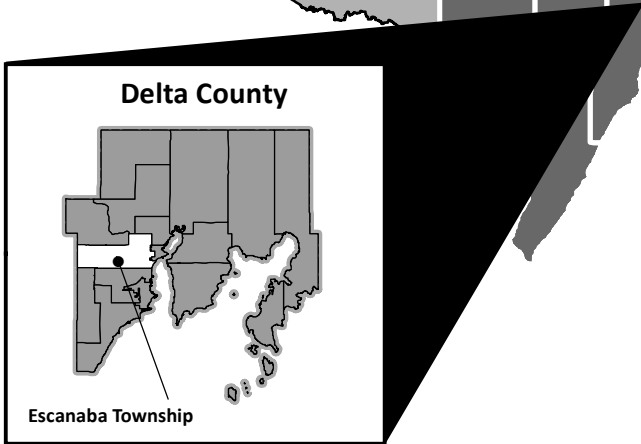
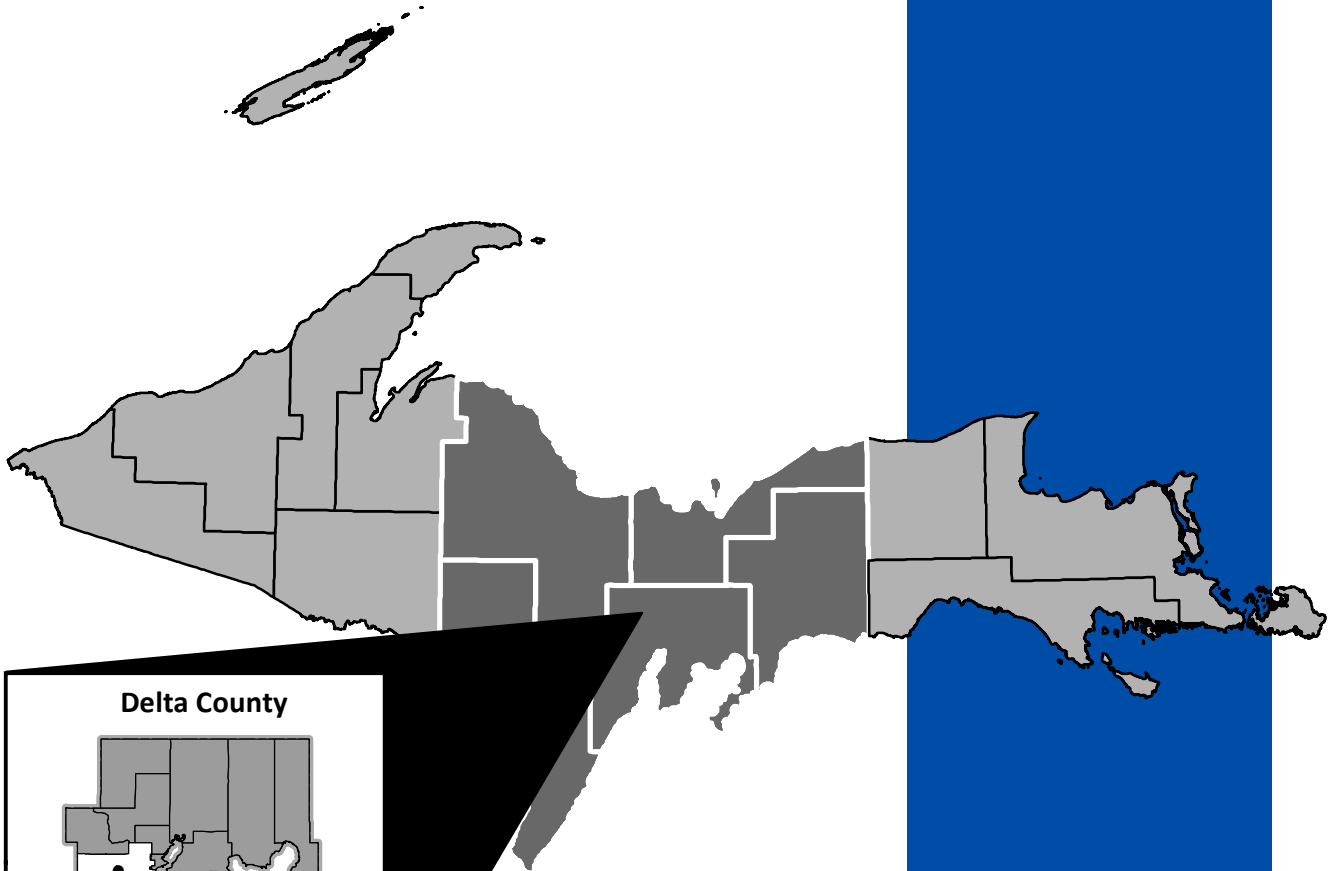


Escanaba Township



Master Plan

Prepared & Adopted By:
Escanaba Township Planning Commission
Adopted: January 7, 2019
&
Escanaba Township Board
Adopted: January 14, 2019





Escanaba Township
Est. 1861 MUNICIPAL
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Escanaba Township PASER Ratings 2018

2018 TOWNSHIP PHOTOS

RESOLUTIONS OF ADOPTION

- Escanaba Township Planning Commission – January 7, 2019
- Escanaba Township Board – January 14, 2019

1.0 INTRODUCTION

1.1 Introduction

This Master Plan represents the culmination of months of discussion and study by the Escanaba Township Planning Commission, with technical assistance from the Central Upper Peninsula Regional Commission (CUPPAD). The plan can be divided into two primary areas -- background information, and goals, policies and objectives which will guide the Township's future development.

The first nine chapters of the plan contain background information on population trends, the local economy, land use, and community facilities, among other things. Such information is useful in forming a complete picture of the Township's growth and development over time. In order to set the stage for future discussions about goals, policies and objectives, each chapter contains a brief summary of issues and opportunities related to each subject area.

Once the Planning Commission has gained an understanding of the past and present situation in the Township, the question becomes "where do we want to go in the future, and how can we achieve those goals?" Chapter 11 contains a discussion of present and future goals, policies, and objectives that were taken from the previous chapters in this plan. The last chapter of this plan builds on the first ten, and provides a framework for guiding the Township's future development.

In addition to providing a general framework for development, the goals, policies and objectives articulated in this plan will assist the Planning Commission to update the zoning ordinance to reflect the desired future land use pattern for the Township. Map 1-1 is provided for reference to the Township's features. The plan will also be used as a basis for reviewing proposed public improvement projects, in accordance with the Coordinated Planning Act.

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2.0 POPULATION

2.1 Introduction

A thorough examination of a community’s population - past, present, and projected - is a basic component to any community planning effort. Such an examination provides an understanding of the people who live, work and recreate in the community. Since communities do not exist in a vacuum, comparisons to other communities will be provided throughout this chapter.

Demography, or the statistical study of the population, is key to understanding the impact of population on housing, educational, recreational, health care, transportation and future economic needs of a community. Detailed demographic characteristics of Escanaba Township and the general area will be presented in this chapter.

2.2 Population Trends

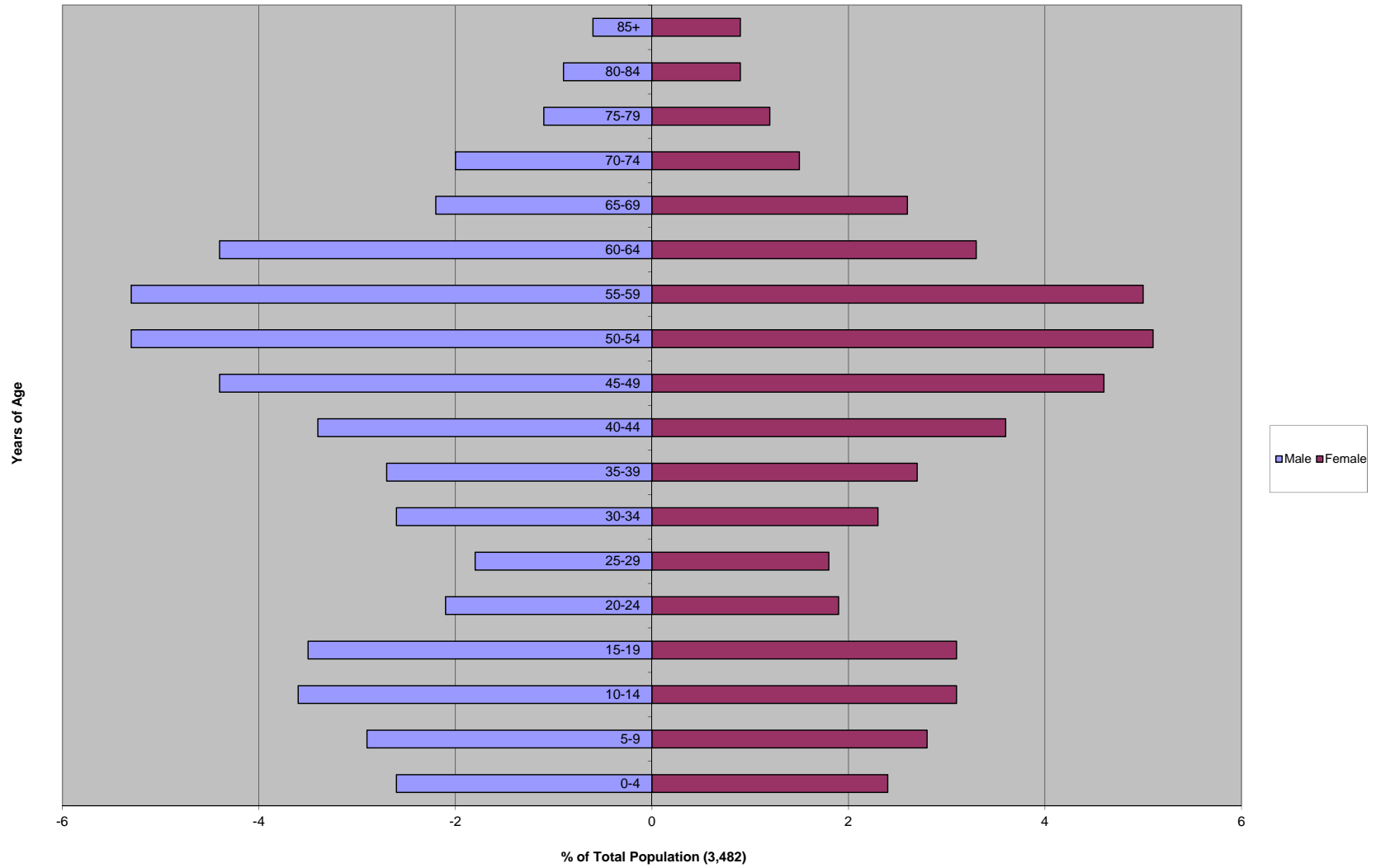
Escanaba Township has experienced population increases in every decade since 1940, except the last one. The largest increase occurred from 1970 to 1980, +66 percent. From 1940 to 2015 Escanaba Township’s population increased by 240 percent to 3,451 persons estimated for 2015. During the last 15 years, the township’s population has decreased by 136 persons, a 3.8 percent decrease.

Major events such as World War I, World War II, and the Great Depression influenced where people lived, how they lived and what jobs they pursued to support themselves and their families. Economic factors of a more local nature such as available timber resources and markets for farm products are primary determinants as well. Official population counts since 1940 are presented in Table 2-1. Figure 2-1 illustrates the Township’s 2010 population by age and gender.

Table 2-1 Population of Escanaba Township 1940-2015	
Year	Population
1940	1,014
1950	1,065
1960	1,485
1970	1,948
1980	3,229
1990	3,340
2000	3,587
2010	3,482
2015 (est.)	3,451

Source: U.S. Census Bureau for years cited

FIGURE 2-1: Escanaba Township 2010 Population by Age & Sex



Comparisons with adjoining townships and the county presented in Table 2-2 show varying patterns from 1940 to 2015. In the last 15 years (2000-2015), Escanaba Township, the surrounding area and the County as a whole, have experienced an overall population decline. The Township had a percentage decline of -3.8%, while the County declined -4.7%. Between 1940 and 2015, Escanaba Township had a dramatic population increase of +240%, while the County had a more modest increase of +7.9%.

Table 2-2 Population 1940-2015, Selected Areas								
Year	Governmental Unit							
	Escanaba Twp.	Delta County	Baldwin Twp.	Bark River Twp.	Brampton Twp.	Cornell Twp.	Gladstone City of	Escanaba City of
1940	1,014	34,037	887	1,377	593	617	4,972	14,830
1950	1,065	32,913	689	1,287	555	538	4,831	15,170
1960	1,485	34,298	647	1,361	589	431	5,267	15,391
1970	1,948	35,924	610	1,299	737	438	5,237	15,368
1980	3,229	38,947	769	1,571	1,113	531	4,533	14,355
1990	3,340	37,780	726	1,548	1,142	529	4,565	13,659
2000	3,587	38,520	748	1,650	1,090	557	5,032	13,148
2010	3,482	37,069	759	1,578	1,050	593	4,973	12,616
2015 (est.)	3,451	36,712	705	1,498	947	521	4,902	12,468
2000-2015 Change	-136	-1,808	-43	-152	-143	-36	-130	-680
1940-2015 Change	+2,437	+2,675	-182	+121	+354	-96	-70	-2,362

Source: U.S. Census Bureau for years cited, and 2015 American Community Survey 5-Year Pop. Estimate

Population estimates for 2015 were prepared under the 2011-2015 American Community Survey 5-Year Estimates. These estimates provide valuable information about demographic changes that have occurred in different areas of the state and county between the census counts. These estimates continue a 5-year overall downward trend beginning after 2000.

The largest estimated decrease in this most recent period (2000-2015) has occurred in the City of Escanaba with a -5.2 percent drop and a 680 loss of residents.

Table 2-3.0 Estimated Population of Delta County and Subcounty Units, 2000- 2004							
Area Name	July 2004 (est.)	July 2003 (est.)	July 2002 (est.)	July 2001 (est.)	July 2000 (est.)	April 2000 Census	Estimated Percentage Change April 2000 to July 2004
Escanaba Twp.	3,561	3,557	3,564	3,576	3,590	3,587	-0.72%
Delta County	38,380	38,386	38,439	38,449	38,569	38,520	-0.36%
Baldwin Twp.	766	759	760	755	751	748	2.4%
Bark River Twp.	1,640	1,637	1,641	1,645	1,652	1,650	-0.6%
Bay de Noc Twp.	332	330	330	330	330	329	0.9%
Brampton Twp.	1,081	1,080	1,082	1,086	1,091	1,090	-0.8%
Cornell Twp.	566	561	562	560	558	557	1.6%
Ensign Twp.	783	779	781	780	781	780	0.4%
Escanaba City	12,752	12,800	12,848	12,974	13,128	13,140	-3.0%
Fairbanks Twp.	328	325	325	324	322	321	2.2%
Ford River Twp.	2,223	2,219	2,224	2,231	2,243	2,241	-0.8%
Garden Twp.	837	827	830	824	820	817	2.4%
Gladstone City	5,266	5,296	5,283	5,146	5,064	5,032	4.7%
Maple Ridge Twp.	826	818	820	815	811	808	2.2%
Masonville Twp.	1,937	1,924	1,899	1,890	1,883	1,877	3.2%
Nahma Twp.	519	511	513	507	501	499	4.0%
Wells Twp.	4,963	4,963	4,977	5,006	5,044	5,044	-1.6%

Source: Annual Estimates of the Population for Minor Civil Divisions in Michigan, Population Division, U.S. Census Bureau June 30, 2005.

Table 2-3.1 Estimated Population of Delta County and Subcounty Units, 2010- 2016									
Area Name	July 2016 (est.)	July 2015 (est.)	July 2014 (est.)	July 2013 (est.)	July 2012 (est.)	July 2011 (est.)	July 2010 (est.)	April 2010 Census	Est. % Change April 2010 to July2016
Escanaba Twp.	3,409	3,426	3,440	3,463	3,463	3,470	3,482	3,482	-2.1%
Delta County	36,202	36,407	36,573	36,830	36,838	36,935	37,066	37,069	-2.3%
Baldwin Twp.	741	745	748	754	755	756	759	759	-2.4%
Bark River Twp.	1,542	1,549	1,556	1,568	1,569	1,573	1,578	1,578	-2.3%
Bay de Noc Twp.	298	299	301	303	303	304	305	305	-2.3%
Brampton Twp.	1,030	1,035	1,039	1,045	1,044	1,046	1,050	1,050	-1.9%
Cornell Twp.	581	583	586	590	590	591	593	593	-2.0%
Ensign Twp.	733	737	740	744	744	745	748	748	-2.0%
Escanaba City	12,327	12,396	12,450	12,534	12,538	12,571	12,615	12,616	-2.3%
Fairbanks Twp.	274	276	278	280	279	280	281	281	-2.5%
Ford River Twp.	2,014	2,025	2,032	2,046	2,044	2,049	2,054	2,054	-1.9%
Garden Twp.	735	738	741	746	746	747	750	750	-2.0%
Gladstone City	4,796	4,836	4,870	4,916	4,923	4,947	4,971	4,973	-3.6%
Maple Ridge Twp.	747	752	755	761	762	763	766	766	-2.5%
Masonville Twp.	1,697	1,706	1,713	1,724	1,724	1,728	1,734	1,734	-2.1%
Nahma Twp.	485	487	490	493	492	493	495	495	-2.0%
Wells Twp.	4,793	4,817	4,834	4,863	4,862	4,872	4,885	4,885	-1.9%

Source: Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2016, U.S. Census Bureau, Population Division

2.3 Age

Median age is a commonly used demographic measurement (equal number of persons above and below that specific age). The median age of Escanaba Township residents in 2010 was 45.7 years (Table 2-4). In comparison, the county’s median age was 45.6 years, while Michigan’s and United States’ recorded median ages of 38.9 and 37.2 years respectively.

Longer life expectancies and smaller family sizes are the major reasons that the overall population is getting older. Revealing statistics from the Michigan Department of Community Health document a decline of thirteen (-12.8%) percent in live births in Delta County from 2005 to 2015. The same statistical report documents live birth decreases of ten (-9.9%) percent for the Upper Peninsula. Moreover, the largest segment of the population, the “baby boom” generation (born 1946 to 1965), is entering retirement age.

The forces of migration - in and out - are important to consider. In rural areas where job opportunities are limited, younger adults find it necessary to move (out-migration) to further their educations and/or careers. Persons of retirement age have shown a preference for rural areas and further impact the area age structure through in-migration.

Table 2-4 Median Age, 1970-2015, Selected Areas							
Year	Governmental Unit						
	Escanaba Twp.	Delta County	Baldwin Twp.	Bark River Twp.	Brampton Twp.	Cornell Twp.	Gladstone City
1970	21.2	28.2	24.7	25.4	27.4	30.3	29.3
1980	25.9	30.2	27.9	26.4	28.6	29.3	31.6
1990	32.2	35.2	35.1	33.0	33.9	33.7	36.8
2000	38.8	40.4	41.3	36.3	42.4	42.4	39.9
2010	45.7	45.6	47.5	41.4	50.5	47.6	43.6
2015	48.7	46.4	48.6	40.2	56.8	50.8	43.1
Percent Change 1970-2015	+130%	+64.5%	+96.8%	+58.3%	+107%	+67.7%	+47.1%

Source: U.S. Census Bureau for years cited

Age grouping is presented in Table 2-5 using 2015 census data. Brampton Township and the City of Gladstone are included because of the common school district.

The preschool age group in the township comprises 4.0 percent of the total population, which is less than the county (5.2%) and the state (5.8%). Brampton Township and City of Gladstone recorded 3.0 percent and 6.8 percent of their population in the preschool age group respectively.

Those in the 5 - 19 age group, or school age, make up 16.1 percent of the township’s population. The percentage of this age group is more than Brampton Township, less than the City of Gladstone, the county and the state.

The workforce age group (20-64) comprise 66.4 percent of the population, more than Brampton Township (51.5 %), Gladstone (53.4%), the County (56.9%) and the State (59.4%).

Within the retiree age group (65 years and older) the Escanaba Township percentage (13.5%) is considerably less than the surrounding area (Brampton 34.4%, Gladstone 20.4%) and Delta County (20.6%), but is comparable with the State (14.9%). Brampton Township and Gladstone have larger percentages of retirement age residents within this age category. The retirement

village located in the south bluff area and two senior housing complexes contribute to the high percentage of those over the age of 65 within the City of Gladstone.

Table 2-5 Population by Age Groups, Selected Areas, 2015							
Age	Escanaba Township			Brampton Township	Gladstone city	Delta County	State of Michigan
	Total	Percent		Percent	Percent	Percent	Percent
under 5	139	4.0	Preschool Age	3.0	6.8	5.2	5.8
<i>Subtotal</i>	<i>139</i>	<i>4.0</i>		<i>3.0</i>	<i>6.8</i>	<i>5.2</i>	<i>5.8</i>
5 – 9	293	8.5	Normal School Age	2.4	6.6	5.7	6.2
10 – 14	96	2.8		4.3	6.6	5.9	6.6
15 – 19	167	4.8		4.3	6.0	5.7	7.0
<i>Subtotal</i>	<i>556</i>	<i>16.1</i>		<i>11.0</i>	<i>19.2</i>	<i>17.3</i>	<i>19.8</i>
20 – 34	549	16.0	Normal Workforce Age	7.9	16.1	15.0	19.2
35 – 44	280	8.1		6.3	11.1	10.8	12.2
45 – 54	657	19.0		19.0	14.2	14.4	14.4
55 – 64	805	23.3		18.3	12.0	16.7	13.6
<i>Subtotal</i>	<i>2,291</i>	<i>66.4</i>		<i>51.5</i>	<i>53.4</i>	<i>56.9</i>	<i>59.4</i>
65 – 74	228	6.6	Normal Retirement Age	21.1	9.7	10.9	8.4
75 – 84	167	4.8		11.8	8.1	6.8	4.5
85 and older	70	2.0		1.5	2.6	2.9	2.0
<i>Subtotal</i>	<i>465</i>	<i>13.5</i>		<i>34.4</i>	<i>20.4</i>	<i>20.6</i>	<i>14.9</i>
TOTAL	3,451	100.0		100.0	100.0	100.0	100.0

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates.

The Gladstone Area School District encompasses Escanaba Township, Brampton Township and the City of Gladstone.

School Year	Enrollment
2009-2010	1,588
2010-2011	1,572
2011-2012	1,559
2012-2013	1,500
2013-2014	1,495
2014-2015	1,502
2015-2016	1,572
2016-2017	1,603

Source: Gladstone Area Schools, 2017, Spring count.

2.4 Racial Composition

Almost 97 percent of the Township’s population is identified as white. This compares to approximately 94 percent for Delta County and 79 percent within the entire state. Persons identifying themselves within the American Indian/Alaska Native racial category comprise the largest nonwhite category. This information is displayed in Table 2-7 below.

Race	Escanaba Township		Delta County		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent
White	3,336	96.7	34,569	94.2	7,823,875	79.0
Black/African American	0	0.0	93	0.3	1,381,388	14.0
American Indian/Alaska Native	34	1.0	728	2.0	53,951	0.5
Asian	0	0.0	95	0.3	268,766	2.7
Native Hawaiian/Pacific Islander	9	0.3	13	0.0	2,083	0.0
Some other race	0	0.0	48	0.1	109,184	1.1
Two or more races	72	2.1	1,166	3.2	261,324	2.6
TOTAL	3,451	100.0	36,712	100.0	9,900,571	100.0

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

2.5 Gender

Females typically outnumber males in the overall population by a small margin due to longer life expectancies. In Michigan, for instance, the 2015 estimate reflects a 51-49 percent favoring females. In Escanaba Township, males make up a majority of the population (53.9 percent).

The ratio of males to females varies by age with a slightly higher percentage of females in the elderly population due to the higher life expectancy of females.

Table 2-8 Gender, Selected Areas, 2015					
Gender	Escanaba Township		Delta County		State of Michigan
	Number	Percent	Number	Percent	Percent
Males	1,859	53.9	18,172	49.5	49.1
Females	1,592	46.1	18,540	50.5	50.9
Totals	3,451	100.0	36,712	100.0	100.0

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

2.6 Educational Attainment

Over 95 percent of Township residents who are at least 25 years of age have completed high school and almost 19 percent have earned college degrees. As Table 2-9 shows, the high school completion rate is significantly higher than the state. Township graduate degree holders were at a higher percentage than in the County, but less than the state level.

Education and training requirements have been increasing in most industries. Employers are now placing an emphasis on formal education and are looking for prospective employees who have attained an educational level sufficient to meet the demands of the modern workplace. A highly trained educated workforce is an asset to a community.

Table 2-9 Educational Attainment of Persons 25 Years or Older, Selected Areas, 2015				
Educational Level	Escanaba Township		Delta County	State of Michigan
	Number	Percent	Percent	Percent
Less than 9 th grade	50	1.9	2.5	3.2
9 th to 12 th , no diploma	70	2.7	5.3	7.2
High school graduate or equivalency	886	33.7	35.3	29.9
Some college, no degree	788	30.0	25.9	23.8
Associate degree	339	12.9	12.1	8.9
Bachelor’s degree	276	10.5	13.6	16.5
Graduate or professional degree	221	8.4	5.2	10.5
Percent high school graduate or higher	95.4		92.1	89.6
Percent bachelor’s degree or higher	18.9		18.9	26.9

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

2.7 Household Characteristics

A household is defined by the Census Bureau as all persons who occupy a housing unit; e.g., a single family, one person living alone, two or more families living together, or any group of related or unrelated persons sharing living quarters.

A family consists of a householder and one or more persons living in the same household who are related by birth, marriage or adoption. A non-family household can be one person living alone, or in any combination of people not related by blood, marriage or adoption. The household characteristics for Escanaba Township, Delta County, and Michigan are presented in Table 2-10.

Total occupied households within Escanaba Township have decreased by 75 units from 1,109 in 2010 to 1,034 in 2015. During the same time period, the township saw its population decrease by one and 6/10ths (-1.6%) percent, resulting in a slightly lower average household size of 2.44 persons. The decline in household size is both a trend occurring statewide as well as nationally.

The number of family households with their own children under 18 dropped by twenty-six and 1/10th (-26.1%) percent from 432 to 329. While the married-couple family numbers remained about the same, increasing by about 1%.

Female householder (no husband present) dropped from 105 to 47, over a 55% decrease. Non-family households increased from 297 to 383, a 29% increase. The number of householders living alone increased substantially (+88) from 211 to 299, a 41.7% increase.

The number of households 65 years or older decreased slightly from 150 to 145.

Table 2-10							
Household Characteristics, Selected Areas for Years Cited							
Household Type	Escanaba Township				Delta County		State of Michigan
	2010		2015		2015		2000
	Number	Percent	Number	Percent	Number	Percent	Percent
Family Households	1,109	78.9	1,034	73.0	9,928	63.3	65.0
With own children under 18 years	432	30.7	319	22.5	3,545	22.6	27.2
Married-couple family	922	65.5	930	65.6	7,858	50.1	47.8
Female householder (no husband present)	105	7.5	47	3.3	1,427	9.1	12.7
Non-family Households	297	21.1	383	27.0	5,756	36.7	35.0
Householder living alone	211	15.0	299	21.1	4,894	31.2	29.1
Householder 65 years or older	150	10.7	145	10.2	2,274	14.5	10.7
TOTAL HOUSEHOLDS	1,406	100.0	1,417	100.0	15,685	100.0	100.0
AVERAGE HOUSEHOLD SIZE	2.45	-	2.44	-	2.34	-	2.58
	persons		persons		persons		persons

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates.

2.8 Population Density

Escanaba Township’s 3,587 residents (2000 population) live within the township’s 59.57 square mile boundary producing a density of 60.2 persons per square mile. As expected, the cities of Escanaba and Gladstone have the highest population density as shown in Table 2-11 below. Of the townships in the county, only Wells Township has a greater population density than that of Escanaba Township. Delta County’s population density is 32.9 persons per square mile, while the state’s is 174.9 persons.

Table 2-11 Population Densities, Delta County			
Place	Population	Land Area (Square Miles)	Persons Per Square Mile
Baldwin Township	745	83.77	8.9
Bark River Township	1,549	45.59	34.0
Bay de Noc Township	299	67.48	4.4
Brampton Township	1,035	23.72	43.6
Cornell Township	583	59.76	9.8
Ensign Township	737	58.97	12.5
Escanaba city	12,396	12.66	979
Escanaba Township	3426	59.57	57.5
Gladstone city	4,836	4.96	975
Fairbanks Township	276	47.19	5.8
Ford River Township	2,025	64.81	31.2
Garden Township	738	159.92	4.6
Maple Ridge Twp.	752	108.23	6.9
Masonville Township	1,706	167.67	10.2
Nahma Township	487	166.24	2.9
Wells Township	4,817	39.49	122.0

Source: Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2016, U.S. Census Bureau, Population Division

2.9 Population Projections

The most recent set of population projections prepared for counties in the State of Michigan extend to the year 2045. Projections are estimates of the population for future dates and are useful for community planning endeavors.

A Delta County population of 35,290 is projected for the year 2045. This indicates an increase of three and 7/10th's (+3.7%) percent over the 1940 census count of 34,037. However, it would show a three and 9/10's (-3.9%) decrease from the 2015 estimate of 36,712.

