2019 Humboldt Township

FINAL 5-17-19
DRAFT Master Plan

Prepared By:
Humboldt Township Planning Commission
&
Humboldt Township Board
Adopted: TBD
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CHAPTER 1.0-INTRODUCTION

1.1 Introduction

2018 Master Plan Update

Throughout the update, not all elements were addressed. For example, the Natural Features (Chapter 8) of the Township have remained essentially the same. Therefore, few if any changes were made to this chapter.

The update of the population chapter (Chapter 2) relies heavily on the annual estimates prepared by the U.S. Census Bureau for their American Community Survey (ACS) program. While these estimates provide more timely information, the margin of error for this is higher than actual census counts. The available ACS data may not cover all information provided by census counts. Therefore, it may not be possible to update all tables.

For consistency 2015 estimates were chosen. This year is also midway between the last census (2010) and the upcoming census (2020).

A new Chapter 6 is provided, CAPITAL IMPROVEMENTS, replacing the previous Recreation chapter that is being handled separately. Because the Township does not have either a public water system or a public sewer system, a Capital Improvements Plan (CIP) is not required. However, the Township can still choose to do develop their own CIP for the longer-term management Township public facilities and potential benefits to township residents.

This Chapter is intended to facilitate the development of a Capital Improvements Plan should the Township choose to develop one.

Other Chapters were updated in accordance with currently available information.

Original 2012 Plan Introduction
(with one edit [in italics] regarding the new Capital Improvements Chapter and the old Recreation Chapter)

The preparation of this Master Plan represents many months of study, analysis and review by the Humboldt Township Planning Commission with technical assistance from the Central Upper Peninsula Planning and Development (CUPPAD) Regional Commission. Humboldt Township derives its authority to prepare a Master Plan from the Michigan Planning Enabling Act, PA 33 of 2008, as amended. The Act states:

Sec. 31. (1) A planning commission shall make and approve a master plan as a guide for development within the planning jurisdiction...
Sec. 33. (1) A master plan shall address land use and infrastructure issues and may project 20 years or more into the future. A master plan shall include maps, plats, charts, and descriptive, explanatory, and other related matter and shall show the planning commission’s recommendations for the physical development of the planning jurisdiction.

Major elements discussed in this document include: population, economic base, housing, community facilities and services, transportation, capital improvements, natural features and land use. Recreation is addressed in a separate Five‐year Recreation Plan, the details of which are prescribed by the Michigan Department of Natural Resources. Each of these chapters, or elements, includes a summary of the points having the greatest relevance to future Township decision‐making. Thus, this Plan addresses the issues of present conditions, Humboldt Township needs and desired future conditions, while also providing a means to achieve future development goals and objectives.

The Master Plan has the following characteristics:

- It is a physical Plan. Although social and economic conditions are considered, the Plan will be a guide to the physical development of the community.

- It provides for a long range viewpoint. The Master Plan depicts land use and community development within a time frame of approximately ten (10) years.

- It is comprehensive, covering the entire Township and all the components that affect its physical makeup.

- It is the official statement of policy regarding such issues as land use, community character and transportation, which impact the physical environment. As a policy guide, it has been designed to be sufficiently flexible to provide guidance for changing conditions and unanticipated events.

The Master Plan is not a Zoning Ordinance, nor is it a law or local ordinance. The Master Plan is a long‐range policy guide for the physical development and land use arrangements within Humboldt Township. The Zoning Ordinance specifically regulates land use and the manner in which individual properties are used, and while it is very effective, it is only one of a number of tools utilized to implement the Master Plan.
In summary, the Humboldt Township Master Plan is intended for use as a guide for Township officials when considering matters related to development and land use within Humboldt Township. Planning is not a static process and it requires ongoing review and analysis. To that end, this Plan will remain a “work-in-progress” and will require timely and focused review to be of the greatest value.
CHAPTER 2.0-POPULATION

2.1 Introduction

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

Because communities do not exist in a vacuum, it is important to examine trends in the surrounding areas as well. Residents of one community may work in another community, send their children to school in a different place and travel to additional areas to purchase goods and services. A portion of the population base in Humboldt Township may have located in the area due to early mining activities and associated employment opportunities, the natural beauty of the area, logging, somewhat limited agricultural activities and/or recreation opportunities.

Demographics -- age, income, education, and occupation, among other related factors -- shape the development of a community as well as its growth. Analysis of these trends and patterns are a useful tool to determine the needs and demands of the future population of Humboldt Township. Included in this chapter is a thorough review of population data regarding current and historical trending, along with population density and age distribution tables. Data from the Decennial Census, as well as the American Community Survey (ACS) 5-Year Estimates from 2006-2010 and US. Census Bureau, 2011-2016, American Community Survey (ACS) 5-Year Estimates have been used in this chapter. While the main function of the U.S. Decennial Census is to provide counts of people for the purpose of Congressional Apportionment, the primary purpose of the ACS is to measure the changing social and economic characteristics of the U.S. population. As a result, the ACS does not provide official counts of the population in between censuses. Although the questions used in the ACS are very similar to those included on the long form used in the Census 2000, there are some important differences between the two surveys. While the Decennial Census has provided a snapshot of the U.S. population once every 10 years, the ACS has been described as a "moving video image, continually updated to provide much needed data about our nation in today's fast-moving world." Because ACS data are collected continuously, they are not always comparable to data collected from the Decennial Census.

Margin of Error is a statistic expressing the amount of random sampling error in a survey's results. The larger the Margin of Error, the less complete faith one should have that the poll's reported results are close to the "true" figures; that is, the figures for the whole population. Margin of Error occurs whenever a population is incompletely sampled. Much of the data reported for the ACS 2015 estimates for Humboldt Township have a very high Margin of Error, possibly due to the small sample size. Nevertheless, this 2015 data is the best that is available. The 2020 Census data with a much lower Margin of Error will not be available until 2021 or 2022.

Chapter 2-Population
CHAPTER 2.0-POPULATION

2.2 Area Population Trends

Historic Population Trends
Table 2-1 presents a comparison of historic population trends for all Marquette County jurisdictions from 1940 to 2015. Humboldt Township has experienced an 11.1 percent population loss between 1940 and 2010 (Figure 2-1, Table 2-1). Humboldt Township’s population peaked in 1980. The Humboldt Mill was originally built to process ore from the Humboldt Iron Mine, an open pit process, and the Humboldt Mill has served several mining companies since the 1950s. The Humboldt Mill was later used to process gold ore, with finely ground waste rock, or tailings, placed in the open pit. The Humboldt Iron Mine site has not been used since the mid-1990s and Humboldt Township’s population has declined since that time. The Township lost 5 persons, or 1.1 percent of the population between 2000 and 2010. By 2015, it had regained 17 persons (3.7%).

