

# SANDS TOWNSHIP MASTER PLAN



Drafted April/May 2010  
Director Zoning/Planning  
Randall L. Yelle

Reviewed July 2010/2011  
CUPPAD  
Michelle Dewitt

Public Hearing  
August 10, 2011  
Planning Commission

September 22, 2010  
Town Hall Meeting

July 2011  
County review

Accepted August 24, 2011  
Sands Township Board

January 16, 2018  
5 Year Review Public Hearing

October 09, 2018 Adopted  
Sands Township Board

Updated December 2022  
Sands Township Board

Adopted per the Michigan Planning Enabling Act, PA 33 of 2008

## **Thanks**

As with any publication of this scope, there are many to whom I owe my thanks.

First: thanks to Mark Wyckoff, Professor and Sr. Associate Director of the Land Policy Institute and Director of the Planning and Zoning Center at Michigan State University (input, guidance and direction).

Second: thanks to Mrs. Lee Yelle and Mrs. Carolyn Kerkela, Sands Township's Administrative Assistants (clerical support and research).

Third: thanks to Ms. Michelle Dewitt, CUPPAD consultant, & Marquette County Planning Commission (document review and input).

Fourth: thanks to West Branch, Marquette, Richmond, Forsyth, and Negaunee Townships (providing copies of their comprehensive plans).

Fifth: thanks to the residents of Sands Township who participated in the Town-hall meeting and Township work sessions.

Last but not least, thanks to the commissioners of the Sands Township Planning Commission: Steve Foulks, Joe Wixtrom, Brian Mann, Robert Myers, Jane Noe, Eric Anderson, and Ron Titter.

Randall L. Yelle  
Director of Zoning and Planning  
Sands Township, County of Marquette,  
State of Michigan  
zoning@sandstownship.org

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C

# Master Plan Reasoning

## Legal Background

### Primary Responsibility of the Planning Commission

“A planning commission shall make and approve a master plan as a guide for development within the planning jurisdiction...” Sec. 31. (1), Michigan Planning Enabling Act, PA 33 of 2008.

“At least every five (5) years after adoption of a master plan, the planning commission shall review the master plan and determine whether to commence with the procedure, to amend the master plan, or adopt a new master plan.” Sec. 45 (2), Michigan Planning Enabling Act, PA 33 of 2008.

As the above quotes indicate, the planning commission must make, approve, and maintain a master plan. If a local unit of government wishes to have a master plan, or any part of a master plan, it must first have a planning commission. Adoption of a master plan cannot be done without a planning commission. Without an up-to-date master plan, the zoning regulations, subdivision regulations, and capital improvement programs cannot be properly prepared and implemented.

### What is a Master Plan?

A master plan is a land use and infrastructure plan that sets forth local goals, objectives, and policies for community growth and/or redevelopment over the next 20-30 years. The master plan serves as the basis for the local zoning ordinance, subdivision regulations, and for ensuring that capital improvements are consistent with the community goals and policies expressed in the master plan. It may also be referred to as a comprehensive plan, future land use plan, basic plan, general plan, or other terms. Michigan Planning Enabling Act, PA 33 of 2008, also indicates in the definition of “master plan” in sec. 3 (g) and in sec. 81 (1) that the master plan can also serve as the required plan that must be the basis for the zoning ordinance; prepared and adopted under the Michigan Zoning Enabling Act, PA 110 of 2006, as amended.

### Purposes of a Master Plan

The general purpose of a master plan is to guide and accomplish, in the planning jurisdiction and its environs, development that satisfies all of the following criteria:

1. Is coordinated, adjusted, harmonious, efficient, and economical.
2. Considers the character of the planning jurisdiction and its suitability for particular uses, judged in terms of such factors as trends in land and population development.
3. Will, in accordance with present and future needs, best promote public health, safety, order, convenience, prosperity, and general welfare.

4. Includes, among other things, promotion of or adequate provision for one or more of the following:
  - A system of transportation to lessen congestion on roads.
  - Safety from fire and other dangers.
  - Air and light.
  - Healthful and convenient distribution of population.
  - Good civic design and arrangement, and wise and efficient expenditure of public funds.
  - Utilities such as sewage and water, and planning for future public improvements.
  - Recreation.
  - The use of resources in accordance with their character and adaptability.

The purposes of the master plan focus heavily on physical features of development and on the infrastructure necessary to serve that development. It also focuses on creating healthy, safe, efficient, and economical communities.

### **Legal Role of Master Plan**

The master plan has several legal roles to play. These include:

- To provide a rational, foresighted, comprehensive, long-term oriented foundation for implementing tools: zoning (including map, districts, schedule of regulations, and supporting text); subdivision and land division regulation; special initiatives (like a farmland protection program or affordable housing program); and capital improvements program.
- To protect against challenges of arbitrariness.
  - To create public goals, objectives, and policies for future growth and/or redevelopment based on broad public input.
  - To allow for discussion of pros and cons of alternative actions and documentation of public interests.
- To document public interests in private land development and to declare public intentions for infrastructure improvements, in some cases long before the public has the means to act. This will permit the private sector to make decisions that effectively takes these public interests and intentions into account.
- To establish where the geographic boundaries for different types of development will be permitted/promoted.

Courts have long recognized that boundaries between certain land uses must be drawn somewhere and that there needs to be a reasonable basis for distinguishing boundaries. Courts also recognize that some property will benefit from higher values as a result of zoning based upon a plan, and that some may have lower values. The master plan should provide a reasonable basis for such distinctions. Documented data and research that occurs as part of the planning process is key to establishing reasonableness.

The master plan and zoning ordinance must ensure that every parcel of property has some reasonable use. This means an economically viable use, not necessarily the higher valued use.

Courts usually defer to the local unit of government where there is evidence of forethought and reasonable action. The local government is presumed to have acted in a valid manner and the burden is on the challenger to prove otherwise. This presumption of validity is a major asset in a court case. A well-prepared master plan can go a long way to demonstrate forethought and a reasonable scheme for land use and infrastructure improvement in the community.

The master plan is the foundation to the major implementation tools: zoning, subdivision regulations, special programs, and capital improvements. Clearly, without a good master plan, implementation tools will lack a solid legal foundation and this could unnecessarily put the community at risk of future litigation.

# Chapter 1

## DEMOGRAPHICS

### INTRODUCTION

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

### DEMOGRAPHICS

#### Total Population

A study of population trends is necessary for understanding the historic pattern of growth within communities. Past population fluctuations may provide insight to possible patterns of change in the future.

Chart 1-1 shows how the population of Sands Township has changed over the last several decades, with the most noticeable change in the 1950's. In 1950, the population of Sands Township was 179, and it jumped to 1,657 in 1960, an increase of 925%. This contributed to the opening of K.I. Sawyer Air Force Base in 1955. The population of the Township peaked at 2,696 in 1990. Between 1990 and 2000 there was a decline of 569 persons, a change of 26.8%, which was mostly due to the closure of K.I. Sawyer in 1995.

Chart 1-1  
Sands Township Population, 1900-2016

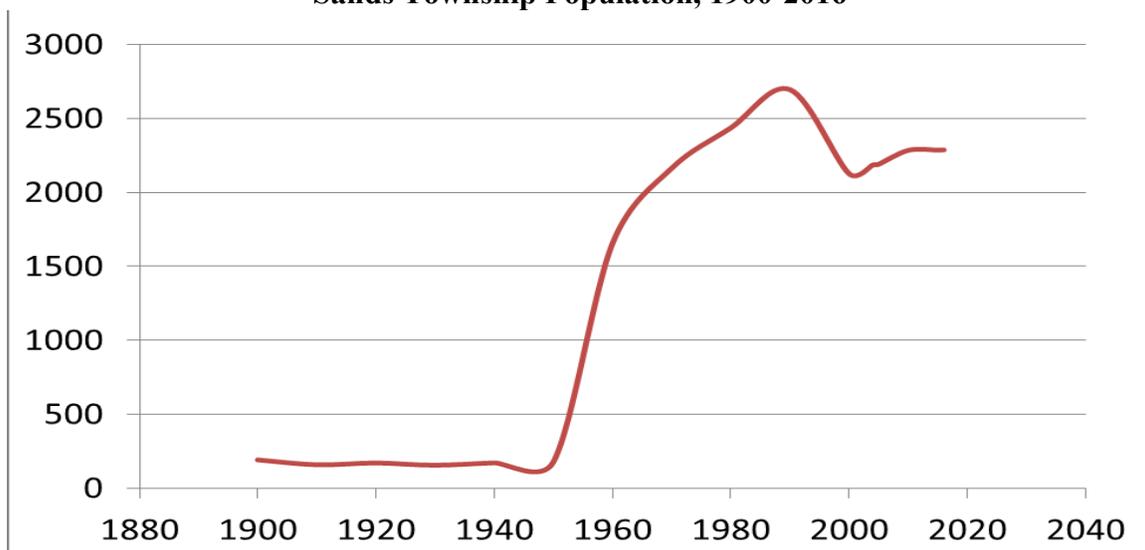
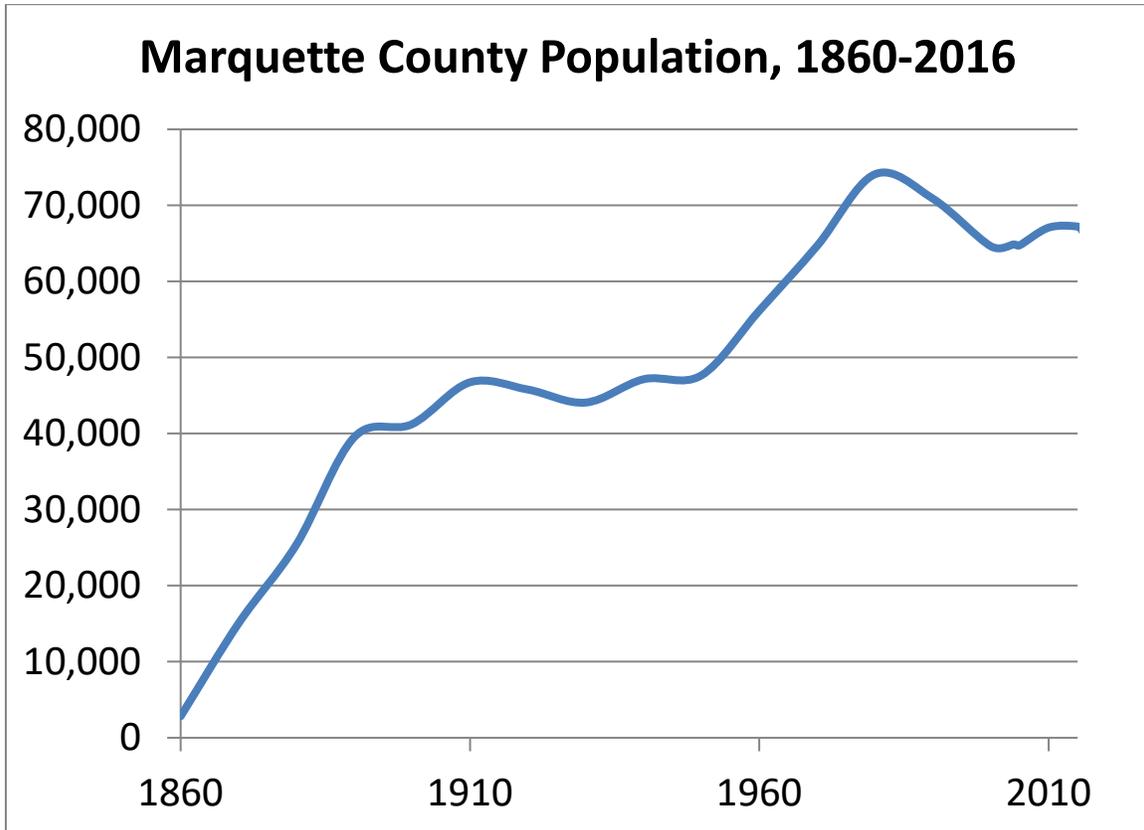


Chart 1-2 shows the population trends of Marquette County from 1850 to 2016. The mining and forestry boom in the late 1800's caused the population to grow quickly, and it remained fairly steady from 1910 until the opening of K.I. Sawyer, when it again started increasing rapidly. The population of Marquette County peaked at 74,101 in 1980, and was 66,435 in 2016.

Chart 1-2  
Marquette County Population, 1860 - 2016



The growth trends of Sands Township are compared with those adjoining units of government in Table 1-1. Within the same period where Sands Township had a decline in population due to the closing of K.I. Sawyer, many of the communities that neighbor Sands Township, and Marquette County as a whole, also experienced declines in population, with the exception of Marquette Township.

Table 1-1

**Population of Sands Township and Surrounding Communities, 1990-2010**

<b>Community</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>Total Change 1990-2000</b>	<b>% Change 1990-2000</b>	<b>Total Change 2000-2010</b>	<b>% Change 2000-2010</b>
Sands Township	2,696	2,127	2,285	-569	-21%	+158	+7%
West Branch Township	2,241	1,648	1,623	-593	-26%	-25	-2%
Skandia Township	933	907	826	-26	-3%	-81	-9%
Chocolay Township	6,025	6,095	5,903	+70	+1%	-192	-3%
Marquette Township	2,757	3,286	3,905	+529	+19%	+619	+19%
City of Marquette	21,977	20,714	21,355	-1,263	-6%	+641	+3%
Marquette County	70,887	64,634	67,077	-6,253	-9%	+2,443	+4%
State of Michigan	9,295,297	9,938,444	9,883,640	+643,147	+7%	-54,804	-.6%

Source: U.S. Census Bureau, 2010

**Population Projection**

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

If current growth trends continue, the population of Sands Township could increase by 190 persons, or 9% between 2000 and 2020, based on the 1980, 1990, and 2000 census figures and allowing for the closing of K.I. Sawyer being the single largest reason for the decline in population within Sands Township between 1990 and 2000. Based on current trends, the County stands to lose 9,466 persons, or 15% over the next 10 years. Even though the County population will likely decline, Sands Township and a few other townships surrounding the city of Marquette are likely to grow. If the growth rate of the last ten years continues to increase, it will be important to adjust this plan at intervals of not less than 5 years.

Growth in Sands Township depends on a variety of factors. These factors include lifestyle, commuting habits, economic influences, housing availability, and more. Many of these factors are outside of the Township's control, and others may only be marginally influenced by actions of the community. However, it is likely that for at least the next decade, a portion of the population growth in Marquette County may occur in Sands

Township, partly due to people migrating out of the City, in order to live in a more rural area. Should the economy of the area significantly improve, this projection is likely to be low. Similarly, if it were to decline, then these projections may be high.

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

<b>Community</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>2020</b>	<b>Total Change 2000- 2020</b>	<b>%Change 2000-2020</b>
Sands Township	2,434	2,696	2,127	2,225	2,317	+190	+8.9%
West Branch Township	2,166	2,241	1,648	1,500	1,241	-407	-24.7%
Skandia Township	999	933	907	854	808	-99	-10.9%
Chocolay Township	5,685	6,025	6,095	6,345	6,550	+455	+7.5%
Marquette Township	2,669	2,757	3,286	3,521	3,830	+544	+16.5%
City of Marquette	23,288	21,977	20,714	19,419	18,132	-2,582	-12.5%
Marquette County	74,101	70,887	64,634	60,407	55,674	-18,961	-13.9%

Source: U.S. Census Bureau. Projections by Planning & Zoning Center, Inc. based on local information, based on Linear Growth Method.

### Household Characteristics

There are 871 households in Sands Township, and 98.6% of residents reside in these households. The remaining 32 residents live in group quarters (75% of which are institutionalized). Most households, 78.5%, are family households, and 85% of these are husband-wife families. The average household size is 2.59 persons and the average family size is 2.88 persons.

Table 1-3  
**Household Characteristics for Sands Township, 2010**

<b>Household Type</b>	<b>Number</b>	<b>Percent</b>
Family Households	684	78.5
Husband-Wife Family	588	67.5
Female Householder	55	6.3
Male Householder	41	4.7
Non-Family Households	187	21.5
Householder Living Alone	146	16.8
Householder 65 or over	29	3.3
Total Households	871	100.0
Average Household Size	2.59	

Source: U.S. Census Bureau, 2010

### Other Demographic Characteristics

To further understand the people who reside in Sands Township, we need to look closer at the demographic profile. The U.S. Census Bureau has released information from the 2010 Census that details gender, age, race, and education.

Table 1-4  
**Sands Township Residents by Gender, Compared with County  
 and Statewide Average**

Gender	Number of Residents	% of Population	% of County Population	% of Michigan Population
Male	1,158	50.7	50.5	49.1
Female	1,127	49.3	49.5	50.9

Source: U.S. Census Bureau, 2010

In Sands Township, 1,158 of the residents are Male, or 50.7% of the population. The remaining 49.3%, or 1,127 residents, are female. This ratio closely matches Marquette County numbers, and differs only slightly from the statewide percentages.

Table 1-5  
**Sands Township Residents by Age, Compared with Statewide Average**

Age Group	Number of Residents	% of Population	Average % of Marquette County	Difference of Sands Township and County	Average % of Michigan Population	Difference of Sands Township and State
Under 5 Years	121	5.3	5.2	+1	6.0	-.7
5-9	130	5.7	4.9	+.8	6.5	-.8
10-14	188	8.2	5.2	+3.0	6.8	+1.4
15-19	155	6.8	7.7	-.9	7.5	-.7
20-24	91	4.0	10.5	-6.5	6.8	-2.8
25-34	232	10.2	12.1	-1.9	11.8	-1.6
35-44	330	14.4	10.9	+3.5	12.9	+1.5
45-54	450	19.7	14.7	+5.0	15.3	+4.4
55-59	236	10.3	8.0	+2.3	6.9	+3.4
60-64	176	7.7	6.3	+1.4	5.8	+1.9
65-74	136	6.0	7.7	-1.7	7.3	+.7
75-84	33	1.4	4.8	-3.4	4.5	-3.1
85 Years +	7	.3	2.2	-1.9	1.9	-1.6

Source: U.S. Census Bureau, 2010

The age of Sands Township residents varies slightly from the county and statewide average age. The average age of Sands Township residents is 42 years, slightly higher than the Marquette County average age of 39.4 and the Michigan statewide average age of 38.9. This is further illustrated in Table 1-5, where every age group in Sands Township less than 35 years old, with the exception of 10-14 years, has a lower

percentage of the population than the statewide average. In addition, every age group between 35 -74 in Sands Township has a higher percentage of the population than the statewide average, with the greatest difference being in the 45-54 age group. When compared to the age of Marquette County residents, Sands Township has a slightly higher percentage of children under the age of 14, and also in adults ages 35-64.

Table 1-6  
**Sands Township Residents by Race, Compared to State and National Numbers**

<b>Race</b>	<b>Township %</b>	<b>Marquette County %</b>	<b>Statewide %</b>	<b>National %</b>
One Race	98.64	97.99	97.67	97.1
White	94.84	93.79	78.95	72.4
Black or African American	.53	1.70	14.17	12.6
American Indian or Alaska Native	2.93	1.73	.63	.9
Asian	.35	.57	2.41	4.8
Native Hawaiian & Other Pacific Islander	0.00	.02	.03	.2
Some Other Race	0.00	.01	1.49	6.2
Two or More Races	1.36	2.01	2.33	2.9

Source: U.S. Census Bureau, 2010

Most residents of Sands Township, almost 95%, are white. This is very similar to the Marquette County demographics, but significantly lower than the State and National numbers. The remaining population is comprised of blacks or African Americans, American Indians or Alaska Natives, Asians, or people who identify with two or more races.

Table 1-7  
**Highest Educational Attainment of Population Age 25 and Up (Percentage)**

<b>Education Attained</b>	<b>Sands Township</b>	<b>Marquette County</b>	<b>Michigan</b>	<b>United States</b>
<b>No Diploma</b>	6.4	11.5	16.6	19.2
<b>High School Graduate</b>	56.2	58.4	54.7	49.7
<b>Associate Degree</b>	9.0	6.4	7.0	6.3
<b>Bachelor's Degree</b>	19.1	15.9	13.7	15.5
<b>Graduate or Professional Degree</b>	9.3	7.8	8.1	8.9

Source: U.S. Census Bureau, 2010

Residents of Sands Township are well educated. Only 93 out of the 1,444 residents over the age of 25 do not have a high school diploma, and 37.4% of residents in that age group have some type of post-high school degree, compared to only about 29% of Michigan residents.