2.10 Issues and Opportunities

The 2015 Census estimate set the Escanaba Township population at 3,451 persons, or 9.4 percent of the county total. The number of persons residing in the township increased steadily for 60 years (1940-2000), but has decreased somewhat (-3.8%) for the last 15 years (2000-2015).

The most recent (2015) population estimate (3,451) for the township indicates a less than one percent (0.9%) drop of the population base since 2010. Neighboring jurisdictions also saw slight population losses (See Table 2-3.1).

The median age has risen dramatically across the County over the decades. In 1970 Escanaba Township's median age was 21.2, but has risen to 48.7 in 2015. The County went from 28.2 (1970) to 46.4 (2015). Bark River Township has the lowest, currently at with 40.2 years and Bay de Noc Township has the highest at 61.2 years.

The township has a greater percentage of school age children and working adults (82.5%) than the county, state and adjacent Brampton Township and city of Gladstone.

The percentage of persons over the age of 65 (13.5%) is considerably less than found in Brampton Township, the city of Gladstone, the county or state.

The number of occupied households in the township first increased from 2000 (1,038) to 2010 (1,109) and then declined again in 2015 to 1,034.

The average household size has decreased from 3.03 persons in 1990 to 2.76 persons in 2000, to 2.45 in 2010, and appears to have stabilized around 2.44 in 2015.

There has been a substantial increase in the number of persons living alone. In 1990 there were 155 persons living alone, by 2000 the number grew to 212, in 2010 it was 211, and then by 2015 the number jumped to 299. The households 65 or older appear to have stabilized around 150 (2010 – 150 / 2015 – 145).

In Escanaba Township, the percent obtaining high school graduation (or equivalency) is about on par with the County and the State. When it comes to obtaining some college (but no degree) the Township's percent is significantly higher than the County and the State. At the Associate degree level the Township is slightly better than the County and significantly better than the State. But at the Bachelor's degree level the Township falls significantly behind the County and the State. At the Graduate or professional degree level, the Township is above the County, but below the State. Overall, 95.4% of the Township's 25 year-olds or older have obtained high

school graduation or higher, which compares favorably with the County and the State. This indicates a relatively well-educated workforce.

According to state population projections, Delta County is projected to reduce in population by 2045 to 35,290. This would be a 3.7% increase from 1940's population of 34,037, but a 3.9% decrease from 2015's estimated population of 35,712.

3.0 ECONOMIC BASE

3.1 Introduction

Escanaba Township is situated within the Gladstone-Escanaba urban center. The Township shares its southern border with the more commercial and industrial Wells Township. The Township’s 2005 state equalized valuation was \$91,140,474. Taxable value was \$74,185,896. Residential properties and agriculture properties make up 93 percent and 3 percent respectively of the total assessed value. The table below compares the 2004 and 2005 SEV of the township and the county.

Table 3-1 State Equalized Value, Escanaba Township, 2004 and 2005				
Classification	2004 value	2005 value	Percent Increase	Township percent of Delta County 2005 SEV total
Residential	\$79,084,157	\$84,866,157	7.3%	9.7%
Commercial	\$1,703,789	\$1,692,882	-0.6%	1.2%
Industrial	\$1,062,661	\$1,304,158	22.7%	2.9%
Agriculture	\$2,315,734	\$2,687,717	16.1%	6.6%
Timber Cut over	\$623,510	\$589,560	-5.4%	96.1%

3.2 Area Economy

The economic activity of Escanaba Township has historically been closely related to agriculture and forestry. Approximately 64 percent of the township is forested, and 16 percent is used for agricultural purposes. Family farms which once dominated the landscape were the area’s principal economic activities. Market forces, escalating operating costs, improved technology and farming practices and lifestyle preferences have contributed to the decline in the number of farms and persons engaged in farming as a principal occupation.

Agriculture is a mainstay in the area west of the Escanaba River with dairying, beef production and crop production. There are about 10-15 full-time farmers in the township, with their principal income derived from agriculture activities. There are about 10-15 part-time farmers, with their main sources of income derived off the farm, but are able to maintain a profitable agriculture business.

There are limited commercial establishments within Escanaba Township, mainly consisting of smaller retail and service type establishments, such as gas stations, small motels and restaurants.

The Verso paper mill has several structures and parking areas within the Township boundaries. The majority of the mill grounds are located outside of the Township. There are also several gravel/sand extraction areas and small lumberyards located within the Township.

The eastern portion of the township could be described as a “bedroom community” of the greater Escanaba-Gladstone area. Many township residents find work in either Gladstone or Escanaba, with an average commute time of 20 minutes.

3.3 Labor Force and Unemployment

Labor force and unemployment information collected by the Michigan Department of Labor and Economic Growth is presented in Table 3-2. During the past ten-year period the county labor force expanded by 13.5 percent. The number of employed persons in the county labor force grew significantly, by 17.0 percent. Labor force needs are always driven by prevailing economic conditions.

Unemployment within Delta County has ranged from 5.8 percent to 10.7 percent. The current 2004 annual average for Delta County is 7.9 percent. Unemployment rates for Delta County have generally been higher than those of the Upper Peninsula. Both the state and nation consistently recorded lower rates of unemployment. During the past ten-year period, the unemployment rate for Delta County has slowly dropped from the 1994 rate of 10.7 percent to the current figure of 7.9 percent.

Table 3-2 Labor Force and Average Annual Unemployment, Selected Areas, 1994-2004							
Year	Delta County Labor Force			Annual Average Unemployment Percentage			
	Labor Force	Employed	Unemployed	Delta County	U.P.	Michigan	United States
1994	18,160	16,225	1,935	10.7	9.2	6.2	6.1
1995	18,051	16,317	1,734	9.6	8.8	5.3	5.6
1996	18,337	16,915	1,422	7.8	7.6	4.9	5.4
1997	18,769	17,444	1,325	7.1	6.9	4.3	4.9
1998	18,911	17,752	1,159	6.1	6.0	4.0	4.5
1999	19,141	18,029	1,112	5.8	5.7	3.8	4.2
2000	19,861	1,882	1,040	5.2	5.2	3.7	4.0
2001	20,009	18,743	1,266	6.3	6.3	5.2	4.7
2002	19,725	18,281	1,444	7.3	7.2	6.2	5.8
2003	20,098	18,425	1,673	8.3	7.6	7.1	6.0
2004	20,626	18,987	1,639	7.9	7.4	7.1	5.5

Source: Michigan Department of Career Development, Employment Service Agency, Office of Labor Market Information

Table 3-3 provides occupational information for the resident male and female workforce participants.

Table 3-3 Civilian Workforce by Major Occupational Category, Escanaba Township, 2000			
Occupational Category	All Employed Persons 16 years and older	Male	Female
Management, professional, and related	492	243	249
Service	266	58	208
Sales and office	405	165	240
Farming, fishing, and forestry	21	21	0
Construction, extraction, and maintenance	239	226	13
Production, transportation, and material moving	307	288	19
TOTAL	1,730	1,001	729

Source: U.S. Census Bureau, Census 2000 SF 3, Table P50

The following table (Table 3-4) depicts the industry in which Escanaba Township residents are employed within. At the time the census was collected, 49 percent of the township residents who were working found employment in the manufacturing (22.1), health and care and social services ((14.3) and retail trade (13.1). For the same categories on the county level, manufacturing accounted for 18.9 percent, health and social services 11.7 percent and retail trade 13.2 percent.

Table 3-4 Civilian Workforce by Industry, Escanaba Township, 2000			
Industry	All Employed Persons 16 years of age and older	Male	Female
Agriculture, forestry, fishing, and hunting	90	76	14
Mining	7	7	0
Construction	138	123	15
Manufacturing	383	337	46
Wholesale Trade	23	16	7
Retail Trade	225	108	117
Transportation and warehousing	143	129	14
Utilities	11	6	5
Information	30	7	23
Finance, insurance	40	6	34
Real estate and rental and leasing	6	0	6
Professional, scientific, and technical and administrative services	49	21	28
Educational, services	106	18	88
Health care and social services	249	55	194
Arts, entertainment and recreation	42	5	37
Accommodation and food service	121	44	77
Other services (except public administration)	45	26	19
Public administration	22	17	5
TOTAL	1,730	1,001	729

Source: U.S. Census Bureau, Census 2000 SF 3, Table P49

The workplace as we have come to know it has been greatly influenced by technological advancements and economic globalization. It is expected that fully one-third of the 21st Century workforce will be independent regarding location; telephone and electrical services will be the only requirements. Communities that can offer quality living environments will be the locations of choice for these types of work arrangements.

3.4 Income

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

Income is measured in three ways:

1. **Per capita income** is derived from the total income reported for a community divided by the total population.
2. **Household income** is the income reported for all households including families.
3. **Family income** includes married-couple families and other households made up of persons related by blood, marriage, or adoption. It does not include persons living alone, unrelated persons sharing living quarters, or other non family households.

Household and family incomes are presented as either median or mean. The mean income is average of the incomes. The median income is the middle value of the incomes.

Incomes in Escanaba Township compare favorably to state averages (Table 3-5). The township's median household income of \$44,730 exceeds the state figure of \$44,667. The township median family income is 91.4 percent of the state's value. Township incomes are higher than the county.

The 1989 income figures were gathered during the 1990 Census and are shown in Table 3-5 as a figure that is "adjusted for inflation." The "inflation adjusted" 1989 income figures uses the Bureau of Labor Statistics inflation factor of 1.297861 for the period of 1989- 1999. As illustrated an Escanaba Township household with a 1989 income of \$29,408 would require \$34,274 in 1999 to keep up with inflation. The 1999 household income has increased to \$44,730 indicating household income has kept pace with inflation. Family income has also increased with inflation.

Annual household incomes are presented in Table 3-6. Township households reporting incomes of less than \$50,000 totaled 58.2 percent. This compares to 66 percent in Delta County and 55.4 percent in Michigan overall.

Table 3-5 Income Levels, Selected Areas, 1989-1999						
	1989 Actual Income	Income Adjusted for 1999 Inflation	Percent of State (actual)	1999 Actual Income	Percent of State (actual)	Percent Change After Inflation Adjustment
Per Capita Income						
Escanaba Township	\$11,152	\$14,474	78.8	\$18,454	83.2	27.5
Delta County	\$10,810	\$14,030	76.4	\$18,667	84.2	33.1
State of Michigan	\$14,154	\$18,370	100.0	\$22,168	100.0	20.7
Median Household Income						
Escanaba Township	\$29,408	\$34,274	94.8	\$44,730	100.1	30.5
Delta County	\$22,791	\$29,580	73.5	\$35,511	79.5	20.1
State of Michigan	\$31,020	\$40,260	100.0	\$44,667	100.0	10.9
Median Family Income						
Escanaba Township	\$31,393	\$40,743	85.7	\$48,839	91.4	19.9
Delta County	\$28,260	\$36,678	77.1	\$45,079	84.3	22.9
State of Michigan	\$36,652	\$47,569	100.0	\$53,457	100.0	12.4

Source: U.S. Bureau of the Census, 1990 Census STF3A, 069, 074, 08; Census 2000, Table DP-3

Table 3-6 Households by Annual Household Income, 1989					
Earnings	Escanaba Township		Delta County		Michigan
	Number	Percent	Number	Percent	Percent
Under \$10,000	94	7.1	1,584	10.0	8.3
\$10,000 to \$14,999	50	3.8	1,417	9.0	5.8
\$15,000 to \$24,999	132	10.0	2,356	14.9	12.4
\$25,000 to \$34,999	198	15.0	2,436	15.4	12.4
\$35,000 to \$49,999	295	22.3	2,637	16.7	16.5
\$50,000 to \$74,999	331	25.1	3,321	21.0	20.6
\$75,000 to \$99,999	123	9.3	1,128	7.1	11.4
\$100,000 or more	97	7.3	941	5.9	12.7

Source: U.S. Census Bureau, Census 2000 SF 3, Table P84 and P85

Household and family income is presented in Table 3-7. Mean and median incomes within single female households are much lower than family households of married-couples.

Table 3-7 Household and Family Income, Escanaba Township, 1999					
	All Households	Family Households			Non-Family Households
		Total	Married-couples	Female householder, no husband present	
Median income	\$44,730	\$48,839	\$49,719	\$37,188	\$23,616
Mean income	\$49,400	\$53,981	\$55,151	\$42,151	\$30,508

Source: U.S. Census Bureau, QT-P-32 Income Distribution in 1999 of Households and Families: 2000

Examining the source of household income in the township, the majority is derived from wage and salary income or through self-employment. There is a notable portion of income (22 percent) derived from social security income.

Table 3-8 Source of Household Income, Escanaba Township, 1999			
	Number	Percent	Mean Income
With earnings	1084	82.1	\$49,219
With Social Security Income	291	22.0	\$11,867
With Supplemental Security Income	20	1.5	\$3,665
With public assistance income	22	1.7	\$2,241
With retirement income	230	17.4	\$18,763

Source: U.S. Census Bureau, Census 2000 Table DP-3

3.5 Employment by Place of Work

The majority of Escanaba’s working population was employed in the Delta County. Of the approximate 7 percent who work outside the county, about 2 percent find employment outside of Michigan. Although the data does not indicate which state residents find employment, it is safe to assume that their workplace is in Wisconsin. Table 3-9 shows that 5 percent worked in another Michigan county. Some residents find employment at home; the at-home workers comprise less than 1 percent of the township’s work force.

Table 3-9 Place of Work for Workers 16+ Years, Escanaba Township and Delta County, 2000				
	Escanaba Township		Delta County	
	Number	Percent	Number	Percent
Worked in Michigan	1,653	97.6	16,812	98.0
Worked in Delta County	1,562	92.3	15,081	88.1
Worked outside of Delta County	91	5.3	1,731	10.1
Worked outside of Michigan	40	2.4	304	1.8
Total Workers	1,693	100.0	17,116	100.0

Source: U.S. Census Bureau, Census 2000 SF 3, Table P26

Table 3-10 Means of Transportation to Work, Escanaba Township and Delta County, 2000				
Means to Work	Escanaba Township		Delta County	
	Number	Percent	Number	Percent
Car, truck or van	1,636	96.6	14,283	83.4
Public Transportation	0	0.0	133	0.7
Motorcycle	0	0.0	19	0.1
Bicycle	0	0.0	26	0.2
Walked	35	2.1	419	2.9
Other means	10	0.6	92	0.6
Worked at Home	12	0.7	446	3.1
Total Workers	1,693	100.0	17,116	100.0

Source: U.S. Census Bureau, Census 2000 SF 3, Table P30

Most of the workers drive alone to work. According to the 2000 Census, only 9.5 percent of the commuters are part of a carpool. This is a decrease from ten years ago, when 177 persons (12.5 of the workers) were part of a carpool arrangement.

Work commuting times are presented in Table 3-11. Except for persons working at home, the average employed resident of the Township spends 27.8 minutes traveling to work.

Table 3-11 Work Commuting Time for Residents Aged 16 or Older, Escanaba Township, 2000		
Residence to Work Travel Time	Number of Workers	Percent
Less than 10 minutes	301	17.9
10 to 19 minutes	413	24.6
20 to 29 minutes	350	20.8
30 to 44 minutes	97	5.7
45 to 59 minutes	16	1.0
60 minutes or more	86	5.1
Mean travel time to work: 19.7 minutes		

Source: U.S. Census Bureau, Census 2000 SF 3, Table P31

3.6 Issues and Opportunities

The Township had its historical beginnings with agriculture and continues to this day with a number of farms in the Flat Rock area. The number of farms have decreased over the years.

The present (2004) unemployment rate for Delta County stands at 7.9 percent, a figure higher than that of the Upper Peninsula, the region and the state of Michigan.

Overall incomes of Escanaba Township are shown to be greater than those of the county and the state.

The vast majority of working residents find employment in Delta County, with an average commute time of less than 20 minutes. Most commuters travel to work alone.

In recent months, a solar energy company has approached a number of land owners in the Township. The company is interested in developing a 1,200 to 1,300 acre solar farm within the Township. This would present a significant opportunity for the Township and the County.

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4.0 NATURAL FEATURES

4.1 Introduction

Natural features, including soils, geology, topography, water features and other natural resources, have an effect on a community's development. These physical features directly or indirectly limit or encourage growth. Soil types and geology may affect the availability, quality and quantity of underground water supplies. The natural resources, such as timber, prime agricultural lands and minerals, which occur in certain areas are often a primary factor in the establishment and growth (or decline) of communities. Communities not having wastewater treatment facilities must rely on on-site septic systems where soil types are of primary importance.

These natural features are often interrelated, and disturbance in one area can potentially affect other areas. From a planning standpoint, it is important to gain an understanding of these interrelationships to gauge potential development accurately.

4.2 Geology

Both bedrock and surface geology have an impact on community development. Bedrock geology consists of the solid rock formations found below the soil that were formed millions of years ago. These formations have since undergone extensive folding, uplifting, eroding, and weathering and are now overlain by surface geology and soil.

A primary factor making geology important to a community's development is its ability to supply groundwater. The types of bedrock through which water passes before extraction influence the quality and quantity of groundwater. Certain types of bedrock increase the potential for groundwater contamination, particularly when such bedrock is close to the surface. Surface runoff is filtered through the soil and other materials that overlays bedrock. When bedrock is close to the surface and the filtering layer is thin, the opportunity for polluted runoff to enter the groundwater table is increased. If the bedrock is highly permeable, contaminants can quickly enter the same layers of groundwater used for domestic purposes.

4.3 Bedrock Geology

The bedrock of Delta County is made up of sedimentary rocks that were formed during the Paleozoic Age, about 400 to 500 million years ago. The Paleozoic rocks that underlie the County consist of limestone, dolomite, shale, sandstone, and gypsum. These rocks were deposited in the shallow seas that covered the Michigan basin during a majority of the Paleozoic era. The wide diversity of the sediments deposited is evidence of fluctuating sea levels, oscillating shorelines, and a variety of sediment sources.

As illustrated on Map 4-2, the entire Township is underlain by Black River and Trenton limestone. This formation is found in the western and north-central portions of Delta County. It

is composed of thin, irregular beds of gray to buff limestone and dolomite inter bedded with thin layers of shale. The thickness of the rock ranges from 150 to 300 feet. Black River and Trenton formation provides adequate groundwater capacity for most domestic and farm needs; however, it would not provide sufficient water for large industrial use.

Underlying the beds of dense dolomite and shale of the Black River and Trenton limestone formation is the Prairie du Chien sandstone. This formation is a good source of ground water providing sufficient water quantity. The maximum thickness of the Prairie du Chien formation is about 300 feet.

Well depths in the township range from shallow wells of 26 feet to 580 feet. The majority of the wells found in the Lake Bluff area are in the 80 feet to 180 feet range, with an average depth of 171 feet. There are a few wells in the Lake Bluff area drilled to depths of around 300 or more. In the general area east of the Escanaba River the vast majority of wells are in the 80 feet to 180 feet range, with an average depth of 149 feet. West of the Escanaba River the well depths generally range from 125 feet to 165 feet, with an average depth of 146 feet. Map 4-7 shows well depths in relation to bedrock depth.

Delta County has seen numerous problems with water/well contamination due to shallow bedrock depths (bedrock very close to soil surface). In areas where bedrock is close to the surface, water that percolates through the soil is not given enough time to be “cleaned” properly. This causes contaminated water to be sent back into the drinking supply.

Map 4-1 shows contaminated wells and previous contamination areas. Water samples revealing that coliform bacteria is present triggers a written advisory from Public Health-Delta County. The agency provides guidance for well disinfection measures as well as a source of technical assistance.

Improperly constructed wells may actually hasten the penetration of surface waters into the aquifer which is a source of potable water. The health department has identified two areas of concern due to groundwater quality in Escanaba Township. One area of concern is the Carroll’s Corner area where in the early to mid 1990’s many of the older wells were found to have high levels of bacteria and E. coli present. The poorly constructed wells were abandoned and replacement wells were drilled and tapped into the Prairie du Chien formation for the water source. Another area is along county road 416 where there have been sporadic instances of bacterial contamination. The health department has issued special well construction requirements for both areas. The special water well construction requirements for both areas are shown on Table 4-1; the areas of concern are shown on Map 4-1.

Another concern of the health department is high levels of nitrates in water wells. There have been several areas throughout Delta County with high levels of nitrates. Only a few of these areas are in Escanaba Township. High nitrate levels in water can cause methemoglobinemia or blue baby syndrome, a condition found especially in infants less than six months. High nitrate levels do not usually affect healthy adults, unless there has been prolonged consumption.

Although a few cases of high nitrate levels have been found in Escanaba Township, none have had negative health effects.

Table 4-1 Areas of Concern Due to Groundwater Quality, Escanaba Township				
Site	Description of Problem	Possible Solution	Special Water Well Construction Requirements	Approx. # of households affected
Flat Rock Area	Bacterial contamination	Abandon poorly constructed wells; drill replacement water wells	Six-inch casing grouted into the blue shale (Lower Trenton formation) terminating in the Prairie du Chien formation	Less than 30
Carroll's Corner	Bacterial contamination of many old wells, primarily with surface water bacteria	Properly abandon poorly constructed wells and unused wells; drill replacement water wells	Six inch casing 15-20 feet through blue shale (Lower Trenton formation) and terminating in the Prairie du Chien formation; grouted entire length of well casing	More than 50

Source: Public Health, Delta & Menominee Counties, 2005

Within the Lake Bluff area most of the homeowners receive their water supply from the Black River and Trenton formation. However, there have been reported instances of a few individuals tapped into the Black River and Trenton aquifer who utilize large quantities of water for lawn care and have an insufficient water supply in the summertime. These individuals have literally run out of water and have had to wait for the aquifer to recharge. Some of the newer homes and recently drilled wells have begun utilizing the Prairie du Chien aquifer. This aquifer provides a reliable source of water, but requires wells to be drilled to depths of about 300 feet.

4.4 Surface Geology

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

Surface geology types found in Escanaba Township are shown on Map 4-3 and include:

Wetlands: Wetland areas are located along the Little Bay de Noc shoreline and an area east of county road 416 near the southern boundary. Wetland areas are thin deposits of muck and peat underlain by sand, silt, and clay lake deposits. The permeability of these areas is highly variable.

Dune Sand: This type of deposit is found within the eastern third of the township. Dune sand deposits have a very high permeability. This area is located above the water table necessitating drilling wells a considerable distance. Their high infiltration capacities mean they serve as an important avenue of groundwater recharge.

End or Recessional Moraine: Almost two thirds of the township is an end or recessional moraine. The moraine deposit in the township consists of numerous low hills and ridges composed of characteristically red till. The till from these moraines contain a larger percentage of coarse materials by weight and is considerably more permeable than the adjacent till-plain deposits. The majority of the wells that are drilled in this area tap the underlying Trenton and Black River formation for water.

Glacial Till: A small deposit of glacial till is found in the north-central portion of the township. This deposit is composed of poorly sorted clay and boulder till of low permeability; generally a thin veneer over bedrock. These deposits will not yield supplies of water adequate for most uses. Many wells in the areas fail because of impermeable drift or bedrock at a shallow depth.

4.5 Soils

Soil formation is the result of glaciers moving over bedrock material, whose massive pressure and slow movement turns the solid rock into extremely fine-ground material. The different types of soil created from the contractions of these glacial sheets were deposited throughout the County in no particular order. The U.S. Department of Agriculture Soil Conservation Service has classified the soils of Delta County into 13 soil associations; within Escanaba Township there are four soil classifications, shown on Map 4-4.

Soils are grouped into associations based on common characteristics, such as drainage, slope, and texture. Development should be planned in such a way as to take into account the suitability of the soils for the type of development planned; for example, residential subdivisions should avoid areas of shallow and/or poorly drained soils or areas where the water table is close to the surface, since such soils are unsuitable for septic drain fields.

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

The major characteristics of the four soil associations found in Escanaba Township are described below, along with suitable uses of these soils.

Soil Association 1: Rubicon Association: Nearly level to very steep, well-drained sandy soil with coarse textured subsoil.

This soil association has low fertility and very low water capacity. Due to droughtiness, it is fair for forestry and poor for cropland and pasture. Pine trees grow well on this soil association. It has moderate limitations for recreational uses because of its coarse texture, and slight limitations for intensive uses requiring septic tanks. It is well suited for residential development.

This association is found along the eastern boundary of the township.

Soil Association 2: Kalkaska Association: Nearly level to very steep, well-drained and moderately well-drained sandy soils that have coarse textured subsoils.

Kalkaska soil association has low fertility and very low available water capacity. It is fair for forestry and poor for pasture and croplands, due to droughtiness. It has moderate limitations for recreational uses, and slight limitations for intensive uses requiring septic tanks, except in those areas with steep slopes. This association is used principally for woodland and for recreation. This soil association is found along the southern boundary in sections 34 and 35.

Soil Association 6: Onaway-Charlevoix-Tacoosh Association: Nearly level to moderately steep, well drained to somewhat poorly drained loamy soils that have moderately coarse textured subsoils, and nearly level, very poorly drained organic soils.

The Onaway and Charlevoix soils have medium to high fertility and moderate to high available water capacity, while the Tacoosh soils have very low fertility and very high available water capacity. This soil association is well to fairly suited for forestry, cropland, and pasture, except for the wet organic soils of the Tacoosh association. The Township's agricultural land is located within this soil association. Due to the wetness, steep slopes, and organic nature of the soils, this association has slight to moderate limitations for use as picnic areas and trails, and moderate to severe limitation for playground and campground usage. The Charlevoix and Tacoosh soils have severe limitations for residential or intensive use requiring septic tanks because of their wet organic nature. The Onaway soils have only slight to moderate limitations for residential dwellings due to steep slopes and moderate limitations on septic tanks because of the fine texture of the soil.

This soil association is found in the western two-thirds of the township.

Soil Association 10: Charlevoix-Ensley-Angelica Association: Nearly level to gently sloping, somewhat poorly drained and poorly drained loamy soils that have moderately coarse textured and medium textured subsoils.

The soils in this association have medium to high fertility and moderate to high available water capacity. This soil association is rated fair for cropland and pasture because of wetness. In

terms of forestry use, the Charlevoix soils are rated fair, while the Ensley and Angelica soils are poorly suited for this use. The limitation for recreation and residential uses for this soil association are severe, except for the Charlevoix soils, which have only moderate limitations for use as a picnic area or trail. The majority of this association is used as woodland. A finger like extension of this soil association is found in the northwest portion of the township.

Soil Association 12: Kalkaska-Tawas-Carbondale Association: Nearly level to very steep, well drained and moderately well drained sandy soils that have coarse textured subsoils, and nearly level, very poorly drained organic soils.

This association has low fertility, and an available water capacity that are very high in the organic soils and very low in the sandy soils. It is poorly suited for forestry, cropland, and pasture because of wetness, droughtiness, and organic soils, except for the Kalkaska soils, which are rated fair for forestry. The limitations for recreational or intensive use in this association are severe because of its coarse texture and wet organic nature, except for the Kalkaska soils, which have only slight limitation for intensive uses requiring septic tanks except where slopes are excessive.

This soil association is found in the northeastern section of Escanaba Township.

Soil Association 14: Roscommon-Tawas Association: Nearly level, poorly drained sandy soils that have coarse textured subsoils, and nearly level, very poorly drained organic soils.

This soil association has low fertility, and an available water capacity that is very high in the organic soils and very low to low in the sandy soils. It is very poorly suited for forestry, agricultural, recreational, or residential use because of its wet organic character. This association is mainly used as woodland and for recreation.

This soil association is found in the eastern one third of Escanaba Township.

More detailed information on soil types within Delta County is contained in the Soil Survey of Delta County and Hiawatha National Forest of Alger and Schoolcraft Counties, Michigan, republished in 1994 by the U.S. Department of Agriculture Soil Conservation Service and Forest Service.

There are areas of the township which contain soils which limit certain uses. From a planning standpoint, displaying the suitability of soils in the Township for certain uses is helpful in determining the most appropriate areas for certain land uses. Maps 4-4 and 4-5 depict the limitations of the soils for constructing dwellings with basements, and for use as septic tank absorption fields.

As shown on Map 4-4, much of the Township contains soils which have severe limitation for dwellings with basements. The rating is based on soil properties, site features, and observed performance with the soils. Some soils provide good foundation for houses, but others do not. A

high-water table, depth to bedrock, large stones, slopes and flooding affect the ease of excavation and construction. Limitations for building site development include the presence of shallow bedrock that can make the construction of basements difficult. If the rock is soft or fractured, excavations can be made with trenching machines or backhoes. If the rock is hard or massive, blasting or special equipment generally is needed for excavation.

Wastewater is treated by private, on-site septic systems throughout the township. Septic tank absorptions fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. As depicted on Map 4-5, with very few exceptions, most of the township is rated severe for septic tank absorption fields. The ratings are based on soil properties, site features and observed performance of the soils. Permeability, a high-water table depth to bedrock and flooding can affect absorption of the effluent. Unsatisfactory performance of septic tank absorption fields, including excessively slow absorption of effluents and surfacing of the effluent can affect public health. Large stones and bedrock would interfere with installation. Shallow soil depths and permeable bedrock heighten potential for contamination of wells and river systems. On site soil evaluations are performed by the health department to determine soil suitability for on-site sewage disposal systems.

While the local health department has seen septic system failures in the township, the failures have been primarily due to age of the system and not due to soil conditions.