Lundin Mining Corporation has reestablished the Humboldt Mill and to process approximately 1,500 tons of ore per day from Lundin’s Eagle Mine located on the Yellow Dog Plains in Michigamme Township, near Big Bay. There were 70 full-time workers employed at the Humboldt Mill in early phases of operation, with those workers being hired largely from Marquette County. Over time this number increased to nearly 200.1 Another 100 to 200 local contract jobs relate to the Humboldt Mine/Mill site reclamation, facility refurbishment and construction work. The cost for the site cleanup and rehabilitation of the mill was $275 million.

Many rural areas have been characterized by slight, but consistent long-term population loss, coupled with a lack of employment opportunities, low levels of infrastructure and business development, low educational attainment and skill development as well limited access to medical facilities and health care professionals. In addition, continued out-migration of working age residents leaves behind a large residual of both young and older residents who will still require a large share of governmental services. Job creation within Humboldt Township is a major priority in order to keep this rural area from declining further. With the rehabilitation and retrofit of the Humboldt Mill by the Lundin Mining Corporation, the Township’s population should rebound. Lundin crushes and grinds rock obtained from its Eagle Mine at the new Humboldt Mill Site to produce nickel and copper concentrates, which are sent by rail to Sudbury, Ontario for further processing.

The population of Marquette County increased by 20,438 persons, or 43.4 percent, from 1940 to 2015 and increased 4.6 percent from 2000 to 2015. Marquette County was one of three UP counties to experience a population increase from 2000 to 2010. Of all County civil or political divisions, many of the Townships, as well as the City of Marquette experienced growth during this period, with the largest growth occurring in Sands Township. Countywide, a significant portion of the population growth in the 1950s and 1960s was attributed to K.I. Sawyer Air Force

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1 See Eagle Mine, Table 3-7
CHAPTER 2.0-POPULATION

2.2 Area Population Trends continued

Base, with large population increases in Forsyth, Sands and West Branch townships, which encompass the former base.

Historic Population Trends continued

Between 1950 and 1960, for example, Sands Township population grew by over 800 percent. According to the 2010 Census, the population of the City of Marquette has declined since 1980, but has rebounded from 2000 Census numbers.

Population in the surrounding townships has increased significantly. The populations of the other two cities in the County, Ishpeming and Negaunee, have declined significantly from 1940-2010. Population decline in cities, with migration to the surrounding townships has occurred in areas across the country.

The six county CUPPAD Region experienced some population decline in the 1940s, which was then followed by steady growth from 1950-1980, with a population increase of 22 percent; however, from 2000 to 2010, the region lost 2,228 persons, or -1.3 percent.

The State of Michigan in each of the decades from 1940 to 2000 incurred growth in population, with a 60 year period increase of 89.1 percent. Michigan’s population has steadily declined for the past five years (2006-2010). Michigan was the only state to lose population from 2000 to 2010. The state’s population declined from 9,938,444 in 2000 to 9,883,640 in 2010, a -0.6 percent loss. Driving the state’s population decline is the steady increase in movement of residents to other states, many of whom left for economic reasons. The 2015 population estimates a slight increase (0.2%) to 9,900,571. The population of the United States increased 12.5 percent from 2000 to 2015, to 316,515,021. (See Table 2-1, Population and Percent Change, Selected Areas, 1940-2015).

Figure 2-1

Humboldt Township Population Trends
1940-2015
# Chapter 2.0 - Population

## 2.2 Area Population Trends continued

### Table 2-1
Population and Percent Change, Selected Areas, 1940-2010

<table>
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<td>56,154</td>
<td>64,686</td>
<td>74,101</td>
<td>70,887</td>
<td>64,634</td>
<td>67,077</td>
<td>67,582</td>
<td>3.8</td>
<td>42.3</td>
</tr>
<tr>
<td>CUPPAD Region</td>
<td>154,496</td>
<td>149,865</td>
<td>157,257</td>
<td>165,744</td>
<td>182,390</td>
<td>177,692</td>
<td>174,717</td>
<td>172,429</td>
<td>171,787</td>
<td>-1.3</td>
<td>11.6</td>
</tr>
<tr>
<td>Michigan</td>
<td>5,256,106</td>
<td>6,381,766</td>
<td>7,824,965</td>
<td>8,875,083</td>
<td>9,262,078</td>
<td>9,295,297</td>
<td>9,938,444</td>
<td>9,883,640</td>
<td>9,900,571</td>
<td>-0.6</td>
<td>88.0</td>
</tr>
<tr>
<td>United States</td>
<td>131,669,275</td>
<td>151,325,798</td>
<td>179,232,175</td>
<td>203,302,031</td>
<td>226,542,199</td>
<td>248,709,873</td>
<td>281,421,906</td>
<td>308,745,538</td>
<td>316,515,021</td>
<td>9.7</td>
<td>134.5</td>
</tr>
</tbody>
</table>

