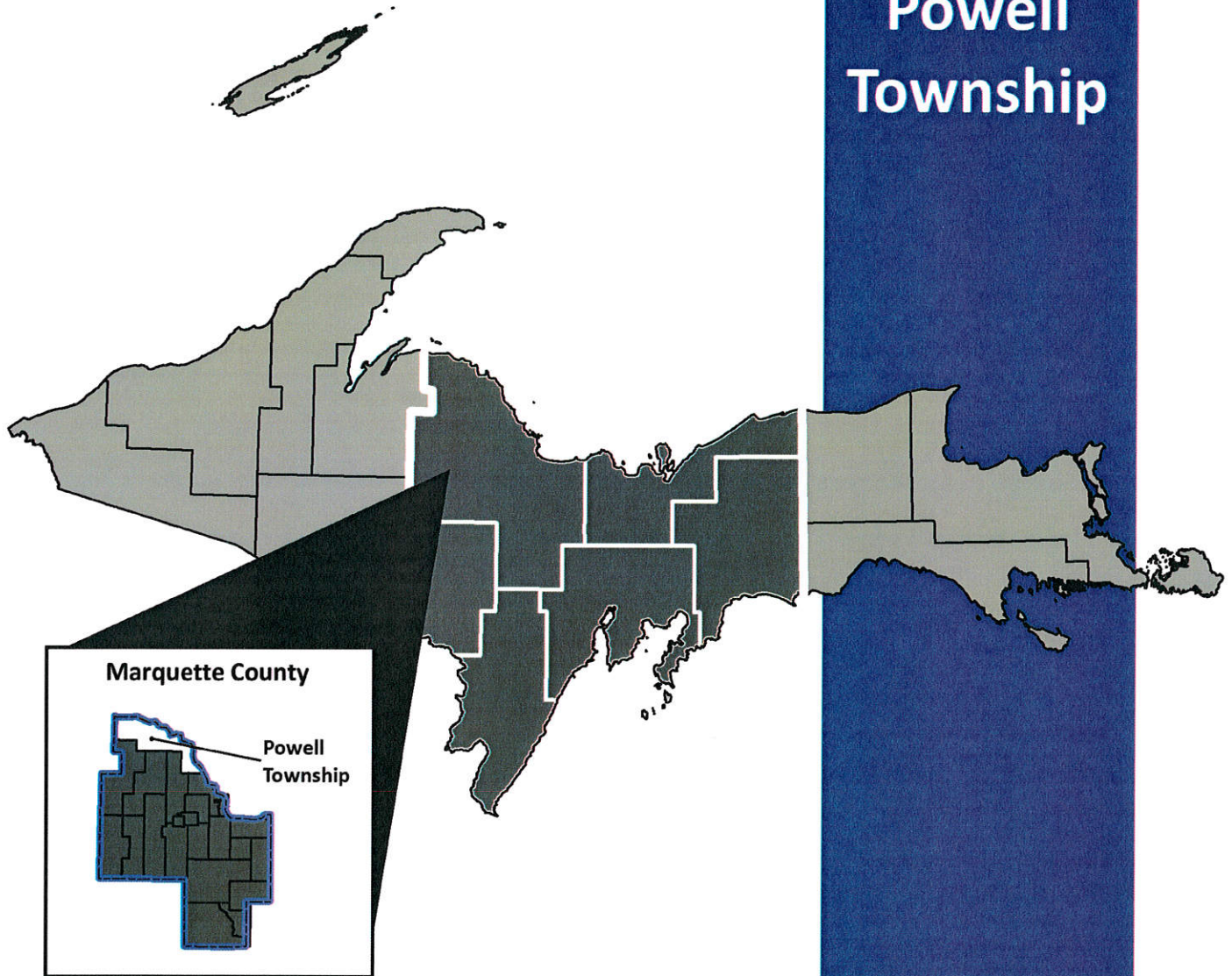


Powell Township



Master Plan

2014

Prepared By:

Powell Township Planning Commission

Adopted: October 15, 2014



ACKNOWLEDGEMENTS

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TABLE OF CONTENTS

1.0 INTRODUCTION

2.1	What is a Master Plan?	1
2.2	Update Process	1

2.0 THE PEOPLE

2.1	Introduction	1
2.2	Population Trends.....	1
2.3	Population Projections	4
2.4	Population Density.....	5
2.5	Age and Sex Characteristics	6
2.6	Race and Ethnicity.....	9
2.7	Educational Attainment.....	10
2.8	Household Characteristics	11
2.9	Issues and Opportunities	12

3.0 THE ECONOMY

3.1	Introduction	1
3.2	Area Economy	1
3.3	Labor Force and Employment.....	2
3.4	Employment by Sector.....	5
3.5	Employment by Place of Work	8
3.6	Major Employers.....	9
3.7	Income Trends	10
3.8	Poverty Rates	12
3.9	Issues and Opportunities	13

4.0 HOUSING

4.1	Introduction	1
4.2	Housing Characteristics	2
4.3	Financial Characteristics	9
4.4	Selected Housing Characteristics.....	12
4.5	Issues and Opportunities	14

5.0 COMMUNITY FACILITIES AND SERVICES

5.1	Introduction	1
5.2	Municipal Community Facilities and Services	1

5.3	Other Community Facilities and Services	3
5.4	Other Public Facilities and Services	6
5.5	Issues and Opportunities	8
6.0	RECREATION	
6.1	Introduction	1
6.2	Existing Recreational Facilities.....	1
6.3	Nearby Recreation Sites	5
6.4	Local Recreation Needs	9
6.5	Recreation Needs Standards	10
6.6	Park Accessibility.....	12
6.7	Historical Resources.....	13
6.8	Issues and Opportunities.....	16
7.0	TRANSPORTATION	
7.1	Introduction	1
7.2	Road System.....	1
7.3	Private Roads	3
7.4	National Functional Classification of Roads	3
7.5	Road Condition Evaluation	5
7.6	Road Improvements	5
7.7	Financing.....	6
7.8	Traffic Flow and Volume	7
7.9	Statewide and Regional Highway Planning	8
7.10	Public Transportation	8
7.11	Inter-Community Bus Service	8
7.12	Waterborne Transportation	9
7.13	Air Transportation.....	9
7.14	Railroads	9
7.15	Non-Motorized Transportation Facilities	10
7.14	Issues and Opportunities	10
8.0	NATURAL FEATURES	
8.1	Introduction	1
8.2	Topography	2
8.3	Geology	2
8.4	Soils	5
8.5	Water Features	7
8.6	Wildlife	8

8.7	Climate	8
8.8	Issues and Opportunities	9
9.0	LAND USE & OWNERSHIP	
9.1	Historical Land Use Patterns	1
9.2	Current Use Inventory	4
9.3	Residential Land Use	6
9.4	Commercial Land Use	7
9.5	Industrial Land Use	7
9.6	Forestry and Agricultural Land Uses	7
9.7	Public and Quasi-Public Land Use	8
9.8	Land Ownership	9
9.9	Land Use Trends	10
9.10	Issues and Opportunities	11
10.0	GOALS AND RECOMMENDATIONS	
10.1	Introduction	1
10.2	Population	2
10.3	Economy	3
10.4	Land Use	4
10.5	Public and Community Facilities	7
10.6	Housing	8
10.7	Recreation/Historical	9
10.8	Transportation	11
11.0	FUTURE LAND USE AND ZONING PLAN	
11.1	Introduction	1
11.2	Future Land Use Descriptions	1
11.3	Zoning Districts and Zoning Plan	4
11.4	Conclusion	8

APPENDIX A: MAPS

APPENDIX B: COMMUNITY SURVEY & DEPARTMENTAL SURVEY

CHAPTER ONE: INTRODUCTION

1.1 WHAT IS A MASTER PLAN?

A Master Plan outlines a community's vision for its future, providing guidance in the areas of housing, land use, the economy, sustainability, community facilities and services, recreation, and transportation through measurable goals and objectives. This vision is reached through community input as well as research and analysis of changing demographic and economic trends.

The Michigan Planning Enabling Act, P.A. 33 of 2008 provides for all local government (township, village, city & county) land use planning in the state. The Michigan Zoning Enabling Act of 2006 provides for all local government (township, village, city & county) zoning in the state. The act requires that the zoning ordinance be based on a plan.

1.2 UPDATE PROCESS

The twelve chapters presented in this document represent the culmination of several months of discussion and study by the Powell Township Planning Commission, with technical assistance from the Central Upper Peninsula Planning and Development Regional Commission (CUPPAD) in updating several chapters of the 2007 Powell Township Comprehensive Plan. When the 2007 Comprehensive Plan was prepared, 2000 Census data was used. With the availability of Census 2010 data, the Planning Commission wanted the background information in the Plan to be updated with more current statistics. All chapters were updated to include the most recent statistical information, and all maps were updated with the most recent information.

Additionally, a chapter on Future Land Use (Chapter 11 – Future Land Use) was added. This chapter proposes a future land use scheme for the township which reflects the goals, policies and objectives identified in earlier chapters. The future land use scheme reflects the physical factors and demographic and economic trends identified in the earlier chapters of the plan, and includes a brief zoning plan.

A community survey was available online for residents to complete from October, 2013 to February, 2014. A Master Plan Open House was held at 5:30 p.m. on January 22, 2014 at the Powell Township Hall for members of public to offer input on the proposed future land use map and the draft plan. The final draft plan was posted online on August 8, 2014 and made available at the Powell Township Hall. Residents also had the opportunity to provide comments at the Planning Commission's public hearing on September 17, 2014.

This Plan was adopted by the Powell Township Board on October 21, 2014.

CHAPTER TWO: THE PEOPLE

2.1 INTRODUCTION

The existing population change is a primary component in tracking a community's past growth as well as predicting future population trends. Population characteristics relate directly to the Township's housing, educational, community, recreational facility, and public service needs, and to its future economic development. Fluctuations in the economy can greatly influence the population growth and characteristics in a community.

Demographic information is based on available Census data. In 2010, the Census Bureau mailed out a revised short form to American households. The traditional long form associated with the decennial census has been replaced by the American Community Survey (ACS). The ACS is an ongoing national survey that produces period estimates rather than point in time estimates approximating April 1st of the census year. Households across the nation are randomly sampled every month and data from the monthly surveys are accumulated and pooled over 12, 36, and 60 months. As such, the data do not directly compare to the decennial census. The ACS is intended to describe a community's characteristics based on a small sample of households surveyed every month. For smaller communities, such as Powell Township, ACS data is only available on a 5-year basis and this data is used in the plan.

2.2 POPULATION TRENDS

The population of Powell Township from 1950 to 2010 increased by 31% percent, to the current level of 816 persons (Table 2.1). The largest population decline in this period occurred between 1950 and 1960. In June of 1949, the Ford Motor Company lumber mill in the Powell community of Big Bay, which employed about 110 workers, ceased operations. As a result, during the 1950s, most of the mill's workers and their families moved elsewhere to work and live. In contrast, Powell Township experienced considerable growth in population during the 1970s, with an increase of 295 persons, or approximately 80 percent. This substantial increase in population was likely the result of an influx of families from the Marquette/Negaunee/Ishpeming urban area to the Township to live. Most of the working members from these families commuted to the urban area to work. From 1980 to 1990 the population declined slightly before posting a gain of 64 persons for the 2000 census. Between 2000 and 2010 the Township grew by 92 persons, or nearly 13%.

In addition to the increases in the year-round population, Powell Township undergoes seasonal fluctuations in population due to the high number of seasonal residences in the Township and the Huron Mountain Club. Of the 928 housing units in the township, half are for recreational and seasonal use. These 464 units are not occupied at the same time, but the influx of users is felt in different parts of the year.

As a possible point of reference, assuming one quarter of the seasonal homes are occupied by the state wide household average of 2.49 persons, the population would increase by 288 persons.

The population of Marquette County from 1950 to 2010 increased by 41 percent. Chocolay, Ely, Forsyth, Ishpeming, Marquette, Negaunee, Powell, Sands, Skandia, Tilden, and West Branch townships and the city of Marquette experienced growth during this period. The now-closed K.I. Sawyer Air Force base brought about rapid population growth in Forsyth, Sands and West Branch townships between 1950 and 1970. Between 1950 and 1960, for example, the population of Sands Township grew by over 800 percent.

The central U.P. experienced some decline in population during the 1940s, which was then followed by steady growth from 1950-1980, with a population increase of 22 percent. Small declines were recorded from 1990 through 2010. The State of Michigan recorded growth in every census after 1940, until 2010 when there was a slight loss of less than 1% (-0.6%). Overall, the population of Michigan increased 88 percent over the 70-year period.

Population change is the result of a combination of natural increase and migration. When births within a community during a period of time exceed deaths, a positive natural increase occurs. If deaths exceed births, a negative natural increase is the result. Communities with a relatively young population tend to have a high natural increase, since the birth rate is relatively high. Those communities with a large number of older people tend to have a small natural increase; a negative natural increase is uncommon.

Net migration is the difference between the number of people moving into a community and the number of people moving out. Net migration is positive when more people move into an area than move out. Economically depressed areas often experience significant out-migration as residents leave for real or perceived employment opportunities elsewhere.

TABLE 2.1: POPULATION TRENDS, SELECTED AREAS, 1950-2010*

Area	1950	1960	1970	1980	1990	2000	2010	1950 TO 2010
Powell Twp.	623	390	372	667	660	724	816	
Change	--	-37%	-5%	+80%	-1%	+10%	+13%	+31%
Champion Twp.	557	495	519	460	346	297	297	
Change	--	-11%	+5%	-11%	-25%	-14%	0%	-47%
Ishpeming Twp.	1,517	2,238	2,376	3,612	3,515	3,522	3,513	
Change	--	+48%	+6%	+52%	-3%	+1%	-1%	+132%
Marquette Twp.	1,280	1,880	1,703	2,669	2,757	3,286	3,905	
Change	--	+47%	-9%	+57%	+3%	+19%	+19%	+205%
Michigamme Twp.	455	410	436	383	339	377	349	
Change	--	-10%	+6%	-12%	-11%	+11%	-7%	-26%
Negaunee Twp.	909	1,383	1,760	2,443	2,368	2,707	3,088	
Change	--	+52%	+27%	+39%	-3%	+14%	+14%	+240%
Marquette County	47,654	56,154	64,686	74,101	70,887	64,634	67,077	
Change	--	+18%	+15%	+15%	-4%	-9%	+4%	+41%
Central U.P.	149,865	157,257	165,744	182,390	177,692	174,717	172,429	
Change	--	+5%	+5%	+10%	-3%	-2%	-1%	+15%
Michigan	6,371,766	7,824,965	8,875,083	9,262,078	9,295,297	9,938,444	9,883,640	
Change	--	+23%	+13%	+4%	+1%	+7%	-1%	+55%
United States	151,325,798	179,323,175	203,302,031	226,542,199	248,709,873	281,421,906	308,745,538	
Change	--	+19%	+13%	+11%	+10%	+13%	+10%	+104%

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

*Percentage figures rounded to nearest whole number.

2.3 POPULATION PROJECTIONS

Population projections are very useful for units of government like counties for projecting future residential demands for public services. However, the major component for making population projections, future in- and out-migration, is very difficult to predict. The main problem is this data depends heavily on the future economic trends of the locality and other areas. The other components of population projections, fertility and mortality data, have less of an impact on population change, particularly for smaller jurisdictions.

In 1996, the Michigan Department of Management and Budget prepared baseline population projections to the year 2020 for counties of the State using a special formula that utilizes the three main components of population change; birth, death, and migration. These population projections assist counties in making predictions based on future demographic trends.

The 30-year population forecast for Marquette County reveals a downward population trend, with an overall 5.96 percent decrease from 1990 to 2020 (Tables 2.2 and 2.3). Marquette and Menominee counties are the only counties in the central U.P. with a projected decline between 2010 and 2020. However, Marquette County's population actually saw an increase between 2000 and 2010, contrary to the Department's predictions.

Area	1990 Census	1995	2000	2005	2010	2015	2020
Marquette County	70,887	65,427	69,135	68,916	68,393	67,016	66,661
Alger County	8,972	9,847	9,920	10,009	10,114	10,192	10,205
Delta County	37,780	38,582	38,741	38,906	39,004	39,244	39,400
Dickinson County	26,831	27,161	27,416	27,547	27,746	27,942	28,096
Menominee County	24,920	24,537	23,576	22,518	21,497	20,565	19,581
Schoolcraft County	8,302	8,706	8,779	8,861	8,926	8,970	8,929
Central U.P.	177,692	174,260	177,617	176,757	175,740	174,529	172,872
Michigan	9,295,297	9,556,063	9,786,685	9,963,788	10,121,298	10,284,960	10,454,737
United States	248,709,873	262,073,000	275,005,000	287,092,000	299,194,000	311,833,000	324,668,000

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

TABLE 2.3: POPULATION PROJECTIONS, PERCENT CHANGE, 1990-2020							
Area	1990-1995	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020	1990-2020
Marquette County	-7.70	5.67	-0.32	-0.76	-1.14	-1.41	-5.96
Alger County	9.75	0.74	0.90	1.05	0.77	0.13	13.74
Delta County	2.12	0.54	0.30	0.41	0.46	0.40	4.29
Dickinson County	1.23	0.94	0.48	0.72	0.71	0.55	4.71
Menominee County	-1.54	-3.92	-4.49	-4.53	-4.34	-4.78	-21.42
Schoolcraft County	4.87	0.84	0.93	0.73	0.49	-0.46	7.55
Central U.P.	-1.93	1.93	-0.48	-5.8	-0.69	-0.95	-2.71
Michigan	2.81	2.41	1.81	1.58	1.62	1.65	12.47
United States	5.37	4.93	4.40	4.22	4.22	4.12	30.54

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

Powell Township has experienced an increase in population in the past few decades and expects approximately 200 more families to move into the area.

2.4 POPULATION DENSITY

With a 2010 population of 816 persons and a land area of 154.2 square miles, Powell Township's population density was 5.29 persons per square mile (Table 2.4). The densities for the county and state are 36.83 and 173.98 persons per square mile respectively.

Most of Powell Township's population is concentrated in the eastern portion of the Township along CR 550, within the community of Big Bay, and along or near water features. The majority of the western portion of the Township is made up of forested land with only seasonal residences.

TABLE 2.4: POPULATION DENSITIES, SELECTED AREAS, 2010			
Place	Land Area (Square Miles)	Population	Persons Per Square Mile
Powell Township	154.2	816	5.29
Negaunee Township	42.1	3,088	73.35

TABLE 2.4: POPULATION DENSITIES, SELECTED AREAS, 2010			
Place	Land Area (Square Miles)	Population	Persons Per Square Mile
Ishpeming Township	86.5	3,513	40.61
Marquette Township	54.7	3,905	71.39
Champion Township	120.9	297	2.46
Michigamme Township	133.7	349	2.61
Marquette County	1,821.3	67,077	36.83
Michigan	56,809.2	9,883,640	173.98

Source: U.S. Census Bureau, 2010.

2.5 AGE AND SEX CHARACTERISTICS

The age of the residents of an area may indicate emerging needs for a new facility or new facilities, both public and private. Age categories were altered from the 1980 and 1990 Censuses to the 2000 Census; 2010 data is also included. Tables 2.5 to 2.7 contain age-related statistics for Powell Township and selected areas.

TABLE 2.5: MEDIAN AGE, 1990-2010, SELECTED AREAS				
Area	1990	2000	2010	Change, 1990-2010
Powell Township	36.3	46.1	53.7	+48%
Marquette County	30.7	37.5	39.4	+28%
Michigan	32.6	35.5	38.9	+19%
United States	32.9	35.3	37.2	+13%

Source: U.S. Census Bureau for years cited

TABLE 2.6: POPULATION DISTRIBUTION BY AGE GROUP, POWELL TWP., 1980 and 1990				
Age Group	1980		1990	
	Number	Percent	Number	Percent
Under 5	67	10.0	42	6.4
5-14	89	13.3	99	15.0
15-24	98	14.7	63	9.5
25-34	153	22.9	107	16.2

TABLE 2.6: POPULATION DISTRIBUTION BY AGE GROUP, POWELL TWP., 1980 and 1990				
35-44	60	8.9	133	20.2
44-54	70	10.5	64	9.7
55-64	59	8.8	66	10.0
65-74	58	8.7	57	8.6
75+	13	1.9	29	4.4
Total	667		660	

Source: U.S. Census Bureau for years cited

Note: The percentages in this table reflect the relationship of each age group to the total population.

TABLE 2.7: POPULATION DISTRIBUTION BY AGE GROUP, POWELL TWP., 2000 and 2010				
Age Group	2000		2010	
	Number	Percent	Number	Percent
Preschool Age				
Under 5	20	2.8	22	2.7
<i>Subtotal</i>	20	2.8	22	2.7
School Age				
5 -9	38	5.2	30	3.7
10 – 14	46	6.4	27	3.3
15 – 19	39	5.4	28	3.4
<i>Subtotal</i>	123	17.0	85	10.4
Working Age				
20 – 24	22	3.0	32	3.9
25 – 34	60	8.3	72	8.8
35 – 44	123	17.0	74	9.1
45 – 54	163	22.5	149	18.3
55 – 59	47	6.5	102	12.5
60 – 64	42	5.8	98	12.0
<i>Subtotal</i>	457	63.1	527	64.6
Retirement Age				
65 – 74	80	11.0	107	13.1
75 – 84	39	5.4	58	7.1
85 years and over	5	0.6	17	2.1
<i>Subtotal</i>	124	17.1	182	22.3
Total	724		816	

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

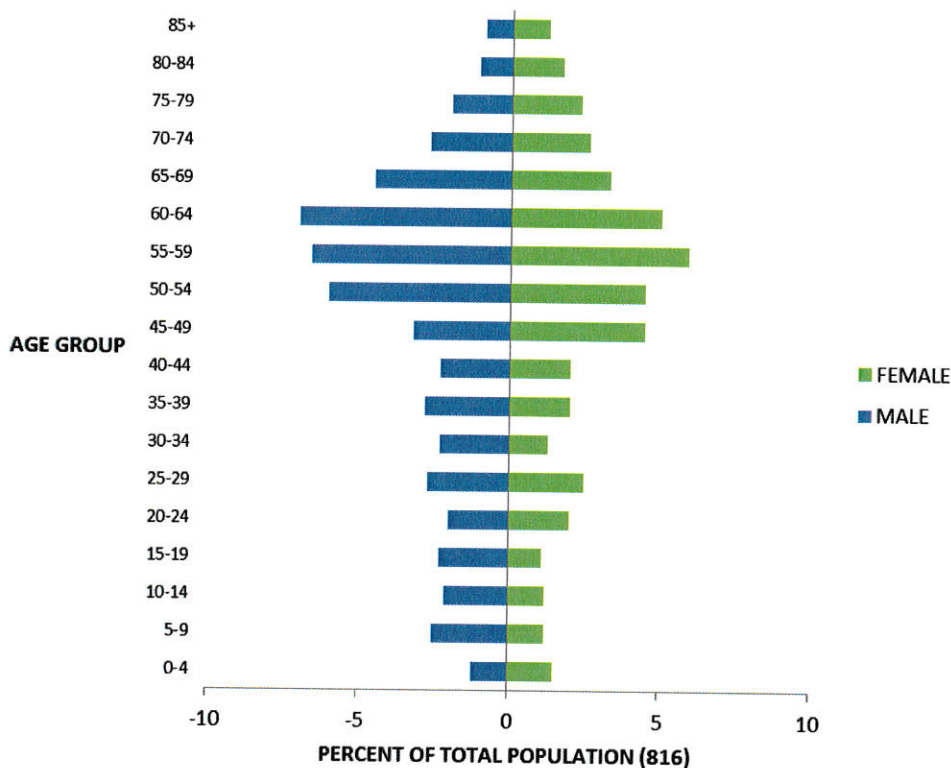
Note: The percentages in this table reflect the relationship of each age group to the total population.

The age of the younger age group has an important impact from an educational standpoint. The number of school age children has decreased over the past two decades; the number of pre-school (under 5 years) has also decreased.

Powell Township's population is aging rapidly. In 1980 only 10.6 percent of the population was of retirement age; by 2010, over 22 percent of the population was 65 and older. As indicative of the drastically aging population of the Township, more than 65 percent of the Township's population is over the age of 45.

The Township's older age structure is most likely the result of increased lifespan and immigration of people aged 40 and older. On the whole, the aging population of the Township is following state and national trends, which result from a combination of factors. The primary causes of this aging are increased life expectancies, combined with the fact the largest segment of the population, the so-called "baby boomers," are aging. A trend toward smaller families, with many people choosing to delay childbearing or not to have children, also contributes toward this trend.

FIGURE 2.1: 2010 POWELL TOWNSHIP POPULATION BY AGE AND GENDER



Source: U.S. Census Bureau, 2010

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

2.6 RACE AND ETHNICITY

Understanding the racial and ethnic make-up of a community helps identify the diverse needs of its population. The Upper Peninsula as a whole has remained predominately white compared to the rest of the state. Powell Township reflects this trend. However, the proximity of Northern Michigan University, which attracts students from all over Michigan, could potentially contribute to an increase in racial diversity.

In 2010, whites made up more than 95 percent of Powell Township's population. The Township saw a slight increase in racial and ethnic diversity compared to 2000. The next largest group was American Indian/Alaska Native with 21 persons, an increase of seven people since 2000. Eight individuals identified as Asian, compared to one in 2000. Additionally, one person identified as Black or African American and three people identified as Hispanic or Latino, compared to zero for each of these groups in 2000. This information is presented in Table 2.8.

TABLE 2.8: NUMBER OF PERSONS BY RACE, 2000 AND 2010, POWELL TOWNSHIP				
Race	2000		2010	
	Number	Percent	Number	Percent
Total	724	100	816	100
White	697	96.27	778	95.34
Black or African American	0	0.00	1	0.12
American Indian & Alaska Native	14	1.93	21	2.57
Asian	1	0.01	8	0.98
Native Hawaiian & Other Pac. Is.	0	0.00	0	0.00
Hispanic or Latino	0	0.00	3	0.37
Other Races (or two or more races)	12	1.66	8	0.98

Source: U.S. Census Bureau, 2000 and 2010. Compiled by Northwest Michigan Council of Governments.

2.7 EDUCATIONAL ATTAINMENT

Among Township residents who were 25 years of age or older at the time of the 2010 American Community Survey, 11.8 percent had not completed high school or the equivalent. The percentage of those attaining high school diplomas was higher in the Township than at the county or state level. The comparisons in Table 2.9 below show a lower percentage of persons with college degrees residing in the Township than within the county and state. However, compared to the 2000 Census, the percentage of residents 25 or older with a Bachelor's degree has increased slightly.

TABLE 2.9: EDUCATIONAL ATTAINMENT OF PERSONS OVER 25 YEARS, 2010				
Educational Level	Powell Township		Marquette County	Michigan
	Number	Percent	Percent	Percent
Less than 9th Grade	15	3.3	2.3	3.5
9th-12th Grade, No Diploma	39	8.5	6.0	8.4
High School Graduate	171	37.3	32.9	31.5
Some College, No Degree	98	21.4	20.9	23.4
Associate Degree	42	9.2	8.2	8.1
Bachelor's Degree	67	14.6	20.7	15.5
Graduate or Professional Degree	11	2.4	7.7	8.6
High School Graduate or Higher	404	88.2	91.7	88.0
Bachelor's Degree or Higher	93	20.3	29.7	25.0

Source: Missouri Census Data Center, 2013. ACS Profile Report: 2006-2010 (5-year estimates).

Recent trends indicate that many employers nationwide now require their employees to have educational skills beyond a high school degree. Many of Marquette County's major employers are in the health care and education sectors, which generally require a college degree or technical training beyond high school. Many positions associated with financial institutions, the state prison system, and municipal governments also require post high school educational training. Some of the major manufacturing industries have also started to require higher education background before hiring.

2.8 HOUSEHOLD CHARACTERISTICS

Evaluation of the changes in household characteristics in a community can often provide additional insight regarding population trends. Household relationships reflect changing social values, economic conditions, and demographic changes, such as increased lifespan and the increasing mobility of our society. The Census defines a household as all persons who occupy a housing unit, i.e., a single family, one person living alone, two or more families living together, or any group or related or unrelated persons sharing living quarters. A *family* consists of a householder and one or more persons living in the same household who are related by birth, marriage, or adoption. A *non-family household* can be one person living alone, or any combination of people not related by blood, marriage or adoption.

Of the 423 households in Powell Township, 48.2 percent are married-couple families, 35.9 percent are single person households, and 4.3 percent are single parent households. Of the 27,538 households in Marquette County, 47.8 percent are married-couple households, 30.4 percent are single person households and 7.3 percent are single parent households. Powell Township has a lower average household size compared to Marquette County as a whole. The average household size decreased for both the Township and the County between 2000 and 2010.

TABLE 2.10: HOUSEHOLD BY SIZE AND TYPE, 2000 AND 2010						
Household Type	POWELL TOWNSHIP			MARQUETTE COUNTY		
	2000	2010	Percent 2010	2000	2010	Percent 2010
Total Households	333	423	100.0	25,767	27,538	100.0
Family Households	228	239	56.5	16,480	16,664	60.5
Married-Couple Family	195	204	48.2	13,225	13,170	47.8
Male Householder	--	12	2.8	--	1,131	4.1
Female Householder	15	23	5.4	2,290	2,363	8.6
Non-Family Household	105	184	43.5	9,287	10,874	39.5
Householder Living Alone	93	152	35.9	7,450	8,361	30.4
Householder 65 Years and Older	38	55	13.0	2,709	2,925	10.6
Average Household Size	2.17	1.93	--	2.35	2.26	--

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

* Male Householder data not available before 2010.

2.9 ISSUES AND OPPORTUNITIES

- Increases in population each decade, if continued, may require additional investment in community facilities and infrastructure improvements. However, the additional tax base from an increase in population could mitigate this cost.
- The proportion of individuals in the preschool and school age groups continues to shrink which contributes declining school enrollment. Declining school enrollment could require consolidation of services to save money.
- Many residents in the working age population have been forced to move to areas with more employment opportunities. Additionally, as the "baby boomers" begin to reach retirement age, a smaller proportion of the population is participating in the workforce. With a diminishing workforce, there are fewer people contributing to pension funds and additional programs that support retirees. As the number of working persons decreases in comparison to retirees, there is distress over the future of programs such as Social Security.
- With many major employers within Marquette County requiring degrees beyond high school, the Township should encourage the local population to further their education. In addition, a well-educated work force is essential for attracting potential employers to the area.
- The increase in nonfamily households between 2000 and 2010 may indicate a small change in the type of housing and other services demanded within the Township. Most significant is the increase in the number of persons living alone.
- The Township's population density is one of the lowest of the townships within Marquette County. The majority of the Township's population is located near along CR 550, within the community of Big Bay, and along or near water features. It is likely that the greatest growth in population within the Township in coming years will occur along and near water features, due to the desirability of living in such a location.

CHAPTER THREE: THE ECONOMY

3.1 INTRODUCTION

Numerous factors contribute to the economic development of a community, many of which extend far beyond the community's boundaries. Therefore, this chapter will not only include information that is specific to Powell Township, but it will also include data for the county, region, and state. An economic development strategy for the Township will be presented at the end of the plan in the Goals, Policies, and Objectives chapter. This strategy contains broad economic development goals for the Township and specific implementation tools designed to help the Township in achieving the goals.



Eagle Mine | Source: michiganradio.org

3.2 AREA ECONOMY

Like the rest of the Upper Peninsula of Michigan, Powell Township's economic history is closely related to its natural resources. Logging and wood product industries were mainstays of the local economy throughout the Township's history. The first products shipped from Big Bay were white pine logs sent to Quebec; a variety of lumber mills followed as the area was settled. The Lake Independence Lumber Company, a subsidiary of the Brunswick Balke Collander Company, manufactured bowling pins; this plant operated until the 1920s, when it was bought out by the Kerry and Hanson Flooring Company. In the 1930s the Ford Motor Company bought the mill and the town of Big Bay, and produced parts for wooden auto bodies until 1949. This mill site, under its various ownerships, was the mainstay of employment in Big Bay for many years.

The community of Birch in the southern portion of the Township was also built around the lumber industry. Founded in 1906, this community boasted as many as 500 residents, but by the 1920s the community had largely disappeared. Other communities sprang up and just as quickly disappeared as the timber was cut or companies went out of business.

Logging remains a mainstay in the Township's economy, although most of the timber now cut in the Township is hauled to mills elsewhere for processing. Natural resources continue to be crucial to the local economy, both as a source of raw material, and as a part of the environment that draws tourists and seasonal residents to the area.

The Township has vast areas of land in Commercial Forest Reserve (CFR). Much of this CFR land contains timber used for pulp by paper manufacturers such as the Mead Corporation. Tourism is also a significant part of the Township's economy. Year-round tourists are attracted to the Township's scenic setting and abundant natural resources.

The Huron Mountain Club, the Township's largest employer and largest single landowner (nearly 26,000 acres), has been in existence for over a century in various forms. This private club provides employment for local residents, and is also the largest taxpayer in the Township. Other lodging and dining establishments, primarily in the Big Bay area, provide services to the general public. Granot Loma, originally built as the summer residence of the Louis Kaufman family in the 1920s, is in private ownership and is closed to the public. However, the lodge would be suitable for operation as a bed and breakfast or inn offering meals and lodging to the public, and some owners have discussed such plans. If this were to occur, the facility could be an additional attraction in the area.

County-wide, the economy has diversified beyond its original natural resource base. The service and retail trade sectors have become the largest employment sectors in the County, while manufacturing has diminished in relative importance. Within the County, there is a regional health care facility, a state university, and several government offices. Between the mid-1950s and 1995, K.I. Sawyer Air Force Base was a major employer in the county, until the base closed officially on September 30, 1995.

3.3 LABOR FORCE AND EMPLOYMENT

Unemployment figures and other labor force data are collected at the county level by the Michigan Department of Technology, Management & Budget (DTMB) and are available dating back to the early 1960s. The U.S. Census Bureau also collects labor force data.

The information summarized in Table 3.1 and Figure 3.1 shows that unemployment in Marquette County has generally followed the same trends as the six-county central region, the Upper Peninsula, and the state and nation.

However, unemployment has generally been lower in Marquette County than the U.P. as a whole. The slight rise in unemployment in 1994 is contrary to regional and state trends, and probably reflects the closure of K.I. Sawyer Air Force Base. The sharp increase in unemployment in 1995 is probably also due to base closure, and greater than the slight increase that occurred UP-wide.