Prime farmland is one of the several kinds of important farmland defined by the U.S. Department of Agriculture. Prime farmland is land that has the best combination of physical and chemical characteristics for producing feed, forage fiber and oilseed crops. The soil qualities, growing season and moisture supply are those needed for the soil to economically produce sustained high yields of crops with proper management using acceptable farming methods. About 14,557 acres of prime farmland is found in the Escanaba Township, making up 37 percent of the total land area and nearly 30 percent of the prime farmlands found in Delta County. Map 4-6 depicts the prime agricultural lands within the township. The prime farmlands are located in the western two thirds of the township.

4.6 Topography

Topography describes the unique character that an area's physical features provide expressed in terms of elevation above mean sea level, shown on Map 4-8. Steep topography or slopes of 10 percent or greater can be aesthetically attractive for residential or commercial development. However, a steep grade increases the likelihood of soil movement or slides, and the weight of structures is an added force which encourages this movement. In addition to these dangers, there is an added excavation expense if development occurs on the sloping surface itself. Measures to control potential erosion when steep grades are present must be considered and natural water courses should be maintained. Soil disturbance of one or more acres or within 500 feet of a lake or stream generally requires a permit as authorized under Part 91 (Soil Erosion and Sedimentation Control) of the Natural Resources Environmental Protection Act.

The most prominent feature in the township is the escarpment which extends in a north-south direction. Much of the residential development within the township has occurred on top of the bluff. Sites along the bluff edge offer a scenic view of the bay area. The remainder of the township is characterized by level to rolling. Elevations range from 623 feet to 853 feet above mean sea level. The lowest elevation is found along the bay and the highest elevation is found in the western end of the township.

4.7 Mineral Resources

Gravel deposits are found in the Township and have been commercially excavated. Currently extraction activities are occurring near the Escanaba River.

4.8 Water Features

More than 70 percent of the earth's surface is water. Water features such as lakes and streams have very important functions as natural resources. First, they provide us with our domestic and commercial source of water. Secondly, recreational activities such as fishing, boating and swimming depend on water features. The quantity of available water is important in both industrial and residential development. Since removal of impurities is extremely expensive, quality drinking water supplies are very important.

One of the most visible water features associated with Escanaba Township is Little Bay de Noc, which forms a portion of the township's eastern boundary. Little Bay de Noc is one of the most diverse coastal resource areas found in the Great Lakes region. The bay serves as a port for commodities coming in and out of Delta County. It is also the habitat of some of the finest fish and wildlife in the Upper Peninsula and is recognized nationally as a prime sports fishing area. The bay provides residents and tourists a variety of recreational opportunities like beaches and prime fishing areas.

Another highly visible water feature in the Township is the Escanaba River. The river, which flows in a general north-south direction, has its terminus at Little Bay de Noc in Wells Township. The river has been designated by the MDNR as a trout stream; the river has several cold-water feeders.

An impoundment on the Escanaba River created by the Escanaba River Dam #3, is located in the vicinity of the West Gladstone Bridge on county road 420. The Michigan Department of Natural Resources maintains a boating access site with a hard surface ramp. Dam #3 has been rated by the Michigan Department of Environmental Quality as a "significant hazard" due to its upstream location of populated areas. Inspections are required at four-year intervals. The impacts of a failure at Dam #3 are dependent on whether the failure took place under fair or flood weather conditions. According to the Emergency Action Plan for the dam, a fair-weather failure would impact residences, a campground and other development along the Escanaba River below the dam; a dam failure under flood conditions would impact residences and other structures along with failure of downstream dams.

The Ford River, which also flows in a north-south direction, is situated in the township's western portion. The river eventually empties into Lake Michigan near the community of Ford River. The entire length of the stream is designated as a trout stream with cold water feeders.

Land use and development patterns are heavily influenced by the presence of water features. While lakes and rivers are physical barriers that limit growth of communities and/or transportation facilities, they are attractive for development such as waterfront residential or industries requiring large volumes of water.

4.9 Wetlands and Floodplains

Floodplains and wetlands are important for a planning standpoint due to their potential limitations on future development. In the case of floodplains it is important to consider the possible impacts on existing development.

Significant wetland areas are found throughout the township, shown on Map 4-9. Development in these areas is regulated by the Michigan Department of Environmental Quality and the U.S. Army Corps of Engineers. In the Township, approximately 14,480 acres (37 percent of the total township land area) are considered wetlands according to data from the National Wetland Inventory. A wetland area may be referred to as a swamp, bog or marsh and is normally characterized by the presence of water at a frequency and duration sufficient to support wetland vegetation and aquatic life. Wetland areas help to improve water quality by filtering pollutants and trapping sediments. Any development occurring in wetland areas is subject to the regulatory authority of the Michigan Department of Environmental Quality.

The Federal Emergency Management Agency (FEMA) has mapped floodplain areas in the Township. The 100-year flood is defined as the area in which there is a 1 percent chance of a flood occurring in any given year. Since the meaning of the term "100-year floodplain" has been confused, the National Flood Insurance Program has replaced it with the designation of "base flood elevation" (BFE).

Escanaba Township has been participating in the flood insurance program since December 18, 1986. Several neighboring townships and the cities of Escanaba and Gladstone also participate in the program. The flood hazard areas identified in Escanaba Township are located along the Ford and Escanaba Rivers and portions of Bichler and Reno Creeks. There are restrictions on development in these areas due to potential damage and health and safety risks. Map 4-10 shows areas in the floodplain.

4.10 Climate

July is the warmest month, January the coldest. Daily maximum and minimum July temperature averages recorded at Escanaba are 74.9 and 57.9 degrees respectively (Fahrenheit scale). The maximum daily average in January is 23.8 degrees while the minimum daily average is 8.5

degrees. Average July and January temperatures are 66.4 and 16.1 degrees respectively. High and low temperatures are greater at inland locations where the influence of Lake Michigan is diminished. The growing season, or frost-free period, averaged 152 days during the 1951-1980 period. Generally it is considered to be shorter, extending from mid-May to mid-September.

July is the wettest month averaging 3.57 inches of precipitation. February is the driest averaging 1.05 inches. Average snowfall in the Escanaba area from 1950 to 1981 was 49.9 inches. Over the most recent 10-year period, snowfall has averaged 54.3 inches. The greatest snowfall amounts occur in December and January. Although measurement data are not available, northern parts of the county typically receive more snowfall.

Afternoon thunderstorms are common during summer months. Although tornado activity has been recorded, it is infrequent since the county lies north of the Midwest tornado belt. There were seven funnel cloud sightings or tornado events in Delta County over the most recent 10-year period. The most severe and damaging occurred in July 1992 as a storm of “F2” intensity (113-157 miles per hour) caused \$2.5 million in property damage in Delta County.

4.11 Wildlife and Fish

The area supports a wide variety of wildlife including game animals such as whitetail deer, black bear, turkeys, ruffed grouse, squirrels, and rabbits. The Escanaba and Ford Rivers are designated trout streams.

4.12 Issues and Opportunities

Township residents obtain their potable water needs from private wells. Well depth in the township range from 26 feet to 580 feet. Depending on location, the average well depth in the Lake Bluff area is 171 feet, the average depth of wells west of the Escanaba River is 146 feet, and wells found east of the Escanaba River average 149 feet.

Several homeowners in the Lake Bluff have begun tapping into the Prairie du Chien aquifer to obtain a reliable water supply. Wells drilled to the Prairie du Chien aquifer are generally around 300 feet in depth.

Two groundwater areas of concern have been identified by the health department. One area is Carroll’s Corner and the other is along county road 416 in Flat Rock. Special well construction requirements are in place to prevent bacteria contamination with the water supply.

Soil association characteristics have been rated as to the suitability of constructing dwellings and for septic tank absorption fields. For both uses, the soil suitability has been rated as having “severe limitations” indicating that some problems may be encountered such as high-water table, depth to bedrock, large stones and slopes.

While most of the township has “severe limitations” for septic tank absorption fields, the health department has not noticed a significant number of septic tank failures related to soil conditions. Most septic tank failures are the result of age.

The western two-thirds of the township contain soils that are considered prime for agricultural production. With the area’s precipitation, soils and growing season, agriculture is a viable industry in the township. The township contains almost 30 percent of all of the prime farmlands within Delta County.

Approximately 37 percent of the Township’s land cover is wetlands. Development in wetland areas is strictly regulated. Areas along both the Escanaba and Ford Rivers have been mapped as flood hazard area. Floodplains and wetlands can potentially limit certain types of development or result in increased costs for development.

Prominent water features in the township include Little Bay de Noc and the Escanaba and Ford Rivers. Both the Ford River and the Escanaba River are the Township’s largest streams and are fed by several cold-water streams. Little Bay de Noc forms part of the township’s eastern boundary.

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5.0 EXISTING LAND USE

5.1 Introduction

Escanaba Township is located in the western part of Delta County, and is surrounded by Delta County's largest two cities, Escanaba and Gladstone. The City of Escanaba, located just south of the Township, was incorporated as a village in 1866 and as a city in 1883. Gladstone, which borders the township on the eastern side, was incorporated as a village in 1887 and as a city in 1889.

5.2 Historical Land Use Patterns

The general historic land uses common to the Upper Peninsula are reflected in the land use patterns that have developed in Escanaba Township. Logging and timber-production were common throughout Escanaba Township, and still are today.

Farming has historically been a major use of land in the Township. Families survived and counted on crops grown on their own land. Today, farming is still a leading use of Escanaba Township's land.

5.3 Factors Affecting Land Use

There are many factors that determine how land is used. Homebuyers, developers, land speculators, commercial interests and governmental entities all can affect land use decisions.

Homebuyers and commercial interests tend to base decisions on location. Factors such as access, available public and private services, and the qualities of surroundings are often important as well. Speculators may purchase, hold or sell property based on an anticipated future return on investment. Land developers, too, attempt to gauge the demand and supply aspects of the housing, retail, commercial and industrial markets for financial gain. To be successful, speculators must accurately assess the type, size and timing of developments.

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

Generally, the immediate self-interest of the individual or organization making a land use decision supersedes thorough consideration of the potential impact on surrounding lands. Decisions determined in this fashion can potentially result in incompatible development since the community's overall pattern of development is not necessarily among the considered factors.

Natural features and cultural influences were also important determinants of how land was used. The presence of rugged terrain and swampland, for instance, was not conducive to establishing settlements. Cultural influences are manifested in the types of buildings constructed, local commercial practices and community activities.

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

Overall, the federal government has limited influence on local planning efforts and growth management strategies. However, the federal government does exercise many responsibilities that affect land use through various loans and grant programs for community facilities, water and wastewater systems, housing, economic development, and planning. Federal regulations also address environmental concerns such as air quality, drinking water standards, etc. Although these programs and regulations do not usually directly affect land use and development, they have a significant indirect effect. For example, a community that lacks sufficient sewage disposal capacity to serve industrial uses can possibly obtain federal funding to help with expansion of its sewage treatment facility, which in turn, may lead to industrial development.

The role of the state has traditionally been limited to providing enabling legislation for local units of government to regulate growth and development through planning and zoning. However, with wetlands, flood plains and coastal areas, regulatory authority rests with the state. This can directly affect local land use decisions. The state also enforces standards for municipal water systems and wastewater treatment systems that are at least as strict as federal standards. These regulatory standards influence a community's ability to provide water and wastewater systems, as well as their user rate structures.

Local governments can employ zoning ordinances, subdivision regulations, building codes, and public investment in infrastructures to influence land uses. Infrastructure investments include water and wastewater systems, roads, parks, etc. Local planning efforts that seek to define the most desirable and appropriate uses for the various parts of a community, and anticipate and prepare for growth, can serve to guide future land use decision-making.

Other factors affecting land use include the existing transportation system, taxation, land values, natural features, changing technology, and market conditions. Changes in lifestyles, family size and structure, shopping preferences, and consumer attitudes also affect land use decisions. Mobility is greater than at any previous time, families are smaller, and life expectancies have increased. These changes may be reflected in shopping habits, housing preferences, employment patterns, and leisure time activities. From a land use standpoint, some pertinent issues include the preference for large homes situated on large land parcels, the apparent willingness of individuals to endure the time and costs associated with lengthy commuting distances to work,

and the growing market for housing specifically designed for elderly residents - particularly those residing for only part of the year.

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

Taxation and land values play a part in many land use decisions. Families may move from urban areas because they feel that they are willing to trade off lower taxes and user fees for fewer municipal services and increased distance from employment, shopping and schools. Land may be less expensive in rural areas, thus making such residency decisions even more attractive. Commercial and industrial enterprises are generally less willing to forego municipal services such as water and sewer. They are also more likely to locate in areas of concentrations of population rather than in very rural areas. In any situation, however, tax rates and land values will be very important considerations.

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

Low-density developments that start at the edges of cities and villages and spread outward are most commonly called as sprawl. Post World War II development has seen traditional urban development give way to low density urban and suburban growth. Development of this type is more often than not poorly planned, automobile-dependent, and designed without regard to the impact on the surrounding area or the economic costs associated with building a new infrastructure. Beyond consuming a lot of land, sprawl impacts traffic congestion and air quality, the economic condition of traditional downtown areas, and the overall character of a community. Sometimes government policies and practices encourage sprawl because of requirements regarding lot size, setbacks, etc. The effects of land use patterns of this type should be carefully considered in future planning activities.

5.4 Land Use Inventory

The broad categories of current land use described in this section are taken from the 2000 MIRIS guide, and are based on the interpretation of the 1998 aerial photos. These seven broad

categories, with numerous subcategories, describe current land use/cover within the Township. Map 5-1 shows current land use, and map 5-2 shows a comparison of 1978 and 1998 land use.

It should be noted that between the 1978 classification and the 1998 classification, many categories and subcategories were changed within the MIRIS system. Because Escanaba Township has a great deal of low-land conifer, it is important to point out that the low-land conifer subcategory was changed from within Forested in 1978 to within Wetlands in 1998. This causes a great deal of forested land to be categorized under the wetland category, even if the actual land does not meet federal requirements of a wetland.

Forested: The majority (approx. 56 percent) of Escanaba Township's 38,850 acres are forested. Most of the forested areas in the Township are categorized as mixed forest, which consists of both deciduous and coniferous trees.

Agricultural: Lands used for crop production and grazing are the second largest use in Escanaba Township. Approximately 6,288 acres (16 percent) of the Township are in agricultural production.

Wetlands: Wetlands, which includes lowland forest and mixed forest wetland, represent approximately 13.7 percent of the total acreage in the Township. The majority of this percentage is in the lowland conifer category.

Urban and Built-Up Areas: Areas of intensive use with much of the land covered by structures are classified as urban or built-up. Escanaba Township contains approximately 3,651 acres of built-up land. This accounts for around 9.4 percent of the total acreage. This is a large increase from the 1978 land use, where only about 1 percent was classified as urban.

This category has seen the most change, as a result of the development of new residential areas, as well as industrial and commercial development.

Other uses included in this category include transportation, extraction areas, outdoor recreation, and other forms of open space.

Non-forested and Agricultural: Non-forested lands make up 2.7 percent, or 1,068 acres, of the Township. This is the fourth largest category of land use in the Township. These lands are open lands or rangelands, characterized by grasses, shrubs, or some trees. Non-forested lands do not include those showing obvious evidence of past agricultural practices.

Water: Water coverage is classified as streams, rivers, lakes, and ponds. Approximately 644 acres of Escanaba Township (1.6 percent) is covered by water, mostly in the form of rivers, streams, and small lakes.

Barren: Barren land includes exposed sand dunes, steep bluffs, rock outcrops, or permanently exposed soil. Escanaba Township does not have any barren land as described.

5.5 Residential Land Use

Residential land use in Delta County occurs primarily in the western half of the County, near the Escanaba-Gladstone corridor, with other residential concentrations located in smaller communities throughout the County.

Residential land use in Escanaba Township occurs primarily on the eastern half of the Township, near the Gladstone area, and also near the Flat Rock area.

Escanaba Township has experienced residential growth in the form of ribbon development in the past 30-40 years, specifically in its farmland and upland areas. Ribbon development is the building of structures, most commonly houses, along roadways radiating from a town. In Escanaba Township, ribbon development has occurred in a westerly direction, stemming from the Gladstone and Escanaba areas. County Road 416 has seen the majority of this development, mainly near Flat Rock. County Road 426 has also seen ribbon development, mainly north of Flat Rock and directly across the Escanaba River from the Verso paper mill. Most of the residential development is composed of single-family homes built on the edge of croplands.

A great deal of residential development has occurred east of the Escanaba River, near the Gladstone area. Many subdivisions and housing have been developed in recent decades. As the growth of the two cities increases, the need for new housing grows and pushes living further into the Township. Another factor in the development of residential housing has been the Terrace Bluff Golf Course, located in the southeast corner of the Township.

Since Escanaba Township has experienced residential growth in the form of subdivisions in the past 10-20 years, the Township may see additional subdivisions be developed. The Township should have in place an ordinance to allow for the review of subdivisions being proposed.

5.6 Commercial Land Use

As with most of the residential development, the majority of commercial development is concentrated in the eastern half of the Township. Carroll's Corner and the Flat Rock area contain the majority of the commercial uses. Commercial use is also present along County Road 426 near the Escanaba River in the southern part of the Township. Most commercial use consists of smaller retail and service type establishments, such as gas stations, small motels, and restaurants. A greenhouse is located on County Road 416 near the Flat Rock area. These establishments require smaller lots with sufficient space for parking. Land use impacts from smaller commercial establishments are usually minimal.

5.7 Industrial

As with commercial uses, industrial uses are more concentrated in the eastern part of the Township, near water and transportation routes. Industrial operations include paper mills, lumberyards, gravel/sand extraction areas, and construction companies. Lands designated for industrial uses usually require extra land use planning considerations, such as transportation need, emergency services, and site-specific development standards.

The most notable industrial use within the Township is the Verso paper mill. The majority of the mill grounds are located outside of the Township. However, some structures and parking are inside the Township boundary.

Other industrial uses include several gravel/sand extraction areas. One area is located on County Road 420, near the Escanaba River. Another area, located just north of Carroll's Corner on County Road D3, is a larger operation that has several smaller areas following the Escanaba River in a northerly direction. A smaller extraction area is located on County Road D12, west of Carroll's Corner.

Several small lumberyards are present throughout the Township.

5.8 Forestry and Agricultural Land Uses

The predominant forest cover types in Escanaba Township are northern hardwood and lowland conifer. The majority of forest in Escanaba Township is C.F. (Commercial Forest). Landowners in the CF program agree to develop, maintain and manage the land as commercial forest through planting, natural reproduction, or other practices. Lands listed in this program are open to the public for hunting, trapping and fishing only. CF lands are private lands under the control of private owners. Not all public lands are available for commercial timber production; harvest in some areas is restricted or prohibited in order to protect wildlife, recreational, wilderness or research values.

Wetlands include land that has sufficient water at, or near, the surface. These areas are commonly referred to as swamps or marshes. Wetland areas may also include land, which supports lowland hardwoods and conifers. In the case of Escanaba Township, lowland conifers make up the majority of the wetland cover. As shown in the current land use map, wetland areas are scattered throughout the township. Wetland information was not verified by field inspection when these maps were compiled. Thus, areas displayed as wetlands may not actually meet State and Federal criteria for legally regulated wetlands.

The agricultural areas are located primarily in the western portion of the Township. The 2002 U.S. Census of Agriculture shows 273 farms in Delta County, totaling 72,242 acres. Agricultural products from farms in Delta County include field crops such as hay, barley, and corn; dairy

products; and livestock, such as beef cattle, hogs and pigs, and poultry. Farms in Escanaba Township primarily produce hay and corn, as well as dairy products.

As shown in Table 5-2, the number of farms in Delta County has increased in the past five years, while the average farm size has decreased. The total acreage devoted to farming has actually increased by about 4,000 acres between 1997 and 2002. The report shows that slightly more than one-half of the farmers list a principal occupation as farming.

Table 5-1 Agricultural Trends in Delta County, 2002 and 1997		
	2002	1997
Number of farms	273	253
Total acreage in farms	74,242	70,232
Average farm sizes in acres	272	278
Acreage according to use	41,604	41,158
Total cropland	26,570	28,923
Harvested cropland		
Market value of products sold		
Total	37,433	32,260
Average per farm	10,219	8,162
Operator=s principal occupation		
Farming	143	124
Other	130	129

5.9 Public and Quasi-Public Land Use

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

Public buildings in the Township include the Township Hall & Fire Department buildings. These buildings, located on County Road 416 near Flat Rock and on P.5 road, do not occupy large tracts of land. Their primary impact on land use is related to traffic and parking.

A small area of land is reserved for the Township Recreation Area. This land, located near Flat Rock on County Road 416, is quite small and limited in its use. The area currently has a pavilion and a small playground area. Township goals include expanding the recreational opportunities in the Township.

An airport, located north of Carroll’s Corner, occupies a fairly large area of land in the Township. The presence of the airport affects land use in adjoining areas in several ways. The need to maintain a clear zone around the runway restricts the siting of tall structures or industries, which might produce emissions which interfere with visibility for aircraft. Effects all vary depending upon the number of takeoffs and landings, the size and type of aircraft, which use the airport and the overall airport size.

Examples of quasi-public land uses include churches, golf courses and similar facilities that are owned by private enterprise, but are open to the public. These uses generate increased traffic on a seasonal, occasional or intermittent basis, and by providing facilities and services, which meet the needs of local residents, contribute to the quality of life of communities and neighborhoods. The presence of quasi-public facilities such as golf courses can also affect property values.

Currently, the Township contains several churches located throughout the area, and one golf course located in the lower southeast corner of the Township.

5.10 Land Ownership

Land ownership (Map 5-3) in Delta County and Escanaba Township has a significant effect on land use. Large tracts of land in public ownership mean that less land is available for private development. However, public lands often provide many of the amenities that attract residents to rural areas in the first place - wildlife habitats, green space, scenic beauty, etc. And while public land is not available for private development, most of these lands are not suitable for development. Many areas contain wetlands, swamps, unsuitable soils, and other environmental limitations.

Of Escanaba Township's 38,850 acres, roughly 7,100 acres are CF land. The major owner of CF land in the Township is Escanaba Timber LLC. As stated in section 5.7, CF lands are open to the public for hunting, fishing, and trapping only. Because these large tracts of land are open for public use, visitors are normally attracted to the area. This in turn provides potential customers for retail and service businesses and impacts transportation patterns. Therefore, even though the use of these lands does not include intensive development, development in other areas may be encouraged as a result of the presence of public lands.

Escanaba Township currently owns 152 acres across from the Gladstone High School on M-35. This purchased property consists mainly of swamp. However, development is conceivable. Possible suggestions for this property include a bike/walking trail, a subdivision on seventy-five acres of high ground, windmills for energy production, a campground, and a water tower.

5.11 Contaminated Sites

The Michigan Department of Environmental Quality maintains a listing of contaminated sites in accordance with Part 201 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. These environmental contamination sites are locations at which contamination of soil, groundwater, surface water, air or other environmental resources is confirmed, or where there is the potential for contamination of those resources due to site conditions, site use, or management practices. The most recent list of Michigan Sites of Environmental Contamination includes two sites within Escanaba Township. This represents eight percent of the sites found in

Delta County. These sites are shown in Table 5-1; the site name is assigned for identification purposes only and is not necessarily a party responsible for contamination.

Table 5-2 Part 201 Sites of Environmental Contamination, Escanaba Township				
SITE NAME	LOCATION	CONTAMINATION	SCORE	STATUS
Residential Well	T40N, R23W, Section 03	Benzene, Ethyl benzene, Toluene, Xylenes	29 out of 48	Inactive-no actions taken
Residential Well	T40N, R23W, Section 35	DCA (1,2), Benzene, Toluene, Xylenes	23 out of 48	Interim response conducted-no further actions anticipated

Source: Michigan Department of Environmental Quality, 2005

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

In terms of future land use decisions, it is important that decision makers are aware of the potential for certain types of land use to cause environmental contamination. Most of the sites of environmental contamination identified in Delta County are the result of past land use practices, and this illustrates that even when legal and accepted land uses are undertaken; the possibility of future impacts exists. Leaking underground fuel storage tanks have become a concern throughout the country in recent years. Many fuel tanks, which were in compliance with all installation guidelines at the time they were installed, have deteriorated and allowed fuel to contaminate the surrounding soil. New guidelines for installing underground fuel tanks have been implemented, and efforts are underway to identify and clean up leaking tanks. Although several leaking underground storage tanks have been found in Delta County, none are currently identified in Escanaba Township.

5.12 Land Use Trends

Escanaba Township appears to be absorbing some of the residential and commercial growth of the Gladstone area. Several subdivisions and new residential development have occurred in recent years near the eastern Township boundary. The Township’s proximity to Escanaba and Gladstone cities and the presence of the Escanaba and Ford rivers helps to make the area more desirable.

In the 20 years between 1978 and 1998, Escanaba Township has seen tremendous urban growth surrounding the Escanaba River. Current development trends suggest a continued growth along the river and throughout the Flat Rock area.

Ribbon development along major county roads stemming from Escanaba and Gladstone has been occurring more and more in the past decades. Current trends suggest a continuation of this type of development. Subdivisions and cluster development appear to be the more common types of residential growth near the Gladstone area, where ribbon development is more common further west into the Township.

Because of the presence of large tracts of public and corporately owned lands in the western part of the Township, new development will probably continue to be concentrated in the southern and eastern portions of the Township.

5.13 Issues and Opportunities

Changing lifestyles and family structure, residential development, commercial businesses, and township needs will all affect future land use patterns. The desire for increased development of residential and commercial properties will further the growth of the Township west of the Escanaba River.

The Township recognizes the need for more recreational space, and will need to plan for and develop more areas to accommodate such needs. Possible solutions to these needs include a walking path surrounding the perimeter of the newly purchased Township land, and more playground equipment, tennis courts, and possible ice rink at the Flat Rock recreation area.

The Township will also need to plan for developing land to construct a new township hall and fire hall. Plans have been made to locate the two halls on one piece of property.

The concern of contaminated water wells is an issue the Township has recognized. Several areas have had problems with water wells due to the shallow bedrock. The Public Health Department has provided guidance in dealing with and mitigating well contamination. With land use trends continuing in the direction of growth and new development, the Township needs to take into serious considerations the water well problem when tied into new development. Map 4-7 of this plan shows current well depths, bedrock depth, and contamination sites. This can be useful to the Township in recognizing areas of concern.

The Township recognizes the need for more land to be designated commercial.

6.0 COMMUNITY FACILITIES AND SERVICES

6.1 Introduction

Services and facilities provided by local government are often vital elements in the community's progress and well-being. Services typically include police and fire protection, municipal water, wastewater systems, and solid waste disposal. Community facilities include local government buildings, libraries, and maintenance and storage facilities, and are shown on Map 6-1.

As a part of the comprehensive planning program, the Township's public and community facilities were reviewed and evaluated as to their present condition and adequacy to meet the present and future needs of the community. Facilities and services provided by other levels of government, or by private providers, which serve residents of Escanaba Township are also discussed in this chapter.

6.2 Municipal Community Service Facilities

The original township hall was located off-site and was constructed in 1913. The current location's structure was developed in 1935. Governmental business is conducted in the Township Hall, located at 4618 Co. 416 20th Road. Activities including Township Board meetings, Planning Commission meetings, and elections take place at the hall. The Township hall houses several small offices, a kitchen, a meeting room and two meeting rooms in the basement level that are used by various entities. The building is also used for private and public social gatherings and meetings of local organizations. With the construction of a newer 48' by 48' pole-type fire hall building in 1982, the fire department vacated this portion and relocated to its new facility. An addition was constructed on to the township hall in 1970 providing needed space. The hall now has 4,400 sq. ft. of space upstairs and 4,400 sq. ft. of space in the basement. While the upstairs is accessible according to standards set by the Americans with Disabilities Act (ADA) of 1990, the basement area is not. Eventually the meeting area and/or township offices may be enlarged, depending on available resources.

Other Township Buildings: Four township-owned facilities are located within Escanaba Township:

Escanaba Township Volunteer Fire Department

Escanaba Township Volunteer Fire Department provides fire protection to the entire township. It has written mutual aid agreements with all remaining fire department in Delta County. It also has entered into an automatic aide agreement with the City of Gladstone which helps in our ISO rating.

The department is staffed by 30 volunteers that are paid a stipend for fire calls.

The department operates two (2) stations.

Escanaba Township Fire Hall, Station 1:

Station 1 is located on the same 3-acre Township Hall site, completed in 1982, enlarged to 48 X 60 feet in 1992 with most of the work completed by volunteers. Housed inside are 2 tanks holding 8,000 gallons of water with an electric driven pump to refill tenders quickly.

Escanaba Township Fire Station 2:

Station 2 – the John Besse Hall, 8189 P.5 Road, Gladstone, was completed in 2014. Inside the fire hall is a 1,400 gpm hydrant supplied by the Gladstone Municipal water system.

