and federal agencies that is available for public recreational pursuits.

Further park development, like other types of development in the city, is significantly influenced by the rugged terrain.

Setbacks between equipment are also important to consider. Adequate runout space prevents conflicts involving separate activities and maximizes safety. Setbacks for playground equipment and the street also need to be maintained for safety.

<b>Table 8-2 Local and Regional Recreation Open Space Standards</b>				
Park Type	Service Area	Size in Acres	Acres/1,000 Population	Uses
Mini Park/Pocket Park	<1/4 mile radius	1 or less	0.25 - 0.5	Specialized facility that serves a concentrated or limited population or specific group such as tots or senior citizens.
Neighborhood Park	1/4 - 1/2 mile radius	15 or more	1.0 - 2.0	Area for intense recreation activities such as field games, court games, crafts, play equipment, skating, picnicking, etc.
Community Park	Several neighborhoods; 1 - 2 mile radius	25 or more	5.0 - 8.0	Area of diverse environmental quality that may include areas suited for intense recreational facilities such as athletic complexes and large swimming pools. Area may feature natural qualities for outdoor recreation such as walking, viewing, sitting, and picnicking.
Regional Park	Several communities; 1 hour driving range	200 or more	5.0 - 10.0	Area of natural or ornamental quality for outdoor recreation such as picnicking, boating, fishing, swimming, camping, and trail use; may include pay areas.

Source: Roger A. Lancaster, Ed. 1983, Recreation Park and Open Space Standards and Guidelines, Alexandria, Virginia: National Recreation and Park Association.

<b>Table 8-3 Existing Open Public Space, City of Munising</b>		
Type of Park	Park Land Acreage	NRPA Standard Acreage
Mini Parks	1.5*	0.7-1.4
Neighborhood Parks (includes schools)	10.0*	2.8-5.6
Community Parks	20.0*	13.9-22.2
Regional Parks	0.0*	13.9-27.8
<b>Total Park Area</b>	<b>31.5*</b>	<b>31.3-57.0</b>

\* Estimated Acreage

Note: Acreage does not include state or federal land.

### **8.8 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.

### **8.9 Future Recreation Plans**

The city is currently planning a bike path that may extend from Munising Falls to the west end of Tourist Park. The proposed path will accentuate the natural beauty of the entire corridor and could potentially be scheduled for completion in 2010. A portion of the bike path is expected to be completed in 2009, with a portion of the funds coming from a Michigan Department of Transportation Enhancement Grant.

A 97-acre recreation complex is proposed for property located on St. Martin’s Hill. If the anticipated development is completed, the recreation complex would include multiple baseball fields, a soccer field, tennis courts, cross county skiing trails, a trailhead for a nonmotorized path and a concession area.

### **8.10 Issues and Opportunities**

Munising’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.

The age and condition of some city-owned recreational facilities will involve capital investment in the near future. The city marina will most likely require an expansion in upcoming years. The completion of a harbor upgrade study will allow the city to pursue grant funding for the expansion. Alger Centennial Arena is in need of major repairs in order to continue to provide a suitable place for residents to skate and gather. Multiple grants will be pursued to aid the city in making these significant changes.

The city has completed or has planned enhancements to several city owned recreational facilities, including updates to Bayshore Park, the Munising Municipal Boat Launch, Brown's Addition Tot Lot, Lynn Street Tot Lot, Tannery Park and Tourist Park. These improvements have provided residents and tourists a diversified selection of recreational opportunities in the area.

Continued development of the proposed bike path will provide a diverse range of residents and visitors a non-motorized way to safely access natural areas surrounding the city. Trails provide many benefits to the community including an improved transportation system, health and safety, environmental preservation and economic vitality to the community. It is especially important to consider passive recreation opportunities, such as a non-motorized path, as the population ages.

Suitable space for additional park areas and recreational facilities within the city is, like all other types of development, constrained by the natural terrain. The proposed 97-acre recreation complex on St. Martin's Hill will provide residents and visitors with a wide array of recreational activities in a centralized location. Construction of new baseball fields at the complex may provide the city with the opportunity to redesign the current city owned field for an alternate use.

The continued increase in popularity of heritage recreation and tourism provides the city and surrounding area with a unique opportunity to take full advantage of the historical properties located nearby. The many shipwrecks in the area also present exceptional heritage recreation potential.

The Munising area now has year round recreation events available for residents and visitors to participate in. The success of the Grand Island Marathon and 10K in July, Ice Fest in February and the Taste and Glide in March are proving that Munising is a destination for year round recreation. Increased participation in the Munising 300 snowmobile race may lead to alternate opportunities for the area to host snowmobile races. Continued promotion of the area as a four-season recreation destination and gateway to adventure is essential.

## **9.0 TRANSPORTATION**

### **9.1 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, goals and policies 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 established along areas presenting the least physical resistance.

An inventory of the existing transportation facilities in the city, 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, public transit service, and inter-community transit service are included. Identification and prioritization of vital traffic corridors has become an increasingly important part of regional commerce enhancement.

### **9.2 Road System**

One of the most important elements in the physical structure of a community is its road system. The basic objective of a road system is to accommodate vehicular movement safely and efficiently.

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. Counties, cities and villages receive approximately 61 percent of the funding allocated through Act 51 for local roads with the remaining 39 percent earmarked for state highways under the jurisdiction of the Michigan Department of Transportation.

Map 9-1 depicts roads according to Act 51 classifications.

### **State Trunkline Highway**

The state trunkline system includes state and federal highways which connect communities to other areas within the county, state and out state locations. These roadways provide the highest level of traffic mobility for the traveling public. More than half of the total statewide traffic is carried on the highway system which comprises only 8 percent of the Michigan roadway network length. State highways are designated with the prefix “M,” federal highways with “U.S.”

Highway M-28 extends approximately 3.0 miles through the city, entering at the south-central boundary and following the Lake Superior shoreline to the northwest corporate city limit bordering Grand Island Township. Traffic from the south and east converge at the intersection of M-28 and M-94 just south of the city limit.

Act 51 requires the state transportation department to bear all maintenance costs consistent with department standards and specifications for all state highways including those within incorporated cities and villages. Since the city’s population is less than 25,000, cost sharing requirements for construction and reconstruction associated with opening, widening or other state highway improvements are not applicable.

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.

### **County Road System** (Primary and Local)

Act 51 requires that all roads, streets and highways included in the county primary road system are known as county primary roads. Roads, streets and highways known as county local roads are recognized as county local roads. The mileage of each road system is used as the basis for computation of road funding.

All other roads not classified as primary are considered local. The local road system contains the most miles in the Alger County road system, but has the lowest level of traffic.

The county road system does not include roads within the city.

### **Major Street System**

A system of major streets in each incorporated city or village is approved by the state highway commissioner under Act 51. Major streets are selected by the city or village governing body on the basis of greatest general importance to the city or village. Streets may be added or deleted from the system subject to

approval of the state highway commissioner. The city's 7.49 miles of designated major streets include the following:

- Munising Avenue-H-58 east of Cedar Street,
- Washington Street-Sand Point Road
- Superior Street from Hickory to Cedar
- Onota from Elm to Cedar
- Chocolay from Elm to Maple
- Jewell from Elm to Maple
- Veterans Memorial Drive
- Elm from Jewell to Veterans Memorial Drive
- Maple from Jewell to Munising Avenue
- Birch from Onota to Munising Avenue
- Hickory, Hemlock, Spruce, and Lynn Streets from Superior to Munising Avenue

### **Local Street System**

Those city or village roads, exclusive of state trunk line highways, county roads and those included in the major street system, constitute the local street system. Munising has 11.55 miles of designated local streets. The process of approval, additions and deletions is the same as with other road system designations.

### **9.3 Private Roads**

Private roads have not been an issue in the city. Where private roads do exist, it is important to assess the capability to accommodate fire and emergency vehicles.

### **9.4 National Functional Classification**

The National Functional Classification is a planning tool developed by the Federal Highway Administration in the 1960s and is utilized by federal, state, and local transportation agencies. Under this system, streets and roads are classified according to their function along a continuum that indicates the greatest mobility/greatest access to property. Roads that provide the greatest mobility are classified as principal arterials. Minor arterials, major collectors, and minor collectors follow in this continuum. Roads classified as local provide the greatest access to property. The placement of roads into these categories is determined by the relationship to traffic patterns, land use, land access needs, and traffic volumes. Map 9-2 shows the National Functional Classification Road System for the city of Munising.

The major difference between the functional classification scheme and the one established by Act 51 is that the functional classification breaks down a county road system into more categories. All roads in the functional road classification that are arterials (principal or minor) and collectors (major and

minor) are considered either state trunklines or primary roads in a county road system under Act 51. The main reason for breaking a county road system in functional classifications is to provide a more useful tool for planning purposes.

### **Principal Arterial**

The main function of a principal arterial road is to move traffic over medium distances quickly, safely, and efficiently. Often arterials are used for long interrupted travel between regions or major economic centers. M-28 is included in this class of roadway.

### **Minor Arterial**

Roads meeting this classification move traffic over medium distances within a community or region in a moderate to quick manner. They distribute traffic between collector roads and principal arterials.

### **Collector Road**

A collector road provides access between residential neighborhood and commercial/industrial areas. Its function is to provide a more general service, i.e., 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 where business and commerce are conducted. Munising Avenue-H-58 east of Cedar Street, Washington Street-Sand Point Road, and Connors Road all are collector roads.

### **Rural Local Road**

The predominant function of this classification of a road is to provide direct access to adjacent land uses. A local road serves as the end for most trips within a community. All streets that are not classified as arterials or collectors are classified as local roads.

## **9.5 Condition of Bridges**

Bridge inspections are conducted each year by the city's consulting engineer consistent with state requirements. The Anna River Bridge over H-58 in Munising was built in 1949 and was last inspected in January 2008. The bridge was repaired in 2006.

## **9.6 Condition of Roads**

The city's engineer and Department of Public Works employees are in the process of evaluating all streets as to base and surface condition, curb, gutter and sidewalk condition, and other physical factors. In addition, traffic volume and special uses such as school bus routes are being included in the inventory. From this, the city intends to establish a street evaluation protocol. Those roads under the jurisdiction of the Michigan Department of Transportation are evaluated using standard criteria such as pavement

condition, ride quality, friction and rutting. The results of the 2006 evaluation of principal arterials were as follows:

- M-28 from Federal Forest Highway 13 to junction of H-58 in city – good
- M-28 from H-58 junction to Au Train - fair
- M-94 from Chatham to M-28 junction - good

Future state trunkline system conditions are forecast using Pavement Management System data in conjunction with the Road Quality Forecasting System. It is anticipated that the percentage of pavements in poor condition will decrease over the next ten years. The continuous goal of MDOT is to achieve a rating of “good” for 85 percent of the state’s non freeway pavements. The portion of the state trunkline determined to be in good condition in 2004 was 87 percent.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA) was passed in 2005 as the successor to the Transportation Equity Act for the 21<sup>st</sup> Century. SAFETEA authorizes \$286.5 billion dollars for nationwide transportation spending authorizations. Preservation and maintenance of the current state trunkline system are cited by the Michigan Department of Transportation as the highest priority.

Projects scheduled for 2007-2011 in Alger County include: restoration and rehabilitation of M-28 from Shelter Bay to AuTrain and from AuTrain to Christmas and the resurfacing of M-94 from M-67 to M-28.