CHAPTER 2.0-POPULATION

2.3 Age Composition

The Median Age of Humboldt Township residents in 2015 was 47.0 years (Table 2-2). This figure was 7.9 years older than the median age reported for the County. Humboldt Township’s Median Age figure was higher than each of the bordering Townships and all of the cities in Marquette County, with the exception of Michigamme Township. Between 1970 and 2015, Humboldt Township’s Median Age increased 18.6 years, for a 65.5 percent increase; the most significant increase occurred between 1980 and 1990, when the Median Age increased by 10.5 years. Communities similar to Humboldt Township are experiencing declines in their birth rates and a rapid increase in the proportion of elderly people, contributing to the increase in Median Age.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Humboldt Township</td>
<td>28.4</td>
<td>27.8</td>
<td>38.3</td>
<td>45.5</td>
<td>50.9</td>
<td>47.0</td>
<td>79.2</td>
<td>65.5</td>
</tr>
<tr>
<td>Champion Township</td>
<td>31.5</td>
<td>27.8</td>
<td>36.9</td>
<td>44.1</td>
<td>45.4</td>
<td>40.3</td>
<td>44.1</td>
<td>27.9</td>
</tr>
<tr>
<td>Ely Township</td>
<td>23.0</td>
<td>25.1</td>
<td>32.0</td>
<td>36.8</td>
<td>43.3</td>
<td>41.1</td>
<td>88.3</td>
<td>78.7</td>
</tr>
<tr>
<td>Michigamme Township</td>
<td>40.0</td>
<td>41.1</td>
<td>45.1</td>
<td>51.4</td>
<td>54.7</td>
<td>59.1</td>
<td>36.8</td>
<td>47.8</td>
</tr>
<tr>
<td>City of Negaunee</td>
<td>34.3</td>
<td>31.8</td>
<td>36.9</td>
<td>40.4</td>
<td>39.7</td>
<td>38.6</td>
<td>15.7</td>
<td>12.5</td>
</tr>
<tr>
<td>Richmond Township</td>
<td>31.4</td>
<td>30.6</td>
<td>37.1</td>
<td>42.3</td>
<td>45.7</td>
<td>40.8</td>
<td>45.5</td>
<td>29.9</td>
</tr>
<tr>
<td>Tilden Township</td>
<td>23.8</td>
<td>28.3</td>
<td>33.7</td>
<td>39.7</td>
<td>43.8</td>
<td>41.4</td>
<td>84.0</td>
<td>73.9</td>
</tr>
<tr>
<td>Marquette County</td>
<td>24.2</td>
<td>26.1</td>
<td>30.7</td>
<td>37.5</td>
<td>39.4</td>
<td>39.1</td>
<td>62.8</td>
<td>61.6</td>
</tr>
<tr>
<td>Michigan</td>
<td>26.3</td>
<td>28.8</td>
<td>32.6</td>
<td>35.5</td>
<td>38.9</td>
<td>39.5</td>
<td>47.9</td>
<td>50.2</td>
</tr>
<tr>
<td>United States</td>
<td>27.9</td>
<td>30.0</td>
<td>32.9</td>
<td>35.3</td>
<td>37.2</td>
<td>37.6</td>
<td>33.3</td>
<td>34.8</td>
</tr>
</tbody>
</table>


The term “Baby Boomers” can be used to describe those born between 1946 and 1964. Currently Boomers are approximately 100 million strong in the United States and by 2015 they will represent 35 percent of the US population. The term “Generation X” or “Gen Xers” is used to describe the age group of individuals born after the post World War II baby boom. The exact age range for this generation is in dispute but can generally be considered those born between 1965 and 1976; these individuals came of age in the 1980s. Generation X is much smaller than the Baby Boomers group or the Millenials, also known as “Generation Y.”
2.3 Age Composition continued

“Generation Y”, or the “Millenials” were born during a baby bulge which took place between 1977 and 1994. Millenials are 60 million strong, more than three times the size of Generation X and have grown up in a more media-saturated and brand-conscious world than any of their predecessors. Millenials are also the most racially diverse in history (one third are not Caucasian), 75 percent have working mothers and 25 percent live in a single family home.

Access to information is perhaps the biggest difference between Millenials and their predecessors, as they are the first generation to grow up with the internet. Retaining local Gen Xers and Millenials as well as attracting this age group to the area will be largely dependent on the availability of employment, technology and possibly even the environmental sustainability of the Township.

The aging population of Humboldt Township is following state and national trends that result from a combination of factors. The Township’s older age structure is most likely the result of young adults (Millenials and Gen Xers) out-migrating to other areas with larger populations in search of educational and job opportunities. Many Gen Xers across the country have been dropping out of the general workplace culture, starting their own businesses and are moving to seek additional economic development opportunities. Millenials are considered to be extremely “tech-savvy,” and many seek employment to meet those qualifications. Increased life expectancy, combined with the fact that the largest segment of the population, the “Baby Boomers,” is aging, is also a contributing factor as well. A trend toward smaller families, with many people choosing to delay childbearing or not to have children, also contributes toward the aging population.

Table 2-3 indicates the age distribution of Humboldt Township in 2010 and 2015. In 2010 the Age Group of 45-54 years made up the largest portion of the total population at 84 persons, or 18.1 percent. By 2015 this had shifted to the Age Group 65-74 with 90 persons (18.7%). In 2010 this Age Group of 65-74 years was second, at 70 persons, or 15.1 percent. The Baby Boomers consists of persons between the ages of 46-64 and were born approximately between 1945 and 1964. Persons of the Baby Boomer Generation comprise about 27 percent of Humboldt Township’s population. Generation X, those individuals born between 1965 and 1976, comprise about 10 percent of the Township’s population. At the time of the 2010 Census, these individuals would have been between the ages of 34 and 45. The Millenials, ranging from ages 16 to 31 at the time of the 2010 Census, comprise approximately 15 percent of the Township’s population.

Persons residing in Humboldt Township over the age of 65 represent 104 residents or about 22.5 percent of the population. By 2015 this group had increased to 132 or 27.4 percent. As the working population ages, the type and amount of services Humboldt Township provides may need to change to accommodate an older population. Many persons 65 and older are moving back to the Upper Peninsula after retirement and have at least some discretionary income.
2.3 Age Composition continued

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Under 5</td>
<td>19</td>
<td>4.1</td>
</tr>
<tr>
<td><strong>Preschool Age</strong></td>
<td>19</td>
<td>4.1</td>
</tr>
<tr>
<td>5 to 9</td>
<td>21</td>
<td>4.5</td>
</tr>
<tr>
<td>10 to 14</td>
<td>22</td>
<td>4.7</td>
</tr>
<tr>
<td>15 to 19</td>
<td>24</td>
<td>5.2</td>
</tr>
<tr>
<td><strong>School Age</strong></td>
<td>67</td>
<td>14.4</td>
</tr>
<tr>
<td>20 to 24</td>
<td>8</td>
<td>1.7</td>
</tr>
<tr>
<td>25 to 34</td>
<td>38</td>
<td>8.2</td>
</tr>
<tr>
<td>35 to 44</td>
<td>48</td>
<td>10.3</td>
</tr>
<tr>
<td>45 to 54</td>
<td>84</td>
<td>18.1</td>
</tr>
<tr>
<td>55 to 59</td>
<td>41</td>
<td>8.8</td>
</tr>
<tr>
<td>60 to 64</td>
<td>55</td>
<td>11.9</td>
</tr>
<tr>
<td><strong>Working Age</strong></td>
<td>274</td>
<td>59.0</td>
</tr>
<tr>
<td>65 to 74</td>
<td>70</td>
<td>15.1</td>
</tr>
<tr>
<td>75 to 84</td>
<td>30</td>
<td>6.5</td>
</tr>
<tr>
<td>85+</td>
<td>4</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>Retirement Age</strong></td>
<td>104</td>
<td>22.5</td>
</tr>
<tr>
<td>Total</td>
<td>464</td>
<td>100.0</td>
</tr>
</tbody>
</table>