Escanaba Township has the following equipment:

- Truck #1 - 2003 Pierce pumper, 6-person cab, 1,250 gpm pump, 1,000 gallon tank, foam pro system.
- Truck #2 – 2010 International/Pierce tender, 2-person cab, 500 gpm pump, 3,000 gallon tank.
- Truck #3 – 1989 Ford F-700 tender, 2-person cab, 3,500 gallon tank.
- Truck #4 – 1992 Ford F-350 4 X 4, 175 gallon water, 7 gallon class B foam.
- Truck #5 – 2015 Spartan Aerial Quint. RM-100, 6-person cab., 2,250 gpm pump.
- Truck #6 – 2013 CSI/Freightliner tender, 2-person cab., 1,250 gpm pump, 3,000 gallon tank, foam pro system, jaws of life equipment.
- One (1) trailer mounted Detroit Diesel 453 power unit with a 6 X 6, 1,200 gpm Gorman Rupp pump. (This unit was built by the fire department.)
- One (1) floating pump, 375 gpm.
- Fourteen (14) Scott air packs, 4,500 psi.

The Escanaba Township Volunteer Fire Department maintains and tests three (3) dry hydrants in the township.

- Corner of “G” Road and 19th Lane, Section 35, Beauchamp. N 45.814167, W 087.2625
- Corner of “H” Road and 23rd, Section 14, Triple Creek, Cornell. N 45.869167, W 087.223056
- N.3 Lane, Near west Gladstone Bridge, Section 25, N 45.8438889, W 087.0933333

The adequacy of fire protection is evaluated by the Insurance Service Office (ISO) Commercial Risk Inc. through the use of the Grading Schedule for Municipal Fire Protection. The schedule provides criteria to be used by insurance grading engineers in classifying the fire defenses and physical conditions of municipalities. Grades obtained under the schedule are used throughout the United States in establishing base rates for fire insurance. While ISO does not presume to dictate the level of fire protection services that should be provided by a municipality, reports of surveys made by its Municipal Survey Office generally contain serious deficiencies found, and over the years have been accepted as guides by many municipal officials in planning

improvements to their firefighting services. The grading is obtained by ISO based upon their analysis of fire department equipment, alarm systems, water supply, fire prevention programs, building construction, and distance of potential hazard areas, such as the central business district from a fire station. In rating a community, total deficiency points in the areas of evaluation are used to assign a numerical rating of 1 to 10, with 1 representing the best protection and 10 representing an essentially unprotected community. The fire insurance rating for Escanaba Township is 9. This rating would be lower or better if the township had its own municipal water supply. As it stands, there is ample fire coverage within the township.

Escanaba Township Cemetery:

This facility is located just west of the intersection at 20th road and “J” road. The cemetery was begun by the Catholic Church in 1906 and turned over to the township sometime in the late 1930s after a fire destroyed the church building. The new garage building was constructed in 2004 and is 24’ by 24’ and it is well-maintained. A flag arrangement and cement slab were constructed at the site in 2005 to add further aesthetic value to the site.

Escanaba Township Recreation Area:

Escanaba Township maintains a recreation area that is 5.8 acres in size. Located on the site are a ballfield, tot-lot, 40’ by 100’ pavilion constructed in 1992, and a separate 24’ by 24’ storage building with a concession room and restrooms. The area also has a gravel parking lot for parking. This site is located off site from the other township facilities in the location of the now closed, school area in the Flat Rock area.

Municipal water:

Escanaba Township does not currently have a municipal water supply but does operate three dry hydrants mentioned above and the Fire Station #1 storage tanks. The township has also budgeted funds for municipal facilities should the need arise in the future.

Wastewater:

Escanaba Township does not operate a township wastewater facility.

6.3 Other Community Services & Facilities

Law Enforcement:

Escanaba Township residents depend on the Delta County Sheriff’s Department and the Michigan State Police for police protection as the Township does not maintain its own police force.

The Delta County Sheriff’s Department operates out of a facility 111 N. Third Street in Escanaba. The department’s current staff includes; 12 road patrol officers, one detective, two lieutenants in charge of road and jail operations, one under sheriff. It also employs 12 corrections officers, a jail service administrator, and three support staff. To police the township

the department uses; four marked cars, one unmarked car, three four-wheel drive vehicles are available for on and off-road patrol and investigative work; two off-road vehicles (ORV's), two snowmobiles, two jet-skis and 2 rescue-type patrol boats. The department also has a contract to enforce Escanaba Township's Noise Ordinance and the contract comes up for review every two years.

The Michigan State Police Post #85 is located in the City of Gladstone. Currently, there are 13 officers assigned to the post: one lieutenant, nine troopers, two administrative sergeants, and one motor-carrier officer. The motor-carrier officer enforces the state's commercial vehicle codes. The Michigan State Police are in charge of enforcing state laws and investigating accidents and crimes.

The cities of Gladstone and Escanaba each maintain police departments which will respond to calls outside the city limits if requested by the Sheriff's Department or Michigan State Police. However, their primary responsibility is to the cities, and when they are called outside their community it is generally in a backup capacity.

Electrical Service:

Electrical service in Escanaba Township is primarily supplied by Upper Peninsula Power Company (UPPCO). Alger-Delta Power Company provides a supplemental supply to the northeast corner of the township. These companies serve all residential, commercial and industrial customers of Escanaba Township.

UPPCO has a repair crew based in Escanaba, in Delta County; travel time from the City to the township is normally 15 minutes to one half-hour. When outages occur, it typically takes minutes to hours to restore power. Electricity is transported to the Township via overhead lines located along county roads 420 and 426. Because of shallow bedrock, and a narrow highway corridor, it would be difficult to locate utility poles farther from the roadway, and underground lines would be too costly.

Natural Gas:

Escanaba Township's residential units receive natural gas service from the DTE Natural Gas Company. Some residents throughout the township use propane gas. Propane service is provided by a variety of private companies throughout the area.

Telephone Service:

Local telephone service in Escanaba Township is provided by SBC Communications, Inc. Long distance service can be obtained from several carriers that serve the area. Alltel and AT&T provide cellular phone service.

Health Care:

Residents of Escanaba Township must look outside the Township for health care services. OSF St. Francis Hospital, with 110 beds, is located in the City of Escanaba. The year 2006 saw the completed construction of a new Magnetic Resonance Imaging (MRI) unit and a new Cardiac Diagnostic Center, which will provide enhanced cardiology and cardiovascular services as well as family health services. Home health care services are offered throughout the County, and hospice care is also available. Other services include: Health and Wellness, Hospice, Laboratory, O.B./Nursery, and Rehabilitation Services.

Emergency Medical Service:

Within Escanaba Township, the primary emergency medical service is provided by RAMPART Emergency Medical Services located at 828 Sheridan Road in Escanaba. This emergency medical transporting service is staffed with 20 EMT-S (Specialist), EMT-B (Basic) and paramedics. RAMPART has six Type III Modular ambulances in its inventory. Four are located in Escanaba, one in Gladstone, and one is a first responder in Bark River. There is one 2006, three 1997, and two 1995 vehicles and they are all in satisfactory condition. Five out of the six ambulances offer Advanced Life Support and include one paramedic and one E.M.T. Specialist per vehicle. RAMPART services the rest of Delta County and covers part or all of Marquette, Schoolcraft, and Alger Counties. Mutual aid is offered to Marquette County.

911 System:

Delta County has an “enhanced” 911-dispatch system in operation throughout the County. Emergency calls for fires, medical emergencies, crimes, and other emergencies are accomplished by dialing the number 9-1-1; these calls go to the central dispatch located at the Escanaba Public Safety building, where the location of the call is displayed. The appropriate responding unit is then dispatched. The Delta County Sheriffs Department Emergency Rescue Unit and other Emergency Medical Service units are dispatched through central dispatch.

Delta County Airport:

The Delta County Airport is located at 300 Airport Road in Escanaba. It is a class “E”, category-4 airport that offers commercial and general aviation services, two year-round all-weather runways with full ILS, and convenient access to truck, rail, and port connections. The airport is served by one major carrier – Delta Airlines that has daily service to Detroit’s Metro Airport. The airport also hosts several charter airlines that serve various companies based in the area.

Escanaba Township also has an “Airport of Refuge”. A ¾ mile long gravel strip is accessible in emergency situations for small aircraft. The strip is privately owned and is located on Kenneth Strauss’s property in the east-central portion of the township.

Road Commission:

Roads and streets in Escanaba Township are discussed in more detail in Chapter 9, Transportation. The Township is responsible for 50 percent of the cost of improvements to local roads, and improvement projects are scheduled by the Delta County Road Commission based on funding availability and the priority of requests submitted by townships. County primary roads, such as CR 420 and CR 426 are the responsibility of the Delta County Road Commission. The Road Commission has a storage garage in the adjacent township of Wells for their road maintenance equipment.

Education:

Escanaba Township students attend the Gladstone School District. The district has education for grades Kindergarten through 12th grade and operates two elementary schools (Cameron and Jones Elementary Schools), one middle school (Gladstone Middle School) and one high school (Gladstone High School). The school building is handicap accessible according to standards set by the Americans with Disabilities Act of 1990. Upon graduation from 8th grade, students have the option of attending either Gladstone or Escanaba high schools. Both school systems send buses to Escanaba Township to transport students to their respective school building.

Local residents looking for higher education opportunities can turn to Bay de Noc College, located only miles from Escanaba Township in the City of Escanaba. Bay College has grown from a modest beginning with a limited curriculum in 1963 to serving an enrollment of more than 2,300 students in the fall of 2005. Partnerships with various four-year schools allow students to continue taking classes on the Escanaba campus and to gain a baccalaureate degree without leaving Escanaba. In addition to these partnerships, Bay College continues its traditional occupational programs aimed at giving students the skills to enter the work force, community service, and transfer programs. These transfer programs are designed to allow students to begin their post-secondary education and explore career interests at Bay College, later applying their two-year degree program at a major college or university.

Other institutions of higher learning in the Upper Peninsula include Northern Michigan University; Gogebic Community College in Ironwood; Michigan Technological University in Houghton; and Lake Superior State University in Sault Ste. Marie.

Library:

Escanaba Township does not have a public library, but residents can access the library located at the Gladstone Middle School. Township residents can also utilize the Gladstone Public Library located at 300 South 10th Street in Gladstone or the Escanaba Public Library, located at 400 Ludington Avenue in Escanaba. Escanaba Township has a service contract with the City of Gladstone to borrow books at no cost, but it does not have one with the City of Escanaba. Residents of Escanaba Township who desire to borrow books from the Escanaba Public Library must obtain a non-resident card at a \$20 per-year cost for an individual or family. The facility,

the largest public library in the County, has 70,000 volumes and an annual circulation of about 123,000.

Solid Waste and Recycling:

Escanaba Township residents utilize several disposal companies in Escanaba as their contracted solid waste and recycling service providers. These various disposal companies provide municipal curbside pick-up for Escanaba Township residents. Once solid waste and recyclables have been picked up they are then delivered to the Delta County Landfill and Recycling Center located at 5701 North 19th Street in Escanaba. The various disposal companies do not offer a spring or fall clean-up program, but Escanaba Township does offer its residents a \$30.00 Trash Voucher that is awarded at the time when residents pay their taxes. This once per year voucher enables Escanaba Township residents to bring up to \$30.00 worth of any acceptable waste to the Delta County Landfill.

The Delta County Landfill is currently located on a 63-acre parcel of land in the northeastern corner of Escanaba. The Delta County Solid Waste Authority recently purchased 350 acres to develop a new site adjacent to the current site to meet the future solid waste needs of the county. The landfill began operations in December of 1985 and accepts both Type II waste (residential/household waste) and Type III waste (demolition debris). The Delta County Solid Waste Authority, organized in 1985, owns and manages the landfill. The appointed seven-member authority includes three members appointed by the county township association; three members representing the two cities appointed by the respective city council/commission and one member appointed by the county board of commissioners. The Authority members select the officers. According to the annual report from 2005, the landfill receives about 28,773 tons of municipal solid waste per year. The landfill has a life expectancy of 4 years. Waste arriving into the landfill comes from all units of government in the County. The waste collected from these entities either is directly hauled to the landfill or hauled to one of several transfer stations in the County and then brought to the landfill.

6.4 State & Federal Facilities & Services

In addition to community facilities and services provided by Escanaba Township and Delta County, a variety of state and federal offices and some private providers offer services and facilities to residents of Delta County and beyond.

There is mail delivery service in the township, provided by the City of Gladstone post office.

State and Federal Offices:

Delta County is the location of many state and federal agencies, especially district, regional, and U.P. wide agency offices. State agencies located in the County include: the Office of Aging Services, Department of Agriculture, Department of Civil Rights, Department of Consumer & Industry Services, Department of Corrections, Department of Environmental Quality, Family

Independence Agency, Department of Management & Budget, Escanaba District Court, Michigan Works!, Michigan Jobs Commission Rehabilitation Services, Department of Natural Resources, Secretary of State, Department of Transportation, and Department of Treasury. Federal agencies with offices in the County include: the Department of Agriculture, Department of Army-Corp of Engineers, Coast Guard, Department of Commerce (National Weather Service), U.S. Courts, Department of Justice, Department of Labor, Department of Transportation (Federal Aviation Administration), Drug Enforcement Administration, Federal Bureau of Investigation, Department of Interior (U.S. Fish & Wildlife Service), Department of Labor, Small Business Administration, and Social Security Administration.

6.5 Issues & Opportunities

There is no municipal water system for Escanaba Township. A fund has been started in the case that a municipal system would be needed to provide for the Township's water service requirements or if there is a desire to expand the current capacity.

The power supply at the Township Hall is very limited and future needs may include adapting the hall to accommodate greater needed power. The township hall basement also gets inundated with water in the spring-time and there should be some planning to remedy this situation in the near future.

The government offices at the Township Hall are cramped for space and it may become necessary to implement a plan to create an addition to the building or should residents desire, plan and fund a new structure that could better serve the future wishes of the community. Perhaps a "Township Area" approach instead of a "Town hall building" could be forecasted to include a common town hall building, recreation center, dance hall, and picnic area. This kind of facility would be useful to all township residents and at all times, to anyone who desired to use it – probably much as the current facility is used today.

As stated above, it may be beneficial to have all of the township's facilities located on one parcel. This would require settling on a common parcel somewhere in the vicinity of the current township facilities. However, due to the current state of the facilities, this is not an immediate issue. As the township grows and creates more revenue, a committee could eventually be formed to review the current facilities and issues to see if new development is a sustainable option for the township. Overall, Escanaba Township's public and community facilities provide sufficient capacity, are in good repair, and are well maintained.

7.0 HOUSING

7.1 Introduction

The housing characteristics of Escanaba Township are important elements of the master plan. Housing location is a determinant in the location of public facilities and the costs associated with the provision of public services. Moreover, housing characteristics are indicators of existing social and economic conditions.

National statistics show that home ownership is at an all-time high. Concurrently, the number of households renting is growing faster than the rate for new households overall. Personal income is obviously central to the ownership-rental issue, but other considerations make renting the choice of many persons not constrained by personal economics in increasing numbers.

Neighborhood conditions reflect past and current choices. Well-maintained structures are indicative of healthy neighborhoods that residents find worthy of investment. In a sense, neighborhoods compete with one another and, as such, represent products that people buy.

The information contained in this chapter reflects the most recent housing data available. Age, type and occupancy related to existing housing are included for analysis. This information will help township officials assess housing needs and determine appropriate measures to be undertaken in addressing those needs.

7.2 Characteristics

The Census Bureau recorded a total of 1,520 housing units in 2010. Over a ten-year period beginning in 2000, the number of housing units increased by 122 units (8.7%). During the same period, Delta County's housing unit total grew from 19,223 to 20,214 an increase of 991 units (5.2%).

The City of Gladstone (+142/6.2%) and Wells Township (+172/8.9%) experienced similar growth rates in housing units from 2000 to 2010. For the same 10-year period, the growth rate of housing units was slightly lower for the State (7.0%) and lower yet for the region (5.0%).

While home ownership nationally is at an all-time high, the number of renters is increasing even faster.

Housing unit totals as recorded in official census data for the years 1980, 1990, 2000 and 2010 are presented in Table 7-1.

Unit of Government	1980	1990	2000	2010
Escanaba Township	1,047	1,192	1,398	1,520
Wells Township	1,778	1,838	1,922	2,094
City of Gladstone	1,709	1,970	2,289	2,431
City of Escanaba	5,856	6,063	6,258	6,178
Cornell Township	330	304	371	413
Delta County	16,881	17,928	19,223	20,214
CUPPAD Region	80,271	85,650	91,106	95,628
State of Michigan	3,448,907	3,847,926	4,234,279	4,534,279

Source: U.S. Bureau of the Census, General Housing Characteristics, for the years cited

Occupancy and Tenure

In 2010, 89.5 percent of the Township's housing units were occupied. As shown in Table 7-2, this represents 1,361 of the 1,520 total housing units. The occupancy rate, expressed as a percentage, was substantially higher in the Township than in the county and region. Lower occupancy rates in these areas are largely a result of the many recreational and seasonal units.

Ninety-five and ½ (95.5%) percent of the Township's occupied housing units were occupied by their owners. This compares with 79.0 percent for the county and 75.8 percent for the region.

Housing Units	Escanaba Township		Delta County		CUPPAD Region	
	Number	Percent	Number	Percent	Number	Percent
<i>Total Units</i>	1520	100.0	20214	100.0	95628	100.0
Occupied	1361	89.5	15992	79.1	73020	76.4
Owner	1300	95.5	12636	79.0	55375	75.8
Renter	61	4.5	3356	21.0	17645	24.2
Vacant	159	10.5	4222	20.9	22608	23.6

Source: U.S. Bureau of the Census, 2010 Census of Population and Housing

Units in Structure

Census data from 2010 shows that the Township's housing stock consisted of 89.8 percent single family detached units. This figure compared with 62.2 percent for the City of Escanaba, 79.3 for the county, and 78.1 and 71.7 for the region and state respectively.

Most of the remaining housing stock was of the mobile home type. Housing types found in the Township and adjacent areas are presented in Table 7-3.

Table 7-3 Units in Structure Percentages, Selected Areas, 2010							
Unit Type	Escanaba Township	City of Escanaba	City of Gladstone	Cornell Township	Delta County	CUPPAD Region	State of Michigan
1, detached	89.8	62.2	76.3	86.1	79.3	78.1	71.7
1, attached	0.8	1.7	0.2	0.0	1.0	1.6	4.6
2 units	0.0	9.0	2.7	0.0	3.3	3.5	2.8
3 or 4	0.0	5.8	2.2	0.0	2.3	2.4	2.6
5 to 9	0.0	5.5	3.2	0.0	2.2	2.9	4.2
10 to 19	0.9	2.0	0.0	0.0	0.8	1.7	3.6
20 or more units	0.0	7.5	8.8	1.2	3.4	3.0	4.8
Mobile Home	8.5	6.2	6.6	12.7	7.6	6.7	5.6
Other	-	-	-	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: U.S. Bureau of the Census, 2010 Census of Population and Housing, STF 3A, H20

Age of Housing

About 22 percent of the homes in Escanaba Township were constructed before 1959. Development occurred earlier in the cities of Escanaba and Gladstone and is reflected in the larger percentage of housing units built before 1959. Units built during the other decades shown in Table 7-4 represent an increase in the desirability of the township for residence.

Table 7-4 Housing Units by Year Structure Built, Selected Areas (%)								
Unit of Government	% 2005 or Later	% 2000 to 2004	% 1990 to 1999	% 1980 to 1989	% 1970 to 1979	% 1960 to 1969	% 1959 or earlier	Total
Escanaba Township	1.8	6.6	22.6	14.2	27.9	5.2	21.7	100.0
City of Escanaba	1.2	1.2	6.5	6.1	14.1	9.4	61.6	100.0
City of Gladstone	0.9	6.8	14.9	7.6	7.4	8.3	54.1	100.0
Cornell Township	0.9	8.6	5.6	20.6	17.1	15.6	31.5	100.0
Delta County	1.3	4.5	12.8	9.9	17.4	9.3	44.7	100.0
State of Michigan	2.2	7.1	12.8	9.9	15.7	12.1	40.2	100.0

Source: U.S. Bureau of the Census, 2010 Census of Population and Housing. Household Type and Relationship

The U.S. Census Bureau categorizes households into three types: 1) family households, 2) non-family households, and 3) group quarters.

In 2010, 99.3 percent of township residents lived in family households. As illustrated in Table 7-5, this percentage was slightly higher than that recorded for the county and state. A family household consists of a householder and one or more persons living in the same household related by birth, marriage or adoption. Children comprised 27.3 percent of the family household population. This percentage does not differ substantially from those recorded for the county and state. Among non-family households, the township was lower than the county and state.

Group quarters apply to both institutionalized and non-institutionalized persons. Institutionalized persons are those authorized for confinement, custody or supervised care in correctional facilities, juvenile detention facilities, or nursing homes. Non-institutional group quarters include college dormitories, military facilities and group homes. The percentage of persons residing in such arrangements varied only slightly for the township, county and state.

Between 2000 and 2010, the number of family households and married-couple households declined slightly with a corresponding increase in the number of non-family households. A decrease in the number of family and an increase in non-family households was recorded. The number of married-couple families increased.

Table 7-5 Household Type and Relationship, Selected Areas, 2010						
Persons	Escanaba Township		Delta County		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent
TOTAL PERSONS	3482	100.0	37069	100.0	9883640	100.0
In Households-	3458	99.3	36446	98.3	9654572	97.7
Householder	1361	39.1	15992	43.1	3872508	39.2
Spouse	949	27.3	8274	22.3	1857127	18.8
Child	949	27.3	9492	25.6	2892845	29.3
Other Relatives	100	2.9	925	2.5	493487	5.0
Non-Relatives	99	2.8	1763	4.8	538605	5.4
In Non-Family Households	300	22.0	5611	35.1	1318435	34.0
Householder Lives Alone	247	18.1	4765	29.8	1079678	27.9
Householder 65 and over	94	6.9	2214	13.9	395437	11.2
In Group Quarters	24	0.7	623	1.7	229068	2.3
Institution	18	0.5	391	1.1	109867	1.1
Noninstitutionalized	6	0.2	232	0.6	119201	1.2

Source: U.S. Bureau of the Census, 2010 Census of Population and Housing, DP-1.

Household Size

Escanaba Township's average household size in 2000 was 2.76 persons. This trend is consistent with data compiled locally, regionally and statewide. Moreover, this trend is evident at the national level and is the result of smaller family sizes and an increase in the number of single parent families.

Table 7-6 Persons Per Household, Selected Areas, Multiple Years				
Area	Persons Per Household			
	1980	1990	2000	2010
Escanaba Township	2.84	2.78	2.76	2.54
Delta County	2.62	2.49	2.37	2.28
CUPPAD Region	2.78	2.64	2.37	1.80
State of Michigan	2.84	2.66	2.56	2.49

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

Housing Values and Rents

Escanaba Township's median housing value in 2010 was \$136,200. Lower values were recorded for Cities of Escanaba and Gladstone due in part to the inclusion of the Bluff area homes in the township that elevate the median value. These comparisons are presented in Table 7-7.

Median rents for 2010 are compared in Table 7-8. The median rent value for Escanaba Township was \$836 per month. As with housing values, the difference in rent values determined for Escanaba, Gladstone and Delta County were negligible. Escanaba Township recorded the highest median rent in the area, while the State’s was determined to be \$723. Lower median rents were found in the City of Gladstone.

Table 7-9 provides detailed information on the rent paid for housing units in the township, county, region and state. Contract rent is the monthly rent agreed to or contracted for, regardless of any furnishings, utilities, fees, meals, or services that may be included. For vacant units, it is the monthly rent asked for the rental unit at the time census information was being collected.

Table 7-7 Comparative Median Housing Values, Selected Areas, 2010	
Area	Median Housing Value
Escanaba Township	\$136,200
City of Gladstone	\$86,700
City of Escanaba	\$85,300
Delta County	\$100,600
CUPPAD Region	\$107,600
State of Michigan	\$144,200

Source: U.S. Census Bureau, 2006-2010 American Community Survey, DP04

Table 7-8 Median Gross Rent, Selected Areas, 2010	
Area	Value
Escanaba Township	\$836
City of Gladstone	\$444
City of Escanaba	\$510
Delta County	\$522
State of Michigan	\$723

Source: U.S. Census Bureau, 2006-2010 American Community Survey, DP04

TABLE 7-9 CONTRACT RENT SPECIFIED, RENTER-OCCUPIED HOUSING UNITS, SELECTED AREAS, 2010								
Value	Escanaba		Delta County		CUPPAD Region		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Less than \$200	0	0.0	96	3.1	604	4.3	28,093	3.0
\$200 - \$299	0	0.0	335	10.9	1,321	9.4	37,699	4.0
\$300 - \$499	0	0.0	915	29.6	4,252	30.2	112,656	12.0
\$500 - \$749	22	32.4	1,137	36.8	5,186	36.8	325,818	34.8
\$750 - \$999	33	48.5	400	13.0	1,722	12.2	240,553	25.7
\$1000 - \$1499	13	19.1	194	6.3	864	6.1	149,201	16.0
\$1500 or more	0	0.0	10	0.3	151	1.1	41,225	4.4
Total	68	100	3,087	100	14,100	100	935,245	100

Source: U.S. Census Bureau, 2006-2010 American Community Survey, DP04

Note: Specified Renter-Occupied Housing Units Paying Cash Rent includes all renter-occupied housing units except one-family houses on 10 or more acres.

7.3 Financial Characteristics

Escanaba Township's median household and family income levels in 2009 are presented in Table 7-10. The township's 2010 median household income was \$56,926; median family income was \$64,333. These income measurements show that the township income levels for families and households are higher than the county and the state levels.

Per capita income in the Township was \$27,218, or 23 percent higher than for the county overall. In comparison, the Township per capita income level was higher than both the county and state.

Table 7-10 Income Levels, Selected Areas, 2010					
Area	Median Income		Per Capita Income	Income Below Poverty Level	
	Household	Family		% of Persons	% of Families
Escanaba Township	56,926	64,333	27,218	10.6	8.5
Delta County	41,951	51,442	22,064	12.7	8.7
State of Michigan	48,432	60,341	25,135	14.8	10.6

Source: U.S. Census Bureau, 2006-2010 American Community Survey, S1901, DP03.

7.4 Select Housing Characteristics

Substandard housing condition information is provided in Table 7-11. Housing units lacking complete plumbing (hot and cold piped water, flush toilet, and bathtub or shower) or complete kitchen facilities (an installed sink, range and other cooking appliance, and refrigerator) are considered substandard. Seasonal housing units have an impact on the percentages shown for the county, region and state. None, 0.0 percent of the township's housing units were substandard using criterion established for kitchens and plumbing and are synonymous with camp or seasonal type structures common to the area. This comparison is parallel with Delta County and the State averages (all less than 1%).

Table 7-11 Substandard Housing, Selected Areas, 2010								
Characteristics	Escanaba		Delta County		CUPPAD Region		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Lacking Complete Plumbing Facilities	0	0.0	131	0.8	379	0.5	15,376	0.4
Lacking Complete Kitchen Facilities	0	0.0	147	0.9	473	0.7	23,064	0.6

Source: U.S. Census Bureau, 2006-2010 American Community Survey, S2504

According to 2010 Census information detailed in Table 7-12, 50.2 percent of the Township's occupied housing units used utility gas for heating. For the county and region overall, the percentage was about 61 percent and 78.0 for the state. Occupied Township housing units heating with propane represent 26.0 percent of the total. This was higher than for the other areas in the comparison. About 15 percent of the Township's occupied housing units used wood for heating.

Source	Escanaba		Delta County		CUPPAD Region		State of Michigan	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Utility Gas	706	50.2	9,951	60.9	43,899	61.4	2,997,239	78.0
Bottled, Tank or LP Gas	365	26.0	3,111	19.0	12,149	17.0	352,528	9.2
Electricity	9	0.6	870	5.3	4,974	7.0	270,560	7.0
Fuel Oil, Kerosene, etc.	99	7.0	796	4.9	3,551	5.0	78,658	2.0
Coal or Coke	0	0.0	0	0.0	18	0.0	1,024	0.0
Wood	214	15.2	1,505	9.2	6,357	8.9	105,886	2.8
Solar Energy	0	0.0	0	0.0	12	0.0	675	0.0
Other Fuel	0	0.0	57	0.3	371	0.5	26,326	0.7
No Fuel	13	0.9	49	0.3	210	0.3	11,101	0.3
Total Units	1406	100	16,339	100	71,541	100	3,843,997	100

Source: U.S. Census Bureau, 2006-2010 American Community Survey, DP04

7.5 Private Housing Development

New housing development has been concentrated to the east of the Escanaba River in the Lake Bluff area and north-east section of the township. Development in the Flat Rock area where the township hall is located is limited to agricultural land use and by the limited provided services to the outer reaching areas in the township. New development could occur north of the Lake Bluff area near the Gladstone High School where property has been purchased and delegated for residential development.

7.6 Public Housing Development

No multi-family or public housing structures exist within Escanaba Township.

7.7 Housing Assistance

Housing rehabilitation, weatherization (insulating, caulking, etc.) and home purchasing assistance programs are provided through the Community Action Agency of Delta County. Applicants must meet established eligibility guidelines to qualify.

The Habitat for Humanity-Bay de Noc Chapter was founded in the late 1980s and included Delta County and the Escanaba Township. Applicants are considered based on family income, current home conditions, willingness to participate in a home building project through “sweat equity,” and other factors. Habitat home building projects are constructed by community volunteers and homeowners-to-be on donated land parcels. Fifty (50) Habitat for Humanity homes were built in the Escanaba area and although none of these projects were attempted in Escanaba Township, their services are noted. As of this time, the Bay de Noc Chapter has ceased and interested parties should contact the Marquette County Chapter for further information.