Unemployment rates rose during the late 1970s and 80s, peaking in 1982 at 22.5 percent. During the middle and late 1980s, the unemployment rate followed a fairly consistent pattern of decline; however, this downward trend ended in 1990, with a half of a percentage point increase in unemployment. In early 1990s, the country encountered a moderate economic decline. The Upper Peninsula experienced a slowdown in employment growth, which was similar to the rest of the nation. The trend continued until 1993, when unemployment rates began to drop throughout the nineties and into the early 2000s. Rapid increases in unemployment rates beginning in 2007 in Marquette County and the rest of the United States reflect the national housing crisis and subsequent economic recession.

TABLE 3.1: LABOR FORCE AND UNEMPLOYMENT, SELECTED AREAS, 1990-2012							
Year	Marquette County Labor Force			Unemployment Rates (Percentage)			
	Labor Force	Employed	Unemployed	Marquette County	U.P.	Michigan	U.S.
1990	32,025	29,375	2,650	8.3	8.9	7.7	5.6
1991	32,500	29,700	2,800	8.6	10.0	9.3	6.8
1992	33,500	30,750	2,750	8.2	11.2	9.2	7.5
1993	33,550	31,200	2,350	7.0	9.6	7.4	6.9
1994	33,500	31,125	2,375	7.1	9.2	6.2	6.1
1995	32,075	29,500	2,575	8.1	8.8	5.3	5.6
1996	31,300	29,325	1,975	6.3	7.5	4.9	5.4
1997	32,250	30,300	1,950	6.0	6.9	4.3	4.9
1998	32,075	30,450	1,625	5.1	6.0	4.0	4.5
1999	32,518	30,854	1,664	5.1	5.7	3.8	4.2
2000	34,162	32,681	1,481	4.3	5.3	3.7	4.0
2001	34,541	32,672	1,869	5.4	6.3	5.2	4.7
2002	33,668	31,362	2,306	6.8	7.2	6.2	5.8
2003	34,122	31,873	2,249	6.6	7.6	7.1	6.0

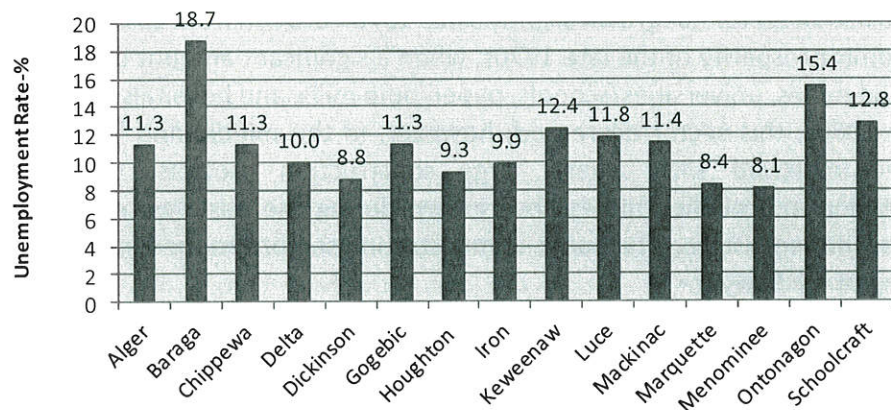
TABLE 3.1: LABOR FORCE AND UNEMPLOYMENT, SELECTED AREAS, 1990-2012

Year	Marquette County Labor Force			Unemployment Rates (Percentage)			
	Labor Force	Employed	Unemployed	Marquette County	U.P.	Michigan	U.S.
2004	34,549	32,438	2,111	6.1	7.4	7.1	5.5
2005	35,550	33,513	2,037	5.7	7.0	6.8	5.1
2006	36,050	33,902	2,148	6.0	7.1	6.9	4.6
2007	36,185	33,966	2,219	6.1	7.4	7.1	4.6
2008	36,203	33,703	2,500	6.9	8.5	8.3	5.8
2009	35,793	32,176	3,617	10.1	12.2	13.4	9.3
2010	35,127	31,672	3,455	9.8	11.8	12.7	9.6
2011	34,427	31,436	2,991	8.7	10.0	10.4	8.9
2012	34,385	31,730	2,655	7.7	10.4	9.1	8.1

Source: Michigan Labor Market Information, <http://www.milmi.org/>, 2012.

Figure 3.1

Labor Force and Unemployment, Upper Peninsula Counties, 2011



Although the percentage of women aged 16 years and older in the labor force has declined slightly since 1990 in Powell Township, the general trend since 1970 has shown a drastic increase.

The 40-year trend mention above reflects changing values, changes in family structure, and the economic need for two-income families. The statistics on women in the labor force also point out potential impacts on employers and local service providers, in terms of day care, health care costs, educational and recreational programs, etc.

TABLE 3.2: LABOR FORCE PARTICIPATION OF WOMEN, 1970-2010						
	1970		1990		2010	
	Number	Percent	Number	Percent	Number	Percent
Powell Township						
Women 16 years and older	108	100.0	222	100.0	232	100.0
Women 16 years and older in labor force	40	37.0	129	58.1	119	51.3

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

3.4 EMPLOYMENT BY SECTOR

According to the U.S. Census, employment patterns in Marquette County have changed greatly since 1970. The biggest changes are the decrease in the relative importance of mining and manufacturing to the County's economy and the growth in the service sector (Table 3.3). The presence of Northern Michigan University and Marquette General Hospital, two large service sector employers, helps to boost Marquette County's reliance on the service sector.

The construction sector has grown slightly since 1970. Growth from 1970-1990 probably reflects the economic prosperity of the late 1970s, when a significant amount of new construction took place at the mines, universities/schools, paper/pulp mills, and hospitals. During the recession of the early 1980s, this sector decreased; however, in the middle and late 1980s, as economic conditions improved with several large construction projects, the sector rebounded. Transportation and public utilities have grown during the past two decades, as has finance, insurance, and real estate. The public administration sector dropped in recent years because of the closing of K.I. Sawyer.

TABLE 3.3: EMPLOYMENT BY SECTOR, MARQUETTE COUNTY, 1970-2010

Sector	1970		1990		2010**	
	Number	Percent	Number	Percent	Number	Percent
Agriculture, Forestry & Fisheries	166	0.8	227	0.8	1,611	5.1
Mining	3,210	15.6	1,987	6.9	*	*
Construction	748	3.6	1,462	5.1	1,664	5.3
Manufacturing	2,687	13.1	1,613	5.6	1,652	5.3
Transportation & Public Utilities	1,302	6.3	2,192	7.6	1,274	4.0
Wholesale Trade	744	3.6	715	2.5	827	2.6
Retail Trade	3,383	16.4	5,948	20.6	4,309	13.7
Finance, Insurance & Real Estate	597	2.9	1,317	4.6	1,334	4.2
Service**	6,311	30.7	11,076	38.4	17,008	54.0
Public Administration	1,435	7.0	2,321	8.0	1,784	5.7
Total	20,583	100.0	28,858	100.0	31,463	100.0

*Mining was combined with agriculture, forestry and fisheries in 2010

**"Service" includes the following 2010 categories: information, professional, scientific, management and administrative, educational, health care and social assistance, arts, entertainment, and recreation and accommodation, and food services, other services.

Source: U.S. Census Bureau for years cited

When Powell Township's employment is compared to Marquette County, it is apparent that the local economy, like that of the County, is dependent upon the service sector (Table 3.4). The service sector was also the largest employment sector in the region and the State. Employment in manufacturing firms is substantially more important locally with almost 13 percent of employed Township residents working in that sector, compared to Marquette County, where manufacturing employment is less than 6 percent. The local economy is also dependent on employment in the construction sector. It must be noted that these figures reflect the types of jobs held by persons living within the Township and County; although the jobs may actually be located outside the Township or County.

TABLE 3.4: EMPLOYMENT BY SECTOR, 2006-2010

Sector	Powell Township		Marquette County	State of Michigan
	Number	Percent	Percent	Percent
Agriculture, forestry, fisheries, & mining	10	4.9	5.1	1.3
Construction	35	17.1	5.3	5.3
Manufacturing	26	12.7	5.3	17.6
Wholesale Trade	3	1.5	2.6	2.8
Retail Trade	12	5.9	13.7	11.6
Transportation and warehousing, and utilities	3	1.5	4.0	4.2
Information	8	3.9	2.7	1.9
Finance and insurance, and real estate and rental and leasing	3	1.5	4.2	5.7
Professional, scientific, management, and administrative	15	7.3	5.9	8.9
Educational services, and health care, and social assistance	60	29.3	29.1	23.2
Arts, entertainment, and recreation, and accommodation, and food services	16	7.8	11.9	9.1
Other services, except, public administration	5	2.4	4.5	4.7
Public administration	9	4.4	5.7	3.8
Total	205	100.0	100.0	100.0

Source: U.S. Bureau of the Census, 2010.

Service sector employment has been the fastest-growing sector nationally and statewide, as well as locally. Regional decline in manufacturing employment is consistent with state and national trends, although some central Upper Peninsula counties have seen increases in manufacturing employment.

Examining the wages associated with each industry paints a clearer picture of a community's economic strength. When employment is concentrated in lower-paying industries, communities may see an increase in the need for public services. At the same time, the tax base has less capacity to contribute to financing public services, as individuals in lower-paying jobs would likely have homes with a smaller assessed value.

Table 3.5: Average Weekly Wages by Industry, Marquette County (2012 Q4)	
Agriculture, forestry, fishing, and hunting	\$539
Mining	\$2,071
Utilities	*
Construction	\$991
Manufacturing	\$815
Wholesale trade	\$867
Retail trade	\$409
Transportation and warehousing	\$891
Information	\$679
Finance and insurance	\$932
Real estate and rental and leasing	\$567
Professional and technical services	\$ 842
Management of companies and enterprises	\$1,351
Administrative and waste services	\$392
Educational services	\$377
Health care and social assistance	\$1,090
Arts, entertainment, and recreation	\$246
Accommodation and food services	\$264
Other services, except public administration	\$427
Federal government	\$1,196
State government	\$1,068
Local government	\$690

* No data.

Source: Michigan Labor Market Information, <http://www.milmi.org/>, 2013.

Table 3.5 above shows the average weekly wages by industry in Marquette County. Although the service sector provides the greatest number of jobs in Marquette County, wages in this category are much lower than in other sectors. Jobs in mining pay much more, but the job availability and security once associated with this industry is no longer a reality. Economic diversification – with more jobs in higher-paying industries – and education targeted towards stable, higher-paying jobs, could help create a more stable tax base.

3.5 EMPLOYMENT BY PLACE OF WORK

In 2010, the vast majority of the employed residents of Powell Township worked within Marquette County (Table 3.6). A few residents worked in other counties of the State.

TABLE 3.6: WORKERS 16 YEARS AND OVER BY PLACE OF WORK, POWELL TOWNSHIP, 2010

	Number	Percent
Total Township Residents Employed	205	100.0
Worked in Michigan	205	100.0
Worked in Marquette County	193	94.1
Worked Outside of County	12	5.9
Worked Outside of Michigan	0	0

Source: US Census Bureau, 2010.

3.6 MAJOR EMPLOYERS

The City of Marquette is the site of most of the major employers within Marquette County, except the Tilden Mine and Empire Mine near Ishpeming and now Eagle Mine, which will be operated by Lundin Mining just outside Powell Township in Michigamme Township. Once the County's largest employer, the closure of K.I. Sawyer AFB resulted in the loss of about 4,700 jobs (3,600 military and 1,100 civilian).

Over the past century, the economy of the central Upper Peninsula has been dominated by mining, especially iron ore mining. The iron ore industry has been sensitive over the century to cycles of boom and bust. Much of the cycle has been related to the same cycles as the national economy. The iron mining industry reacted to the demand for high grade ore by developing pelletizing plants to turn low grade ore into high grade pellets.

Most mining is now done on surface in open pit mines. However, Lundin Mining is currently constructing a new underground copper and nickel mine that will begin operations in 2014. Construction and operations will result in the creation of 750 jobs. Lundin anticipates closing the mine in 2023, but will explore additional mining possibilities in the region. On the flip side, Cliffs Resources will close the Empire Mine by early 2015. Cliffs plans to keep Tilden open until at least 2024.

Marquette County's major employers are shown on Table 3-7. The majority of these larger employers, as well as many smaller firms, are part of the service sector. The two largest employers in the County are Marquette General Hospital and Northern Michigan University. Many residents from Powell Township commute to the City of Marquette to work at these facilities

Like Marquette County, the service sector accounts for the largest number of employees within Powell Township. The major employers within the Township are Powell Township Schools, Bay Cliff Health Camp, and the Huron Mountain Club, all part of the service sector. The Township also has several small service and retail trade businesses that primarily cater to tourists, including

motels and restaurants. Many of the businesses in the area capitalize on local history, such as a bed and breakfast located in a former lighthouse, and a hotel and restaurant in a building built early in the century and used by Henry Ford as a retreat in the 1940s.

TABLE 3.7: MARQUETTE COUNTY MAJOR EMPLOYERS, 2011 (LATEST AVAILABLE FIGURES)		
Firm	2011 Employment	Product/Service
Marquette General Health System	2,831	Healthcare
Cliffs Natural Resources	1,567	Iron ore mining
Northern Michigan University	999	Higher education
Peninsula Medical Center	630	Healthcare
Dept. of Corrections	490	Correctional facilities
Wal-Mart	434	Retail
Marquette Public Schools	419	K-12 education
Bell Hospital	397	Healthcare
Upper Peninsula Builders Association	324	Construction
County of Marquette	240	Public administration
Keweenaw Bay Indian Community	235	Public administration; casino
American Eagle/American Airlines	214	Air transportation
We Energies	205	Energy provider
Pioneer Surgical	200	Medical technology
Target	200	Retail
Jilbert Dairy	170	Dairy processor/distributor

Source: Northern Michigan University's Central for Rural Community and Economic Development, 2011.

3.7 INCOME TRENDS

Examination of local income trends, and comparison of local income figures to state and national averages provide 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. The income generated by a single individual or family is a good representation of the wages and salaries paid by employers in the area.

Household incomes are presented in Table 3.8 for the Township, County and State. Of the 235 estimated households in Powell Township, 51.6 percent reported median household incomes over \$50,000 in 2010. Twenty-eight households reported annual incomes less than \$10,000.

TABLE 3.8: HOUSEHOLDS BY ANNUAL HOUSEHOLD INCOME, 2010						
Annual Income	Powell Township		Marquette County		Michigan	
	Number	Percent	Number	Percent	Number	Percent
Less than \$10,000	28	11.9	2,390	9.3	304,785	7.9
\$10,000-\$14,999	3	1.3	1,739	6.8	219,924	5.7
\$15,000-\$24,999	9	3.8	2,992	11.7	442,676	11.5
\$25,000-\$34,999	34	14.5	2,973	11.6	430,558	11.2
\$35,000-\$49,999	40	17.0	3,737	14.6	577,569	15.0
\$50,000-\$74,999	61	26.0	5,172	20.2	728,579	19.0
\$75,000-\$99,999	49	20.9	3,265	12.7	466,664	12.1
\$100,00 to \$149,000	8	3.4	2,369	9.2	433,144	11.3
\$150,000 to \$199,999	3	1.3	528	2.1	134,211	3.5
\$200,000 or more	-	-	473	1.8	105,887	2.8
Total	235	100.0	25,638	100.0	3,843,997	100.0

Source: U.S. Census Bureau, 2010.

Median household incomes and median family incomes are shown for all Marquette County jurisdictions in Table 3.8. Powell Township has one of the higher median household and median family incomes in the county.

Table 3.8: Median Incomes, Marquette County Jurisdictions, 2006-2010		
Jurisdiction	Median Household Income	Median Family Income
Powell Township	\$52,546	\$52,500
City of Ishpeming	\$39,065	\$53,840
City of Marquette	\$36,797	\$63,978
City of Negaunee	\$43,915	\$51,300
Champion Township	\$45,083	\$58,194
Chocolay Charter Township	\$64,043	\$77,321
Ely Township	\$52,216	\$64,261
Ewing Township	\$36,719	\$55,625
Forsyth Township	\$48,447	\$53,918
Humboldt Township	\$50,750	\$59,167
Ishpeming Township	\$60,718	\$62,083
Marquette Charter Township	\$69,387	\$76,653
Michigamme Township	\$32,143	\$38,889
Negaunee Township	\$62,500	\$67,736
Republic Township	\$37,130	\$44,519

Table 3.8: Median Incomes, Marquette County Jurisdictions, 2006-2010		
Jurisdiction	Median Household Income	Median Family Income
Richmond Township	\$38,125	\$54,200
Sands Township	\$69,783	\$74,643
Skandia Township	\$42,679	\$47,222
Tilden Township	\$48,929	\$58,438
Turin Township	\$35,417	\$36,667
Wells Township	\$35,833	\$60,625
West Branch Township	\$31,736	\$35,972

3.8 POVERTY RATES

Another measure of local incomes is the poverty rate. Poverty levels for the Township, County, and State are shown in Table 3.11 below.

Although the overall poverty rate and the child poverty rate declined, the poverty rate for elderly people increased from 1.2 percent in 1990 to 7.6 percent in 2010. In contrast, the poverty rate for elderly people declined from 1990 to 2010 for both the County and the State while the overall poverty rate increased.

TABLE 3-11 POVERTY RATES, 1990 AND 2010		
	1990	2010
Powell Township		
Poverty Rate for All Persons	11.3	6.8
Poverty Rate for Children Under 18	15.0	6.2
Poverty Rate for Persons 65 and Over	1.2	7.6
Marquette County		
Poverty Rate for All Persons	12.6	13.2
Poverty Rate for Children Under 18	14.0	13.3
Poverty Rate for Persons 65 and Over	13.5	9.8
Michigan		
Poverty Rate for All Persons	13.1	14.8
Poverty Rate for Children Under 18	18.2	20.5
Poverty Rate for Persons 65 and Over	10.8	8.3

Source: U.S. Census Bureau, 2010

3.9 ISSUES AND OPPORTUNITIES

- Powell Township's location affects the local economy through the dependence on commuting to and from larger communities. Township residents who work outside the Township must commute significant distances over narrow, winding roads to reach their place of work, while many local businesses rely on customers who must travel those same roads to purchase a product or service in the Township. This distance from markets also affects the ability of the area to attract industries or businesses which must ship raw materials into or finished products out of the area. However, upgrades to CR 550 will significantly reduce these obstacles.
- The economy is and has historically been closely linked to the area's natural resources and geography. Whether used as raw materials, as in the case of the logging and wood products industries, or for recreational activities, natural resources such as timber, lakes and shoreline, and geographic features such as the Huron Mountains are vital to businesses in the area.
- Increases in the number of women with children in the labor force affects the needs for child care, educational and recreational programs and related facilities. Changes in the working environment to accommodate family needs of both men and women, such as flexible days and hours of work, job sharing, etc., may in turn affect commuting and transportation patterns, shopping patterns, etc. In communities such as Powell Township, where parents must often commute a significant distance to work, the location of child care is often as important as availability. There is a need for a daycare center or after school programs, as the Township expects an increased need with incoming mine families.
- The opportunity may exist to market the area as a location for retirees to establish seasonal or year-round residences. However, the willingness and ability to pay for services such as schools and recreational areas, as well as the need for services which may not be available locally should be taken into consideration.
- Marquette County unemployment rates are generally lower than the Upper Peninsula average. Unemployment increased drastically between 2008 and 2009, but has declined steadily since then. Marquette County's unemployment rate is currently lower than both the State and National average.
- Opportunities may exist to attract small firms such as light industry, communications firms, etc., which are not heavily dependent on the transportation system and distances to markets. The quality of life and natural beauty of the area may be an attraction to firms who can rely on telecommunications, fax machines and computers to market their product. Powell Township has access to broadband internet through several providers.

CHAPTER FOUR: HOUSING

4.1 INTRODUCTION

Housing is one of the key factors to consider when planning for a community's future. The location and type of housing available establishes where public infrastructure must be provided. The placement of a community's housing also determines the costs associated with public services. Furthermore, the location of new housing can be settled on in part by the availability of public infrastructure and services. Housing characteristics can also reveal information about a community's history and its economic and social situation.

The cost of housing and the type of housing available are typically determined by market factors. Outside of operating a housing authority or possibly serving as the developer of residential property, local units of government do not usually become directly involved with providing housing. Through zoning and other land use controls, the provision of infrastructure and services and efforts to attract new residents to a community, local governments can have a powerful impact on housing in a community.

In addition to migration, commuter trends, the cost of land and construction, and other housing related elements, there are several key non-housing factors that can influence an area's housing market. Public safety, or a lack of, can influence where people choose to buy a home and raise a family. Quality education is one of the primary locational factors for families with school-age children. Area access to employment, shopping and other entertainment needs factor into the purchase of a home.

Nationwide trends since 2005 indicate a rapid decline in housing prices. New home sales in the United States may remain relatively weak for some time, as the housing industry struggles with falling prices and rising mortgage foreclosures. From 1960 to 2005, the rate of homeownership nationwide was on the rise. From 2005 onwards, the rate of homeownership has been steadily decreasing, while the number of households renting has been steadily increasing nationwide. While personal income is a major factor for many when deciding to rent or own their home, other considerations make renting a preferred choice for many households.

Information presented in this chapter will provide area officials with the most recent housing data available, including structure and occupancy characteristics. This information will help assess housing needs and determine the appropriate course of action to address housing needs in Powell Township.

Some tables show information for the Big Bay Census Place Designation in addition to the township. That area is shown in pink below:

Fig. 4.1 : Big Bay Census Place Designation



4.2 HOUSING CHARACTERISTICS

Definitions

A *household* is defined as all persons who occupy a housing unit according to the Bureau of the Census. This can include one person living alone, a single family, two or more families living together, or any groups 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 is related by birth, marriage, or adoption. A *non-family household* can be one person living alone, or any combination of people not related by blood, marriage, or adoption.

Housing Unit Trends: According to the 2010 Census, there are 928 housing units in Powell Township, a 13.4 percent increase since the 2000 Census. Since 1980, the number of Township housing units has increased by 19.9 percent. Census information for 1980 through 2010 is presented in Table 4.1.

Figure 4-1, which compares the number of housing units by occupancy and tenure, suggests that the decrease occurred in seasonal and migratory units. Marquette County followed a similar overall trend with most of its occurring between 1990 and 2000. The CUPPAD region as a whole had experienced an increase in housing units of 19.1 percent between 1980 and 2010.

TABLE 4.1: TOTAL HOUSING UNITS, SELECTED AREAS, 1980-2010

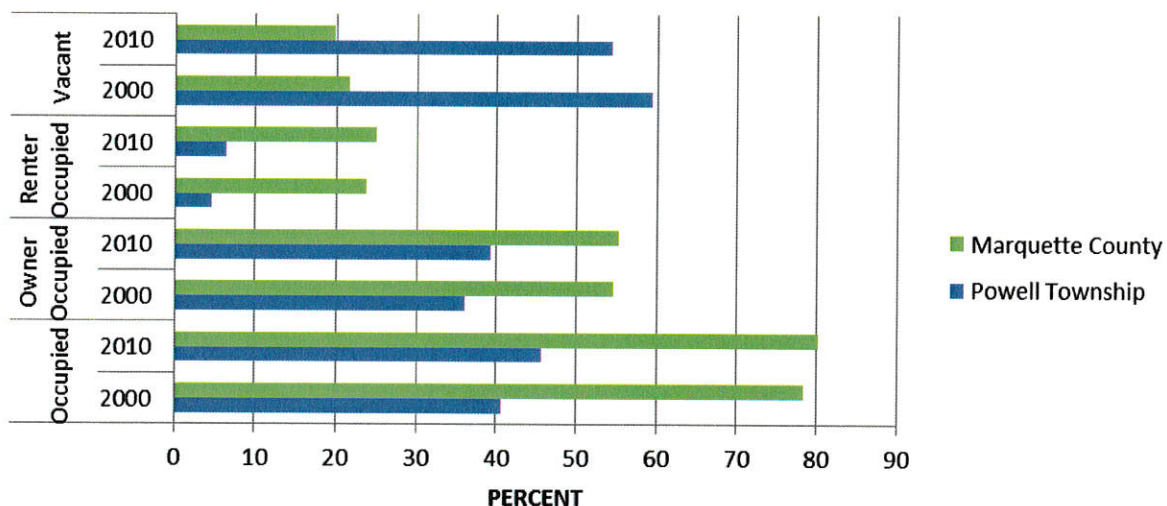
Area	1980	1990	% Change 1980-1990	2000	% Change 1990-2000	2010	% Change 2000- 2010	% Change 1980- 2010
Powell Township	774	646	-16.5	818	26.6	928	13.4	19.9
Marquette County	30,530	31,049	1.7	32,877	5.9	34,330	4.4	12.4
CUPPAD Region	80,271	85,650	6.7	91,105	6.4	95,628	5.0	19.1

Source: U.S. Census Bureau for years cited

Occupancy and Tenure: In 2000, 40.7 percent of the housing units within the Township were occupied and 59.3 percent were vacant. 2010 Census data indicates that the percentage of occupied housing units increased to 45.6 percent with a decreased vacancy rate of 54.4 percent. Housing units used seasonally, recreationally or occasionally made up 91.9 percent of the 505 vacant housing units in the Township.

Marquette County experienced similar decreases in the occupancy rate. The county has a larger portion of renter-occupied units, primarily because of the higher concentration of apartment buildings in more urban areas. Multi-family housing tends to locate in larger communities, where municipal services such as water, sewer and public transportation, are available, and generally within a short distance from shopping and services.

Fig. 4-2: Housing Occupancy and Tenure, Selected Areas, 2000-2010



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

TABLE 4.2: TYPE OF VACANCY OF TOTAL HOUSING UNITS , SELECTED AREAS, 2010				
Vacancy Status	Powell Township		Big Bay CDP	Marquette County
	No.	Percent	Percent	Percent
Total	505	54.4	50.4	19.8
For Rent	6	1.2	1.7	13.9
For Sale only	9	1.8	2.9	5.2
Rented or Sold, not occupied	2	0.4	0	1.7
For seasonal, recreational or occasional use	464	91.9	89.7	63.9
Other vacant	24	4.8	5.7	15.3

Source: U.S. Census Bureau, 2010.

Units in Structure: The vast majority of the Township's housing units are detached single units (Table 4.3). This proportion is higher than Marquette County, which has a wider variety of housing options. Larger multi-family structures are typically located in more urban areas, closer to municipal services and population concentrations. Some rural areas are seeing the development of upscale condominiums in multi-unit structures, especially in waterfront areas.

Mobile homes made up 8.4 percent of the housing stock in the Township in 2010. This compares with 5.4 percent in Marquette County.

TABLE 4.3: YEAR ROUND UNITS IN STRUCTURE, 2007-2011				
Units	Powell Township		Marquette County	
	Number	Percent	Number	Percent
1, detached	820	91.3	24,641	71.8
1, attached	0	0	889	2.6
2	0	0	1,726	5.0
3 or 4	0	0	1,218	3.5
5 to 9	0	0	1,523	4.4
10 to 19	0	0	1,043	3.0
20 or more	0	0	1,411	4.1
Mobile Home or Trailer	75	8.4	1,870	5.4
	0	0	0	0

TABLE 4.3: YEAR ROUND UNITS IN STRUCTURE, 2007-2011

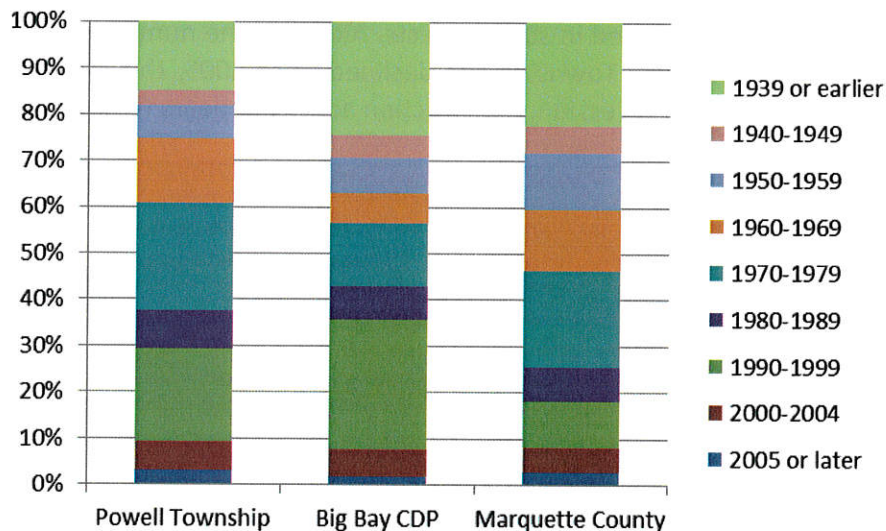
Other				
Total	898	100	34,321	100

Source: U.S. Census Bureau, ACS 5-Year Estimates, 2007-2011.

Age of Housing: Powell Township's housing stock is relatively old, according to the 2007-2011 American Community Survey. Almost 15 percent of homes in the Township were built before 1940, and the vast majority of homes were built before 1970. The County's housing stock is slightly older, but Powell Township's distribution of housing units by age does not differ significantly from the countywide pattern. Big Bay diverges from the Township overall due to a housing boom in the 1990s. Big Bay's popularity as a tourist destination within the township along with the national housing boom likely led to the increase in new construction.

While older housing is not necessarily inadequate or of poorer quality than newer structures, such housing is more prone to deterioration if not properly maintained. Older housing may also be less suitable for an aging population because of increased maintenance needs and accessibility issues such as narrow doorways, steep stairs, etc.

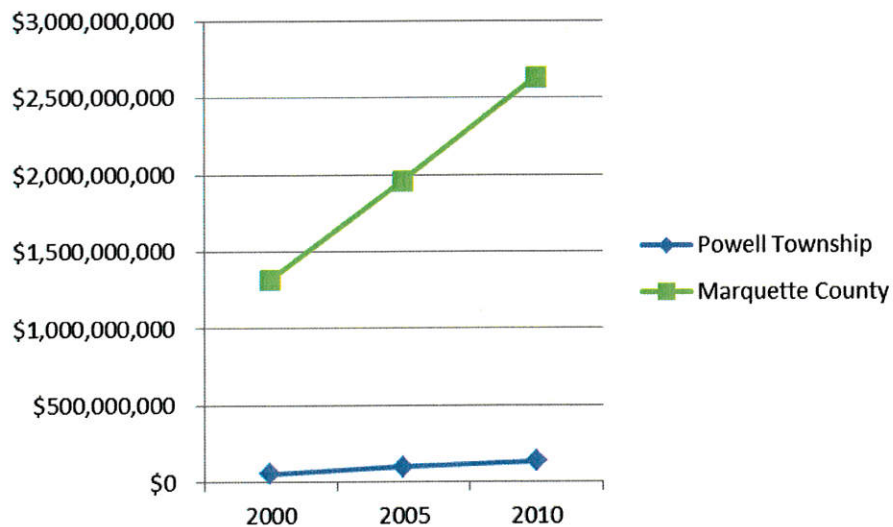
Fig. 4-3: Year Structure Built, Selected Areas, 2000-2010



Source: U.S. Census Bureau, ACS 5-Year Estimates, 2007-2011.

State equalized value (SEV), which is 50% of the market value of a property, sheds light on the amount of wealth in a community. The SEV for all real and personal property in the Township rose from \$56 million in 2000 to \$135 million in 2010, an increase of approximately 104 percent. During the same time period, the SEV for Marquette County increased by almost 100 percent

Fig. 4-4: State Equalized Value, Selected Areas, 2000-2010



Source: Michigan Department of Treasury State Tax Commission, 2000-2010.

Building permit data provides a look into development activity in a community. Construction of new homes and additions/rehabilitation indicate that a community is a desirable place to live, given the time and money involved in such projects. Although the number of building permits issued by the County for Powell Township has declined since 2005, this is largely due to the housing crash and subsequent recession. Construction activity appears to have since stabilized.

TABLE 4.4: BUILDING PERMITS ISSUED, POWELL TOWNSHIP, 2002-2012				
Year	New Residential	Residential Addition/Rehabilitation	Other (Mobile homes, accessory buildings, etc.)	Total Value
2012	8	3	13	\$1,519,200
2011	6	6	18	\$1,382,600
2010	6	5	11	\$1,724,650
2009	4	4	9	\$953,691
2008	5	8	15	\$2,132,100
2007	4	14	14	\$1,821,500
2006	9	9	17	\$2,306,400
2005	18	13	24	\$3,342,290
2004	14	4	19	\$5,867,750
2003	11	9	19	\$1,808,600
2002	13	6	28	\$1,693,100
Total	98	81	187	\$24,551,881

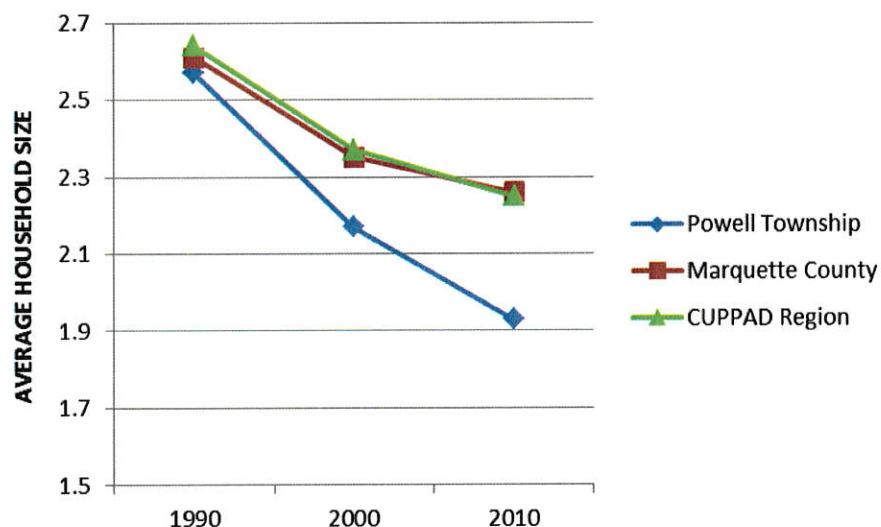
Source: Marquette County Resource Management and Development Department, 2013

Household Size: The number of persons in a household has been decreasing in the United States over the past several decades, and Powell Township is no exception as shown in Figure 4-4 below. The average household size in Powell Township decreased from 2.57 persons per household in 1990 to 1.93 in 2010. Marquette County and the CUPPAD region experienced similar decreases.