Figure 2-2 illustrates the age distribution in Humboldt Township according to four major categories: Preschool Age (under 5), School Age (10-19), Working Age (20-64) and Retirement Age (65+).
CHAPTER 2.0-POPULATION

2.4 Disability Status

The U.S. Bureau of the Census defines disability as “a long-lasting physical, mental or emotional condition. This condition can make it difficult for a person to do activities such as walking, climbing stairs, dressing, bathing, learning or remembering. This condition can also impede a person from being able to go outside the home alone or to work at a job or business.” Disability status data is not available for Humboldt Township from the American Community Five-Year Estimates 2006-2010; 2000 Census data is the most recent available data.

For tracking disability status, the population is broken down into three groups: population 5-20 years (School Age), population 21-64 years (Working Age) and the population 65 and older (Retirement Age). The Census only counted individuals who are not in the military and people who are not under formally authorized supervised care or custody in institutions and typically classified as “patients” or “inmates.” Approximately 9.5 percent of school age children in Humboldt Township have a disability, while 17.3 percent of the working age population and 38.8 percent of the retirement age population reported having a disability in 2000. Assessments for providing services for individuals with a disability depend on direct communication with these populations and the professionals who serve them.

<table>
<thead>
<tr>
<th>Table 2-4</th>
<th>Disability Status, Humboldt Township, 2000 / 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disability Status of the Noninstitutionalized Population</strong></td>
<td><strong>2000</strong></td>
</tr>
<tr>
<td><strong>Population 5-20 Years (2000) / Under 18 (2015)</strong></td>
<td>Number</td>
</tr>
<tr>
<td>With a disability</td>
<td>10</td>
</tr>
<tr>
<td><strong>Population 21-64 Years (2000)/ 18-64 (2015)</strong></td>
<td></td>
</tr>
<tr>
<td>With a disability</td>
<td>271</td>
</tr>
<tr>
<td><strong>Population 65+</strong></td>
<td></td>
</tr>
<tr>
<td>With a disability</td>
<td>67</td>
</tr>
</tbody>
</table>

Source: U.S. Bureau of the Census, Table DP-2: Profile of Selected Social Characteristics and US. Census Bureau, 2011-2016, American Community Survey 5-Year Estimates, Table DP02.

2.5 Educational Attainment

Education is one important factor in analyzing the capabilities of the local work force. The amount of Humboldt Township residents over 25 years of age without a high school diploma from 2006-2009 was 14.9 percent, which was higher than the County and the State (Figure 2-3). Overall, 85.5 percent of residents over 25 years of age in Humboldt Township were high school graduates or higher, which was significantly lower than the County (91.7 percent), and lower than the State (88.1 percent). The percent of residents in Humboldt Township over 25 years of age with a bachelor’s degree or higher was much lower than the rates reported by the County and the State. This may indicate that a lower percentage of jobs within Humboldt Township and the County require higher education skills or an elevated percentage of older residents who did or may not have needed a bachelor’s degree to obtain employment in the past.
CHAPTER 2.0-POPULATION

2.5 Educational Attainment continued

Recent trends indicate that employers are now requiring their employees to have higher educational levels. The economy is increasingly global, with companies both acquiring goods and services in foreign countries and selling their products internationally. Therefore, employers desire individuals who possess higher levels of technical competence. Employers are also looking for potential workers with high-level proficiency in more general higher-order skills, including communication, computation, problem solving and critical thinking.

Figure 2-3

Educational Attainment of Persons Over 25 Years of Age, 2006-2010

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Humboldt Township</th>
<th>Marquette County</th>
<th>State of Michigan</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Diploma</td>
<td>14.5</td>
<td>11.9</td>
<td>54.9</td>
</tr>
<tr>
<td>High School</td>
<td>62.9</td>
<td>53.8</td>
<td>8.2</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>9.6</td>
<td>8.1</td>
<td>20.7</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>7.5</td>
<td>15.5</td>
<td>5.5</td>
</tr>
<tr>
<td>Graduate or More</td>
<td>5.9</td>
<td>9.1</td>
<td>19.9</td>
</tr>
</tbody>
</table>


Educational Attainment of Persons 25 & Over Years of Age, 2015

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Humboldt Township</th>
<th>Marquette County</th>
<th>State of Michigan</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Diploma</td>
<td>6.6</td>
<td>7.2</td>
<td>3.8</td>
</tr>
<tr>
<td>High School Graduate</td>
<td>33.1</td>
<td>29.9</td>
<td>6.6</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>8.6</td>
<td>8.9</td>
<td>8.9</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>19.1</td>
<td>10.2</td>
<td>10.2</td>
</tr>
<tr>
<td>Graduate or More</td>
<td>2.2</td>
<td>16.5</td>
<td>9.7</td>
</tr>
</tbody>
</table>

2.6 Household Characteristics

The U.S. Census defines a Household as all persons who occupy a Housing Unit; e.g., a Single Family, One Person Living Alone, Two or More Families Living Together or any Group of Related or Unrelated Persons Sharing Living Quarters. A Family consists of a Householder and one or more persons living in the same household who are related by birth, marriage, or adoption. A Non-Family Household is comprised of a person living alone or sharing a home exclusively with unrelated people, for example, roommates or unmarried partners.

From 2000 to 2015, the population of Humboldt Township increased by 2.6 percent, however the number of Housing Units (by definition a Household is the same as a Housing Unit) increased by 6.2 percent during the same time period (Table 2-5). This scenario was caused by a decrease in the Average Household Size, which was the result of an increase in Single-Parent Families and Non-Family Households. As Household size decreases, the number of Households increases.

The percentage of family households in Humboldt Township decreased by about 4.5 percent between 2000 and 2010, while the number of non-family households, including persons living alone, increased by about 4.5 percent. The number of non-family householders living alone increased from 41 to 59 between 2000 and 2010; about 12 percent of these households are elderly people living alone. The average household size decreased from 2.42 persons to 2.33 persons between 2000 and 2015.