## **9.7 Financing**

Public Act 51 of 1951 governs state appropriations for most Michigan transportation programs, including state and local highway programs and state and local public transportation programs. There are primarily two sources of state-generated transportation revenue: motor fuel taxes and vehicle registration taxes. These two revenue sources generated approximately \$2 billion dollars in FY 2006-07. Act 51 creates the Michigan Transportation Fund (MTF) as the primary collection and distribution fund for this revenue.

Act 51 directs MTF revenue to other state transportation funds, to special program accounts, and to local units of government. The effect of the MTF distribution formula is to allocate state restricted transportation revenue between highway programs and public transportation programs, and highway program funds between MDOT and local road commissions.

### **Michigan Transportation Fund (Act 51)**

Michigan Transportation Fund revenues distributed to the city for the fiscal year October 1, 2006 through September 30, 2007, totaled \$174,290. Another

\$104,365 was matched by local funds. The total for the city spent on roads for the fiscal year 2007 was \$278,655, with \$77,202 being spent on snow removal.

Table 9-1 identifies funding sources for the complete Michigan transportation budget. The gross majority of transportation money comes from federal and state sources.

<b>Table 9-1</b>		
<b>Revenue Supporting Michigan's FY 2006-2007 Transportation Budget</b>		
Source	Revenue	% of Total Gross
State Funds	\$2,225,029,000	64.6%
Federal Funds	\$1,169,336,300	34.0%
Local Funds	\$47,500,000	1.4%
Gross Appropriation	\$3,441,865,300	100.0%

Source: Michigan Department of Transportation, 2007.

**Michigan Transportation Economic Development Fund**

Enacted in 1987, the Michigan Transportation Economic Development Fund (TEDF), was created to assist in the funding of highway, road and street projects necessary to support economic growth. The TEDF is governed by the 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.” MDOT, county road commissions and all city and village street agencies are eligible to apply for funds. Several types of projects are appropriate for funding, including:

- Category A: target industry development and redevelopment
- Category C: reduction of traffic congestion in urban counties
- Category D: road improvement in rural counties to create an all-season road network
- Category E: construction or reconstruction of roads essential to the development of commercial forests
- Category F: road and street improvements in cities in rural counties

**Other**

Federal funding for state highways is supported mainly through motor fuel taxes. Construction and repair costs associated with state trunkline systems are generated from these taxes. The authorization of the SAFETEA Act in 2005 will provide Michigan with increased funding than received previously under TEA-21. Under the concept of “multi-modals,” transportation planning is supposed to bring about cooperation among the different transportation modes that interconnect at shared hubs, or multi-modals. The state of Michigan is attempting to utilize flexible funding to support multi-modal infrastructure.

Ten percent of each state’s Surface Transportation Program (STP) funding is set aside for transportation enhancement activities. Enhancement activities are

meant to be such things as landscaping, bicycle paths, historic preservation, stormwater runoff mitigation and other quality-of-life type projects. A formal process of application has been established by the Michigan Department of Transportation to afford local and state jurisdictions an opportunity to obtain this funding. The city of Munising is actively pursuing enhancement grant money to assist in financing the qualifying activities.

## **9.8 Traffic Volume**

Data obtained from Michigan Department of Transportation traffic counters located in and around the city is listed in Tables 9-1 and 9-2. The analysis of traffic volumes is helpful in determining the traffic conditions within a community. According to the Michigan Department of Transportation, highway travel in Michigan is increasing at a far greater rate than the state population. The MDOT Long Range Transportation Plan predicts that travel on state trunklines alone will increase 27 percent from 50.1 billion miles in 2000, to over 65.5 billion annual vehicle miles traveled in 2025.

Tourist-related activity is responsible for a large portion of the city's traffic volume. While a high traffic volume is desirable in that it impacts favorably on the local economy, the safety and efficiency of the transportation system is diminished. Of particular concern is the M-28 corridor where much commercial development has occurred and the movement of traffic is difficult due to congestion along the route. Moreover, competing commercial signage and unrestricted turning points create a confusing and hazardous situation for motorists. According to Michigan Department of Transportation data and tourist industry business projections, the city can expect an even larger traffic volume in coming years.

Traffic counters along M-28 indicate a substantial increase in volumes from 1975 to 2006. Volume along M-28 near the south city limit rose from 4,000 to 7,120, or by 78 percent. The counter location along M-28 east of the M-94 junction increased from 4,200 in 1975 to 7,523 in 2006, or by 79 percent. Areas located west of the city also increased, but not as dramatically. Limited data gathered near the M-28 and H-58 (Munising Avenue) junction show increasing traffic volumes.

Commercial traffic (heavy truck) counts are extrapolated from data collected at the counter locations by the Michigan Department of Transportation. The trend in heavy truck traffic volume is presented in Table 9-3.

Year	Location of Traffic Counter				
	M-28 Near South City Limit	M-28 East of M-94 Junction about 1 Mile	M-28 West of City Limit about 2 Miles	City Near Junction of M-28 and H-58	M-94 about 1 Mile West of M-28 Junction
1975	4,000	4,200	NA	NA	1,300
1995	6,400	5,900	3,700	7,700	1,400
2000	8,679	8,349	5,416	9,197	1,539
2001	8,783	6,975	5,459	9,307	1,655
2002	8,300	7,080	5,389	10,677	1,683
2003	8,375	6,960	5,297	10,773	1,659
2004	7,343	6,120	4,767	9,000	1,716
2005	7,211	7,653	4,586	8,838	2,323
2006	7,120	7,523	4,793	8,584	2,304

Source: Michigan Department of Transportation, years cited.

Year	Location of Traffic Counter			
	M-28 Near South City Limit	M-28 East of M-94 Junction about 1 Mile	M-28 West of City Limit about 2 Miles	City Near Junction of M-28 and H-58
1975	360	340	230	140
1997	510	450	240	300
2006	310	260	180	170

Source: Michigan Department of Transportation, years cited.

Information from the Michigan Department of State indicates that vehicle registrations in every category have been increasing. Along with rising registration numbers for vehicles (passenger, commercial and motorcycle), trailer registrations have increased markedly. A total of 8,506,283 passenger vehicle registration transactions occurred in FY 2005-06.

### 9.9 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 the countywide transit services. Senior citizens and disabled persons comprise 60 percent of the system’s annual ridership. In 2006, the system transported 84,421 passengers and logged 462,852 miles with a fleet of 17 vehicles. Altran is discussed further in Chapter 6, Section 6.3.

### 9.10 Intercity Transportation

The only intercity surface transportation available locally is to Marquette via R-Tran which is discussed in Chapter 6, Section 6.3. Greyhound Bus Lines, Inc. offers intercity service from the Marquette County Transportation Authority (Marqtran) terminal in the city of Marquette to many destinations.

### **9.11 Port Facilities**

Munising Bay affords a natural deep-draft harbor (24' depth) that is used to off-load coal at the Neenah Paper mill. Munising is among the 38 Michigan ports that regularly accommodate commercial cargoes. According to waterborne commerce reports compiled by the U.S. Army Corps of Engineers through 2005, between 40,000 and 50,000 tons of coal has been delivered at the port of Munising annually.

With the renewed popularity of cruise ships, cities with adequate port facilities are advancing their communities as potential ports-of-call. Besides evaluating the adequacy of port facilities, operators of passenger cruise ships look for communities offering unique shoreline attractions. The appeal of the area's natural features has led to Munising becoming a destination for cruise ships.

### **9.12 Rail Service**

Passenger rail service is not available in Munising. Industrial rail service within the city is provided solely by Canadian National and serves the Neenah Paper mill. Neenah Corporation receives much of its latex and baled pulp supply by rail.

The area was once served by two lines from the west, both of which have been abandoned. The Lake Superior and Ishpeming Railroad petitioned for abandonment of its line east of Marquette in 1979. Subsequently, the L.S. & I. sold its 5.8 mile Munising Junction-city of Munising spur in 1989 to the Wisconsin Central, Ltd. Wisconsin Central's route from Marquette, which connected with the Lake Superior and Ishpeming line at Munising Junction, was abandoned and the trackage removed. This route was first operated as the Duluth, South Shore and Atlantic Railroad, then as the Soo Line before being acquired by Wisconsin Central in 1987.

Canadian National (CN) purchased the Wisconsin Central line in 2001 and integrated the line into CN's U.S. holdings. Munising occupies the end of the Canadian National rail line that branches from a major east-west line at Trout Lake in Mackinac County. Industrial customers such as Louisiana-Pacific in Newberry and Timber Products in Shingleton help to maintain the route's economic viability.

### **9.13 Air Transportation**

Commercial air service is not available within Alger County. Discussion of air transportation facilities is found in Chapter 6, Section 6.3.

### **9.14 Non-motorized Transportation Facilities**

In recent years, the provision of non-motorized transportation facilities has become more popular. Such facilities include bike lanes and walking paths which encourage alternative modes of transportation and improve safety by separating non-motorized users from motorized traffic. The Michigan

Department of Transportation's Enhancement Program provides funding assistance for such projects on a competitive basis. Future non-motorized transportation opportunities for the area are discussed in Chapter 8, Section 8.9.

### **9.15 Issues and Opportunities**

Informed transportation decisions can be used as a tool to accommodate planned growth within a community. Short and long-term transportation planning is vital.

Increased traffic volumes on M-28 presents an opportunity to the city for enhanced economic development; however a traffic control device will be essential for safety and efficiency.

The intersection of H-58 and M-28 is in need of modifications and improvements to decrease confusion for motorists. A traffic safety assessment should be completed for the intersection.

Traffic volumes on the state trunkline highways serving the city have increased substantially since 1975.

An aging population could increase the need for additional transit services. Currently, the county transit service provides extended hours and flexible scheduling to sufficiently accommodate both residents and the tourist economy.

The natural harbor affords the capability for further opportunities as a Great Lakes port-of-call for cruise ships.

Non-motorized transportation facilities have gained in popularity and development is encouraged through MDOT's Enhancement Program. Munising is on track to complete the first segment of a non-motorized trail in 2008 and plans to continue to expand the trail in future.

## 10.0 GOALS, POLICIES AND OBJECTIVES

### 10.1 Introduction

Throughout the preceding chapters of this plan, detailed information has been presented defining the historical trends and current situation in the city of Munising. This background information has helped the Planning Commission to gain an understanding of the forces which have shaped the growth and development of the city 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 desired future conditions and are based on the background information, assumptions, alternatives and policy variables presented earlier. More specific policies and objectives 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, policies and objectives have been defined. The first step in implementation is the adoption of this plan by the Planning Commission and the City Commission following a public hearing and consideration of any public comments received.

Plan implementation continues through adherence to the goals, policies and objectives set forth in this plan. It should be emphasized, however, that these goals, policies and objectives are only a guide and provide long-term vision; ideas and projects mentioned are adjustable per a community's needs. While the Planning Commission has developed these goals, policies and objectives 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, policies and objectives 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, City Commission, and city staff, 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, policies, and objectives 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.

**Policy:** A statement of position or course of action which provides a means of obtaining a stated goal. Policies are factual in nature, and can be measured by the impact they have on existing conditions.

**Objective:** A specific attainable end derived from a related goal or policy to be accomplished within a specific time. When attained, they represent significant and measurable progress toward a goal, thus providing a means of evaluating progress.

## 10.2 Population

### **Discussion:**

Munising is the county seat and the most populous of the governmental units within Alger County. Population change is the primary component in tracking a community's past growth and forecasting future population trends.

Population characteristics relate directly to a community's housing, education, recreation, 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. According to the 2000 Census, the city of Munising has a population of 2,539. Census data indicates that the city has been subject to a slowly declining population since a peak of 4,409 in 1940. Steadily decreasing population leaves fewer residents to bear the burden of municipal costs for essential services and infrastructure.