The smaller household sizes within these areas followed a national trend. This phenomenon is the result of smaller family sizes, an increase in single parent families and an increase in the number of elderly residents staying in their own homes rather than living with relatives or in group quarters.

As can be seen in Table 4.5, the proportion of non-family households in the Township has been steadily increasing. It should be noted, however, that the increases locally were much less than those on a state or national scale.

Fig. 4-5: Average Household Size, Selected Areas, 1990-2010



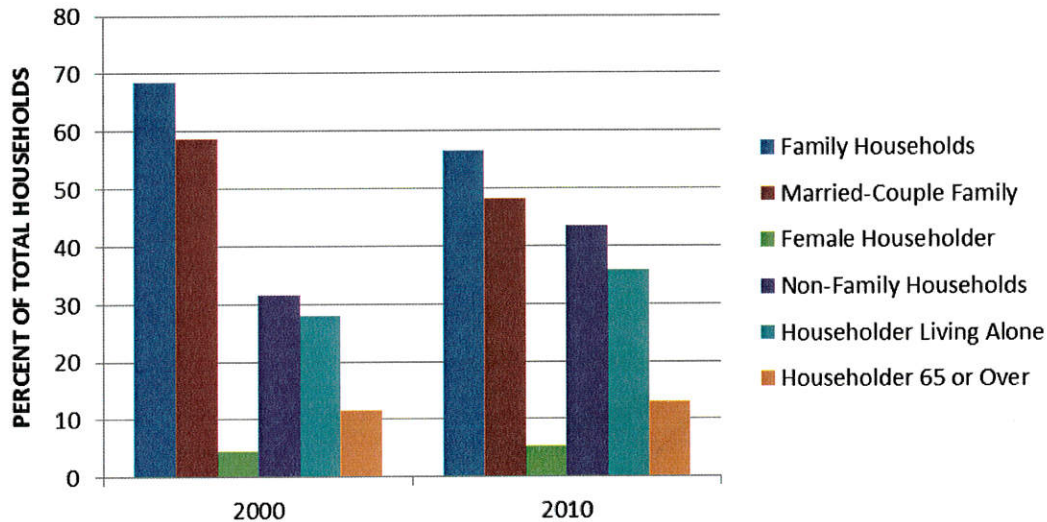
Source: U.S. Census Bureau, 1990-2010.

TABLE 4.5: HOUSEHOLDS, POWELL TOWNSHIP, 2000 and 2010					
	2000		2010		Percent Change 2000-2010
	Number	Percent	Number	Percent	
Total Households	333	100.0	423	100.0	27.0
Family households	228	68.5	239	56.5	4.8
Nonfamily households	105	31.5	184	43.5	75.2

Source: US Census Bureau for years cited.

Household Type: Figure 4-4 below compares the types of households found in Powell Township between 2000 and 2010. The Township had a higher share of nonfamily households, householders living alone, and households with individuals 65 years or older in 2010 compared to 2000.

Fig. 4-4: Household Characteristics, Powell Township, 2000-2010.



Source: U.S. Census Bureau, 2000 -2010.

Changes in the size and makeup of Township households have the potential to affect housing demand in terms of the type of housing needed. Smaller families, families without children, and more elderly residents living alone are all examples of recent trends in household size and composition, both locally and across the country. Families with few or no children may be less interested in houses with many bedrooms, but instead are looking for larger rooms, amenities such as fireplaces, family rooms, etc. Elderly householders may seek housing which requires little maintenance, and with improved accessibility for people with decreased mobility.

Housing Values and Rents: The median value of a home in the Township according to 2007-2011 ACS figures was \$104,900 (Table 74-6), a large increase from 2000. However, this figure was \$22,800 less than the County median, and \$32,400 less than the state. Of the bordering localities, Michigamme and Champion Townships have lower housing values than Powell Township.

The median rent for Powell Township in 2010 was \$325 per month. This figure was much lower than the figures for both the County and the state, and was also lower than the median rent in several surrounding townships. However, with only a few rental properties in the Township, the Census information is prone to sampling error.

It should be noted that the information on housing values and rents is based on residents' answers to questions on the census form. Some residents who have not been involved in buying or selling a house for several years may underestimate the value of their home, while others may overestimate. Likewise, rent sometimes includes utilities or other costs which may affect the median amount.

TABLE 4-6: MEDIAN HOUSING VALUES AND RENTS FOR SELECTED AREAS, 2000 & 2007-2011

Area	2000		2007-2011	
	Median Housing Value	Median Rent (per month)	Median Housing Value	Median Rent (per month)
Powell Township	\$69,700	\$271	\$104,900	\$325
Champion Township	\$36,900	\$275	\$62,200	\$313
Ishpeming Township	\$76,300	\$315	\$112,700	\$548
Michigamme Township	\$49,600	\$288	\$86,800	\$775
Marquette Township	\$97,400	\$421	Not available	Not available
Marquette County	\$77,200	\$358	\$127,700	\$572
Michigan	\$115,600	\$468	\$137,300	\$742

Source: U.S. Census Bureau, 2000 and ACS 2007-2011 5-Year Estimates.

4.3 FINANCIAL CHARACTERISTICS

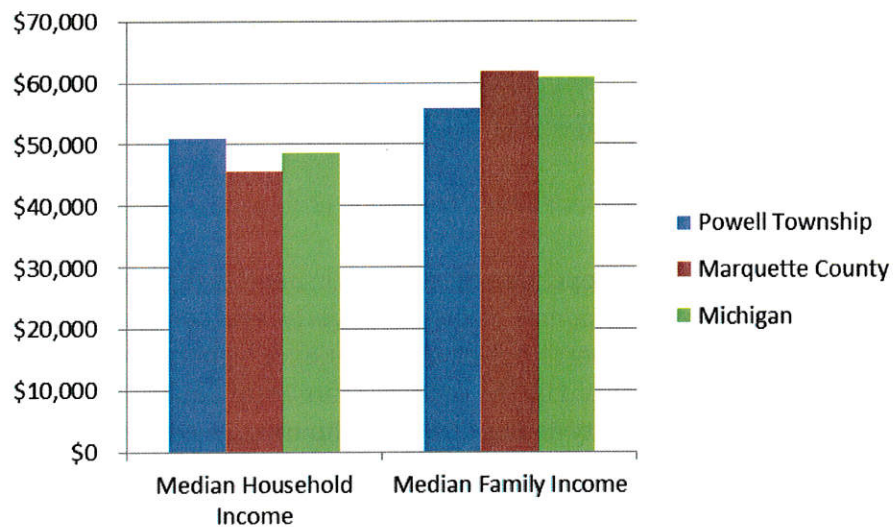
Powell Township contains a lower proportion of residents in poverty than Marquette County, with 6.0 percent of the population with incomes below the poverty level compared to 14.8 percent for the County. Children and single mothers traditionally experience higher poverty rates than the rest of the population, and this is evidenced by the data for Marquette County. People below or close to the poverty level may have difficulty finding affordable housing, given that their limited incomes must cover all of the basic necessities, including food, clothing, shelter, and transportation.

TABLE 4-7: POVERTY RATE, SELECTED AREAS, 2007-2011		
	Powell Township	Marquette County
	Percent	Percent
All people	6.0	14.8
All families	3.5	8.8
Under 18 years	10.0	15.3
65 years and over	3.9	10.0
Married couple families	2.0	3.7
Families with female householder, no husband present	0.0*	41.4

Source: U.S. Census Bureau, ACS 2007-2011 5-Year Estimates; * Margin of error is +/- 100

Powell Township's median household and family income levels were \$51,042 and \$55,833 respectively according to 2007-2011 ACS information. Household income figures were higher than those for Marquette County and the state, but family income figures were lower. Median household and family income information is presented in Fig. 4-5.

Fig. 4-5: Income, Selected Areas, 2007-2011

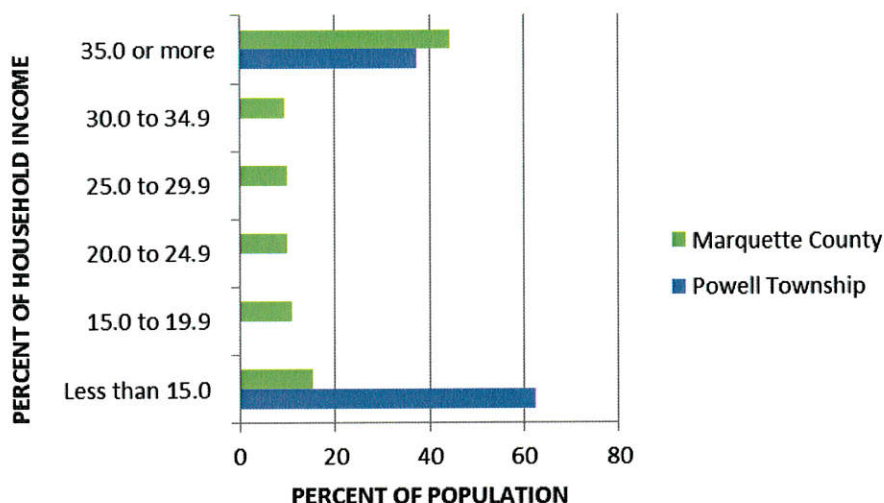


Source: U.S. Census Bureau, ACS 2007-2011 5-Year Estimates

A common measure of the affordability of a community's housing stock is the percentage of income spent on housing related costs. Generally, no more than 25 percent to 30 percent of the household income should be used for these costs. In Powell Township, approximately 37.5

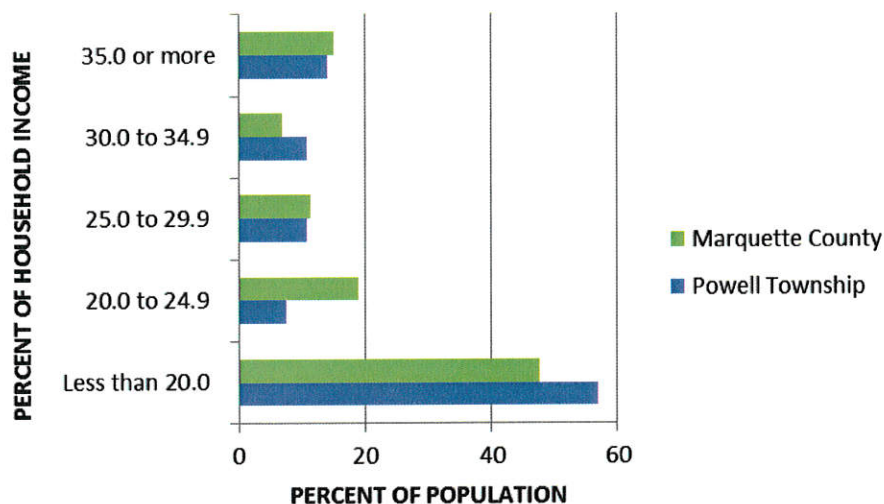
percent of the renter-occupied households pay more than 25 percent of their income for rent, as shown in Fig. 4-6. In terms of owner-occupied housing units, about 35.6 percent of homeowners in the Township pay more than 25 percent of their income for housing costs as shown in Fig. 4-7.

Fig. 4-6: Gross Rent as Percentage of Household Income, Selected Areas, 2007-2011



Note: Gross rent is the sum of contract rent and utility costs.
Source: U.S. Census Bureau, ACS 2007-2011 5-Year Estimates

Fig. 4-7: Monthly Owner Costs as Percentage of Household Income, Selected Areas, 2007-2011



Note: Selected owner costs is the sum of real estate taxes, property insurance, utilities, and regular monthly mortgage payments.
Source: U.S. Census Bureau, ACS 2007-2011 5-Year Estimates

4.4 SELECTED HOUSING CHARACTERISTICS

Substandard Housing

Most units in Powell Township have complete plumbing and kitchen facilities. Complete plumbing facilities are defined as hot and cold running water, a flush toilet and a bath or shower in the housing unit. Complete kitchen facilities means a refrigerator, range or cookstove and sink with running water in the housing unit.

Housing which lacks complete plumbing and/or kitchen facility is considered substandard. The data presented indicates a higher level of substandard housing compared to the County and the State. However, the number of seasonal units in the Township probably accounts for the bulk of the substandard housing reported in those areas.

TABLE 4-8: PHYSICAL HOUSING CHARACTERISTICS, SELECTED AREAS, 2007-2011			
Characteristic	Powell Township	Marquette County	Michigan
	Percent of Occupied Housing Units	Percent of Occupied Housing Units	Percent of Occupied Housing Units
With complete plumbing facilities	97.5	99.7	99.6
With complete kitchen facilities	98.7	99.5	99.3
With telephone service	93.3	97.1	96.5
No vehicle available	0	6.2	7.4

Source: U. S. Census Bureau, ACS 2007-2011 5-Year Estimates

Water and Sewer

The vast majority of the housing units in the Township rely on private wells as a source of water for household use. The only public source in Powell Township is the Big Bay water system. Most housing units rely on private wells. In Marquette County and throughout the central U.P., a much higher proportion of housing units are served by public systems; this reflects the concentrations of population in urban areas where extensive municipal systems are present. Because the Township's population distribution will probably remain much the same throughout the foreseeable future, the Big Bay area will probably remain the only area served by municipal water in the future. The areas along Squaw Beach, the Lake Independence shoreline, and Saux Head Lake may have high enough population densities to support municipal services at some point in time, but this would probably not even be considered unless problems with water quality arise in these areas. The cost of extending service into new areas is very high, and residents are sometimes resistant to the monthly costs associated with such services.

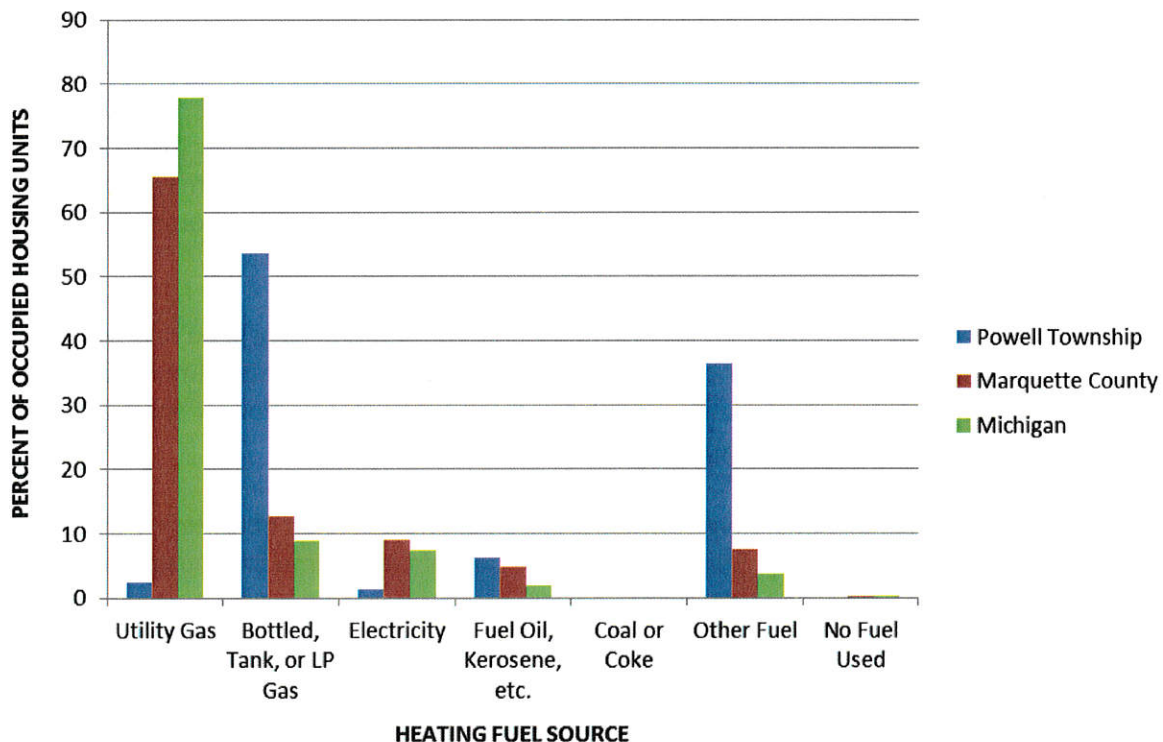
A similar situation exists with regard to the reliance on on-site sewage disposal in Powell Township. Some housing units are served by the community septic system in Big Bay, but most use septic

tanks or other means. It is likely that those units using other means include many seasonal dwellings with privies.

As with municipal water service, the only areas in the Township with sufficient population density to support a municipal system are Big Bay and some waterfront areas. The current community septic system in Big Bay lacks the capacity to serve large numbers of additional households, so any expansion of service area would probably require development of an entire new system. Such an expansion would be unlikely unless serious problems arise with existing on-site systems.

Unlike residents of more densely populated areas, Powell Township residents do not have utility gas available as a home heating fuel. Census sampling data indicates that bottled gas is the most common heating fuel followed by other fuel (most likely wood). The distance from the Marquette urban area and the relatively small concentration of population in Powell Township make it unlikely that natural gas service will be extended into the Township. Usage of heating fuel types is presented in Fig. 4-7.

Fig. 4-7: House Heating Fuel, Selected Areas, 2007-2011



Source: U. S. Census Bureau, ACS 2007-2011 5-Year Estimates

Note: Natural gas service lines do not extend into Powell Township; the number shown is incorrect as the result of sample data being used for this tabulation.

4.5 ISSUES AND OPPORTUNITIES

- Powell Township contains a high percentage of seasonal housing units.
- The vast majority of the occupied housing units are owner-occupied.
- Nearly all of the Township's housing units are single-family detached units, with few multi-family units. Year-round camping areas, multi-family housing units, and manufactured housing communities are needed to accommodate for the increase in population resulting from the mine development. Zoning may need to be changed to allow for such new development, and the Township Board needs to attract developers to meet this need.
- Powell Township has a higher percentage of mobile home housing units than Marquette County. Mobile homes offer an affordable housing alternative to many people. However, mobile homes (especially single-wides) tend not to appreciate in value over the long run, are prone to deterioration, and may not be compatible in appearance and construction with other types of housing.
- About 25.4 percent of all housing in the Township was constructed earlier than 1959. Such housing can be prone to deterioration if not adequately maintained, and may not meet the accessibility needs of an aging population. Also, fire stops were not common to home construction before the mid-1960s.
- Unlike the County and state, changes in household composition have been relatively minor in the Township. However, there has been an increase in the number of elderly householders living alone, and a slight decrease in the proportion of married-couple families. This trend can be expected to continue into the future.
- A significant proportion of homeowners and a smaller proportion of renters, according to the Census, pay more than 30 percent of their household income for housing costs.
- Housing units in the Township are heavily dependent on private wells and on-site septic systems or other methods of sewage disposal. Because of the highly dispersed nature of development in the Township outside the community of Big Bay, this is not likely to change significantly in the near future.

CHAPTER FIVE: COMMUNITY FACILITIES AND SERVICES

5.1 INTRODUCTION

Services and facilities provided by local government are often vital elements in the community's progress and well-being. Services include police and fire protection, municipal water and wastewater systems, and solid waste disposal. Community facilities include local government buildings, libraries, and maintenance and storage facilities, and are shown on Map 5-1.

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 Powell Township are also discussed in this chapter.

5.2 MUNICIPAL COMMUNITY FACILITIES AND SERVICES

Township Office: The Powell Township Hall is located just east of CR 550, at 101 Bensinger, Big Bay. The building was constructed in 1968. Governmental business is conducted in the Township Hall, including Township Board meetings, Planning Commission meetings, and elections. The Township hall houses offices for the Township, a kitchen, a meeting room, and a janitor room. The building is also used for private social gatherings and meetings of local organizations; however, space is limited.

Originally the fire department was housed within the structure, but with the recent construction of a new building, the department vacated its portion. The roof was replaced in 1998, and upgrades since then include additional exterior repairs and an upgraded computer and phone system. With these improvements, the building is in satisfactory physical condition. However, the hall needs a new heating system and offices need remodeling. The building is accessible according to standards set by the Americans with Disabilities Act of 1990.

Powell Township Fire Hall: This facility is located at 101 Bensinger, Big Bay, directly behind the Township Hall. The new facility, completed in 2004, is 60 feet by 50 feet. A pumper tank is stored at this facility, along with portable pumps used for fire protection.

Bill Dionne Halfway Fire Hall: This facility is located at the corner of CR 550 and CR KCl. This building was constructed in the late 1970's, a recent addition completed in 2004, increased the size by a third. Two pumper tanks are stored at this facility. Portable pumps are also owned by the Township and stored at the fire hall.

Fire Protection: The Powell Township Fire Department provides fire protection to the entire Township. The Department has two fire halls, as discussed above, and is staffed by 22 volunteers, paid per diem for monthly meeting attendance and emergency runs. It operates a 1980 pumper tank at the Big Bay site, and a 1976 and a 1979 pumper at the Halfway site. The Department received a \$140,000 FEMA grant for equipment and a \$100,000 grant from Cliffs/Eagle Mine Community Fund for pumper upgrades at Station #2. Two old portable pumps are owned by the Township; along with a recently purchased portable pump. Written mutual aid agreements exist with Marquette Township, Ishpeming Township and Michigamme Township. Verbal mutual aid agreements exist between Powell Township and the remaining townships in Marquette County.

The adequacy of fire protection is evaluated by the Insurance Service Office (ISO) Commercial Risk Inc. They use 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 time have been accepted as guides by many municipal officials in planning improvements to their fire-fighting 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 Powell Township is 8/9. Where classified areas have a split classification, the determination of the first listed protection class is five road miles or less to responding fire station and with a hydrant within 1,000 feet, while the second listed class is five road miles or less to responding fire station, and with a hydrant more than 1,000 feet.

Municipal Water: Powell Township provides municipal water service principally to residents living within the community of Big Bay. The commercial customers of Big Bay have metered water usage while the residential customers are on a flat rate. The remaining areas of the Township utilize private wells.

The municipal water system obtains its water from two wells located in the southern section of Big Bay. The Water Department drilled a new well in 2013 and is in the process of obtaining a grant for connecting to the well to increase the service area. Currently, the wells at maximum use have the capability of pumping 100 gallons per minute, twenty-four hours per day. Average daily usage is around 90,000 gallons/day during the summer and approximately 30,000 in the winter.

The pressure for the water system is maintained by the use of a 50,000-gallon, 117-foot-high water tank. It was installed in the mid 1980s and is in good condition; necessary repairs were completed during 2003. The distribution system serves over a 100 households and businesses in the community of Big Bay, as well as the Big Bay Harbor and Perkins Park. The entire water system is in need of an upgrade, as the last upgrades were made in 1984.

Residents of the Squaw Beach and Lake Independence areas rely on private wells, and the water in these areas is of poor quality in terms of taste and color. Some residents have expressed a desire to connect to the Township's water system, but service does not currently expand beyond Bay Cliff Health Camp. The density of development in these areas is probably too low to support further extension of the water system at this time.

Powell Township prepared a wellhead protection plan, with assistance from U.P. Engineering and Architectural Associates, Inc. The plan, adopted by the Township Board in 2003, identifies the direction of groundwater flow, potential contamination risks, and strategies to protect the Township's groundwater supply from contamination.

In 1998, water from the Powell Township water system was judged to have the best-tasting water in the state in a contest sponsored by the Michigan section of the American Waterworks Association, the Michigan Department of Environmental Quality, and water suppliers across the state.

Wastewater: While the majority of homes and businesses in Powell Township rely on private septic systems for the treatment of sewage, some customers in the community of Big Bay and the Bay View plat receive service from a community septic system. The system dates back to the 1940s, when the Ford Motor Company operated a plant in Big Bay. The septic tank and drain fields were replaced in 2005. With the improved system, a few additional hookups to the septic system may now be possible. The septic tank feeds into two drain fields, which are used on an alternating basis. The flow from the system averages 6-7,000 gallons per day.

5.3 OTHER COMMUNITY FACILITIES AND SERVICES

Law Enforcement: Powell Township residents depend on the Marquette County Sheriff's Department and the Michigan State Police for police protection; the Township does not maintain its own police force. With the increased population expected, the Township may require its own constable.

The Marquette County Sheriff's Department operates out of a facility located at 236 West Baraga in the City of Marquette. The department employs 70 officers, including 26 deputies who patrol roads and answer complaints.

Additionally, two detectives focus on felonies and other serious offenses; a Special Operations Unit oversees volunteer search and rescue services, a marine/ORV/snowmobile patrol, a dive team, and a Haz-Mat trained rescue unit; and a corrections department operates the jail. A variety of vehicles are available for road patrol and investigative work.

Michigan State Police service is provided through the Post along U.S. 41/M-28 in Negaunee Township. Twenty-nine troopers and sergeants work through the Negaunee post and a detachment in Munising to serve Marquette and Alger counties. The Michigan State Police are in charge of enforcing state laws and investigating accidents and crimes. Additionally, a Hometown Security Team that provides homeland security functions across the U.P. is headquartered in Marquette.

The cities of Negaunee, Ishpeming, and Marquette each maintain police departments that 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.

Emergency Medical Service: Within Powell Township, the primary emergency medical service is provided by the Powell Township EMS. The Limited Advanced Life Support emergency transporting service is staffed by ten volunteers. Two volunteers are EMT-S (Specialist), two are first responders, and the remaining are EMT-B (Basic). The volunteers receive partial compensation for the response to a call and full compensation for the complete medical transport. The amount of compensation depends on the level of EMT training. The EMS owns a new ambulance and a snowmobile and trailer for winter emergencies. Powell Township Emergency Medical Service covers parts of Ishpeming, Champion, Negaunee and Michigamme Townships. Mutual aid is offered to Marquette County. In 2005, the Powell Township Ambulance Service upgraded their radio system to 800 MHz, providing communication to all required entities.

Emergency Management: Emergency Management is a federally mandated position in every state. Powell Township has fulfilled this obligation ever since the President, in Homeland Security Directive HSPD-5, directed Homeland Security secretary to develop and administer a National Incident Management System (NIMS). The current Emergency Manager for Powell Township has held this title for over eight years, by continuing the required classes and education recommended, to always be at the ready. The office is an unpaid, volunteer position, and fortunately in the Township there is little call for activation.

911 System: Marquette 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 State Police Post in Negaunee Township, where the location of the call is displayed. The appropriate responding unit is then dispatched.

The Marquette County Sheriff's Department Emergency Rescue Unit, Marquette General Hospital, Powell Township EMS, and other Emergency Medical Service units are dispatched through central dispatch.

Sawyer International Airport: The Marquette County Airport operations moved to the former K.I. Sawyer Air Force Base in September 1999. The new location has added considerable time and distance to those wanting to use the county airport. It is one of seven airports in the U.P. that provides local commuter and corporate charter service. The airport is served by three major carriers. Mesaba Airlines/Northwest Airlink has daily flights to Detroit Metro Airport; Midwest Airlines/Midwest Connect has daily service to Milwaukee's General Mitchell International Airport; and American Eagle has daily air service to Chicago O'Hare International Airport. A portion of the former airport in Negaunee Township has been sold to private developer which is being developed as a mix of commercial, industrial and residential uses. The remaining portion has been purchased by the Keweenaw Bay Indian Community who has plans to relocate their Harvey gaming operations to the property.

Road Commission: Roads and streets in Powell Township are discussed in more detail in Chapter 9, Transportation. The Township is responsible for 60 percent of the cost of improvements to local roads, and improvement projects are scheduled by the Marquette County Road Commission based on funding availability and the priority of requests submitted by townships. County primary roads, such as CR 510 and CR 550 are the responsibilities of the Marquette County Road Commission. The Road Commission has a storage garage in the community of Big Bay for their road maintenance equipment.

Education: The Powell Township School District has grades Kindergarten through 8th grade. The Powell Township School is located at 101 Deutsch Avenue in the community of Big Bay. During the 2012/2014 school year 48 students were enrolled. 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 Negaunee or Marquette high schools. For about 50 years, high school students from the Township attended Marquette Senior High School. However, since 1998 the district has had an agreement with Negaunee Public Schools to educate Powell Township high school students and provides transportation to Negaunee. The Negaunee district charges less tuition than Marquette.

Local residents looking for higher education opportunities can turn to Northern Michigan University, located approximately 25 miles from Big Bay in the City of Marquette. Northern offers baccalaureate and masters' degree programs, as well as technical training in a variety of fields. Other institutions of higher learning in the Upper Peninsula include Bay de Noc Community College in Escanaba; Gogebic Community College in Ironwood; Michigan Technological University in Houghton; and Lake Superior State University in Sault Ste. Marie.

Library: A library located at the Powell Township School is available for use by Powell Township residents. Also, the Peter White Public Library located in the City of Marquette is available to Powell Township residents. The library is located at 217 North Front Street in the City of Marquette. The facility, the largest public library in the County, has 126,000 volumes and an annual circulation of about 300,000.

Solid Waste and Recycling: Powell Township has a transfer station located on Dump Road in the community of Big Bay for the disposal of solid waste. This site is also the location of the former Township landfill, which has been closed for several years. No municipal curbside pick-up is provided to Powell Township residents. A one mil levy allows property owners to dispose of waste as well as recycle at the transfer station year-round. Waste from the transfer station is then hauled to the Marquette County Landfill. Ishpeming Township residents may also use the transfer station upon payment of one mil equivalent; there are several townships that take advantage of this opportunity.

The Marquette County Landfill is located on a 210-acre parcel of land in the northwestern corner of Sands Township. The landfill began operations in December of 1989. The landfill accepts both Type II waste (residential/household waste) and Type III waste (demolition debris). The Marquette County Solid Waste Authority, organized in 1987, owns and manages the landfill. The appointed seven member authority includes: three representatives at large; three members designated by the Marquette City Commission; and one member designated by the Sands Township Supervisor, who serves as chair person. The landfill receives about 50,000 tons of solid waste per year. The landfill has a life expectancy of 20 years. Waste arriving into the landfill comes from all 23 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.

5.4 OTHER PUBLIC FACILITIES AND SERVICES

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

A post office is located at 505 Hoffman in the community of Big Bay. There is no mail delivery service in the community of Big Bay, while those living outside of Big Bay receive their mail by motor carrier. Post office boxes are available free of charge to those residents not serviced by a mail route.

State and Federal Offices: Marquette 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 (Marquette Branch Prison), Department of Environmental Quality, Family Independence Agency, Lottery Claims & Regional Office, Department of Management & Budget (U.P. Central Warehouse), Marquette District Court, Marquette Forensic Lab, Michigan Works! The Job Force, Michigan Jobs Commission Rehabilitation Services, Department of Natural Resources, Secretary of State, State Police, Department of Transportation, and Department of Treasury. Federal agencies with offices in the County include: the Department of Agriculture, U.S. Army Corps of Engineers, Coast Guard, Department of Commerce (National Weather Service), U.S. Courts, Department of Justice, Department of Labor (Mine Safety & Health Administration), Department of Army 996 Engineer Co., Department of Transportation (Federal Aviation Administration), Drug Enforcement Administration, Federal Bureau of Investigation, Department of Interior (U.S. Fish & Wildlife Service), Department of Labor, U.S. Marshal's Office, Small Business Administration, and Social Security Administration.

Electrical Service: Electrical service in Powell Township is supplied by Alger-Delta Electrical Cooperative Association. The company serves all residential, commercial and industrial customers of Powell Township.

While electrical service is generally adequate in the Township, distance and terrain are factors in the reliability of service. Alger-Delta Coop has a repair crew based in Christmas, in Alger County; travel time from Christmas to Big Bay is normally one hour to one and half hours. When outages occur, it typically takes hours to restore power. However, recent upgrades paid for by the mining companies have virtually eliminated outages.

Gas: Powell Township does not receive natural gas service. Many 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 Powell Township is provided by AT&T Michigan. Long distance service can be obtained from several carriers which serve the area. Upgrades to and installations of wireless towers mean that many people use only cell phones.

Health Care: Residents of Powell Township must look outside the Township for health care services. Duke Life Point Hospital, with approximately 400 beds and a new Level II Trauma/Emergency department is located in Marquette. A smaller hospital, Bell Memorial Hospital, is located in Ishpeming.

Physicians in the area provide a broad spectrum of health care services, including cardiology, dermatology, urology, obstetrics/gynecology, pediatrics, etc., along with family practice. Dentists, optometrists and ophthalmologists, and other specialties round out the range of choices for local residents.

Home health care services are offered throughout the County, and hospice care is also available. There are two nursing homes in Marquette and Ishpeming and one in Negaunee and Palmer.

Bay Cliff Health Camp: Bay Cliff Health Camp is located on 170 acres along Lake Superior. Founded in 1934, Bay Cliff serves both handicapped children and adults. Bay Cliff's main program is an intensive therapy session for physically handicapped children. Originally a dairy farm, the actual facility is a mixture of renovated buildings and new construction. Walkways are paved and buildings ramped, allowing full participation by those using wheelchairs. Completion of a \$7.2 million renovation plan has allowed the facility to remain open during the winter.

5.5 ISSUES AND OPPORTUNITIES

- The municipal water system in Big Bay is in need of repair or replacement of some undersized or leaking water lines. A project is currently in the planning stages and would facilitate the completion of these repairs. In addition, the Township would like to extend the system beyond current limits.
- There is a desire on the part of some residents to extend the Township water system into the Squaw Beach and Lake Independence areas. However, such a project is probably not cost-effective at this time. General Township funds may be required to assist with improvements.
- An upgrade to the community septic system in Big Bay from 2004-2005 replaced deteriorated collection lines with a new system of laterals and mains.
- With the fire department and EMS located in larger quarters, the meeting area at the Township Hall can expand.
- Improvements to the Powell Township School, including a new roof and updated electrical system, were completed in November, 2013. An agreement with the Negaunee School District provides students an additional option for their high school education, although distance, the condition of CR 550 and the amount of time students spend on buses continue to be of concern.

- The Post Office needs to designate handicapped parking spots to accommodate the older population but must work with the Township and County because parking is on a public street. Additionally, 200 post boxes are needed to accommodate for population increase.
- Overall, Powell Township's public and community facilities provide sufficient capacity and are in good repair.

CHAPTER SIX: RECREATION

6.1 INTRODUCTION

It is generally accepted that the planning and provision of recreational facilities enhances the quality of life in a community. The provision of recreational opportunities can affect the quality as well as the quantity of development, while open space contributes to a community's wellbeing. In addition to benefiting the residents of a community, recreational sites and facilities can serve to attract visitors to an area.