# Chapter 2

## ECONOMY

### INTRODUCTION

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

### AREA ECONOMY

#### County Employment

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

Table 2-1  
Marquette County Employment by Category, 1940-2010

Category	1940	1950	1960	1970	1980	1988	2002	2010	2015
Total Labor Force	17,946	16,934	18,952	21,200	30,575	28,125	32,950	35,558	33,891
Unemployment	2,239	1,129	1,502	1,380	3,925	2,975	1,900	3,472	2,606
Govt. Employment	731	1,455	2,087	4,154	8,100	8,350	6,900	6,516*	5,614
Mining	3,074	3,408	2,830	3,210	No Data	2,700	1,675	1,657	1,092
Wholesale/Retail Trade	2,225	2,714	2,625	4,127	4,950	4,775	4,415	5,554	4,283
Finance, Ins. & Real Estate	152	294	300	597	825	900	1,114	1,176	1,235
Services	2,312	1,974	2,490	3,855	No Data	5,050	9,965	8,730	6,543

Source: Michigan Department of Technology, Management & Budget and U.S. Census Bureau; 2015 Data from Michigan Department of Labor and Economic Growth, Bureau of Labor Market Information and Strategic Initiatives

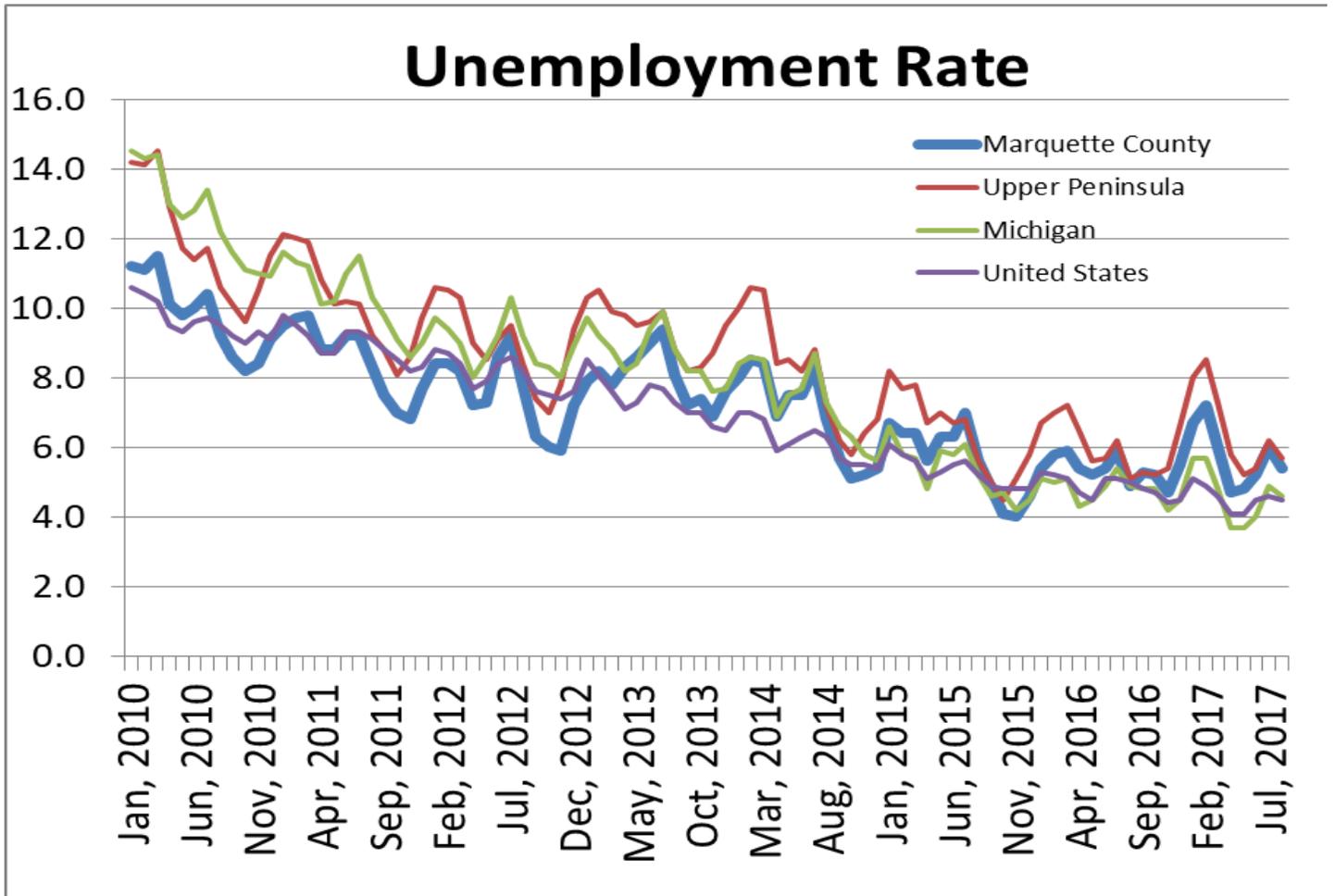
\*Figure from FedStats, year 2006

The figures on total labor force show that there has been a fluctuation in the size of the workforce. From 1970 to 1980 the labor force grew substantially from 21,200 to 30,575, which was an increase of 44% in a ten-year period. Between the periods from 1980 to 1988 a drop of 8.7% was recorded in the labor force, which is a numerical drop from 30,575 in 1980 to 28,125 in 1988. In 2002, the labor force rose to 32,950, an increase of 4,825 or 17% from 1988. In 2010, the labor force rose again to 35,558, an increase of

2,608 or 7.9% from 2002. In 2015, the labor force dropped to 33,891, a decrease of 9.5% from 2010.

The unemployment rate for Marquette County, which averaged 7.9% in 1960, dropped to 6.5% in 1979 and then rose to 12.8% in 1980. In 1988, it was 10.6%, in 2002 it was 5.7% and in 2004 it was again 5.7%. In 2007, the unemployment rate was at 6.1%, it rose to 9.8% in 2010, fell to 5.7% in 2015, and rose to 6.7% in January 2017. Between January 2008 and August 2017, the lowest unemployment rate for Marquette County was 4.0% in November 2015, and the highest was 11.5% in March 2010. From 2005-2014, Marquette County's unemployment rate held below the Upper Peninsula rate and the State of Michigan rate, and tracked above the U.S. rate for the same time period. For 2015 and 2016, Marquette County's unemployment rate was higher than both the State of Michigan rate and the U.S. rate.

Chart 2-1  
Unemployment Rate 2010 - 2017



During a forty-five year period, government employment grew from 19.6% in 1970 to 29.6% in 1988, dropped to 20.9% in 2000, and then went down to 18.1% in 2006 and was 19.76% in 2015. Government employment consists of the US Postal Service, federal government, military, schools (non-private), hospitals (non-private), colleges, universities, etc.

The slow-down in the mining industry is represented by the fact that in 1970, mining accounted for 15.1% of the employment in Marquette County, but in 1988, it only accounted for 9.6% and in 2010 it only accounted for 4.7%. In 2015, the mining industry accounted for 3.79% of the county's employment. The Empire Mine in Richmond Township closed in 2016, eliminating over 200 jobs from the region. The Tilden Mine in Ishpeming and the Eagle Mine in Michigamme Township both continue to operate.

Without doing a complete survey of the labor force not only in Marquette County, but in the Central U.P. as well as Michigan and the United States, including a survey of employment of major employers in Marquette County and Sands Township, it is difficult to make determinations as to the trends in the economy. Suffice it to say that in Sands Township, much of the employment is derived outside of Sands Township boundaries. For example, being located less than ten miles outside of the City of Marquette provides a variety of employment opportunities in retail business and the government and service sectors, including personnel in the Marquette School system and Northern Michigan University. Many ancillary jobs are also created as a result of these facilities. In addition, UP Health System-Marquette and Michigan State Branch Prison employ many Township residents. Other areas of employment include Gwinn Area School system and Cliffs Natural Resources.

Photo 2-1  
**Gwinn High School**



Photo 2-2  
**Marquette High School**

Photo 2-3  
**Northern Michigan University**



Photo 2-4  
**UP Health System - Marquette**



This close proximity to several employment opportunities allows residents to enjoy the area without a lengthy commute to work. Of the 1,276 Township residents who work outside of the home, 91.5% drive alone to work and 7.9% carpool. The average commute to work is 17.9 minutes. There are 41 Township residents, about 3% of employed workers, who worked from home in 2015. In 2000, only 2% of employed workers worked from home. Globally, telecommuting, or working from home, is increasing rapidly. It could be expected that an increasing number of workers in Sands Township will work from home in the future.

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

1. Government
  - A. Sands Township
2. Retail and Service
  - A. Plumbing and Heating Contractor
  - B. Gas station, including convenience store
  - C. Recreational sales and services
  - D. Moving company
  - E. Accounting Service
  - F. Truck rental service
  - G. Medical equipment distributor
  - H. Propane distributor
  - I. Generator rental and sales
  - J. Restaurant/Bar
  - K. Restaurant supply distributor
  - L. Waste and septage hauler
  - M. Mini storage units
  - N. Provisioning Centers
  - O. Tax & Financial Service
  - P. Distribution Centers
  - Q. Animal Shelter
  - R. Landscaping
3. Industry and Manufacturing
  - A. Warehousing and storage
  - B. Service contractors and trucking
  - C. Auto/truck repair and towing
  - D. Manufacturing
  - E. Contractor
  - F. Asphalt plant
  - G. Concrete batch plant
  - H. Mineral extraction (sand and gravel)
  - I. Landfill and recycling
  - J. Steel distributor

Sands Township does allow for home occupations in some zoning districts, with an approved permit. A variety of home occupations have been approved in the past, which must meet certain conditions.

**Income**

Residents of Sands Township, as a whole, have a higher median household income and median family income than Marquette County. The per capita income in Sands Township is 10% higher than the per capita income in Marquette County. The median household income, which includes income from all households including families, is significantly higher at almost 27% more than Marquette County and 16% more than the state median household income. The median family income in Sands Township is 26% higher than the county average and 22% higher than the state average.

Table 2-3  
Income Levels, 2015

<b>Community</b>	<b>Per Capita Income</b>	<b>Median Household Income</b>	<b>Median Family Income</b>
<b>Sands Township</b>	\$26,193	\$57,583	\$76,250
<b>Marquette County</b>	\$23,785	\$45,409	\$60,492
<b>State of Michigan</b>	\$26,607	\$49,576	\$62,247

Source: 2015 American Community Survey

**Poverty**

Sands Township has a few residents below the poverty level. According to the American Community Survey, 11.7% of all residents and 12.4% of families with children under 18 years old fell below the poverty level in Sands Township in 2015. Of the families with children that fell below the poverty level, only 3.6% were married couple families, and 58% were families with a female householder (no husband present).

**State Equalized Value of Different Land Use Categories**

It is apparent from the State Equalized Value (SEV) of real property in Sands Township that the primary value is in residential property. Residential property accounted for \$82,861,750 or nearly 85.8% of all assessed real property value in the Township in 2017. See Table 2-4. Agricultural SEV was \$1,248,400 or 1.29% of total assessed real property value. Commercial SEV was \$5,614,800 or 5.8% of assessed property in 2017, and industrial SEV was \$50,000 or less than .01% of total real property value in 2017. The value of the residential category remained in about the same relative percentage of total value for the last several years, with residential at about 85% since 2010. The large percentage of residential property indicates that nearly all of the tax burden for public services falls on home owners. Residential property can be highly demanding of public services, compared to other uses such as agriculture, business, and industrial. Total SEV residential property increased from \$71,817,100 in 2010 to \$82,861,750 in 2017, an increase of about 15.38% in seven years.

Photo 2-5  
**The Primary Source of Tax Base in  
 Sands Township is Residential Land Use**



Table 2-4  
**Sands Township SEV, 2000 to 2017**

Year	Agriculture Assessed Value	% of Total	Residential	% of Total	Commercial and Industrial	% of Total
2000	798,950	1.82	31,110,400	70.94	2,308,350	5.27
2005	1,440,550	2.34	49,999,900	81.07	2,932,000	4.75
2010	829,350	.98	71,817,100	85.31	4,581,400	5.44
2015	1,151,150	1.24	79,962,705	85.88	4,924,100	5.29
2017	1,248,400	1.29	82,861,750	85.80	5,664,800	5.87

According to the 2017 Township property tax records, there are 1,308 residentially assessed parcels in the Township, as well as 11 agriculture parcels and 62 business or industrial parcels. This illustrates the overall dominance of residential uses, and the lack of other land uses.

**ISSUES AND PROBLEMS**

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

Past development surveys indicated citizens would welcome more retail and service businesses in the Township, primarily along the State Highway M-553 and County Road 480 corridor. Participants of the Visioning Town Meeting held on September 22, 2010 primarily expressed a desire for more businesses along this corridor, and this desire is reflected in the vision statement in Chapter 8. However, the quiet, rural, low-intensity lifestyle was also important and residents did not want that lifestyle destroyed at the expense of jobs, many of which are available outside, but close to, the Township.

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

# Chapter 3

## HOUSING

### INTRODUCTION

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

### Housing Types

The 2015 American Community Survey data estimates a total of 1,092 housing units in Sands Township. See Table 3-1. Of the total, 987 or 90.4% of them occupied as year-round homes and 105 or 9.6% were vacant housing units. Of the 987 occupied homes, 921 or 93.3% were owner-occupied and 66 or 6.7% were renter-occupied.

Table 3-1  
**Housing Characteristics, 2000-2015**

Unit Type	Number 2000	Percentage 2000	Number 2010	Percentage 2010	Number 2015	Percentage 2015
Total housing units	1,006		960		1092	
Occupied Units	768	76.3	871	90.7	987	90.4
Owner-occupied	703	91.5 *	807	92.7*	921	93.3*
Renter-occupied	65	8.5 *	64	7.3*	66	6.7*
Vacant Units	238	23.7	89	9.3	105	9.6
Seasonal	24	10.1 **	43	48.3**		

\* % of occupied

\*\* % of vacant

Source: U.S. Census Bureau, 2000 and 2010  
American Community Survey, 2015

Photo 3-1

**The Majority of Homes in Sands Township are Year-round Homes**



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

Nearly 83.2% of all housing was single-family, with 908 units in 2015, according to the American Community Survey. Mobile homes were a distant second in numbers, with 125, or 11.4% of housing in 2015.

Sands Township is a fairly stable community, with nearly 18.2% of owners-occupants moving into their homes over 25 years prior to 2015, according to the American Community Survey. See Table 3-2. Those occupants moving into their homes between 6 and 25 years prior to 2015 accounted for 56.3%. Those moving into homes within the five years prior to 2015 accounted for 22.1%. Those moving into homes within one year prior to 2015 accounted for 3.3%.

Table 3-2  
**Longevity of Occupancy of Housing in Sands Township, 2015**

<b>Gained Occupancy</b>	During last year	During 1-5 years	During 6-25 years	More than 25 years
Numbers	33	218	556	180
Percent	3.3	22.1	56.3	18.2

Source: American Community Survey, 2015

Photo 3-2  
**Manufactured Home**



**Age of Housing**

Home building in Sands Township in recent years has focused on single-family homes. The 2015 American Community Survey estimates that 167 housing units, or 15.3% of all housing in the Township, were built since 2000. See Table 3-3. The housing stock is fairly recent, suggesting it is in good condition, with 55.4% of homes 35 years old or less, while only 6.5% were older than 65 years in 2015.

Table 3-3  
**Age of Housing Units in Sands Township**

<b>Year Structure Built</b>	<b>Number</b>	<b>Percent</b>
2014 or Later	0	
2010 to 2013	23	2.1
2000 to 2009	144	13.2
1990 to 1999	279	25.5
1980 to 1989	159	14.6
1970 to 1979	309	28.3
1960 to 1969	107	9.8
1950 to 1959	33	3.0
1940 to 1949	14	1.3
1939 or earlier	39	3.8

Source: American Community Survey, 2015

**Housing Values**

One-quarter of the total owner-occupied homes in Sands Township were valued at less than \$100,000 in 2015. See Table 3-4. About 18%, or 164, of the owner-occupied homes were valued between \$100,000 and \$149,000. Another 26.2% of owner-occupied homes were valued at between \$150,000 and \$199,999, and 20.3% were valued at \$200,000 to \$299,999. Another 9.6% of owner-occupied homes were valued between \$300,000 and \$499,999, and there were 8 homes, almost 1%, valued over \$500,000. The median home value in 2015 was \$160,700.

Table 3-4  
**Owner-occupied Housing Value in Sands Township**

<b>Value</b>	<b>2015</b>	<b>Percent</b>
Less than \$50,000	112	12.4%
\$50,000 to \$99,999	113	12.5%
\$100,000 to \$149,999	164	18.1%
\$150,000 to \$199,999	237	26.2%
\$200,000 to \$299,999	184	20.3%
\$300,000 to \$499,999	87	9.6%
\$500,000 or more	8	.9%

Source: American Community Survey, 2015

**Rental Homes**

The American Community Survey estimates there were 66 occupied units paying rent in 2015, and over half of them paid at least \$1,000/month. See Table 3-5. About 30% of

renters paid between \$500 and \$999 per month for rent, and 18.2% paid less than \$500/month. Median rent was \$1,007, according to the 2015 American Community Survey.

Table 3-5  
**Average Rent in Sands Township, 2015**

Rent per month	Number	Percent
Less than \$500	12	18.2
\$500 to \$999	20	30.3
\$1000 to \$1,499	34	51.5
\$1,500 or more	0	0
No cash rent	4	8.5

Source: American Community Survey, 2015

### **Housing in the Future**

Sands Township will need more housing in the future, and a mix of housing types, but a portion of that housing may need to serve smaller families. Population projections for Sands Township suggest that 225 more people will reside in the Township in 2020 than did in 2000. This is a similar rise in population compared to the 20 years between 1980 and 2000, when the population rose by 529 persons. In the same period of 1980 to 2000, the number of housing units increased by 503.

Photo 3-3  
**Multiple-family Housing in Sands Township**



The Township will need to look at the level of demand for different types of housing in the future. Following national trends, there may be a greater need for homes for more singles, young couples without children, empty nester couples, and families with a single parent than in the past. This suggests smaller homes. Attached town houses, and rental apartments will be important in the housing mix. There has also been an apparent pattern of movement of families from Marquette City into more rural, but close areas, such as Sands Township, Marquette, and Chocolay Townships. Generally, these are families with small children that move from city to country, and occupy detached, single-family homes in subdivisions, or on larger lots in the country. Thus, the Township should provide for a wide range of housing types and densities to meet the needs of its population.

# Chapter 4

## NATURAL FEATURES

### INTRODUCTION

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

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

### NATURAL FEATURES

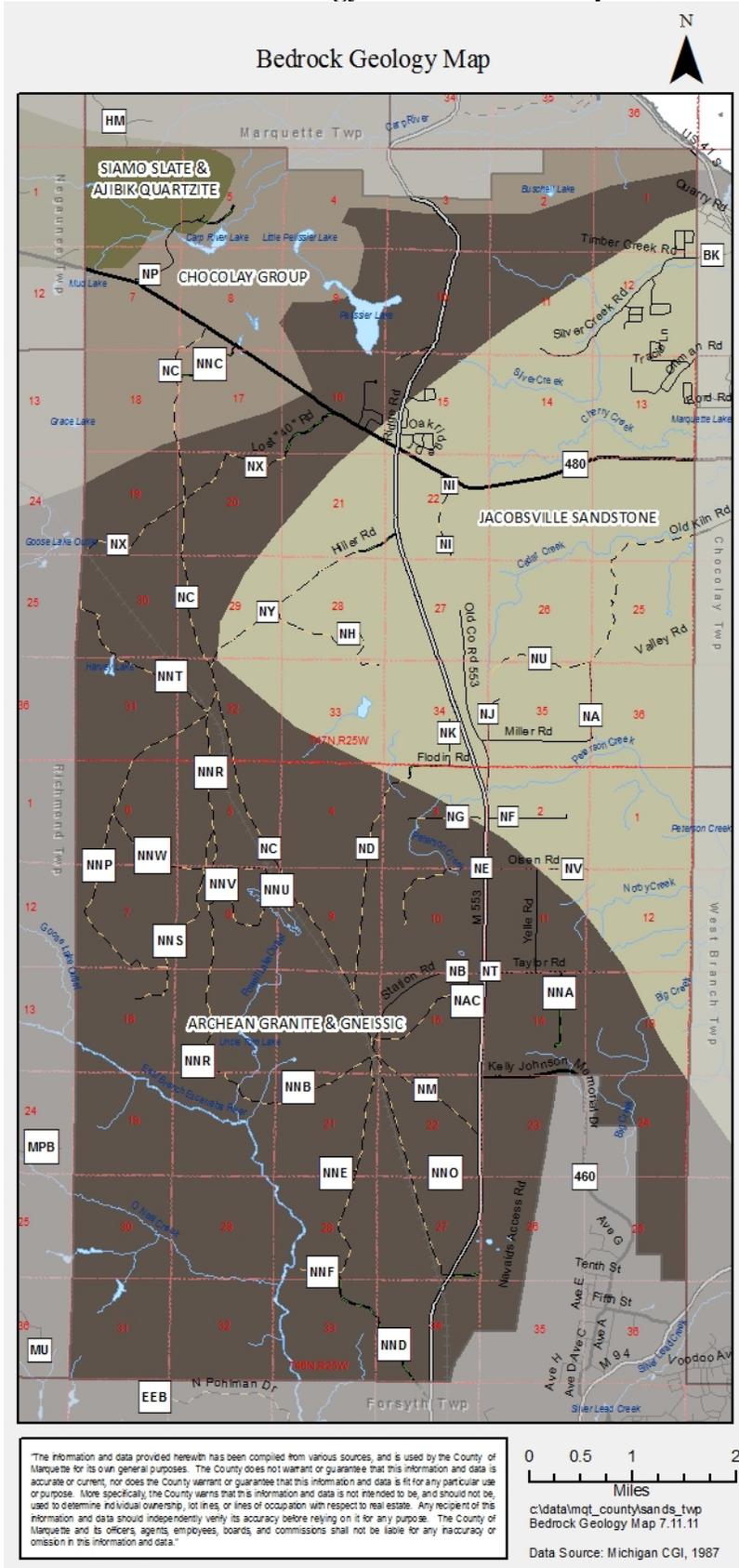
#### **Bedrock Geology**

This is the solid rock layer found below the soils and surface geology. Bedrock can be found hundreds of feet below the surface or protruding out of the soil as rock bluffs. In either case, the bedrock can help or hinder development.

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

The major importance of bedrock as a resource in this investigation is its capacity to supply drinking water. The quantity and quality of a well's water varies with the type of bedrock the water is retrieved from, and the layers of material through which the water has passed before reaching the bedrock. See Map 4-1 for Bedrock Geology in Sands Township.

# Map 4-1 Bedrock Geology in Sands Township



### **Cambrian Sandstone**

Large parts of the Upper Peninsula are covered by Cambrian Sandstone, deposited by swift streams from the Paleozoic Seas during the Cambrian period. Jacobsville Sandstone, a type of Cambrian Sandstone, occurs at the area of County Road 480 running in a triangular shape into the Township to the east.

### **Surface Geology**

This material usually occurs between the soils at the earth's surface and the bedrock formations below surface. It is not as fine textured as the soil, but is a granular material far different from bedrock. The different deposits of the surface geology are categorized by names that relate to the particular process of formation and also variances in material content. For example, glacial deposits occurred in three main ways: material deposited directly from the ice with little or no transportation by moving water are called tills; materials deposited in and by moving streams of water are called outwash; and those deposited in glacial lakes are called lake deposits. More specifically, surface geology categorizes the deposits by individual or combined actions of wind, water, and glaciers that are responsible for their formation. See Map 4-2 for Surface Geology of Sands Township.