According to the 15-year population forecast, Alger County should see a steady, but modest population increase, which may lessen the burden on the city.

### **Goal**

- Achieve a population growth rate that is manageable demographically-balanced and optimally utilizes the public and private facilities available within the city.

### **Policies**

- Encourage those persons who reside in the city for more than six months to declare Munising as their place of residence.
- Encourage those persons who currently reside in the city to remain residents of Munising.

### **Strategies**

- Maintain current infrastructure, make infrastructure improvements whenever possible and continue to offer a high level of services to encourage residents of Munising to remain in the city and draw new residents to the area.
- Strive to meet existing and future demand for residential development.

### 10.3 Economy

#### Discussion:

The local economy, like that of the county, is closely related to natural resources and features. Tourism is a growing industry in the area. Tourism was once limited to the summer season, but has now become a four-season industry for the area. Economic activity in the service and retail trade sectors has favorably impacted employment as the tourist industry has grown, while the number of manufacturing jobs has decreased since 1990. 75.1 percent of Munising residents work within Alger County and require less than fifteen minutes travel time to reach their place of employment. Alger County unemployment rates have been higher than the state and the nation, consistent with the trends in counties around the Upper Peninsula. Neenah Paper has been the area's largest single employer for many decades and currently employs around 350 people. Income rates for residents are fairly consistent with the county and state rates. Poverty rates for the city are slightly higher than the county and state.

#### Goal

- Achieve increased business and employment opportunities that are compatible with the character, natural environment and long-term interests of the city.

#### Policies

- Ensure that retail, commercial and industrial growth occurs in areas identified and zoned as suitable to support such growth.
- Support and participate in area-wide economic development efforts.
- Continue to enhance tourism by encouraging new or improved specialty services and facilities.
- Promote the surrounding waterfront as a means to attract business and industry to the city.
- Continue to promote the city's proximity to unique recreational opportunities within the Pictured Rocks National Lakeshore, Grand Island, Hiawatha National Forest, the Alger Underwater Preserve and additional public and private attractions.

#### Strategies

- Encourage existing area businesses to remain, improve and grow.
- Cooperate with surrounding townships to identify potential sites suitable for expanding businesses or new businesses looking to locate in the area.

- Encourage the use of existing commercial sites when feasible.
- Support the cleanup of environmentally contaminated sites within the city so the sites are available for desired redevelopment.
- Encourage, support and cooperate with the Downtown Development Authority, Alger County Chamber of Commerce, the Munising Area Partnership for Development and other entities dedicated to strengthening the local economy.
- Utilize 100 percent of the Industrial Park by promoting occupancy to small businesses.
- Review current zoning ordinance regulations regarding commercial and industrial districts to encourage consistency with the Master Plan.
- Promote a positive climate within the city which will maintain and attract business and employment opportunities.

#### **10.4 Natural Features**

##### **Goal**

- Preserve and enhance the natural setting of the city, while allowing for compatible development to occur at suitable sites.

##### **Policies**

- Simultaneously use and preserve the natural beauty and physical features of the city to stimulate growth.
- Ensure that any growth occurs in areas identified and zoned as suitable to support such growth. Growth that occurs shall not endanger or diminish the city's natural features.
- Continue to protect public access to the lakeshore area.
- Continue to promote low impact participation in the natural setting of the city.

##### **Strategies**

- Coordinate with various organizations and agencies to advance a common interest in the city's natural features.
- Encourage Munising Bay watershed protection and management.

## 10.5 Land Use

### **Discussion:**

Industrial, commercial and residential development has occurred within the areas located between Munising Bay and the high terrain that surrounds the city. Residential characteristics are typical of many cities, including small lot sizes, limited parking and high density development. Lakeshore development is a mixture of uses, many of which are exempt from property taxes. Land suitable for commercial and residential development within the city is limited due to terrain. Future industrial development can be accommodated by available space within the city's Industrial Park, located in Munising Township and also by properly zoned sites within the city limits.

### **Goal:**

- Foster orderly patterns of development that preserve the area's natural features.

### **Policies:**

- Promote high quality and appropriately scaled residential, commercial and industrial development that compliments the natural features of the area when possible.
- Utilize the Zoning Ordinance in accordance with the Master Plan to encourage compatible development.
- Work cooperatively with surrounding communities to manage growth and establish consistent and compatible land use.
- Encourage compatible commercial and industrial development where adequate facilities exist or may be provided.
- Ensure that future development along the lakeshore provides optimal long-term public and private benefits.
- Encourage future development that will provide safe access, sufficient parking, easements for fire protection and connection to municipal water and sewer systems, where feasible.

### **Strategies:**

- Identify potential commercial and residential sites consistent with current or future zoning districts.
- Identify areas that are unsuitable for commercial and residential development.

- Review and revise the existing zoning ordinance to ensure compatibility with policies stated in the Master Plan.
- Encourage uses that will have a positive impact on the city's tax base.
- Ensure that the city's infrastructure and services are modern, efficient and competitive with ample capacity to meet economic expansion demand.
- Promote industrial development at the existing Industrial Park and on properly zoned industrial sites within the city limits.
- Encourage commercial growth within the existing downtown area.
- Encourage lakeshore development that will preserve its natural features as well as provide maximum economic benefit.
- Encourage minimum maintenance standards for commercial, industrial and residential buildings that promote safe, healthy and aesthetically pleasing surroundings.

## **10.6 Public and Community Facilities**

### **Discussion:**

The city of Munising continues to provide a complete range of facilities and services to local residents, including municipal water and sewer systems, fire and police protection, streets, etc. Other services are provided by other levels of government, such as the state or county, or are provided by non-profit entities. Such facilities and services are a critical part of a community's quality of life and are also an important factor in economic development. Improving efficiency in these facilities and services will directly impact the quality and cost of services.

### **Goal:**

- Provide all necessary community facilities and services efficiently for all residents and visitors.

### **Policies:**

- Ensure that existing city structures, infrastructure and equipment are kept in good repair and provide for the greatest measure of public safety.
- Continue to provide exceptional fire protection service to the city.
- Ensure that any expansion of facilities and services are done based on the city's ability to sustain operational and maintenance costs.

- Whenever practical, augment local revenue resources with federal and state grant and loan programs to provide improved facilities and services.
- Support facility and service expansion and improvement in neighboring units of government that will provide a common public benefit.
- Maintain a multi-year capital improvement plan to address facility maintenance and improvements in accordance with priorities established through public discussion.
- Locate municipal facilities to gain maximum efficiency.
- Promote coordination of municipal services and procedures that will achieve the greatest level of service at the lowest cost to taxpayers.
- Utilize new technologies as a means of gaining operating cost advantages in municipal activities.

**Strategies:**

- Encourage improvement of city owned facilities.
- Utilize state and federal grant and loan programs when possible to provide and improve facilities and services.
- Encourage beautification of community facilities through flower, shrub and tree planting activities where appropriate.

**10.7 Housing**

**Discussion:**

The majority of the housing units within the city were constructed before 1950 and are detached single family residences. Median housing values in the city of Munising and surrounding townships have increased dramatically from 1990 to 2000, following a nationwide trend. Median gross rent in the city has also increased due to the rise in demand for rental units. Rental costs for residents in Munising still remain affordable.

**Goal:**

- Develop a diverse housing stock that is sufficient to meet the needs, preferences, and financial capabilities of the local population.

**Policies:**

- Ensure the availability of housing development sites through zoning and other means of land use regulation.

- Maintain consistent and vigilant enforcement of those ordinances designed to ensure public health and safety, and control blight and structural deterioration.
- Maintain an awareness of current housing rehabilitation programs designed to upgrade existing housing units.

**Strategies:**

- Revise the zoning ordinance as necessary to guarantee that areas essential to maintaining the character of the city are preserved and protected.
- Encourage redevelopment and rehabilitation of residential areas with existing infrastructure.
- Encourage additional apartment units within the downtown business district through the conversion of underutilized upper floor space.
- Encourage the maintenance and rehabilitation of existing housing units to ensure the safety of residents, preservation of neighborhoods and prevention of blight.
- Encourage neighborhood beautification efforts through flower, shrub and tree planting that do not interfere with the provision of municipal services or maintenance activities.
- Promote citizen interaction that fosters good neighborhoods and community pride.

**10.8 Recreation**

**Discussion:**

The city of Munising and the surrounding area have developed into an all-season tourist destination. In addition to city-owned facilities, both the U.S. Forest Service and U.S. Park Service offer wide-ranging opportunities on the federal lands under their jurisdiction. Several city-owned recreation facilities are currently in the process of being improved. Attractions and facilities located in close proximity to the city present many opportunities for active and passive recreation. Munising is exceptionally rich in natural resources which draw a growing number of visitors each year. Heritage based tourism and ecology based tourism are becoming increasingly popular.

**Goal:**

- Maintain and improve recreational opportunities for residents and visitors.

**Policies:**

- Prepare and implement plans to establish pedestrian and non-motorized paths where feasible.
- Encourage trails, paths and green space in new developments.
- Maintain an updated recreation plan that is prepared in conformance with the standards required by the MDNR.
- Ensure that recreational facilities are developed for multi-purpose and/or year-round use to optimize cost and benefits for the public.

**Strategies:**

- Encourage public participation in recreation planning.
- Encourage improvements and developments at existing city-owned facilities.
- Continue to pursue grants to improve existing recreation facilities, build new facilities and acquire land for recreation.
- Identify and seek alternate funding for maintaining, improving and developing recreation facilities.
- Encourage citizen involvement in recreational facility care through community service adoption programs.
- Utilize marina upgrade study to continue to pursue grant funding for a possible marina expansion.
- Continue promotion of area recreation events.

**10.9 Transportation**

**Goals:**

- Provide efficient and safe multi-modal transportation connections.
- Reduce the congestion and safety hazards that exist along the M-28 corridor.

**Policies:**

- Evaluate, prioritize, maintain and improve the city street network on an annual basis.
- Promote traffic access that provides the greatest measure of safety.

**Strategies:**

- Actively participate with MDOT in identifying and setting road improvement priorities with the city.
- Collaborate with MDOT to develop access/asset management plans for areas along M-28, to reduce the potential for future safety hazards and preserve the current road conditions while spending less money to do so.
- Identify routes that will provide safe and efficient access for motorized, non-motorized and pedestrian traffic.
- Seek to improve non-motorized routes; consider pursuing grants as appropriate.
- Encourage continuation and expansion of public transportation services through the Alger County Transportation Authority.
- Enhance safety along existing traffic corridors by discouraging signage that is redundant, gaudy or in poor condition.

## **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 the city of Munising and 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 will be carried out. It is based on analyses of environmental opportunities and constraints, existing trends and conditions and projected future land use needs. 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 city’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 city’s zoning ordinance and any potential modifications to the districts will also be discussed in this chapter.

The city of Munising covers a total land area of 9.1 square miles and according to 2000 Census data, has a population of 2,539. The city is moderately populated with a density of 233.2 persons per square mile. According to the land cover/use data presented in Chapter 5, about 20 percent of the city’s land is developed for residential, commercial, industrial, transportation and recreational uses. Slightly more than 75 percent of the city’s land area is classified as forest land, much of it corporately owned. Much of this land is considered rugged and sharply sloped, somewhat constraining further development. With the limited amount of vacant land available within the city limits, redevelopment of existing buildings and lots will be the principal means to implement a future land use plan.