Recreational sites and facilities can be of many kinds. Many are relatively small, and are intended primarily to benefit the local population. Others are large and are intended to serve an extended population base. Some sites are intensively developed, with many man-made attractions, while others feature little or no development, and appeal to those seeking natural beauty and solitude.

In the case of Powell Township, tourism is a major factor in the local economy. Miles of Lake Superior shoreline, many inland lakes, waterfalls, steep slopes and the undeveloped character of the area, as well as the historic significance of some sites in the Township, serve to bring both transient visitors and summer residents to the Township.

This chapter provides an inventory of existing parks, recreational facilities, and natural resource assets located within the planning area, followed by a description of the recreational needs of the community in relation to standards set by the National Recreation and Park Association. Projects which have been identified as necessary or desired to increase the quality of the recreation opportunities offered locally.

6.2 EXISTING RECREATIONAL FACILITIES

It is important that the Township provide a broad range of recreational opportunities to local citizens, as well as tourists. When identifying existing facilities, it helps to understand the types of facilities present. Not all communities contain all types of recreational sites or facilities; sometimes communities contain sites which serve population well beyond the community's boundaries, while in other cases facilities used by local residents exist outside the community. The different types of facilities are explained below.

Mini-Park: A park containing specialized facilities that serve a concentrated or limited population or specific group such as tots or the elderly. A tot lot would be an example of such a facility.

Neighborhood Park/Playground: An active recreation site incorporating one or more open space areas designed for field sport and providing play apparatuses. The open space areas should be able to serve the needs of both youths and adults. A baseball field with adjoining playground and restrooms would be an example of a neighborhood park.

Community Park/Recreation Area: Area of diverse environmental quality. It may include areas suited for intense recreational facilities such as athletic complexes and large swimming pools or an area of natural quality for outdoor recreation such as walking, viewing, sitting, and picnicking.

Regional Park/Recreation Area: Area of natural or ornamental quality for outdoor recreation, such as picnicking, boating, fishing, swimming, camping, and trail uses. It may include play areas. These types of facilities tend to attract individuals from outside the community.

Recreational opportunities in Powell Township are provided by a number of different entities. Sites and facilities are described below, and are shown on Map 8-1. Township residents also have access to a wide range of facilities and programs in neighboring communities.

Inventory of Sites in Powell Township

Township-Owned Recreation Facilities:

1. **Draver Park:** This site occupies 3/4 of a city block in the community of Big Bay, at the intersection of Balke and Schneider Avenues. Facilities include a softball field, playground, picnic area, and concession stand, public address system, along with a building containing restrooms and storage. A pavilion was constructed during summer 2004. The toilet and pavilion are ADA compliant. The water tower for the Big Bay water system is also located on this 3.6 acre property.
2. **Halfway Fire Hall:** Powell Township maintains playground equipment on property adjacent to the Bill Dionne Halfway Fire Hall at the intersection of CR 550 and CR KCI.
3. **Halfway Ball Field:** The Township owns 28 acres south of Brown Deer Road at the intersection with CR 550, across 550 from the Halfway Fire Hall. This site was formerly used as a ball field, but is currently unused.
4. **Burns Landing:** Powell Township owns 3.85 acres of land on the Lake Superior shoreline just west of the Big Bay Harbor. The historic Burns Cabin is located on this property; this small log structure was one of the first buildings built in the Township, and is well over 100 years old. Recent improvements at the site include a handicapped-accessible toilet placed at the edge of a gravel parking area, a boardwalk built between the cabin and the beach and installation of benches and grills. This site also includes a portion of the area known as

Squaw Beach, a popular swimming area on Lake Superior. The beach is unguarded and undeveloped, but receives significant use.

5. **Thomas Rock:** Ten acres of land along CR 510 about a mile south of CR 550 were donated to Powell Township for use as a recreational site. The Township acquired 379 acres of forest land around the original site in 2010 through a grant to protect wildlife habitat and extend the existing trail system. Locally known as “Gobbler’s Knob,” this high point offers views of Lake Superior and Lake Independence. The site has been developed as an overlook area with fence and guardrails installed, as well as restroom facilities, a picnic area, and non-motorized trails.

Other Public Recreation Facilities within the Township:

6. **Perkins Park:** This 71-acre county park is located on the western shore of Lake Independence in the community of Big Bay. The park includes 76 campsites, 50 with electricity, and 37 of those sites with full hookups (water, electricity and sewer). The remaining 24 sites are primitive sites. Other facilities include a swimming beach, playground, restrooms, bathhouse with showers, boat launch, fishing pier and fish cleaning station. The boat launch, fishing pier and fish cleaning station were completed in 1998, along with bank stabilization along the shoreline. Construction of two new restroom/shower buildings, conversion of the existing bathhouse to a pavilion took place in 2002. Spring 2004 saw development of several new pull-through campsites with electric, sewer and water hook-ups; road alignment for better access within the park; separation of day-use and camping areas with landscaping and vegetation; stabilization of the Lake Independence shoreline and construction of a boardwalk on an abandoned railroad grade with observation decks overlooking a wetland. Eventually when additional funds are available, the campground office will be relocated to a centrally located site.
7. **Big Bay Harbor:** Located just north of Big Bay on Lake Superior, the Big Bay Harbor offers transient dockage, gasoline, water, restrooms and showers, holding tank pump-out, a public telephone, launch ramp and parking. Since 1998, improvements have included shoreline stabilization, dredging, bulkhead extension, subsidence correction, and renovation of walkways and finger piers.
8. **Powell Township School:** The Powell Township School is located at 101 Deutsch Avenue in Big Bay. Recreational facilities available at the school include a playground, two tennis courts, a basketball court, and the school gym. Powell Township School won a 2011 Educational Excellence award.

Privately-owned sites:

9. **Huron Mountain Club:** The Huron Mountain Club was formed in the early 1890s by a group of prominent Marquette residents. The families built cabins and a lodge at the mouth of the Pine River, and used the Club as a summer vacation retreat. In the early 1900s the Huron Mountain Club was reorganized and memberships were held primarily by wealthy families outside Marquette County. The Huron Mountain Club remains in existence today, and owns nearly 26,000 acres in Powell Township. All Club holdings are limited to access by members only; however, the Club does attract many visitors to the area and provides employment to area residents.

In addition to these sites, which have been developed to some extent, the Township contains vast amounts of land open to hunting and fishing. Lands designated as Commercial Forest Reserve, while remaining in private ownership, must be open to the public for hunting and fishing. These lands, together with the state land in the Township, provide further recreational opportunities to residents and visitors alike.

A local group, the Yellow Dog Preserve, is actively working to preserve the Yellow Dog River in its natural state. Along with a variety of educational programs, the group is seeking opportunities to purchase property and/or establish conservation easements along the river. In 1998, 12 acres along the Yellow Dog River just outside of Powell Township was purchased, and the Preserve is discussing purchase of a larger parcel in the Township. Any property purchased will be open to the public to allow access to the river.

Powell Township and surrounding areas are very popular with snowmobilers. The Lake Superior snowbelt tends to have more reliable snow cover than other parts of the U.P., and Powell Township offers large tracts of relatively undeveloped land. Many trails crisscross the area and connect with Baraga County to the west, Marquette to the southeast, and Ishpeming and Negaunee to the south. These trails utilize CFR lands as well as road rights of ways. The 550 Snowmobile Club, based in Big Bay, maintains 70-140 miles of snowmobile trails, which connect the trails maintained by other organizations.

The Hiawatha Water Trail, running 120 miles from Big Bay to Grand Marais, follows the south shoreline of Lake Superior. It offers views of shipwrecks and the rugged, beautiful shoreline to a growing number of kayakers and tourists. With Big Bay as the trail head, many opportunities are available for improving facilities and trail provisions which would bring more kayakers to Powell Township. In addition, another local group is working to establish the Big Bay Pathway, featuring approximately 18 kilometers of trails with destination points that include panoramic views of Lake Superior, the Huron Islands, Big Bay Point Lighthouse and the Yellow Dog Plains. In the winter months, the trail will offer narrow classic ski and snowshoe trails. In the summer months, trail will offer mountain biking, hiking, photography, birding and kayaking.

The Big Bay Sportsmen's Club has a clubhouse with electricity and bathroom facilities, on 80 acres of land on CR 550 near Big Bay. Each year the club sponsors a fishing derby on Lake Independence, with proceeds used to help restock fish in the lake. The club also teaches firearm safety and snowmobile safety classes, and maintains a rifle range for the use of club members.

Powell Township's steep terrain and many rivers combine to form many waterfalls, some of which are relatively large. While some waterfalls are within Huron Mountain Club holdings and are not easily accessible to the public, others, such as Alder Falls near Big Bay are readily accessible. Some falls, while located on public or CFR lands require driving and/or hiking for several miles.

6.3 NEARBY RECREATION SITES

TABLE 8.1: NEARBY RECREATION SITES		
General Location	Description	Acreage
City of Marquette		
Shiras Hills Park	Small facility in Shiras Hills residential development which includes grassy open space, hard play surfaces, playground equipment, picnic tables, benches, drinking fountain and basketball court.	0.1
Giants Foot Park	Playground in South Marquette also includes cross country skiing and hiking trail.	0.1
Williams Park	Corner of Ohio Street and Pine Street, with three tennis courts, basketball court, playground equipment, park bench, picnic tables, paved play area, and drinking fountain. Portable restrooms seasonally.	2.0
Harlow Park	On Washington Street between Seventh and Park Street, with grassy open space, paved play area, playground equipment, basketball court, shuffleboard court, 24 park benches, picnic tables and drinking fountain. Portable restrooms seasonally.	1.0
North Marquette Athletic Field	On Presque Isle Avenue near the corner of Presque Isle Avenue and Wright Street, with one softball and two regulation baseball fields, one junior baseball field, basketball court, playground equipment, a paved play area, outdoor ice rink (lighted), restrooms, drinking fountain, soccer field, and spectator seating including barrier free design seating.	20.0
Hurley Field	At Menard and Adams Streets, with lighted softball field, basketball court, playground equipment, a paved play area, restrooms, concession facilities, drinking fountain, and picnic tables.	2.5
Pioneer Road Softball Diamond	Approx. 7/8 mile west of CR 553 on Pioneer Road, with softball field, fencing, spectator seating and portable restrooms during	3.0

TABLE 8.1: NEARBY RECREATION SITES

General Location	Description	Acreage
	season.	
Setter Field	Located in Tourist Park, with softball diamond, seating, and picnic tables.	2.0
Shiras Park	Also known as Picnic Rocks, on the shore of Lake Superior near the intersection of Lakeshore Boulevard and East Fair Street. It has 5/8 mi. sand beach, restrooms, grassy open space, cooking facilities and picnic tables. Also accessible by the shoreline bike path.	31.0
McCarty's Cove (officially part of Shiras Park)	<p>Located adjacent to the U.S. Coast Guard Station on Lakeshore Boulevard, with swimming beach on Lake Superior with a lifeguard, picnic tables, park benches, grassy open space, and portable restrooms seasonally. Also accessible by the shoreline bike path.</p> <p>*Note: Much of the Holly S. Greer Shoreline Bike Path, starting where it enters the city limits from Harvey, serves as the North Country National Scenic Trail which links the Atlantic seaboard with the Lewis and Clark National Historic Trail in North Dakota. In addition to bicyclists, the "Bike Path" is used extensively by walkers, joggers, roller skaters and rollerblade enthusiasts.</p>	1.5
Mount Marquette Lookout	On Mount Marquette off the Mount Marquette Road near the Carp River, a lookout with panoramic scenic view of the City of Marquette and Lake Superior. Also part of a groomed snowmobile trail and has hiking trails.	-
Fit-Strip (Cemetery) Cross-Country Trail	On West Ridge at the southwest corner of the Park Cemetery, this site contains 1.7 and 1 kilometer lighted cross-country ski trails. Also serves as a jogging trail in the summer, includes developed exercise stations.	4.5
South Beach Park	Immediately south of the Municipal Power Plant off of Lake Street, with guarded swimming beach on Lake Superior, accessible restrooms, viewing platform facing the lake.	1.5
Ellwood A. Mattson Lower Harbor Park	Just north of the ore dock in Marquette's Lower Harbor, with grassy open space, park benches, picnic tables, playground, and lighted ice rink in winter, concession stand/restrooms, boat ramp, a large break wall, and 19 slips for boats. The shoreline bike path runs through the park and an illuminated walkway (period style lighting) parallels the waterfront. Park is a fishing access site and is used for special events.	22.0
Lakeside Park	Immediately south of the Marquette Chamber of Commerce building, overlooking Lake Superior and Marquette's Lower Harbor. Grassy open space, park benches, monument and	1.0

TABLE 8.1: NEARBY RECREATION SITES

General Location	Description	Acreage
	drinking fountain.	
Father Marquette Park	Located directly north of the Chamber of Commerce building, overlooking Lake Superior and Marquette's Lower Harbor. It has grassy open space, park benches and a statue monument to Father Marquette.	0.5
Pocket Park	On Washington Street in downtown Marquette, a small grassy area nestled between buildings with 4 park benches, lighting, and drinking fountain. Used for seasonal noon concerts.	-
Spring Street Park	Near the Snowberry Heights senior housing complex, with large grassy open space with concrete walks; used as an outdoor ice rink during the winter months.	3.0
Tourist Park	Located approximately ½ mile north of Wright Street on CR 550, with softball diamond with spectator seating, playground equipment, cooking facilities, grassy open space, hiking trails, drinking fountains, three large picnic areas and restrooms, beach with lifeguard and bathhouse, fishing access, 20 acre campground with 110 camping sites.	40.0
Presque Isle Park	At the end of Lakeshore Boulevard, with two major picnic areas, concession facilities, 3.5 and 1.5 kilometer cross-country ski trails, hiking trails, playground facilities, two tennis courts, four shuffleboard courts, four horseshoe pits, three drinking fountains, grassy open areas, scenic drive around the park perimeter, band shell for concerts, two concession stands, two sets of restrooms, an open air gazebo, break wall with lighthouse, fishing access, and the largest outdoor swimming pool with change facility, restrooms, and 160 foot water slide.	312.0
Presque Isle Marina	Adjacent to Presque Isle Park at the end of Lakeshore Blvd., with 97 boat slips, two launch ramps with two launching sites each, picnic tables, restrooms, and limited grassy open space.	2.0
Lakeview Arena	On East Fair Street at Lakeshore Blvd., this 72,000 square foot facility provides for a variety of recreational services including special events, conventions, trade shows, public skating, youth and adult hockey, skating lessons, figure skating, and ice rental for community groups and organizations. Also accessible via the shoreline bike path.	-
City of Marquette Community Center	In Marquette City Hall, with gymnasium, shower and locker facilities. Facility is handicap accessible and is open to the public during work week lunch hours.	-
Northern Michigan University	Physical-Education Instructional Facility (wrestling and weight training rooms, dance studio, gymnastics area, eight-lane	-

TABLE 8.1: NEARBY RECREATION SITES

General Location	Description	Acreage
	swimming pool with diving well, ice arena, basketball court, eight handball-racquetball courts, a large artificial open turf area, sports medicine areas, locker rooms, and saunas; Superior Dome (indoor all-events center), with indoor 200 meter track, tennis, volleyball and basketball courts; outdoor facilities including quarter mile track, 16 tennis courts (8 illuminated), track and field hockey areas, two ball diamonds, a 9,500-seat football stadium and Longyear Forest informal hiking trails. Most university facilities are available to the public on an intermittent basis, sometimes requiring user fees and/or recreation program memberships. NMU also offers a variety of instructional sports and recreation classes for youth and adults through Community Outreach Program.	
Marquette Mountain	Downhill ski area with several ski lifts, ski shop, lodge (privately-owned and operated).	
Marquette Township		
Lion's Field Recreation Area	Neighborhood park/community playfield with ball field, tennis court, pavilion with picnic tables, restrooms, parking, and playground.	2.5
Schwemwood Park	Property to be developed as nature park	6.15
Turtle Lakes	Located off of CR 550, but accessible only by foot at this time, with two ponds and some hills.	26.5
Longyear Forest	Forested property owned by Northern Michigan University, used for educational purposes and informally by the public, with nature trail, physical fitness course and cross-county ski trail designed for expert skiers.	180.0
Little Presque Isle Park	Located between CR 550 and Lake Superior a short distance northwest of Marquette, includes Harlow Lake (64 acres), Hogback Mountain, Little Presque Isle, several streams, and an 8.6 acre island. Facilities include rustic cabins and hiking trails. Owned/managed by Michigan DNR.	2,800.0
Sugarloaf Mountain Natural Area	On CR 550 adjacent to Little Presque Isle, owned/managed by Marquette County. Developed facilities include parking lot, trails and stairways leading to summit with panoramic view of Lake Superior and surrounding countryside.	80.0
North Country Trail	A portion of this hiking trail traverses Marquette Township,	-

TABLE 8.1: NEARBY RECREATION SITES

General Location	Description	Acreage
	roughly following the Lake Superior shoreline from the City of Marquette through the Little Presque Isle area, then northwest along the banks of the Little Garlic River.	
Michigamme State Forest	Located in the northern half of Michigamme Township, open to the public for wilderness camping, hiking, hunting, and fishing.	420.0
Forestville Access Site	Located off Forestville Road, this state-owned site includes a boat launch on the Dead River, picnic tables, and toilet facilities.	5.0
Little Garlic River Access Site	A state-owned public access off of County Road 550 on the Little Garlic River. It is principally used for fishing activities.	-

Source: City of Marquette Recreation Plan, 2011; Marquette County Recreation Plan, 2008; Marquette Township Recreation Plan, 2008.

6.4 LOCAL RECREATION NEEDS

Powell Township has identified a number of projects which would enhance the spectrum of recreational activities available to local residents and visitors. Marquette County has also identified potential future projects for Perkins Park and other sites in and near Powell Township that will enhance recreational opportunities in the Township. The following projects have been identified.

- Bring playground equipment at Draver Park up to current safety and ADA standards.
- Stabilize and preserve the cabin at Burns Landing and extend boardwalk and pavilion at the beach.
- Develop non-motorized and water trails within the township.

Marquette County has identified other improvements on nearby sites, which are relevant to Powell Township. A bike path is located along CR 550 from the City of Marquette to Sugarloaf Mountain. Plans call for this bike path to be extended to eventually extend as far as Big Bay. Funding has been received for improvements to facilities at Sugarloaf Mountain, including replacement of deteriorated stairways. Although Sugarloaf Mountain is located outside the Township, it is a site often visited by those visiting Powell Township, and is also used by local residents.

The Township should coordinate the planning of bike paths and other trails with Marquette Township and other surrounding communities.

6.5 RECREATION NEEDS STANDARDS

One method to assess community recreation needs is the standards system. Standards developed by the National Recreation and Park Association (NRPA) provide a scale against which an existing recreation system can be measured so that guidelines for future needs can be created. Standards compare acreage to community population. However, many communities find that their need for recreational opportunities and open space can be met by facilities in nearby communities, while in some instances a community may be providing recreational opportunities and open space for neighboring communities. For example, regional parks containing large tracts of undeveloped land are usually found in rural areas, but fulfill a need extending far beyond the boundaries of a single rural community. Conversely, residents of small communities often access recreation facilities such as swimming pools or fitness centers in nearby urban areas. It should also be recognized that some sites represent unique environmental features or historical sites which in themselves are worthy of protection and designation, over and above any applicable standards.

Standards for Recreation Open Space: Open space needs can be assessed using space standards, the most common and widely used measure of a recreation system's adequacy. Total park and recreation space is usually expressed as acres per population. These space standards are useful as a guideline to assess current and future open space needs and demand (Table 8.2).

Park Type	Service Area	Size (Acres)	Acres/1,000 Population	Uses
Mini Park	<1/4 mile radius	1 or less	0.25 to 0.5	Specialized facility that serves a concentrated or limited population or specific group such as tots or seniors citizens
Neighborhood Park	1/4 to 1/2 mile radius	15+	1.0 to 2.0	Area for intense recreation activities such as field games, court games, crafts, play equipment, skating, picnicking, etc.
Community Park	Several neighborhoods, 1 to 2 mile radius	25+	5.0 to 8.0	Area of diverse environmental quality. May include areas suited for intense recreational facilities, such as athletic complexes and large swimming pools. May also be an area of natural quality for outdoor recreation, such as walking, viewing, sitting, and picnicking.
Regional Park	Several Communities, 1 hour driving time	200+	5.0 to 10.0	Area of natural or ornamental quality for outdoor recreation, such as picnicking, boating, fishing, swimming, camping, and trail use; may include play areas.

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

A community's park system under NRPA standards should have a minimum of 6.25 to 10.50 total acres of developed open space per 1,000 residents of population. With a population of less than 1,000, the standards indicate that the Township should provide between 0.25 to 0.5 acres of mini parks, one to two acres of neighborhood parks, five to eight acres of community parks, and five to 10 acres of regional parks to meet this minimum standard (Table 8.3).

Existing Public Open Space: Powell Township possesses nearly 500 acres of publicly-owned recreational land. The NRPA standards would appear to indicate that the Township has excessive park acreage. However, Powell Township is very dependent on the tourism industry, which in turn is attracted to the area because of its natural beauty. The area provides recreational opportunities to a population outside its boundaries, and has a legitimate interest in maintaining accessibility to natural features. The Township should work with Marquette Township and other surrounding townships in promoting the tourism attributes of the area.

TABLE 8.3: EXISTING PUBLIC OPEN SPACE, POWELL TOWNSHIP		
Type of Park	Park Land Area (Acres)	Land Area Standard (Acres)
Mini Parks		
Halfway Fire Hall Playground	0.5	
Subtotal	0.5	0.25 to 0.5
Neighborhood Parks		
Draver Park	3.6	
Halfway Ball Field	28	
Subtotal	31.6	1.0 to 2.0
Community Parks		
Thomas Rock	389	
Subtotal	10	5.0 to 8.0
Regional Parks		
Perkins Park	71	
Burns Landing	4	
Subtotal	75	5.0 to 10.0
Total Park Area	117.1	11.25 to 20.5

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

6.6 PARK ACCESSIBILITY

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

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

The Americans with Disabilities Act (ADA) of 1990 requires that “reasonable accommodation” be made to the needs of the estimated one in five people in this country who are disabled. That is, all public and private goods and service providers and employers must remove all structural and communication barriers from facilities, or provide alternative access where feasible.

Currently, there are no written standards for making outdoor recreation facilities totally accessible to the disabled. Many suggestions on outdoor recreation facilities accessibility have been made; therefore, recommendations regarding outdoor play equipment, picnic facilities, boat docks, pathways and trails, have been incorporated into this plan.

Recommendations regarding buildings, restrooms, slopes of ramps, and parking stalls should be seriously considered. These types of facilities all have current standards set by the Americans With Disabilities Act of 1990.

ADA Standards: Accessibility is another factor that should be taken into account when determining recreational needs in Powell Township. Often, existing recreational sites are not completely accessible according to the ADA standards. Restrooms, pathways, parking, and general accessibility of all amenities must be examined closely over the next few years to assure that all people are given the same opportunities within the community.

Where more than one **restroom facility** exists, at least one must be accessible by persons with disabilities. In some cases, this would require minimal remodeling; in others, it could require substantial modification.

At least one **picnic table** and one **grill** designed to accommodate persons in wheelchairs should be available at each park (if these types of facilities are not currently available). These facilities should be identified with a sign showing the universal symbol of accessibility.

At least one in 25 **parking stalls** should be designated for disabled parking. These stalls must be the closest spaces to the park or facility entrance and have a direct route to and from the stalls. Spaces must be 96 inches wide with a clearly marked adjacent access aisle of 60 inches and an unobscured vertical sign that shows the universal symbol of accessibility. Slope of these spaces and aisles cannot exceed 1:50.

Stable barrier-free **pathways** which provide linkages from one recreation amenity to another should be provided at outdoor recreation facilities. These pathways must be at least 36 inches wide, and a 60 x 60 inch passing space or turnaround must be provided every 200 feet. If a pathway level changes more than ½ inch, the pathway must be ramped. If the level changes is between ½ inch and ¾ inch, the levels must be beveled.

Where **water fountains** are available, spouts should be no more than 36 inches above the finished floor. If the fountain is freestanding or built-in and does not have a clear space underneath, a clear floor space of 30 to 48 inches alongside the fountain for a parallel approach must be provided. Wall or post mounted fountains must have a clear knee space under the fountain of at least 27 inches high by 17 to 19 inches deep by 30 inches wide. Controls must be located at the front edge of the fountain and operable with one hand without twisting the wrist.

A complete guideline list based on standards set by the Americans with Disabilities Act of 1990 for various types of facilities and recommendations established by the USDA Forest Service for improving the accessibility of recreational areas are detailed in Appendix A at the end of the plan.

6.7 HISTORICAL RESOURCES

Powell Township contains a wealth of sites and buildings which recall the early days of settlement. Some of these sites are officially designated by the state or federal government, while others are not. These sites serve to attract visitors to the community, and serve as a reminder of the area's past.

- **Burns Cabin:** This one-story log cabin was built in the 1860s, and may have been the first permanent residence in the Big Bay area. It is located near Lake Superior in the area known as Burns' Landing. A boardwalk has recently been built from near the cabin to the Lake Superior, and a handicapped-accessible outhouse has been installed. The cabin is

currently boarded up, but there is interest in restoring the structure and perhaps using it as a museum.

- **Big Bay Point Lighthouse:** The Big Bay Point Lighthouse is located on a bluff above Lake Superior, about three miles northeast of Big Bay. The lighthouse was completed in 1896 as a two-story brick dwelling with a total of 18 rooms, providing living quarters for two families. The light tower is about 60 feet tall. Operated as a lighthouse until about 1960, it has since been converted to a bed and breakfast. The structure is listed on the State and National Registers of Historic Places.
- **Thunder Bay Inn:** This structure was built in 1911 and was used as a combination store, post office, barber shop and livery. In 1940, Henry Ford purchased the lumber mill on Lake Independence and a number of other properties, including this building. He rebuilt the building as a retreat, with sleeping room, meeting facilities, and dining rooms. When Ford died, the building was sold, and was used as a hotel under various ownerships until the early 1980s. In 1959 a portion of the movie "Anatomy of a Murder" was filmed at the hotel; the present dining room was added at that time. After sitting vacant for a few years in the 1980s, the hotel was reopened and continues to operate. It is listed on the State Register of Historic Places.
- **The Huron Mountain Club:** This club was organized in 1891, and was reorganized a few years later. The Club owns thousands of acres of land east of Big Bay, including several lakes. Many of the buildings located at the mouth of the Pine River, at Ives Lake, and elsewhere on the club's property were constructed in the early part of the 20th century. Club members included local residents who were instrumental in building the early economy of Marquette County, such as Peter White and J.M. Longyear, as well as wealthy individuals from lower Michigan and Chicago, such as Henry Ford.
- **Granot Loma:** Construction of this huge summer home of the Louis Kaufman family began in 1919 and was completed in 1927. Built on a point extending into Lake Superior near Garlic Island, the lodge contains over 30 fireplaces, an 80 x 40-foot sitting room, huge light fixtures made from tree roots, and many other unique features. The name Granot Loma was made up of the first two letters of the Kaufman's first five children, Graveraet Young, Ann Elizabeth, Otto Young, Louis Graveraet, and Marie Joan. The building and surrounding lands remain in private ownership, and are not generally accessible to the public. Granot Loma was listed on the National Register in 1991.
- **Bay Cliff Health Camp:** Bay Cliff is a summer camp for handicapped children, located on the site of the former J.B. Deutsch home. J.B. Deutsch was the superintendent of the Lake Independence Lumber Company, and in 1912-13 had a large home built on the bluff above Squaw Beach. In 1934 the property was converted to a camp for underprivileged children,

and has since evolved to serve the handicapped. Other structures have been built during the time the property has been operated as a camp, but the Deutsch home remains.

- **Former Ford Plant:** A smokestack and some buildings are still visible on the north shore of Lake Independence, on the site where several different lumber mills operated. During the 1940s, the mill produced wooden parts for Ford automobiles; previously it had produced hardwood lumber, wooden bowling pins, flooring, and wooden parts for some Buick automobiles. After Ford closed the mill in 1949, it was reopened again and operated for a few years as a lumber mill. The smokestack and buildings are located on private property.
- **Huron Islands Lighthouse:** This granite and mortar lighthouse was built in 1868, and is located on the northeast corner of Huron Island, the largest island in the Huron Islands chain. The lighthouse structure has not been used since the early 1960s, and has suffered from deterioration and vandalism. The roof is leaking, allowing water to enter the building, and vandals had reportedly destroyed the interior of the building before windows and doors were boarded up to prevent entry. The lighthouse is owned by the U.S. Fish and Wildlife Service, which administers the Huron Islands National Wildlife Refuge. However, the U.S. Coast Guard continues to maintain the light itself, now powered by solar panels. The islands are accessible only by boat, and high winds and waves often make access difficult. In late 1998, a group known as the Huron Island Lighthouse Preservation Association was formed in Baraga County. The group has visited the island and examined the structures, and hopes to raise funds to repair the roof, stabilize the structure, and repair a deteriorated dock in order to improve access to the island. The lighthouse is listed on the National Register of Historic Places.
- **Camp Sosawagaming:** Built by J.M. Longyear in 1897, the Sosawagaming Club operated as a private club for a few years, then became the Sosawagaming Hotel until 1910. The Club was located at the mouth of the Iron River; at that time, there was a bridge across the river there. A tote road ran along the lakeshore there, and was used to haul supplies to the Huron Mountain Club and lumber camps in the area. After the hotel venture failed, the club was sold and used as a boys' summer camp for several years; it is now a private camp.
- **Lumberjack Tavern:** This building in Big Bay currently is operated as a tavern, and was the location of the shooting which resulted in the trial used as the basis for the book and movie "Anatomy of a Murder." "Bullet" holes can be found in the wall, although it is unlikely that those holes actually resulted from the murder.
- **The Depot:** The Depot was built in 1905 at the northern terminus of the railroad from Marquette. In the 1940s it was moved a short distance down the tracks to its current location. It is currently privately-owned and has been converted into a hotel.

- **CCC Camp:** A Civilian Conservation Corps camp existed during the 1930s near Big Bay. No evidence of this camp remains, although there is a sign commemorating the camp near Alder Creek.
- **Granite Island Lighthouse:** Granite Island is a small, rocky island located 11 miles northeast of Marquette and about six miles offshore. The 2 ½-acre island is within Powell Township, and is currently owned by the U.S. Coast Guard. A lighthouse was built on the island in 1868, and the light was automated in 1939. The light is still maintained by the Coast Guard. Buildings include a house, outhouse, and oil storage facility, as well as a steel structure which houses the present navigational light. The lighthouse was listed on the National Register of Historic Places in 1969, and the buildings have fallen into disrepair. The Coast Guard has offered the island to other federal agencies, none of which have expressed any interest; the island was offered to state and local governments in the fall of 1998. If no governmental entity is interested in the island, the property will be appraised and offered for sale to the public.

6.8 ISSUES AND OPPORTUNITIES

- The amount of recreational land in Powell Township is in excess of that required to meet national standards based on population. However, the local sites serve to attract visitors and provide resources not available in other communities.
- The acquisition of the 10-acre site at Thomas Rock offers the opportunity to develop a site with non-motorized trails and views of Lake Superior, Big Bay, and the surrounding area.
- There are a variety of improvements needed at Township recreational areas. These improvements are included in the capital improvements program in the Powell Township Recreation Plan.
- The Big Bay Harbor is in need of dredging to maintain adequate depths for boaters.
- Marquette County's planned improvements to Perkins Park will enhance the attractiveness of the park, and should help to attract visitors to the area.
- The 28-acre site at Halfway offers a potential opportunity for additional recreational development.
- Some recreational facilities, such as swimming pools and fitness centers, are not available within Powell Township. However, there are tennis courts, ball parks, playgrounds and public beaches.

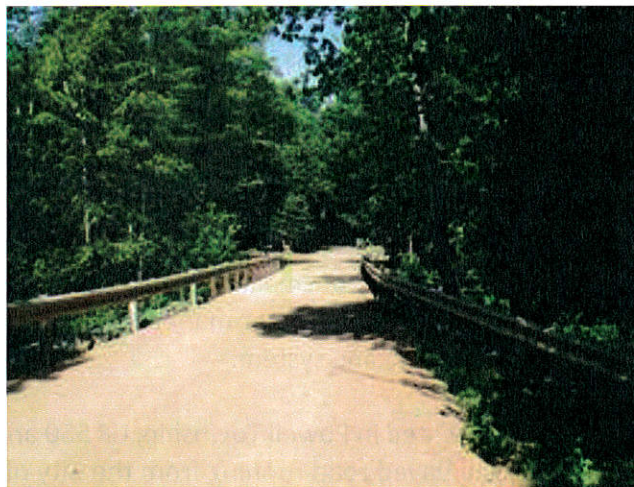
- Sites outside of Powell Township, such as Sugarloaf Mountain, help to enhance the “package” of recreational opportunities which attract visitors to the area.
- Some parks and recreational facilities may not be fully accessible in accordance with the Americans with Disabilities Act of 1990.
- Several historic sites are located within Powell Township. These sites offer a link to the community's past for current and future residents. There may be opportunities to enhance some of these sites in the future, either through restoration, protection through formal listing on the State or National registers, interpretation of the sites for educational purposes, etc.

CHAPTER SEVEN: TRANSPORTATION

7.1 INTRODUCTION

An adequate transportation system is necessary for the effective movement of people and goods to, from and within a community. The transportation system plays a key role in the development of the local economy, land use patterns, and the relationship of communities to each other.

This section of the plan presents an inventory of the existing transportation facilities which serve Powell Township, and discusses future transportation needs and concerns. In the case of Powell Township, the chapter will focus primarily on the road system, with some discussion of other modes of transportation which serve local residents. Specific recommendations to meet future transportation needs will be identified in the Goals, Policies, and Objectives Chapter.



County Road KK | Source: miningjournal.net

7.2 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 jurisdictions. 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 road types 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 with Powell Township follows.

State Trunkline: The state trunkline system within a county road network is made up of state (M) and federal (U.S.) highways, which connect communities within the county to other areas within the state and locations outside the state. These roadways provide the highest level of traffic mobility for the traveling public. No segments of state trunklines are located in or near Powell Township, although several serve the Marquette-Ishpeming-Negaunee urban corridor. In Marquette County, the following highways are classified as state trunklines: U.S. 41, M-94, M-95, and the M-28 business route in Negaunee and Ishpeming.