### **Glacial Lake Plain**

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

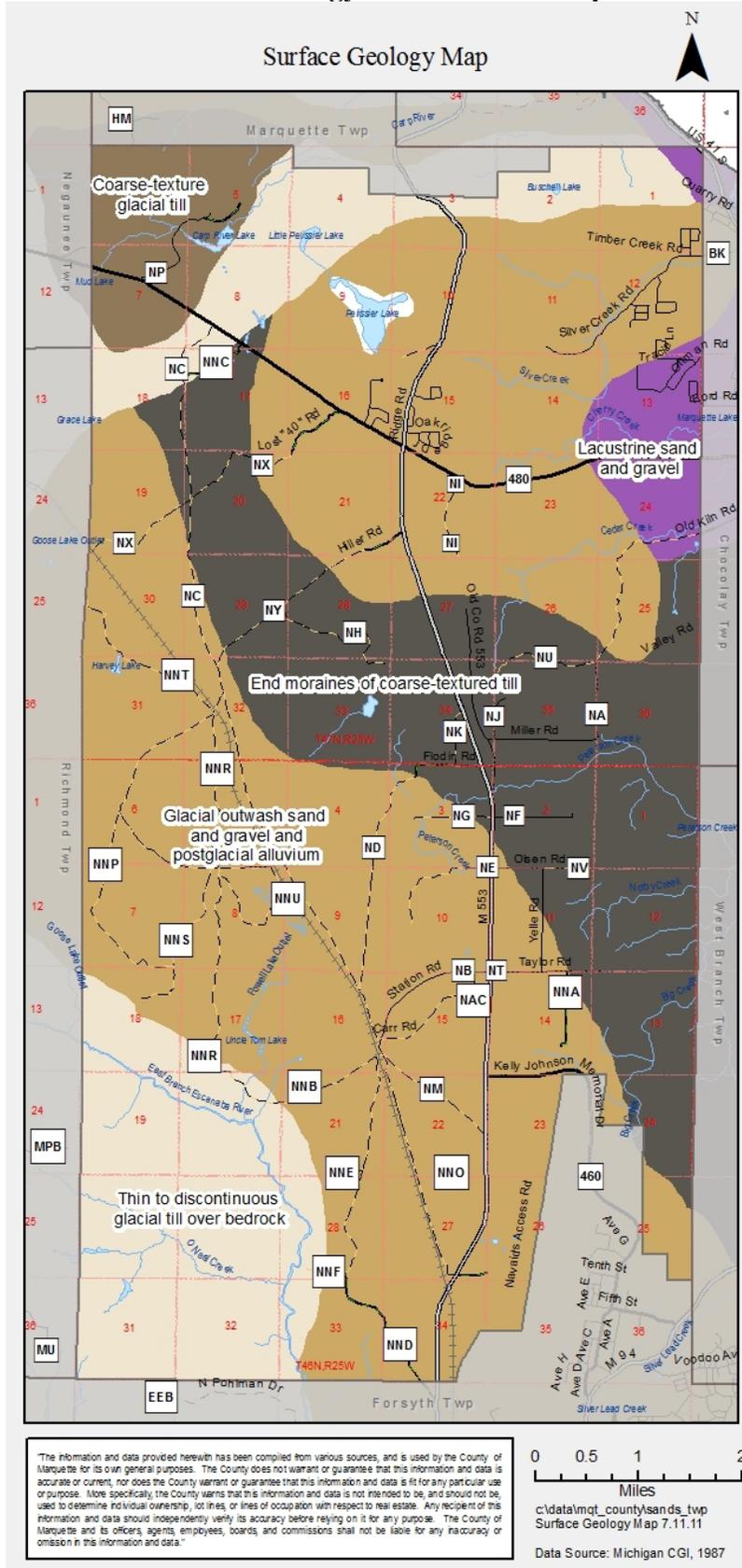
### **End or Recessional Moraine**

End or recessional moraines are composed predominantly of sands and gravel till, with small areas of sand and gravel outwash. Locally, till is clayey or silty. Permeability varies greatly, being low in clayey till and high in outwash areas. Moraines are a source of domestic water supply and in some areas may yield moderate supplies of water. Moraine deposits can reach a depth of over 300 feet. On the surface they appear as ridges which are steep and rugged and were not exposed to wave action; elsewhere they are somewhat subdued.

### **Glacial Till – Bedrock**

These areas are made up of bedrock with occurrences of glacial till in scattered locations. The bedrock in this area is of Precambrian origin and, like glacial till, is a poor source of groundwater. The till is thin and bedrock appears at the surface wherever the glacial till is nonexistent. This deposit is most visible at the northeast corner of Sands Township (rock cut area).

# Map 4-2 Surface Geology of Sands Township



## Soils

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

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

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

With the cooperation of the Soil Conservation Service (now Natural Resource Conservation Service), soil types in Sands Township were identified and categorized according to their suitability for different uses. Two major uses are identified for study. These are urban uses and resource production. Resource production refers to farming and forest activities. The urban uses were rated according to their suitability for residential development without public sewer, and those areas not suitable for urban development.

Detailed soils maps are available from Sands Township and from the Natural Resource Conservation Service, Marquette Service Center, 780 Commerce Drive, Suite D, Marquette, Michigan 49855, (906) 226-8871, [www.nrcs.usda.gov](http://www.nrcs.usda.gov). Whenever a specific parcel is in question, detailed data for that piece of land should be obtained from the Natural Resource Conservation Service.

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

The general topography of the Township offers a variety of landscapes. The eastern and northern portions have the greatest topographic changes. From a soil standpoint the area is dominated by sandy soils. There also is a small amount of silt loam soil in the northern portion. Sands Township terrain is typical of Marquette County, in that it is varied and contains flat, gently rolling hilly areas. The eastern and northern portions of the

Township are the most rugged topography. The remainder of the Township is generally level to rolling hills.

The highest point in the Township is situated in the north central portion of the Township, just west of Pelissier Lake, with an elevation of 1,440 feet above sea level or 838 feet above Lake Superior. The lowest elevation in the Township is 700 feet above sea level or 98 feet above Lake Superior which is located in the northeastern portion of the Township near Silver Creek.

Three soil associations found in Sands Township are located on bedrock-controlled moraines (See Map 4-3). The Keewaydin-Michigamme-Rock Outcrop Association is found in the southwest corner of the Township. This association is composed of nearly level to very hilly, moderately deep, well-drained soils. Woodland is the most major use of areas with this soil association. The Schweitzer-Michigamme-Rock Outcrop Association covers areas in the northern part of the Township. The makeup of this association includes gently rolling to very hilly, moderately to very deep, very well drained loamy soils. The major use of this association is woodlands. The Kalkaska-Ishpeming-Rock Outcrop Association is found in the southwestern portion of the Township. It consists of nearly level to very deep, somewhat excessively drained sandy soils. The primary use is woodlands.

Sands Township also has three soil associations found on outwash plains, terraces, and beach ridges. The Rubicon-Sayner Association is found in the central, northwestern, and southeastern parts of the Township. This association is composed of gently undulating to very steep, very deep, excessively drained sandy soils. The Grayling Association covers areas in the south central and western portions of the Township. It consists of gently undulating to very steep, very deep, excessively drained sandy soils on outwash plains. The Kalkaska-Carbondale-Deford Association covers a very small portion of the Township on the very eastern boundary. It consists of very deep, nearly level to very hilly, somewhat excessively drained, very poorly drained, and poorly drained, sandy and mucky soils on outwash plains and terraces. The areas in these associations are most commonly used as woodland throughout Marquette County, but also support commercial and residential uses in Sands Township. Limitations of soils in these associations for sanitary facilities (such as septic systems) and buildings, range from slight to severe, generally depending on slope.

Two of the soil associations in the Township are found on till floored lake plains and dissected moraines. The Keweenaw-Kalkaska-Waiska Association is found in the north central and east central portions of the Township. It is made up of moderately sloping to very steep, very deep, well-drained and somewhat excessively drained sandy soils. The areas in this association are primarily used for woodlands, although in Sands Township these soils are also used for residential and agricultural purposes. The Garlic-Alcona-Voelker Association covers areas in the northeastern and east central portions of the Township. This association consists of moderately sloping to very steep, very deep, well-drained sandy loamy soils. Most areas of this association are used for woodlands; however, in Sands Township these soils are used for residential development, particularly in areas of steep slopes. Sandy soils tend to cave and be unstable. Excessive permeability can also allow septic tank effluent to reach groundwater without proper filtering.

# Map 4-3 Soils of Sands Township

General Soils Map

**GENERAL SOIL ASSOCIATIONS**

**Soils and Miscellaneous Areas on Bedrock-controlled Moraines**

- Kalkaska-Ishpeming-Rock Outcrop
- Keewaydin-Michigamme-Rock Outcrop
- Schweitzer-Michigamme-Rock Outcrop

**Soils on Outwash Plains, Terraces, and Beach Ridges**

- Graying Association
- Kalkaska-Carbondale-Deford
- Rubicon-Sayner

**Soils on Till-floored Lake Plains and Dissected Moraines**

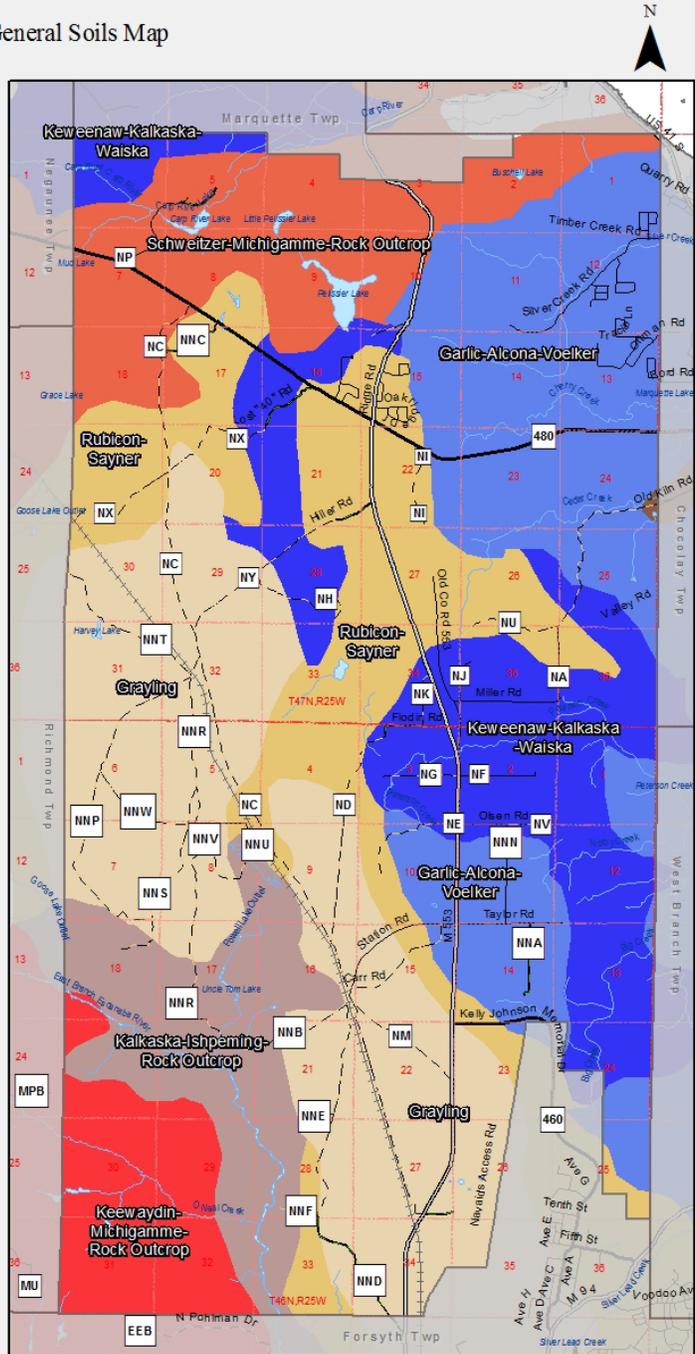
- Garlic-Alcona-Voelker
- Keweenaw-Kalkaska-Waiska



c:\data\mq\_county\sands\_twp  
General Soils Map 7.11.11

Data Source: MCRMDD,  
CUPAD, and NRCS

The information and data provided herewith has been compiled from various sources, and is used by the County of Marquette for its own general purposes. The County does not warrant or guarantee that this information and data is accurate or current, nor does the County warrant or guarantee that this information and data is fit for any particular use or purpose. More specifically, the County warns that this information and data is not intended to be, and should not be, used to determine individual ownership, lot lines, or lines of occupation with respect to real estate. Any recipient of this information and data should independently verify its accuracy before relying on it for any purpose. The County of Marquette and its officers, agents, employees, boards, and commissions shall not be liable for any inaccuracy or omission in this information and data.



## **Mineral Deposits**

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

Valuable mineral deposits can be divided into two categories: 1) ferrous metals and 2) non-ferrous metals. The ferrous metals, particularly iron ore, are prominent in Marquette County. However, current mapping of the Marquette Iron Ore Range by Cleveland Cliffs Iron Ore Company shows the iron formation stopping some distance prior to the Township's east boundary.

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

However, other valuable mineral resources such as sand and gravel do exist throughout the Township. Extraction of these resources is dependent on local needs and location economics. Because the hauling costs can easily exceed the resource's market price, deposits must be located in close proximity to the use area. For this reason, these mineral resources should be preserved as Areas of Particular Concern. Sands Township has two large gravel pits in place, as well as a number of active sand pits. See Chapter 10.

## **Topography**

There are hills, ravines, mountains, flat plains, and a thousand other shapes to the earth. This changing surface can be said to have a changing topography. The vertical distance measured above mean sea level is elevation. These elevation changes in the landscape determine the size and slope of a watershed.

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

Other significant topographic characteristics are unique geologic formations. In Sands Township this would include protruding bedrock formations and bluffs ranging in size. These areas, in addition to steep-sloped areas, are Areas of Particular Concern. See Chapter 10.

## **Water Features and Watersheds**

Streams, creeks, rivers, lakes, wetlands, and the Sands Plain Aquifer all play a valuable role in Sands Township's natural features. Sands Township residents enjoy the water for domestic use, fishing, hunting, canoeing, and enjoying nature. Water is the habitat for a wide variety of water-bound creatures. These diverse and sometimes conflicting uses can strain water quality.

**Photo 4-1  
Carp River**



**Photo 4-2  
Escanaba River-East Branch**



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

The major water features within Sands Township include the Carp River, East Branch of the Escanaba River, Big Creek, Pelissier Lake, and other lakes and creeks. Lake Superior's water quality is influenced by the quality of the drainage from the Township's water bodies. These water areas and the other lesser streams and ponds are all very

important to the life cycle of both humans and animals, and deserve to be Areas of Particular Concern.

This brings us to watersheds in Sands Township. Because of the topography of Sands Township, the surface and subsurface waters flow together in watersheds or basins. Each stream has a watershed or area that drains toward a central point of discharge or collection. Depending on the size of the watershed and amount of water collected within it, a body of water, usually a stream or river, will form to carry this water off. All impurities or effluent released into one watershed eventually becomes consolidated in a stream or river serving the watershed. This is how each individual action affects all others downstream in the same watershed.

### **Wetlands**

Typical wetland areas include marshes, swamps, fens, and bogs. Typical characteristics include the presence of water or wetland vegetation. Wetland areas differ in one major way from glacial lake plain deposits. Because of poor drainage and high water tables, an accumulation of muck and peat overlies the glacial lake plain. Water yields are similar to lake plain yields. These deposits occur in a few areas in the Township.

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

Photo 4-3

#### **This Wetland Area is known as Shrub Wetland**



### **Floodplains**

Typical floodplain areas occur along the shore of lakes, in wetland areas, and along rivers and stream watershed courses. Currently, floodplains are regulated in part by Part 31 of the Natural Resources and Environmental Protection Act, PA 451 of 1994, the Floodplain Regulation Act, but also by local building and zoning codes which require special treatment for structures built in a floodplain.

Because the floodplain provides an area of water retention in times of flooding to prevent flooding into other areas, these floodplains should be preserved as Areas of Particular Concern and development should be discouraged. Indiscriminate filling of these floodplains can affect other areas by causing damage and loss of property due to

flooding, and therefore efforts to manage these floodplains and flood prone properties are essential to all concerned. Sands Township has no areas of concern regarding the floodplain area.

### **Sands Plain Aquifer**

The majority of the Township is located above the Sands Plain Aquifer. The exception is in the southwest corner of the Township, namely sections 19, 20, 29, 30, 31, and 32 of T46N-R25W. The aquifer is split into two flow directions with the majority flowing towards Lake Superior and a smaller portion in the south/west of the Township flowing toward Lake Michigan. Sands Township has several monitoring wells located within the Township with one well, well number 30, located just east of the tailing basin of Cliffs Natural Resources. These wells are monitored twice yearly by the Township with a written report presented to the Township Board and available for public review at the Township's office, upon request. The aquifer is and shall remain an Area of Particular Concern.

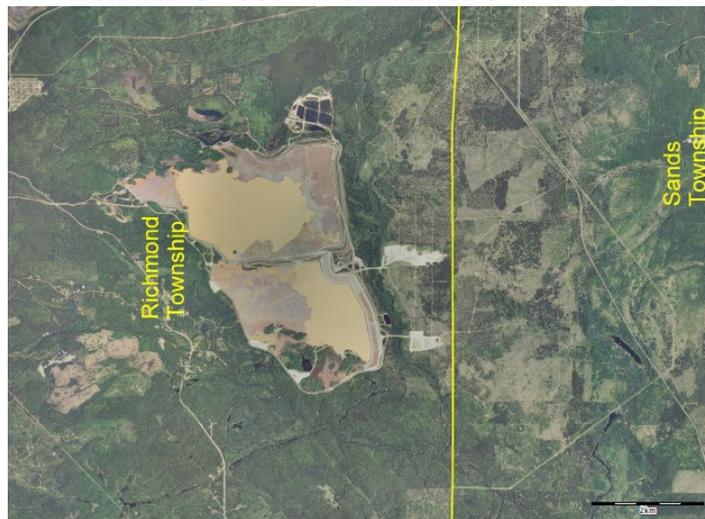
### **Effect of Gribben Basin**

Cliffs Natural Resources has proposed a tailings basin, known as the Gribben Basin, in the central part of Richmond Township just west of the Sands Township-Richmond Township border. It is, however, in the recharge area of the Sands Plain Aquifer.

The potential recharge area of this project is approximately 2.5 square miles. During the 30+ years that Cliffs Natural Resources and Sands Township have kept records on the wells monitored in the area, there has been a drop in the groundwater depth that varies from 8 to 15 feet from the south to the north parts of the Township. This loss has mildly fluctuated over the years but continues on a downward trend without an equilibrium having been reached. The Township will continue to seek answers as to why these changes are occurring. The health of the Sands Plain Aquifer is of utmost importance to the Township and some of the adjoining governmental units.

Photo 4-4

### **Cliffs Natural Resources Gribben area located over the Sands Plain Aquifer**



# Chapter 5

## EXISTING LAND USE

### INTRODUCTION

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

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

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

Photo 5-1  
**County Landfill is one Example of Different Land Uses**



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

Land Use	Acres	Percent
Urban and Built Up	2,742.6	6.0
Residential	494.7	1.1
Commercial	387.0	0.9
Industrial	6.3	0.0
Transportation, Communications, & Utilities	1,221.0	2.7
Extractive Uses	349.1	0.9
Open Land, Other	239.5	0.5
Agriculture	618.0	1.4
Non-forested	1,408.4	3.1
Forested	39,892.6	87.6
Northern Hardwood	12,318.8	27.1
Aspen/White Birch Association	9,262.0	20.3
Lowland Hardwoods	133.8	0.3
Pine	17,240.0	37.9
Other Upland Conifers	156.5	0.3
Lowland Conifers	781.5	1.7
Water	160.9	0.4
Wetlands	578.3	1.3
Barren	117.3	0.3
Total Acres in Sands Township	45,518.1	100.0

*Sources: Michigan Resource Information System*

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

### **Urban and Built-up**

There were 2,742.6 acres of urban and built-up land in Sands Township in 2004. Single-family residential comprises nearly 1.1% of all urban and built-up land. Sands Township also has Multiple-family residential, mobile home parks, commercial, services, primary/central business, secondary/neighborhood business, industrial, transport, open pit, sand and gravel, and outdoor recreation uses.

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

### **Agricultural Land**

Agricultural land, totaling over 618 acres in Sands Township, is mostly non-crop land.

Photo 5-2  
**Sands Township Farmstead**



**Non-forested**

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

Photo 5-3  
**Non-forested Land in Sands Township**



**Forested**

This category comprises the largest percentage of land in Sands Township, with over 39,892 acres, or almost 88% of the entire Township area. Forest land in Sands Township is a mixture of softwood and hardwood. Hardwood includes maple, birch, oak, and associated other species. Softwood includes many species of pine and aspen.

Photo 5-4  
**Forested Land Comprises the Largest Percentage of Land in Sands Township**



## **Water**

Open water areas comprise nearly 160 acres of Sands Township. There are streams, creeks, rivers, and inland lakes.

## **Wetlands**

Wetlands comprise nearly 580 acres of Sands Township. Wetland areas are soils which are saturated with moisture either permanently or seasonally. Such area may also be covered partly or completely by shallow pools of water.

## **Barren**

Barren land comprises nearly 120 acres of Sands Township. Barren land is land in which less than one third of the area has vegetation or other cover. In general, barren land has thin soil, sand, or rocks. Barren lands include deserts, dry salt flats, beaches, sand dunes, exposed rock, strip mines, quarries, and gravel pits.

Photo 5-5  
**Barren Land in Sands Township**



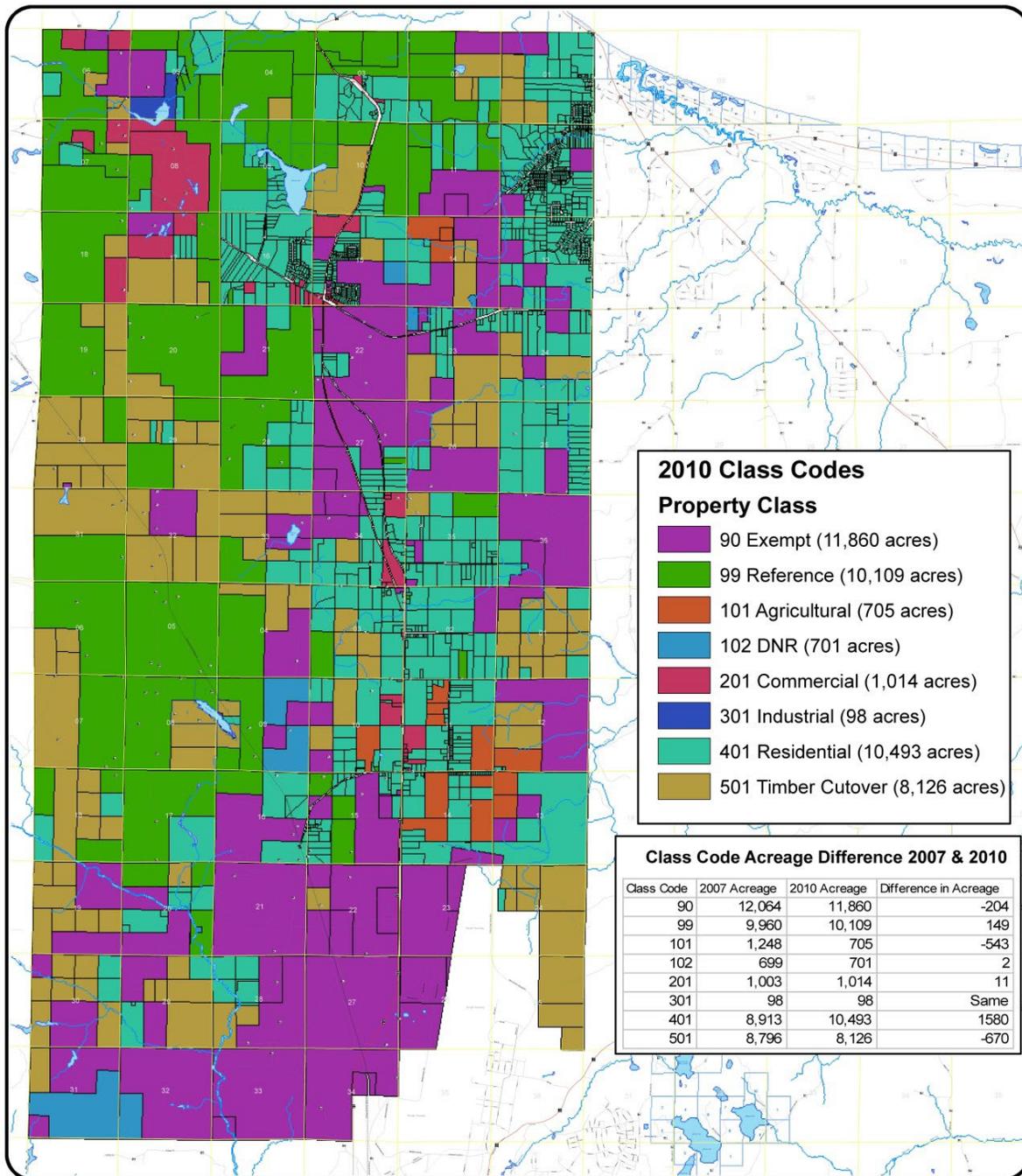
## **LAND USE BY TAX CLASS**

According to assessment records for 2010, over 10,493 acres of Sands Township were classed as residential, about 23% of the land. This was in striking contrast to the area of the Township that was actually in urban and built-up use, which was less than 2741.6 acres or 6% (which also included commercial and industrial land use).