Map 11-1, Future Land Use, reflects the assumption that land use patterns in Munising 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 along the shoreline and to develop a more consistent land use pattern throughout the city.

In communities across the country, there is a growing concern that current development patterns, described as “sprawl,” are not in the best interest of the community. Communities are supportive of growth, but question the economic cost of abandoning infrastructure in the city, only to build it further out. “Smart-growth” involves investing time, effort and resources in restoring community and vitality to center cities and older suburbs. Smart growth is town-centered, transit and pedestrian oriented and has a greater mix of housing, commercial and retail uses. It also preserves open space and other environmental amenities. All of these characteristics of smart growth communities are standards that Munising can focus on, especially with the limited space available for development.

### **11.2 Zoning Districts and Zoning Plan**

The city of Munising is currently divided into fourteen zoning districts. The intent and general purpose will be depicted for each district. A schedule of regulations will also be included. Munising is a relatively mature city and modification to the number or type of current zoning districts is not anticipated. At this time, no new zoning districts are proposed and all districts on Map 11-1 coincide with the districts on the city of Munising Official Zoning Map.

#### **R-1, Residential One District**

The R-1 district is designed to accommodate small lot sizes, primarily for one-family residential use within the central, established portion of the city. The uses in this district are intended to keep the neighborhoods relatively quiet and free of unrelated traffic influences and commercial activities.

#### **R-2, Residential Two District**

The R-2 district is designed to establish medium sized lots for single-family residential neighborhoods in established areas not in the central city area. The uses in this district are intended to keep the neighborhoods relatively quiet and free of unrelated traffic influences and commercial activities. The district will allow for a mix of residential and compatible commercial uses. The lots are slightly larger than found in the R-1 District.

#### **L-1, Lakeshore One District**

The L-1 district is designed to establish and maintain residential use lots in areas with frontage on or in close proximity to Lake Superior, which because of their natural characteristics and accessibility, are suitable for residential development. The L-1 district will permit development along the shoreline but take into consideration the visual appearance and accessibility to the water resource.

#### **L-2, Lakeshore Two District**

The L-2 district is intended to establish and maintain for residential use in areas with frontage on or in close proximity to Lake Superior, which because of

their natural characteristics and accessibility, are suitable for development. The district will permit a mix of residential and compatible commercial uses but take into consideration the visual appearance, accessibility to and preservation of the water resource.

**RR-IBZ, Rural Residential-Inland Buffer Zone District**

The RR-IBZ is designed to establish and to maintain a low intensity, residential use environment for those areas of the Pictured Rock National Lakeshore Inland Buffer Zone, as established by Public Law 89-668, which because of their location, accessibility, soils, drainage and other characteristics are suitable for the development of year-round single-family dwellings.

**H-1 Highland One District**

The H-1 district is designed to establish and maintain residential use in areas of rural character of the ridge lines and hillsides that surround the city. Because tourism, recreation and environmental integrity are major aspects of the city's development situation, it is deemed vital to the general welfare of the city that natural resources and scenic assets be preserved. It is the intent of this district to allow development uses with appropriate regulations that will retain the area in as much of its natural condition as possible. The district will allow for a mix of residential and compatible commercial uses.

**H-2, Highland Two District**

The H-2 district is designed primarily for residential use in areas of rural character where development has not previously taken place. The larger sized lots are to insure safe, potable water supply and treatment of wastewater on the same lot, since such municipal services may not be extended entirely within this district. Commercial uses permitted are compatible with the residential setting, as the large lots may tend to screen such uses from adjoining residential use.

**D, Downtown District**

The D district is designed to establish and maintain an area for intensive commercial development to occur in the business oriented center core of the city. Common parking areas are encouraged to serve the needs of the district. Residential use is not permitted in this district, with the exception of dwellings located in the upper floors of commercial establishments.

**T, Transitional District**

The T district will serve as a transition area between commercial/business districts and residential districts. Non-residential uses permitted are limited to those uses which are compatible with residential uses in that they do not involve high traffic volumes, excessive lighting, noise, smoke, fumes or outdoor storage or sales.

**LC, Lakefront Commercial District**

The LC district is intended to provide an area within the city for commercial use along or in close proximity to the lakeshore. The district would include services and retail sales catering to the community and to tourist traffic with the intent of preserving, developing or enhancing a “commercial fishing village atmosphere.” Residential use may be permitted in the district.

**C, Commercial District**

The C district is designed to provide an area for general commercial business for the convenience of residents and the traveling public.

**I-1, Light Industrial District**

The I-1 district is designed to accommodate establishments where the finished product generally consists of small machine parts, small electronic equipment or similar items. All manufacturing operations within this district will have less than 90 decibels emanating from the building.

**I-2, Heavy Industrial District**

The I-2 district is designed to accommodate wholesale activities, warehouses, major repair operations, manufacturing operations and other industrial uses whose external and physical effects are such that require them to be separate from residential uses. The location of industrial uses may be located on individual lots or as part of an industrial park.

**PL, Public Lands District**

The PL district is to establish and preserve areas for certain public purposes.

**LSO, Lake Superior Shoreline Protection Overlay District**

The LSO district is intended to protect the natural environment and preserve the natural beauty of the lake shore areas adjacent to Lake Superior in the city. The LSO district includes all land lying within the 1986 U.S. Army Corps of Engineers High Water Mark within areas zoned as either L-1 or L-2 as depicted on the Official Zoning Map for the city. This boundary extends across all underlying zoning districts.

Schedule of Regulations							
District	Minimum Lot Size (Sq. feet or acreage)	Minimum Lot Width <sup>A</sup>	Minimum Setback <sup>B</sup>			Maximum Height	Maximum Lot Coverage Ratio
			Front <sup>C</sup>	Side	Rear		
R-1	3,300 sq. ft.	33 ft.	12 ft.	4 ft.	12 ft.	30 ft.	58%
R-2	5,000 sq. ft.	50 ft.	12 ft.	6 ft.	12 ft.	30 ft.	58%
L-1	20,000 sq. ft. <sup>F</sup>	100 ft.	50 ft. <sup>D</sup>	10 ft.	25 ft.	30 ft.	25%
L-2	10,000 sq. ft. <sup>F</sup>	100 ft.	50 ft. <sup>D</sup>	10 ft.	25 ft.	30 ft.	20%
H-1	2 acres	200 ft.	100 ft.	50 ft.	50 ft.	35 ft.	7.5%
	4 acres <sup>G</sup>	300 ft. <sup>G</sup>	150 ft. <sup>G</sup>	75 ft. <sup>G</sup>	75 ft. <sup>G</sup>	40 ft. <sup>G</sup>	6.0% <sup>G</sup>
H-2	3 acres	200 ft.	100 ft.	50 ft.	50 ft.	40 ft.	7.5%
RR-IBZ	2 acres	200 ft.	50 ft.	30 ft.	30 ft.	30 ft.	7.5%
D	None	None	None	4 ft.	6 ft.	40 ft.	100%
T	5,000 sq. ft.	50 ft.	25 ft.	10 ft.	10 ft.	30 ft.	40%
LC	5,000 sq. ft.	50 ft.	50 ft. <sup>E</sup>	10 ft.	12 ft.	30 ft.	23%-water lot
							46%-land lot
C	20,000 sq. ft.	150 ft.	25 ft.	10 ft.	12 ft.	40 ft.	62%
I-1	None	None	12 ft.	10 ft.	12 ft.	30 ft.	90%
I-2	25,000 sq. ft.	125 ft.	50 ft.	25 ft.	50 ft.	40 ft.	30%
PL	None	None	None	None	None	None	Not applicable

**Footnotes to the Table:**

- A. Lot width shall be measured at front setback line and shall not include any encumbrances, such as easements or other such restrictions.
- B. Cornices, eaves, and gutters may project two feet into the required yard. Attached or unattached decks and porches shall comply with required front, side and rear setbacks.
- 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 parcel abuts a water body, the front lot line setback shall be 50 feet from the ordinary high water mark. Where a parcel does not abut a water body, the front lot line shall be measured 25 feet from the road right-of-way.
- E. Where a parcel abuts a water body, the front lot line setback shall be 50 feet from the ordinary high water mark. Where a parcel does not abut a water body, the front lot line shall be measured 12 feet from the road right-of-way.
- F. Prior to installation of a septic system on lots within L-1 and L-2, the local health department must be consulted to determine minimum lot size needed.
- G. Applies to motel/hotel and restaurant establishments.

**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. More than one principal use and/or structure per lot may be permitted. Development in accordance with the Planned Unit Development provisions of the Zoning Ordinance can be in the form of a platted subdivision, a site

condominium development or other legal means. Development for a shopping center shall be as a Planned Unit Development.

In order to receive consideration by the Planning Commission, a proposed Planned Unit Development shall:

1. Be located in one of the following districts, R-2, L-2, H-1, H-2, D, T, LC, C, I-1, or I-2.
2. Be located on a parcel equal to the greater of either:
  - (a) Two acres or
  - (b) The total square footage for all buildings, including storage, garages, etc. divided by the floor area ratio of .15.
3. Provide for open space and preservation of natural features; clustered development and similar design methods are encouraged.
4. Minimize the amount of the impervious surface created.
5. 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.

Potential changes to the city of Munising 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.

### **11.3 Sensitive Areas**

Within the city limits, there are few sensitive areas of land in need of protection. The Anna River watershed is an environment 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 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 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 the city of Munising and portions of Munising and Au Train Townships. 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.

From 2004 to 2006 a project was undertaken on St. Martin's Hill to prevent sediment from being carried down the road and into a sediment basin that was unable to handle the sediment load. Portions of the road were paved and curb cuts were installed; storm sewer and curb drains with water-drop control structures were built in; and rock riprap over geotextile fabric and rock check dams were installed to decrease the flow of water. This project resulted in the elimination of one of the largest sources of sediment to Munising Bay. Continued monitoring of the Munising Bay watershed is essential to the area.

There are a small number of high risk erosion zones within the city of Munising. Erosion has occurred on Cemetery Hill and there has been a redirection of water to mitigate the problem. Observation is continuing to prevent further erosion. Joe's Creek, which feeds into the Anna River, is another area with erosion concerns. Any potential infrastructure projects that occur in this area should carefully consider limiting curb cuts and utilizing sediment traps as containment areas to catch sediment before runoff water is discharged. The hillside along west M-28 may also be considered a sensitive area where continued monitoring and erosion control practices will be beneficial.

In the early 1990's, the city had a deep well system installed. The Department of Environmental Quality (DEQ) establishes standards for water quality and has oversight of community public water supplies. The city regularly sends water samples to the DEQ for testing. There is no surface water infiltration, and currently no need for a wellhead protection plan.

## 11.4 Commercial Development

The Downtown District is designed to establish and maintain an area for intensive commercial development to occur in the business oriented center core of the city. Common parking areas are encouraged to serve the needs of the district. Residential use is not permitted in this District, with the exception of dwellings located in the upper floors of commercial establishments. The Transitional District serves as a transition area between commercial/ business districts and residential districts. Non-residential uses permitted are limited to those uses which are compatible with residential uses in that they do not involve high traffic volumes, excessive lighting, noise, smoke, fumes or outdoor storage or sales.

The Downtown and Transitional Districts are connected by M-28, the city's main traffic generator, creating the major commercial corridor within the city. There is a shortage of parking throughout the city, in the commercial districts, as well as residential. The zoning ordinance has a provision for payment in lieu of parking. The city recognizes that due to the small lot sizes and existing development patterns, new developments may not be able to meet off-street parking requirements. Payment in lieu of parking allows applicants to contribute a one-time predevelopment fee to the city's Alternative Parking Fund, which the city would then use to purchase of property and physical improvements to provide for additional off-street parking. This policy should be supported whenever practical. Shared parking is encouraged when possible. A parking garage or ramp in the Downtown District is also an option, should a lot be purchased for this use.