U.S. 41 traverses Marquette County from east to west, and connects the County to Escanaba and Gladstone to the south and Houghton, Hancock and the Keweenaw Peninsula to the northwest. Farther to the south, U.S. 41 passes through Green Bay, Milwaukee, and Chicago on the way to Miami, Florida. M-28 is one of two primary east-west routes across the Upper Peninsula, extending from the Sault Ste. Marie area to Wakefield near the western end of the U.P. M-35 runs from Menominee to the south to U.S. 41 near Negaunee. Only a small segment of M-94, which connects Manistique to U.S. 41 south of Marquette, is located in Marquette County, while M-95 connects Iron Mountain in Dickinson County to U.S. 41 near Champion.

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.

Only two county primary roads are located in Powell Township, CR 550 and CR 510. County Road 550, known as the Big Bay Road, is a paved road running from the City of Marquette to Big Bay. County Road 510 is a gravel road which intersects with CR 550 about 2 ½ miles southeast of Big Bay and runs roughly southeasterly to intersect with Midway Drive in Negaunee Township, just north of U.S. 41/M-28. The remainder of the roads in the Township are county local roads, private roads, or relatively unimproved “two-track” roads.

County Road 550 is the only paved route linking Big Bay and the urban area of the County. This road is used by Township residents traveling to the urban area for employment, health care, shopping, entertainment, etc.; it is used to transport high school students to Marquette or Negaunee; it is used by tourists to access the many attractions of the Township; and it is used by logging trucks hauling wood from the vast corporate holdings in Powell Township and neighboring townships. The majority of development in the Township is located along CR 550.

Terrain, weather, level of use, and funding constraints have combined to create hazardous conditions on CR 550.

County Road 510 is an important haul route for logs harvested from the northern part of Ishpeming, Champion and Michigamme townships, as well as Powell Township.

7.3 PRIVATE ROADS

Within Powell Township, a number of private roads serve 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 either accomplish these tasks either on their own or through a contract agreement with a private entity.

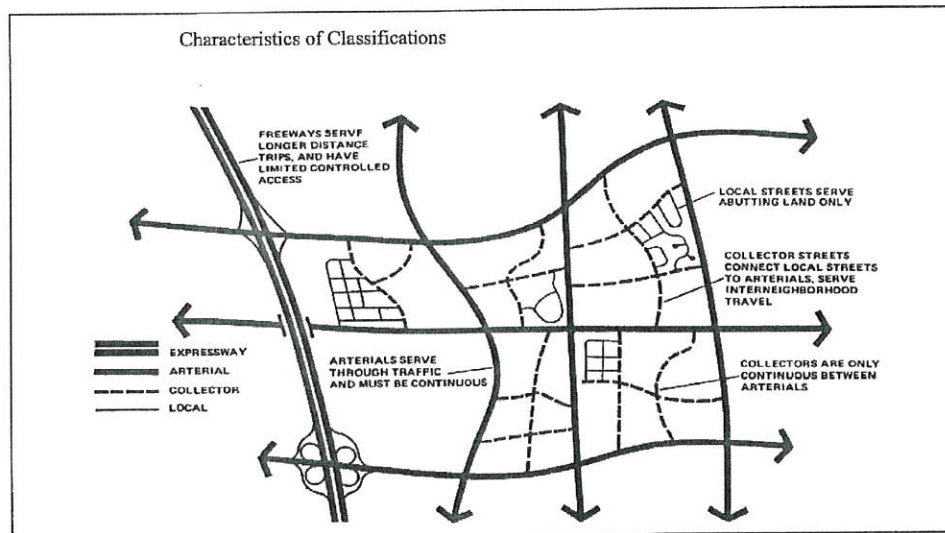
The Road Commission will not provide any maintenance service to privately owned roads. The presence of private roads may affect some of the services provided to the residents living along these roads, such as fire protection and emergency services. Access for fire and emergency vehicles on private roads can be difficult, especially if the roads are badly maintained, narrow, and/or inadequately marked and signed. As further development occurs along private roads, the possibility of conflicts between residents living along these roads and the community in which they live is more likely.

To remedy these problems in the future, a community can put 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. Some communities in Michigan have adopted private road ordinances which stipulate when roads must be deeded to the public, and/or the standards to which private roads must be built. It is also possible to prohibit subdivision and development of property unless the resulting parcels have direct access to public roads.

7.4 NATIONAL FUNCTIONAL CLASSIFICATION OF ROADS

The National Functional Classification is a planning tool developed by the Federal Highway Administration, which is used by federal, state, and local transportation agencies. It classifies streets and roads according to their function along a continuum that indicates the greatest mobility/greatest access to property. Roads which provide the greatest mobility are classified as principal arterials. Minor arterials, major collectors, and minor collectors follow in this continuum. Local roads provide the greatest direct access to property. The placement of roads into these categories is determined by their relationship to traffic patterns, land use, land access needs, and traffic volumes; the classification system is illustrated in Fig. 9.1

FIGURE 7.1 – CHARACTERISTICS OF CLASSIFICATIONS



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

The functional classification scheme uses more categories than the Act 51 system. All roads in the functional road classification that are arterials (principal and minor) and collectors (major and minor) are considered either state trunklines or primary roads in the county road system under Act 51. All arterials, urban collectors and major collectors are considered federal-aid roads, with eligibility for federal funding. Minor collectors have limited eligibility for federal funding, while local roads are not eligible for federal aid.

Principal Arterial: Roads within this classification function mainly to move traffic over medium to longer distances quickly, safely, and efficiently. Often the movement is between regions or major economic centers. There are no principal arterials in Powell Township; examples in Marquette County include U.S. 41 and M-28.

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. Again, there are no minor arterials within Powell Township; M-35 and Business M-28 are examples of minor arterials in Marquette County.

Collector Roads: A collector road provides access between residential neighborhoods and commercial/industrial areas. 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.

County Road 550 is classified as a major collector, the only road in Powell Township classified as other than local. Other major collectors in the County include the southern portion of CR 510 south of the Dead River Storage Basin, CR 553, CR 480, CR 492, etc.

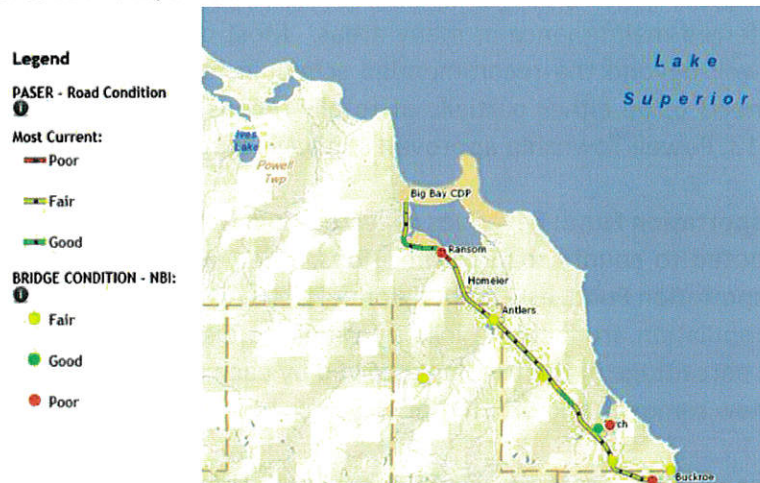
Local Roads: The predominant function of roads classified as local is to provide direct access to adjacent land uses. Local roads serve as the end for most trips within a community. All streets which are not classified as arterial or collector are classified as local roads.

Local roads should be designed to move traffic from an individual lot to collector streets which in turn serve areas of business, commerce, and employment. Local roads should not be designed or located in such a manner that they would or might be utilized by through traffic.

7.5 ROAD CONDITION EVALUATION

The Marquette County Road Commission uses a computer model to classify all county roads according to a variety of condition ratings. Figure 9.XX illustrates the condition ratings for various segments of CR 550 as well as bridges in Powell Township. Most of the road is in fair condition, but some portions, such as the area around Ransom, are in poor condition.

FIGURE 7.1 – 2011 ROAD CONDITIONS, CR 550



Source: Michigan Transportation Asset Management Council, 2013

7.6 ROAD IMPROVEMENTS

Recent road improvements include resurfacing of segments of CR 550 and 510 and replacement of the Dead River Bridge and Alder Creek Bridge.

Powell Township resident approved a tax increase in 2013 for 20 years to fund road improvements on the streets of Big Bay and roads in the township beginning with “K”. Projects include:

- Resurfacing parts of Marquette County Road KK which leads to the Huron Mountain Club
- County Road KG which leads to the transfer station

Marquette County Road Commission will upgrade about eleven miles of road across the county beginning in 2014, including segments of CR 510 in Powell Township. The upgrades will connect CR 550 to the Eagle Mine in Michigamme Township.

7.7 FINANCING

Local Funding: The Marquette County Road Commission can contribute up to 40 percent of the funding necessary for construction or reconstruction projects on County local roads, primarily using monies from the Michigan Transportation Fund. The remaining portion is contributed by the township in which the road is located or by other sources.

The Marquette County Road Commission, along with many road commissions throughout Michigan, has experienced a funding shortfall in recent years relative to maintenance and construction projects. Revenues received are not enough to cover all of the needed projects, resulting in deferred maintenance in many areas. Most of the paved roads that are in poor condition are well beyond the recommended schedule for repaving and if funding becomes available, will need to be either partially or totally reconstructed because of subsurface base damage. In 2013, Powell Township approved a millage to fund these repairs.

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

Michigan Transportation Economic Development Fund: The establishment of this fund in 1987 set forth a mission “to enhance the ability of the state to compete in an international economy, to serve as a catalyst for the 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.

Federal Funding: President Obama signed the Moving Ahead for Progress in the 21st Century Act (MAP-21) into law on July 6, 2012. MAP-21 is a 2 year transportation bill that replaces the previous SAFETEA-LU authorization for Federal surface transportation programs. Programs funded by this act include:

- National Highway Performance Program
- Surface Transportation Program
- Emergency Relief
- Highway Safety Improvement Program
- Congestion Mitigation & Air Quality Program
- Transportation Alternatives (Combination of Enhancements, Recreational Trails Program, Safe Routes to Schools)

7.8 TRAFFIC FLOW AND VOLUME

Traffic Counts: The analysis of traffic volumes helps to determine trends and needs related to transportation. Traffic volumes are usually presented as an average daily traffic (ADT) figure, which is calculated for a particular intersection or stretch of roadway. Marquette County Road Commission conducts counts on many county primary roads, including segments of CR 550 and CR 510 in Powell Township.

Traffic counts taken by the Marquette County Road Commission along CR 550 indicate a relatively high level of traffic on CR 550, and steady levels of traffic over the past few years for both CR 550 and CR 510. Table 7-3 summarizes counts taken at various points during the summer in 2010, 2011, and 2013.

TABLE 7.1: TRAFFIC COUNTS, CR 510 & 550 , 2010, 2011, & 2013									
Counter Location	Average Daily Traffic			% Commercial			85 th Percentile MPH		
	2010	2011	2013	2010	2011	2013	2010	2011	2013
CR 550 – North of CR 510	1458	1461	1127	7.58	9.36	9.78	58	60	59
CR 550 – East of CR 510	1469	1505	1171	10.30	10.55	11.51	56	58	58
CR 550 – At Big Bay	1623	1626	1279	7.66	6.95	-	54	53	-
CR 510 – At CR 550	407	610	517	20.28	36.4	18.97	42	44	43

Source: Marquette County Road Commission, 2013

*2013 Counts low due to temporary weight restrictions on roads

7.9 STATEWIDE AND REGIONAL HIGHWAY PLANNING

As Powell Township's transportation network is part of a larger system, it is important to consider statewide and regional planning efforts such as the following:

- **Michigan Sub-State Area Long Range Plan:** This regional plan, written in 1995, details suggested improvements to the state's transportation system and sets up a funding priority list. In the Upper Peninsula, the plan recommends that bypasses of congested areas and passing lanes be used to improve traffic flow.
- **US-2/US-41/M-35 & US-2/US-41/M-95 Access Management Plans:** CUPPAD and MDOT collaborated to conduct access management studies for major highway corridors in the Central U.P. in 2005 and 2009 to improve traffic flow throughout the region.
- **MDOT 2013-2017 Five Year Transportation Program:** This program lists planned improvements to roads and bridges under MDOT's jurisdiction over the next five years, together with cost estimates and proposed construction season. While none of these improvements will take place in Powell Township (since there are no state roads in the Township), several projects are scheduled to take place throughout Marquette County which will improve overall traffic flow and safety.

7.10 PUBLIC TRANSPORTATION

The Marquette County Transit Authority (Marq-Tran) operates throughout Marquette County every day of the week. Marquette County Transit Authority (MARQ-TRAN) was created in 1985 through the consolidation of three public transit systems within Marquette County. There are several fixed routes, including a fixed route from Ishpeming to Marquette. Marq-Tran also offers door to door service in the Ishpeming-Negaunee area and the greater Marquette area. All buses are lift equipped and accessible to persons with disabilities.

Although residents of Powell Township contribute taxes towards the County Transit Authority, MarqTran does not currently serve the Big Bay area.

7.11 INTER-COMMUNITY BUS SERVICE

Indian Trails provides daily inter-community bus service within Marquette County. The local ticket agent is at the Marq-Tran office, located at 1325 Commerce Drive in Marquette. The north-south route runs along US 41 from Calumet to Milwaukee and Chicago. Southbound service is offered late night, while northbound service is available in the early morning.

7.12 WATERBORNE TRANSPORTATION

Historically, transportation by water was very important to Powell Township. Prior to the completion of railroads in the area, the primary means of transportation of goods and people to and from the Township was by water. Various docks were built over the years in Big Bay, and boats regularly carried goods and people between Big Bay, Marquette and the Huron Mountain Club even after railroads and roads were built. Although there is no longer any commercial shipping from Big Bay, Marquette County maintains a recreational harbor with charter fishing. The harbor requires periodic maintenance dredging; the harbor was last dredged in 2008.

At the present time, commercial shipping is limited to the City of Marquette's Upper Harbor docks, approximately 25 miles from the community of Big Bay. The port is an important shipping point for iron ore pellets from the Empire and Tilden mines. Pellets are transported from the mines by rail, and then shipped to steel mills in the lower Great Lakes region. Commodities such as coal and salt are shipped into Marquette via the port. In 2011, over 1.7 million tons of product was shipped through the port in Marquette.

7.13 AIR TRANSPORTATION

Powell Township residents must drive 40 miles to Gwinn, MI to the former K.I. Sawyer Air Force Base for air transportation services. Sawyer Airport is one of six airports in the U.P. that provides commercial passenger air service. American Airlines operates daily flights to Chicago and Delta Airlines operates daily flights to Detroit, connecting area residents to the rest of the nation and the world.

7.14 RAILROADS

Railroads were one of the dominant forces shaping early industry and settlement in Marquette County. In Powell Township, the completion of the railroad from Marquette to Big Bay in 1905 opened up the area to logging and settlement. The railroad provided the lumber companies a means to get logs from the woods to the mill, as well as a way to bring in equipment and supplies. It was also a means for people to travel between communities, as the early roads in the area were very poor, and travel by boat was subject to the limitations of weather. In many cases short spur lines were laid to bring lumber from lumber camps to the main railroad; these spurs were taken up as soon as the timber was harvested, and moved to another location. Rail service between Marquette and Big Bay was discontinued in 1956.

Rail service elsewhere in Marquette County is provided by Wisconsin Central Ltd. (WCL) and the Lake Superior & Ishpeming (LS&I) Railroad. Wisconsin Central operates rail lines throughout the U.P. and elsewhere in the Midwest and Canada. In Marquette County, Wisconsin Central owns the track and cars used to haul iron ore to the Escanaba ore docks, which are also owned by WCL.

Wisconsin Central also has tracks running from Baraga to Marquette and on through Munising and beyond; service between Diamond Junction in Negaunee Township and Munising is on an as-needed basis, and WCL has proposed abandoning this segment of track. The Lake Superior and Ishpeming Railroad operates between the iron mines in the Negaunee area and Marquette, hauling ore from the mines to the Upper Harbor ore docks.

7.15 NON-MOTORIZED TRANSPORTATION FACILITIES

Non-motorized transportation facilities provide recreational opportunities, encourage alternative modes of transportation, and improve safety by separating non-motorized users from motorized traffic. The Noquemanon Trail Network manages several non-motorized trails throughout Marquette County, including two in Powell Township:

- **Saux Head Trail** – 12km two way bike/ski/hiking trail near Saux Head Lake.
- **Big Bay Trail** – 15km trail groomed ski trail west of Big Bay.

These trails are primarily recreational. CR 510 and 550 both have light traffic volume and may be suitable for bike riding, but poor visibility and hazardous winter conditions may present issues for cyclists.

7.16 ISSUES AND OPPORTUNITIES

- The Township approved a 20-year millage in 2013 to fund much-needed local road improvement projects and is working with the Marquette County Road Commission to schedule these projects. Major upgrades are planned for CR 550 and CR 510, which should mitigate expected increases in traffic with the mine opening.
- Many Powell Township residents are concerned with the proposed improvements to CR 510, especially the speed limit of 55 mph which some feel is too high.
- CR 550, 510, and AAA create year round use and heavy trucking traffic. Additionally, AAA is now a Class A road, and connects to the village of Big Bay via CR 510 and CR 550.
- The decision to relocate the County airport from Negaunee Township to the former K.I. Sawyer AFB increased the distance local residents must travel to obtain air service.
- The development of non-motorized transportation facilities within the Township, such as bike lanes and walking paths, will promote non-motorized forms of transportation as a vital part of a community transportation system, and will provide an additional way for visitors and local residents to enjoy the area. Several non-motorized trails have been added to the Thomas Rock area.

- Residential development on private roads can potentially create demands for services not typically provided off public roads, such as school bus routes and refuse collection. Private roads may also be designed and constructed in such a way as to make emergency access for fire protection, emergency medical services, etc., difficult.
- The aging of the local population in some areas of the Township could result in future needs for additional transportation services for the elderly and/or disabled.

CHAPTER EIGHT: NATURAL FEATURES

8.1 INTRODUCTION

Natural features, including soils, geology, topography, water features, and other natural resources, have a profound effect on a community's development. These physical features directly or indirectly constrain or encourage growth; for example, soil types and geology often affect the ability of a community to provide high quality water and wastewater services. The natural resources, such as timber or minerals, which occur in certain areas are often a primary factor in the establishment and growth (or decline) of communities. For instance, many areas in the Upper Peninsula were settled as a result of logging or mining operations in the late 1800s.

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



Big Bay at sunset. |Source: Nithya Rajan

8.2 TOPOGRAPHY

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

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

Powell Township contains many areas of relatively steep terrain. The steepest areas are located in the western portion of the Township, primarily in the area owned by the Huron Mountain Club. Huron Mountain reaches a height of 1,518 feet above mean sea level, while several other summits are over 1,400 feet in elevation. The relief in some of these areas is significant, as is the case where Huron Mountain slopes steeply to the shore of Mountain Lake nearly 700 feet below. There are also some areas of steep slopes south of CR 550.

The highest point in Powell Township is Huron Mountain, at 1,518 feet, while the lowest point is the shore of Lake Superior. The approximate mean lake elevation is 602 feet, nearly 1,000 feet lower.

Along the shore of Lake Superior, there are some areas where steep bluffs from 60 to 100 feet above the water exist. The most extensive of these bluff areas is located from Salmon Trout Point to Burns Landing. Many other shoreline areas are characterized by wide expanses of flat land along the lakeshore; for example, the area southeast of Lake Independence, between CR 550 and Lake Superior, contains elevation changes of only about 100 feet in a distance of more than two miles.

8.3 GEOLOGY

Both bedrock and surface geology have an impact on community development. Bedrock geology consists of the solid rock formations found below the soil, which were formed during the early periods of the earth's evolution. Map 8-1 shows the Township's bedrock geology.

These formations have undergone extensive folding, uplifting, eroding, and weathering during the millions of years which have since passed, and are now overlain by surface geology and soil.

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

Depth to bedrock is also important in terms of the ability to support agricultural crops or timber, and can affect the suitability of a site for construction. Even in areas where municipal utilities are available, the presence of shallow bedrock can greatly increase costs due to the need for blasting for water and sewer lines.

All of the bedrock underlying Powell Township dates back to the Precambrian era, generally believed to be over 600 million years ago. The majority of the settled portions of the Township, from southwest of CR 550 to the Lake Superior shoreline, are underlain by Jacobsville Sandstone. The Michigamme formation is found underneath the southwestern corner of the Township, while granitic and gneissic rocks underlie the areas between the Jacobsville Sandstone and the Michigamme formation.

Jacobsville sandstone is predominately sandstone, although it may contain shale and conglomerate in some areas. It is red to reddish-brown in color, mottled with white in some places. It was used extensively as a building material in Marquette County and elsewhere around the turn of the century, although no quarries have operated in the U.P. for many years. Two quarries were located in Powell Township, one near the mouth of the Salmon Trout River and the other near Thoney's Point. Both of these locations have sandstone outcrops along the lakeshore. The quarry at the mouth of the Salmon Trout River opened in 1888, and was in operation for only a few years, although the sandstone was reported to be of good quality.

Wells drilled into Jacobsville Sandstone generally do not yield large quantities of water, but most are adequate for domestic supplies. The quality of water from this formation is generally good, although iron is common. Wells drilled into this formation in Powell Township vary from 80-plus feet to over 600 feet in depth.

The Michigamme formation is a Precambrian formation which has been subjected to folding, faulting, metamorphism and erosion over several million years. In other parts of the U.P., iron ore has been found in the Michigamme formation. The availability of groundwater varies, but is generally sufficient for residential wells.

Granitic and gneissic rocks are generally hard, crystalline rocks which serve as poor aquifers. Wells drilled in areas underlain by these rocks generally rely on water found in the surface deposits overlying the bedrock.

The surface geology of Powell Township is a result of glaciation which occurred 10,000-12,000 years ago. As the Wisconsin Continental Glacier moved over the area, existing landform features were obliterated under the weight of ice estimated to be about one mile thick.

Glacial lake plain, outwash, recessional moraine, glacial till-bedrock, and wetlands make up the surface geology of the Township, as shown on Map 8-2.

Glacial lake plains are those areas where meltwater from the glaciers ponded and deposited relatively flat areas of material. These plains generally contain a mixture of sand, silt and clay, with the various materials stratified. The amount of silt or clay determines permeability; areas with high silt or clay content impede drainage and often result in swamps or marshes. Water supply is generally sufficient for domestic use. In Powell Township, glacial lake plains extend along the Lake Superior shoreline.

Where glaciers stopped their forward progress and began to recede, they deposited sand and gravel till. In some areas these deposits can be as much as 300 feet thick. Moraines generally provide an adequate source of domestic water. Recessional moraines stretch across the Township from northwest to southeast, separated from Lake Superior by glacial lake plains.

Outwash consists of stratified sand and gravel, which were carried by glaciers and deposited as a result of meltwater flowing from glaciers. These deposits commonly are very permeable, and are a good source of ground water. Wells drilled into glacial outwash generally yield over 10 gallons per minute, providing water which is satisfactory for domestic use. Some areas of outwash contain groundwater with a high level of iron. Outwash is found in the southwestern portion of Powell Township.

In some areas the movement of the glaciers scoured all or most of the surface material away, leaving bedrock exposed. In some cases a thin layer of till may remain. The bedrock in this area is of Precambrian origin. Availability of groundwater depends on the type of bedrock but is usually poor. Areas of glacial till-bedrock are found in the southeastern portion of the Township.

Wetlands are areas of poor drainage and high water tables where an accumulation of muck and peat overlay a glacial lake plain. Wetlands occur around the mouth of the Salmon Trout River, southeast of Lake Independence, and in the southeastern corner of the Township.

8.4 SOILS

Soil occurs at the earth's surface, and generally has a finer texture than the bedrock or surface geology described in the previous section. Most soils in the U.P. have been formed as a result of glacial action, followed by accumulation of organic matter in some areas.

An updated soil survey was completed for Marquette County, by the U.S. Department of Agriculture Natural Resource Conservation Service (formerly the Soils Conservation Service) in 2007. Soils throughout the County have been mapped based on aerial photo interpretation and extensive field work over the past several years. This information has been used to prepare the soil maps accompanying this chapter.

About 250 mapping units have been identified in Marquette County. These mapping units consist of a single soil type, or a complex containing more than one soil type which responds to development or use in similar ways. Some mapping units will also contain dissimilar soils, such as mapping units which contain areas of rock outcrop too small to be mapped separately. The documentation for the soil survey provides information on the suitability of each of these mapping units for various uses, such as woodland, agriculture, building site development, etc. Various properties of the soil, such as texture, depth to bedrock, permeability, stoniness, droughtiness, etc. influence a soil's ability to support various uses. This information is important to developers, foresters, planners, realtors, farmers, and anyone else concerned with the utilization and development of the land.

From a planning standpoint, some of the most important features of soils have to do with the ability to support residential, commercial or industrial development. In areas not served by municipal water or sewer systems, suitability for septic tank drainfields is a major consideration. Limitations on local roads and streets, and limitations on building construction are also important. It should be noted, however, that although the soils survey is relatively detailed, site inspections should still be used to determine the suitability of a particular site for development. Within any particular mapping unit, areas will exist where limitations are more or less important as a result of terrain or other features too small to be included in this county-wide survey. The areas mapped as "variable" on the maps accompanying this plan are soil mapping units which contain complexes of different types of soils, or areas where the original soils have been significantly impacted by human use, through filling, compaction, leveling, or other means. The limitations on uses within these types will vary too greatly to allow them to be mapped as having slight, moderate or severe limitations.

Engineering and construction techniques can be used to overcome soil limitations, often at considerable cost. However, the long-term implications of such techniques should be carefully considered, since development in areas of marginal suitability may increase costs to local governments, and thence to taxpayers, in order to provide services to these areas.

Limitations for Septic Tank Drainfields: Map 8-3 illustrates areas where soil limitations affect the ability of septic tank drainfields to properly remove contaminants from effluent. Examples of such limitations include soils which are impermeable, and thus do not allow effluent to be filtered through the underlying soil; soils which are highly permeable, and allow effluent to pass through rapidly without proper filtering; areas of shallow bedrock, where there is insufficient soil to support a drainfield; and so on. Site-specific characteristics may mean that a particular site may be suitable for development, however. For example, very sandy soils are generally considered to have severe limitations due to the very rapid permeability of these soils. However, if the sand is very deep, adequate filtering will occur before the effluent reaches the groundwater, and septic systems will operate normally for many years.

As can be seen from the map, the majority of Powell Township is characterized by severe limitations on septic tank drainfields. The primary limitations are poor filtration, slow percolation, wetness and slope. Although this map would seem to indicate that there are few, if any sites suitable for development in the Township, the actual situation is that many suitable sites exist even in areas with generally severe limitations. Local health departments rely on site-specific testing in determining whether to issue a permit for a septic system. The soils survey information presented on Map 4-3 represents a general guideline as to the extent of potential limitations, and should not preclude individual sites from consideration for development.

Limitations for Building Site Development: These limitations are shown on Maps 8-4 and 8-5. Soil limitations for building site development include the presence of shallow bedrock which can make construction of basements difficult; wetness, which can result in wet basements or unstable support for foundations; or steep slopes, which increase the potential for structures to slide. Unlike the limitations for septic tank absorption fields, there are significant areas of Powell Township which have only slight or moderate limitations. Some areas have differing limitations depending on whether or not basements are used; for example, a soil type characterized by shallow bedrock may be suitable for construction of a building without a basement, but the costs of constructing a basement may be prohibitive. As noted above, specific sites, even within areas mapped as having severe limitations, may be suitable for development.

Limitations for Local Roads and Streets: Local roads and streets are those with an all-weather surface, designed to carry automobile and light truck traffic all year. Construction and maintenance of roads and streets is affected by a soil's shrink-swell potential, frost action potential, depth to bedrock or water table, and slope. Limitations for roads and streets are shown on Map 8-6.

As with other soil constraints, construction techniques are available to overcome many of the limitations of the underlying soils. However, such techniques are costly, and roads which are built over unsuitable soils generally require more frequent maintenance in order to maintain the road in good condition.

8.5 WATER FEATURES

The most significant water features in or adjacent to the Township are Lake Superior, Lake Independence and the many lakes in the vicinity of the Huron Mountain Club. Saux Head Lake and the Yellow Dog and Salmon Trout Rivers are also important water features. These water features are illustrated on the base map. Lake Independence is fairly developed, with the community of Big Bay and residential parcels around much of the shoreline. The north shore of the lake was also the site of several different lumber mill ventures over the last 100 years. The western and northern shores of Saux Head Lake contain residential development, while the remainder of the lake is undeveloped. The lakes surrounded by Huron Mountain Club ownership are undeveloped with the exception of some cabins and seasonal residences related to the Club.

Powell Township contains about 40 miles of Lake Superior shoreline on the mainland, plus several miles of shoreline on the Huron Islands about three miles northeast of the mouth of the Huron River. The Huron Islands are federally-owned and undeveloped, while the majority of the mainland shoreline is privately-owned.

Very little of the mainland shoreline has been developed. About 12 miles of shoreline are owned by the Huron Mountain Club, which has a concentration of buildings at the mouth of the Pine River about halfway between Big Bay and the western boundary of the Township. Some small tracts with seasonal or year-round homes are located near Big Bay, from the Burns Landing area to Lighthouse Point; other areas of development occur north of Saux Head Lake, south of Thoney Point, and in some other scattered areas. About three miles of shoreline is owned by Loma Farms, and is undeveloped except for the buildings at Granot Loma.

The Huron Islands shoreline will remain undeveloped due to the area's designation as both a national wildlife refuge and a wilderness area. One deteriorating dock is located on Huron Island, and a lighthouse, built in 1868, is located on the northeast shoreline of Huron Island. The islands support a sizeable herring gull population; the gulls nest on the rocky shores of the islands. Many other birds can be found on the island, including bald eagles and loons, which seek out sites relatively undisturbed by humans.

Because of the relatively steep topography in the Township, there are several waterfalls along area rivers and streams. Many of these are located within the Huron Mountain Club, and are not generally accessible to the public.

Others, however, are accessible, and serve to draw visitors to the area. These include Alder Falls, Pinnacle Falls, and several falls along the Yellow Dog River between CR 510 and CR 550.

The entire Township is located within the Huron Mountains coastal drainage basin. All streams eventually drain into Lake Superior, the largest and deepest of the Great Lakes.

8.6 WILDLIFE

An abundance of wildlife species thrive within the Township's forest and water areas. Many fish species are found in the Township's rivers, inland lakes and streams, and Lake Superior. The type of fish found in these bodies of water include various trout and salmon species, perch, walleye, pike, panfish, and rough fish species. Mammals found within the Township include muskrat, beaver, white-tailed deer, moose, black bear, wolves, coyotes, bobcats, cougars, pine martens, fishers, fox, skunk, mink, and raccoon. Bird species that can be seen include a wide variety of songbirds, woodcock, ruffed grouse, geese, ducks, bald eagles, osprey, and owls.

8.7 CLIMATE

Powell Township has a temperate continental climate that is heavily influenced by Lake Superior, with cold winters and humid cool summers. The lake helps keep temperatures cool in summer and generally moderate in winter. Climate information for Powell Township, which is based on records compiled by the National Oceanic & Atmospheric Administration at Big Bay between 1980 and 2012, shows mean monthly temperature ranges from 7.7 degrees Fahrenheit in January to 79.0 degrees Fahrenheit in July, with a mean annual temperature of about 43.3 degrees Fahrenheit. Temperatures in areas immediately adjacent to Lake Superior are moderated by five to six degrees warmer in the winter and six to eight degrees cooler in the summer, when compared to inland areas. Total precipitation averages approximately 29.0 inches per year. Powell Township is located in the Lake Superior snowbelt, and averages about 114.9 inches of snow annually.

The growing season in Marquette County averages about 109 days. The last frost in the spring usually occurs about May 31, and the first frost in fall usually occurs about September 17. Incidence of thunderstorms is around 26 days per year. Michigan is located on the northeast fringe of the Midwest tornado belt. Between 1950 and 2013, only eight tornadoes occurred in Marquette County, one of which touched down in the Huron Mountains.

8.8 ISSUES AND OPPORTUNITIES

- Powell Township contains a relatively large amount of steep terrain, which may limit certain types of development in these areas.
- The majority of the Township is made up of soils with generally severe limitations for septic tank drainfields. This may limit the density, type and location of development in these areas.
- Limitations due to soils exist in some areas for building sites and local roads and streets. Specific sites within these areas may be more suitable for development; construction techniques may also be used to overcome these limitations.
- The Township contains a wealth of water features, which have played a role in the growth and development of the Township. These water features help to attract visitors to the area, and provide attractive sites for residential development in many cases.
- High risk erosion areas along Lake Superior are generally found in relatively undeveloped areas. However, should development occur in these locations, the required setbacks for structures must be observed.
- The climate in Powell Township limits the type of agricultural crops that can be produced, and, because of the long winters and significant snowfall, affects road maintenance, commuting and travel patterns, etc. The long winters and abundant snowfall also serve to attract visitors who enjoy winter sports.

CHAPTER NINE: LAND USE AND OWNERSHIP

9.1 HISTORICAL LAND USE PATTERNS

The land use pattern in Powell Township has been shaped by the area's natural resources and features. The wood products industry was the primary economic factor in the Township even before any significant settlement occurred. In 1877 the harvest of white pine logs began near Lake Independence; the logs were shipped to Canada and England to be used in shipbuilding. In 1901 the Big Bay Lumber Company began operations in Big Bay. At that time the road from Marquette was a "corduroy" road; the journey from Marquette to Big Bay by land took two days. The primary means of access was by boat until a railroad was completed between Marquette and Big Bay in 1905.

After construction of the railroad, other communities sprang up at points along the rail line. These communities were closely tied to the lumber industry, and included Birch and Natpo. After only a few years of existence, these towns disappeared; the homes and sawmill equipment moved to other locations.



Thunder Bay Inn | Ron Koenig, 2010

The site of the Big Bay Lumber Company remained in use as a lumber company for nearly 50 years, under a variety of owners. In 1943, Henry Ford purchased the mill and associated properties in the Big Bay area, and made a significant investment in upgrading the mill and equipment, as well as other structures in the Big Bay area, such as the former company store, now known as the Thunder Bay Inn. The Ford mill ceased operation in 1949, a couple of years after Henry Ford's death.