Land use/land cover measures existing area of land devoted to a particular use or land cover, whereas tax class measures land use by tax class on a parcel basis, so if a part of a parcel is used for residential purposes, the whole parcel is classified that way.

Map 5-1  
Sands Township Land Use by Tax Class, 2010

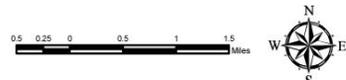
Sands Township Class Codes 2010



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**Legend**

- Section Lines
- Government Lots
- Highways
- Primary Roads
- Secondary Roads
- Unclassed Roads
- Active RR
- Abandoned RR
- Rivers
- Lakes



Many parcels have the tax classification “exempt”. Most of these are state-owned. In 2010, 11,860 acres, or 28% of the total acres, were tax exempt in Sands Township.

Commercial Forest Act (CFR) lands accounted for 8,126 acres of Sands Township in 2010. These are private lands and, under CFR agreement, the owners pay a reduced tax of \$1.10 per acre on forest lands greater than 40 acres if a management plan is developed. The Department of Natural Resources, Forest, Mineral and Fire Management Division, offers this property tax incentive to owners of forested lands if they agree to manage their commercial forest lands for recreation or wildlife. Forest species such as deer, turkey, grouse, non-game forest birds, amphibians, reptiles, etc. benefit from this program. Cutting of trees is approved by permit only.

Property classed as “commercial” and “industrial” accounted for 1,112 acres in 2010. Commercial and industrial parcels in the Township include a large gravel pit, county landfill, and both large and small parcels along the State Highway M-553 and County Road 480 corridor.

There were 705 acres with a tax classification of “agriculture” in 2010, while 618 acres were identified as agriculture in the land use/cover inventory. None of the 618 acres of agriculture land in the use/cover inventory was tax exempt. This means that approximately 87 acres were not classified as such.

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

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

Already developed parcels and most of those classified as residential (and thus presumed to be developable) are in close proximity to sensitive natural features or have severe development limitations. These natural features include the Carp and Escanaba Rivers and many high quality streams and creeks that feed the rivers and lakes. The Sands Plain Aquifer is considered the number one natural feature, and every effort to protect this natural feature shall be pursued.

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

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

**Photo 5-6  
Logging Operation in Sands Township**



**Photo 5-7  
Mineral Extraction in Sands Township**



# Chapter 6

## PUBLIC FACILITIES AND SERVICES

### INTRODUCTION

This chapter describes the public facilities and services provided to residents in Sands Township. This includes Fire and EMS protection, governmental administration, solid waste collection and disposal, recycling, recreation, education, health, library, cemetery, and others.

### TOWNSHIP ADMINISTRATION

The operation of Township business takes place at the Municipal Complex, on an 18 acre parcel at 987 State Highway M-553, located just south of the County Road 480 and State Highway M-553 crossroads. Office Complex hours are Monday thru Friday from 10:00 AM to 3:00 PM.

(See Table 6-1).

**Table 6-1**  
**Sands Township Employees**

<b>Department</b>	<b>Number Of Employees</b>
Township elected officials (1 Supervisor, 1 Clerk, 1 Treasurer, 2 Trustees)	5
Office staff (1 director of zoning and planning, 1 administrative assistant)	2
Fire and Emergency services (1 fire chief, 2 assistant fire chiefs, 1 director of EMS, 1 assistant director of EMS, Approximately 22 on call fire and EMS personnel)	Approximately 27
Waste management (1 driver, 2 sanitation workers, 1 transfer station attendant)	4
Cemetery (1 Director, 2 workers)	3
Parks & Recreation (2 workers)	2
Approximate Total Employees	43

Photo 6-1  
**Sands Township Office Complex**



The municipal complex was built and occupied in 2000. It contains offices for all Township departments, including offices of the Supervisor, Assessor, Clerk, Treasurer, Zoning Administrator, and Administrative Assistant.

### **WASTEWATER SYSTEMS**

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

### **WATER WELLS**

At present, all Township residents and businesses are served by private wells, each varying in quality and capacity. New wells must be permitted by the Marquette County Health Department. The Township provides no public system for distribution of water.

### **SOLID WASTE/RECYCLING**

Township residents generate about 25 pounds of solid waste per resident per month. Total residential/commercial solid waste is between 55 to 78 tons per month, depending on the time of year. The Township provides curb-side garbage collection, for which a one mill tax is levied to help offset costs, and also provides a solid waste drop-off collection at the Township's transfer station. The new Recycling/Transfer Station is located south of the township's park and office complex. It is currently open every Wednesday from 4 – 7 PM, Thursdays from 10 AM-2 PM, and the second and fourth Saturday of each month from 10 AM-2PM. Charges for disposal are about \$10.00 per pick-up load, recycling is free. Solid waste is deposited in the Marquette County Landfill, which is located about 4 miles west of the crossroads of County Road 480 and State Highway M-553. Residents may haul their own waste to the landfill after getting a permit from the Township.

The Marquette County Solid Waste Management Authority (Landfill) offers a single-stream recycling program, as well as a glass recycling program that the Township participates in. Recyclables (single-stream) are brought to the transfer station and placed in two large green roll-off containers. Glass is brought to the transfer station and placed

in the blue roll-off and metal is placed in the red roll-off. When recyclable and glass roll-offs are full, they are hauled to the Landfill for processing. The Township continues to look into ways to improve the recycling program and increase participation while reducing the cost.

## **UTILITIES**

The Marquette Board of Light and Power is the provider of electricity to Sands Township. SEMCO Energy provides natural gas to homes in some areas of the Township.

## **EMERGENCY SERVICES**

### **Police**

Sands Township does not have its own police department; the Township is dependent on the County Sheriff and Michigan State Police departments.

The nearest State Police post is about nine miles west of Sands Township in Negaunee Township, The County Sheriff department is located in the City of Marquette, about ten miles north of Sands Township.

Photo 6-2  
**Police Department Vehicle**



### **Fire Department**

Sands Township Fire has 23 volunteers, including officers. There are two fire stations sharing the following apparatus: 2 pumpers, 1 tender (tanker), 1 equipment vehicle for extrication, 1 brush truck (photo 6-3). Because the Township does not have a municipal water system, all water used in fighting a fire must be transported by tanker and mutual aid trucks, siphoned from one of two underground holding tanks or from two dry hydrants. One dry hydrant is located along creeks on the south side of County Road 480 (photo 6-4) and the second dry hydrant is located at the bridge on County Road NP.

Hall #1, the larger fire station of the two, is located north of the Township Office Complex and south of County Road 480 on M-553. This station is shared with Sands Township Emergency Medical Services and has a meeting/training room. Hall #2 is located at the corner of Silver Creek and Timber Creek. The Township has mutual aid agreements with surrounding municipalities that include automatic mutual aid dispatching depending on the nature of the emergency. These agreements result in more equipment and staffing to assist at our emergencies.

Photo 6-3  
**Sands Township Vehicles**



Photo 6-4  
**Dry Hydrant along County Road 480**



Homeowner and business insurance is tied to rating of the fire suppression capability of the community from the Insurance Services Organization (ISO). The Fire Department went through a lengthy ISO review in 2015, which resulted in the lowering of the ISO rating from a 9 to an 8B for residents within five road miles of a fire department. The remaining portions of the Township remain with a rating of 10. The Fire Department continually works to reduce the ISO rating by following National Fire Protection Association recommendations on how much water must be available at certain types of fires. By restructuring hose and equipment available on each type of apparatus and shoring up auto-dispatches of surrounding fire departments, the ISO rating was decreased for some areas. Possible further reduction in the ISO rating could come from the installation of an elevated water storage tank or other options for rapid filling of firefighting equipment, or the installation of a municipal water system.

### **Emergency Medical Services**

Sands Township provides a Basic Life Support (BLS) transporting ambulance with 8-10 volunteers wearing pagers and leaving their work, home, activities when able. They are inspected at least annually by the State of Michigan and all personnel are required to attend continuing education in order to maintain their emergency medical services licenses. Additionally, there are (ALS) Advanced Life Support ambulances available from UP Health System. When a 911 call is made, the dispatcher follows emergency medical dispatching guides to determine what level of care is needed. There are occasions when the patients need equipment, medication and skills beyond that of basic life support and that is why a tiered system is present with an ALS ambulance also being dispatched. The nearest hospital to Sands Township and is located approximately 10 miles to the north in the City of Marquette.

### **HEALTH CARE**

U.P. Health System – Marquette is a Level II trauma specialty care hospital with 222 beds. It offers a wide array of emergency, surgical, treatment, and wellness services. It is located at 850 West Baraga Ave, Marquette.

### **EDUCATION**

Children in Sands Township attending public schools do so in the Marquette and Gwinn Area School systems. Total enrollment in the fall of 2022 in Marquette was 3247. The Gwinn 2022 fall enrollment was 997.

### **CEMETERY**

In 1995 the Sands Township Cemetery opened for burials. The cemetery is located on County Road NA (Miller Road) and plots are available to both residents and nonresidents.

### **RECREATIONAL FACILITIES**

The Township Board approved the Sands Township Recreation Plan for 2011-2015, and the Recreation Committee is currently updating the plan for the next 5 years. The Plan is reviewed by the Planning Commission annually in order to ensure compliance with the Township's Master Plan and Zoning Ordinance. The Recreation Plan provides an inventory of existing recreation-related facilities and lays out projections for improvements and expansions. In the past, the Township has relied heavily upon grants

to fund recreational facilities. For a complete description of recreation facilities in the Township, please refer to the Recreation Plan, which is kept on file in the office complex. Table 6-2 and the following text provide a brief overview of recreation facilities and their features.

Photo 6-5  
**Township Recreation Area/Park**



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

<b>Sands Township Recreation Facilities</b>	<b>Strawberry Lake</b>	<b>Township Park</b>	<b>Township Complex</b>	<b>Blueberry Ridge</b>
Playgrounds		X		
Picnic Facilities	X	X		
Open Space	X	X		X
Restrooms	X	X	X	X
Hiking/Nature Trail	X	F		X
X-Country Skiing				X
Fishing	X			
Basketball Court		X	X	
Tennis Court		X		
Volleyball Court			X	
Pickleball Court		X	X	
Showers			X	
Covered Pavilion		X		
Warming Hut				X

Note: “X”=existing and “F”=future.

**Township Recreation Properties**

This section summarizes Township properties used for active and passive recreation.

**Strawberry Lake**

This property is located in section 33 of T47N-R25W southwest of the Marquette County Fairgrounds with access off of State Highway M-553. It is surrounded by approximately 120 acres of Township-owned property. This property is zoned Public Lands, and is a

local fishing spot, which also offers public outdoor restrooms, picnic, and hiking areas. This property is open May through September from 9:00 AM to 10:00 PM. A caretaker is on site.

Strawberry Lake is a designated trout lake by the Department of Natural Resources, and special fishing regulations are in place. The DNR regularly stocks with lake with trout. Due to diminishing water levels over the years, dark muck surrounds the lake and the shoreline has become hazardous. Please use caution if you choose to recreate around the lake.

Photo 6-6  
**Strawberry Lake**



### **Township Park**

This property is located just south of the crossroads of County Road 480 and west of State Highway M-553, and adjacent to the Sands Township Office Complex. This park offers two basketball courts, two tennis courts, four pickleball courts, child play area, and a covered pavilion with picnic tables. These facilities plus parking and outdoor restrooms were funded by tax dollars and a DNR Land and Water Trust Fund Grant that was awarded in 2006. The Pavilion was funded in part by donations.

Photo 6-7  
**Sands Township Park**



### **Township Complex**

This property is located just south of the crossroads of County Road 480 and State Highway M-553, between the Sands Township Fire Facility and the Sands Township Park. The gym is available for public rental for social gatherings or sport related activities.

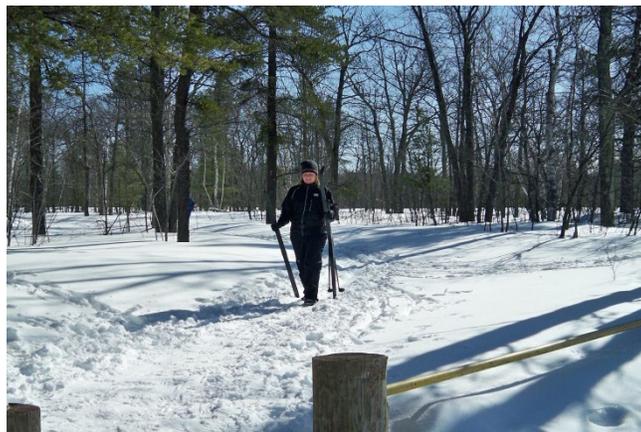
Photo 6-8  
**Sands Township Gym**



### **Blueberry Ridge**

This property is controlled through the State of Michigan, and offers cross-country Skiing. One of the trails is lighted until 10:00 PM in the winter months. In the summer, the trails are used for hiking and nature viewing. A warming hut was built in 2016 at the lighted loop. This hut was constructed with funds from a Land and Water Conservation Fund grant and donations gathered by the Superiorland Ski Club. The Superiorland Ski Club oversees the operations of the hut.

Photo 6-9  
**Blueberry Ridge Ski Area**



## **Equestrian Trail**

Within Sands Township, the DNR has dedicated an equestrian trail located at the end of County Road NA (Miller Rd).

Photo 6-10

### **Equestrian Trail in Sands Township**



## **Fairgrounds**

The Marquette County Fairgrounds is located in Sands Township on State Highway M-553, about two miles south of the Crossroads. Despite its name, the fairgrounds is privately owned and operated; it is not county government funded.

## **COUNTY LANDS AND FACILITIES**

The county does own land in the Township, about 3,994 acres. The only county facility is the Marquette County Landfill, which is controlled by the Marquette County Solid Waste Management Authority board.

## **STATE LANDS AND FACILITIES**

There are no state facilities in the Township, although, the state does own land in the Township, about 7,423 acres.

## **UNITED STATES GOVERNMENT LANDS AND FACILITIES**

There are no longer U.S. Government facilities in the Township, although the U.S. Government does own land in the Township, about 313 acres. The property south of County Road 480 is serviced by the Gwinn Post Office, with the remaining Township residents, north of County Road 480, serviced by the Marquette Post Office.

# Chapter 7

## TRANSPORTATION

### INTRODUCTION

In Sands Township, as in all communities today, the economy is heavily dependent on the transportation system. State Highway M-553 and County Road 480 serve not only local residents, but long distance travelers. Chapter 2 noted that the large majority of Township residents work outside the Township and drive to work. Therefore, the growth of the area becomes largely dependent upon a safe, convenient, and economical transportation system to facilitate the easy movement of people, goods, and services both within and outside the Township. This makes the local transportation system, including highways, railroads, airports, and harbors, even when outside the Township, key elements in the future of Sands Township.

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

### TRANSPORTATION MODES

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

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

Photo 7-1

**The Primary Transportation Mode in Sands Township is Vehicles on Public Roads**



Air transportation services are available at the Sawyer International Airport. The facility has a 12,360 foot main runway with an instrument landing system. The site also contains a passenger terminal building and air crash protection facility. Service is provided by regional jet aircraft. American Eagle, with a new 64-passenger aircraft, has one daily arrival and one departure to Chicago. Delta provides service to Detroit and Minneapolis/St. Paul. There are two arrivals and departures from Detroit daily, except for Saturdays when there is only one. There is one arrival and one departure from Minneapolis/St. Paul daily.

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

Bus transportation is another mode that services the community through the transfer of people and a limited amount of goods. There is no bus facility in the Township. The Greyhound line has one run daily to Calumet and two daily to Chicago. Southbound pickup includes a stop in Harvey on the way to Escanaba/Chicago. In addition, westbound pickup is also made at the Escanaba connection. There is also a local mass transit system (Marq-Tran) that will be discussed in detail in a later section.

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

## **CLASSIFICATION OF ROADS**

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

The design of a road depends principally on its functional classification and the traffic volume it is expected to carry at some future time. Such design factors as the number of lanes, width and surfacing of shoulders, width of structures, type of surface, and design speed all depend on traffic volume and functional classification.

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

A typical road classification system includes the following road types:

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

Freeways absolutely preserve the movement function while local streets primarily serve as access to abutting property. Arterials and collectors provide some of both, with arterials primarily there for the movement function. It is very important to preserve the movement function of arterials and collectors, or congestion will greatly reduce the utility of such roads for safe travel over a distance. When communities poorly plan and regulate land uses next to arterials and collectors, then considerable tax dollars must be spent to remedy the resulting congestion and unsafe conditions.

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

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

- Rural Minor Collector (analogous to “minor collector” above).

Within Sands Township, only two of these classifications apply:

1. Rural Principal Arterial – These arterials provide the next to the highest level of traffic mobility available on the highway system. State Highway M-553 is a state arterial. State Highway M-553 connects State Highway M-35 with County Road 480 and into the City of Marquette.
2. Rural Major Collector – These interconnect and augment the statewide and regional arterial system. County Road 480 is a major connector between US-41 and State Highway M-553 and into the City of Negaunee.

Photo 7-2

**State Highway M-553 is a State Arterial**



The remaining roads in the Township are grouped as Local Access Streets/Roads. These provide access to adjacent properties and these streets and roads carry practically no through traffic since traffic uses are mostly local in nature. The major functions of these streets and roads are to:

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

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

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

The county road system includes only two categories: primary and local roads. County road commissions also receive Act 51 funds and sometimes federal aid highway funds for special projects on certain roads. Within the Township, County Road 480 is the only county primary road and is also on the federal National Functional Classification system. All other roads, excluding private roads, in the Township are county local roads.

Gravel roads serve parts of the Township. Such local roads do a good job of meeting access needs when traffic volumes are low. However, once traffic exceeds 500 vehicles per day on an average quality gravel road, then maintenance demands go up sharply. Paving is often not an option because of the high construction cost (often \$400,000 plus per mile), even though the maintenance cost is much less. In addition, a paved road often has a capacity of 12-15,000 vehicles/day, which is far more than needed in many rural areas and may induce more development into the area (sprawl). Thus, it is very important that Township zoning regulations keep density lower than 1 dwelling unit per 10 acres in areas served by gravel roads. This density reflects the highest traffic volume a gravel road can accommodate without constantly needing grading, and even then it assumes the gravel road is of the highest quality possible with a proper sub-base and a good gravel surface.

Photo 7-3  
**A Gravel Road in Sands Township**



### **TRANSPORTATION DECISION MAKING**

All of the decisions on roads in the Township are made by the Michigan Department of Transportation (on State Highway M-553) or the Marquette County Road Commission (which is responsible for all other public roads in the Township). MDOT has a five year plan that lists priority road and bridge improvements throughout the state. Local governments provide input on priority road and bridge needs directly to MDOT through the local Transportation Service Center (TSC) in Ishpeming.

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

First, each year the Township Board decides its priorities for the roads in the Township: what roads need work, where, and when. The Township Board, in an advisory role, then meets with the Road Commission to present their priorities and to exchange other pertinent information. The Township pays 100% of the cost for road construction projects in the Township, but the Road Commission is involved in the bidding process and works with the contractors and oversees the project, for a nominal fee. Road projects are paid for by a millage specifically approved only for road repairs. It should be noted that the Township's road needs are always greater than its financial abilities to meet those needs. Thus, the degree to which the Township's priorities are acted on will depend in part on how much money the Township has to provide funding for those priorities. The second way the Township can affect Road Commission decisions is through the County Board of Commissioners who appoint the County Road Commissioners.

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

## **ACCESS MANAGEMENT**

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

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

## 15 ACCESS MANAGEMENT PRINCIPLES

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

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

### **County Road 480/State Highway M-553 Corridor & Access Management Plan**

At some time in the future, the implementation of a corridor & access management plan may be pursued by the Michigan Department of Transportation and Sands Township with input from representatives of the jurisdictions along the County Road 480 and State Highway M-553 corridor. The Plan will set forth a series of proposed road and intersection improvements, as well as driveway redesign and closures proposed to be implemented as the opportunity presents itself.

### **Traffic Volumes**

Average daily traffic (ADT) volume on State Highway M-553 is about 3,770 vehicles. About 40% of this traffic is commercial trucks, with the higher percentage being north of County Road 480.

Average daily traffic volumes on County Road 480 is about 2,820 vehicles per day east of State Highway M-553 and 3,520 west of State Highway M-553. A large percentage of this traffic is commercial trucks.

### **Traffic Crashes**

Within 300 feet of the intersection of County Road 480 and State Highway M-553, there were 25 crashes from 2010 to 2014; 9 were rear-end crashes, 7 were angle, 6 were single vehicle accidents, 2 were sideswipes going the same direction, and 1 was other/unknown cause. Glasses Curve and the hill area by the fairgrounds are considered high traffic crash areas on State Highway M-553. MDOT is currently working on an M-553 project for curve realignments and resurfacing, along with guardrail and sign upgrades in the Glasses Curve/Marquette Mountain Ski Hill area.