7.8 Specialized Housing

Pine Haven and Country Acres represent the two assisted living facilities and/or group homes which are found within the township. Those facilities requiring state licensing are regulated as to the number and type of residents, the services provided, and staffing requirements.

7.9 Issues & Opportunities

Attractive parcel sizes and lower taxes continue to attract homebuyers to the township area. There has been a continued concentration of new home development in the Lake Bluff area and along the ribbon development in the Flat Rock Area.

Of the Township’s 1,406 occupied housing units, 5.4 percent were renter units. Overall vacancy rates, as recorded in 2010, were 11.2 percent.

Escanaba Township's housing stock includes a higher percentage of single-family detached units than was recorded in surrounding areas.

Over 21 percent of the township's housing stock was constructed before 1959. Older structures are more likely to present condition and efficiency concerns. Structural integrity and aesthetics are essential to neighborhood preservation.

Consistent with national trends, non-family households have been increasing and the average number of persons per household have been declining in the township. The average household size in 2010 was 2.54 persons.

Median rents and housing values in 2010 were higher within the local market area and region, reflecting a favorable living environment and economic conditions.

The percentage of substandard housing units in the township was very low according to the most recent census findings.

Private housing development is constrained by land availability and environmental conditions caused by well water contamination. Street grid systems and sidewalks are largely absent in newer developments.

In recent years, most of the building permits were for garages, 46 out of 87 total building permits.

Delta County Building Permits 2015 – 2017

Permit Type	2015	2016	2017	Totals
Alterations/Repairs	7	7	7	21
Garage	18	8	20	46
Res./Mobile/Mod.	6	8	6	20
Totals	31	23	33	87

Source: Delta County Zoning & Building Dept.

Regulation of dilapidated structures as provided under Ordinance # 8-05, which provides a means to protect citizens from unsafe and unsanitary conditions.

8.0 TRANSPORTATION

8.1 Introduction

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

Roads and other transportation systems have been largely influenced by physical barriers present such as rivers, lakes, swamps and rugged terrain. Therefore, transportation routes generally were established where physical features offered the least resistance.

An inventory of existing transportation facilities in Escanaba Township and surrounding areas is presented in this chapter. According to data from the Michigan Department of Transportation, there are 881.36 miles of Delta County public roadways minus the state public roadway.

8.2 Road System

Michigan Act 51 of 1951 requires that all counties and incorporated cities and villages establish and maintain road systems under their jurisdiction, as distinct from state jurisdiction. Roads within the Township, classified under Act 51, are identified on Map 8-1.

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

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

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

State Trunkline Highway

Road prefixes “M” and “US” denote state and federal highways respectively and are included in this category. State trunklines provide the highest level of traffic mobility for the public. While the highway system carries more than half the total statewide traffic, it is only 9 percent of the Michigan roadway network length. State and federal highways are designed by the prefixes “M” and “US” respectively. M-35 in Escanaba Township extends from the City of Escanaba north to the northern township boundary along the eastern portion of the township at a distance of approximately 5.5 miles. M-35 is one of the two principal north-south routes across the central portion of the Upper Peninsula. The southern segment of M-35 in Escanaba Township is also shared by U.S. 2, a major east-west corridor and U.S. 41.

County Road System

County roads are classified as either primary or local.

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

Within Delta County there are 352.02 miles of county primary roads and 23.44 miles located within Escanaba Township. Primary roads within the township are paved and include the following roads (See map 8.1):

- | | |
|---------------------------|----------------------------|
| - 20 th | - 21 st |
| - Co 416 23 rd | - Co 420, 21 st |
| - Co 426L | - Co 426 M.5 |
| - Days River 24.5 | - J |
| - L | - P |
| - P.5 | |

Roads not classified as primary are considered local. Local roads comprise the most miles in the county system, but have the lowest level of traffic. The roads in this system are often referred to as “township roads,” though the county road commission maintains jurisdiction of those roads. There are a total of 529.34 miles of local roads within Delta County, with 43.45 miles being in Escanaba Township.

Federal Roads

There are no roads that are part of the Federal Forest Roads system in Escanaba Township. Countywide, there are 115.86 miles of roads located within the Hiawatha National Forest.

8.3 Private Roads

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

The Road Commission will not provide any maintenance service to privately owned roads. The condition and location of private roads may affect some of the services provided to the residents such as fire protection, garbage collection, and emergency services. Access for fire and emergency vehicles on private roads can be difficult, especially if the roads are badly maintained, narrow, and/or lack enough space for turning around. As further development occurs along private roads, the possibility of conflicts between residents living along these roads

with ongoing maintenance may occur. Often residents will request the Township Board, or the Road Commission pay for maintenance of private roads.

Residents living on private roads need to be aware that school bus service may not be provided. Generally, school buses will pick-up students only on public roadways.

Situations may have occurred in Escanaba Township where structures along private roads have been placed on existing easements.

To remedy these problems in the future, Escanaba Township should consider including stipulations in its zoning ordinance or land division ordinance that requires private roads serving new residential areas to conform to certain dimensional and maintenance standards. It is also possible to prohibit subdivision and development of property unless the resulting parcels have direct access to public roads. Zoning ordinance provisions may require that the structure be constructed a specified distance from the centerline of a private road or easement. However, even if a road is constructed to county road commission standards, the Delta County Road Commission may not accept it into the county road network.

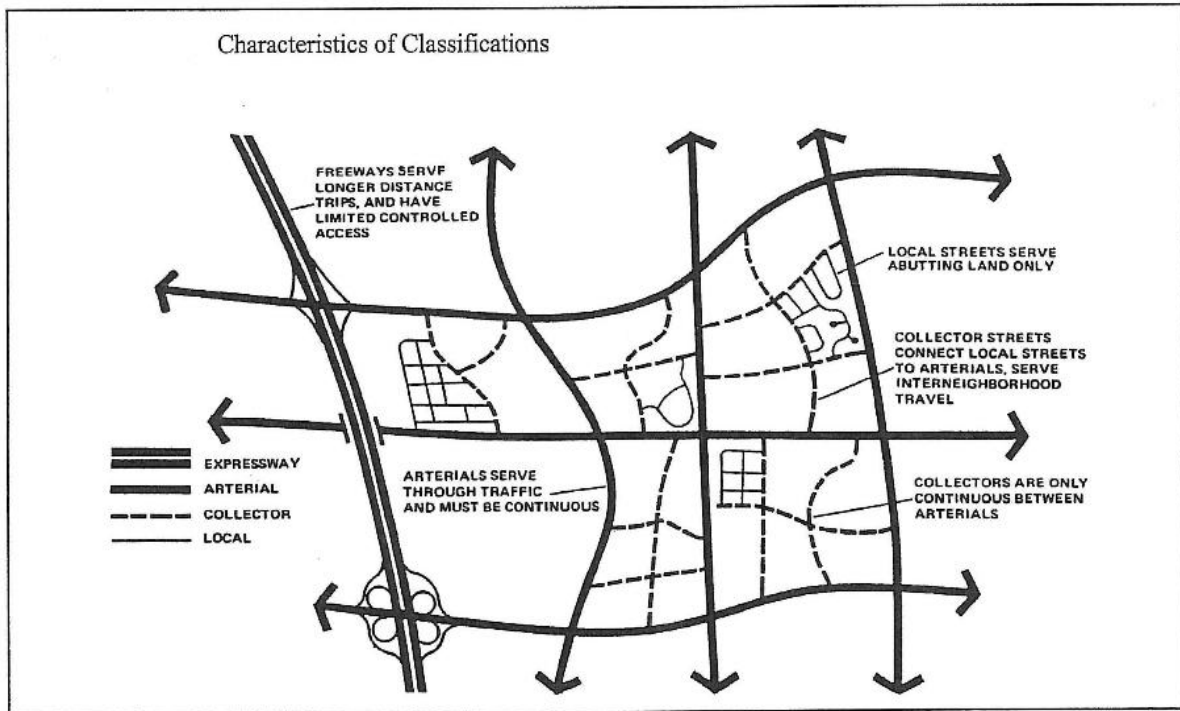
Residents living on a private road may petition the Township for permission to name the private road. Before the Township Board approves the road name, the name is first presented to the Planning Commission for their review and recommendation. The Planning Commission, after being assured that a majority of the property owners on the road concur with the name chosen, determine if the name is appropriate, that it is not confusing or similar in sound to existing roads, or that it has not been used elsewhere in the township.

8.4 National Classification of Roads

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

The functional system creates more categories than is provided under P.A. 51. All roads in the functional road classification system that are arterials and collectors are considered either state trunklines or primary roads in the county road system under P.A. 51.

The following graphic shows the characteristics of road classifications.



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

Principal Arterial

Roads within this classification function mainly to move traffic over medium to longer distances quickly and safely and efficiently. Often the movement is between regions or major economic centers. In Escanaba Township, the segment of M-35/U.S. 2/U.S. 41 along the southeastern edge of the township is classified as a principal arterial, at a distance of about 1.5 miles.

Minor Arterial

Roads within this classification function to move traffic over medium distances within a community or larger area at a moderate to a quick rate. There are 14.2 miles of roads within this classification in Escanaba Township.

Collector Roads

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

Within Escanaba Township, County 416 23rd Road is considered a “major collector road” and “L” Road is considered a “minor collector road.” Together these two roads are a part of a network that encompasses 13 miles of collector roadways classified in the Township.

Local Roads

All roads not serving as arterials or collectors are classified as local. The predominant function of roads in this classification is to provide direct access to adjacent land uses. A local road serves as the end for most trips within a community. The Township’s 44.6 miles of local roads provide direct access to adjacent land uses and should be designed to move traffic from an individual land parcel to places of business and employment via collector roads.

8.5 Road Condition Evaluation

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

An evaluation of the state’s road bridges by MDOT estimates that 92 percent of Delta County’s bridges are rated as “in good condition” for 2007. Bridge rehabilitation and replacement is scheduled on a “worst first” basis. The Escanaba Township bridge located on M-5 road near Carroll’s Corner has been reconstructed in place of the old bridge.

Roads within Escanaba Township have been evaluated using the PASER (*Pavement Surface and Evaluation and Rating*) system. In the summer of 2005, a survey team consisting of road commission members and CUPPAD staff drove all of the roads and the PASER system was used to evaluate the pavement surface condition. The results of the survey are attached as an appendix to the plan (Appendix B).

8.6 Road Improvements

The Escanaba Township bridge located on M-5 road near Carroll’s Corner has been reconstructed by the County Road Commission. The bridge was deemed a priority within the township. A concrete span was constructed in place of the old bridge. Closure of the bridge for reconstruction, posed a minor problem due to that road being a dead end. Easements were needed from property owners so that an alternative route would be available during the reconstruction phase.

The Planning Commission has compiled a priority listing of roads and bridges needing improvements.

<p align="center">Table 8-1 Escanaba Township Road/Bridge Improvement Listing</p>		
Priority Number	Bridge/Road Name	Type of Improvement Needed
1	21 st Road (western segment)	Structural
2	“G” road (north of twp line)	Structural
3	D6	Structural
4	19 th Lane (north of twp line)	Structural
5	“M” Lane (north of 21 st road)	Structural
6	“K” Road	Structural
7	“L” Road	Structural

8.7 Financing

Local Funding

The Township does not levy millage for road improvement projects, but does budget general fund monies for roadwork. In 2018 the Township budgeted \$175,000 for transportation improvements and street signs, but on average the township budgets \$140,000 per year. In recent years the township has spent most of these budgeted funds. Monies spent have been for resurfacing and for structural improvements.

Michigan Transportation Fund

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

Michigan Transportation Economic Development Fund (TEDF)

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

- 1. Category A - target industries
- 2. Category B - state trunkline takeover
- 3. Category C - urban congestion
- 4. Category D - rural primary
- 5. Category E - forest road
- 6. Category F - urban area

Other

Federal assistance for state highways is supported mainly through motor fuel taxes. Construction and repair costs associated with state trunkline systems are generated from these taxes.

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

8.8 Traffic Flow and Volume

It is anticipated that travel demand will grow by 50 percent in the next decade. Each year sees more cars, more drivers and fewer carpoolers. Nationally, two car households increased from 10 million in 1960 to 40 million in 2000. The largest population growth is occurring in suburbs where dependence on private automobiles is greatest. New road construction is not keeping pace with this growth and roads are becoming increasingly crowded.

According to the Michigan Department of Transportation, highway travel in Michigan is increasing at a far greater rate than the state population. Michigan roads have experienced an increase in traffic volume. In 1940, travel logged on Michigan roads totaled 14.6 billion miles. The total travel volume in 2001 was 96.6 billion miles, an increase of more than six and one-half times more than 1940. Volumes are usually presented as an average daily traffic (ADT) figure, and are calculated for a particular intersection or section of roadway.

Traffic counting devices are used by the Michigan Department of Transportation to record volumes at set points along state trunklines. Tables 8-1 and 8-2 offer comparisons of MDOT traffic volume data from 1994 to 2017 taken along US2/41 & M-35 in Escanaba Township. Traffic counts at the Escanaba Township locations have increased overall between 1994 and 2017.

Table 8-2									
Average Annual Traffic Counts for Selected Years									
Route	Counter Location	1994	1998	2000	2002	2003	2004	2017	Change 1994-2017
US2/41/ M-35	Near Sheridan Road	19,000	23,300	23,500	22,900	22,900	23,800	23,398	23.1% Increase
M-35	Gladstone (west of US 2/41 junction)	8,400	9,300	9,100	9,000	9,100	9,000	7,543	-10.2% Decrease
M-35	Near Chaison Road	3,000	3,800	3,600	3,500	3,500	3,700	2,879	-4.0% Decrease

Source: Michigan Department of Transportation, Annual Average 24-Hour Traffic Volumes, 2017, 2004, 2002, 2000, 1998, 1994.

Table 8-3									
Average Annual Commercial Traffic Counts for Selected Years									
Route	Counter Location	1994	1998	2000	2002	2003	2004	2017	Change 1994-2017
US2/41 & M-35	Near Sheridan Road	1,300	940	940	1,500	1,500	1,400	1,541	18.5% Increase
M-35	Near Clark Drive	370	370	390	390	390	410	365	-1.4% Decrease
M-35	Near Chaison Road	370	370	390	390	390	410	231	-37.6% Decrease

Source: MDOT, Commercial Traffic, 2017, 2004, 2003, 2002, 2000, 1998, 1994.

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

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

Access management consolidates driveways, provides better vehicle and pedestrian circulation and otherwise reduces the impact of roadside land use on the efficiency of the road system. It requires a good relationship among road agencies, local government and property owners to develop an access plan and possibly adopt an overlay zoning district. This approach has yielded successes for some communities. Such a strategy may be useful along M-35 before such a problem occurs in the Township.

Information from the Michigan Department of State indicates that vehicle registrations in the passenger and motorcycle categories have been increasing. Compared to rising registration numbers for vehicles (passenger and motorcycle), trailer and commercial registrations have decreased markedly. Commercial vehicle registrations in Delta County decreased considerably from 2003 to 2017. Passenger vehicle registrations in the county from 2005 to 2017 have increased significantly. As of 2005, there are slightly less registered cars, trucks and motorcycles (36,441) than residents (38,520). Comparisons are presented in Table 8-4.

Unit of Govt.	Passenger Vehicles			Commercial Vehicles			Trailers			Motorcycles		
	2003	2005	2017	2003	2005	2017	2003	2005	2017	2003	2005	2017
Delta Co.	5,000	26,739	30,490	3,255	8,591	2,308	1,954	1,933	1,173	281	1,111	1,191
State of Mich.	6.5 mil.	6.9 mi.	7.7 mil.	2.0 mil.	1.3 mil.	0.47 mil.	1.2 mil.	0.25 mil.	0.18 mil.	0.21 mil.	0.25 mil.	0.26 mil.

Source: Michigan Secretary of State, 2003, 2005, 2016/17.

8.9 Public Transportation

The Delta Area Transit Authority (DATA) was formed in September 1989 under the authority of P.A. 196. In its first year of Customer Service Operations, DATA Bus exceeded its five-year growth projection. In 1997 DATA Bus moved Bus Maintenance and Customer Service Operations into a new 12,500 square foot Inter-Modal Transportation Facility and was funded by Federal (80%) & State (20%) investments in the amount of \$850,000.

Our facility houses our computer dispatch, business office, bus maintenance, bus parking garage and serves as a regional intercity transportation center by selling Indian Trails bus tickets for 4 bus routes that service Escanaba every morning 7 days a week.

DATA Bus currently provides 120,000 rides annually in Delta County. In FY 2012 DATA provided 132,931 passenger trips and drove 434,443 miles with a fleet of 17 wheelchair lift equipped buses.

DATA is currently supported 36% State funding, 18% federal funding, local contracts and bus fares and millage from the cities of Escanaba and Gladstone and the townships of Brampton, Ensign, Escanaba, Ford River and Masonville. The fares within the millage paying area are as follows:

- Up to 5 miles: \$2.00
- 5 to 10 miles: \$4.00
- 10 to 20 miles: \$6.00
- 20 to 30 miles: \$8.00
- 30 to 40 miles: \$10.00

Anyone living outside these millage paying communities are in a "non-participating" area and have higher bus fares.

- Up to 5 miles: \$6.00
- 5 to 10 miles: \$12.00
- 10 to 20 miles: \$18.00
- 20 to 30 miles: \$24.00

8.10 Rail Service

There are two rail lines in Escanaba Township, the Escanaba & Lake Superior (ELS) and Canadian National (CN).

The most important portion of the Canadian National rail line running through Delta County was the iron ore pellet line from the Marquette iron ore range to the ore docks in Escanaba. Since 1864, iron ore pellets from the mining operations in Marquette County have been transported to Escanaba by railroad, where they were loaded onto ships and transported to steel plants along the lower Great Lakes. The portion of the rail line that runs through the southwestern part of the County is an important line for transporting raw materials and supplies to paper making operations located in the U.P. and northeastern Wisconsin. Canadian National is expected to continue to maintain all its current lines in the U.P. Iron ore no longer is hauled by the railroad company to the County. It remains to be seen whether the Empire Mine in Marquette County will be reopened and what this will mean for renewing iron ore rail shipments to the Escanaba ore dock.

Canadian National (CN) has a major operating hub located in the City of Gladstone. Activities occurring at this terminal facility include: switching of freight cars, repairs to freight cars, and servicing of locomotives. CN has proposed adding an intermodal terminal at this facility. At this time, the proposed project is in development and is not actively being pursued, nor is it in the company's current capital budget. In early 1996, a private developer began construction of a transloading and warehouse facility along CN tracks just north of the Verso paper mill in Wells Township. The developer plans to add intermodal capability in the future.

The Escanaba and Lake Superior rail line goes from the company's main office facility in Wells Township to the community of Channing in Dickinson County, where it connects to a north/south line. This line has very little freight traffic. It is principally used as a line for connecting the company's main office facility with its main rail lines that run from Ontonagon to Channing and from just north of Republic to Green Bay, Wisconsin. The facility in Wells Township is used for repairing cars and locomotives. Over the last 15 years, abandonment proceedings for the rail line between Wells and Channing have been initiated twice; however, the track has remained in use.

8.11 Air Transportation

Commercial passenger service is available from Delta County Airport in Delta County and Sawyer International Airport in Marquette County approximately 45 miles in distance from the Township. An airfield of refuge, which is privately owned by the Kenneth Strauss Family and is located near M5 ROAD in Section 14, also serves the township.

8.12 Non-motorized Transportation Facilities

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

Sidewalks have served to connect residents to their neighborhoods, schools, stores and workplaces for as long as they have been around. In the absence of sidewalks, people will either drive to where they need to go or use the street as they would a sidewalk. Sidewalks are pedestrian transportation corridors. The recommended standard for requiring sidewalks is where lot sizes are 10,000 square feet and smaller. Wider shoulders, for instance can provide an added measure of safety for bicyclists and pedestrians.

8.13 Issues and Opportunities

The ability of the Delta County Road Commission to keep up with maintenance and construction needs on the county road system has increased in recent years. If funding continues to be secured, the Road Commission will continue to maximize maintenance, and the condition of many Township roads will improve.

The Township Board and the Planning Commission should work with the Delta County Road Commission and MDOT to ensure that transportation deficiencies are not impediments to investment in the Township.

Escanaba Township should prioritize local road improvement projects and work with the Delta

County Road Commission to schedule these projects as local and road commission funds become available.

The Township should take the proper steps to avoid future conflicts with residents living along private roads, especially when it comes to maintaining these roads and providing certain community services to these residents.

Traffic volumes will continue to increase along the state trunklines in Escanaba Township. Average daily traffic count in Delta County has increased about 18 percent overall in the past 10 years.

The opportunity may exist to work with MDOT to develop access/asset management plans for areas along M-35 in the Township, in order to reduce the potential for future safety hazards and to preserve the current road conditions while spending less money to do so.

The aging of the local population could result in future needs for additional transportation services for the elderly and/or disabled.

Trends indicate that traffic volume will increase by 50 percent in the next decade.

Limited public transportation is available locally on a demand-response basis. Daily bus transportation is available by DATA.

It is the Township's goal to have road reconstructions within the township, as designated by the Township Board, developed using a 28' asphalt surface for the purpose of providing walking and biking on the side of the road.

9.0 CAPITAL IMPROVEMENTS

9.1 Introduction

A Capital Improvements Plan (CIP) is intended to guide elected leaders in future budgetary decisions based on the goals and objectives and project six years into the future.

State Law: The Michigan Planning and Enabling Act (MPEA) was amended through P.A. 33 of 2008 to consolidate planning requirements for cities, counties, townships and villages.

Section 65 of the MPEA states:

“To further the desirable future development of the local unit of government under the master plan, a planning commission, after adoption of a master plan, shall annually prepare a capital improvements program of public structures and improvements, unless the planning commission is exempted from this requirement by charter or otherwise.”

9.2 Capital Improvements Plan Elements

- The capital improvements plan details a minimum of six (6) years of public structures and improvements and is reviewed annually. (Sometimes the purchase of major vehicles, such as fire trucks, are included in a capital improvements plan.)
- The first year of a CIP is the capital budget adopted by the Township Board.
- The capital improvements plan coordinates projects to minimize construction costs.
- The capital improvements plan coordinates with the master plan and budget.
- The capital improvements plan is typically accessible online.

9.3 What is a Capital Improvement Plan?

A Capital Improvement Plan is a financial schedule that helps to prioritize the public improvements identified in the Township’s Master Plan. The CIP includes any improvements or changes to the Township’s physical facilities that involve a substantial investment and last a long time, for example:

- Any construction of a new asset (i.e., a public building, water/sanitary sewer mains, storm sewers, major /local roadways, pathways such as sidewalks and trails, recreation facilities), an addition to rehabilitation of or extension of such a facility, provided that the cost is \$_____ or more and that the improvement will have a useful life of _____ years or more.

- Any purchase or replacement of major equipment to support Township services that cost \$ _____ or more and will have a useful life of three years or more.
- Infrastructure: Basic assets, services, and installations needed for the functioning of the Township such as transportation systems, sanitary, storm, and water lines, parks, public buildings, etc., and the land affiliated with those assets.

9.4 Capital Outlay Projects vs Capital Improvement Plan Projects

A Capital Outlay is any non-major project having a service life of 2 years or more and is not physically dependent on a particular fixed asset. For example, office equipment and service vehicles.

9.5 Funding Sources

Capital Improvement Projects involve the outlay of substantial funds so numerous sources may be necessary to provide financing over the life of the project. Some capital funding sources may be earmarked for specific purposes and cannot be transferred from one capital project to another. As such, the capital improvement plan should be prepared with some projections regarding the amount of funds available. The following is a list of some possible funding sources:

- Internal reserve funds or set aside funds
- Bonds and/or Other Financial Mechanisms
- State Tax act 51 Funding
- Tax Increment Funding
- Tax Millages
- Federal and State Funds (e.g. USDA Rural Development, CDBG)
- Special Assessments
- Donations

9.6 Who Must be Involved?

Each agency or local unit of government with the authority for public structures and improvements shall upon request furnish the planning commission with lists of plans and estimates of time and cost of those public structures and improvements.

9.7 Planning Commission (PC) Role

Section 65 of the MPEA requires the PC to “prepare” a CIP.

- The PC is involved in creating and implementing the Master Plan, and capital improvement projects are an important way to implement recommendations.
- The MPEA also requires the PC to review and provide advisory comments on public projects.
- The PC should also cooperate with adjoining units of local government and seek maximum coordination with various agencies of the state and federal government.
- Those agencies in turn must make public information available and furnish technical assistance and advice.

9.8 Preparing a CIP

Define roles, policies and set a schedule

Appoint a CIP coordinator to lead the project. In some cases, this is the Township Supervisor or it can be the Chair of the Planning Commission. This person is responsible for organizing and drafting the capital improvement plan to submit to the planning commission. This process must be supported by the Township Board because it requires collaboration between all department heads, the planning commission and the township board.

Policy Group

This group is usually made up of department heads relevant to the capital improvement planning process. For example: the Recreation Director, the Treasurer, the Clerk, the Planning Director, the Director of Public Works, Director of Finance, Police Chief, Fire Chief, Township Board members and Planning Commission representatives. When all of these positions do not exist in the township, look for a team that understands the goals and direction of growth in the township, the priorities for spending in the township and the township's finances.

Administrative Team

This group is responsible for the final scoring of the project requests and the crafting of the capital improvements plan to present to the planning commission. This group should consist of managers or supervisors and the director of finance. When all of these positions do not exist in the township, look for a team that understands the goals and direction of growth in the township, the priorities for spending in the township and the township's finances.

Planning Commission

The planning commission is given responsibility by the act to adopt the capital improvement plan after the adoption of the master plan. It is recommended that at least two commissioners are involved in the process from start to finish. The planning commission must fully understand the value and process of the capital improvement program. Once a draft is complete, the planning commission should hold a working session open to the public to review the CIP draft and give the project leader and the administrative team their final edits. After these edits have been incorporated, the planning commission adopts the CIP in an open meeting.

Township Board

The Township should use the capital improvement plan to aid in the adoption of the township's annual budget. This is most effective when the governing body fully understands the benefits and process of the CIP. It is recommended that one elected official be a part of the CIP process from start to finish. The township board is expected to adopt the CIP after the planning commission adopts it, but before the budget is adopted.

Set a schedule

Once the roles have been identified, it's important to set a schedule that clearly outlines the process by times needed. For example, the township board needs to have the capital improvements plan adopted before the adoption of the annual budget. The schedule can work backwards to allow enough time for the entire capital improvement program to follow a comfortable pace. In the end, the schedule may look something like this:

CIP 2019 Schedule (example)

2/5/2019 The Township Supervisor approves the schedule

3/5/2019 Policy group reviews criteria prepared by project leader and makes recommendation to the Planning Commission for adoption.

4/1/2019 Planning Commission adopts criteria

5/20/2019 Project application forms are distributed to all department heads. A project form should be filled out for each project.

6/20/2019 Project applications are submitted to each member of the policy group along with the appropriate amount of score sheets. Projects are ranked, scored and submitted to the administrative team. The administrative team drafts the capital improvements plan based on the priority of the projects for the township and available funds. The length of the plan will depend on the amount of the projects, the years projected out and the capacity of the township.

7/25/2019 The administrative team presents a draft CIP to the planning commission. Ideally, this is during a working session which allows the planning commission to give input and feedback and hear public comment before it is adopted by the planning commission.

8/3/2019 The planning commission reviews during a public hearing and adopts the final CIP and the plan goes to the township board for final adoption.

9/10/2019 The township board adopts the CIP for the Township's annual budget.

CIP 2019 Work/Spreadsheet (example: prepared in Excel)

Escanaba Township: Capital Improvement Possibilities - 2019

Type of Improvement	2019	2020	2021	2022	2023	2024	
							Totals
Bike/Ped. Paths							
New ROWs							
Exist Rd Shldr							
Engineer.							
Construct.							
Fire Dept.							
Trucks							
Other							
Public Water System							
Road Improvements							
Recreation Facilities							
Township Hall							
Cemetery							
Totals							

Updating a CIP

- ***The MPEA requires the PC to annually review and update the CIP.***

- ***The annual review should follow the CIP process.***
 - ***For townships with two-year budgets, the second year is a simple update.***
 - ***Costs, funding sources, timing should be updated, extending out for a six-year period.***

9.9 Creating a Priority System for Project Selection

A key role of the Planning Commission is to highlight the importance of projects that implement the Township’s Master Plan. Below are some considerations for creating a priority system for project selection.

- Projects mandated by state and or federal law will likely receive the highest priority.
- Projects essential to public health or safety or a saving in operating costs often receive priority.
- Projects may be prioritized as: “Urgent”, “Important”, or “Desirable”.
- Basic priorities:
 - Contributes to health, safety and welfare
 - Needs to comply with local, state or federal law
 - Conforms to an adopted program policy or plan
- Remediates an existing projected deficiency.
- Reduces future costs.
- Contributes to the long-term needs and desires of the community.
- Protects or conserves sensitive natural features or natural resources, or air or water quality.
- Reduces energy needs and/or lifecycle costs.
- Improves resiliency to extreme weather events.
- Delivers desired level of service to the community.
- Many communities develop their own priorities and assign weights.