<table>
<thead>
<tr>
<th>Table 2-5</th>
<th>Household Characteristics, Humboldt Township, 2000 - 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household Type</td>
<td>2000</td>
</tr>
<tr>
<td>Family Households</td>
<td></td>
</tr>
<tr>
<td>Husband-Wife Family</td>
<td>142</td>
</tr>
<tr>
<td>Female Householder</td>
<td>12</td>
</tr>
<tr>
<td>Male Householder</td>
<td>7</td>
</tr>
<tr>
<td>Non-Family Households</td>
<td>52</td>
</tr>
<tr>
<td>Householder Living Alone</td>
<td>41</td>
</tr>
<tr>
<td>Householder 65 or Over</td>
<td>21</td>
</tr>
<tr>
<td>Total Households</td>
<td>194</td>
</tr>
<tr>
<td>Average Household Size</td>
<td>2.42</td>
</tr>
</tbody>
</table>

Sources: U.S. Census, 2010 SF1, 2000 Table DP-1: Profile of General Demographic Characteristics; 1990 Census of Population and Housing, STF 1A, P003, P016, and H017A; and 1980 Census of Population and Housing, STF 1, 003, 016, 022, and 035. US. Census Bureau, 2011-2015, American Community Survey 5-Year Estimates.

2.7 Population Density

With a 2010 population of 464 persons and a land area of 95.7 square miles, Humboldt Township's Population Density was 4.8 persons per square mile (Table 2-6). This figure compares with a density of 36.8 persons per square mile at the County level and 174.0 persons per square mile at the State level. Humboldt Township has the third lowest Population Density of communities listed in Table 2-6, slightly higher than Champion and Michigamme Townships. The
CHAPTER 2.0-POPULATION

2.7 Population Density continued

Low Population Density in Humboldt Township is likely due to large tracts of land that are part of the Escanaba River State Forest as well as additional lands held in corporate and private ownership.

<table>
<thead>
<tr>
<th>Place</th>
<th>Land Area (Sq. Miles)</th>
<th>2010 Population</th>
<th>Persons Per Sq. Mile</th>
<th>2015 Population</th>
<th>Persons Per Sq. Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humboldt Township</td>
<td>95.7</td>
<td>464</td>
<td>4.8</td>
<td>481</td>
<td>5.0</td>
</tr>
<tr>
<td>Champion Township</td>
<td>125.0</td>
<td>297</td>
<td>2.4</td>
<td>331</td>
<td>2.6</td>
</tr>
<tr>
<td>Ely Township</td>
<td>140.6</td>
<td>1,952</td>
<td>13.9</td>
<td>2,054</td>
<td>14.6</td>
</tr>
<tr>
<td>Michigamme Township</td>
<td>141.8</td>
<td>349</td>
<td>2.5</td>
<td>304</td>
<td>2.1</td>
</tr>
<tr>
<td>City of Marquette</td>
<td>11.4</td>
<td>21,355</td>
<td>1,873.2</td>
<td>21,444</td>
<td>1,881.1</td>
</tr>
<tr>
<td>City of Negaunee</td>
<td>13.8</td>
<td>4,568</td>
<td>331.0</td>
<td>4,609</td>
<td>334.0</td>
</tr>
<tr>
<td>Negaunee Township</td>
<td>42.1</td>
<td>3,088</td>
<td>73.3</td>
<td>3,106</td>
<td>73.8</td>
</tr>
<tr>
<td>Sands Township</td>
<td>71.1</td>
<td>2,285</td>
<td>32.1</td>
<td>2,817</td>
<td>39.6</td>
</tr>
<tr>
<td>Richmond Township</td>
<td>57.5</td>
<td>882</td>
<td>15.3</td>
<td>838</td>
<td>14.6</td>
</tr>
<tr>
<td>Tilden Township</td>
<td>96.0</td>
<td>1,013</td>
<td>10.6</td>
<td>1,192</td>
<td>12.4</td>
</tr>
<tr>
<td>Marquette County</td>
<td>1821.3</td>
<td>67,077</td>
<td>36.8</td>
<td>67,582</td>
<td>37.1</td>
</tr>
<tr>
<td>Michigan</td>
<td>56,809.2</td>
<td>9,883,640</td>
<td>174.0</td>
<td>9,900,571</td>
<td>174.3</td>
</tr>
</tbody>
</table>


2.8 Issues and Opportunities

- Humboldt Township lost 5 persons, or 1.1 percent of the population between 2000 and 2010, and the population declined from 469 in 2000 to 464 in 2010. By 2015 the population had rebounded to 481 (2017 est. 444). Lack of career opportunities for local high school and college graduates in the area have contributed to the declining population in Humboldt Township over the last thirty years. The reopening of the Humboldt Mill by Eagle Mine, a subsidiary of Lundin Mining Corporation, has likely contributed to the Township’s population temporary resurgence.

- Census data indicates that Humboldt Township has experienced a relatively steady population decline since 1940, with the exceptions of the year 1980 and now 2015.

- The population of Marquette County increased 4.6 percent from 2000 to 2015. Marquette County was one of three UP counties to experience a population increase from 2000 to 2010.
CHAPTER 2.0-POPULATION

2.8 Issues and Opportunities continued

- The Median Age of Humboldt Township residents in 2015 was 47.0 years. The age composition and distribution within Humboldt Township indicates a much older population base than the County, State and the National average.

- Baby Boomers account for about 27 percent of Humboldt Township’s population, Gen Xers make up about 10 percent and Millennials comprise about 15 percent of the Township’s population.

- Nearly 23 percent of Humboldt Township’s population was over the age of 65 in 2010. An aging population requires diversified services. Nearly 40 percent of the Township’s population over 65 reported having a disability. By 2015, 27.4 percent of the Township’s population was 65 and older.

- Humboldt Township reports high school graduation rates higher than that of the State and Marquette County. Humboldt Township also reports that 13 percent of its residents have a bachelor’s degree or higher. By 2015, this had moderated to 12.4 percent.

- The moderately large shift from Family Households to Non-Family Households between 2000 and 2010 indicates a change in the type of housing and other services demanded within Humboldt Township. In this period, the most significant is the increase in the number of non-elderly persons living alone. By 2015, these short-term trends were largely reversed. However, the increase in the 65 or Over population continued.

- Humboldt Township’s Population Density of 5.0 persons per mile is the third lowest of the surrounding townships and it is believed to reflect the sizeable amount of land held in the Escanaba River State Forest and the large extent of corporate and private land holdings in Humboldt Township.