### **Driveway Closures/Consolidations on State Highway M-553/County Road 480**

One of the most fundamental access management principles is that driveway closures or consolidations reduce the number of conflict points at which crashes could occur. Crashes go up with the number of driveways if the separation distance between driveways is substandard. As a result, where there are two or more driveways on the same parcel, and they are not properly separated for the speed of the roadway, driveways should be closed or combined to meet the MDOT safety requirements. Exceptions may apply for driveways serving semi-trucks but even then, not more than two driveways on State Highway M-553 or County Road 480 should be permitted. Driveway closures or consolidations are most easily accomplished when a landowner comes in for development of property. Opportunities to combine driveways and gain access via a frontage or rear service road should also be capitalized upon.

Photo 7-4

### **Very Few Businesses Need Two Driveways. Restricting Access on State Highway M-553 and County Road 480 Will Improve Safety and Traffic Flow**



### **PUBLIC ROADS CONDITIONS AND IMPROVEMENTS**

The county road network consists of 284 miles of county primary roads and about 988 miles of county local roads. The County plows about 67.7% or about 862 miles of roads. There are 6.14 miles of county primary road and 81 miles of county local roads in Sands Township. Improvements to the county primary road, both maintenance and construction, are scheduled by the Road Commission as their funds allow. As mentioned above, the County Road Commission bears the responsibility of construction and maintenance on

both the primary and local road systems. The Township, however, covers 100% of the cost of construction on the local road system. The Road Commission must finance all maintenance costs on both the primary and local road system. In addition, the Road Commission is responsible for preliminary signing on the roads under their jurisdiction.

On local roads, the Township is often the determining factor of when the roads get worked on, mainly because Township funds are usually scarce. The Township's cost for construction projects may be anywhere from \$15,000 to \$250,000 or more for one project. Improvements to the Township road system fall into two categories: 1) upgrading existing roads, and 2) future roads. As far as the existing roads are concerned, their general routes and locations are established. But as the roads carry increased traffic volume, their level of construction should correspondingly increase. Some of the first roads in the area were much narrower than current design standards would allow and their base is not as sturdy as present design would provide. A gradual improvement of the existing roads should take place so that they also meet contemporary design specifications.

### **Existing Road Improvements**

The state highway and county primary road in the Township are in fair to good shape. State Highway M-553, from South of the 480/553 Crossroads to M-35 in Gwinn, was resurfaced in 2016.

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

1. Silver Creek Road
2. Ford Road
3. County Road NP, including bridge

The Township used road millage funds to have extensive repairs done on several roads in the last few years:

1. NE (Laramie Rd) – 2016
2. NAP (Old County Road 553) – 2022
3. NV (Olsen Rd) - 2022
4. NNN (Yelle Rd) - 2022
5. NA (Miller Rd) - 2014
6. NJ (Dahlstrom Rd) – 2014
7. NB (Station Rd) - 2013
8. NT (Taylor Rd) - 2022
9. NF (Youngs Rd) - 2012
10. NG (Contois Rd) – 2011

The Road Commission and Sands Township Board worked together to determine which roads in the Township had the greatest need for repairs. A 5 year plan was approved in 2016 and not only outlined roads planned for resurfacing, but also for crack seal, chip seal, and wedge/overlay repairs. This plan will be updated and amended as needed.

## **New Roads**

Future roads shall meet design specifications of the Township and the County Road Commission. Consideration should particularly be given to where these roads should be located. An improved road can be a great attraction for development. But the development should be where it can be conveniently served by local services. Therefore, determination of where development should occur should be a major determinant to deciding where the new roads should be built. The other major determinants for new roads are:

- Providing missing links on an interconnected road pattern
- Relieving and preventing congestion
- Providing alternative means of access for certain types of traffic.
- Providing more than one egress route to subdivisions and other Residential areas

In 2017, the Township Board approved a new road project that connected State Highway M-553 with Silver Creek Road. The connection road meets with State Highway M-553 on Township owned property about 1 ¼ mile north of the Crossroads. It travels east and meets up with Silver Creek Road near the Teaching Family Homes property. Total length of the road is approximately 1.25 miles. The project, which was completed in October of 2017, cost \$503,558.70.

## **PRIVATE ROAD CONDITIONS AND IMPROVEMENTS**

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

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

The Township has two ordinances in place that address road requirements regarding standards for parcels on roads and roads themselves. The two ordinances are the Private Road Ordinance and the Zoning Ordinance. These standards provide for approved private roads to have a minimum 66 foot right-of-way, a 20 foot width and be paved with gravel or similar material. They must meet the standards of the County Road Commission. Services such as public school buses will typically not travel on private roads and some Township services, such as refuse collection, will not be provided to the property owners on a private road unless the road is property maintained and passable. Improvements to private roads, as well as construction and maintenance, are totally the responsibility of the property owners.

The Township should require that all future roads in the Township serving more than a single residence or business be public roads. This may pose a problem in implementation, however, when open space developments are concerned. These are projects where dwellings are clustered on a small part of the site and the balance is left in permanent open space. These projects attract residents who want to be in the country and enjoy a natural setting. When trees are cleared for a full 66 feet (as is often required for public roads) then the rural character of open space developments is often badly undermined. Speeds are slow on these roads and few homes are served, so the clearing of vegetation for these roads may be adjusted 12' on either side of the pavement.

The Planning Commission should work with the County Road Commission and other Planning Commissions to create a new set of standards for open space developments serving a smaller number of lots. This will require new standards on road design and construction and number of lots served. It will require imposing road maintenance agreements that are signed by the developer and Township and recorded with the Register of Deeds for all property affected. It will also require a special assessment clause if it is not adequately maintained. Until then, the Township accepts public road standards as their current standards, for the design, construction, and maintenance.

Following is a list of the private roads in Sands Township:

Pelissier Lake Road, Timber Creek Road, Deer Run Road, Goodman Road, Hiller Road, Tracie Lane, Plank Hill, Silver Creek Drive, Hurley Drive, Stonemill Road, and Roses Ct.

The Township does not currently have a system to monitor the maintenance of private roads and the responsibility lies with the residents located on the private road. However, because not all private roads have been properly maintained, the Township needs to be more assertive to ensure that emergency vehicles and fire trucks can always access dwellings and businesses along private roads. Sands Township has adopted a private road ordinance that has gone a long way towards solving this problem, and the Planning Commission should review this ordinance every five years.

When a person applies for a permit to build a dwelling on a private road, they must sign a Grantor's Covenant, a document which states neither the County nor Township is responsible for maintenance of the road and that property owners may not be eligible for certain services normally provided curbside. This document is notarized and recorded at the Register of Deeds.

## **MASS TRANSIT**

Marq-Tran provides a fixed Marquette/Sawyer International Airport/Gwinn route, which travels north and south on State Highway M-553 through Sands Township. In addition to this service, Marq-Tran will also provide door-to-door service, upon reasonable requests, to Township residents seven days a week.

Photo 7-5

**Marq-Tran Provides Service to Township Residents**



**PARK & RIDE**

Sands Township has an MDOT Park and Ride area located at the crossroads of County Road 480 and State Highway M-553, lying south of the Crossroads Grill and west of State Highway M-553.

**CAPITAL IMPROVEMENTS PROGRAM**

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

# Chapter 8

## VISION, GOALS, POLICIES, & OBJECTIVES

### INTRODUCTION

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

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

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

Goal: (Long term) The generalized end toward which all efforts are directed. It is normally stated in terms of fulfilling broad public needs or the alleviation of major problems.

Policy: A statement of position or course of action which provides a means to attaining the stated goal. Policies are factual rather than value-laden, and can be measured by the impact they have on existing conditions. They must also be within the Township's authority and resource capabilities.

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

### VISION STATEMENT

#### Introduction

The Township website is [www.sandstownship.org](http://www.sandstownship.org)

Our vision for Sands Township is a community:

- Which is forward thinking,
- Where there is a strong sense of place, belonging, and pride,
- Where development is compatible with the maintenance of our "quality of life",
- Where development is "park-like",
- Where the community is environmentally conscious,
- Where water is clean and accessible,
- Where sound forestry and agricultural land use is encouraged,

- Where there are green zones which include parks, corridors, and naturally buffered activity areas throughout,
- Where we develop along the “village concept”, and
- Where the community (public and private) supports the vision.

Following is a vision statement that describes Sands Township as residents in 2010 want it to be in the year 2030. This statement was prepared with input from a Visioning Town Hall Meeting conducted on September 22, 2010. It was refined following subsequent input from the Planning Commission, Township Board, and the public.

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

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

### **Proactive Planning and Sustainability**

Sands Township moved into the third decade of the 21<sup>st</sup> century as one of the most desirable places to live within the Upper Peninsula of Michigan. Residents and businesses in Sands Township enjoy a rich, diversified quality of life and are reaping the benefits of productive planning and commitments in the 1990-2000 and refined in the early part of the new century.

Sands Township has become a true reflection of sustainability. Sustainability means meeting the needs of all the people of the present generation, in all parts of the Township, without compromising the ability of future generations to meet their needs. Neighborhoods, businesses, local government, parks, and natural resources are healthy and self-sustaining in 2030. Reaching sustainability requires the community to look beyond short-term gains in order to plan for a better life for its children and grandchildren.

Growth in Sands Township has been characterized by a mix of land uses, that have helped balance the tax base, with commercial and limited industrial growth helping to support services desired by both businesses and the residential population.

### **Quality of Life: Impression, Standards, and Visual Character**

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

Photo 8-1  
**Sands Township Residents Envision “Lots of Green” as a Measure of a High Quality of Life**



Special efforts to improve areas of decline have paid off with some turn-around in those neighborhoods and business areas, and these special efforts shall continue in this area of need.

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

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

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

Sands Township is located over the largest fresh water aquifer within the Upper Peninsula of Michigan. The Sands Township board and its residents are committed to doing everything within their resources and power regarding the protection of the Sands Plain Aquifer.

**Quality of Life: Neighborhoods**

Sands Township residential neighborhoods for the most part are well-kept and provide a variety of housing choices, especially with the expansion of opportunities for seniors over the past two decades. Neighborhoods that had once suffered deterioration have been

improved. There is greater pedestrian access within and between neighborhoods than at any previous time, leading to a safer, healthier lifestyle.

### **Quality of Life: Access to Opportunities**

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

### **Quality of Life: Recreation**

The Township has long held recreational opportunity as an important aspect of quality of life. Recreational opportunities abound in all seasons, both indoors and outdoors. Sands Township is an important destination for snowmobiling, cross-country skiing, hunting and fishing, plus wildlife viewing. The Township Office Complex offers an indoor basketball/volleyball/pickleball court, by appointment at a rental rate established by the Township Board. Township parks are well maintained and expected to be added to in the future.

Photo 8-2

### **Recreational Opportunity Abounds in Sands Township**



### **Quality of Life: Infrastructure**

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

## **GOALS, POLICIES AND OBJECTIVES**

### **Balanced Growth**

#### Goal:

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

#### Policies:

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

#### Objectives:

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

#### Explanation:

The goal and the accompanying policies and objectives recognize that the Township has a responsibility to protect and enhance the quality of life of its residents, and to be fiscally prudent in doing so. Unmanaged growth could overextend public services, raising

the cost to provide them, and could also destroy the character of the community that resident's value. This Plan and the Zoning Ordinance are designed to prevent the negative impacts of unmanaged growth.

## **Housing/Residential**

### Goal:

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

### Policies:

1. Recognize, through the administration of land use controls and other development policies, that the provision of housing is a public as well as private responsibility.
2. New housing should be located in areas without significant environmental hazards.
3. Encourage variety in the housing stock through revision and enforcement of the Zoning Ordinance, subdivision regulations, and other land use controls.
4. Encourage energy-efficient housing types.
5. Encourage improvement of housing and subdivision design.
6. Encourage improvement of the numbering system to improve emergency vehicle accessibility.
7. Stabilize property values by protecting residential areas from the encroachment of incompatible land uses.
8. Encourage the upgrading and improvement of residential dwelling units showing signs of deterioration.
9. Discourage the pattern of scattered, rural housing in areas of important and prime farmland.
10. Maintain within the Zoning Ordinance acreage for multi-family and mobile home development.
11. Give consideration to the need for housing assistance for the elderly, low income, and handicapped families and other segments of the Township population.
12. Maintain "rural residential" with a large minimum lot size as the primary residential land use in the Township where sewer and water are not available or planned. Encourage the clustering of such dwellings where the land is suitable for such a design to help preserve the rural character of the area, especially as viewed from the road.
13. Explore alternative measures to reduce housing costs and make home ownership more affordable, such as zoning regulations and other programs which are designed to reduce the cost of constructing new housing, provided the exercise of these measures still preserves the character of the area in which the housing is to be built.
14. Encourage upgrading, clean up, and landscaping of existing mobile home parks.
15. Allow only quiet, low traffic, low intensity home occupations in residential areas to preserve the serenity of existing neighborhoods.
16. Consider, adopt, and enforce a basic property maintenance code.
17. Encourage the preservation and retention of older homes to maintain community character and history and utilize zoning regulations to prevent homeowners from

- splitting older single-family homes in neighborhoods of exclusively single-family homes into multiple-family apartments or condominium units.
18. Encourage eligible landowners to participate in federal, state, or county housing rehabilitation grant programs.

#### Objectives

1. Annually review changes which have occurred in the Township's housing stock (new construction, demolition, conversions, etc.) to determine the extent to which adequate choices exist with respect to housing type and price range.
2. Perform an evaluation of the Zoning Ordinance and other codes and regulations and modify them if necessary to insure that a wide variety of housing types and prices is enabled.
3. Foster educational opportunities for Township residents on increasing the energy efficiency of their homes.

#### Explanation

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

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

#### Goal:

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

#### Policies:

1. New nonresidential developments should pay for the full cost of sewer and water extensions (if a public sewer and water system is created) and densities will be sufficient for the long-term cost-effective support of those systems.
2. The Township should ensure new residential subdivisions and site condominium projects are permitted of a size and scale that does not exceed the capacity of roads serving the development.
3. Residential development patterns throughout the Township should reflect economical and efficient use of land and be especially mindful of the value of protecting renewable resource lands such as agricultural, forestry, and other land-based resources from premature conversion or land fragmentation.

#### Objectives:

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

2. The Zoning Ordinance will be updated to direct new, higher density residential developments to areas where roads and infrastructure are available or are planned to accommodate such density, with larger lot sizes away from existing subdivisions and other settlements.
3. The Township Planning Commission, in cooperation with local jurisdictions, realtors, developers, and other interest groups will develop educational materials for citizens and home buyers on housing trends in the Township, and the potential impact of those trends with alternatives that provide for residential development that minimize adverse effects on community finances, the transportation system, scenic character, and the environment.
4. New developments should be discouraged in areas where there are not all-season roads. The Township will adopt zoning regulations limiting development on gravel roads to a level that does not exceed road capacity.
5. The Township will strongly encourage that all roads in new developments be public roads. The Township has a Private Road Ordinance, which maintains private road standards that require adequate emergency vehicle access without excessive surface water runoff or damage to rural character and which ensure proper long-term maintenance of the road. Any new private roads must meet the standards outlined in the ordinance.
6. The Zoning Ordinance will be reviewed and updated, if needed, to zone rural areas of the Township with a density based standard to prevent over development. Overall density will be tied to maximum lot size to encourage clustering and the retention of open space.

Explanation:

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

Goal:

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

Policies:

1. The regulation of land division is actively and thoroughly implemented to the extent of the law by Sands Township.
2. Appropriate land division standards prevent unbuildable lots or those that create traffic hazards, harm the environment, limit agricultural activities, create unnecessary public service burdens, or contribute to the destruction of rural character.

Objectives:

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

2. The Township land division standards should be available through the office, so they are readily available to land owners, realtors, and persons interested in buying land in Sands Township.
3. The Township should make available educational materials on appropriate land division practices.

Explanation:

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

Goal:

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

Policies:

1. The Township should adopt rural residential development standards that set aside open space and employ vegetative buffers along roadsides and where there are sensitive environments, greenways, and potential trail and wildlife corridors. These standards should be adopted as part of site plan review, cluster ordinances, conservation subdivision ordinances, site condominium ordinances, and planned unit development ordinances.
2. The Township should adopt and promote design guidelines for residential development, both for single parcels and for large parcels developed with multiple homes that promote roadside open space and buffers to protect or enhance scenic quality.
3. The Township will employ capital improvements planning to phase investment in new infrastructure and improvements.

Objectives:

1. Sands Township will identify important open space and scenic resources, including public lands, focus attention on protecting open space, rural character, scenic views, and provide a package of tools to accomplish this.
2. The Zoning Ordinance will be reviewed and updated as needed to ensure new residential development respects the natural conditions and characteristics existing in the Township
3. Design guidelines (such as the extensively illustrated **New Designs for Growth Development**, available online at [www.newdesignsforgrowth.com](http://www.newdesignsforgrowth.com) ) will be used to educate landowners and developers on how residential development can protect scenic quality through vegetative buffering and other techniques.

Explanation:

This goal, policies, and objectives recognize that the Township Master Plan, Zoning Ordinance, and other regulations and actions foster a style of compatible development that is not self implementing and that without the Plan and appropriate regulations, new

development can destroy the visual character of the Township. The Township can modify its regulations and actions to better protect Sands Township scenery and visual character.

Goal:

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

Policies:

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

Objectives:

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

Explanation:

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

**Commercial/Business**

Goal:

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

Policies:

1. Encourage new commercial/business development to locate adjacent to existing commercial/business areas, with the concentration of commercial/business development at the intersection of State Highway M-553 and County Road 480.
2. Promote the development of small commercial/business centers adjacent to existing commercial/business development along the corridors of County Road 480 and State Highway M-553, rather than as lot-by-lot strips.

3. Encourage the design and location of commercial/business in a manner which complements and does not conflict with adjoining residential areas.
4. Encourage a compatible and desirable mix of commercial/business uses.
5. Provide design guidelines to commercial/business landowners which promote similarity in the height and design of storefronts and buildings and which prevent the creation of structures whose mass is too great for the lot and structures on adjoining lots.
6. Improve unsafe and unsightly commercial/business development along the County Road 480 and State Highway M-553 corridor through design, landscaping, and enforcement regulations/requirements such as maintaining existing large trees, creating berms, planting, and providing shared access and shared parking when possible.
7. Encourage landowners to maintain and where necessary improve the condition of commercial/business structures and parking lots.
8. Avoid separate parking lots for each business and encourage centrally placed lots which serve several businesses, where feasible.
9. Implement access management regulations along both County Road 480 and State Highway M-553 consistent with the State and County access management plans.

Objectives:

1. Ensure appropriate context-sensitive design standards are used to respect and enhance commercial/business character.
2. Actively foster the visual enhancement and cleanup of existing and new commercial/business properties.

Explanation:

This goal, policies, and objectives recognize that in order for the Township to diversify land uses and tax base, it is necessary to include commercial/business uses in a pattern and design that has a positive impact on the community.

**Industrial**

Goal:

1. Encourage the location of non-polluting light industry in the Township without damaging the environment, having an adverse impact on the aquifer, spoiling the scenic beauty of the area, or overburdening local roads, utilities, or other public or private facilities.

Policies:

1. New industries should locate contiguous to existing industrial facilities and in new locations with appropriate public utilities and adequate roads to minimize service costs, traffic problems, and negative impacts on other land uses.
2. Implement site plan requirements for light industries which are designed to incorporate generous amounts of open space, attractive landscaping, and buffering from adjacent non-industrial uses.
3. Require the separation of industrial sites from residential areas through buffers made up of any combination of parking, commercial/business or office uses, parks, parkways, open space, forests, tree planting, or farmland.
4. Require that the aquifer not be adversely affected by development.

Objectives:

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

Explanation:

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

**Transportation**

Goal:

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

Policies:

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

Objectives:

1. Implement access management regulations on the State Highway M-553 and County Road 480 corridors.
2. Continually revise and strengthen the Township's Zoning Ordinance, Private Road Ordinance, and other land use controls to reflect the Township's transportation needs and design standards.
3. In cooperation with the Marquette County Road Commission and the State, adopt and implement an annual Capital Improvements Program for road improvements.
4. Annually review road conditions throughout the Township and recommend a priority for road improvements. Gravel roads should remain gravel until such time as the density or intensity of development requires paving.
5. Identify and classify roadways within the Township as suggested by the State Department of Transportation.

Explanation:

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

**Economy**

Goal:

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

Policies:

1. Encourage new economic development that will significantly increase local employment, tax revenues, and/or commercial services in relationship to the cost of providing services to the development.
2. Balance the supply of public services provided by the Township with the demand and willingness to pay for those services.
3. Services should be financed by users of the service through special assessment districts, user fees, etc.
4. Encourage well designed, safe, convenient, well landscaped, and attractive commercial developments.

Objectives:

1. Annually review the area economy to identify emerging trends and work with other governments in the area to expand employment opportunities.
2. Encourage expansion of retail-wholesale and service industries within the Township to meet the needs and services desired by Township residents.
3. Encourage conversion of noncommercial land use within existing commercial zones to commercial uses.
4. Encourage carefully designed commercial areas which are safe, convenient, environmentally sound, well landscaped, and attractive.

Explanation:

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

## Natural Features

### Goal:

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

### Policies:

1. Ensure that the use of land and the intensity of use are suitable to the natural environment.
2. Encourage the preservation of prime agricultural and forest production areas from more intense types of land use.
3. Protect and preserve the Township's ground water and the Sands Plain Aquifer.
4. Avoid further development of land in designated "areas of particular concern."

Photo 8-4  
**Protect Areas of Particular Concern (Sands Plain Aquifer)  
to Preserve Resources (Water)**



5. Encourage the preservation of high quality fish and wildlife habitat.
6. Coordinate watershed management activities with the Chocolay River Watershed Advisory Council and the Marquette County Soil and Water Conservation District.

### Objectives:

1. Periodically review designated "areas of particular concern" and enact strict controls on development in those areas of high risk erosion, steep slopes, and other natural and cultural "areas of particular concern."
2. Encourage the state Department of Natural Resources and the Marquette County Soil and Water Conservation District to further study water issues and work with the Chocolay River Watershed Advisory Council to recommend solutions.
3. Annually evaluate the performance of the Zoning Ordinance, subdivision regulations, and other land use controlling ordinances to protect natural features.

4. Prepare educational materials for Township residents and business owners featuring the “areas of particular concern,” and best management practices to protect those resources.