9.10 Funding

The CIP needs to also include:

- Revenue projections/estimates
- Expenditure projections/estimates
- Discussion of alternative financing mechanisms
- An aim to identify specific, realistic funding sources

9.11 Public Engagement

- Remember to provide transparency and accountability in the process
- Demonstrate that you are listening
- Open the process
- Ideally, the public hearing is not the first opportunity for public participation

9.12 Issues and Opportunities

The Township has a fairly limited number of capital facilities.

The Township has recently bought new fire trucks and may not need new ones for a number of years.

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10.0 STRENGTHS, WEAKNESSES, OPPORTUNITIES and THREATS (SWOT) EXERCISE

10.1 Introduction

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis is a strategic planning tool to evaluate internal and external influences upon a common vision or specific goal. SWOT analyses are a common method for a company or organization to assess its capacity to execute a plan or achieve an attainable goal. In the context of local governmental planning the SWOT analysis evaluates the internal and external factors of a community (e.g.: quality of community services, external development pressures, internal attitudes toward commercial development, etc.) as they may pertain to the community values as reflected in the Vision Statement and Master Plan Goals as summarized below.

The Escanaba Township Planning Commission on two different occasions during work sessions conducted SWOT exercises. The first in May 2018 involved only the Planning Commissioners themselves. The second in June 2018 involved only members of the township’s public.

10.2 Exercise Results

- A. The May exercise with only the Planning Commissioners strongly identified “**Solar**” as an Opportunity, with a total of five (5) votes.

Two moderately noted Weaknesses were “**Better/Safer walkways/Bicycles paths**” and “**Trails (Connections)**” with three (3) votes each.

The remainder of votes were distributed (1 or 2 votes) among eleven other SWOT items.

Strengths, Weaknesses, Opportunities & Threats Exercise (May 2018) – RESULTS

The Escanaba Township Planning Commission was asked to identify the Township’s strengths, weaknesses, threats and opportunities. After these were identified they were asked to identify the most important ones by placing one or more of five circular stickers next to the ones they felt were most important. Below are the results of this exercise.

Strengths

- Township Fire Department
 - Good work ethic
 - Cemetery
 - Roads (Pretty good shape)
 - Township Hall (Good shape)
- Infrastructure in area (Railroads, airport, state highways)
 - Township recreational facilities

- o Papermill/Forest industry
- o Farming

Weaknesses

- OOO Better/Safer walkways/Bicycle paths
- OO Waterwells (Shallow contamination)
- OO Lack of business support
 - Road speeds
- O Township web site
- OOO Trails (Connections)
 - Project Committee needed

Threats

- o Water wells
- o Aging population
- o Papermill (*as in “having all your eggs in one basket”*)
 - Dams in township and area are old

Opportunities

- OOOOO Solar
- O Trails
 - Grants

B. The June exercise with only public citizens very strongly identified “**Solar**” as an Opportunity, with a total of thirteen (13) votes.

Two strongly noted Weaknesses were “**Lack of business support**” (6 votes) and “**J Road condition**” (5 votes).

The remainder of votes were distributed (1 or 2 votes, one 3 vote) among thirteen other SWOT items.

Strengths, Weaknesses, Opportunities & Threats Exercise (June 18, 2018) – RESULTS

The Escanaba Township Planning Commission held a work session on this date with citizen representatives of the Township. The citizen representatives were asked to identify the Township’s strengths, weaknesses, threats and opportunities. After these were identified they were asked to identify the most important ones by placing one or more of five circular stickers next to the ones they felt were most important. Below are the results of this exercise.

Strengths

- Zoning
- Electrical power ample (2 substations)
- Township’s entrepreneurial history
- Township Fire Department

- Good work ethic
- Cemetery
- Roads (Pretty good shape)
- Township Hall (Good shape)
- Infrastructure in area (Railroads, airport, state highways)
- Township recreational facilities
- Papermill/Forest industry
- Farming

Weaknesses

- OO Zoning
 - Master Plan – not followed
- OO Septic systems
- OOOOO J Road condition
 - Parks/Playgrounds (not enough)
- OO Better/Safer walkways/Bicycle paths
- OO Waterwells (Shallow contamination)
- OOOOOO Lack of business support
 - O Road speeds
 - O Township web site
 - O Trails (Connections)
 - O Project Committee needed

Threats

- OOO Septic systems
- O Road speeds
- OO Water wells
 - Aging population
 - Papermill (*as in “having all your eggs in one basket”*)
 - Dams in township and area are old

Opportunities

- OOOOO OOOOO OOO Solar
 - O Trails
- OO Grants

10.3 Issues and Opportunities

- Addressing solar opportunities were strongly identified in both exercises. Solar energy generation facilities are already a permitted use in the zoning ordinance. It is not clear then, what more the Township might want to do in support of solar development. The Township could seek to become a designated SolSmart community under the U.S. Department of Energy’s “SolSmart Solar Program.

- Paths, trails and roads are items the Township can directly invest in.
- Business support. The Township or individuals from the Township could become involved with and supportive of the Delta County Alliance, which is all about business and economic development within the county.

11.0 GOALS, POLICIES AND STRATEGIES

11.1 Introduction

Information contained in the preceding chapters has been detailed to help establish existing conditions within Escanaba Township. An understanding of the historical trends and evolving issues is important in identifying growth and development over the years.

Goals, or desired outcomes, are the centerpiece to any planning document. The goals stated in this chapter are based largely on the factual findings found in chapters 2 through 8. Again, these goals reflect desired future conditions. Policies set forth actions that can be undertaken by the elected bodies of the Township; strategies set specific actions that can influence actions leading to goal attainment.

Surveys seeking community input in outlining goals for the Township were sent out to residents in December 2007. Residents were asked about land use, transportation, community facilities and services and recreation and were asked to provide suggestions for the future of the Township. Results from the survey were discussed at a work session held by the Planning Commission. Citizen opinions obtained from the surveys were then organized into additional goals by the Planning Commission and are contained within this Chapter.

In addition to the above surveys, the Township Planning Commission conducted two Strengths, Weaknesses, Opportunities and Threats (SWOT) exercises; one in May 2018 with the Planning Commission members and the second in June 2018 with Township citizens. The results of these SWOT exercises are described in Chapter 10.

11.2 Population

Discussion: Official 2010 Census figures set the Escanaba Township population at 3,482 persons, or 9.4 percent of the county's total. The number of persons residing in the township has increased steadily for 60 years (1940-2000) and then has slightly declined in the last 15 years to 3,451 (2015 estimate). The median age is lower than most townships at 45.7 and it is the fourth lowest (tied with Wells Twp.) among the local governments in Delta County. The township also has a greater percentage of school age children than Brampton Township, but less than Gladstone, Delta County and the State of Michigan. The township has a higher percentage of working adults than the county, state, and adjacent Brampton Township and City of Gladstone.

Population stabilization and a balanced age distribution are indicative of growing and economically prospering communities.

Goal: Achieve a population growth rate that is manageable, demographically-balanced, and optimally utilizes the private and public facilities and services available within the Township.

Strategies

- A. Encourage neighborhoods, businesses and public entities to maintain their structures and grounds and offer services sufficient to meet existing and future residential and commercial growth requirements.
- B. Emphasize the academic and extra-curricular achievements and the high percentage of residents that have completed high school in the Gladstone and Escanaba School Districts.
- C. Emphasize the area’s low crime rate, cost of living advantages, strong community commitment, and overall quality of life.
- D. Strive to meet existing and future demand for residential development.
- E. Emphasize services and infrastructure currently available and that may be needed within the Township.
- F. Emphasize the locational advantages, including climatic conditions, of the Township.

11.3 Economy

Discussion: The economic activity of Escanaba Township has historically been closely related to agriculture. Four (4) of the 8 dairy farms in the county are located in Escanaba Township.¹ Agriculture and service business are the predominant business types located in the township. There are also many establishments operating as a home occupation that are located within the township such as beauty shops and bridal shops and home crafters. The majority of these businesses serve township residents. The number of females in the labor force has increased, with a corresponding increase of women with children in the labor force. This suggests that there may be a future need for day care as well as before and after school programs.

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

Policies

- A. Support and participate in countywide economic development efforts.

¹ MSU-Extension Field Crops Educator, Escanaba 2018.

- B. Evaluate and determine highest and best use of Township-owned properties.

Strategies

- A. Encourage reuse of existing commercial and industrial sites wherever practical.
- B. Encourage existing business concerns to remain, improve and grow.
- C. Ensure that businesses - existing and prospective - are aware of assistance for infrastructure, workforce training, business development and counseling, financing, and other resources administered by public and private entities.
- D. Encourage on-going exploration of technology sector opportunities that can broaden and expand the area’s employment base.
- E. Strengthen Township collaboration in economic development issues including critical services and facilities.

Additional Goals

- A. Encourage the balance of a “country township” lifestyle with the potential for an increased tax base with additional industry and business.

11.4 Natural Features

Discussion: There are extensive wetland areas in Escanaba Township - 37 percent of the land cover is wetlands. Development in wetland areas is strictly regulated. Areas along both the Escanaba and Ford Rivers have been mapped as flood hazard area. The western two-thirds of the township contain soils that prime farmland for agricultural production. With the area’s precipitation, soils and growing season, agriculture is and has been a viable industry in the township. Well depths in the township range from 26 feet to 580 feet. Depending on the location, the average well depth in the Lake Bluff area is 171 feet, while areas east and west of the Escanaba River average between 145 and 150 feet. Special well construction requirements are in place to prevent bacteria contamination with the well water supply in the areas of Carroll’s Corner and along county road 416 in Flat Rock.

Goal: Preserve and enhance the Township’s natural environment, while encouraging development where suitable land exists and where land use compatibility is reasonably assured.

Strategies

- A. Evaluate evolving engineering technologies for renewable energy systems including wind and especially solar energy.

- B. Ensure that development occurs in areas suitable to sustain such growth.
- C. Encourage and participate in watershed improvement efforts and protection of ground and surface waters from point and non-point sources of contamination
- D. Encourage watershed management and protection through education.
- E. Encourage and participate in planning for natural emergencies and mitigation of hazards.
- F. Evaluate the feasibility of future municipal wastewater collection and treatment should the opportunity present itself.
- G. Evaluate evolving engineering technologies for on-site wastewater treatment.

11.5 Land Use

Discussion: The majority (approx. 56 percent) of Escanaba Township’s 38,850 acres are forested, with 7,100 of those acres being CF land. Most of the forested areas in the Township are categorized as mixed forest, which consists of both deciduous and coniferous trees.

Changing lifestyles and family structure, residential development, commercial businesses, and township needs will all affect future land use patterns. The desire for increased development of residential and commercial properties will further the growth of the Township west of the Escanaba River. In the 20 years between 1978 and 1998, Escanaba Township has seen tremendous urban growth surrounding the Escanaba River.

Current development trends suggest a continued growth along the river and throughout the Flat Rock area. Ribbon development along major county roads stemming from Escanaba and Gladstone has been occurring more and more in the past decades. Current trends suggest a continuation of this type of development. Subdivisions and cluster development appear to be the more common types of residential growth near the Gladstone area, where ribbon development is more common further west into the Township.

Because of the presence of large tracts of public and corporately owned lands in the western part of the Township, new development will likely continue to be concentrated in the southern and eastern portions of the Township.

Goal: Foster manageable and compatible commercial, industrial and residential growth where adequate facilities exist or can be reasonably provided.

Policies

- A. Ensure public awareness of the Township’s existing wetland cover with regards to future development.
- B. Ensure that the existing “dangerous building” ordinance is appropriate and effective by thoroughly reviewing its contents periodically.
- C. Explore possible areas for increasing the Township’s recreational opportunities because of a continued increase of residential growth and desired services.
- D. Ensure public awareness of Michigan’s Land Division Act.

Strategies

- A. Promote a compatibility of land uses that will preserve agricultural land and open space while limiting ribbon development.
- B. Encourage location of industrial and commercial enterprises in areas accessed by all-seasons roadways and where required utility services are readily available.
- C. Develop additional recreation opportunities for residents and others who visit the area as a means of increasing economic revenue for the Township.
- D. Explore a zoning update as a means of guiding land use development that protects public health, safety and welfare.

Additional Goals

- A. Encourage water systems where feasible.
- B. Encourage the reuse of existing commercial and industrial sites whenever possible.
- C. Develop existing township property when practical.
- D. Consider a tie-in to the wastewater system in Gladstone.
- E. Investigate purchasing two lots on the Bluff; one lot to be used for a water tower, the other to be used for a Tot Lot.

11.6 Community Facilities & Services

Discussion: It has been stated that it would be beneficial to have all of the township’s facilities located on one parcel. This would require settling on a common parcel somewhere in the vicinity that the current township facilities are located. However, due to the current state of the facilities, this is not an immediate issue. As the township grows and creates more revenue, a committee could eventually be formed to review the current facilities and issues to see if new

development is a sustainable option for the township. Overall, Escanaba Township’s public and community facilities provide sufficient capacity, are in good repair, and are well maintained.

There is no municipal water system for Escanaba Township. A fund has been started in the case that a municipal system would be needed in response to the Township’s water demand or if there is a desire to expand the current capacity.

Goal: Provide all necessary community facilities and services efficiently and in conformance with all applicable regulatory standards for all Township residents and visitors.

Policies

- A. Ensure that existing Township structures, infrastructure and equipment are kept in good repair and provide for the greatest measure of public safety.
- B. Ensure that adequate fire protection service is available to all areas of the Township.
- C. Ensure that expansion of facilities and/or services are predicated on the Township’s ability to sustain operational and maintenance costs.
- D. Develop a multi-year capital improvement plan to be used as a long-range planning and budgeting tool.
- E. Ensure that public trust and confidence is maintained through clear, timely, and respectful communications.
- F. Whenever feasible and practical, augment local revenue resources with federal and state grant and loan programs to provide improved facilities and services.

Strategies

- A. Encourage public participation in community events and facility maintenance.
- B. Encourage facility and service improvements and expansion in surrounding jurisdictions for which a common benefit can be realized.
- C. Encourage beautification efforts such as flower, shrub and tree planting where appropriate.

- D. Encourage collaboration with community organizations as facility and service issues arise.

Additional Goals

- A. Pursue the addition of land for a Tot Lot in the Lake Bluff area.
- B. Maintain and update current community facilities such as the pavilion and the town hall. Updates could include updated kitchen facilities and appliances.
- C. Many residents would like to have cable and natural gas services offered.
- D. Investigate the potential use of the YMCA for Township residents at a reduced rate.
- E. Encourage the incorporation of “green building” into any new public facility. These considerations could include placing windows facing to the south to reduce heating costs and purchasing and installing energy efficient appliances. The Township could also consider installing solar photovoltaic panels to generate a portion of the Township’s needed electricity.

11.7 Housing

Discussion: Nearly 89.8 percent of residential dwellings in the Township are single family detached units in 2010. Mobile homes make up 8.5 percent of the housing units (2010 census data). According to a 2016 estimate, about 33 percent of the housing units were constructed between 1970 and 1979. Escanaba Township in 2010 boasted the fourth highest median home values in the county at \$136,200. This number is slightly lower than the state median home value of \$144,200. The township’s average household size in 2010 was 2.54 persons. This number is above Delta County and the state’s sizes of 2.28 and 2.49 persons, respectively.

Goal: Develop sufficient housing stock of varying style and size to meet the needs of the local population.

Policies

- A. Ensure that the Township’s dangerous building ordinance is enforced to maintain neighborhood quality.
- B. Maintain awareness of local, county, state and federal sponsored housing rehabilitation and construction programs intended to improve housing conditions.

Strategies

- A. Encourage owners and/or occupants to maintain dwellings and yards properly so as to avoid blighted or unsafe conditions.
- B. Encourage adherence to established building code standards.
- C. Encourage the development of various residential housing types appropriate for all income levels, the elderly, and persons with special needs.

11.8 Transportation

Discussion: M-35 in Escanaba Township exists from the City of Escanaba north to the northern township boundary, along the eastern portion of the township extending about 5.5 miles. M-35 is one of the two principal north-south routes across the central portion of the Upper Peninsula. The southern segment of M-35 in Escanaba Township is also shared by U.S.2, a major east-west corridor, and U.S. 41. These roads have seen an increase in traffic volume, especially with heavy trucks. County and local roads are generally in good condition.

Goal: Foster improvements necessary to achieve a safe, efficient multi-modal transportation system.

Policies

- A. Participate with the Delta County Road Commission in identifying and funding road improvement projects within the Township.
- B. Participate with the Delta County Road Commission and the Michigan Department of Transportation in setting road improvement priorities.
- C. Work with MDOT to develop access/asset management plans for areas along M-35 in the Township, in order to reduce the potential for future safety hazards and to preserve the current road conditions while spending less money to do so.

Strategies

- A. Encourage use and/or development of road access points that afford the greatest level of public safety.
- B. Encourage non-motorized trail development and neighborhood “walkability.”
- C. Promote visual enhancements along roadways; discourage signs that are gaudy, unnecessary, or in poor condition.
- D. Encourage upgrades and safety improvements along the railroad corridor.

- E. Promote safe routes and traffic safety measures in the school zone area.

Additional Goals

- A. Encourage the widening of roads to accommodate walking and bike paths when new road construction or reconstruction occurs.
- B. Increase the amount of LED lighting at intersections to improve safety. Add solar photovoltaic cells with batteries to provide electricity for this lighting and reduce costs.

11.9 Capital Improvements

Discussion: The development of a future Capital Improvements Plan (CIP) may help with long-term Township budgeting, coordination of projects, and reduction of costs.

Goal: Develop a Capital Improvements Plan (CIP) starting in 2019.

Policies

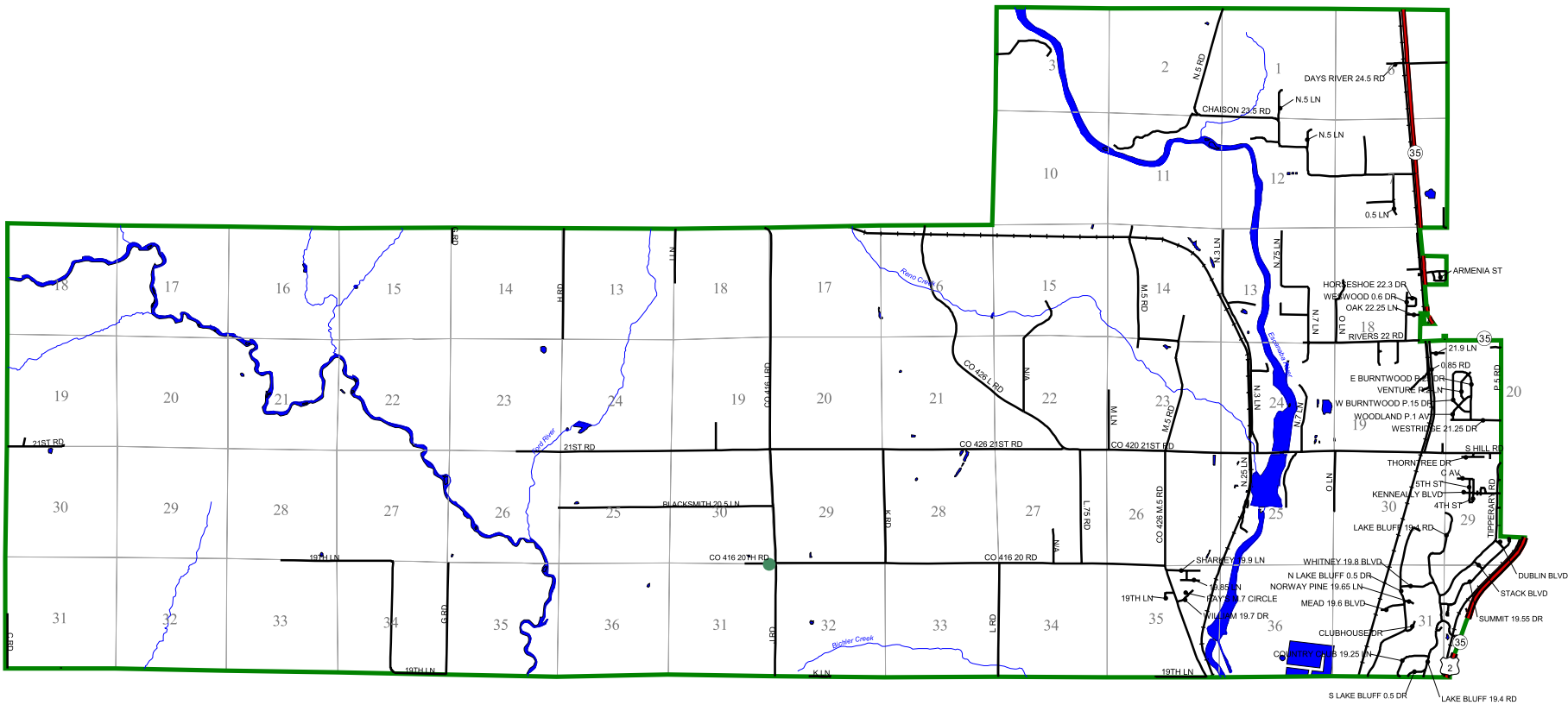
- A. Develop and maintain CIP that is prepared in conformance with the Michigan Planning Enabling Act (Public Act 33 of 2008).
- B. Ensure that Township facilities are developed consistent with the CIP.
- C. Ensure that Township facilities are safe, clean and accessible to users of all ages.
- D. Ensure that Township facilities are, to the maximum extent practical, developed for multi-purpose and/or year-round uses to optimize cost and benefits accrued to the public.

Strategies

- A. Encourage public participation in the provision of Township activities and facility upkeep.
- B. Encourage public participation in Township planning to enhance opportunities for residents and visitors.
- C. Explore motorized and non-motorized trail development on school, state and private lands.

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Escanaba Township



LEGEND

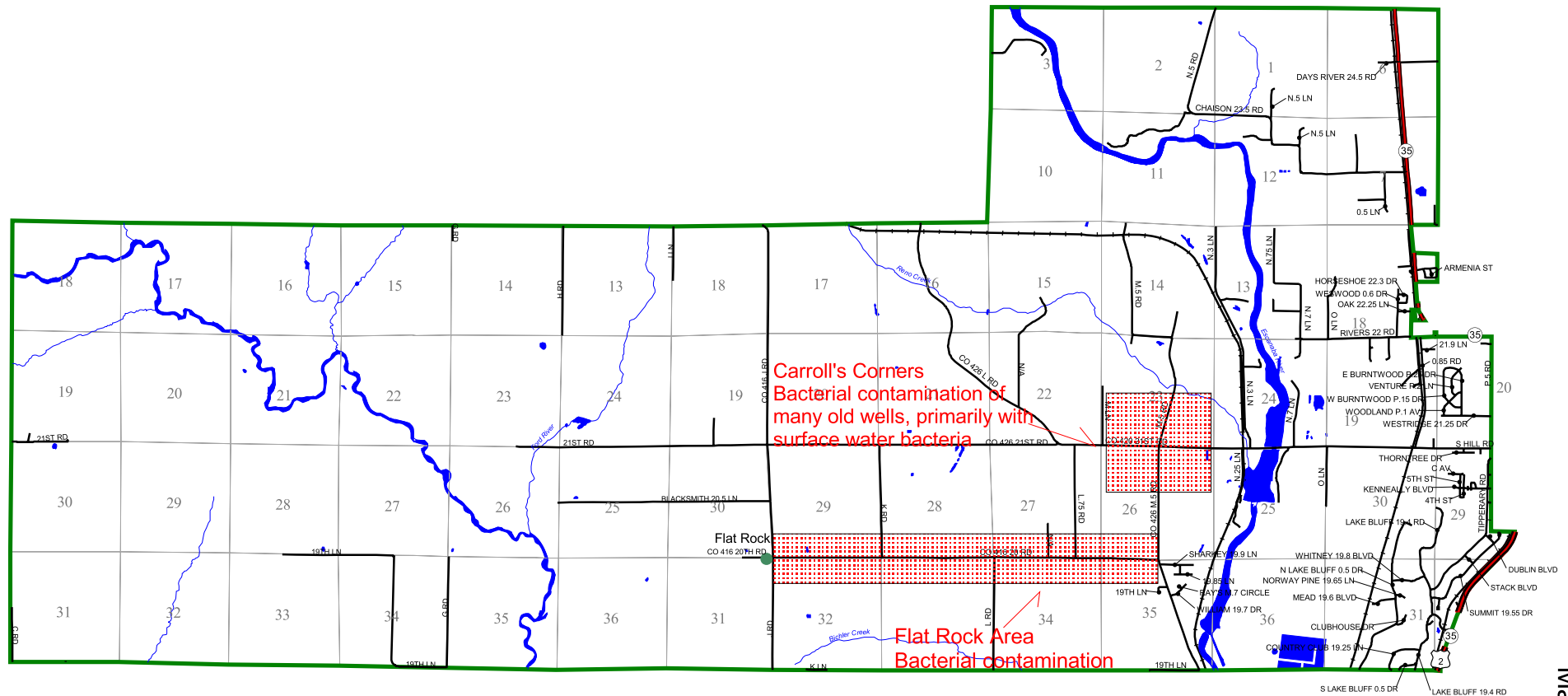
- STATE HIGHWAYS
- COUNTY ROADS
- CITY STREETS
- TWO-TRACKS
- RIVERS
- RAILS
- LAKES



COMPILED BY CUPPAD, 2007

Map 1-1 Base Map

Escanaba Township



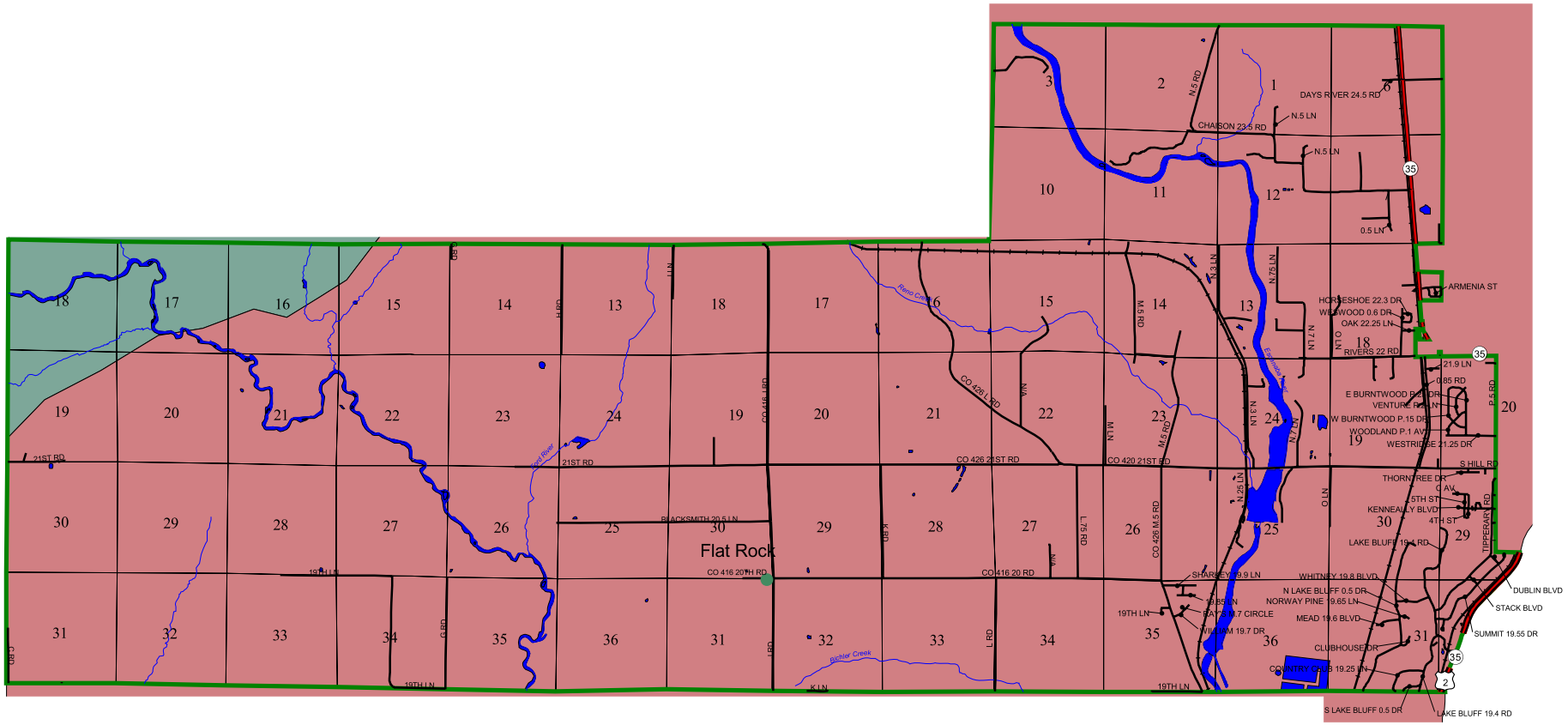
This map is designed for general planning purposes only and not for making specific decisions

The areas of concern boundaries have been estimated, private water may or may not produce water of degraded quality