A mill built on Lake Independence by Cram & Crocker operated for a period of time, alleviating some of the unemployment caused by layoffs at the Ford plant. The Northwest Plywood and Veneer Mill was also established around this time, located off Triple A Road west of Big Bay. However, the closure of these mills marked the end of the large lumber mill operations in the area.

Even before the Big Bay Lumber Company began operation, the area had been discovered by people who valued the vast forests, Lake Superior shoreline, and inland lakes of the Huron Mountains for their scenic beauty and solitude, rather than as a source of timber. The Huron Mountain Club was formed in the early 1890s, by a group of prominent Marquette residents. These families built cabins and a lodge at the mouth of the Pine River, and used the Club as a summer vacation retreat. In the early 1900s the Huron Mountain Club was reorganized and memberships were held primarily by wealthy families from outside Marquette County. Henry Ford was a longtime member of the Club, even before purchasing the lumber mill and surrounding area in Big Bay. The Huron Mountain Club remains in existence today, and owns nearly 20,000 acres in Powell Township.

Other areas in Powell Township were sought after for recreational pursuits. The Sosowagaming Club was built at the mouth of the Iron River in 1897, and operated for several years, until it was converted to a hotel. The property operated as a hotel until 1910, and was then used as a summer camp. J. M. Longyear built a camp at Ives Lake, which was separate from Huron Mountain Club property even though it was located adjacent to Club holdings. In 1919, Louis Kaufman began construction of a lodge on the shore of Lake Superior at Garlic Island. The lodge was completed in 1927, and was named Granot Loma, a name incorporating the first two letters of the names of the Kaufmans' first five children. This huge lodge still stands today, and is in private ownership, listed for sale as of December 2013. A dairy farm, known as Loma Farms, operated for many years just inland from Granot Loma, and Loma Farms' holdings now exceed 3,000 acres in Powell Township.

J. B. Deutsch, who ran the Lake Independence Lumber Company beginning in 1910, built a large home just north of Big Bay in 1912-13. Known as Bay Cliff, this home was built on the bluffs overlooking Lake Superior. In 1934, this home and surrounding property was converted into a camp for underprivileged children. Bay Cliff Health Camp currently encompasses 170 acres.

While the rich deposits of iron ore which shaped the development of much of Marquette County were not present in Powell Township, other mineral resources did play a part in shaping local land use patterns. A gold mine operated in the Township from 1901 until about 1907, but was unsuccessful in finding any significant deposits. Two sandstone quarries operated in the Township, one at the mouth of the Salmon Trout River and the other at Thoney's Point.

Today, logging and tourism continue to be the backbone of the local economy. The Huron Mountain Club continues to draw visitors from its membership, which now largely consists of residents of Lower Michigan. Tourist oriented businesses in Big Bay, along with the County-owned Perkins Park campground on Lake Independence, offer services to those drawn to the area's natural beauty. Large amounts of the Township are in Commercial Forest Reserve, much of this owned by Longyear Realty Corporation and Mead Paper Corporation. These CFR lands provide the raw materials that are trucked to paper mills in other parts of the U.P., or to lumber mills. Only a couple small lumber mills remain in existence in the Township today.



Huron Mountain Club | WNMU-FM

The general land use pattern in Powell Township consists of corridor development along County Road 550, surrounded largely by undeveloped forested areas. Scattered residential development, both year-round and seasonal, exists along CR 550 throughout the Township, with small concentrations along Johnson's Road, Remington's Road, and Homeier Road. The largest concentration of residential and commercial use is at Big Bay and on the shores of Lake Independence. There is also an area of residential development on the west shore of Saux Head Lake, north of County Road 550.

Residential development is occurring on Lighthouse Road. At the Big Bay lighthouse, a site condominium composed of single-family homes is being developed. Additional residential development is found on CR 510 south of CR 550. CR 510 is currently being paved due to increased traffic from the development of Eagle Mine.

9.2 CURRENT USE INVENTORY

This section will examine the current land use patterns for Powell Township and Marquette County, based on aerial photography taken in 2006. The land use patterns are depicted on Map 5-1. Sections 9.4 through 9.8 contain further detail on key land uses and trends in Powell Township.

Forest: The vast majority (76.48 percent) of Powell Township is forested, according to the Current Use Inventory. Predominant forest cover type in Powell Township is northern hardwood, followed by aspen, white birch and associated species.

Agricultural: This description broadly defines lands used for the production of food and fiber. In Powell Township, less than 1% of the land area is designated for agricultural production.

Wetlands: Wetlands are defined as those areas between terrestrial and aquatic systems where the water table is at, near or above the land surface for a significant part of most years. Wetlands represent a relatively minor proportion of the Township's land cover, at 13 percent. The largest concentrations of wetlands shown in the Current Use Inventory are along the Salmon Trout River near the river mouth, and east and north of Lake Independence. Wetlands are scattered throughout the Township, however, primarily in areas adjacent to lakes and rivers.

These areas can pose significant constraints on development in some areas, due to state and federal regulations and the general unsuitability of wetlands for many types of development. It should be noted that the presence of wetland areas in the Current Use Inventory is based on photo interpretations, and a site-specific wetlands determination is necessary for any proposed development in such areas.

Developed Areas: Developed areas includes land used for the following purposes: commercial; industrial; transportation, communications and utilities, such as airports, railroads, highways, etc.; open pit mining area, lands devoted to outdoor recreation, cemeteries, and other forms of open space. Less than 1% of Powell Township is developed. The community of Big Bay contains the largest concentration of developed land in the Township. Additional development occurs along CR 550, at Saux Head Lake, Ives Lake, along the shore of Lake Independence, Conway Lake, along Lighthouse Road, and in the vicinity of the Huron Mountain Club.

Commercial establishments in the Township include motels, restaurants, a grocery store and gas station, and other retail and service establishments. Some of these structures are of relatively new construction, while others are located in renovated historic buildings. Such as the Thunder Bay Inn, a hotel and restaurant located in a building originally used as a company store and The Depot, a motel in the former railroad depot. Another example is the Big Bay Point Lighthouse, which has been renovated and converted to a bed and breakfast.

Grassland/Herbaceous and Scrub/Shrub: These lands are open lands or rangelands, characterized by grasses and shrubs, but not including those lands showing obvious evidence of seeding, fertilizing or other agricultural practices. About four percent of Powell Township falls into this category.

Water: 5.9 percent of Powell Township is classified as water, in the form of streams, waterways, lakes and reservoirs. These areas have an effect on adjacent land use, by supplying sites for water-dependent industry, water-based recreational sites, and residential or commercial development. The large amount of water in Powell Township includes Lake Independence, Saux Head Lake, and the numerous large and small lakes encompassed by the Huron Mountain Club.

Barren: "Barren" lands include exposed rocks and beaches, and make up less than 1% of the Township's total area. The barren areas are primarily bedrock outcrops at high elevations, with a few rock outcrops along Lake Superior. The beach areas occur at the mouth of the Salmon Trout and Iron rivers.

TABLE 9-1: POWELL TOWNSHIP & MARQUETTE COUNTY LAND USE PATTERNS				
	Powell Township		Marquette County	
	Acres	%	Acres	%
Developed, High Intensity	0.82	<0.01	1,619.56	0.14
Developed, Medium Intensity	21.55	0.02	3874.02	0.32
Developed, Low Intensity	240.45	0.23	10,393.56	0.87
Developed, Open Space	17.34	0.02	3,073.58	0.26
TOTAL DEVELOPED	280.16	0.27	18,960.72	1.59
Cultivated Crops	120.04	0.12	2,943.08	0.25
Pasture/Hay	282.33	0.27	8,687.63	0.73
TOTAL AGRICULTURAL	402.37	0.39	11,630.71	0.97
Deciduous Forest	40,328.50	38.97	370,857.20	31.01
Evergreen Forest	15,403.20	14.88	132,567.55	11.08
Mixed Forest	23,413.79	22.63	202,864.74	16.96
TOTAL FORESTED	79,145.49	76.48	706,289.49	59.05
Grassland/Herbaceous	2,553.38	2.47	44,284.04	3.70
Scrub/Shrub	1,279.91	1.24	27,102.65	2.27
Wetlands	13,452.36	13.00	338,404.75	28.29
Barren	265.70	0.26	11,246.26	0.94
Open Water	6,102.91	5.90	38,101.34	3.19
TOTAL	103,482.28	100.00	1,196,019.96	100.00

Source: Michigan Resource Information System, 2006.

9.3 RESIDENTIAL LAND USE

Residential land use in Powell Township has experienced some dramatic fluctuations in the past. Some communities, such as Birch, were founded, flourished for a few years, and are now gone. The community of Big Bay was originally developed in an area called Red Town, at lower elevations along the shores of Lake Independence; it was later moved to its present location. Homes were moved from Red Town to the present location; structures were also moved from Birch to Big Bay or to other locations.



A House in Big Bay | UPMLS Listings

While some residents of Powell Township commute to the urban corridor for employment, Big Bay is too far from Marquette to experience the increase in development occurring in many townships on the urban fringes. However, as the beauty of the area becomes more well-known, and as technology makes it easier for people to work and do business at remote locations, additional population growth is likely.

There are several potential concerns for local communities associated with the expectations of people moving from urban to outlying areas. Often they expect to receive the same level of services they would enjoy in a more urban area, although the cost of providing those services may be much greater in rural areas. For example, many new residents expect garbage pickup at their homes, expect roads to be plowed promptly, and take for granted that fire and other emergency services will be readily available. They also often want the rural character of the community to remain the same, not realizing that the cumulative effect of development in these outlying areas can create some of the same problems they hoped to escape when leaving the urban area. In areas where development exceeds the capacity of the site to support on-site wells and septic systems, groundwater contamination can occur, and septic systems can fail. In such cases, residents often look to local governments to help provide a solution in the form of public water or sewer systems. Such systems are very expensive, and may not be cost-effective to operate in areas of low density development.

Land use conflicts are also possible when this new residential development locates in agricultural or forested areas. The conversion of farmland or productive timberland to other uses is one concern, as is creating "landlocked" areas as a result of splitting off a row of lots with road frontage along the edge of a large parcel. New residents in such areas may not be prepared for the realities of rural life, such as the hours of operation, sounds and odors associated with farming, or the noise and dust associated with logging, and the appearance of recently cutover areas.

9.4 COMMERCIAL LAND USE



Lumberjack Tavern | Frosty the Snow Van (blog)

As Powell Township begins to realize its potential to attract visitors to its scenic beauty, there is pressure to expand the commercial sector of the Township. Well-planned commercial development, can provide necessary services without detracting from the area's beauty and rural character. Commercial establishments can be grouped, with one or two shared access points to reduce turning incidents and potential for traffic hazards. Requirements for signs can be

developed which provide for visibility without creating clutter. Commercial development should be provided for in sites which are physically capable of providing adequate drainage, access, sewage disposal and room for potential expansion. Development in areas which lack utilities and access, or which are not physically capable of supporting development, should be discouraged.

Commercial acreage may need to expand to support an increase in businesses resulting from Eagle Mine development.

9.5 INDUSTRIAL LAND USE

While industrial land use, in the form of various wood products industries, has played a major role in shaping Powell Township's development, the only industrial uses currently in the Township are a couple of small sawmills. Future industrial use is limited by the distance to markets and the lack of sewer and water in much of the Township. However, so-called "light industry," including small manufacturing and assembly firms which do not require large volume of water or generate toxic effluent may be suitable for the area. Some of these firms produce small products which do not require large volumes of truck traffic, and rely on the Internet, e-mail, fax machines and other forms of communication to market their product.

9.6 FORESTRY AND AGRICULTURAL LAND USES

Map 9-1 shows the predominance of forested lands in Powell Township. This area includes primarily private lands, thousands of acres of which are managed as commercial forest under the Commercial Forest Act. Nearly 20,000 acres are owned by the Huron Mountain Club, with restricted access. A small amount of state forest land is also located in the Township.

Commercial forest land, designated as Commercial Forest Reserve, or CFR, allows for public access for hunting, fishing, etc. Residential uses or other non-forestry uses cannot occur on these lands while they are in CFR status. The major owners of CFR lands in Powell Township are Longyear Realty Corporation and Plum Creek.

These and other companies actively manage their lands for timber production, with logs harvested in the Township going to supply paper mills and sawmills throughout the U.P.

The Huron Mountain Club has not placed their holdings in CFR, because their lands are not being managed for timber harvest, and because access is limited to club members. However, in the mid-1990s, the Club applied for open space designation for their lands, under the same law which provides for agricultural preservation. Such designation would have lowered the taxes on club lands considerably. Powell Township denied the application, and the Club then appealed to the Michigan Department of Natural Resources. The application was denied by the DNR, largely because of the Club's policy of limiting access to their lands.

Agricultural uses historically included Loma Farms east of Saux Head Lake and farming operations associated with the J.B. Deutsch farm at Bay Cliff. The climate and terrain of Powell Township are generally not conducive to agricultural uses, however, and such use has not been an important part of the area's development. Future prospects for agricultural use are limited.

9.7 PUBLIC AND QUASI-PUBLIC LAND USE

Public land uses in Powell Township include parks, public buildings, schools and tracts of public owned lands. Many of these uses are discussed in more detail in other chapters of this plan; however, the land use considerations associated with these uses will be discussed here.

Parks in Powell Township include Thomas Rock, Perkins Park, the Big Bay Harbor, and two Township parks, one in Big Bay and the other associated with the fire station along CR 550. The State of Michigan provides a public access site at the mouth of the Huron River in the northwest corner of the Township. Other state-owned lands in the Township are also available for hunting, fishing, hiking and other forms of outdoor recreation.



Powell Twp. Cemetery | Ron Koenig, 2010.

In terms of land use, local parks and public lands provide recreational facilities for residents, as well as maintaining green space and public space in areas which may otherwise be relatively densely developed. Larger regional parks, while continuing to provide recreational opportunities and green space, also attract visitors from a wider area. Such areas have the potential to create more conflicts with adjacent uses, in terms of traffic, parking, hours of operation, noise, etc.

Public buildings in the Township include the Township Office and fire stations. These buildings and other public buildings outside the Township which serve Township residents are discussed in more detail in Chapter 6, Public and Community Facilities. As a general rule, these buildings are located in population centers, and do not occupy large tracts of land. Their primary impact on land use is related to traffic and parking.

Examples of quasi-public land uses include churches, recreational sites 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. In addition to serving as places of worship, churches often serve as community gathering places, for social events and local meetings. The closure or consolidation of churches, as is currently being done in some areas in the Catholic Diocese of Marquette, can affect traffic patterns and the availability of gathering places; it can also have a less tangible effect on the character and cohesiveness of a community.

9.8 LAND OWNERSHIP

Land ownership in Powell Township has a significant effect on land use. Large tracts of land in CFR status, plus the presence of the large tract of land owned by the Huron Mountain Club mean that less land is readily available for private development. However, these lands provide recreational opportunities and, in the case of CFR lands, raw materials for the wood products industry. It is also questionable whether some of these areas would be desirable for more intensive development, due to terrain, remote location, and other site characteristics.



Granot Loma Lodge | Granot Loma Camp

Another large land-owner in the Township is Loma Farms, with about 5,200 acres east of Saux Head Lake between CR 550 and Lake Superior. This property includes Granot Loma and the buildings of Loma Farms, and has potential for development as a recreational property, utilizing the huge lodge, and/or as a residential subdivision.

State and federal land ownership is not a major factor in Powell Township. The State of Michigan owns about 2,800 acres in the Township, while the federal government owns 147 acres encompassing the Huron Islands in Lake Superior just north of the mouth of the Huron River. The Huron Islands are managed by the U.S. Fish and Wildlife Service, known as the Huron Islands National Wildlife Refuge. Access to the Huron Islands is difficult, and the area receives few visitors. The islands have been a wildlife refuge since 1905, and a wilderness area since 1970. In addition to a large herring gull population, the islands contain an abandoned lighthouse and outbuildings. While the buildings are no longer occupied, the light has been automated and is maintained by the U.S. Coast Guard.

9.9 LAND USE TRENDS

Powell Township is experiencing growth in both year-round and seasonal residential use. Waterfront areas are the most desirable for development, with new homes interspersed between older residences. Since waterfront areas are typically more susceptible to environmental degradation, care should be taken to protect the waterfront values. Dense development in waterfront areas can result in a loss of the unique character of these areas.

The overall trend in Powell Township land use has been residential -- bedroom and retirement community. Upgrades to several local businesses, as well as several zoning district changes, and multiple dwelling sites have occurred. A number of people have vacation homes in the township; the mix of residents is from the greater Marquette area, downstate Michigan and from out-of-state.

Growth and development is limited in Powell Township by the area's remoteness, and the physical characteristics of the region. It is unlikely that the Township will experience the rapid growth of some areas closer to urban areas, but the unique nature of the area, in terms of scenic beauty and rural character, is more sensitive to change than areas in more urban settings.

While recent development has added to the Township's property tax base, studies in other parts of the state have indicated that much new residential development does not generate enough new tax revenue to cover the cost of providing services. In the case of development in areas where sewer and water are not available, the costs of providing services may not be that high at this time; however, if additional services are needed in the future, scattered development could make provision of municipal services very expensive.

Because of the land ownership and transportation pattern in Powell Township, it is likely that future development will occur in the Big Bay area and along CR 550. Due to the lack of public transit and the nature of local employment and commuting patterns, future development will continue to be oriented towards the private automobile.

9.10 ISSUES AND OPPORTUNITIES

- Powell Township's large expanses of waterfront property offer the opportunity for future residential and recreational development.
- The growing awareness of the natural beauty and unique character of Powell Township offers the opportunity to attract more visitors and residents to the area.
- The degree to which future residential, commercial and industrial growth occurs is linked to the transportation network in the Township, particularly CR 550. The Road Commission is making improvements to the road, which will greatly increase the potential for growth.
- There are areas within the Township which, because of terrain or the presence of unique habitats or species are not highly suitable for development.
- Increased commercial development in the Big Bay area may tend toward "strip" development along CR 550 similar to the development in Marquette Township along US-41. This could result in a change in the character of the highway corridor, and has the potential to create traffic hazards by adding new driveways along the highway. The opportunity may exist to guide commercial development towards areas where strip commercial development is minimized, access is controlled, and the rural character of the community is maintained. For example, a minimum 100 foot setback requirement may keep the area's character but allow for needed development.

CHAPTER TEN: GOALS AND RECOMMENDATIONS

10.1 INTRODUCTION

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

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

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

Plan implementation continues through adherence to the goals, policies and objectives set forth in this plan. It should be emphasized, however, that these goals, policies and objectives are not "cast in concrete." While the Planning Commission has developed these goals, policies and objectives based on the best information available, and the needs of the community at a point in time, changing needs and desires within the community, or changes in the local population or economy, may mean that these goals, policies and objectives will need to be reevaluated. This plan must remain flexible enough to respond to changing needs and conditions, while still providing a strong guiding mechanism for future development. The Planning Commission, Township Board, and Township staff, together with other groups, organizations and individuals, will use this plan as a dynamic decision making tool. The Planning Commission shall ensure that the plan is referred to frequently and updated periodically.

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

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

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

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

10.2 POPULATION

The Township's population is increasing as evidenced by an almost thirteen percent increase from 2000-2010. Since 1950, the population has grown by 31 percent. Additionally, the age of township residents is increasing: the median age recorded in the 2010 Census was 53.7 compared to 46.1 in the 2000 Census. The township has one of the lowest population densities in Marquette County, with the majority of the population located on or near County Road 550, within the community of Big Bay or along or on one of the water features in the township.

Goal:

Sustain a population growth rate that maintains the rural nature of the township.

Policies:

- Encourage the availability of appropriate housing development sites such as apartments and manufactured housing communities through zoning and other means of land use regulation.
- Ensure that housing units are kept in good repair so as to safeguard the public from unsafe living conditions and blighted neighborhoods.
- Ensure that applicable ordinance and code regulations are consistently enforced.
- Ensure that the zoning ordinance effectively preserves and protects the character of the Township.

Objectives:

- Periodically review the Township infrastructure and services to ensure there is sufficient capacity to meet existing and future residential and commercial requirements.

- Neighborhoods, businesses and public entities should be vigilant regarding physical appearances, sanitation and general ownership responsibilities.
- Emphasize the overall quality-of-life enjoyed by residents.
- Strive to meet future demand for residential development without sacrificing the rural character and natural beauty.
- Maintain awareness of state and county sponsored housing rehabilitation programs designed to upgrade existing housing units.

10.3 ECONOMY

Powell Township's economy is closely related to its natural resources, both in terms of the recreational opportunities and scenic beauty which draw tourists to the area, and the logging and lumber industries which historically led to the area's settlement. While there are no longer any lumber mills active in the Township, thousands of acres of corporately-owned timberlands help supply raw materials to pulp and lumber mills throughout the region. Some residents are employed within the Township, either through self-employment or employment in businesses in Big Bay or elsewhere in the Township, while others commute to the Marquette urban area for employment. The Marquette area is the economic and cultural center of the County.

Goal:

Increase employment and investment that will result in economic diversification compatible with the character and long-term interests of the Township.

Policies:

- Encourage businesses and industries already located in the area to remain in the community, and encourage expansion of these firms, except in cases where such uses are nonconforming, or where state and federal standards are not being complied with.
- Ensure that adequate sites are available for new development and/or expansion of existing firms, in areas where such development is appropriate.
- Focus on growth in the service sector, particularly the tourism industry. Where efforts are made to attract new industry to the Township, the focus should be on so-called "light" industry, assembly, etc., particularly smaller firms with relatively low impact on the community and environment, and with minimal demands for public services such as water and sewer.

- Ensure that commercial and industrial development is located where adequate infrastructure is in place or is available.
- Ensure the availability of appropriate commercial/industrial sites to meet growth and/or expansion needs and at the same time maintain the rural character of the township.
- Encourage the establishment of home-based and natural resource-based industry through promotion of area's rural setting and overall quality-of-life.

Objectives:

- Identify sites where adequate infrastructure exists to support development, where the physical characteristics of the site are suitable for development, and where additional development will not create problems with access, visual clutter, etc.
- Market the quality of life and a dedicated work force found in Powell Township to potential new businesses looking for a rural location.
- Develop design guidelines for commercial areas in the Township which will help deter "strip" development, multiple accesses onto county roads, conflicts with adjacent uses, etc.
- Ensure that the zoning ordinance reflects the location of suitable sites, design guidelines, and the desired future character of the area, especially in the community of Big Bay.
- Support the Marquette County Road Commission and other entities in their efforts to obtain funding for improvements to CR 550 and CR 510.
- Partner with the Lake Superior Community Partnership, Michigan Economic Developers Association (MEDA), and other entities which promote the economic well-being of Marquette County.

10.4 LAND USE

The land use pattern in Powell Township consists of a concentration of residential and commercial development in Big Bay, seasonal and year-round residential uses along CR 550 and some waterfront areas, and vast tracts of undeveloped forestland. Historically, communities have been founded, flourished and then faded as the industries which supported them grew and then disappeared. Since the closure of the last significant lumbering operation in the Township, the land use pattern has generally stabilized until it reached the current configuration.

The area's natural beauty has contributed to its development, as areas such as the Huron Mountain Club and Granot Loma were built as retreats for wealthy residents of other communities. Recently, as in other areas, the pressure for waterfront development has been increasing.

Goal:

Achieve a pattern of land use that will allow for manageable and compatible development in areas where adequate facilities exist or can be provided, while preserving the rural nature of the area.

Policies:

- Development in the outlying portions of the Township should occur in such a way as to preserve open space and the rural character of the Township, and to provide adequate space for private wells and septic systems.
- Development throughout the Township should be consistent with site characteristics and infrastructure availability.
- Development which includes more than one residential, commercial and/or industrial establishment served by private roads should be discouraged.
- The unique visual and environmental characteristics should be considered when allowing for waterfront development.
- Encourage new residential development in areas that have adequate infrastructure in place or can be readily and economically provided.
- Ensure land uses that are adequately supported by existing infrastructure and natural features.
- Development should ensure that adequate land area exists for private wells and septic fields.
- Ensure that driveways and private roadways are designed and constructed to provide safe ingress and egress.
- Encourage the preservation of wetland and floodplain areas.
- Encourage watershed management and protection activities.

- Discourage inappropriate development in floodplains and wetlands which are vulnerable to future on-site septic systems and groundwater contamination.

Objectives:

- Limit private driveway access to CR 550 in order to avoid traffic congestion, accidents and safety hazards. Enact ordinance or land use provisions that will require the development of shared driveways and parking, frontage roads, and deceleration and turning lanes to reduce turning accidents, improve traffic flow, and discourage "strip" development.
- Develop design guidelines for commercial areas in the Township which will help deter "strip" development, multiple accesses onto county roads, conflicts with adjacent uses, etc.
- Ensure that the zoning ordinance reflects the location of suitable sites, design guidelines, and the desired future character of the area.
- Site plan review standards, setback and parking requirements, and other requirements of the zoning ordinance should be revised to promote access management on CR 550. Assistance in developing an access management plan may be available from the Marquette County Road Commission and/or CUPPAD.
- Coordinate with Marquette Township the development and implementation of an access management plan for County Road 550.
- Records pertaining to variances should be reviewed to determine if there are areas within the Township where numerous nonconforming uses or frequent variance requests occur. If such instances are occurring, the zoning ordinance should be examined to perhaps eliminate the large number of variance requests being made.
- The Township will not recommend roads for inclusion into the County road system unless they are already built to County standards.
- Revise the zoning ordinance to require that development occur in areas served by public roads wherever possible. Where development on private roads is allowed, such roads should be built to County standards, or sufficient right of way should be established to allow for future improvement to County standards.
- Identify development constraints within floodplain areas where pressure for development may be the highest and the environmental is potentially more fragile.

- Using zoning and other land use controls, encourage a pattern of land use which minimizes environmental impact, encourages economic growth in appropriate areas and maintains the natural features of the community.
- Eliminate the use of privies and holding tanks as a means of on-site sewage disposal in floodplain areas. Ensure compliance through local, county, state and federal agency regulations.
- Encourage development in areas where environmental degradation can be avoided.
- Work with state and federal agencies in preserving and enhancing the area's wetland and floodplain areas.

10.5 PUBLIC AND COMMUNITY FACILITIES

Powell Township provides a variety of municipal services to part or all of the Township. For example, municipal water is provided in the community of Big Bay, while fire protection and emergency medical services are provided throughout the Township. Other services, such as law enforcement and library, are provided by other local, state or federal entities. Facilities and services offered or available within a community is a critical part of a community's quality of life, and play an important factor in economic development.

Goal:

- Continue to provide all needed community facilities and services in a cost-effective manner, in accordance with the standards of regulatory agencies.

Policies:

- Ensure that the Township infrastructures and equipment are maintained in good repair.
- Ensure adequate fire protection coverage and emergency medical technician service to all areas of the Township.
- Continue to provide existing services in a safe and efficient manner, in compliance with state and federal standards, and expand services as needed.
- Improvements needed for the township should be identified within a multi-year Capital Improvement Plan for the Township.

Objectives:

- The Township Board should develop a multi-year Capital Improvement Plan to be used as a long-range planning and budgeting tool by the Township Board.
- Identify repair and/or replacement needs in the Powell Township Water System and develop a schedule for accomplishment of these projects along with potential funding sources.
- Continue to maintain good working relationships with other agencies and organizations which provide services to local residents.

10.6 HOUSING

Census 2000 revealed there was a 27 percent increase in the number of housing units in the Township since 1990; over a thirty-year trend the increase was 83 percent. Powell Township contains a high percentage of seasonal housing units, some of these may in future be converted to year-round housing. The vast majority of the occupied housing is owner occupied, with nearly all of the homes single-family structures. There are few multi-family units in the township. There is a higher percentage of mobile homes in the township than in the county and central Upper Peninsula. About 40 percent of the housing is more than 40 years of age. A significant proportion of homeowners and a smaller proportion of renters pay more than 30 percent of their household income for housing.

Goal:

- Encourage provision of an adequate supply of affordable, safe and sanitary housing, consistent with the needs of the local population.

Policies:

- Encourage continued development and maintenance of a variety of housing types.
- Encourage the rehabilitation and maintenance of existing housing stock to provide safe living conditions and prevent deterioration and blight.
- Encourage new residential development in areas that have adequate infrastructure in place or can be readily and economically provided.

Objectives:

- Through the zoning ordinance and other land use regulation tools, ensure that sufficient appropriate sites are available to develop new housing.
- Residential zoning districts should provide for a variety of densities and dwelling sizes and types, and should guide denser development to areas where utilities and natural features are suitable for such development.
- Revise zoning ordinance and other local ordinances as necessary to protect the scenic and environmental values of waterfront areas, and to protect the small-town character of the Big Bay area.
- Work with developers to encourage development that is consistent with the Land Division Act and discourage development which involves more than one residence or other structure served by a private road.
- Promote state and county programs for housing rehabilitation to residents, and encourage their use of programs to help eliminate deteriorated and unsafe housing.
- Continue to enforce local ordinances regarding blight and deterioration, to eliminate hazards to public health and safety.

10.7 RECREATION/HISTORICAL

The recreational opportunities in Powell Township are a large part of what draws visitors to the area. The Township is rich in natural beauty, and contains steep slopes, miles of Lake Superior shoreline, and many inland lakes. Recreational facilities for local residents are provided by the Township and others, while other agencies and organizations provide facilities or services which draw visitors from outside the area.

Powell Township's history dates back to the logging era of the late 1800s. Several buildings and historic sites remain which help to attract visitors and create a link with the past.

Goal:

Provide a wide range of recreational opportunities, including a variety of recreational experiences for all age groups and abilities.

Policies:

- Maintain existing parks and recreational facilities, and implement improvements identified through the recreation planning process.
- Maintain the unique scenic character of the area, and maintain access to lakes, rivers, waterfalls and other scenic areas which are popular with visitors.

Objectives:

- Continue to update the Powell Township Recreation Plan every five years, in accordance with Michigan DNR guidelines.
- Use grant funds in combination with local funds to improve Township recreation areas to serve local residents. Support other local governments' efforts to obtain grant funds for other recreational facilities in the area.
- Identify opportunities to make sites and facilities more accessible to people with disabilities.
- Encourage community involvement in the recreation planning process and in site development, in order to ensure that facilities are developed in accordance with local needs.
- Cooperate with other units of government in encouraging maintenance and improvement of recreational facilities, including the design and development of trails, throughout the county.
- Work with the Hiawatha Water Trail Association, the Noquemanon Trail Network, the MDNR, the US Forest Service, the National Park Service and other local groups to promote the development and maintenance of non-motorized and water trails within the township. Also work with various groups to encourage the continuity of development of motorized trails for use by snowmobiles and other recreational vehicles.

Goal:

Encourage preservation of historic sites where possible, in order to maintain links to the past and potentially attract visitors to the area.

Policies:

- Encourage the protection and/or rehabilitation of historical structures wherever possible, rather than replacing with new structures.

Objectives:

- Encourage owners and/or managers of historical sites to preserve and/or rehabilitate structures and sites.
- Support efforts of other agencies and local units of government to obtain funding to preserve, rehabilitate, and interpret historical sites.
- Preserve the rural character of the CR 550 corridor, particularly in the Big Bay area.

10.8 TRANSPORTATION

Powell Township's primary link with the Marquette urban area is CR 550. CR 510 provides access to U.S. 41 near Negaunee, but is unpaved. The local tourism trade is dependent on CR 550 to bring visitors to the area; loggers use it to haul timber from vast acreages of corporate forest land; local residents use it to commute to and from work; high school students are transported to school in Marquette and Negaunee; and the road is vital for emergency services such as fire and ambulance. Beyond CR 550 and CR 510, Powell Township is served by a network of county local roads, private roads, and "two-track" roads in remote areas.

Goal:

Encourage provision of a transportation network which provides for the safe and efficient movement of goods and people through, into and out of the Township.

Policies:

- Encourage continued improvements to CR 550, including reconstruction, straightening, widening and other activities.
- Coordinate road planning and development projects with adjoining local units of government.

- Private driveway access to CR 550 in the Big Bay area should be limited, in order to avoid increasing traffic congestion and safety hazards. Development should utilize shared driveways and parking, frontage roads, and deceleration and turning lanes to reduce turning incidents and improve traffic flow.
- Development that involves more than one residential, commercial and/or industrial establishment served by a private road should be discouraged. The Township should not recommend roads for inclusion into the County road system unless they are built to County standards.

Objectives:

- Work with the Marquette County Road Commission and other townships to stress the importance of improvements to CR 550 and CR 510.
- Continue to develop road improvement priority lists identifying needed improvements within Powell Township, and lobby the Marquette County Road Commission for completion of these projects.
- The zoning ordinance should require that development occur in areas served by public roads wherever possible. Where development on private roads is allowed, such roads should be built to County standards, or sufficient right of way should be established to allow for future improvement to County standards.
- Site plan review standards, setback and parking requirements, and other requirements of the zoning ordinance should promote access management on CR 550, especially in the Big Bay area, in order to reduce traffic hazards and maintain the rural character of the community.

CHAPTER ELEVEN: FUTURE LAND USE

11.1 INTRODUCTION

The previous chapters of the Master Plan provide an overview of the existing conditions in Powell Township. A future land use plan is representative of the “preferred future” of how the community would like to grow, and includes recommendations on how development should be carried out. Recommendations are based on analyses of environmental opportunities and constraints, existing trends and conditions, and projected future land use needs.

Future land use planning establishes the desired amounts and locations of residential, commercial, and industrial development; public facilities; open space; environmental conservation and recreational areas; non-motorized transportation facilities; and changes or improvements to the local traffic circulation systems. When making future land use decisions, township officials should carefully review adjacent land uses in bordering jurisdictions for compatibility.

The Michigan Planning Enabling Act (PA 33 of 2008) requires a Master Plan to include “...a Zoning Plan for various Zoning Districts controlling the height, area, bulk, location, and use of buildings and premises. The Zoning Plan shall include an explanation of how the land use categories on the Future Land Use map relate to Districts on the Zoning Map” (Section 33(2)(d)).

Consequently, this chapter also contains information about Powell Township’s current zoning districts and recommendations for any potential modifications to the districts based on the future land use plan. Map 11.1 shows the current zoning districts, and Map 11.2 shows the future land use categories.