Commercial development is encouraged within properly zoned districts. Currently, there are a few sporadic parcels available for commercial use within the city. About 70 percent of the city's commercial space is occupied at this time. There are also several homes to be torn down where commercial uses could be established. A central courtyard with surrounding retail outfits is another option for attractive commercial space. The downtown district could continue to improve its appeal by installing benches throughout the area.

Redevelopment of existing properties is promoted within the city. A potential model building for redevelopment within the Downtown District is the Fineman Building. Currently the building houses several businesses on the lower level and apartments are located on the upper level. Much of the space within the building is vacant. There is a push for mixed use development, especially within local downtown business districts. Mixed use development would consist of commercial space on the ground floor of buildings, with residential space above. Another possibility for redevelopment is the Bay House building, with studio apartments above and businesses below. Parking may again be an issue with this building, as with many of the city lots.

Formation of the Downtown Development Authority was completed in 1976 under the authority of Public Act 197 of 1975. The DDA adopted its first written plan in 1979 using self-generated funding together with a grant award through the MDNR's Coastal Management Program. Over the years, significant physical and visual improvement has been realized due to the DDA's efforts. The city and the DDA have worked together on self-funded façade grants for businesses in the downtown. Roughly 17 businesses have been completed over a 2 ½ year period. Façade improvements for the portions of businesses facing alleys within the Downtown Development District could be pursued to improve attractiveness. Michigan State Housing Development Authority (MSHDA) façade grant funding is an option for additional funding if the necessary qualifications can be met.

A Tax Increment Financing Plan was approved by the DDA and adopted by the City Commission in 1988 (amended in 1993) with the stated mission of preventing further deterioration in the business district by using tax increment revenues to make needed public improvements in the designated development district. Revenues are derived from the entire district. The district surrounds M-28 throughout most of the city and it includes public and institutional properties located between M-28 and the Munising Bay shoreline. TIF captured revenues could be utilized for various street, sidewalk and utility improvements.

Much of the city's most valuable land located along the lakeshore has been occupied for use by non-tax generating development. Future development and redevelopment along the lakeshore is being carefully considered to determine the long-term tax revenue potential and best use of lakeshore land uses.

Among existing businesses, attention to visual quality is important to maintaining an attractive and inviting commercial district. Signage along portions of M-28 is confusing and cluttered to some extent. Efforts are being made through zoning ordinance amendments to provide for signage that is appropriate for each district. As discussed, the Transitional District serves as transition area between commercial/ business districts and residential districts. The signage permitted will reflect the compatible uses allowed and will be smaller than signage permitted in a strictly commercial area. The Commercial District along M-28 could provide for larger signs, as the district is not a transition area between business and residences and larger signage would not be conflicting. Additional revisions to regulations regarding signs may include: the elimination of pole signs throughout the city; developing regulations to produce more consistent and aesthetically pleasing signage, perhaps following one of several themes; and reducing the amount of signage clutter.

The city also has a goal of relocating City Hall and combining it with the Fire Department and Police Station into one municipal complex. Potential sites at

for a new municipal complex are being explored. An all-in-one municipal complex would allow the city to provide efficient and effective services to Munising residents in a modernized setting. The new municipal complex would also be much more energy efficient and environmentally friendly. Various grant funding may be pursued to aid in financing the project.

### **11.5 Industrial Development**

There are several tracts of land currently zoned for industrial use within the city limits. Much of this land is utilized by Neenah Paper for its mill operations. Industrial land occupies about 73 acres within the city limits, just over 2 percent of the developed land within the city. Development or redevelopment in the industrial district would need to be compatible with limited space.

The city's 37-acre certified industrial park is located in Munising Township and 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 city is actively promoting the open sites to 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.

A Brownfield Redevelopment Authority was established in 2002, as a way for property improvements associated with cleanup and redevelopment to pay for environmental activities necessary for safe improvements. The BRA has been working with private developers on a project to reuse former road commission property and old school property along the lakeshore. There are several other properties within the city that could be pursued as redevelopment projects, including the former Cox Building and the former municipal garage. Alger County recently developed a county-wide Brownfield Authority which will work closely with the city's BRA to improve environmental conditions. This cooperative effort opens up the potential for increased funding sources for the city as well.

### **11.6 Residential Development**

Extensive residential development within the city is somewhat limited due to the surrounding natural features and the small number of unoccupied lots. Narrow lots sizes are common within the older residential areas. Current zoning for the residential one district (R-1) provides for small lot sizes in the established central residential area and requires a minimum lot width of 33 feet; the residential two district (R-2) is designed to establish medium sized lots

for single-family residential neighborhoods in established areas not in the central city area and requires a minimum lot width of 50 feet.

Eliminating the 33' minimum lot width in the R-1 district is an option. The minimum lot width in the R-1 district could be increase to a width of 49.5'. All lots of record prior to the change would then be considered a nonconforming lot of record. Buildings will still be permitted to be reconstructed in the case of complete destruction as indicated in the Zoning Ordinance. Utilization of an existing lot not conforming to area, width or other provisions of the Zoning Ordinance may be permitted, provided a variance is obtained. New general regulations for the 49.5' minimum lot width will be updated w/ new minimum lot size, setbacks, and maximum lot coverage ratio to reflect the new width.

As mentioned in previous chapters there are few sporadic parcels located throughout the city with potential for residential development, as well as the St. Martin's Hill development and lots along Connors Road. There are parcels vacant along H-58, where condominiums could potentially be constructed. Grandview Apartments are currently in the process of converting from apartments into condominiums. A variety of housing options should be encouraged throughout the city.

Another option for residential development could come from an extension of the R-2 zone in the Cox Addition area. Storm water control would need to be implemented in the area as well as an extension of water and sewer service. An additional residential area could be considered at the end of Bell Avenue where a proposed plat is located, with room for about 20 homes.

Also on St. Martin's Hill lies the potential for a manufactured home park. Manufactured homes are built entirely in a factory under a federal building code administered by HUD. Manufactured homes may be single- or multi-section and are transported to the site and installed. On site additions such as garages, porches and decks can add to the appeal of the development.

Housing rehabilitation assistance programs should be utilized where again 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**

A 97-acre recreation complex is proposed for property located on St. Martin's Hill. If the anticipated development is completed, the recreation complex would include multiple baseball fields, a soccer field, tennis courts, cross country skiing trails, a trailhead for a nonmotorized path and a concession area.

A bike path project has also been proposed which may extend from Munising Falls to the west end of Tourist Park. A portion of the bike bath is expected to be completed in 2009, with a portion of the funds coming from a Michigan Department of Transportation Enhancement Grant. Continuation of non-motorized transportation planning should be pursued to promote Munising as a walkable community with many recreation options. Walking remains the cheapest form of transport for all people, and the construction of a walkable community provides the most affordable transportation system any community can plan, design, construct and maintain.

There are several city owned lots throughout Munising. These lots are small and have limited building potential. The lots could be put on the market for sale. Should the lots remain unsold, they could be designated as recreational space and turned into pocket parks or green space throughout the city.

### **11.8 Transportation**

M-28 throughout the city is on the Michigan Department of Transportation's reconstruction schedule for 2010 for crack sealing. Currently, driving through Munising presents a view of mixed land uses, competing and distracting signage. This repair project may present the city with the opportunity to improve beautification along the commercial corridor and continue to enhance the ease of transportation throughout the city. Sidewalks with tree-lined boulevards could also add to the appeal of the downtown area and also provide a safer walkway for pedestrians.

At the present time, there is difficulty and confusion at the M-28/Elm Avenue intersection. A traffic control device is scheduled to be installed at the M-28/Elm Avenue intersection in spring 2009, funded entirely by the city. The signal will be the only full-sequence signal operating in Alger County after installation. The light will be governed by sensors installed along Elm Avenue. Pedestrian crosswalk lights, push-buttons and wheelchair corner ramps are also planned. The intersection and traffic signal set-up are being designed to meet MDOT specifications. The traffic lane scheme was reconfigured by MDOT in fall 2008, in anticipation of the signal installation. The lane modifications should improve traffic flow. The combination of lane changes and the new traffic signal should reduce speeds through the downtown area and allow pedestrians to safely cross the M-28 to City Hall, Bayshore Park and the downtown business district. Efforts to improve traffic flow throughout the city may prove beneficial to local businesses.

Residential development and the proposed recreational opportunities on St. Martin's Hill may present the city with the chance to make road improvements. At this time there is only one entrance/exit into the St. Martin's Hill area and improvements to the old logging trail could be considered as an alternative route. Residential growth in the Cox Addition area may warrant the extensions of High and Nester Street, if the necessary land can be accessed.

Cemetery Hill Road improvements could be considered as a joint project between the city of Munising, Munising Township and the Alger County Road Commission.

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 off of Mill Street. 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.

### **11.9 Alternative Energy**

With increasing energy costs, there has been a growing interest in utilizing alternative energy resources. Regulations regarding alternative energy sources will continue to be reviewed by the city and incorporated into the zoning ordinance as appropriate.

Outdoor wood burners are currently banned from use within the city limits. The city has been postponing a draft of an outdoor wood burner ordinance until the Michigan Department of Environmental Quality adopts standards for use. When the City does begin to draft an ordinance regarding the wood burners, engineering modifications that may be made should be addressed in regards to the addition of stack height to chimneys to alleviate issues with smoke. Outdoor wood burners could be designated as conditional uses in the appropriate districts.

Wind energy is another emerging technology that may require the city to consider updates to the zoning ordinance. 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 added and updated. The types of turbines may differ by use, height or capacity. The zoning districts in which wind turbines will be hosted must also

be determined. The wind turbines will be permitted as an accessory use, a principal permitted use or as a conditional use depending on the zoning district. Appropriate development standards will need to be created and adopted for each type of wind energy facility. Site plan review requirements may also need to be revised.

#### **11.10 Conclusion**

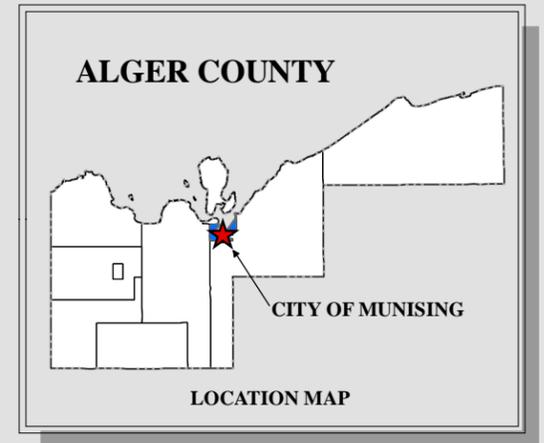
Planning is intended to guide the forces of change in ways that insure desirable outcomes while striking an appropriate balance with development and preservation. Priorities will likely require periodic review and further study as unforeseen circumstances bring about new challenges. The Planning Commission will be responsible for the review of this plan every five years. Patience, resolve and flexibility are necessary to achieve the goals set forth in this plan. The Master Plan is one of the tools that the city of Munising can utilize to encourage better land use decisions.