Source: Public Health
Delta & Menominee Counties



Compiled by CUPPAD, 2007



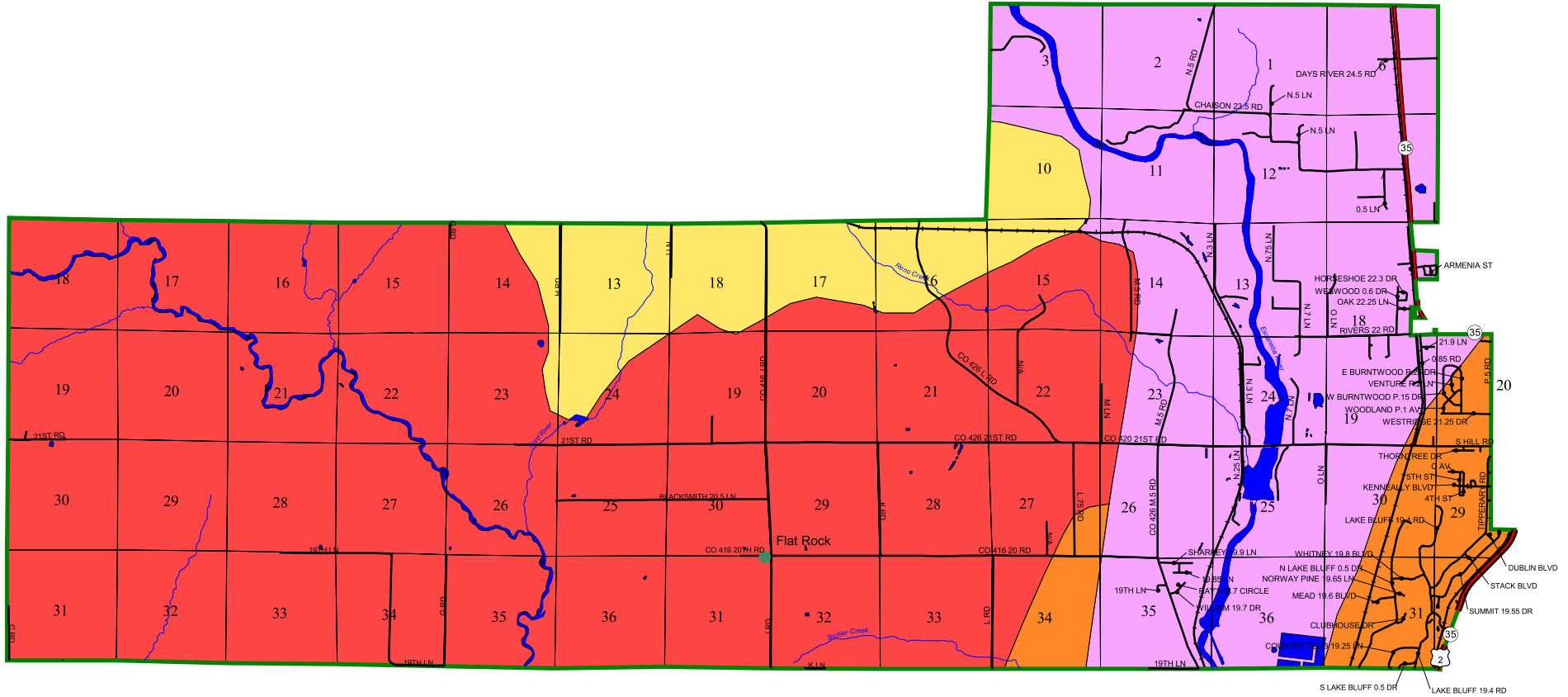
Legend

- U S HIGHWAY
- STATE HIGHWAY
- FOREST HIGHWAY
- COUNTY ROAD
- LOCAL STREETS
- Bedrock Geology**
- BLACK RIVER GROUP
- TRENTON GROUP



Compiled by CUPPAD, 2007

Escanaba Township



Legend

- U S HIGHWAY
- STATE HIGHWAY
- FOREST HIGHWAY
- COUNTY ROAD
- LOCAL STREETS

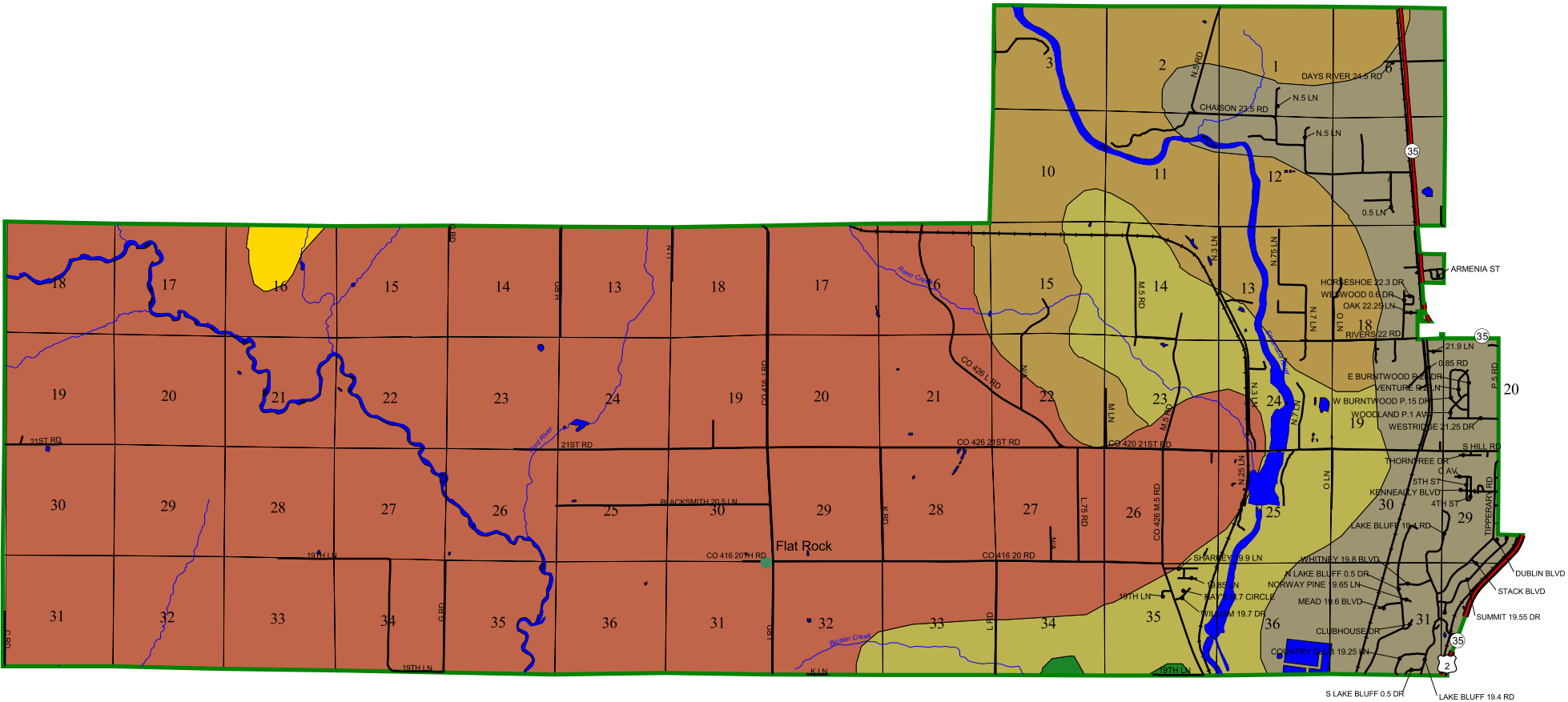
Surface Geology

- Dune Sand
- End or Rec Moraine
- Glacial Till
- Wetlands



Compiled by CUPPAD, 2007

Escanaba Township



Legend

- U.S. HIGHWAY
- STATE HIGHWAY
- FOREST HIGHWAY
- COUNTY ROAD
- LOCAL STREETS

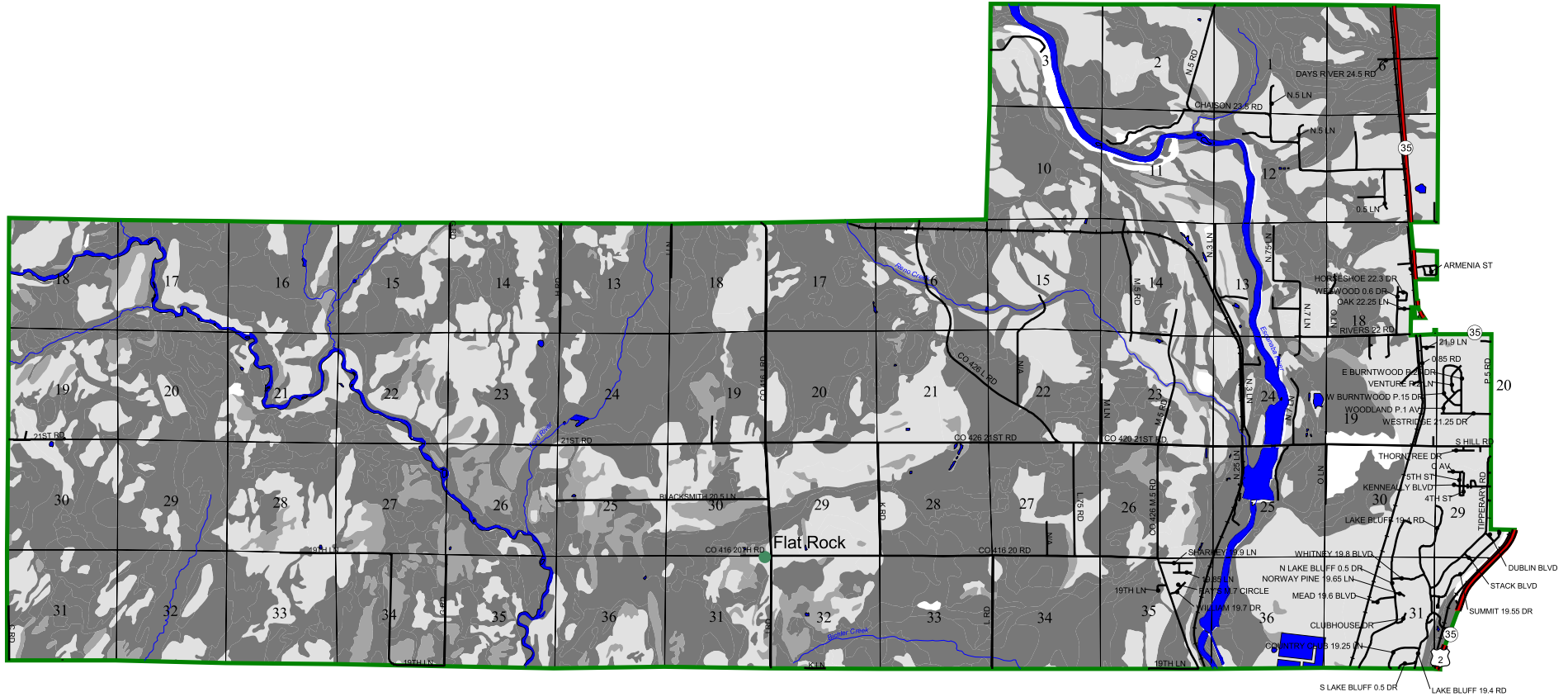
Soil Association

- ONOAWAY-CHARLEVOIX-TACOOSH
- CHARLEVOIX-ENSLEY-ANGELICA
- ROSCOMMON-TAWAS
- KALKASKA
- RUBICON
- KALKASKA-TAWAS-CARBONDALE



Compiled by CUPPAD, 2007

Escanaba Township



Legend

- U.S. HIGHWAY
- STATE HIGHWAY
- FOREST HIGHWAY
- COUNTY ROAD
- LOCAL STREETS

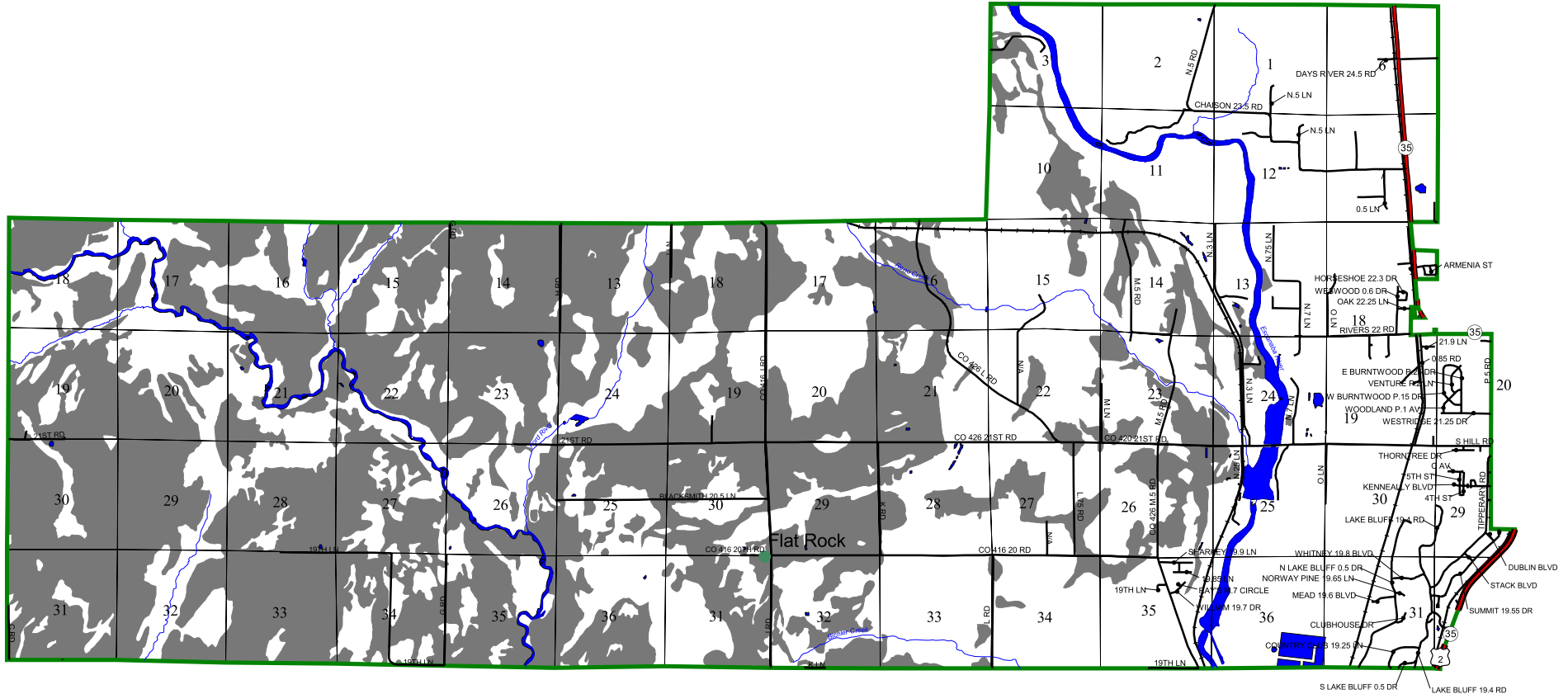
Limitations

- Severe
- Moderate-Severe
- Moderate
- Slight-Moderate
- Slight



Compiled by CUPPAD, 2007

Escanaba Township



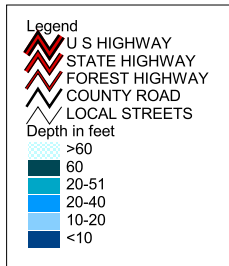
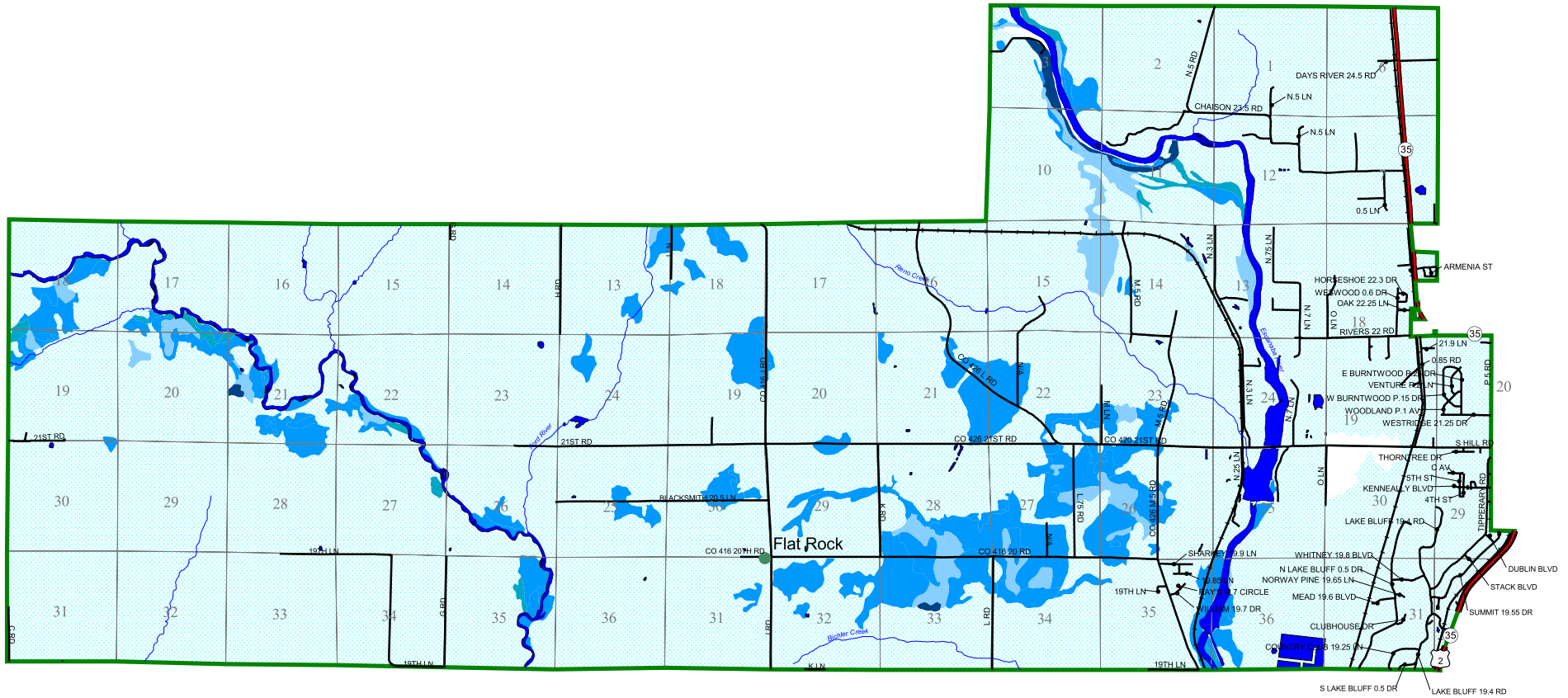
Legend

- U S HIGHWAY
- STATE HIGHWAY
- FOREST HIGHWAY
- COUNTY ROAD
- LOCAL STREETS
- Prime Farmland



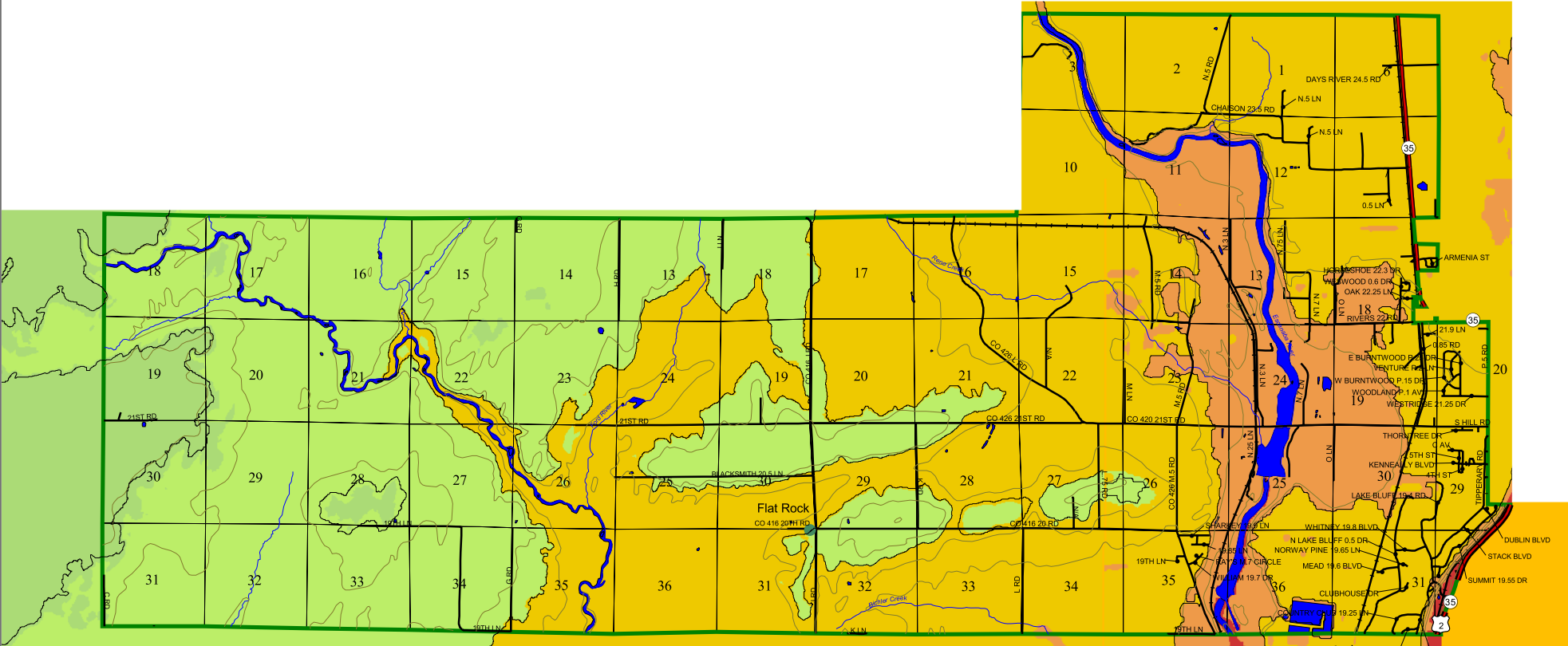
Compiled by CUPPAD, 2007

Escanaba Township



Compiled by CUPPAD, 2007

Escanaba Township



29_contours.shp

Legend

- U.S. HIGHWAY
- STATE HIGHWAY
- FOREST HIGHWAY
- COUNTY ROAD
- LOCAL STREETS

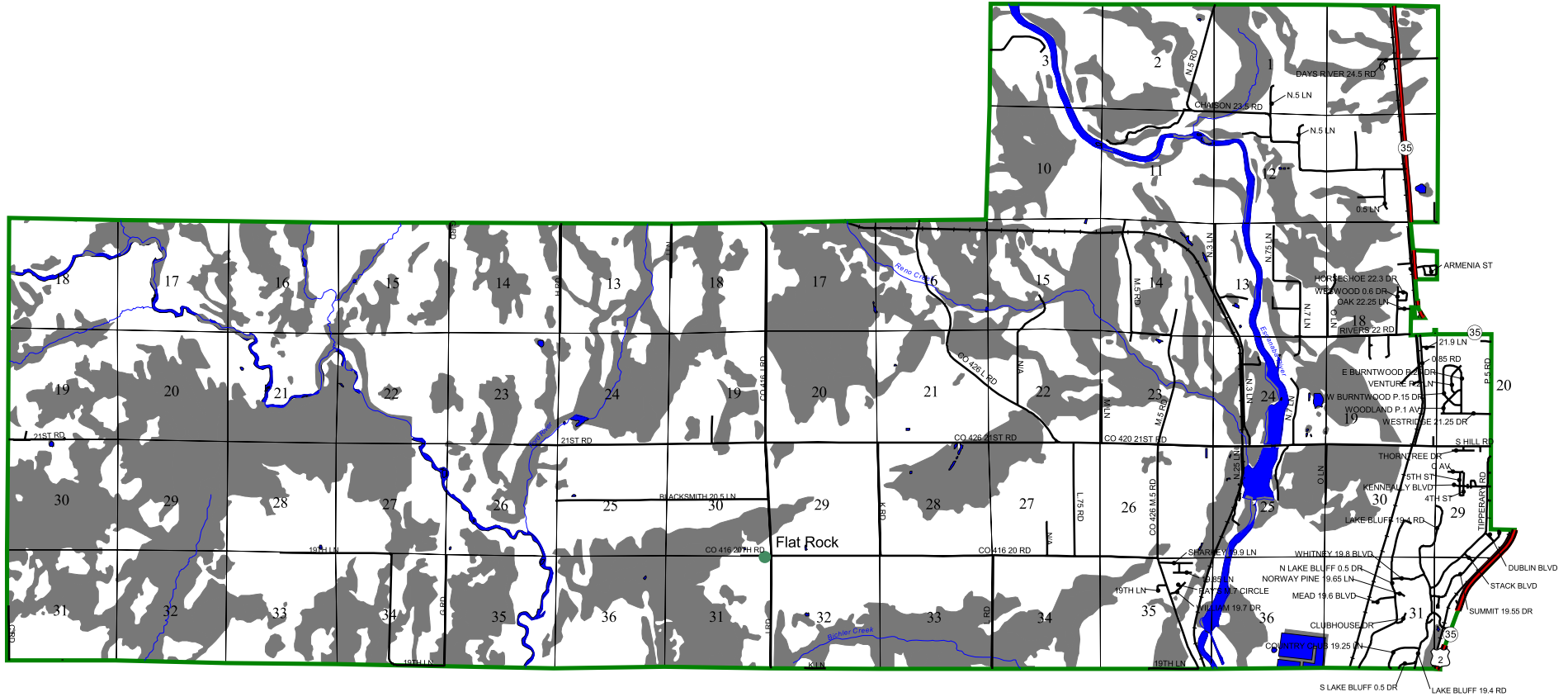
Elevation in Feet

- 582 - 636
- 637 - 704
- 705 - 772
- 773 - 840
- 841 - 909
- 910 - 977
- 978 - 1045
- 1046 - 1113
- No Data