11.2 FUTURE LAND USE DESCRIPTIONS

The following descriptions provide a general outline of the vision and intent for future land use in Powell Township. Descriptions are based on the goals and objectives mentioned in previous chapters, as well as best practices in planning.

Each future land use category description is accompanied by a picture. These examples are taken from various rural locations in the United States, and are provided to illustrate the intended use and general character of each land use designation. The examples are not intended to dictate any particular architectural style, building standard or arrangement, or to limit the uses of a land use designation to those depicted.



Residential

New residential development should be encouraged in areas that have adequate infrastructure in place or that can be readily and economically provided. Care should be taken in choosing building sites where septic systems will function properly, as the Township has some soil types with limitations. The existing zoning districts should generally be sufficient to accommodate any new residential development.

Image: Grow Smart Maine



Rural Residential

Development in the outlying portions of the Township should occur in such a way as to preserve open space and the rural character of the Township, and to provide adequate space for private wells and septic systems. The existing zoning districts should generally be sufficient to accommodate any new residential rural development.

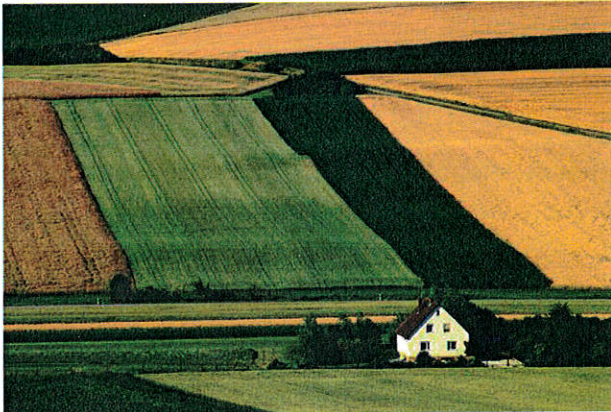
Image: Rhode Island Dept. of Environmental Management



Waterfront

The preservation of wetland and floodplain areas as well as watershed management and protection activities should be encouraged. Inappropriate development in floodplains and wetlands which are vulnerable to future on-site septic systems and groundwater contamination should be discouraged. Unique visual and environmental characteristics should be considered when allowing for waterfront development. The existing zoning districts should generally be sufficient to accommodate any new waterfront development.

Image: U.S. Environmental Protection Agency



Agricultural Production

A small portion of the Township has suitable soil characteristics for growing of crops and raising livestock. This land should be preserved for such uses as well as forestry and mining operations where such resources exist and their removal does not negatively impact adjoining agricultural land uses. The existing zoning districts should generally be sufficient to accommodate any new agricultural production.

Image: Michigan Farmer



Timber and Other Resource Production

Much of Powell Township's land area is well-suited for logging and mineral extraction due to rural character, soil types, potential mineral content, and location. The existing zoning districts should generally be sufficient to accommodate any new agricultural production.

Image: Timber Harvesting Magazine



Town Development

Larger, more concentrated populations in the unincorporated community of Big Bay may necessitate higher density residential and commercial development than other future land use categories. However, this development should be compatible with a small town setting. The existing zoning districts should generally be sufficient to accommodate any new development in this category.

Image: U.S. Environmental Protection Agency



Industrial

Powell Township does not currently have a designated industrial area on its zoning map. Allowing for industrial uses, isolated from residential uses, could encourage new business development and strengthen the area's economy.

Image: Morguefile.com

11.3 ZONING DISTRICTS AND ZONING PLAN

Powell Township is currently divided into 15 zoning districts. Map 11.1 shows the zoning districts, and the following text describes the intent and general purpose for each district. The permitted and conditional uses within each district and schedule of district regulations are included in the Powell Township Zoning Ordinance (Revised January 2013). A review of the current districts is pertinent to the discussion of any Zoning Ordinance revisions efforts as well as future land use.

Current Zoning Districts

District R: Residential

The R, Residential, District is intended for the establishment and preservation of quiet neighborhoods for single-family dwellings and two-family dwellings free from other uses except those which are both compatible with and convenient to the residents in this District. The R District is designed to accommodate residential opportunities for those who are willing to assume the costs of providing their own services, requiring spacious lots, insuring a safe, potable water supply and treatment of waste water on the same lot. Minimum lot size is 22,500 sq. ft.

District R-1: Residential

The R-1, Residential, District is similar to R: Residential, but with a minimum lot size of 1 acre.

District R-2: Residential

The R-2, Residential, District is similar to R: Residential, but with a minimum lot size of 2 acres.

District RR-5: Rural Residential

The RR-5, Rural Residential, District is established to provide for a transition zone between more densely settled residential areas and the more sparsely developed rural, agricultural, or forested areas of the Township. Such areas are accessible and provide for a mix of moderately intensive, compatible uses from surrounding zones. Minimum lot size is 5 acres.

District LS/R: Lake Shore and River

The LS/R, Lake Shore and River, District is established to preserve for residential and recreational uses those areas with frontage on lakes and rivers which, because of existing development, natural characteristics and accessibility, are suitable for development. Minimum lot size is 22,500 sq. ft.

District LS/R-2: Lake Shore and River

The LS/R-2, Lake Shore and River, District is similar to LS/R: Lake Shore and River, but with a minimum lot size of 2 acres.

District RS-10: Recreational Structures

The RS-10, Recreational Structures, District, is established and maintained for recreational and residential uses. The District is designed for areas with frontage on lakes and rivers, which because of their natural characteristics, accessibility, and high cost of providing public services, are suited for less intensive development than the LS/R District and intended for recreational or seasonal development. Governmental services may not be provided on a year-round basis or may not be provided at all. Minimum lot size is 10 acres.

District MH: Mobile Home Residential District

The MH, Mobile Home Residential, District is designed and intended to accomplish the objectives of the zoning ordinance through planned development for a mobile home park. Site planning and careful land use will allow appropriate development that is in keeping with the rural nature of the township.

District PUD: Planned Unit Development

The PUD, Planned Unit Development, District is designed and intended to accomplish the objectives of the zoning ordinance through a land development project review process based on the application of site planning criteria to achieve integration of the proposed land development project with the characteristics of the project area. A planned unit development may be located anywhere in the Township upon its approval by the Powell Township Planning Commission following an extensive site plan review.

District AP-20: Agricultural Production

The AP-20, Agricultural Production, District is intended to preserve for productivity and protect from other incompatible uses the lands which have suitable soil characteristics for the growing of crops and animals beneficial to man and to allow forestry and mineral extraction where such resources exist and their removal will not interfere with the overall operation and productivity of adjoining agricultural land uses. Minimum lot size is 20 acres.

District RP-10: Resource Production Ten

The RP-10, Resource Production Ten, District is established to maintain low density rural areas which because of their rural character and location, potential mineral content, accessibility, natural characteristics and the potentially high cost of providing public services for intensive uses are more suitable for a wide range of forestry, agriculture, natural resource and recreational uses. Some of the characteristics necessary for the RP-10 District are having electrical service and being located on a county road serviced year-round. Minimum lot size is 10 acres.

District RP-20: Resource Production Twenty

The RP-20, Resource Production Twenty, District, is established to maintain very low density rural areas which because of their location, potential mineral content, accessibility, natural characteristics and high cost of providing public services are not suitable for year-round development but rather for a wide range of forestry, agriculture, mineral extraction, natural resource and recreational uses. Governmental services may not be provided on a year-round basis or may not be provided at all. Minimum lot size is 20 acres.

District TP-40: Timber Production

The TP-40, Timber Production, District is established to preserve and maintain for timber production purposes those lands which because of their soil, drainage, large tract ownership, potential mineral content, and other characteristics, are especially suited for timber productions and mining. Minimum lot size is 40 acres.

District TD: Town Development

The TD, Town Development, District is established to preserve a district for residential, retail and service establishments, and certain governmental uses that are compatible with a small town setting serving residents and tourists. This district is designed for small unincorporated town areas where a mix of residential and retail is in accord with established patterns of land use and the needs of nearby residents. Minimum lot size is 3800 sq. ft.

District I: Industrial

The I, Industrial, District is designed and intended for manufacturing, assembling, fabricating, and processing businesses, storage, mineral extraction, and other commercial activities which may require larger sites and isolation from many kinds of other land uses and to make provisions for commercial uses necessary to service the immediate needs of an industrial area. Minimum lot size is 1 acre.

Relationship Between Zoning and Future Land Use

The following table lists future land use categories and their corresponding existing zoning districts, along with notes when applicable. Currently, the existing zoning districts align with the goals and recommendations discussed in previous chapters. However, if the needs of Powell Township change in the future, amendments to the zoning map and districts may be necessary.

Future Land Use Category	Zoning District	Notes
Residential (R)	R, R-1, R-2	-
Rural Residential (RR)	RR-5	-
Waterfront (W)	LS/R, LS/R-5, RS-10	-
Agricultural Production (A)	AP-20	-
Timber and Other Resource Production (T)	TP-40, RP-10, RP-20	-
Town Development (TD)	TD	-
Industrial (I)	I	"Industrial" classification described in zoning ordinance, but not in current zoning map.
-	MH	"Mobile Home" residential district described in zoning ordinance, but not in current zoning map.
-	PUD	Planned Unit Developments are provided for by the zoning ordinance per site plan review.

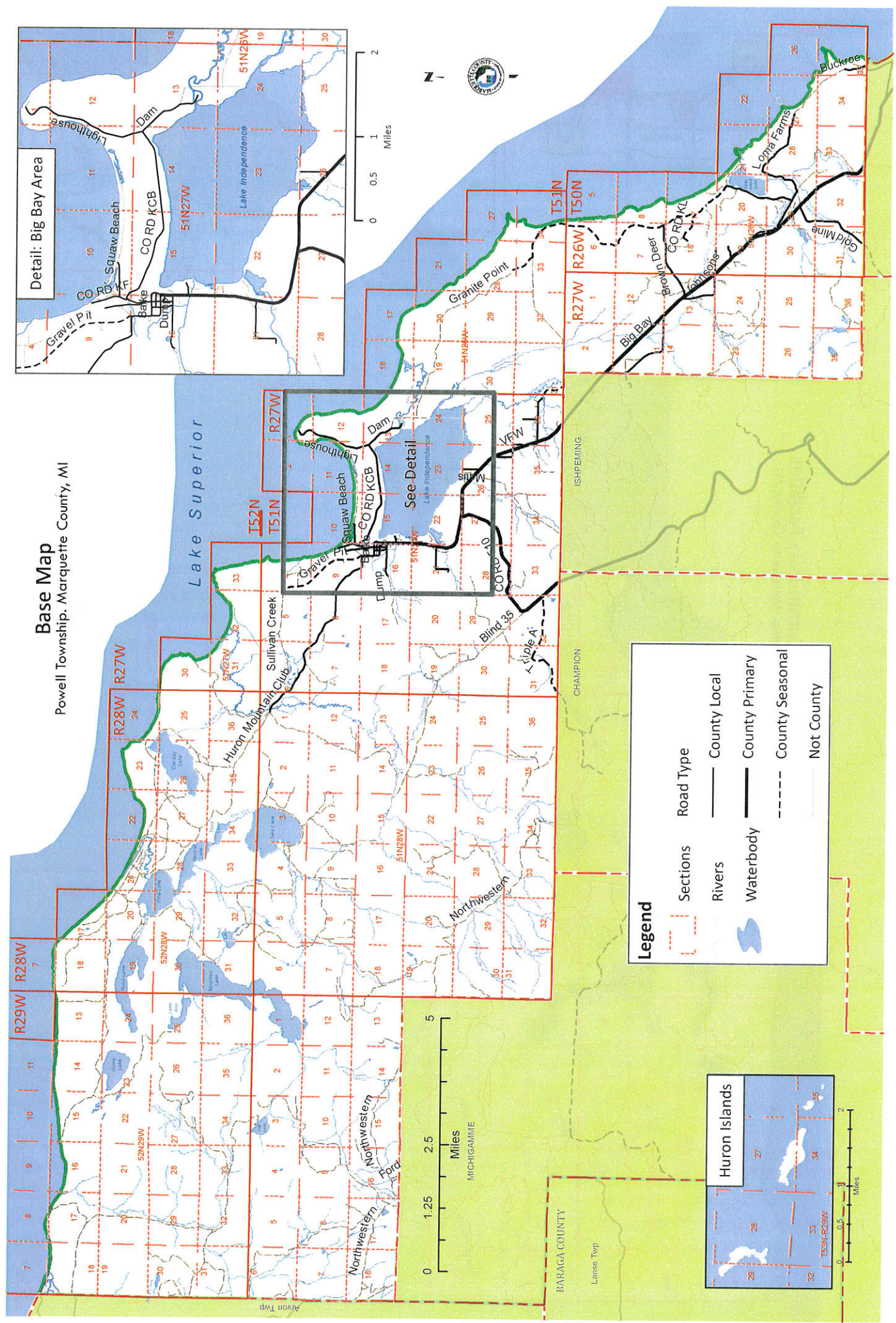
11.4 CONCLUSION

Planning is intended to guide the forces of change in ways that encourage desirable outcomes by striking an appropriate balance with development and preservation. The Master Plan should be reviewed on a yearly basis, and amending the plan as necessary will maintain its use as a reliable planning tool. State law requires that the Master Plan be reviewed every five years to determine if updating is necessary.

As the developers and most frequent users of this document, the Planning Commission will be responsible for reviewing the objectives and progress of the Plan. Amendments that should occur include:

- Deleting goals and objectives that have been accomplished.
- Adding new objectives as needs and desires arise.
- Modifying the Future Land Use Map to reflect any zoning decisions that have changed the direction of development in the Township.

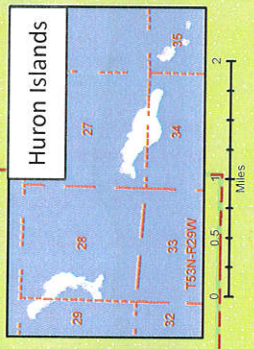
APPENDIX A: MAPS



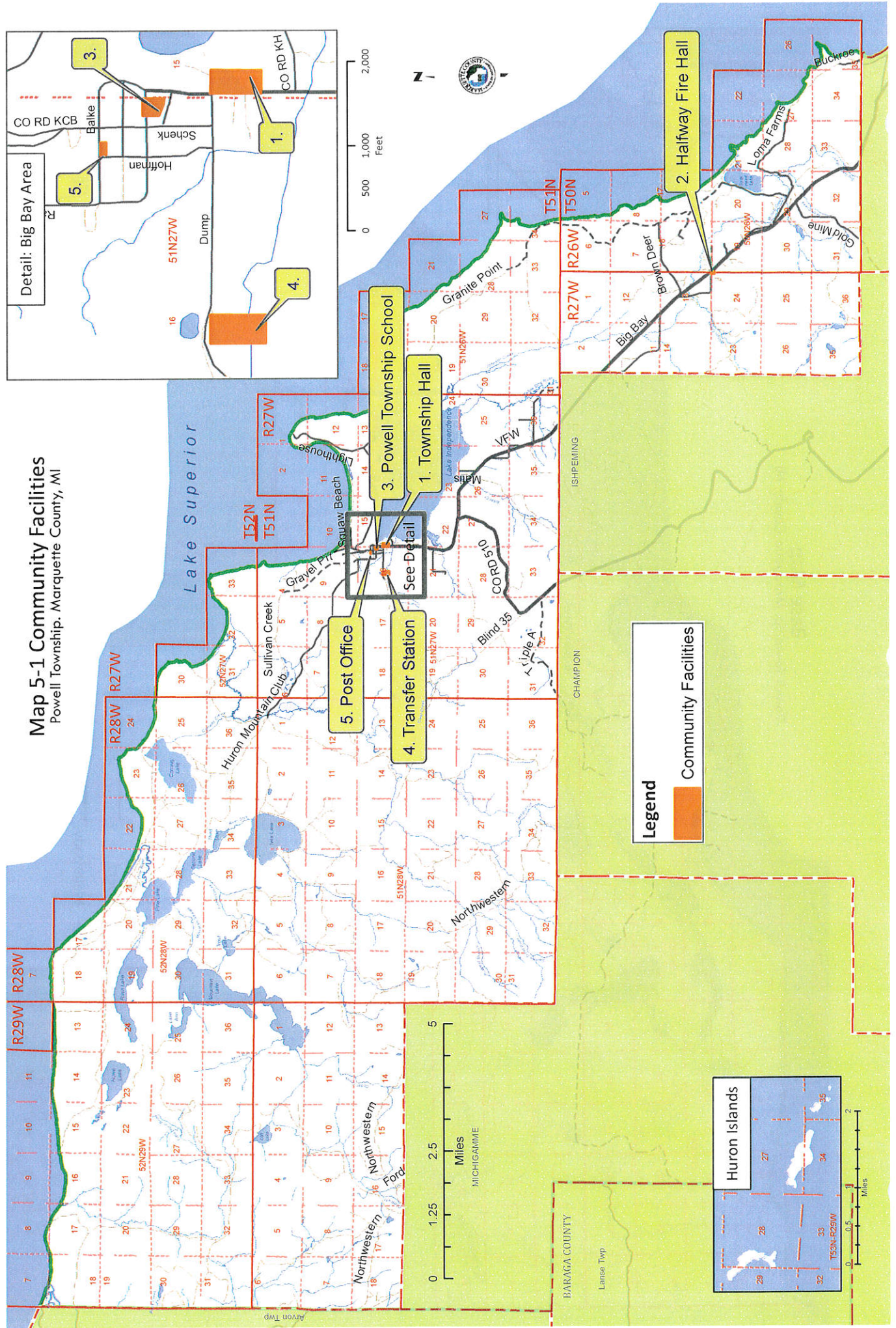
Base Map
Powell Township, Marquette County, MI

Legend

Sections	Road Type
Rivers	County Local
Waterbody	County Primary
	County Seasonal
	Not County

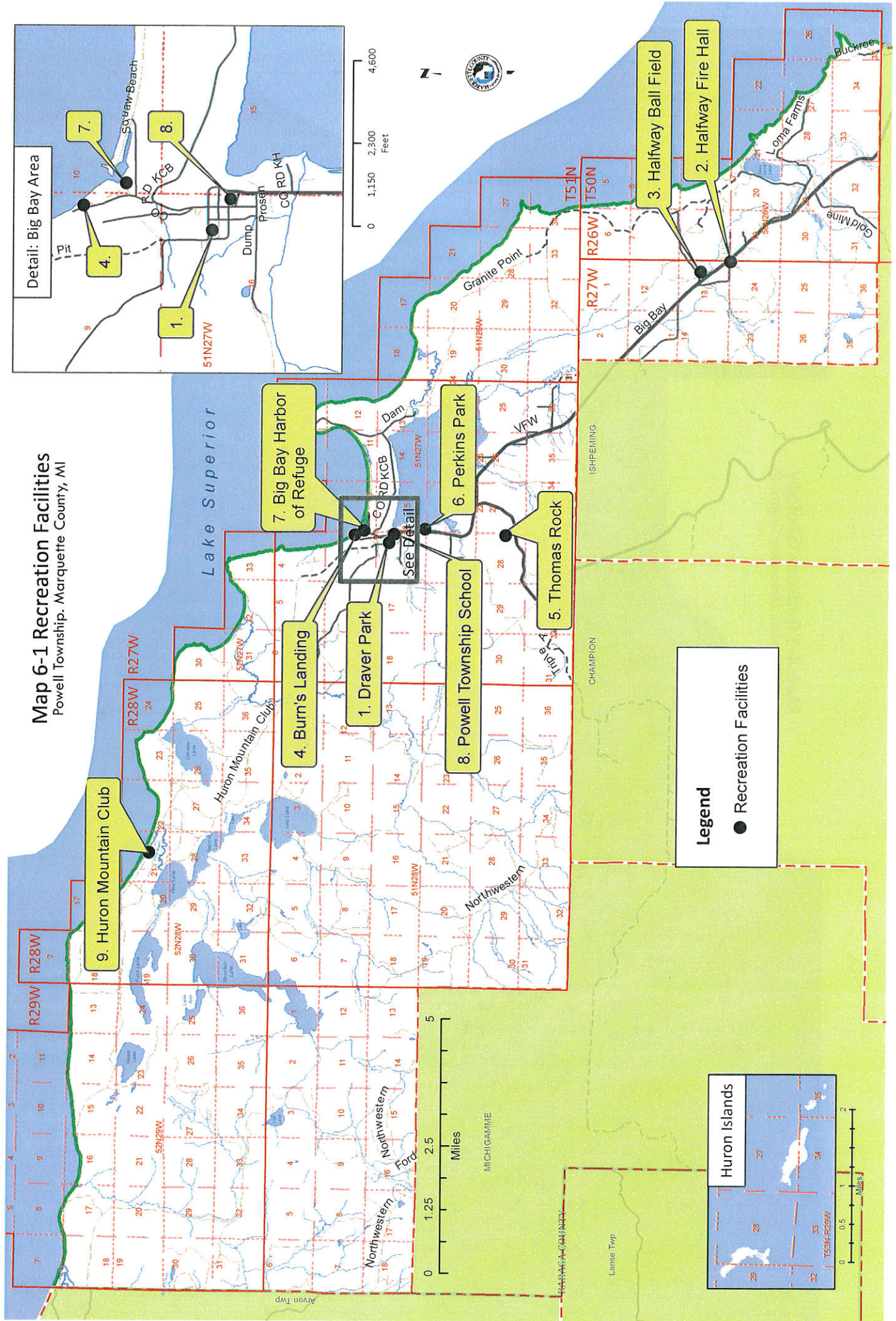


Map 5-1 Community Facilities
Powell Township, Marquette County, MI

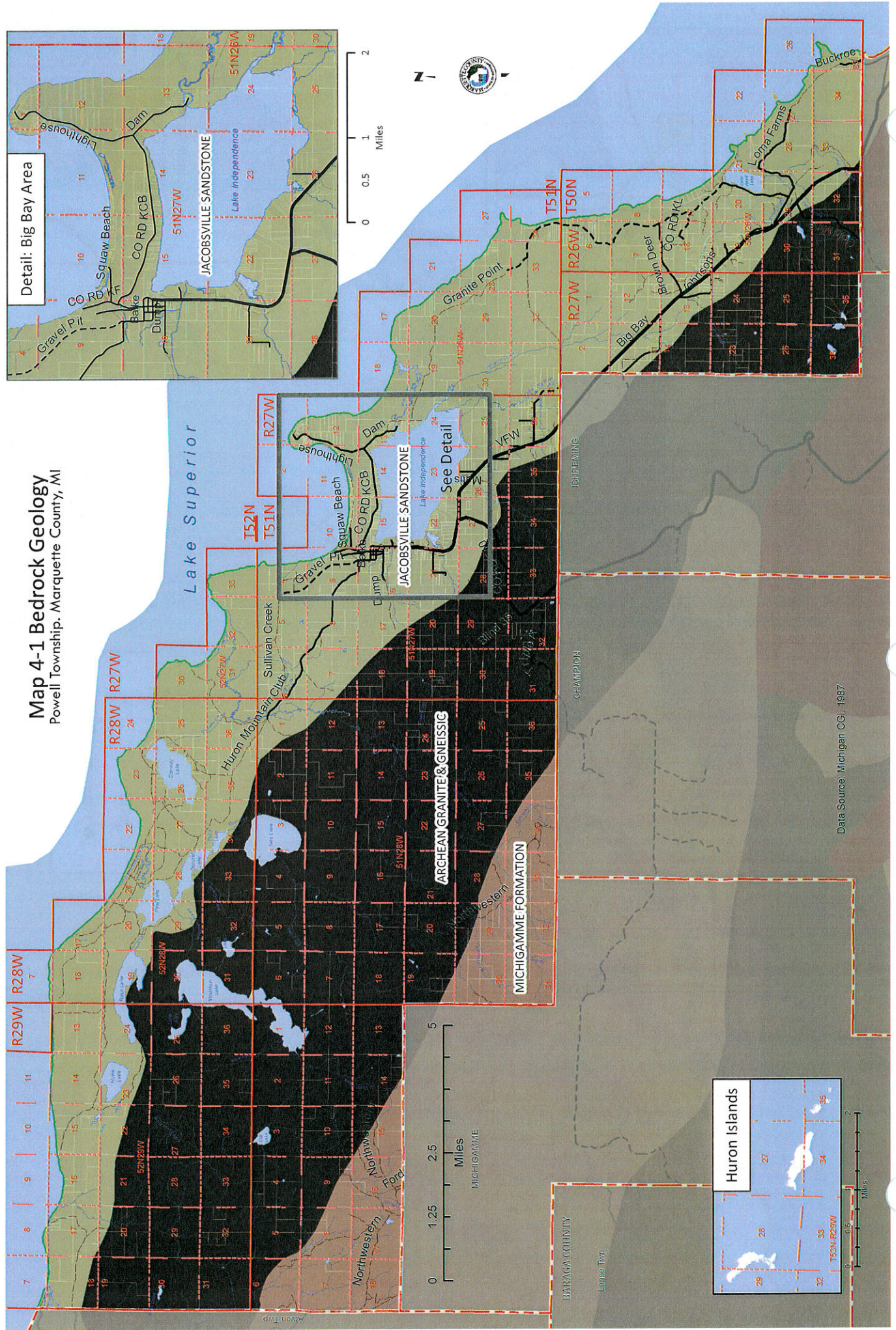


Map 6-1 Recreation Facilities

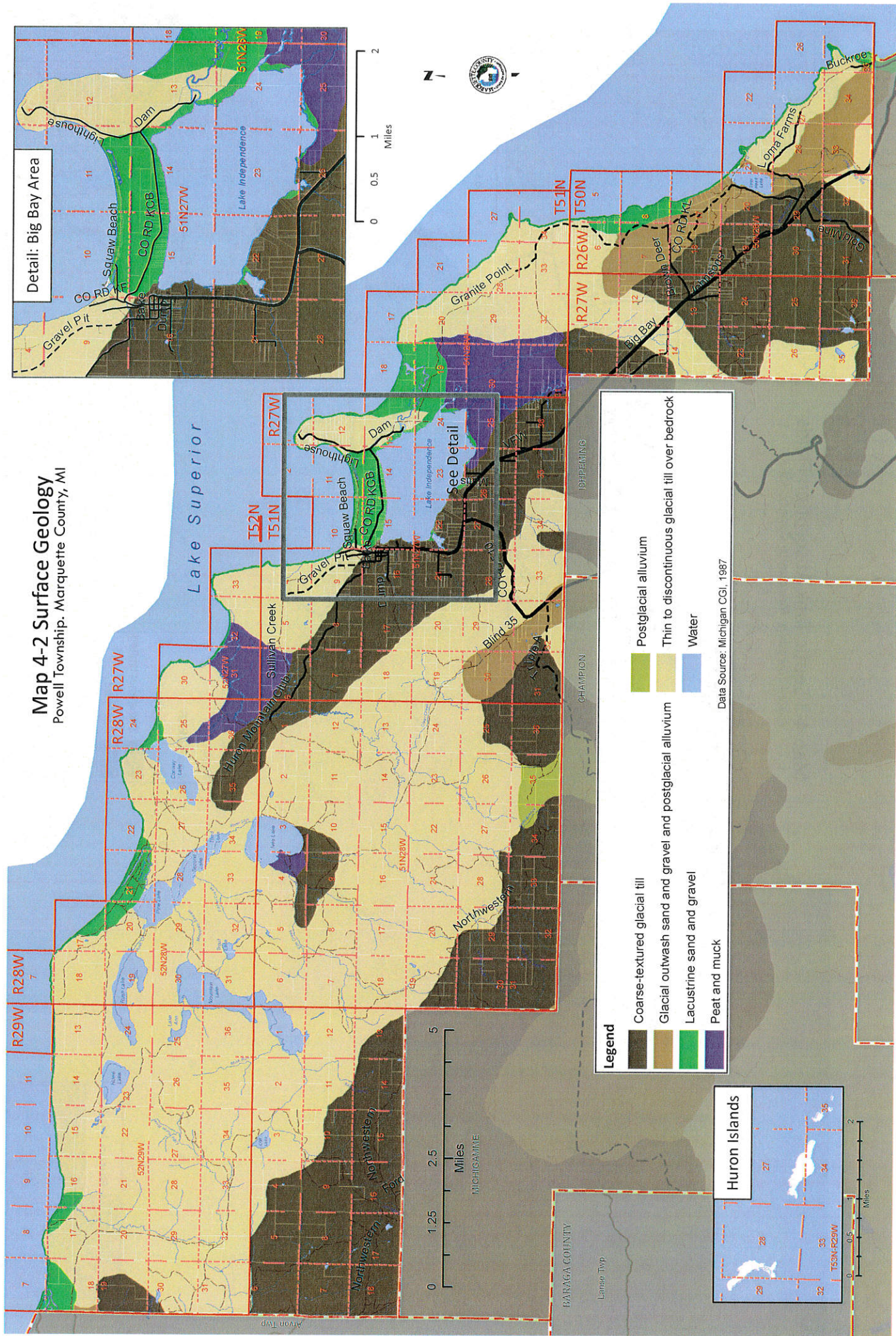
Powell Township, Marquette County, MI



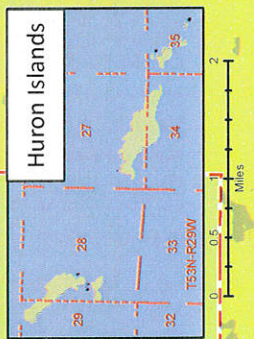
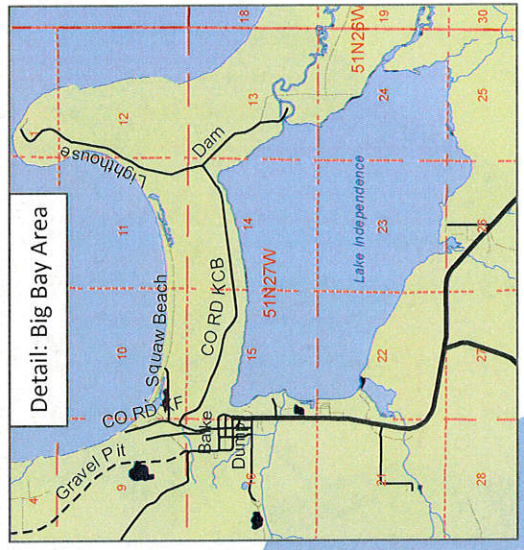
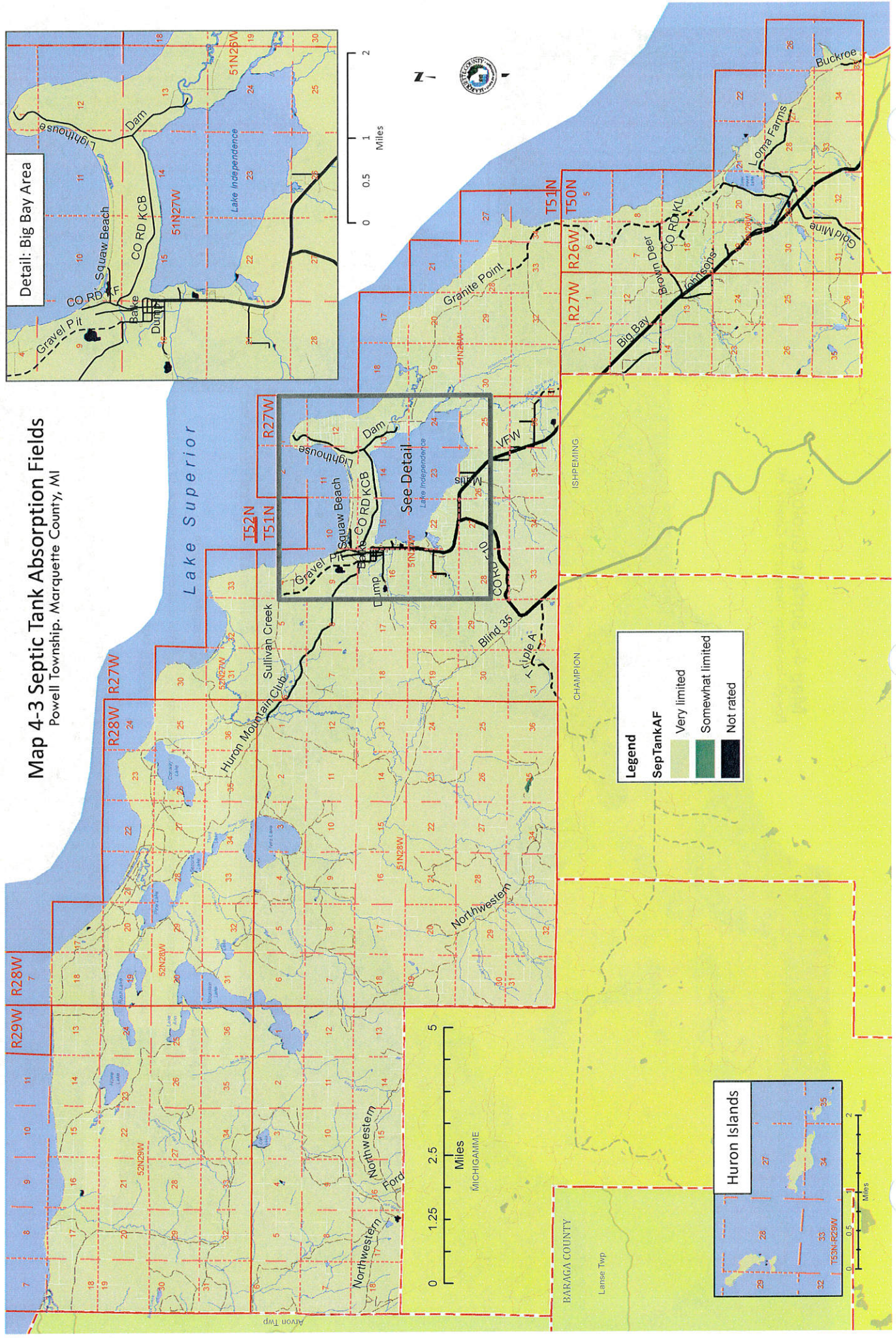
Map 4-1 Bedrock Geology
Powell Township, Marquette County, MI



Map 4-2 Surface Geology
Powell Township, Marquette County, MI



Map 4-3 Septic Tank Absorption Fields Powell Township, Marquette County, MI

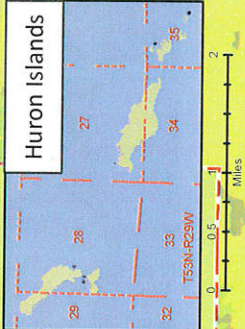


Legend

Sep TankAF

- Very limited
- Somewhat limited
- Not rated

Powell Township, Marquette County, MI



[illegible]

Map 9-1 Existing Land Use
Powell Township, Marquette County, MI

Legend

- Urban & Built Up
- Natural Resource/Forest Lands
- Water
- Wetland

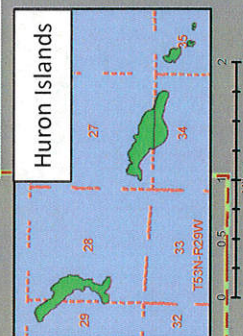
Scale: 0 1.25 2.5 5 Miles

Inset Map: Huron Islands

Detail: Big Bay Area

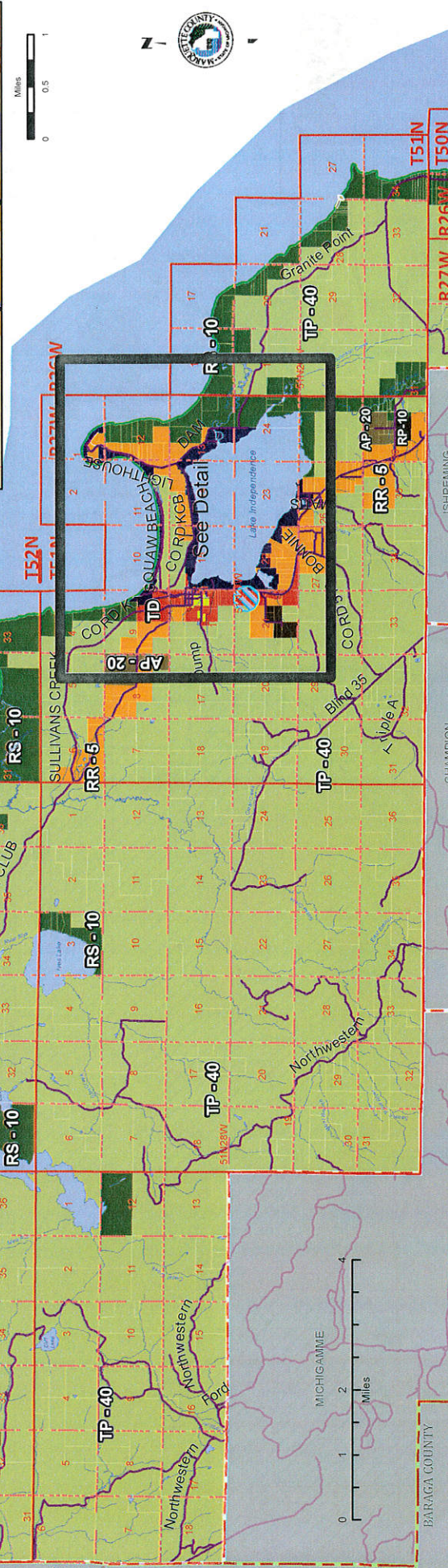
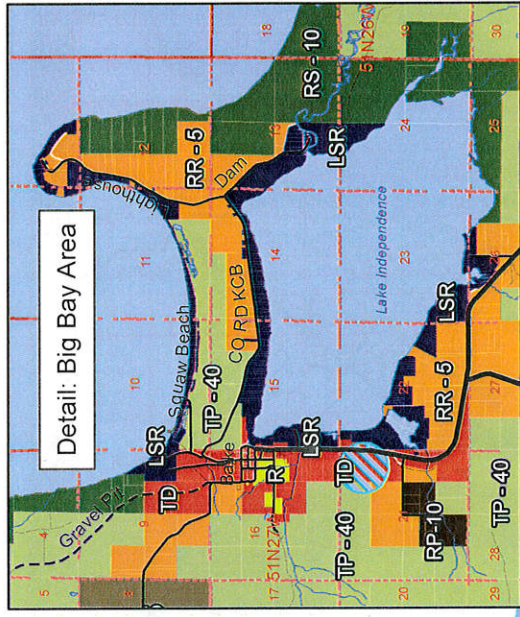
Scale: 0 0.5 1 2 Miles





Map 11-1 Zoning

Powell Township, Marquette County, MI



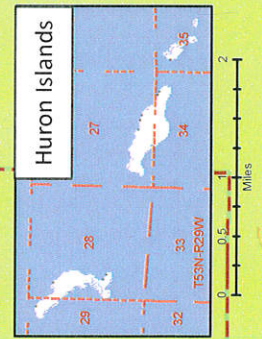
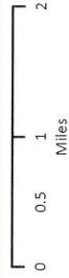
The zoning map is subject to amendments over time and Zoning Districts may be revised. Rather than exclusively relying upon the information shown on this map the Powell Township offices should be contacted at (906) 345-9345 for verification.