#### Explanation

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

#### **Recreation**

##### Goal:

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

##### Policies:

1. Identify and explore opportunities to cooperate with other jurisdictions, with county and state agencies, including Marquette County and the Department of Natural Resources, as well as with other local organizations, on recreation projects which would benefit area residents and strengthen the tourism industry.
2. Encourage local government participation in activities designed to enhance the area’s seasonal festivals.
3. Promote a system of trails for non-motorized activities such as biking, dog sled, and cross-country skiing with other jurisdictions or agencies if possible, through the use of local funds, grants and loans, and coordinated long-term capital improvement programming.
4. Promote a system of trails for motorized activities such as snowmobiling, four-wheeling, dirt biking, and the use of other recreational vehicles with other jurisdictions or agencies if possible, through the use of local funds, grants and loans, and coordinated long-term capital improvement programming.
5. Retain, maintain, and improve all existing public owned parks so that they continue to meet the diverse recreation needs of area residents and tourists.

##### Objectives:

1. Implement the recommendations of the Township Recreation Plan, and those of subsequent Recreation Plans.
2. Review and prepare as needed a non-motorized transportation and recreation plan for the Township.

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

Explanation:

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

**Community Facilities**

Goal:

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

Policies:

1. Continue to provide adequate administrative facilities for government and community use.
2. Encourage the Township to pursue planning and financing for future, phased water and/or sewage facilities.
3. Encourage conservation and maintenance of the existing quality of the water system.
4. Continue to provide solid waste collection with an economically equitable system.
5. Provide adequate recreational facilities to meet Township needs.
6. Provide adequate EMS and fire protection for the Township
7. Develop, annually update, and implement a Capital Improvements program which meets the Township's needs and is consistent with this Plan.
8. Provide other services to the Township in accordance with the ability and willingness of the people to pay for them.
9. Update the Township's Recreation Plan every five years in order to qualify for Natural Resources Trust Fund grants.

Objectives:

1. Prepare a plan for the future use of the old Township hall building.
2. Prepare design plans for development/expansion of local park areas and public access to water areas.
3. Encourage the state Department of Natural Resources and Natural Resources Conservation Service to assist the Marquette County Soil and Water Conservation District to implement action items in the Chocolay River Watershed Plan.
4. Review and develop a mapping and numbering system of the Township to provide adequate fire protection and other emergency services.
5. Consider installing an elevated storage tank or other options for rapid filling of firefighting equipment within needed areas of the Township.
6. Study and adopt special assessment districts to fairly distribute public costs in critical service areas where deemed necessary.
7. Annually review and prioritize a program of capital improvements.

### Explanation:

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

## **Community Character**

### Goals:

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

### Policies:

1. Encourage architectural and site design that complements, rather than detracts, from existing development on neighboring parcels.
2. Preserve the character of the area by encouraging land uses and densities/intensities of development which are consistent with and complement the character, economic base, and image of the area.
3. Improve the appearance of the entrances to businesses along the State Highway M-553 and County Road 480 corridor into and through the Township through landscape designs, signs, and land development which promote the vitality and character of the community, without unnecessary clutter or safety hazards.
4. Discourage the development of “Bigfoot” homes that restrict views, block light and the free flow of air for neighbors, detract from the charm of a neighborhood, and serve as a catalyst for sending excess storm-water runoff onto abutting properties and into waterways (lakes, rivers, creeks, and streams).
5. Discourage design which would block significant views and vistas.
6. Ensure enforcement of existing ordinances and regulations to better preserve the established character of Sands Township and promote the goals and policies of this Plan.

### Objectives:

1. Prepare and implement a Scenic Character Preservation Plan for Sands Township with mapping scenic areas and design guidelines for property owners on how to manage their properties in order to protect the scenic quality of the Township.
2. Review and update the sign and fence ordinance to insure it helps protect the visual quality of the Township.
3. Provide residents with educational materials on the historic structure/s in Sands Township and on approaches to protecting them.
4. Review and update the Zoning Ordinance to provide for setbacks, natural landscaping, buffers, and other provisions to protect scenic visual character.
5. Consider creating and enforcing property maintenance codes for the upkeep and maintenance of homes and businesses.

Explanation:

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

## Chapter 9

# AREAS OF PARTICULAR CONCERN

### INTRODUCTION

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

Photo 9-1

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



For areas identified as such, the underlying objective is to express some measure of concern, and to manage these areas so as to conserve resources, resolve conflicts, and

foster preferable land and water uses. It is inevitable that the expanding needs for development will impact Areas of Particular Concern, either directly or indirectly. However, to provide for the orderly and coherent development of these areas and surrounding lands, this Plan should incorporate the appropriate management principles for Township Areas of Particular Concern, including measures to coordinate with agencies at various levels of government.

This chapter will provide a guide in identifying and dealing with Areas of Particular Concern. The discussion will include natural and cultural areas as well as other areas previously mentioned in this Plan. The chapter then concludes with suggestions for specifically managing these areas.

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

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

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

1. Environmental (waterways, wildlife, plant life areas, etc.)
  - All waterways within the Township as identified in the Master Plan or as determined by the DNR or Zoning Administrator.
  - Natural features identified in the Marquette County Natural Features Inventory.
2. Wildlife and Natural/Scientific Areas
3. Geologic Formations
  - Steep sloped areas as identified in the Master Plan
  - Protruding bedrock areas as identified in the Master Plan
  - Rock Bluff area
4. Lakes (inland)
  - Pelissier Lake
  - Carp River Lake
  - Strawberry Lake
  - Buschell Lake
  - Harvey Lake
  - Powell Lake
5. Rivers and Streams
  - All rivers and streams within the Township
6. Groundwater and Sands Plain Aquifer
  - All groundwater

- Sands Plain Aquifer
- 7. Prime Agricultural Lands
  - All land currently under cultivation
- 8. Prime Forested Lands
  - All forest land within the Township
  - Forested areas on steep slope areas
- 9. Mineral Resources
  - Existing gravel and sand operations in the Township

Photo 9-2

**Existing Gravel and Sand Operations in the Township**



**Cultural Areas of Particular Concern**

1. Aesthetic Areas
  - Natural scenery along local roads in general
2. Recreation Areas
  - Blueberry Ridge ski and walking trails
  - Strawberry Lake Area
  - Township Park
  - Township Indoor Gym Area
  - State Forest lands and Cliffs Natural Resources land occupy a large portion of Sands Township. They provide a variety of recreational opportunities, including hunting, fishing, and hiking.
3. Historic Sites
  - Those areas identified by the Marquette County Historical Society, [www.marquettehistory.org](http://www.marquettehistory.org).

4. Urbanizing Areas
  - Intersection of State Highway M-553 and County Road 480.

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

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

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

The following discussion will identify possible management programs for those Areas of Particular Concern in Sands Township. Parts of this discussion will be more detailed than others. That is because many of the Areas of Particular Concern identified were general in nature – rivers and streams, lakes, etc. The DNR has a helpful local guidebook available that addresses many of these areas. It is entitled **Filling the Gaps: Environmental Protection Options for Local Governments**, 2003. It is available for viewing at <http://worldcat.org/arcviewer/1/EEX/2008/03/19/0000083437/viewer/file1.html>, and the appendix to the report includes sample zoning regulations.

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

#### **1. Environmental Areas**

##### **A. The Carp River and East Branch Escanaba River areas, etc.**

The Township should actively participate in management planning for these areas. For zoning purposes, it is recommended that these areas be or remain Open Space. In areas where these waterways (and all inland lakes, creeks, and streams) are zoned industrial, the Township should be actively involved in monitoring these areas regarding environmental concerns.

##### **B. Natural Features.** A wide variety of management techniques are available for protecting natural features on private lands. Primarily, education of landowners is needed in order to raise their consciousness about the existence and importance of natural features. A landowner's guide is available from the DNR (**Managing Michigan's Wildlife: A Landowner's Guide**, available from the Michigan

Department of Natural Resources at [http://www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/landowners\\_guide/Introduction/TOC.htm](http://www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/landowners_guide/Introduction/TOC.htm)

The assistance of staff of the Marquette County Soil and Water Conservation District should be promoted. In addition a publication targeted to both citizens and Township officials is also available. Entitled **Your Upper Peninsula: A Guide to Planning for Tomorrow's Shorelines**, it presents a variety of shoreline planning tools that can help preserve a natural appearing shoreline as well as water quality. It is available from the National Wildlife Federation ([www.nwf.org](http://www.nwf.org)).

## 2. Wildlife and Natural/Scientific Areas

See the discussion under subsection "A" under Environmental Areas for the areas identified under this section.

## 3. Geologic Formations

- A. Steep Sloped Areas: The steeply sloped areas of the Township are generally less desirable for most types of development because of the higher construction costs, high erosion possibilities when soils are disrupted, and the high cost of providing public services like road construction, snow plowing, sewage collection, etc. Therefore, intense types of development should be limited. The areas in the northeast and southeast portions as well as some areas in the Sands Plain portion of the Township can support timber production. In such steeply sloped areas, erosion problems should be given careful consideration before timber permits are issued. The areas should remain zoned Open Space.

Photo 9-3

### Protruding Bedrock Areas are Notable



- B. Protruding Bedrock Areas: Protruding bedrock can create development problems in construction of septic tank drain fields, water supply, or construction on its rock bluffs. It is recommended that intense development be limited in those areas because of those problems; and if development occurs, it can be monitored by

enforcing the health, building, and subdivision controls. Bedrock and rock bluff areas in the Township shall be zoned Open Space. The rock bluffs in the northeast area of the Township shall be closely monitored because the pressure for intense development exists.

**4. Lakes (inland)**

The Township's Zoning Ordinance requires waterfront setback of 100 feet from the high water mark on all inland lakes. The Township shall enforce developmental controls, as set out in the Inland Lakes and Streams Act, Part 301 of PA 451 of 1994 and the Local River Management Act, Part 311 of PA 451 of 1994.

**5. Rivers, Creeks, and Streams**

All creeks, rivers, and streams shall be afforded protection from overuse and intense development. Any portions that may be surrounded by wetlands shall follow the recommendations for those areas. Reasonable setbacks shall be maintained/established through the Zoning Ordinance. The Township shall enforce developmental controls, as set out in the Inland Lakes and Streams Act, Part 301 of PA 451 and the Local Management Act, Part 311 of PA 451 of 1994.

The Chocolay River Watershed Project, managed by the Marquette County Soil and Water Conservation District along with many partners, developed a program of restoration, education, and conservation in order to protect this valuable water resource. The Chocolay River Watershed Management Plan is available by contacting the Marquette County Soil and Water Conservation District or online at [http://www.michigan.gov/documents/deq/nps-chocolay-plan\\_315271\\_7.pdf](http://www.michigan.gov/documents/deq/nps-chocolay-plan_315271_7.pdf). The Watershed Project has been involved in the clean-up of contamination, stream restoration, dam removal, implementing forestry best management practices, and other stewardship activities. Since Sands Township is part of the Chocolay River watershed, the Township Board should establish a formal relationship with the Chocolay River Watershed Project.

There are a few road crossings of streams in the watershed, and these are of particular concern as possible sources of sediment and other contamination.

Photo 9-4  
**A Few Roads in Sands Township Cross Streams and Rivers**



#### **6. Groundwater and Sands Plain Aquifer**

The Sands Plain Aquifer supplies water to most of the Township residents, and also portions of Chocolay, Forsyth, West Branch, and Skandia Townships. The Township has closely monitored several test wells throughout the Township, and has records of water levels in the aquifer dating back to 1980. Although groundwater levels fluctuate a little from year to year, there is an overall decline in water levels that vary from 8 to 15 feet, with the largest drop in the levels near the Crossroads area. Sands Township has an Aquifer and Groundwater Protection Ordinance, which is intended to limit large capacity wells and protect groundwater levels for our residents. It is recommended that the Planning Commission consider the impact on the aquifer and groundwater levels as they address requests in the Township.

#### **7. Prime Agricultural Lands**

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

#### **8. Prime Forested Lands**

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

Commercial Forest Act, Part 511 of PA 451 of 1994, would be involved. Lands intended to be preserved for its timber resources should be zoned Open Space.

## **9. Mineral Resources**

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

## **Cultural Areas of Particular Concern**

### **1. Aesthetic Areas**

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

Photo 9-5

### **Many Roads in Sands Township are Scenic**



### **2. Recreation Areas**

For the location of recreation areas, see Sands Township Public Facilities in Chapter 6. Recreation areas that are not zoned public land should be zoned Open Space.

### **3. Historic Sites**

Current protection for all state and federal sites come from the Historic Division of Michigan's Department of State. All local preservation efforts (funding and enforcement) should go through their office or the Marquette

County Historical Commission. Each area identified is unique unto itself so will require individual attention in its management.

**4. Urbanizing Areas**

**A. Intersection of State Highway M-553 and County Road 480.**

This intersection, located just south of the Oakridge subdivision, is of particular concern for a number of reasons. There are two major roads that intersect at this point, generating traffic concerns and conflicts. On each of the four corners, there is a major business -- a convenience store/fuel sales business, an ORV sales and service business, a restaurant/bar, and a truck repair business. Additionally, there are other businesses not far from the intersection along the two roadways, and there is a possibility of more growth in the area. Due to the location of a major trucking terminal just east of the intersection and the trucking activity coming from Marquette to the gravel pit located just west on County Road 480 with return truck traffic going both to Marquette to the north and also to Harvey to the east, the intersection receives substantial truck traffic. Finally, there is major automobile traffic because of Sands Township and Gwinn residents traveling to and from work in Marquette and surrounding areas and because of automobiles, vans, and buses servicing Sawyer International Airport. The intersection is controlled only by a four-stop setup, with an overhead flashing red light and stop signs at each corner.

Photo 9-6

**The Commercial Corridor of State Highway M-553 and County Road 480**



# **Chapter 10**

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

### **INTRODUCTION**

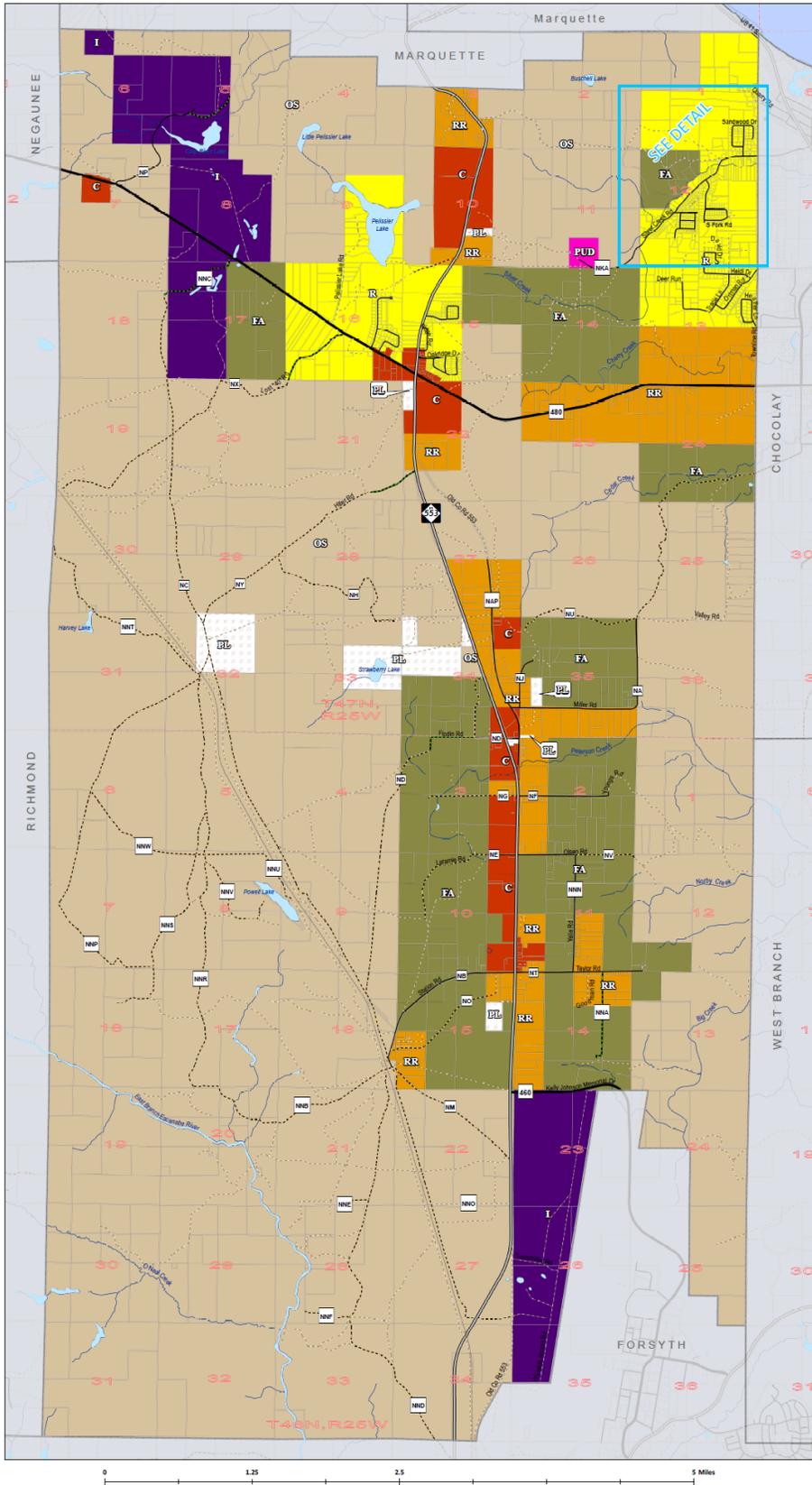
This chapter presents the arrangement of future land uses in the Township for at least the next twenty years. This arrangement is intended to implement the vision, goals, policies, and objectives presented in Chapter 8, in a manner that properly respects the areas of particular concern described in Chapter 9. This chapter is also directly related to the next chapter which presents a Zoning Plan for the Township and the two should be read and used together.

The key infrastructure management strategies necessary to implement the future land use arrangement are described in the next section. The last section addresses issues associated with ensuring consistency with the plans and zoning regulations of adjoining jurisdictions.

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

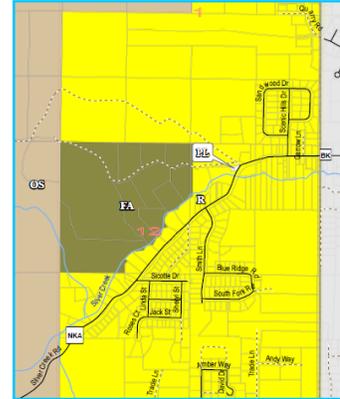
Current land uses are depicted on Map 10-1, entitled the Current Land Use Map. Future land uses are depicted on Map 10-2 and Map 10-3, entitled the Future Land Use Map. Each future land use category corresponds to one or more zoning districts which are described in the next chapter. The density of use is as permitted by the corresponding zoning district. Where land is presently used and zoned for a low intensity use, like farming or forestry, and a more intensive use is proposed, approval of the more intensive use should not occur unless a determination is first made that all the public infrastructure and services necessary to adequately serve that development are in place, and that the environmental impacts of the change are minimal or properly mitigated according to applicable Federal, State, County, and Township laws.

# Map 10-1 Current Land Use Map



## Official Zoning Map Sands Township Marquette County, Michigan

### DETAIL



### Zoning Districts

- C- Commercial
- FA- Forestry and Agriculture
- I- Industrial
- OS- Open Space
- PUD- Planned Unit Development
- PL- Public Land
- R- Residential
- RR- Rural Residential

The Highway Overlay Zone is defined as: All lots and parcels that abut the right-of-way of State Highway M-553 and the right-of-way of County Road 480 and such other lands that front on intersecting streets within three hundred fifty (350) feet of the State Highway M-553 or the County Road 480 right-of-way within Sands Township

This Zoning Map is subject to amendments over time and Zoning Districts may be revised. Rather than exclusively relying upon the information shown on this map, the Sands Township offices should be contacted at (900) 240-9199 for verification.

Officially adopted by the Sands Township Board of Trustees, Marquette County Michigan, on this 13th day of March, 2012.

Revised through: February 27, 2017

Township Clerk – Lee Yelle  
  
Township Supervisor – Darlene Walch  
  
Township Zoning Administrator – Randy L. Yelle

ZONING AMENDMENTS					
NO.	DATE OF ADOPTION	ZONING DISTRICT PREVIOUS	ZONING DISTRICT REVISED	LOCATION	MAP UPDATED BY
1	03.23.14	C	FA	160N-R25W, NE 1/4 of the SE 1/4, Sec 25.	Mkt. Co. Planning
2	03.23.14	C	R	160N-R25W, SE 1/4 of the SE 1/4, Sec 25.	Mkt. Co. Planning
3	02.27.17	FA	OS	167N-R25W, S 1/2 of Section 11.	Mkt. Co. Planning
4	02.27.17	OS	I	167N-R25W, N 1/2 of the NW 1/4, Sec 8 & S 1/2 of the NW 1/4, Sec 8.	Mkt. Co. Planning
5	02.27.17	RR	PL	167N-R25W, SW 1/4 of the SW 1/4, Sec 35.	Mkt. Co. Planning



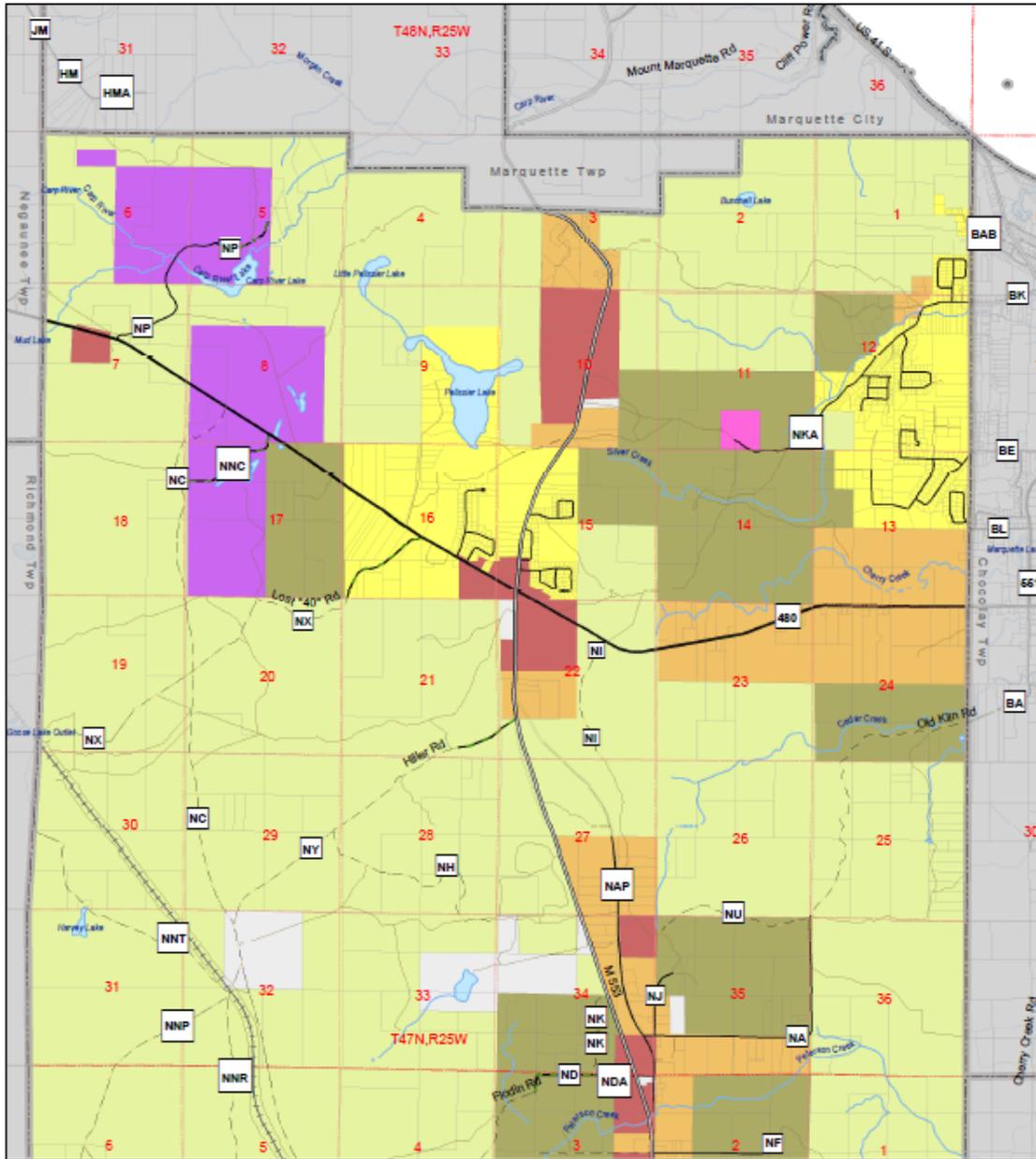
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This map was prepared by Marquette County's Resource, Management and Development Department under the direction of the Sands Township Planning Commission for the Sands Township Board.