- It was anticipated that Humboldt Township would likely experience an increase in population, due to the proposed reuse of the Humboldt Mine/Mill by Eagle Mine, a subsidiary of Lundin Mining Corporation. By 2015, this increase had occurred.
CHAPTER 3.0-ECONOMIC BASE

3.1 Introduction
Community growth and stability are directly linked to the local economic base. Two major sectors make up an economy: one that provides goods and services for markets outside the community (basic or export sector) and one that provides goods and services for local consumption (non-basic sector). Economic vitality and balance rely heavily on the creation and retention of local basic sector jobs. The factors that affect the economic base in a community extend beyond its boundaries; increasingly so as they realize the effects of the global economy. In this chapter, data for Humboldt Township, the Marquette County area, the Region and State are presented for analysis and comparison.

Much of the economic information presented is available only at the County level. The high degree of personal mobility may affect the accuracy of some information regarding the local economy. Humboldt Township has limited commercial development, mainly due to a lack of residents and limited infrastructure available to support large scale commercial and/or industrial activity. Eagle Mine, a subsidiary of Lundin Mining, invested $275 million in the site clean up, environmental reclamation and equipment upgrades for the Humboldt Mill. This has had a positive economic impact on Humboldt Township. County Road 595, was proposed to run north from US-41 through a four-mile wide corridor, and located within two miles of either side of County Road FY. However, the new county road was not approved by the Michigan Department of Environmental Quality (MDEQ) based on objection from the U.S. Environmental Protection Agency (EPA).

3.2 Area Economy
Humboldt Township is located in western Marquette County, west of the Marquette-Negaunee-Ishpeming urban area; Humboldt Township also borders Dickinson County to the south. This urban area contains the majority of Marquette County’s commercial and industrial development. A significant amount of development is located along the US-41/M-28 corridor in Marquette County. Developments are occurring in the cities of Marquette, Negaunee and Ishpeming as well as the adjacent Townships, particularly Marquette, Chocolay and Negaunee Townships.

For most of Marquette County’s history, the economy was principally based on the iron ore mining industry. Mining on the Marquette Iron Range in Marquette County dates back approximately 150 years. In the late 1800’s and early 1900’s, iron ore mining was by far the dominant industry within the County. However, in the latter half of the 1900’s, the mining industry lost some of its economic dominance within Marquette County, with the closing of several mines within the Iron Range.
CHAPTER 3.0-ECONOMIC BASE

3.2 Area Economy continued

Cliffs Natural Resources Inc., headquartered in Cleveland, Ohio, is the largest producer of iron ore pellets in North America, and was also a major supplier of metallurgical coal to the global steelmaking industry. Cliffs Natural Resources operates the Tilden mine in Marquette County in Tilden Township. The nearby Cliffs’ Empire mine in Richmond Township was closed August 28, 2016, but is currently under consideration for reopening. A competing alternative iron ore mine in Minnesota is also being considered by Cliffs. A decision is expected in 2019.

Iron ore from the mine is shipped via railroad to Presque Isle Harbor in Marquette for loading on lake ore carriers with delivery to various steel mills. Previously, shipment via railroad to an Escanaba port was another option. There are approximately 1,100 individuals currently employed by the mining companies (Cliffs Natural Resources & Eagle Mine). The cities of Marquette, Negaunee and Ishpeming, along with the neighboring townships, function as living areas and retail and service centers for many individuals working at the mines.

Eagle Mine has an administrative office at the Eagle Mine mill site at 4547 County Road 601 (in Humboldt Twp.), Champion, MI 49814. They also have a visitors’ center in the City of Marquette. Eagle Mine mines a large, high-grade nickel and copper ore body, located on the Yellow Dog Plains with at 6510 Triple A Road, Michigamme, MI 49861. The initial Eagle Mine operation is projected to continue into 2022. The Eagle East mining operations are projected to allow the extension of the overall mining at least into 2023.

The long-term future of the mining industry within Marquette County is somewhat uncertain. It will depend on a number of concerns, including the national and worldwide demand for nickel, copper, steel and steel products, popularity of steel substitute materials, international competition, federal governmental trade policies, labor productivity, availability and price of electric power and the other energy sources, environmental constraints and financial considerations. However, in the immediate and foreseeable future, iron ore and potentially other mining will continue to have a large impact on Marquette County’s economy.

The City of Marquette, along with the Cities of Negaunee and Ishpeming, serve as the retail trade and service centers for Marquette County and nearby communities outside of the County. Significant retail trade has been developed along US-41 in Marquette Township in recent years as well. Many residents in the outlying areas of the County, including Humboldt Township, work in the retail trade and service center, but choose to live in a more rural setting. The service and retail trade sectors are the strongest industries at the County level and have experienced the greatest growth in the number of jobs in recent decades. Much of this growth can be attributed to an increase in the number of visitors to the Marquette County area and the promotion of tourism has been the focus point for many businesses and governmental units within the region.
CHAPTER 3.0-ECONOMIC BASE

3.2 Area Economy continued
Tourism is a growth industry in the area that has become much less seasonal in nature. This is due, in part, to the growing population of retirees who travel extensively. Besides traditional summer vacationing, the autumn color of the northern hardwood forests and winter sports, especially snowmobiling (Michigan leads the nation in the number of snowmobiles licensed) attracts thousands of visitors to the area. The Lake Superior Community Partnership works with local communities throughout Marquette County to serve as a business, visitor and economic development partner. The Greater Ishpeming-Negaunee Chamber of Commerce opened offices in the Ishpeming Ski and Snowboard Hall of Fame. The chamber of commerce is responsible for promoting and unifying western Marquette County businesses.

Tourism and recreation have increased over the years as transportation means have increased personal mobility. Today’s tourists are more likely to travel frequently, take shorter trips and stay closer to home. Heritage-tourism and eco-tourism have increased in popularity. Heritage-tourism draws those interested in the historic and cultural offerings of a community or institution. With the paving of a part of the regional, multi-use Iron Ore Heritage Trail between Ishpeming and Negaunee in 2008 and within the City of Ishpeming in 2010, heritage tourism has come to the forefront in Marquette County. Eco-tourism has gained popularity among those wanting to experience nature through activities such as bird watching, hiking, horseback riding and kayaking. The term “tourism” is comprehensive and includes a range of activities associated with natural and man-made attractions such as products and services for leisure and recreational pleasure.