# ***Appendix A***

## ***Maps***

# City of Munising

## Bedrock Geology

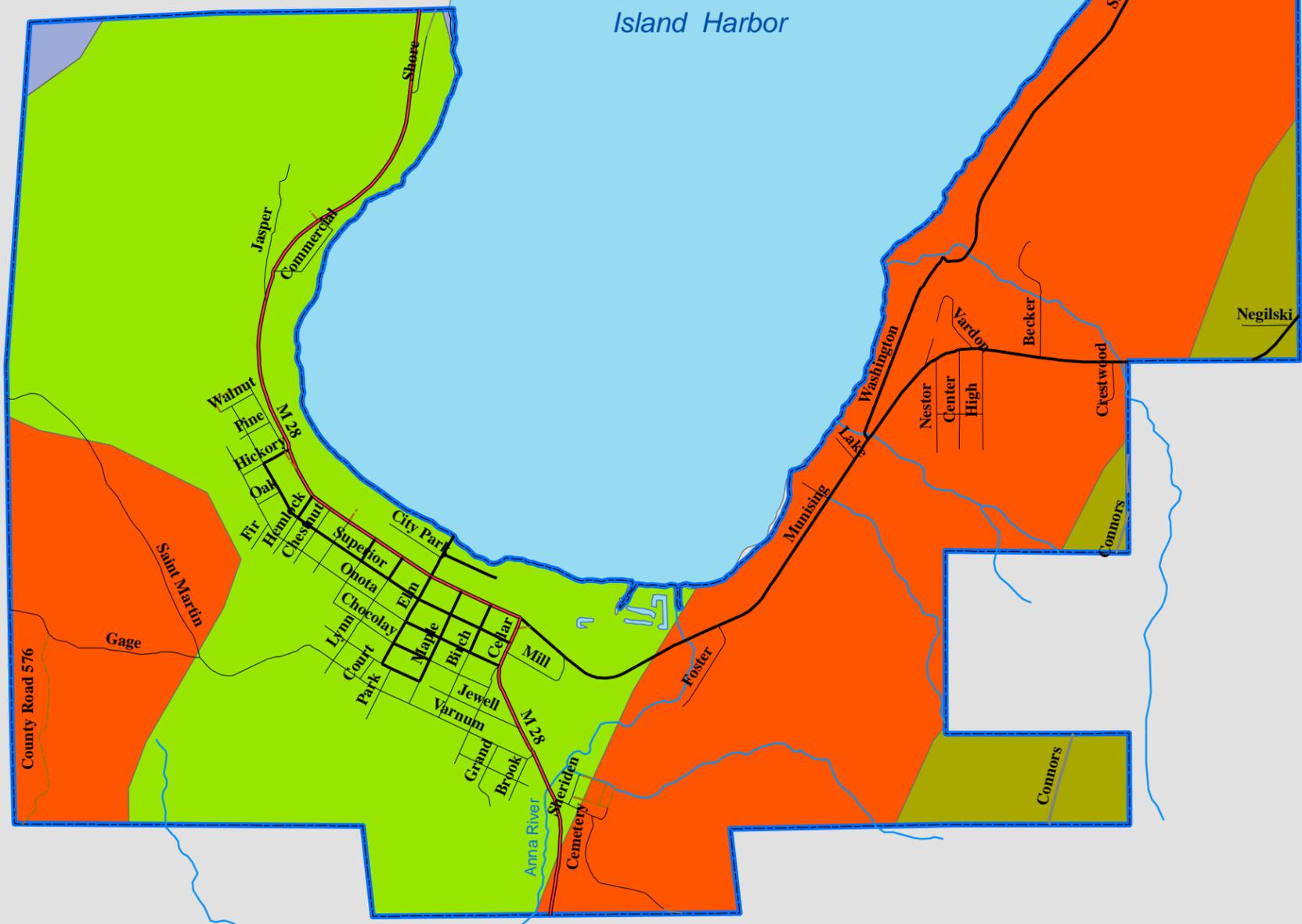


**Bedrock**

- JACOBSVILLE SANDSTONE
- MUNISING FORMATION
- PRAIRIE DU CHIEN GROUP
- TREMPEALEAU FORMATION

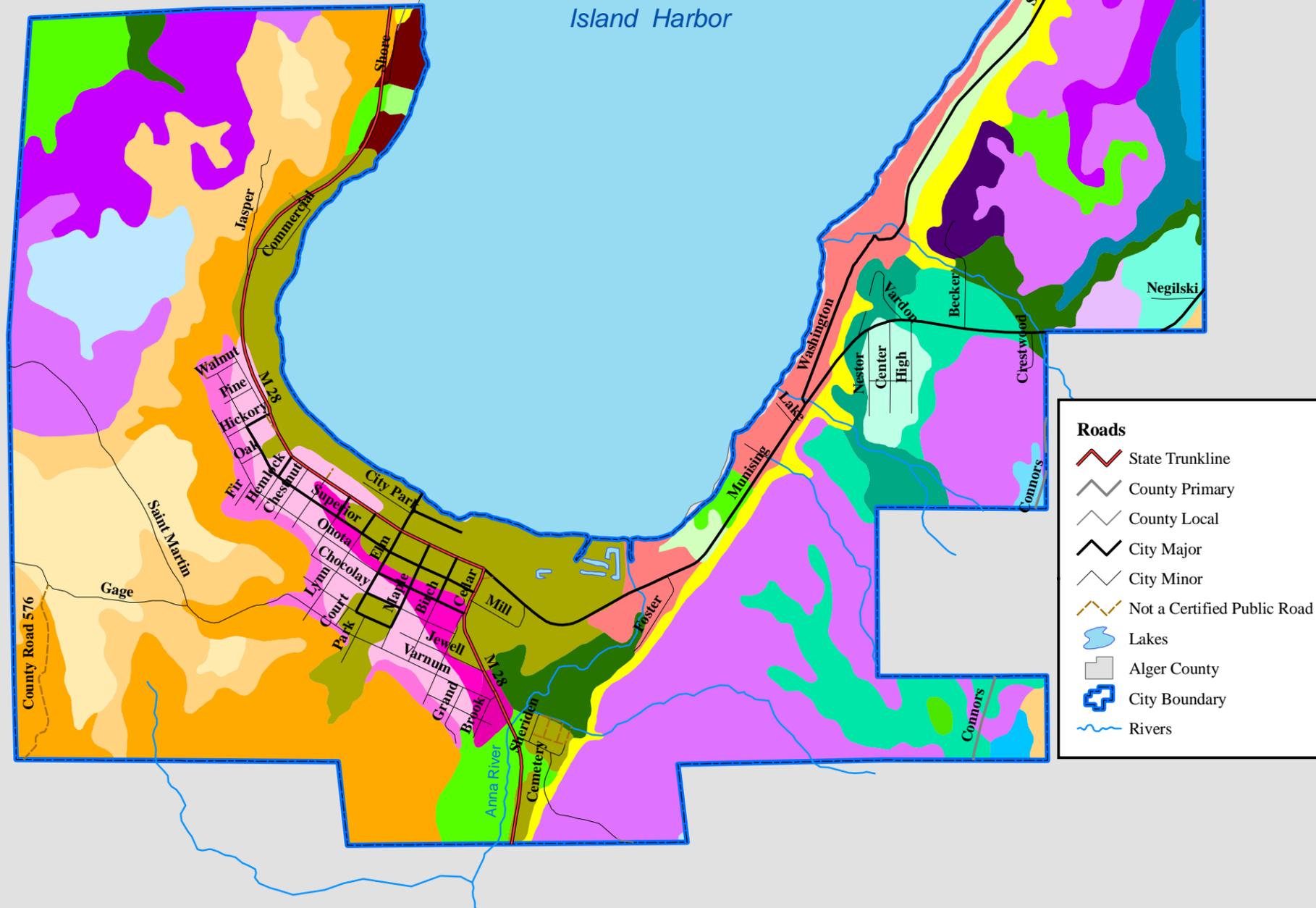
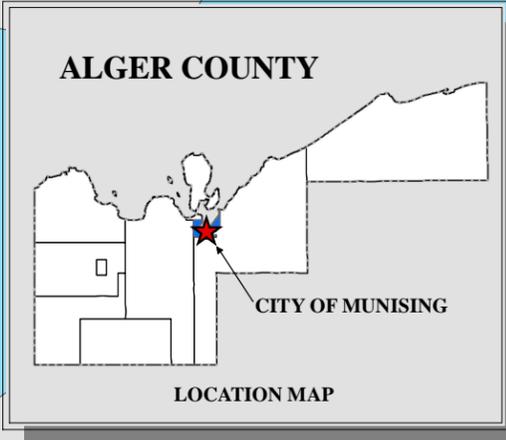
**Roads**

- State Trunkline
- County Primary
- County Local
- City Major
- City Minor
- Not a Certified Public Road
- Lakes
- City Boundary
- Rivers
- Alger County



# City of Munising

Soil Types



### 1 - Sandy soils on lake plains and outwash plains

- 12B Rubicon Sand, 0-6% slopes
- 12D Rubicon Sand, 6-15% slopes
- 15A Crowell Sand, 0-3% slopes
- 17A Au Gres Sand, 0-3% slopes

### 2 - Hydric soils

- 19 Deford Muck
- 46 Jacobsville Muck
- 57 Carbondale, Lupton, and Tawas Soils
- 58 Dawson, Greenwood, and Loxley Soils
- 60 Histosols and Aquents, ponded
- 93 Tawas-Deford Mucks
- 62F Udipsamments and Udorthents, nearly level to very steep

### 4 - Sandy and loamy soils on dissected moraines

- 76C Garlic-Blue Lake-Voelker complex, 1-12% slopes, dissected
- 76E Garlic-Blue Lake-Voelker complex, 8-35% slopes, dissected
- 76F Garlic-Blue Lake-Voelker complex, 15-60% slopes, dissected

### 5 - Sandy and loamy soils formed at the front of the rapidly melting glacier

- 254C Kalkaska-Blue Lake complex, 1-12% slopes, dissected
- 254E Kalkaska-Blue Lake complex, 8-35% slopes, dissected
- 254F Kalkaska-Blue Lake complex, 15-70% slopes, dissected

### 6 - Sandy soils on beach ridges and dunes

- 232B Shelldrake sand, 0-8% slopes
- 298B Wurtsmith-Deford complex, 0-6% slopes

### 7 - Loamy soils on ground moraines

- 24B Munising fine sandy loam, 1-6% slopes
- 25B Munising-Yalmer complex, 1-6% slopes
- 145C Munising-Yalmer complex, 1-12% slopes, dissected, very stony
- 181E Frohling-Tokiahok complex, 8-35% slopes, dissected, stony
- 104C Fence very fine sandy loam, 1-12% slopes, dissected
- 155A Zeba-Jacobsville complex, 0-3% slopes, very stony

### 10 - Soils on bedrock benches and steep escarpments

- 72E Deerton-Tokiahok-Trout Bay complex, 8-35% slopes, dissected
- 240F Trout Bay-Gongeau-Shingleton-Rock outcrop complex, 1-70% slopes

### 11 - Sandy and loamy soils formed between ground moraines and outwash plains

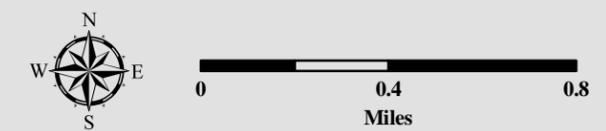
- 13B Kalkaska sand, 0-6% slopes
- 214B Kalkaska-Blue Lake complex, 1-6% slopes
- 214D Kalkaska-Blue Lake complex, 6-15% slopes
- 284B Steuben-Blue Lake-Kalkaska complex, 1-6% slopes
- 284D Steuben-Blue Lake-Kalkaska complex, 6-15% slopes