# Map 10-2 Future Land Use Map T47N-R25W

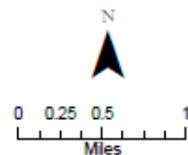
Sands Township Future Land Use  
T47N-R25W

MAP 1 OF 2



### Future Land Use Types

- |   |   |
|---|---|
| <span style="display:inline-block; width:15px; height:15px; background-color:red; border:1px solid black;"></span> C- Commercial                  | <span style="display:inline-block; width:15px; height:15px; background-color:orange; border:1px solid black;"></span> RR- Rural Residential       |
| <span style="display:inline-block; width:15px; height:15px; background-color:olive; border:1px solid black;"></span> FA- Forestry and Agriculture | <span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> R- Residential              |
| <span style="display:inline-block; width:15px; height:15px; background-color:purple; border:1px solid black;"></span> I- Industrial               | <span style="display:inline-block; width:15px; height:15px; background-color:grey; border:1px solid black;"></span> PL- Public Land               |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightgreen; border:1px solid black;"></span> OS- Open Space          | <span style="display:inline-block; width:15px; height:15px; background-color:pink; border:1px solid black;"></span> PUD- Planned Unit Development |

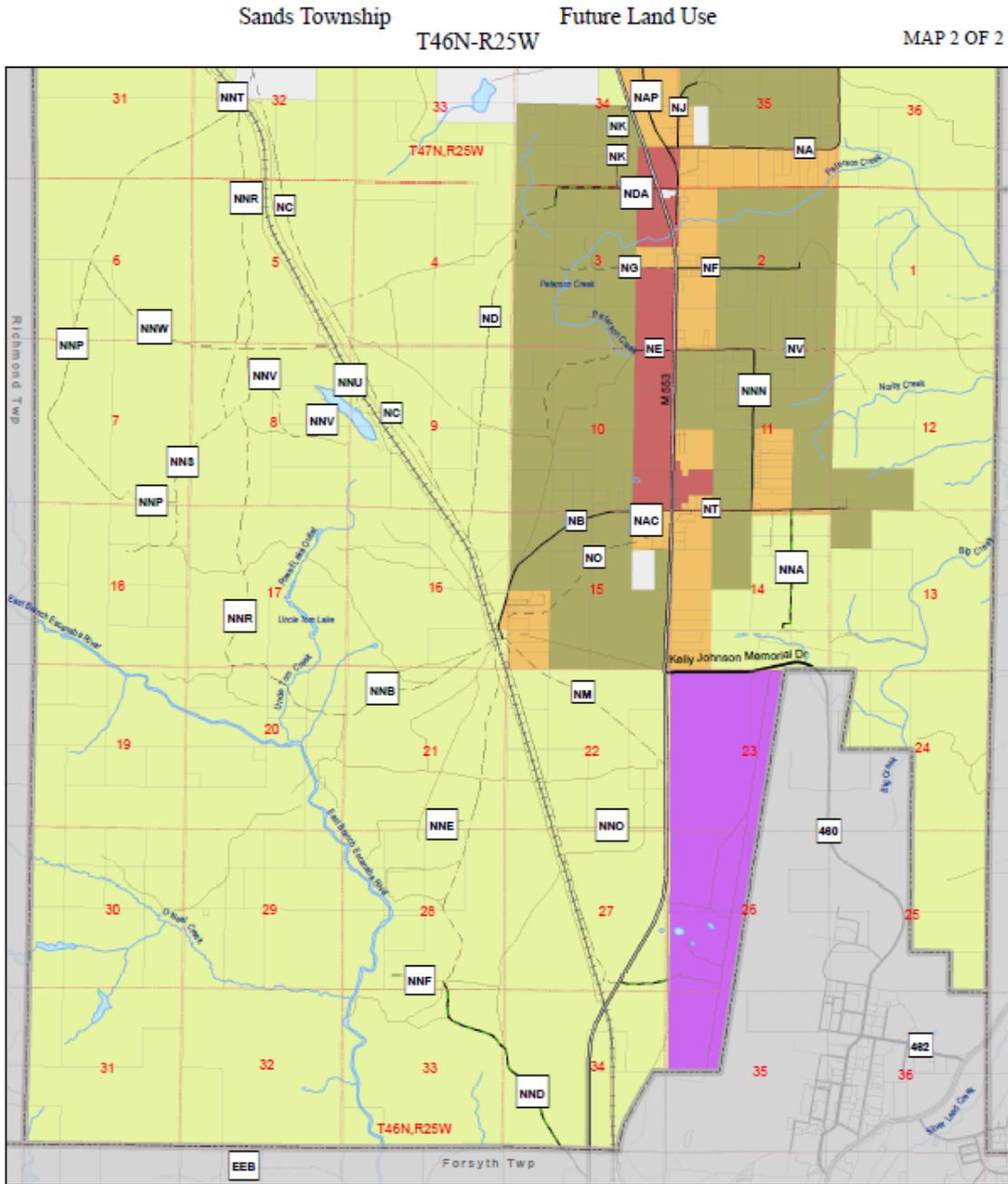


date: 11.03.17  
c:\data\mql\_county\sands\_twp  
FLU4725

Data Source: MCRMDO,  
Sands Township

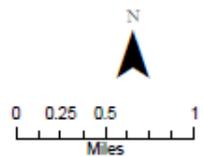
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# Map 10-3 Future Land Use Map T46N-R25W



**Future Land Use Types**

- |  |  |
|--|--|
| <span style="display: inline-block; width: 20px; height: 10px; background-color: red; border: 1px solid black;"></span> C- Commercial                  | <span style="display: inline-block; width: 20px; height: 10px; background-color: pink; border: 1px solid black;"></span> PUD- Planned Unit Development |
| <span style="display: inline-block; width: 20px; height: 10px; background-color: green; border: 1px solid black;"></span> FA- Forestry and Agriculture | <span style="display: inline-block; width: 20px; height: 10px; background-color: grey; border: 1px solid black;"></span> PL- Public Land               |
| <span style="display: inline-block; width: 20px; height: 10px; background-color: purple; border: 1px solid black;"></span> I- Industrial               | <span style="display: inline-block; width: 20px; height: 10px; background-color: yellow; border: 1px solid black;"></span> R- Residential              |
| <span style="display: inline-block; width: 20px; height: 10px; background-color: yellow-green; border: 1px solid black;"></span> OS- Open Space        | <span style="display: inline-block; width: 20px; height: 10px; background-color: orange; border: 1px solid black;"></span> RR- Rural Residential       |



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FLU46/25

Data Source: MGRMDO,  
Sands Township

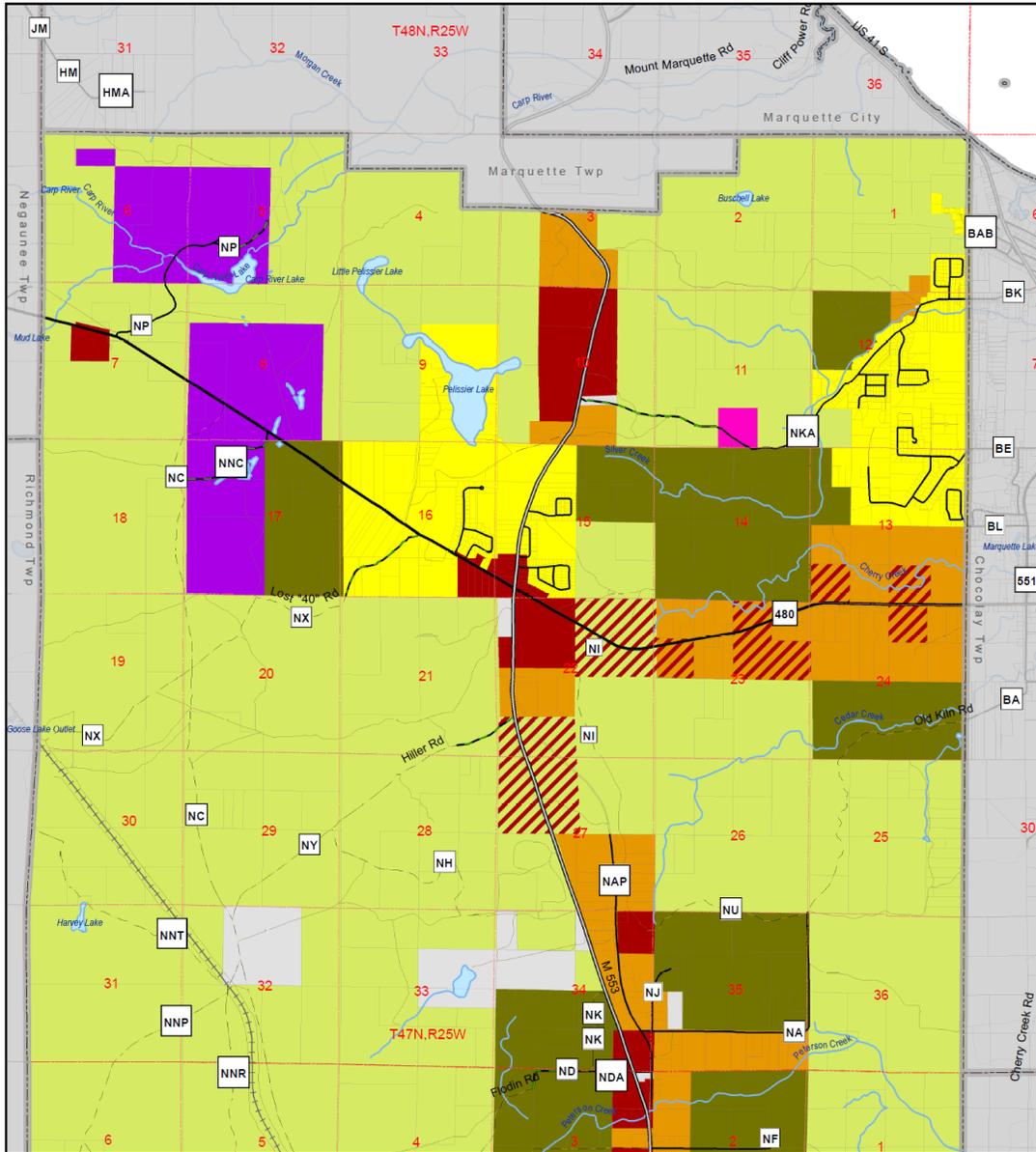
"The information and data provided herewith has been compiled from various sources, and is used by the County of Marquette for its own general purposes. The County does not warrant or guarantee that the information and data is accurate or current, nor does the County warrant or guarantee that this information and data is fit for any particular use or purpose. More specifically, the County warns that this information and data is not intended to be, and should not be, used to determine individual ownership, lot lines, or lines of occupation with respect to real estate. Any recipient of the information and data should independently verify its accuracy before relying on it for any purpose. The County of Marquette and its officers, agents, employees, boards, and committees shall not be liable for any inaccuracy or omission in this information and data."

# Map 10-4 Proposed Future Land Use Map T47N-R25W (October 2018)

MAP 1 OF 2

PROPOSED CHANGES TO FUTURE LAND USE  
T47N-R25W

10/2018

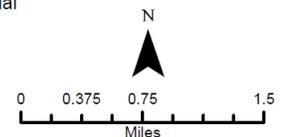


**Legend**

**Proposed Changes FLU Classifications**

- |   |                |   |                              |   |                               |
|---|----------------|---|------------------------------|---|-------------------------------|
|  | C- Commercial  |  | C- Commercial                |  | PUD- Planned Unit Development |
|  | I- Industrial  |  | FA- Forestry and Agriculture |  | PL- Public Land               |
|  | I- Industrial  |  | R- Residential               |  | RR- Rural Residential         |
|  | OS- Open Space |   |                              |   |                               |

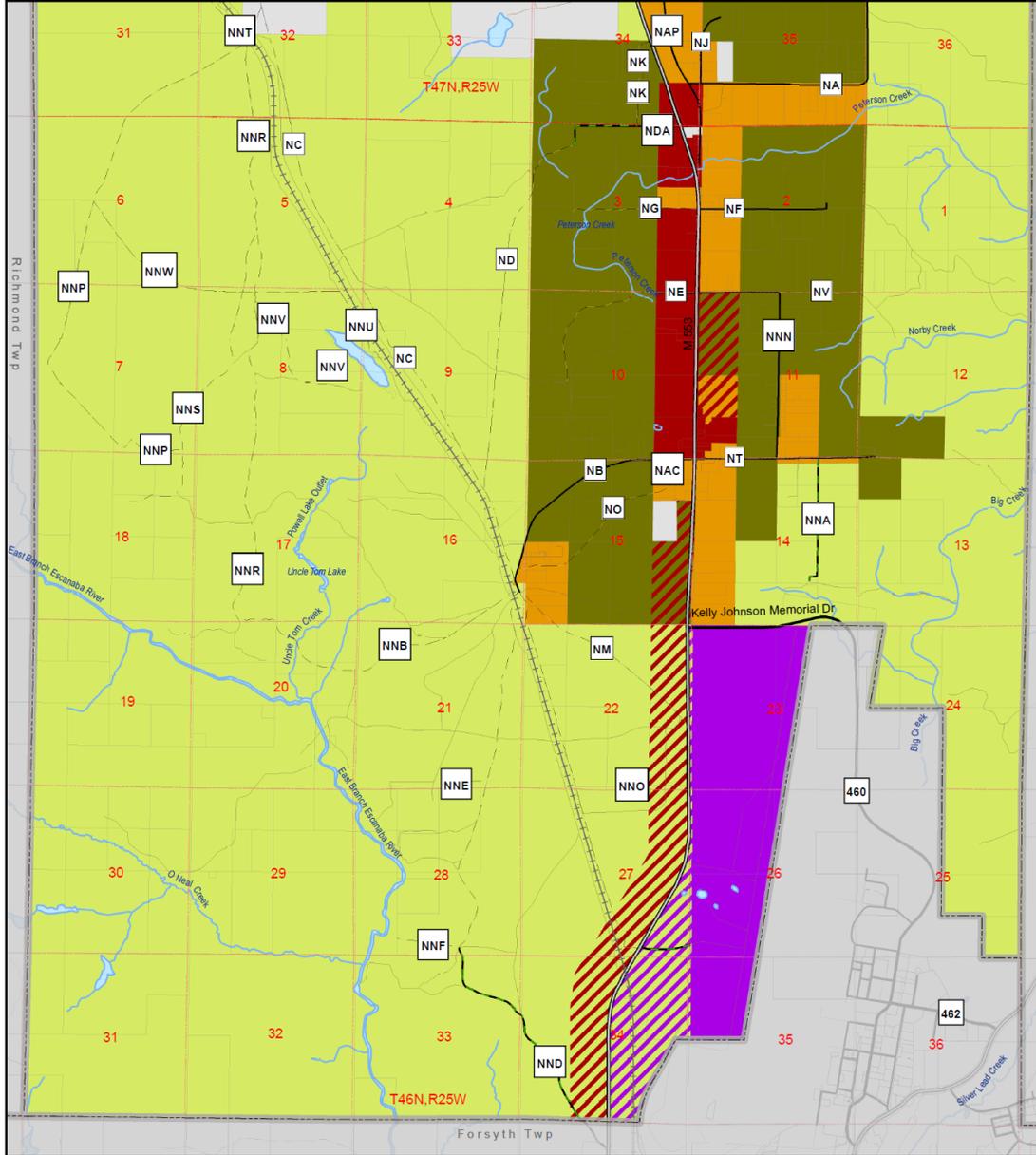
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# Map 10-5 Proposed Future Land Use Map T46N-R25W (October 2018)

PROPOSED CHANGES TO FUTURE LAND USE  
T46N-R25W

MAP 2 OF 2  
10/2018

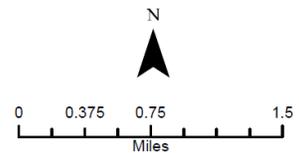


**Legend**

**Proposed Changes FLU Classifications**

- |   |  |   |
|---|--|---|
|  C- Commercial |  C- Commercial                |  PUD- Planned Unit Development |
|  I- Industrial |  FA- Forestry and Agriculture |  PL- Public Land               |
|   |  I- Industrial                |  R- Residential                |
|   |  OS- Open Space               |  RR- Rural Residential         |

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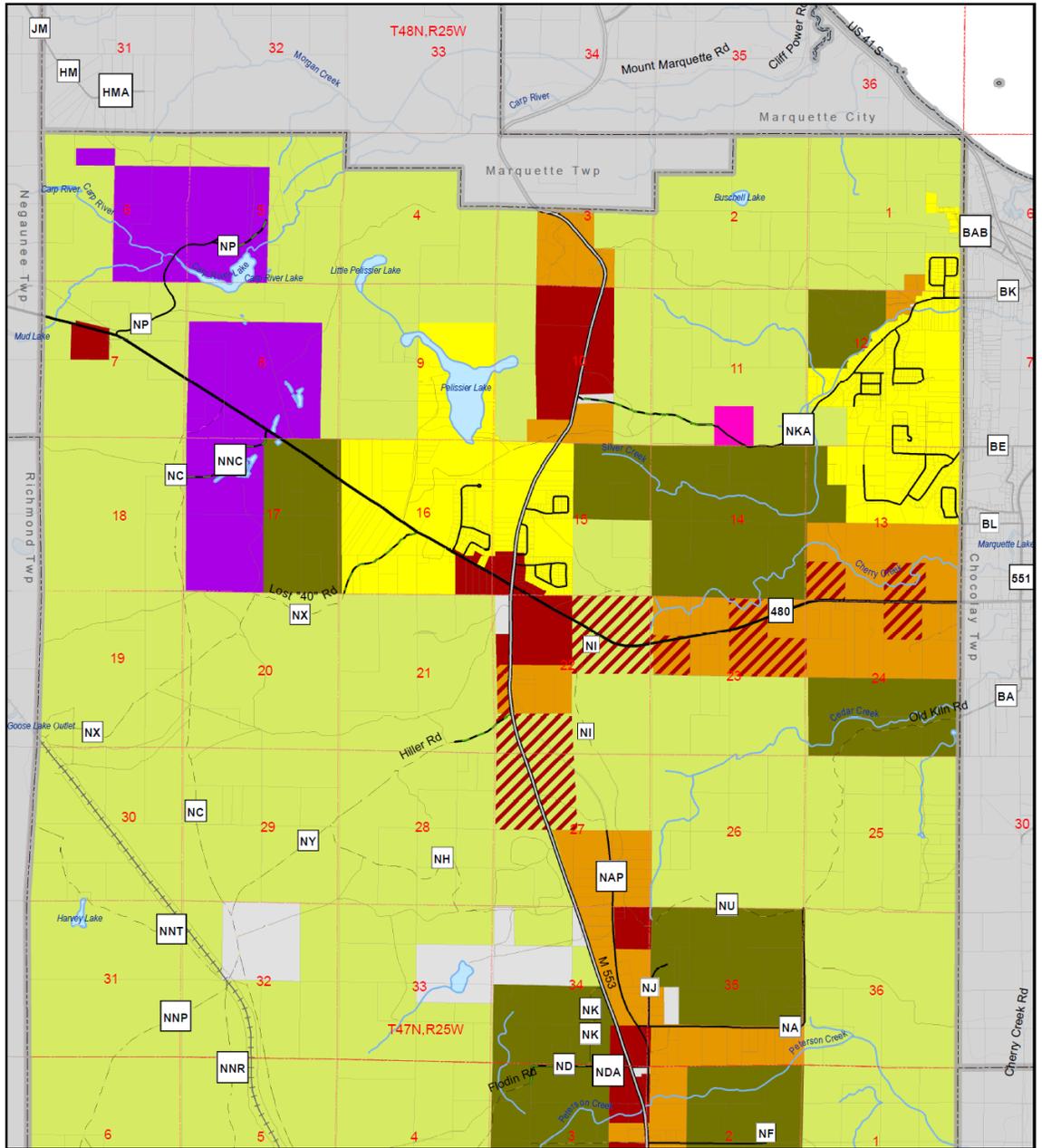


# Map 10-6 Proposed Future Land Use Map T46N-R25W (January 2019)

MAP 1 OF 2

## PROPOSED CHANGES TO FUTURE LAND USE T47N-R25W

1/2019



**Legend**

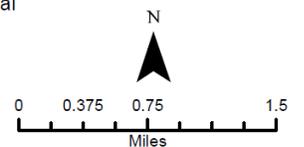
**Proposed Changes FLU Classifications**

- C- Commercial
- I- Industrial

- C- Commercial
- FA- Forestry and Agriculture
- I- Industrial
- OS- Open Space

- PUD- Planned Unit Development
- PL- Public Land
- R- Residential
- RR- Rural Residential

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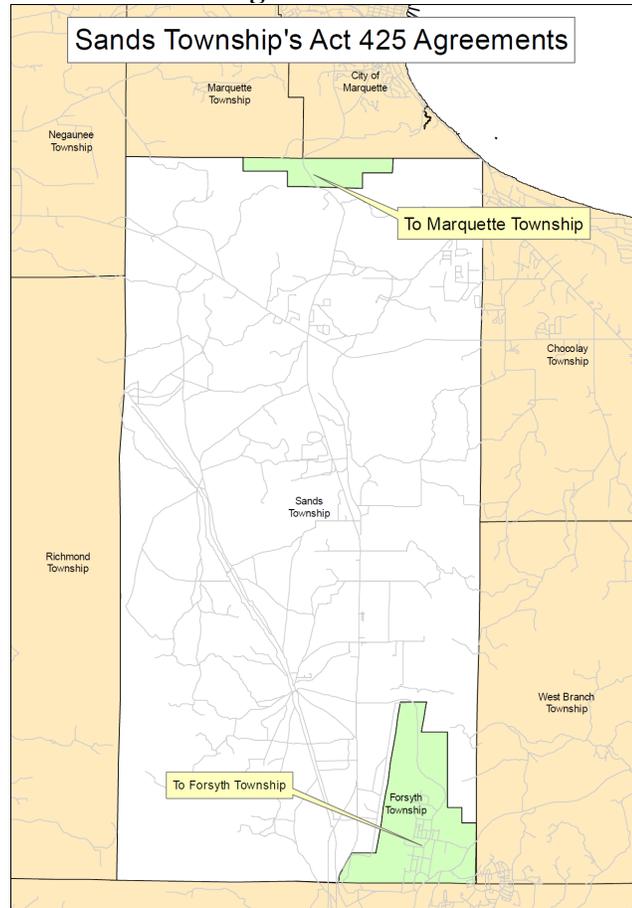


## 425 AGREEMENTS WITHIN SANDS TOWNSHIP

Sands Township has one active 425 agreement in place with the Township of Marquette, and one with Forsyth Township. A 425 agreement is a conditional agreement between municipalities that allows for one municipality to transfer land management and administration to the other. ([www.michiganbusiness.org/cm/files/Fact-Sheets/ConditionalLandUseTransferPA425.pdf](http://www.michiganbusiness.org/cm/files/Fact-Sheets/ConditionalLandUseTransferPA425.pdf), for more information on Michigan PA 425.)