3.3 Cliffs Natural Resources
In 1847, a group of men from the Cleveland area pooled their money and their minds to create the Cleveland Iron Company. Their objective was to explore for minerals in the remote wilderness of the Upper Peninsula; just three years after iron ore was discovered near what is now Negaunee, Michigan, in 1844. The articles of agreement to form this new company were drawn up on November 9, 1847, and the first stock in the new venture was issued on November 27, 1847.

Reborn as Cleveland-Cliffs Inc. in the mid-1980s and subsequently as Cliffs Natural Resources in 2008, the company has remained in the forefront of the North American iron ore business since opening its first mine in the Upper Peninsula of Michigan in 1850, achieving longevity by successfully adapting its operations to major changes that drove many competitors out of business. Cliffs is now an international mining and natural resources company. Cliffs is the largest producer of iron ore pellets in North America, a major supplier of direct-shipping lump and fines iron ore out of Australia and a significant producer of metallurgical coal. While the heart of its operations remains North America, Cliffs continues to explore opportunities for expansion globally.
### 3.3 Cliffs Natural Resources continued

The Tilden Mine is located on the Marquette Iron Range in Michigan’s Upper Peninsula approximately five miles south of Ishpeming, Michigan. The Tilden Mine has been in operation since 1974. Over a five-year period, the Tilden Mine produced between 5.6 million and 7.9 million tons of iron ore pellets annually. In 2017 it produced 7.7 million tons. The Tilden Mine has a rated annual capacity of 8 million tons. Cliffs owns 100 percent of Tilden, after purchasing the remaining 15 percent minority interest owned by U.S. Steel Canada September 29, 2017. Cliffs owns all of the ore reserves at the Tilden Mine and leases them to Tilden. The Tilden facility continues to produce both hematite and magnetite iron ore pellets. Magnetite production was added to the facility in 1989. Producing magnetite pellets utilizes different methods and equipment than processing hematite ore. The Empire Mine previously produced only magnetite ore.

In 2003, the Tilden and Empire mines were combined to operate under one management structure to improve efficiencies and reduce costs. This alliance, called Cliffs Michigan Mining Company, utilized the mining sections of both mines and both processing plants but had a combined management, which reduced manpower through job consolidation and attrition. The Lake Superior and Ishpeming (LS&I) Railroad is also part of this jointly managed operation. Cliffs has implemented and continued to develop other consolidations and cost-saving plans that take advantage of the synergy of the combined operation.

Cliffs continues to look at ways to extend the ore reserves at the Tilden mine and increase the life span of the mine. Production levels were listed at 5.6 million tons for the Tilden Mine in 2009. In 2010, Cliffs invested approximately $5 million to repair one of the iron ore pellet kilns at the Tilden Mine. Cliffs continues to perform and evaluate studies on whether to resume production at the Empire mine.

CHAPTER 3.0-ECONOMIC BASE

3.4 Civilian Labor Force Characteristics

The civilian labor force consists of persons currently employed and those currently seeking employment, excluding persons in the armed forces and those under the age of 16 years. Shifts in the age and sex characteristics of residents, seasonal changes, and employment opportunities can all cause fluctuation in the number of persons in the labor force. Throughout the chapter, the term “Labor Force” will refer to the civilian labor force. With the closure of the K.I. Sawyer Air Force Base in September 1995, the armed forces labor force is significantly smaller in the County with only 131 individuals (0.4 percent); there are zero (0) residents identified as being in the armed forces in Humboldt Township.

For 2006-2010, the percentage of persons within Humboldt Township age 16 and older who were in the Labor Force (Labor Force Participation Rate) was 53.4 percent. In 2015 it was 47.9%. Marquette County’s Labor Force participation rate was 61.3 percent for 2006-2010. In 2015 it was 56.9 %. The Labor Force Participation rate at the State level during the period 2006-2010 was 63.1 percent. By 2015, it had changed to 61.3%. Comparative employment information is provided in Table 3-1.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Humboldt Township</th>
<th>Marquette County</th>
<th>State of Michigan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population 16 years and older</td>
<td>380</td>
<td>411</td>
<td>7,836,314</td>
</tr>
<tr>
<td>In Labor Force</td>
<td>203</td>
<td>197</td>
<td>4,944,003</td>
</tr>
<tr>
<td>Civilian Labor Force</td>
<td>200</td>
<td>197</td>
<td>4,938,337</td>
</tr>
<tr>
<td>Employed in Labor Force</td>
<td>165</td>
<td>179</td>
<td>4,369,785</td>
</tr>
<tr>
<td>Unemployed in Labor Force</td>
<td>35</td>
<td>18</td>
<td>568,552</td>
</tr>
<tr>
<td>Armed Forces</td>
<td>3</td>
<td>0</td>
<td>5,666</td>
</tr>
</tbody>
</table>


The U.S. Bureau of the Census reports employment information by broad economic division, with the categories listed in Table 3-2 below. For the 2006-2010 period, the top three employment divisions for Humboldt Township were: educational, health and social services; agriculture, forestry, fishing, hunting and mining; professional, scientific, management and administrative services. By 2015, these had changed to arts, entertainment, recreation and food services; educational, health and social services; administrative services; and construction. Over 25 percent of Humboldt Township residents were employed in the educational, health and social services division, which changed to a high of nearly 18% in arts, entertainment, recreation and food services. This was slightly lower than Marquette County as a whole (29.1 percent) and higher than Michigan (23.2 percent). About 14 percent of Humboldt Township residents were employed in the agriculture, forestry, fishing, hunting and mining division, compared to 5.1
CHAPTER 3.0-ECONOMIC BASE

3.4 Civilian Labor Force Characteristics continued

percent for the County and 1.3 percent for the State. Humboldt Township exhibited a high rate of employment in this division, due to the close proximity of the Tilden Mines. By 2015 these areas of employment shifted to (1) Arts, entertainment, recreation and food services, (2) Educational, health and social services (but less), and (3) other services.