Compiled by CUPPAD, 2007

Escanaba Township



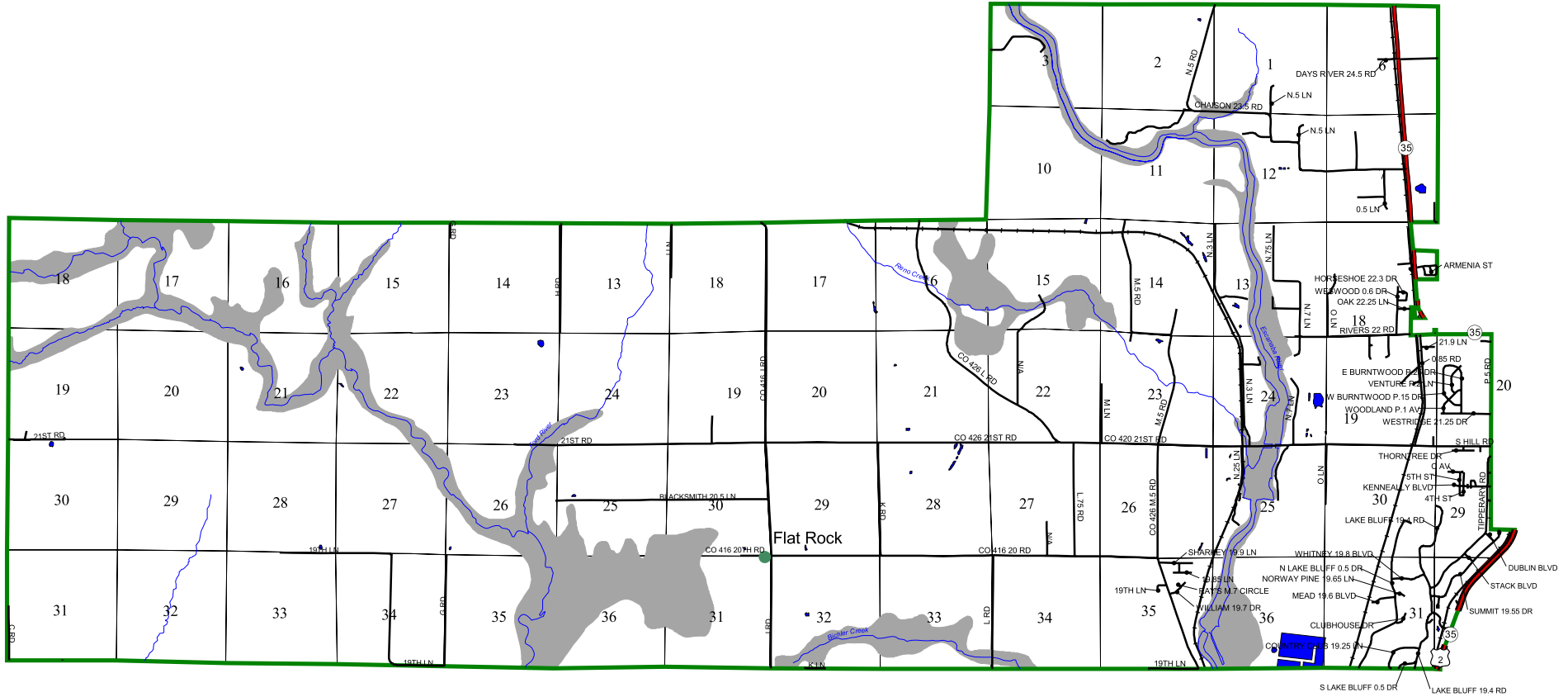
Legend

-  U S HIGHWAY
-  STATE HIGHWAY
-  FOREST HIGHWAY
-  COUNTY ROAD
-  LOCAL STREETS
-  Wetlands



Compiled by CUPPAD, 2007

Escanaba Township



Legend

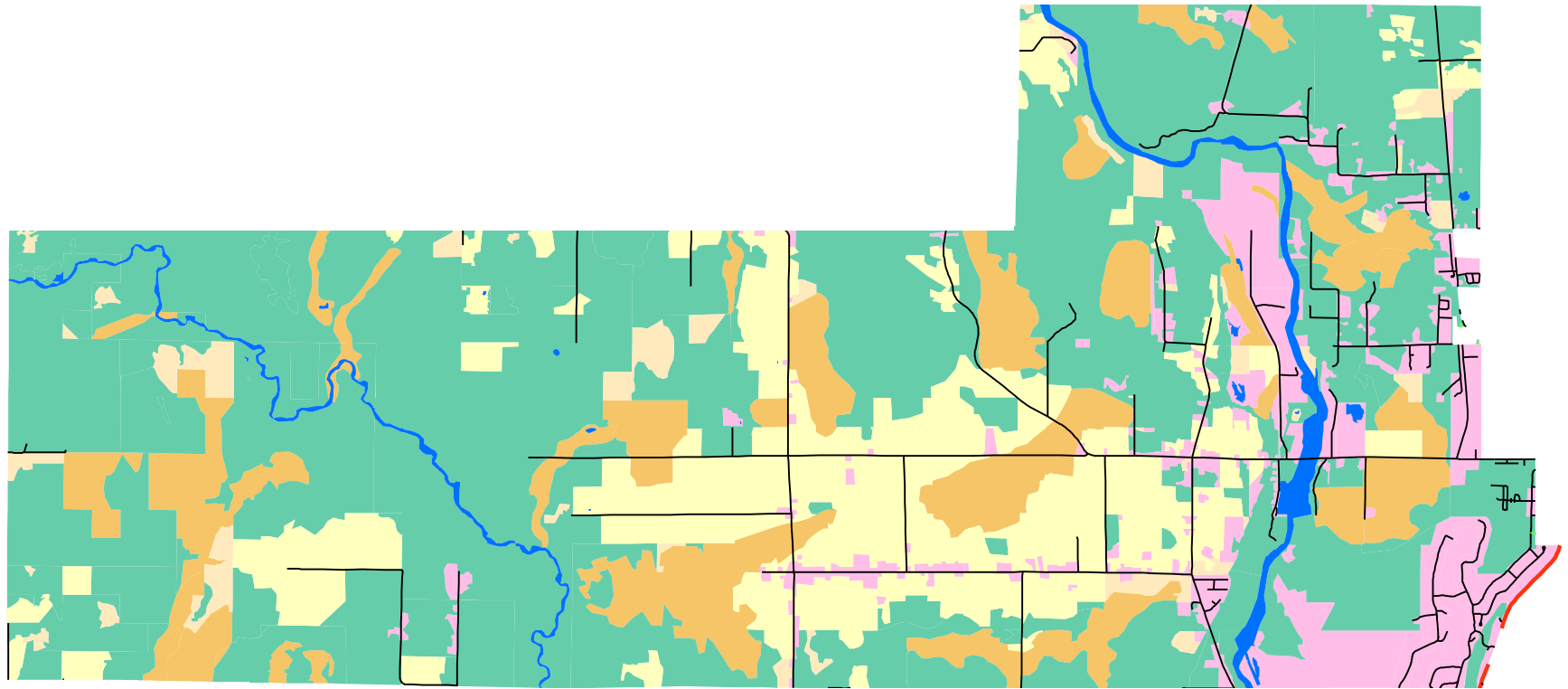
- U S HIGHWAY
- STATE HIGHWAY
- FOREST HIGHWAY
- COUNTY ROAD
- LOCAL STREETS
- Floodplains



Compiled by CUPPAD, 2007

Map 5-1 Escanaba Township Land Use/Cover

*based on 1998 Aerial Photos



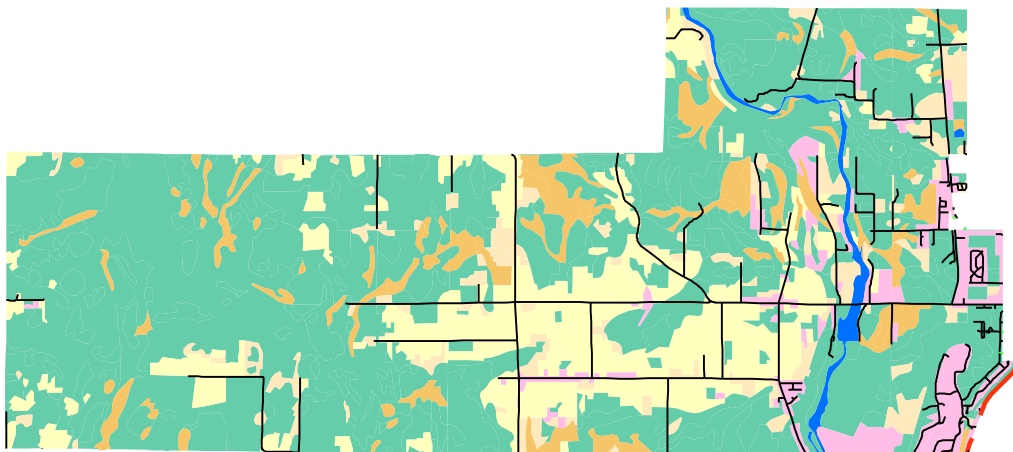
Legend

- AGRICULTURE
- OPEN WATER
- RIVER
- UPLAND FIELD
- FOREST
- URBAN
- WETLAND

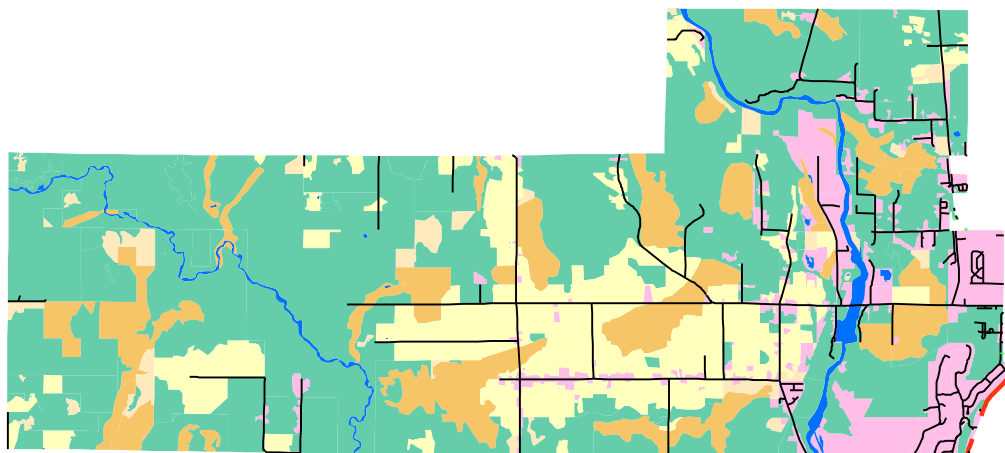
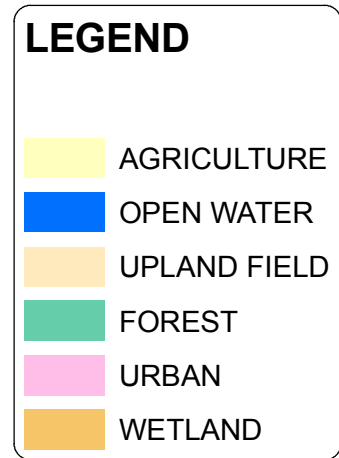


Compiled By:
CUPPAD, 2007

Map 5-2 Escanaba Township 1978 & 1998 Land Use Comparison



1978 Land Use



1998 Land Use

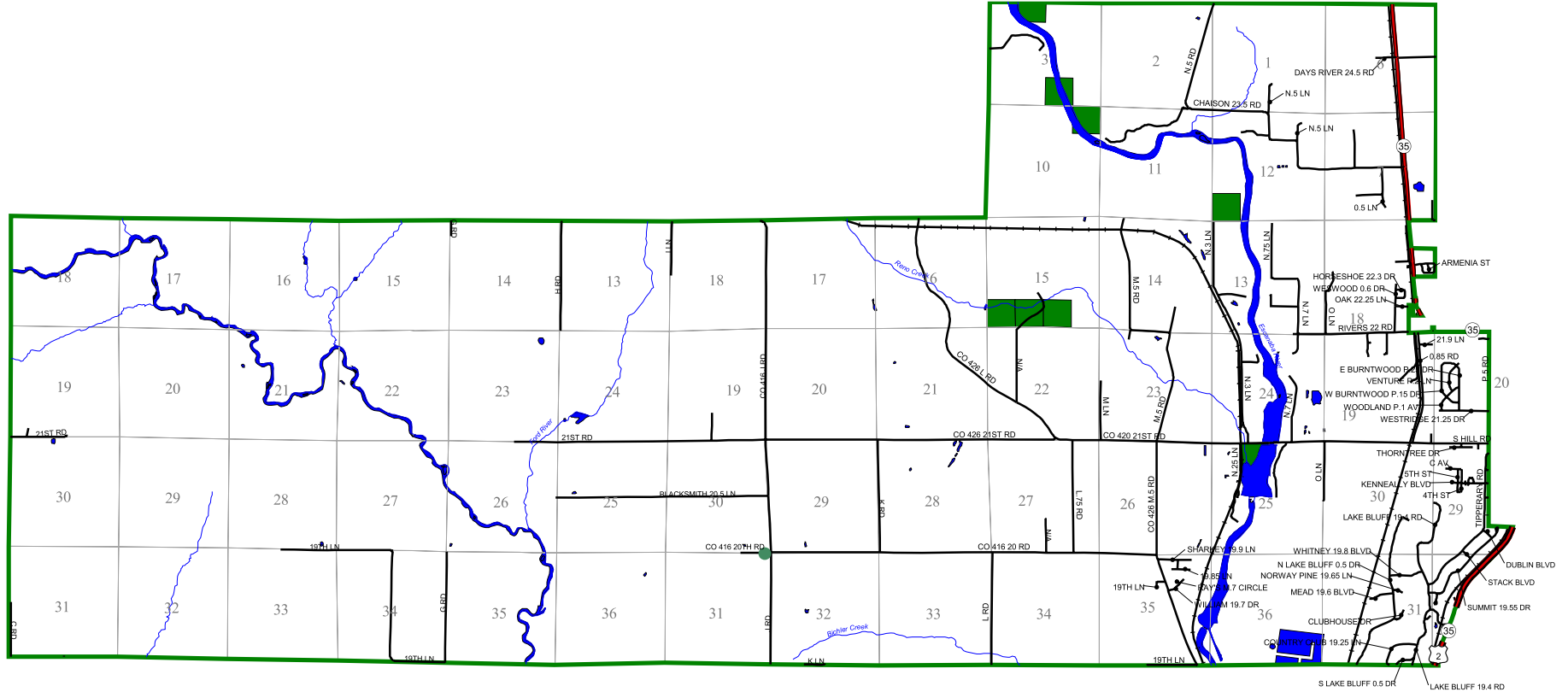
*Low-Conifer added to wetland category



Compiled By:
CUPPAD, 2007



Escanaba Township



LEGEND

- STATE HIGHWAYS
- COUNTY ROADS
- CITY STREETS
- TWO-TRACKS
- RIVERS
- RAILS
- LAKES
- LAND OWNERSHIP**
- STATE OF MICHIGAN










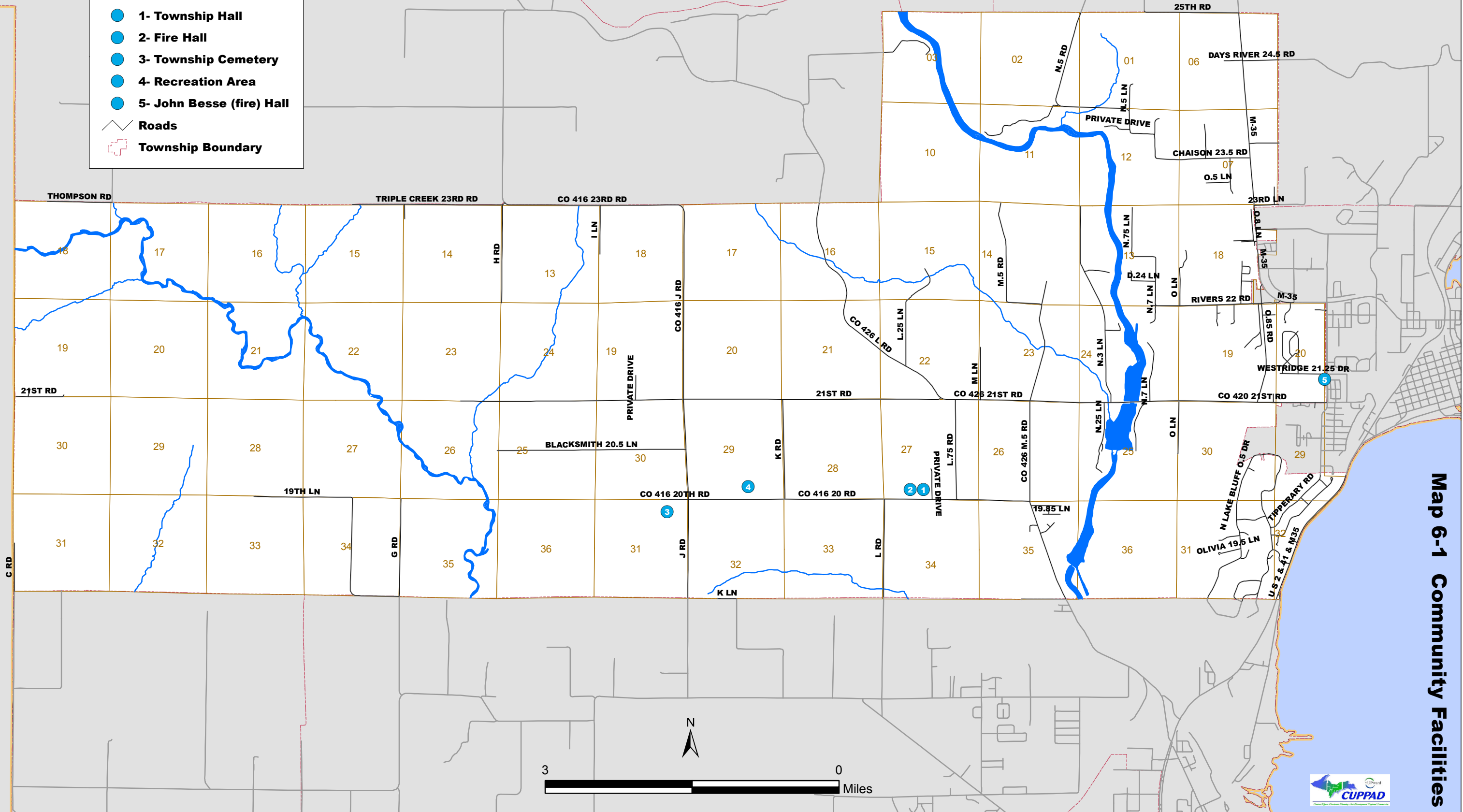
COMPILED BY CUPPAD, 2007

Escanaba Township

Escanaba Township

Community Facilities

-  1- Township Hall
 -  2- Fire Hall
 -  3- Township Cemetery
 -  4- Recreation Area
 -  5- John Besse (fire) Hall
-  Roads
-  Township Boundary



Map 6-1 Community Facilities








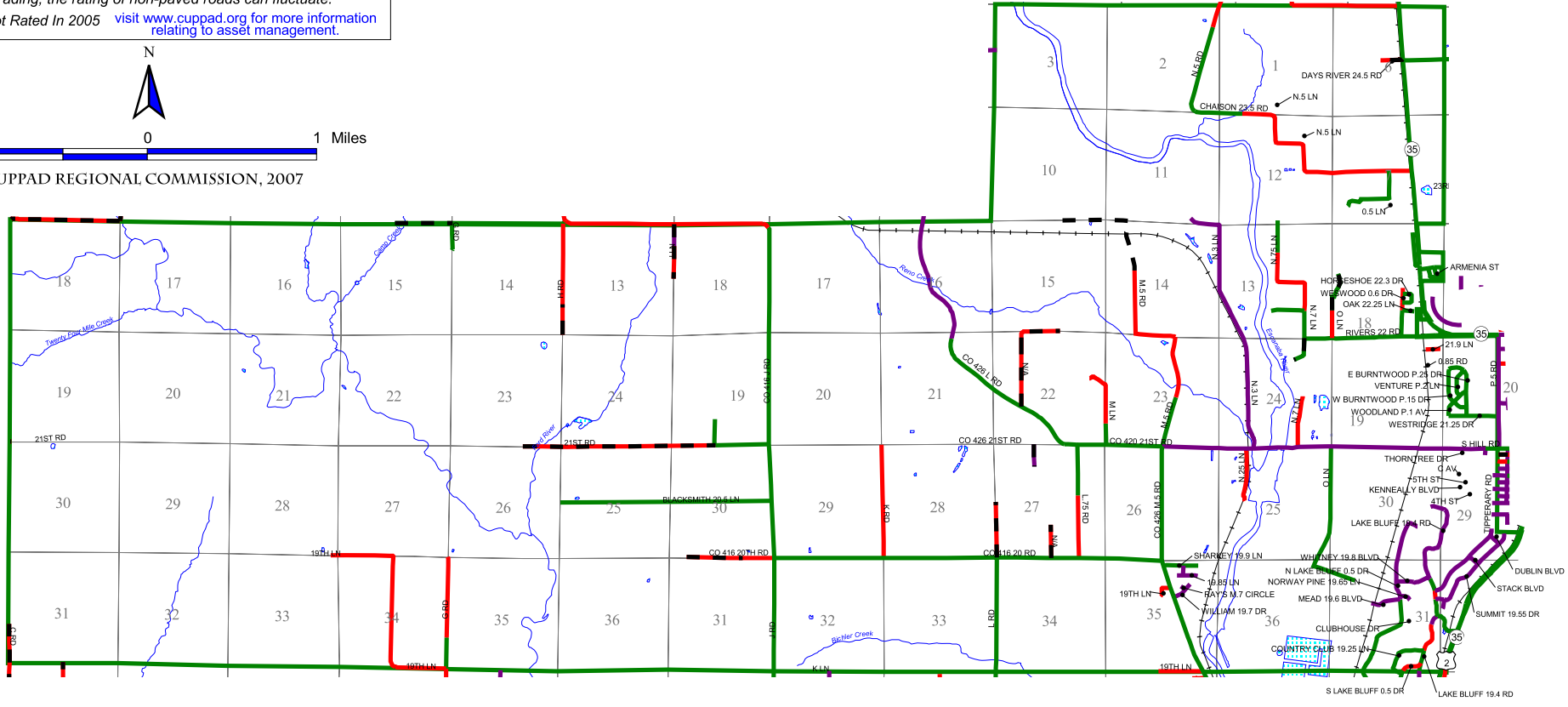
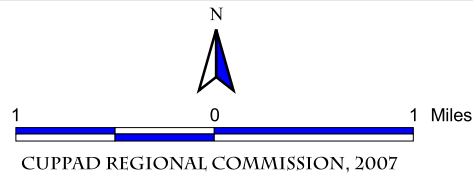
Escanaba Township

2005 PASER (Pavement and Surface Evaluation Rating) RESULTS

LEGEND

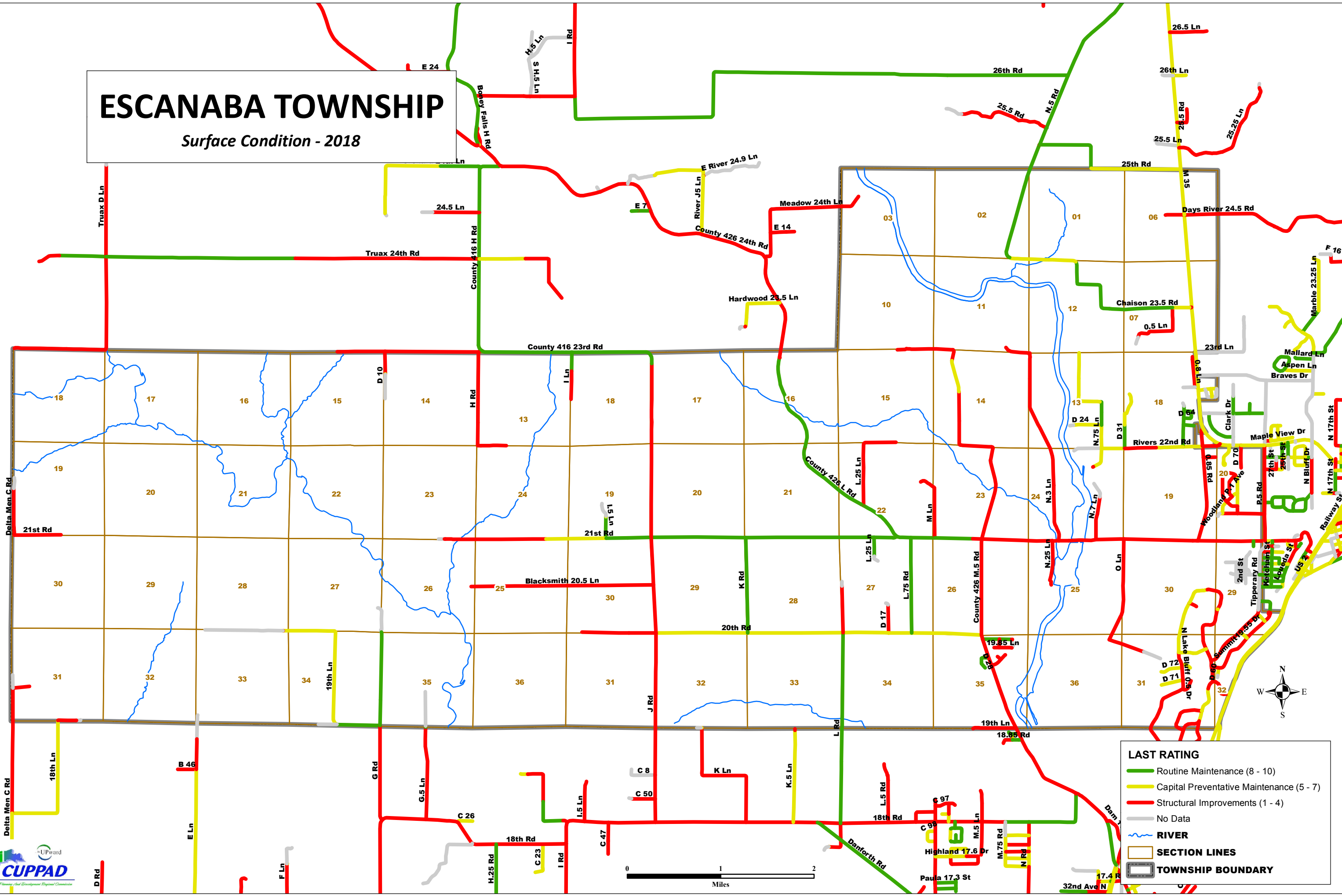
Transportation Asset Management Classification

-  **STRUCTURAL IMPROVEMENTS (1-4 Rating)**
Includes activities taken to preserve the structural integrity or where the safety or structural elements are improved to satisfy current design requirements. Examples include: reconstruction, resurfacing, gravel surfacing or limited rebuilding to improve grades or improve sight distances.
-  **CAPITAL PREVENTIVE MAINTENANCE (5-7 Rating)**
Planned strategy of effective treatments (examples- crack sealing, micro-surfacing, chip-sealing, non-structural overlays) that will preserve assets by retarding deterioration and maintaining functional condition.
-  **ROUTINE MAINTENANCE (8-10 Rating)**
Includes actions performed on a regular basis in response to uncontrollable events upon a roadway where the benefit of the work does not last beyond the next fiscal year. (Examples- new aggregate on gravel road, grading, snow and ice removal)
-  **Non-Paved**
Generally, non-paved roads receive one of the following ratings: 4, 6, 8. Due to elements such as weather, time of year, and last date of grading, the rating of non-paved roads can fluctuate.
-  **Not Rated In 2005** [visit www.cuppad.org](http://www.cuppad.org) for more information relating to asset management.



ESCANABA TOWNSHIP

Surface Condition - 2018



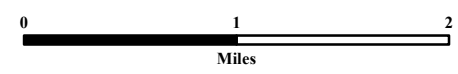
LAST RATING

- Routine Maintenance (8 - 10)
- Capital Preventative Maintenance (5 - 7)
- Structural Improvements (1 - 4)
- No Data

RIVER

SECTION LINES

TOWNSHIP BOUNDARY



Escanaba Township Photos - 2018



Escanaba Township
Est. 1861
MUNICIPAL
COMPLEX





Escanaba Township
Est. 1861 **MUNICIPAL**
COMPLEX





DEDICATED TO OUR
AMERICAN VETERANS
IN WAR AND PEACE
ESPECIALLY TO THOSE
WHO SACRIFICED THEIR
LIVES FOR US ALL

BY
THE PEOPLE OF
ESCANABA TOWNSHIP
AND
THE AMERICAN LEGION
POST 115



ESCANABA TOWNSHIP VOL.
FIRE DEPT

NO PARKING

NO PARKING

NO PARKING

















PARK
AND
PAVILION
CLOSES AT
11:00 PM





 **John D. Besse**
FIRE STATION

ESCANABA TOWNSHIP
FIRE STATION NO. 2



Escanaba Township Planning Commission

Resolution No. PC 01-19

WHEREAS, the Escanaba Township Planning Commission desires to adopt an updated master plan by amendment and has made the necessary inquiries, investigations and surveys of the appropriate resources of the township; and

WHEREAS, the updated master plan amendment will promote the public health, safety and general welfare; to encourage the use of resources in accordance with their character and adaptability; to avoid the overcrowding of land by buildings or people; to lessen congestion on public roads and streets; to facilitate provision for a system of transportation, sewage disposal, safe and adequate water supply, recreation and other public improvements; and consider the character of the township and its suitability for particular uses judged in terms of such factors as the trend in land and population development; and

WHEREAS, the Escanaba Township Planning Commission has noticed and conducted a public hearing in accordance with the requirements of the Michigan Planning Enabling Act (Public Act 33 of 2008, as amended), said hearing was held on January 7, 2019, following distribution of the draft master plan update amendment to the planning commissions of the City of Gladstone, adjacent townships, Menominee County and Delta County on November 16, 2018.

NOW, THEREFORE, BE IT RESOLVED, that the Escanaba Township Planning Commission hereby adopts the Escanaba Township 2018 Master Plan Update amendment, including with all the associated maps.

YEAS: Ray, Korm, Barry, Jack

NAYS: 0

ABSENT: Ann, Cliff

RESOLUTION DECLARED ADOPTED/NOT ADOPTED.

I certify that the foregoing resolution was adopted by the Escanaba Township Planning Commission at its meeting on January 7, 2019.


Jack Penegor, Planning Commission Chair
Escanaba Township Planning Commission
January 7, 2019

**Escanaba Township Board
Resolution No. BD. 01-19**

WHEREAS, the Escanaba Township Board desires to adopt an updated master plan by amendment and the Township Planning Commission has made the necessary inquiries, investigations and surveys of the appropriate resources of the township; and

WHEREAS, the updated master plan amendment will promote the public health, safety and general welfare; to encourage the use of resources in accordance with their character and adaptability; to avoid the overcrowding of land by buildings or people; to lessen congestion on public roads and streets; to facilitate provision for a system of transportation, sewage disposal, safe and adequate water supply, recreation and other public improvements; and consider the character of the township and its suitability for particular uses judged in terms of such factors as the trend in land and population development; and

WHEREAS, the Escanaba Township Planning Commission has noticed and conducted a public hearing in accordance with the requirements of the Michigan Planning Enabling Act (Public Act 33 of 2008, as amended), said hearing was held on January 7, 2019, following distribution of the draft master plan update amendment to the planning commissions of the City of Gladstone, adjacent townships, Menominee County and Delta County on November 16, 2018, and the Planning Commission adopted the Master Plan Update amendment at their January 7, 2019 meeting.

NOW, THEREFORE, BE IT RESOLVED, that the Escanaba Township Board of Trustees hereby adopts the Escanaba Township 2018 Master Plan Update amendment, including with all the associated maps.

YEAS: Patricia Beauchamp, Linda Rokitaik, Alfred Gareau, Raymond Hughes

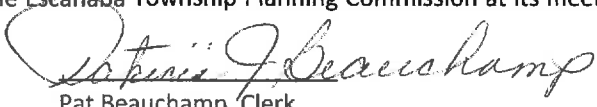
Ken Brunette

NAYS: 0

ABSENT: 0

RESOLUTION DECLARED ADOPTED/NOT ADOPTED.

I certify that the foregoing resolution was adopted by the Escanaba Township Planning Commission at its meeting on January 14, 2019.



Pat Beauchamp, Clerk
Escanaba Township Board
January 14, 2019