**Roads**

- State Trunkline
- County Primary
- County Local
- City Major
- City Minor
- Not a Certified Public Road

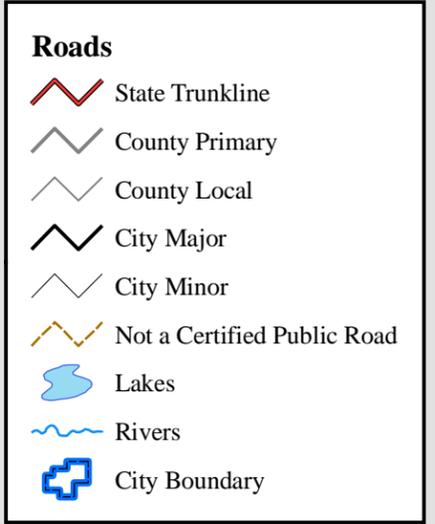
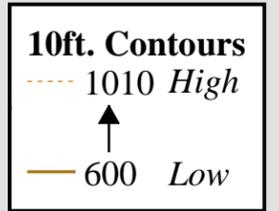
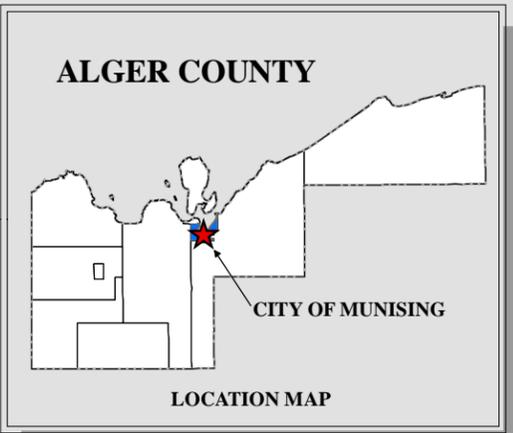
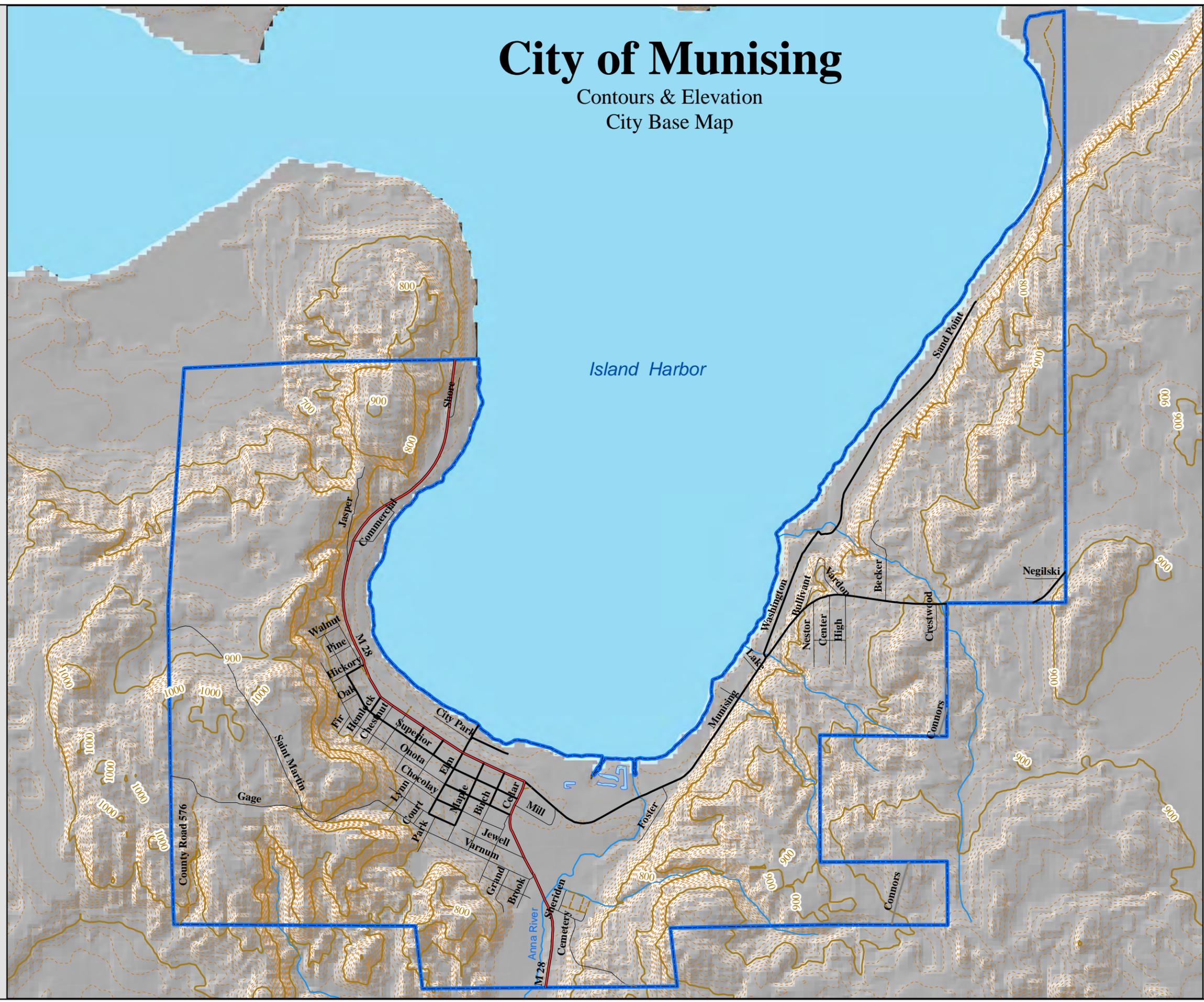
**Other Features**

- Lakes
- Alger County
- City Boundary
- Rivers



# City of Munising

Contours & Elevation  
City Base Map



# City of Munising

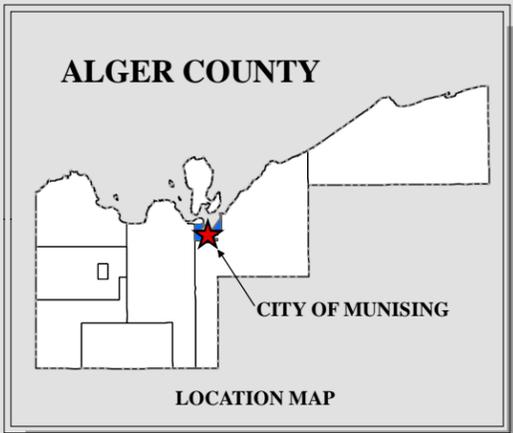


 City Boundary



# City of Munising

Land Use

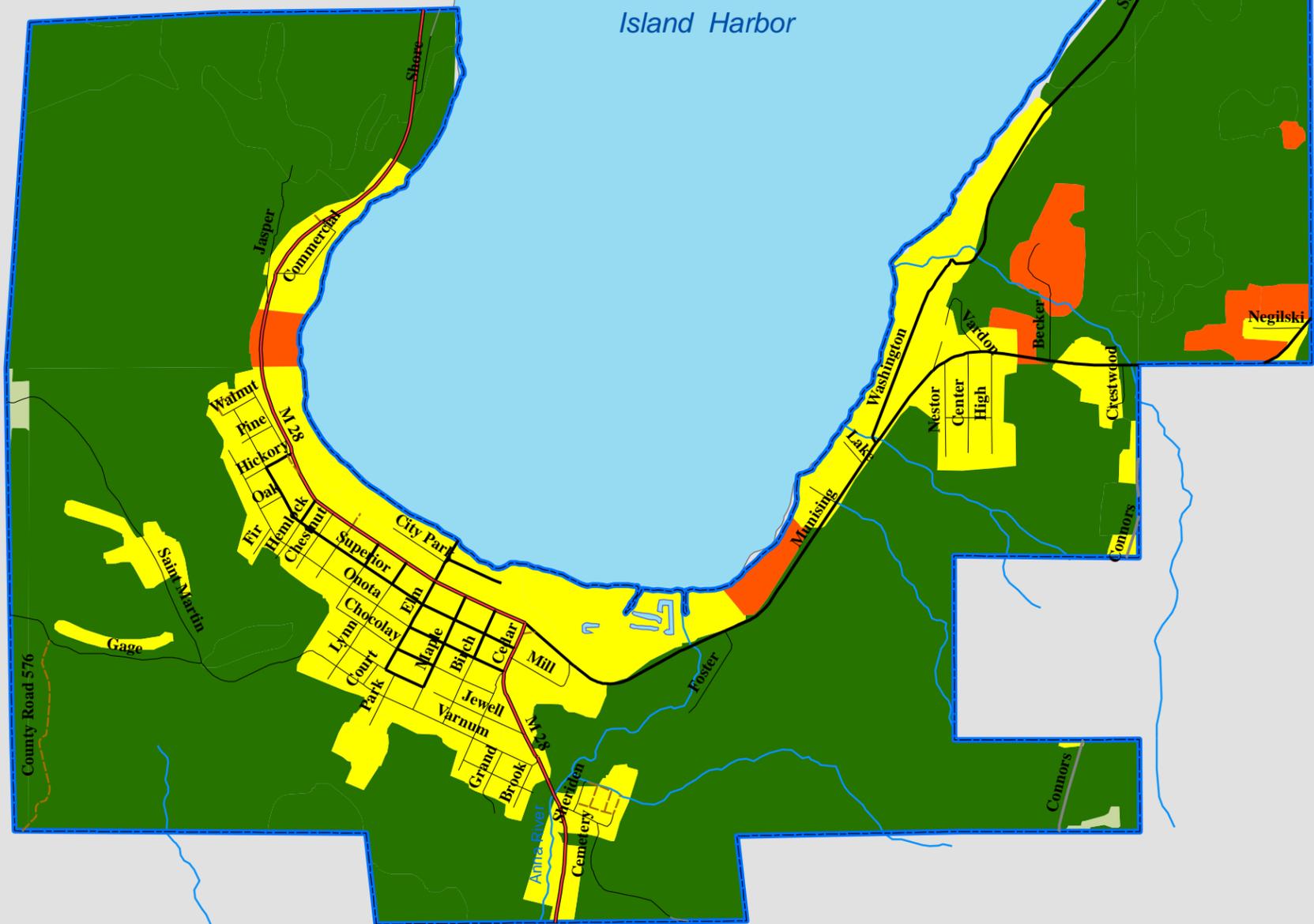


**Land Use**

- AGRICULTURAL
- BARREN
- FORESTED
- NONFORESTED
- URBAN & BUILT UP
- WATER
- WETLAND

**Roads**

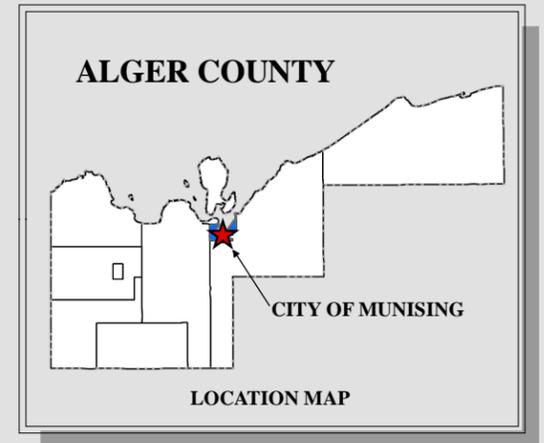
- State Trunkline
- County Primary
- County Local
- City Major
- City Minor
- Not a Certified Public Road
- Lakes
- City Boundary
- Rivers
- Alger County