- Marquette Township – In 2005 Sands Township and Marquette Township entered into a 425 agreement involving properties within sections 2, 3 and 4 of T47N-R25W. This agreement was established as Sands Township and Marquette Township felt it to be in the best interest of both Townships to have the property transferred to Marquette Township for mutual benefit. The agreement is for 25 years with an option for renewal for another 25 years.
- Forsyth Township – In 2001 Sands Township and Forsyth Township entered into a 425 agreement involving properties within sections 23, 24, 25, 26, 34, 35, and 36 of T46N-R25W. This agreement includes all of the new Sawyer International Airport. This property was permanently transferred to the jurisdiction of Forsyth Township for all purposes.

Map 10-7  
425 Agreements



## **LAND USE**

A lot of time and thought went into developing a zoning plan for the Township (see Chapter 11 for the plan). The characteristics of each area are looked at closely, along with the current use of the land, uses the property could be suitable for in the future, and the characteristics and uses of surrounding properties. Occasionally, this plan needs to be amended so that the intended uses of a property fit with its characteristics, while still meeting the vision and goals of the Master Plan.

One area of the Township that should be considered for possible amendments to the zoning plan is in the Northeast corner of the Township - Section 1 and the north part of the Northeast quarter of Section 12 of T47N-R25W. Most of this area is currently zoned Residential, but there are many large lots with physical characteristics that would better fit uses in less-restrictive zoning districts.

## **RESIDENTIAL DEVELOPMENT**

Citizens and local leaders strongly believe it is important to provide for a wide variety of types and densities of residential dwellings. All homes are desired to be sited in surroundings which permit quiet enjoyment of the property, whether the lot or dwelling is large or small. Some are in more urban small settings, while others are on large lots in the county surrounded by a large amount of open space.

Single family housing is expected to continue to be the largest type of residential housing, but it could be provided in many forms, such as detached site constructed single family homes and detached manufactured homes. At the same time, multiple family dwellings could be provided in apartments and attached site constructed single family homes and condominiums. Large and small lot development could be involved. To accomplish this goal may require some modification of residential zoning districts in the Zoning Ordinance to create new options. It is critical that accompanying such districts be a strong set of subdivision regulations and, if necessary, incentives to encourage subdivision development (as opposed to lot and metes and bounds development) so that over time, the interconnected road systems in Sands Township continue to serve all the most intensely developed parts of the Township (present and future).

## **FORESTRY MANAGEMENT**

The following strategies should be pursued to encourage continued forest management in the Forestry-Agriculture area:

- Encourage private owner participation in Commercial Forest Reserve Act. Landowners of forested property managed for long term forest production can receive significant tax benefits by participating in the Commercial Forest Reserve Act.
- All forested landowners should be encouraged to use sustainable forestry management practices consistent with state policy and industry guidelines.
- Work with landowners to stage tree harvesting in key view-sheds. This will require identification of key view-sheds and then private landowners who plan to harvest trees. By staging harvesting and avoiding large clear-cut areas, the impacts on key view-sheds will be greatly reduced. The most important area to

target for view-shed protection may be the central area along State Highway M-553.

## **AGRICULTURE**

The following strategies should be pursued to encourage continued agriculture in the Forestry-Agriculture area:

- Encourage farmers to continue agriculture activity as long as desired.
- Encourage farmers to participate in PA 116, the state Farmland and Open Space Protection program, which gives an income tax benefit to farmers who agree to keep their land in agriculture for a period of at least 10 years.
- Special attention should be paid to future residential development along existing roads in this area, to maintain the availability of farm land within the Township.

## **AREAS OF PARTICULAR CONCERN**

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

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

Zoning regulations should be updated to ensure that the natural areas of particular concern in Chapter 9 are adequately addressed. This is most important with regard to high risk erosion areas, fire-prone areas, groundwater, surface water, Sands Plain Aquifer, areas with endangered plants and animals, and exposure of soil as new development occurs. These areas are already subject to state laws which seek to protect them, but separate local regulations can also be adopted (see **Filling the Gaps: Environmental Protection Options for Local Governments**, DEQ, 2003). At a minimum, zoning regulations should be updated to ensure Township approval of development is linked with approval by other governmental entities such as the Department of Natural Resources, Marquette County Health Department, Michigan Department of Transportation, and the Marquette County Road Commission. As one way to protect the Sands Plan Aquifer, other groundwater supplies, and surface waters, the Township adopted an Aquifer and Groundwater Protection Ordinance, which regulates large capacity wells and restricts wells in areas with possible contamination.

Beyond that, the Township should consider including in the Recreation Plan a section which identifies important ecosystems and view-sheds and includes recommendations on specified measures that could be implemented to protect those areas.

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

Areas with special aesthetic features and recreation areas can be identified for linkage in the Recreation Plan with a greenway element. A greenway could be on public or private land. It is planned for active or passive human use, but must respect private ownership. View-shed protections can be a part of such a plan, as could protection of key historic

structures or areas. A comprehensive trail system for hiking, biking, cross-country skiing, horseback riding, ATVs, and snowmobiles (on certain trails) may be an integral part of the Recreation Plan.

The urbanizing areas of particular concern identified in Chapter 9 are in the Crossroads area. Key future land use issues associated with this area are addressed in the description of future land use along and/or near key corridors below.

### **Special Corridors**

#### **Land use in area along County Road 480 and along State Highway M-553.**

This area should be the focus of special attention in the future and, following detailed study, may result in future rezoning. There is already considerable commercial and industrial type development along this corridor, including strip residential development which adds unnecessarily to crash risks. All new residential lots should be required to have at least 300 feet frontage unless access comes from a parallel road (such as in a double frontage lot in a subdivision). Subdivisions should be strongly encouraged instead of lot splits along these corridors.

### **INFRASTRUCTURE MANAGEMENT**

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

#### **Road Improvements Strategies**

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

- Work cooperatively with the County Road Commission, MDOT, and other adjacent units of government along County Road 480/State Highway M-553 corridors.
- Add vegetation requirements and buffer standards to the Zoning Ordinance for all new development along state highway and county primaries in the Township.
- Increase driveway separation distances for all lots fronting on, and taking their access from, State Highway M-553 and County Road 480, by increasing lot width to at least 300 feet. Consider increasing lot width requirements in the commercial and industrial areas to a similar amount when they front on these roads, unless they use shared access, frontage roads, or near service roads.
- Encourage all existing private roads to be upgraded and converted to public roads when they meet public road standards.
- Increase maintenance responsibilities of landowners on existing private roads. This may require a new separate ordinance that uses special assessments to require private road maintenance.
- Require all new roads serving more than two non-seasonal dwellings to be public. As discussed in chapter 7, private roads are proliferating in the Township, as are requests for conversion to a public road. However, it is often financially difficult,

if not impossible, to do so after the fact. Many private roads are not well enough maintained to permit safe emergency vehicle access. Public roads are much better over time, especially when it becomes necessary to connect roads.

### **Beautification**

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

- Work with private land owners, MDOT, and the County Road Commission to maintain and improve where needed the aesthetic character of the lands at the entry to Sands Township.
- Create and install quality signage with appropriate landscaping at each entryway to the Township.
- Explore the potential for a scenic viewing area on the top of the Rock Bluff at the northeast corner of the Township. This needs to be done with the Michigan Tourist Center, landowners, and Sands Township involved.

### **Sewer and Water Strategies**

Sands Township offers no municipal water or sewer.

- Sewer service should be studied for the heavy use areas in the Township, with a 20 year plan adopted.
- Water service should be studied for the heavy use areas in the Township, with a 20 year plan adopted.
- A means to provide economical water and sewer service should be explored for the Silver Creek area as well as the subdivisions, such as a possible partnership with Chocolay Township.

### **Budgeting Strategies**

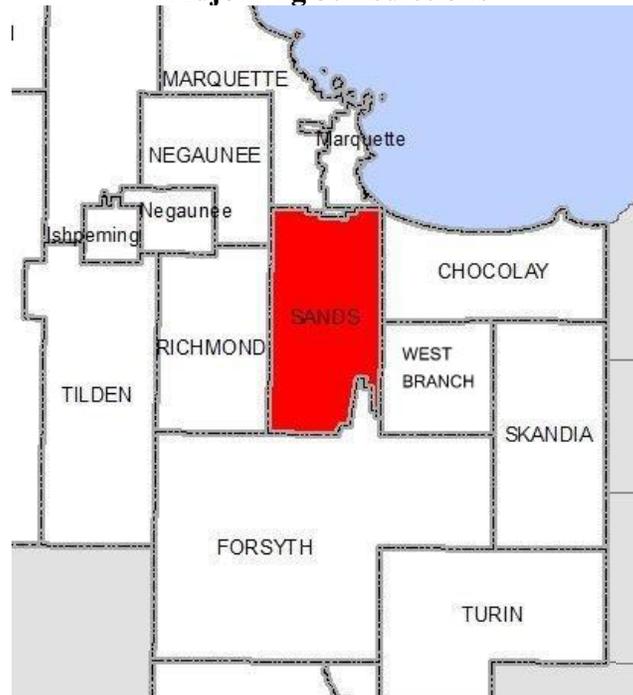
Most of the above strategies will require budgeting for the preparation of special studies and subdivision area plans, as well as for some major capital improvements. As a result, it is important that the Township Board, with input and support from the Planning Commission:

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

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

Sands Township shares a border with seven jurisdictions. Adjoining jurisdictions are shown in Figure 10-2.

Figure 10-1  
Adjoining Jurisdictions



The future land use plans and zoning ordinances of each of the communities adjoining Sands Township were requested at the start of the Plan process. The intent was to examine them for their potential to affect land use in Sands Township. The Marquette City, Chocolay Township, West Branch Township, Richmond Township, and Marquette Township plans were obtained and examined. Future land use plans and zoning ordinances were not provided for Forsyth or Negaunee Townships. However, the County Planning Department provided some basic zoning information.

### City of Marquette Planning and Zoning

The City of Marquette touches Sands Township at the north boundary, being Sections 34, 35, and 36 of T48N-R25W. The majority of the area is planned for Recreation/Open Space. In general these are compatible land uses with Sands Township; therefore, no significant negative effect is anticipated at this time.

### Marquette Township Zoning

Marquette Township and Sands Township share a border along the west half of the north boundary of Sands Township, being Sections 31, 32, & 33 of T48N-R25W. City of Marquette owns property in Sections 32 & 33 except for the east ½ of the east ½ of Section 33 that is owned by Marquette Township. The City of Marquette also owns the S/W ¼ of the S/E ¼ of Section 31, T48N-R25W. There is a 425 agreement in place between Sands Township and Marquette Township for parts of Sections 2, 3, and 4 of

T47N-R25W. Marquette Township properties adjoining Sands Township are zoned Resource Production (RP). No significant negative effect on Sands Township is anticipated.

### **Chocolay Township Zoning**

Chocolay Township and Sands Township share a border along the north half of the east boundary of the Township, being Sections 6, 7, 18, 19, 30, and 31 of T47N, R24W. Sections 6 and 7 are zoned Residential. Section 18, the north half is zoned Residential and the remaining is zoned Forestry & Agriculture (20-acres). Sections 19, 30, and 31 are also zoned Forestry & Agriculture. There should be no significant negative effect on Sands Township.

### **West Branch Township Zoning**

West Branch Township and Sands Township share a border along the south half of the east boundary of the Township, being Sections 6, 7, 18, 19, 30 and 31 of T46N, R24W. They are zoned RP-20 which is Resource Production on 20-acre parcels. No significant negative effect on Sands Township is anticipated.

### **Forsyth Township Zoning**

Forsyth Township and Sands Township share a border to the south of the Township, being Sections 1, 2, 3, 4, 5, and 6 of T45N, R25W. They are zoned Resource Production (RP), Open Space (OS) and Public Area (PA). There should be no significant negative effect on Sands Township.

### **Richmond Township Zoning**

Richmond Township and Sands Township share a border to the west. Sections 13, 24, 25 and 36 of T47N, R26W are zoned Forestry & Recreational (FR). Sections 13, 24, 25 and in T46N, R26W are also zoned Forestry & Recreational (FR). Sections 1, 12 and 36 in T46N, R26W are zoned Mineral Resource (MR). This allows Cliff's Natural Resources to conduct mining operations in this area without Township review or regulatory input. Potentially significant negative effects upon Sands Township exist in the area owned by Cliffs Natural Resources located over most of the Sands Plain Aquifer. Richmond Township has historically approved Cliffs Natural Resources' requests with little or no alteration or detailed examination, which makes this an Area of Particular Concern.

- Sands Township should actively pursue and address any and all proposals and/or activity that have any possibility of impacting the Sands Plain Aquifer and/or groundwater within Sands Township.

### **Negaunee Township Zoning**

Negaunee Township and Sands Township share a border to the west in T47N, R26W, Section 1. The South half is zoned Residential 2, (R2), the North half is zoned Residential 3, (R3) except for the West half of the NW ¼ which is zoned Industrial (I). Section 12 is zoned Forestry except for the N ½ of the NE ¼ which is zoned Residential 2 (R2). No significant negative effect on Sands Township is expected.

**Marquette County Comprehensive Plan**

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

# Chapter 11

## ZONING PLAN

### INTRODUCTION

This chapter opens with a general description of a zoning plan. It is followed by a brief explanation of the relationship between this Master Plan and the Zoning Ordinance of Sands Township. Next, the intent and key dimensional standards of the zoning districts in the Zoning Ordinance are briefly described.

### WHAT IS A ZONING PLAN?

A “zoning plan” is another term for a “zone plan” which is used in the Michigan planning and zoning enabling acts. These acts require a zoning plan be prepared as the basis for the zoning ordinance. The zoning plan identifies the zoning districts and their purposes, as well as the basic standards proposed to control the height, area, bulk, location, and use of buildings and premises in the Township. It must be based on an inventory of conditions pertinent to zoning in the Township and the purposes for which zoning may be adopted (as described in Article 3 of the Michigan Zoning Enabling Act).

### RELATIONSHIP TO MASTER PLAN

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

### DISTRICTS AND DIMENSIONAL STANDARDS

Following are the general purposes and characteristics of zoning in Sands Township. The specific purpose of each zoning district and permitted land uses are listed in the Sands Township Zoning Ordinance. The Section references indicate where detailed ordinance language is located within the ordinance.

### ZONING DISTRICTS

#### Residential Districts

The following zoning districts are considered “Residential”

Section 308 R – Residential

Section 309 RR – Rural Residential

The principal purpose of these districts is to provide for a range of residential dwelling types at various densities within individual zones tailored for specific uses. Minimum lot areas are 30,000 square feet. The Residential district addresses detached single family and two family residences in a low density setting. The Rural Residential district is

similar and encourages medium density by allowing two family and multiple family residences, along with mobile home parks.

### **Business Districts**

The following zoning district is presently considered “Business”  
Section 310 C - Commercial

The basic purpose of this district is to provide opportunities for regulated commercial or office activities serving both local and surrounding area needs. Minimum lot area is 22,500 square feet.

### **Industrial District**

The following zoning district is presently considered “Industrial”  
Section 312 I - Industrial District

The basic purpose of this district is to provide opportunities for uses which may include sites that require large areas and/or isolation from other uses. The minimum lot area for the I district is one acre.

### **Forestry & Agriculture**

The following zoning district is presently considered “Forestry & Agriculture”  
Section 311 FA – Forestry & Agriculture

This district is a low density district with limited accessibility and infrastructure. This area of the Township is where farming, dairying, horse boarding, forestry operations, and other similar type land uses exist and are intended to be encouraged and/or preserved. Detached single family residences are allowed in the FA district on lots with a minimum area of 5 acres and a minimum lot width of 300 feet.

### **Open Space District**

The following zoning district is considered “Open Space”  
Section 313 OS - Open Space District

This district is designed to maximize preservation of existing environments by discouraging development on land that has been deemed unsuitable for intensive development because of its soil, drainage, location, accessibility, and natural/topographic characteristics. The minimum lot area in this district is 20 acres.

### **Public Lands**

The following zoning district considered a “Public Lands” zoning district  
Section 314 PL - Public Lands District

The purpose of the Public Lands district is to provide adequate land resources for the purpose of administering and performing necessary public services by the Township of Sands. Land in this zoning district is intended solely for public building and uses and owned by Sands Township. There is no minimum lot area within this district. Not all public lands are in this district. Lands managed by the State or County for forestry, wildlife, or recreation are mostly in the FA and OS districts.

### **Planned Unit Development District**

The following zoning district is considered “Planned Unit Development”  
Section 318 PUD - Planned Unit Development District

The Planned Unit Development district was established to incorporate mixed residential and commercial land uses. The goal of the district is to encourage innovative ways to develop this land by having more flexibility in the zoning than the other zoning districts, although the predominant use is residential, except in the case of golf course PUDs where it is both recreation and residential. The district also encourages open space for recreational activities and preservation of the existing environment. The minimum area within the PUD district is 20 acres.

### **RECOMMENDATIONS**

These proposed changes to the Zoning Ordinance and other Township Ordinances are intended to address day-to-day problems encountered with zoning administration.

1. Consider developing and adopting a Blight Ordinance in the Township

# Chapter 12

## PLAN IMPLEMENTATION

### INTRODUCTION

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

The central ingredients to successful Plan implementation will be:

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

### FOCUSING ON PRIORTIES

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

### ANNUAL TASKS

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

### TOP PRIORITIES

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

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

- Establish as a high priority those actions that are the precursor to other actions or initiatives. One example is the action to re-examine the residential zoning districts with an eye to eliminating or consolidating some, and rezoning some lands.
- Those actions that are assigned to a particular group (like the Planning Commission) elsewhere in this Plan are a high priority.
- A lower priority may be those actions that are not assigned to a group or broadly identify the “Township” as the responsible party.
- If an action does not list a responsible party, it remains a lower priority until a group or agency steps forward.

A key priority is to study the feasibility and timing of provision of a public sewer and/or water system to serve the northeast portion of the Township, such as the homes in the Silver Creek Area.

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

- Educate all citizens about the vision, goals, objectives, and policies of this Master Plan and provide technical assistance in the integration of these elements into property owner development and redevelopment efforts.
- Update the Township Zoning Ordinance to be consistent with this Plan as outlined in Chapter 10 and 11. (Completed in 2012)
- Adopt access management regulations as part of the Zoning Ordinance and implement the recommendations of the Master Plan regarding the County Road 480 and State Highway M-553 corridors. (Completed in 2012)
- Review other land development regulations in the Township (such as land division and subdivision regulations) and update as necessary to be consistent with this Plan.
- Review and revise the private road regulations to require a maintenance agreement whereby landowners served by the private road pick up all future maintenance and improvement costs, and require connections to other existing private or public roads in the area wherever feasible.
- Continue to study the feasibility and appropriate timing for development of a sewer and water system to serve the northeast developed part of the Township.
- Assist the Township Board with decisions on public land acquisition, development, or disposition.
- Develop a Township Green-space Plan with a Trails Plan sub-element in conjunction with the Township Board, the Park and Recreation Committee, the Department of Natural Resources Environmental, Michigan Department of Transportation, and the Marquette County Road Commission. The Trails Plan sub-element would identify trail locations and options for creating the trails, as well as identify and implement tools for acquisition of title or development rights from willing sellers, and set up funding mechanisms for implementation.
- Use this Plan in the analysis and review of proposed rezoning, zoning text amendments, site plans, and new or amended master plans of adjoining jurisdictions submitted to the Township for statutory review and comment.

- Exercise the inter-jurisdictional review authority of draft plans and plan amendments in ways to improve local decisions by guiding decisions toward integrated and coordinated solutions based on the core policies in this Plan.
- Monitor neighboring jurisdiction and County agency decisions and periodically inform other local governments and County Board of Commissioners on the status of efforts to implement this Master Plan.
- Join efforts with others outside the Township to modernize planning and zoning enabling legislation and to authorize or use new tools to better manage growth and preserve open space.
- At least once every five years, the Master Plan shall be thoroughly reviewed and updated by the Planning Commission with support from the Township Board.
- Develop a Capital Improvements Plan
- Consider developing Sub-area plans in conjunction with large scale property owners in the Township.