Legend

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

Date of Print: 6.28.10

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

[illegible]

APPENDIX B: COMMUNITY SURVEY & DEPARTMENTAL SURVEY



Results

Survey 215541

Number of records in this query:	85
Total records in survey:	85
Percentage of total:	100.00%

Field summary for 1(SQ001)

I enjoy living in Powell Township [Choose]

Answer	Count	Percentage
Strongly Agree (A1)	40	54.79%
Agree (A2)	23	31.51%
Neutral (A3)	5	6.85%
Disagree (A4)	0	0.00%
Strongly Disagree (A5)	1	1.37%
No answer	4	5.48%



Field summary for 2(SQ001)

Traffic congestion [Choose]

Answer	Count	Percentage
Very Important (A1)	10	15.38%
Somewhat Important (A2)	17	26.15%
Neutral (A3)	21	32.31%
Not Sure (A4)	1	1.54%
Not Important (A5)	15	23.08%
No answer	1	1.54%



Field summary for 3(SQ001)

Public safety [Choose]

Answer	Count	Percentage
Very Important (A1)	35	53.85%
Somewhat Important (A2)	22	33.85%
Neutral (A3)	4	6.15%
Not Sure (A4)	1	1.54%
Not Important (A5)	2	3.08%
No answer	1	1.54%



Field summary for 4(SQ001)

Water/sewer availability [Choose]

Answer	Count	Percentage
Very Important (A1)	26	40.00%
Somewhat Important (A2)	13	20.00%
Neutral (A3)	14	21.54%
Not Sure (A4)	1	1.54%
Not Important (A5)	10	15.38%
No answer	1	1.54%



Field summary for 5(SQ001)

Development of public transportation [Choose]

Answer	Count	Percentage
Very Important (A1)	7	10.77%
Somewhat Important (A2)	21	32.31%
Neutral (A3)	18	27.69%
Not Sure (A4)	2	3.08%
Not Important (A5)	16	24.62%
No answer	1	1.54%

Field summary for 6(SQ001)

Commercial development [Choose]

Answer	Count	Percentage
Very Important (A1)	13	20.00%
Somewhat Important (A2)	28	43.08%
Neutral (A3)	10	15.38%
Not Sure (A4)	1	1.54%
Not Important (A5)	12	18.46%
No answer	1	1.54%

Field summary for 7(SQ001)

Walking and biking trails [Choose]

Answer	Count	Percentage
Very Important (A1)	25	38.46%
Somewhat Important (A2)	25	38.46%
Neutral (A3)	9	13.85%
Not Sure (A4)	0	0.00%
Not Important (A5)	5	7.69%
No answer	1	1.54%

Field summary for 8(SQ001)

Maintaining community identity [Choose]

Answer	Count	Percentage
Very Important (A1)	35	53.85%
Somewhat Important (A2)	20	30.77%
Neutral (A3)	6	9.23%
Not Sure (A4)	2	3.08%
Not Important (A5)	1	1.54%
No answer	1	1.54%



Field summary for 9(SQ001)**Highway appearance [Choose]**

Answer	Count	Percentage
Very Important (A1)	25	38.46%
Somewhat Important (A2)	25	38.46%
Neutral (A3)	9	13.85%
Not Sure (A4)	1	1.54%
Not Important (A5)	4	6.15%
No answer	1	1.54%



Field summary for 10(SQ001)**Population growth [Choose]**

Answer	Count	Percentage
Very Important (A1)	15	23.08%
Somewhat Important (A2)	20	30.77%
Neutral (A3)	19	29.23%
Not Sure (A4)	0	0.00%
Not Important (A5)	10	15.38%
No answer	1	1.54%



Field summary for 11(SQ001)

Snow plowing [Choose]

Answer	Count	Percentage
Very Important (A1)	47	72.31%
Somewhat Important (A2)	9	13.85%
Neutral (A3)	8	12.31%
Not Sure (A4)	0	0.00%
Not Important (A5)	0	0.00%
No answer	1	1.54%



Field summary for 12(SQ001)**Affordable housing [Choose]**

Answer	Count	Percentage
Very Important (A1)	22	33.85%
Somewhat Important (A2)	24	36.92%
Neutral (A3)	12	18.46%
Not Sure (A4)	1	1.54%
Not Important (A5)	5	7.69%
No answer	1	1.54%



Field summary for 13(SQ001)

Business recruitment [Choose]

Answer	Count	Percentage
Very Important (A1)	17	26.15%
Somewhat Important (A2)	28	43.08%
Neutral (A3)	9	13.85%
Not Sure (A4)	1	1.54%
Not Important (A5)	9	13.85%
No answer	1	1.54%



Field summary for 14(SQ001)

Employment opportunities [Choose]

Answer	Count	Percentage
Very Important (A1)	18	27.69%
Somewhat Important (A2)	30	46.15%
Neutral (A3)	12	18.46%
Not Sure (A4)	0	0.00%
Not Important (A5)	4	6.15%
No answer	1	1.54%

Field summary for 15(SQ001)

Parks, recreation, open space [Choose]

Answer	Count	Percentage
Very Important (A1)	39	60.00%
Somewhat Important (A2)	13	20.00%
Neutral (A3)	9	13.85%
Not Sure (A4)	0	0.00%
Not Important (A5)	3	4.62%
No answer	1	1.54%



Field summary for 16(SQ001)

Diversification of housing types [Choose]

Answer	Count	Percentage
Very Important (A1)	12	18.46%
Somewhat Important (A2)	23	35.38%
Neutral (A3)	15	23.08%
Not Sure (A4)	4	6.15%
Not Important (A5)	10	15.38%
No answer	1	1.54%

Field summary for 17(SQ001)

Maintaining low tax rate [Choose]

Answer	Count	Percentage
Very Important (A1)	36	55.38%
Somewhat Important (A2)	21	32.31%
Neutral (A3)	6	9.23%
Not Sure (A4)	0	0.00%
Not Important (A5)	1	1.54%
No answer	1	1.54%



Field summary for 18(SQ001)

Managing future growth [Choose]

Answer	Count	Percentage
Very Important (A1)	37	56.92%
Somewhat Important (A2)	22	33.85%
Neutral (A3)	4	6.15%
Not Sure (A4)	0	0.00%
Not Important (A5)	1	1.54%
No answer	1	1.54%

Field summary for 19(SQ001)

Building additional sidewalks [Choose]

Answer	Count	Percentage
Very Important (A1)	6	9.23%
Somewhat Important (A2)	15	23.08%
Neutral (A3)	17	26.15%
Not Sure (A4)	3	4.62%
Not Important (A5)	23	35.38%
No answer	1	1.54%



Field summary for 20

Enter your own issue in the comment box.

Answer	Count	Percentage
Very Important (A1)	47	72.31%
Somewhat Important (A2)	4	6.15%
Neutral (A3)	2	3.08%
Not Sure (A4)	2	3.08%
Not Important (A5)	5	7.69%
Comments	52	80.00%
No answer	5	7.69%

ID	Response
1	Test Issue
4	Development of commercial businesses, Zoning, blight
9	Maintaining rural character of township.
10	Quality of air and water for health.
14	Support our school and maintain our natural resources for recreation.
17	The traffic the mine will produce on the county Road 550. This a safety concern as well.
19	The township needs to be sensitive to the needs of the people and not their own money and power issues.
20	Get rid of the old women on the Board of Trustees
21	Development of gift shops, coffee shops and maybe summer stock theater to support vacationers.
22	heavy trucking on co.rd.550 510 and aaa
23	protect water resources and woodlands
24	mine traffic
26	lack of ATV trails
27	Environmental protection
28	no issue
29	Maintaining the END of THE ROAD and WHERE YOUR ADVENTURE BEGINS Logo of the Township
30	clean up the neighborhoods
31	clean up the neighborhoods
32	Improving roads
35	An increasing divided community, loss of businesses and citizens, lack of transparency among township officials (starting in 2004) - all can be traced back to the mining issues and impact as well as the negative change since 2008 in the economy. Lack of hope that anything will improve before it gets worse is prevalent in the community.
37	Workable dump hours
40	Purchasing property that was not necessary then asking for a millage for the roads. Seems fiscal responsibility is out the window
43	Residential Litter
44	Maintaining roads.
45	Many important issues are missing. Are township services adequate? Are township properties-including roads-well maintained? Is protecting certain areas from development important? Do our current zoning regulations provide enough protection from uncontrolled development? How important is it to protect the waters of our lakes and rivers? Are there parts of the township that should be off limits to commercial uses? What other services do think the township should provide?
46	air and water quality
50	Travel to Marquette with truck traffic will be of utmost importance.
51	Truth in government
53	That ordinances are enforced. As in J&M Garage with all the unlicensed autos that he has, sometimes parked in the right away. It's an eyesore and is illegal.
54	Preservation and maintenance of lakes, rivers and shorelines.
55	Maintaining the natural environment
56	Taxes & utilities too high for non resident land & home owners
58	Big Bay should grow responsibly as to maintain its identity without succumbing to high taxes



- and ridiculous environmental rules; let reason reign!
- 59 Sustainable economic planning and development is a very important issue. I feel that our township sits back and lets other people, government entities, and outside corporate interest make decisions for us. We need to develop and maintain economic development that is sustainable, will utilize our strengths. will not destroy our future for short-term gain, and will be here for future generations.
- 60 Constantly raising water and sewer rates. Find a price and leave it there.
- 61 You need to repair the road to the forty foot falls off the northeastern road. Please!
- 62 Survey questions are ambiguous.
- 64 Roads are in desperate need of repair
- 65 Work with the mine and other partners or grants to get one or more full time police presence in the township. As it is it takes a long time to get law enforcement up here on a call. They could have a small space at the township hall or firehall and exclusively patrol our area like other townships have contracted with the Sheriff Department.
- 67 keeping Big Bay a quiet, desirable place to live.
- 68 keeping Big Bay as a quiet safe community to live in and to visit.
- 69 Maintaining a rural atmosphere
- 70 Wildlife preservation
- 75 The traffic and condition of road 550 is essential. Less truck traffic on that road is necessary.
- 78 Bring out Natural Gas & Cable along Co Rd 550 and Eagles Nest Rd.
- 81 A neat clean mobile home park.
- 83 Safety of citizens
- 84 Get out of the way of people improving their own property within the law
- 89 Public Safety
- 90 Maintaining the beauty and natural aspect of our township
- 91 Increase school transportation
- 94 Beautification (flowers ect..) of community spaces/roadwaysand parks (update park equipment, old and unsafe for small children)



Field summary for 21

Comments

Answer	Count	Percentage
Answer	13	20.00%
No answer	52	80.00%

ID	Response
1	Additional comments
10	I think it is important to keep the quality and atmosphere of our current neighborhoods.
17	I worry that the water supply and other natural resources will be affected by the mine, but I love the employment opportunities this will cause.
19	It is not the job of a township to buy land.
29	Funnest and best place I ever lived.
35	See above input...
45	Many of your questions need more explanation. What do you mean by traffic congestion? In Big Bay? On 550? Do we need a stoplight? Highway appearance-What highway? Are you asking about the condition of the road surface? Snow plowing-Of course this is important. Public safety-Are you asking if we need more police presence? Or if our township facilities are safe? Or if the township is a safe place to live?
50	Perhaps we should look at the types of business that could help sustain Big Bay and that would be appealing - Iverson snowshoes in Munising is an example. Youth development outside of school.
58	I assume that the results of this survey will be available for everyone to read and discuss at an upcoming board meeting.
59	We need to ensure that we retain our rural environment and culture. I live in Powell Township and am willing to put up with the long distances travelled for major grocery shopping and other supplies because of the proximity of a pure Lake Superior and a pristine Yellow Dog Plains. When one of those becomes impaired I may have to consider moving. I am close to that now. If I wanted to live in Ishpeming, I would. I do not. That is why I live here. Our township needs to work to protect those assets that make living in Powell Township worthwhile, regardless of whatever hardship we put up with.
78	Provide a Biking/Hiking trail along Co Rd 550 and out to Lighthouse! Since we are forced to pay for Marq Tran, actually provide a regular service or on demand service to Powell Township residents including Eagles Nest.
81	I was surprised when I moved here I couldn't get a box. Make our post office bigger.
84	consider expanding water system

Field summary for 1(SQ001)

Snow plowing efforts [Choose]

Answer	Count	Percentage
Very Important (A1)	39	65.00%
Somewhat Important (A2)	15	25.00%
Neutral (A3)	4	6.67%
Not Sure (A4)	1	1.67%
Not Important (A5)	1	1.67%
No answer	0	0.00%



Field summary for 2(SQ001)

Maintenance of parks [Choose]

Answer	Count	Percentage
Very Important (A1)	32	53.33%
Somewhat Important (A2)	22	36.67%
Neutral (A3)	5	8.33%
Not Sure (A4)	0	0.00%
Not Important (A5)	1	1.67%
No answer	0	0.00%



Field summary for 3(SQ001)

Fire protection [Choose]

Answer	Count	Percentage
Very Important (A1)	46	76.67%
Somewhat Important (A2)	8	13.33%
Neutral (A3)	5	8.33%
Not Sure (A4)	0	0.00%
Not Important (A5)	1	1.67%
No answer	0	0.00%



Field summary for 4(SQ001)

Safety by providing a Township Constable [Choose]

Answer	Count	Percentage
Very Important (A1)	8	13.33%
Somewhat Important (A2)	22	36.67%
Neutral (A3)	15	25.00%
Not Sure (A4)	2	3.33%
Not Important (A5)	13	21.67%
No answer	0	0.00%



Field summary for 5(SQ001)

Developing more walking and biking trails [Choose]

Answer	Count	Percentage
Very Important (A1)	18	30.00%
Somewhat Important (A2)	20	33.33%
Neutral (A3)	16	26.67%
Not Sure (A4)	0	0.00%
Not Important (A5)	6	10.00%
No answer	0	0.00%

Field summary for 6(SQ001)

Developing a plan for road repair [Choose]

Answer	Count	Percentage
Very Important (A1)	37	61.67%
Somewhat Important (A2)	18	30.00%
Neutral (A3)	4	6.67%
Not Sure (A4)	0	0.00%
Not Important (A5)	1	1.67%
No answer	0	0.00%



Field summary for 7(SQ001)

Developing a community center [Choose]

Answer	Count	Percentage
Very Important (A1)	12	20.00%
Somewhat Important (A2)	16	26.67%
Neutral (A3)	20	33.33%
Not Sure (A4)	1	1.67%
Not Important (A5)	11	18.33%
No answer	0	0.00%



Field summary for 8(SQ001)

Developing natural resources [Choose]

Answer	Count	Percentage
Very Important (A1)	17	28.33%
Somewhat Important (A2)	16	26.67%
Neutral (A3)	17	28.33%
Not Sure (A4)	2	3.33%
Not Important (A5)	8	13.33%
No answer	0	0.00%



Field summary for 9(SQ001)

Exploring a road repair millage for TWP roads [Choose]

Answer	Count	Percentage
Very Important (A1)	27	45.00%
Somewhat Important (A2)	13	21.67%
Neutral (A3)	11	18.33%
Not Sure (A4)	2	3.33%
Not Important (A5)	7	11.67%
No answer	0	0.00%



Field summary for 10(SQ001)**Ambulance Service [Choose]**

Answer	Count	Percentage
Very Important (A1)	42	70.00%
Somewhat Important (A2)	13	21.67%
Neutral (A3)	3	5.00%
Not Sure (A4)	0	0.00%
Not Important (A5)	2	3.33%
No answer	0	0.00%



Field summary for 11(SQ001)

Developing an Electronic Township News Letter [Choose]

Answer	Count	Percentage
Very Important (A1)	12	20.00%
Somewhat Important (A2)	16	26.67%
Neutral (A3)	22	36.67%
Not Sure (A4)	1	1.67%
Not Important (A5)	9	15.00%
No answer	0	0.00%

Field summary for 12

Enter your own issue in the comment box.

Answer	Count	Percentage
Very Important (A1)	9	15.00%
Somewhat Important (A2)	2	3.33%
Neutral (A3)	2	3.33%
Not Sure (A4)	0	0.00%
Not Important (A5)	0	0.00%
Comments	14	23.33%
No answer	47	78.33%

ID	Response
1	Custom Issue 2
4	Prserve natural resources
10	what is meant by developing natural resources. Are you asking mining or improving access to lake superior and natural trails. This question is poorly stated.
19	promote tourism
20	Stop looking at millage to fund the township problems
22	heavy trucking
24	mine traffic
35	Stop accepting money with long-term strings attached. We have made it on our own for a long time and can continue to do it.
45	Some issues mentioned on the previous page have been touched upon on this page.
50	safe travel to Marquette and youth
59	Developing of natural resources is a confusing item. What is meant by this? Does it mean the development of extraction industries? Does it mean protection for the township against the potential devastating effects of the extraction industry? Does it mean the development of parks, hiking and ski trails, and other outdoor recreation activities? Our township needs to have protective ordinances in effect to safeguard our quality of life and ensure a future for our children's children.
78	Improve Eagles Nest Rd & N Buckroe
81	We need more police patrol
89	Beautification and signage as one enters Big Bay.



Field summary for 13

Comments

Answer	Count	Percentage
Answer	3	5.00%
No answer	57	95.00%

ID	Response
1	More comments
10	I would like to see Powell township stay a tourist, retirement, and recreational area.
59	What is meant by "snow plowing effort"? The same goes for "developing natural resources"

This survey is becoming very confusing in what you are asking for. It is very difficult to answer clearly and accurately, as I cannot tell how you will interpret my answer.



Field summary for 1(SQ001)

Overall satisfaction with library services [Choose]

Answer	Count	Percentage
Very Important (A1)	14	23.73%
Somewhat Important (A2)	10	16.95%
Neutral (A3)	16	27.12%
Not Sure (A4)	8	13.56%
Not Important (A5)	11	18.64%
No answer	0	0.00%

Field summary for 2(SQ001)

Overall quality of fire services [Choose]

Answer	Count	Percentage
Very Important (A1)	33	55.93%
Somewhat Important (A2)	13	22.03%
Neutral (A3)	7	11.86%
Not Sure (A4)	5	8.47%
Not Important (A5)	1	1.69%
No answer	0	0.00%



Field summary for 3(SQ001)

Overall quality of sanitation station hours/method [Choose]

Answer	Count	Percentage
Very Important (A1)	20	33.90%
Somewhat Important (A2)	23	38.98%
Neutral (A3)	12	20.34%
Not Sure (A4)	3	5.08%
Not Important (A5)	1	1.69%
No answer	0	0.00%



Field summary for 4(SQ001)

Overall quality of water and sewer services [Choose]

Answer	Count	Percentage
Very Important (A1)	16	27.12%
Somewhat Important (A2)	11	18.64%
Neutral (A3)	24	40.68%
Not Sure (A4)	4	6.78%
Not Important (A5)	4	6.78%
No answer	0	0.00%



Field summary for 5(SQ001)

Overall quality of customer service you receive from township employees [Choose]

Answer	Count	Percentage
Very Important (A1)	31	52.54%
Somewhat Important (A2)	18	30.51%
Neutral (A3)	7	11.86%
Not Sure (A4)	3	5.08%
Not Important (A5)	0	0.00%
No answer	0	0.00%

Field summary for 6(SQ001)

Overall effectiveness of Township communication with the public [Choose]

Answer	Count	Percentage
Very Important (A1)	30	50.85%
Somewhat Important (A2)	15	25.42%
Neutral (A3)	10	16.95%
Not Sure (A4)	1	1.69%
Not Important (A5)	3	5.08%
No answer	0	0.00%



Field summary for 7(SQ001)

Overall effectiveness of land use and development planning [Choose]

Answer	Count	Percentage
Very Important (A1)	27	45.76%
Somewhat Important (A2)	20	33.90%
Neutral (A3)	8	13.56%
Not Sure (A4)	3	5.08%
Not Important (A5)	1	1.69%
No answer	0	0.00%

Field summary for 8(SQ001)

Overall quality of parks, trails, and recreation services [Choose]

Answer	Count	Percentage
Very Important (A1)	23	38.98%
Somewhat Important (A2)	21	35.59%
Neutral (A3)	11	18.64%
Not Sure (A4)	1	1.69%
Not Important (A5)	3	5.08%
No answer	0	0.00%



Field summary for 9(SQ001)

Overall enforcement of township codes and ordinances [Choose]

Answer	Count	Percentage
Very Important (A1)	17	28.81%
Somewhat Important (A2)	21	35.59%
Neutral (A3)	17	28.81%
Not Sure (A4)	3	5.08%
Not Important (A5)	1	1.69%
No answer	0	0.00%



Field summary for 10(SQ001)

Overall quality of County Road Commission streets and roadway maintenance [Choose]

Answer	Count	Percentage
Very Important (A1)	34	57.63%
Somewhat Important (A2)	17	28.81%
Neutral (A3)	6	10.17%
Not Sure (A4)	2	3.39%
Not Important (A5)	0	0.00%
No answer	0	0.00%



Field summary for 11

Enter your own issue in the comment box.

Answer	Count	Percentage
Very Important (A1)	9	15.25%
Somewhat Important (A2)	2	3.39%
Neutral (A3)	1	1.69%
Not Sure (A4)	0	0.00%
Not Important (A5)	0	0.00%
Comments	12	20.34%
No answer	47	79.66%

ID	Response
8	Need second transfer station day during slow season
10	We need to have regional Library services back. BUT at a reasonable cost that reflects population of Powell and income.
14	Preserve our rustic roads and wilderness
24	mine traffic
31	Library is important...BUT we don't have anything!
35	We need to work with Peter White Library to bring the cost of using its resources down to a more economical cost for our community. Something can be done.
40	Blight areas n addressed.
50	Concerned about sharing the road with trucks and how that will impact overall appeal of Big Bay
59	Proper survey methods.
60	What library services? Here in Powell Township or the Peter White Public Library
81	Board needs to more respectful to each other and us. I am newer but see the need for training. Thank you.
89	Town meetings

Field summary for 12

Comments

Answer	Count	Percentage
Answer	6	10.17%
No answer	53	89.83%

ID	Response
1	More comments 3
10	Communication with community is better but still needs improvement. Planning and Zoning meetings still do not allow public comment at the end of the meetings to voice comment on any of their actions or discussions. This is NOT in keeping with most meetings throughout to county and puts the P&Z committee in a negative light.
45	The answer choices on this page do not fit the questions. You seem to be asking if we are satisfied but your choices do not give a chance to answer that. I may believe that the availability of library services is important, but I am not satisfied with their availability. Or that township communication is important but is not happening. My answers reflect my satisfaction with Very Important meaning Very satisfied and Not important meaning Not Satisfied.
59	I have produced surveys as part of a master degree program and I find this survey to be very confusing. I answered "Not Sure" for all questions on this page because the possible answers you offered made no sense for the type of categories this survey is offering. These type of statements require a rating system for the type of services the survey refers to. Either that or rephrase the statements. I am finding enough fault with this survey that I have to hope you do not use the results obtained to develop a master plan for the township. I do not think you can accurately understand what people's intent may be in answering with the way that statements and responses are presented. I seriously hope that you have this survey redone.
62	The wording of this survey is not adequate to make meaning clear. I think it is unfortunate to not have library services but the question is worded in such a way that I cannot make that clear.
75	Water and sewer only apply to a few as most of us have our own well and septic. Would be nice to have city water and sewer expanded but not cost effective.



Field summary for 1

Are you interested in serving on a board or committee?

ID	Response
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Field summary for 2

Comments

Answer	Count	Percentage
Answer	7	12.50%
No answer	49	87.50%

ID	Response
1	Last comments
10	Nice to see this on the web site. Nice job!
45	There is no way to go back and change answers.
58	Some of the choices (answers) seem a little strange for the questions that were asked. Perhaps a "grade" would work better in parts of this survey. Great job in getting this survey out; I hope the people who complete it do it honestly and sincerely. Thanks again!
62	We are in Powell Township for only 3 or 4 months so could not serve.
67	BTDT
81	I will serve next year



Field summary for 3

If an electronic news letter is developed and you would like to receive it please give use your email address.

Answer	Count	Percentage
Answer	21	37.50%
No answer	35	62.50%

ID	Response
1	dbayles@gmail.com
8	jnapiewocki@wideopenwest.com
17	dgreenshi@yahoo.com
22	mark1tallio@gmail.com
23	revcraft@aol.com
26	fluffysugarpie@aol.com
28	selectcb@aol.com
46	ca.sun@hotmail.com
53	tbennettonconway@yahoo.com
58	ifbostwick@yahoo.com
60	bigbayaardvark@sbcglobal.net
61	gshicks3580@comcast.net
62	annwoodrogers@gmail.com
64	marian.allbritten@gmail.com
65	aar5ac@hughes.net
67	mycanoe2000@yahoo.com
75	nann225@gmail.com
78	w.mupton@yahoo.com
90	drkartman@mac.com
93	socalyooopr@aol.com
94	pathollydewitt@yahoo.com

12-9-13

MASTER PLAN UPDATE SURVEY

Dear ,

The Planning Commission is currently working on updating the Master Plan. We are in need of information regarding the following departments.

Department:

FIRE

Improvements, equipment, land, grants acquired or events in the last 5 years:

we received \$140,000 FEMA grant for equipment
recently \$100,000 from cliffs/league mine community fund
for pump upgrade at #2 station

Improvements, equipment, land acquired or events expected or hoped for in the next 5 years:

1. New pump for #2 station with cliffs/League grant
combined with remaining Emergency services equipment
mitigation. 2. To maintain a full roster of fire fighters
to insure the future of this department
3. To maintain and provide good equipment

Funding or Grants expected or hoped for in the next 5 years:

To continue to seek grants for expensive equipment
items (a new power unit for "Jaws of Life" = \$8,000)

Comments: Securing this departments future with competent
and dedicated leaders and fire fighters as this generation
Thank you and please complete by November 15th and place in Planning Commission
box. Any Question please call DJ at 345-9335.

Transition, and responsibility is passed on, and
maintaining the best possible level of service
to our community is the ultimate responsibility,
and goal for the future

Mike Thomas / Chief

powell township fire Department

MASTER PLAN UPDATE SURVEY

Dear

The Planning Commission is currently working on updating the Master Plan. We are in need of information regarding the following departments.

Department: Community Facilities + Services - General

Improvements, equipment, land, grants acquired or events in the last 5 years:

Township Office - Exterior Repairs - (Siding, Roof, Windows) Computer + Phone system upgraded
New electrical service from Alger Delta
Purchase of Transfer Station - Millage for township roads
Communication Towers improvement - Improvements of Cor 550

Improvements, equipment, land acquired or events expected or hoped for in the next 5 years:

Red model offices, new heating system for hall
Broadband for community - High tech programs for department
Capital Improvement Plan

Funding or Grants expected or hoped for in the next 5 years:

Energy Efficiency Funding for township hall

Comments: See Attach

Thank you and please complete by November 15th and place in Planning Commission box. Any Question please call DJ at 345-9335.

Due By
12-15-13

MASTER PLAN UPDATE SURVEY

Dear _____,

The Planning Commission is currently working on updating the Master Plan. We are in need of information regarding the following departments.

Department: Water

Improvements, equipment, land, grants acquired or events in the last 5 years:

Don't know

Improvements, equipment, land acquired or events expected or hoped for in the next 5 years:

Need to replace whole water system
Urgent: Upgrade Inlets
Urgent need Replace Graph Recorders

Funding or Grants expected or hoped for in the next 5 years:

?

Comments:

Thank you and please complete by November 15th and place in Planning Commission box. Any Question please call DJ at 345-9335.

MASTER PLAN UPDATE SURVEY

Dear 11/25/13,

The Planning Commission is currently working on updating the Master Plan. We are in need of information regarding the following departments.

Department: *Parks & Rec*

Improvements, equipment, land, grants acquired or events in the last 5 years:

*Thomas Rock over look, Folley land around
Thomas Rock*

Improvements, equipment, land acquired or events expected or hoped for in the next 5 years:

*Burns landing, restore old Cater complete board
walk area, picnic area, Parking etc.
Drover Park upgrade play equipment, Ball Park & path
ways*

Funding or Grants expected or hoped for in the next 5 years:

*Cliff Kistino Grant, Indian tribe funding, Passport
Grant, Playground grant, HMC, National Trust*

Comments:

Thank you and please complete by November 15th and place in Planning Commission box. Any Question please call DJ at 345-9335.

MASTER PLAN UPDATE SURVEY

Dear _____,

The Planning Commission is currently working on updating the Master Plan. We are in need of information regarding the following departments.

Department: EMS

Improvements, equipment, land, grants acquired or events in the last 5 years:

NEW AMBULANCE
UPDATES TO EMS GARAGE

Improvements, equipment, land acquired or events expected or hoped for in the next 5 years:

CONTINUE UPGRADING CURRENT BUILDING
ETC. CEMENT DRIVEWAY

Funding or Grants expected or hoped for in the next 5 years:

CONTINUE DONATIONS FROM
NIST COMMUNITY FOUNDATION

Comments: _____

Thank you and please complete by November 15th and place in Planning Commission box. Any Question please call DJ at 345-9335.

MASTER PLAN UPDATE SURVEY

Dear _____,

The Planning Commission is currently working on updating the Master Plan. We are in need of information regarding the following departments.

Department: MAINTENANCE,

Improvements, equipment, land, grants acquired or events in the last 5 years:

THOMAS ROCK. LAND NEXT TO THOMAS
ROCK,

Improvements, equipment, land acquired or events expected or hoped for in the next 5 years:

NEW TRUCK, NEW FENCE AT CEMETERY,
UPGRADE WATER SYSTEM. RESURFACE
ROAD'S IN TOWNSHIP

Funding or Grants expected or hoped for in the next 5 years:

MILLAGE FOR ROAD'S

Comments:

Thank you and please complete by November 15th and place in Planning Commission box. Any Question please call DJ at 345-9335.