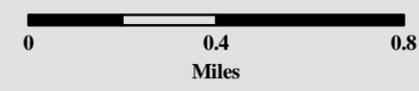
# City of Munising

## City Owned Facilities



- City Owned Facilities**
- 1 - Municipal Building
  - 2 - Fire Department
  - 3 - Wastewater Treatment Plant
  - 4 - City Marina
  - 5 - Bayshore Park
  - 6 - Munising Municipal Boat Ramp
  - 7 - Brown's Addition Tot Lot
  - 8 - Heroes Field
  - 9 - Lynn Street Tot Lot
  - 10 - Tannery Park
  - 11 - Alger Centennial Arena
  - 12 - Skate Park
  - 13 - Tourist Park
  - 14 - Maple Grove Cemetery
  - 15 - Industrial Park

- Roads**
- State Trunkline
  - County Primary
  - County Local
  - City Major
  - City Minor
  - Not a Certified Public Road
  - Lakes
  - City Boundary
  - Rivers
  - Alger County

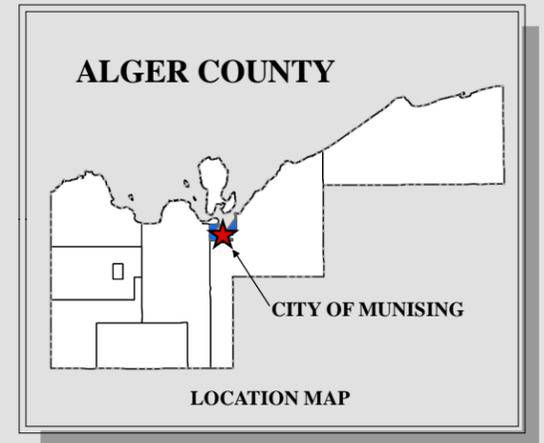




# City of Munising

MDOT National Functional  
Classification Code  
(NFC)

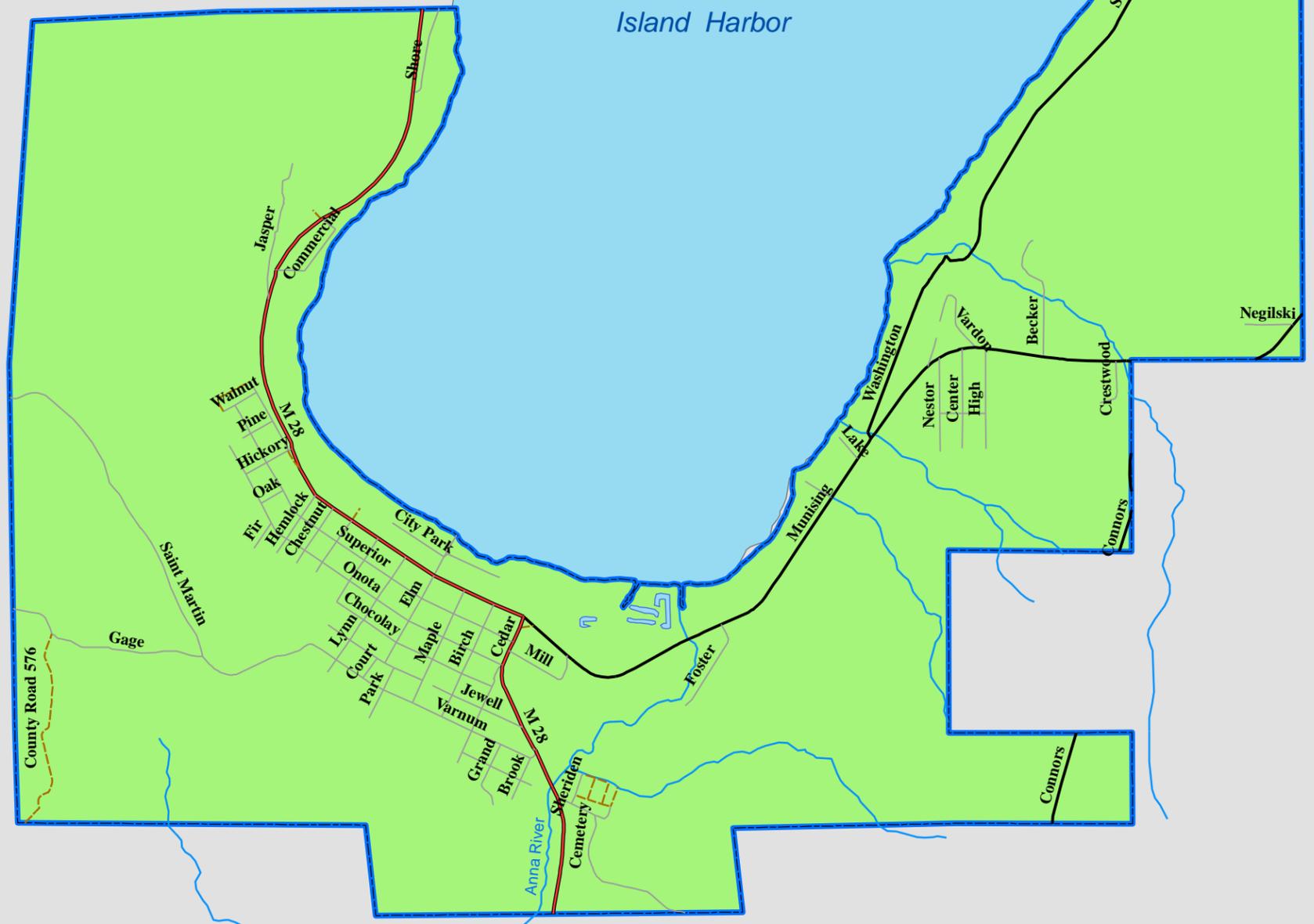
Island Harbor



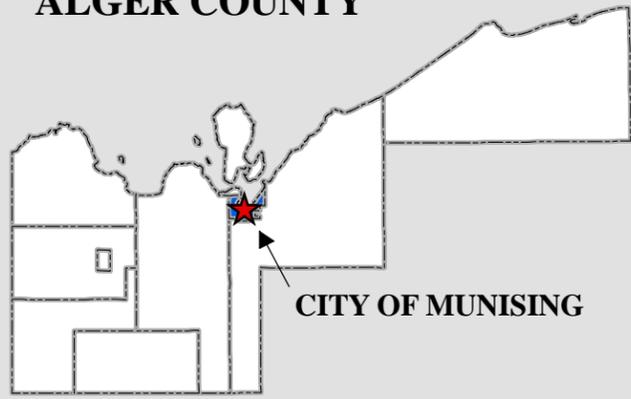
**Roads**

**FUNCLASS**

- Rural Other Principal Arterial
- Rural Major Collector
- Rural Local
- Not a Certified Public Road
- Lakes
- Rivers
- City Boundary
- Alger County



### ALGER COUNTY

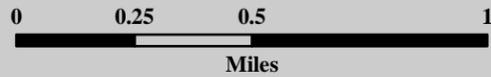


CITY OF MUNISING

LOCATION MAP

# CITY of MUNISING

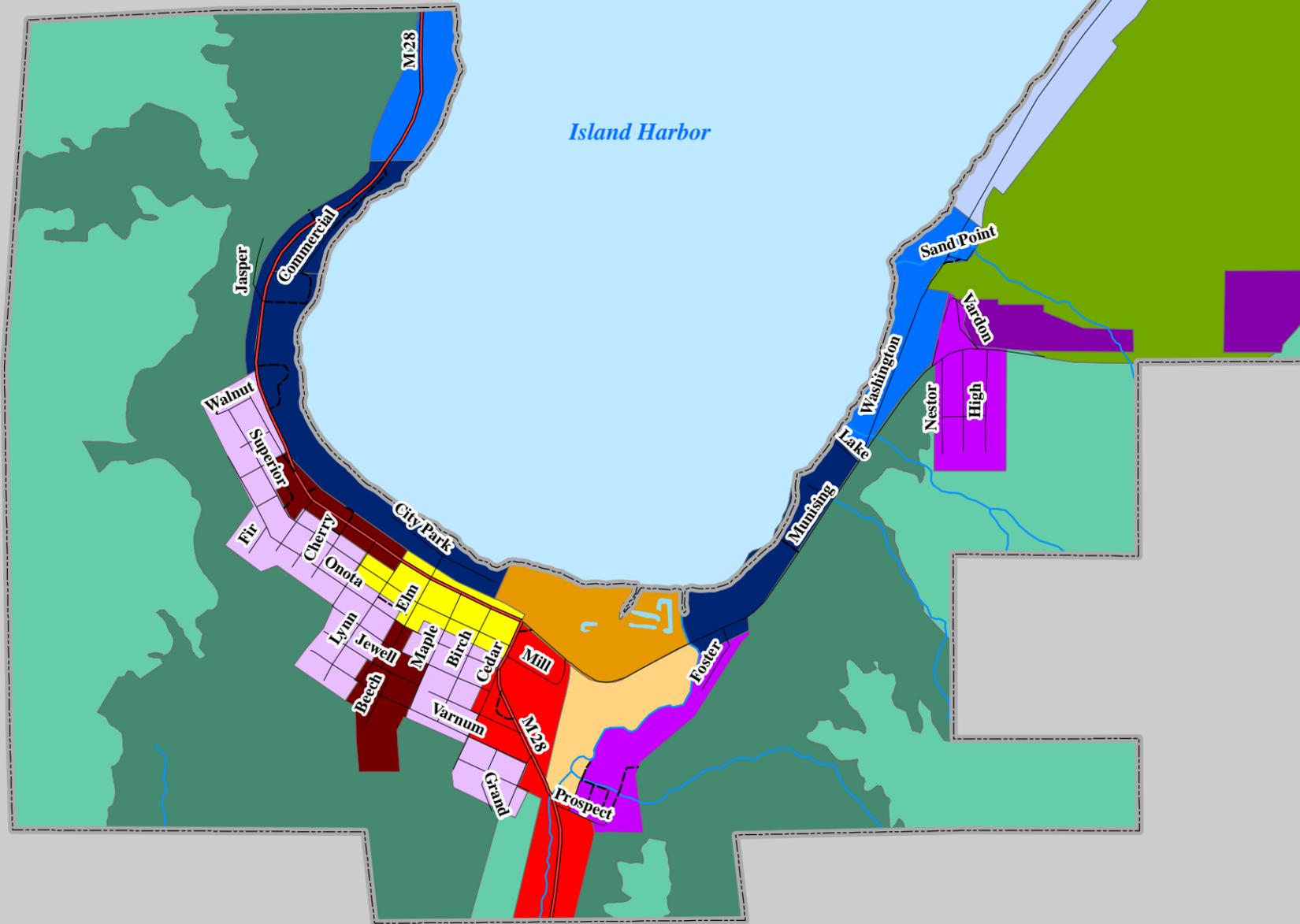
## Future Land Use



### Roads

#### LEGALSYSTE

- State Trunkline
- County Local
- City Major
- City Minor
- Not an Act-51 Certified Public Road
- Lakes
- Rivers
- City Boundary
- Alger County



### Land Use

#### Usage

- Commercial
- Downtown
- Transitional
- Residential One
- Residential Two
- Rural Residential - Inland Buffer Zone
- Highland One
- Highland Two
- Light Industrial
- Heavy Industrial
- Lakeshore One
- Lakeshore Two
- Lakefront Commercial
- Public Lands