<table>
<thead>
<tr>
<th>Table 3-2</th>
<th>Employment by Broad Economic Division, Selected Areas, 2006-2010 &amp; 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad Economic Division</td>
<td>Humboldt Township</td>
</tr>
<tr>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>Agriculture, Forestry, Fishing, Hunting and Mining</td>
<td>23</td>
</tr>
<tr>
<td>Construction</td>
<td>10</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>18</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>0</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>11</td>
</tr>
<tr>
<td>Transportation, Warehousing and Utilities</td>
<td>4</td>
</tr>
<tr>
<td>Information</td>
<td>2</td>
</tr>
<tr>
<td>Finance, Insurance, Real Estate, Rentals and Leasing</td>
<td>4</td>
</tr>
<tr>
<td>Professional, Scientific, Management, Administrative Services</td>
<td>19</td>
</tr>
<tr>
<td>Educational, Health and Social Services</td>
<td>42</td>
</tr>
<tr>
<td>Arts, Entertainment, Recreation and Food Services</td>
<td>4</td>
</tr>
<tr>
<td>Other Services (except public administration)</td>
<td>18</td>
</tr>
<tr>
<td>Public Administration</td>
<td>10</td>
</tr>
<tr>
<td>TOTAL (Number employed age 16 &amp; older)</td>
<td>165</td>
</tr>
</tbody>
</table>

Sources: U.S. Bureau of the Census, American Community Survey Estimates 2006-2010, Table DP03.
U.S. Bureau of the Census, American Community Survey Estimates 2011-2015, Table DP03.

3.5 Employment by Place of Work

According to 2006-2010 American Community Survey Estimates, 89.4 percent of Humboldt Township’s working age population who commuted to work was employed in Marquette County. Of the nineteen individuals who are working outside of Marquette County, none of the individuals found employment in a different state. Residents who worked outside of Marquette County likely found employment in neighboring Alger or Dickinson Counties, with most employment found within the Marquette-Negaunee-Ishpeming urban area. Place of employment for Humboldt Township residents is noted in Table 3-3.
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3.5 Employment by Place of Work continued

<table>
<thead>
<tr>
<th>Table 3-3</th>
<th>Residents Aged 16 Years or Older by Place of Work, Humboldt Township, 2005-2009 &amp; 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics</td>
<td>Number</td>
</tr>
<tr>
<td>Workers 16 and Over Commuting to Work</td>
<td>180</td>
</tr>
<tr>
<td>Worked in Michigan</td>
<td>180</td>
</tr>
<tr>
<td>Worked in Marquette County</td>
<td>161</td>
</tr>
<tr>
<td>Worked Outside of Marquette County</td>
<td>19</td>
</tr>
<tr>
<td>Worked Outside of Michigan</td>
<td>0</td>
</tr>
</tbody>
</table>


Technological advances and economic globalization are having a tremendous influence on the workplace and it has been predicted that fully one-third of the 21st Century workforce will be independent with regard to location; telephone and electrical services will be the only requirements. Places that can offer quality living environments will be the locations of choice for these types of work arrangements.

The personal vehicle is the main mode of transportation for Humboldt Township workers, as well as Marquette County workers. Over 75 percent of Humboldt Township workers drive alone to work as depicted in Table 3-4. According to the 2006-2010 American Community Survey Estimates, 14.8 percent of the commuters are part of a carpool; carpool participation is higher than the County-wide rate. With increasing gasoline prices, future estimates may demonstrate higher rates of carpooling.

<table>
<thead>
<tr>
<th>Table 3-4</th>
<th>Means of Transportation to Work, Residents 16 or Older, Selected Areas, 2006-2010 &amp; 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means of Transportation</td>
<td>Humboldt Township</td>
</tr>
<tr>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>Car, Truck, Van-Drive Alone</td>
<td>118</td>
</tr>
<tr>
<td>Car, Truck, Van-Carpool</td>
<td>23</td>
</tr>
<tr>
<td>Public Transportation</td>
<td>0</td>
</tr>
<tr>
<td>Walk</td>
<td>3</td>
</tr>
<tr>
<td>Other Means</td>
<td>0</td>
</tr>
<tr>
<td>Worked at Home</td>
<td>12</td>
</tr>
</tbody>
</table>


Commuting times from census data indicates that 31.2 percent of Humboldt Township’s working population lives less than 20 minutes from their place of employment (Table 3-5). About 6.3
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3.5 Employment by Place of Work continued

percent travel an hour or more to work, a rate higher than that of the County as a whole. Approximately 7.7 percent of employed persons reported working at home, a percentage higher than that of Marquette County (2.3 percent).

<table>
<thead>
<tr>
<th>Home to Work Travel Time</th>
<th>Humboldt Township</th>
<th>Marquette County</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Percent</td>
</tr>
<tr>
<td>Less Than 10 Minutes</td>
<td>11.8</td>
<td>31.0</td>
</tr>
<tr>
<td>10 to 14 Minutes</td>
<td>11.1</td>
<td>17.2</td>
</tr>
<tr>
<td>15 to 19 Minutes</td>
<td>8.3</td>
<td>5.2</td>
</tr>
<tr>
<td>20 to 24 Minutes</td>
<td>11.8</td>
<td>5.7</td>
</tr>
<tr>
<td>25 to 29 Minutes</td>
<td>4.9</td>
<td>6.3</td>
</tr>
<tr>
<td>30 to 34 Minutes</td>
<td>22.2</td>
<td>14.4</td>
</tr>
<tr>
<td>35 to 44 Minutes</td>
<td>8.3</td>
<td>8.6</td>
</tr>
<tr>
<td>45 to 59 Minutes</td>
<td>15.3</td>
<td>6.9</td>
</tr>
<tr>
<td>60 Minutes or More</td>
<td>6.3</td>
<td>4.6</td>
</tr>
<tr>
<td>Mean Travel Time to Work</td>
<td><strong>34.2 minutes</strong></td>
<td><strong>22.0 minutes</strong></td>
</tr>
</tbody>
</table>


3.6 Unemployment

County unemployment and labor force data are collected and analyzed by the Michigan Department of Labor and Economic Growth. Prior to 1965, United States Bureau of the Census data was used in the computation of unemployment figures. Labor Force and Unemployment, Selected Areas, 1970-2011 is presented in Table 3-6; unemployment data is not available at the sub-county level.

Labor force requirements are determined by economic conditions. The civilian labor force in Marquette County has expanded steadily over the past decade, increasing by 2,189 since 2000, suggesting an improving economic climate. Unemployment rates for Marquette County for the past three years have also been increasing; unemployment jumped to 10.3 percent in 2009 and has declined in 2010 and 2011 to 8.4 percent for Marquette County. The economic crisis has seen unemployment rates skyrocket around the country. The most recent (2011) Marquette County annual average unemployment rate of 8.4 percent is lower than the rate for the Upper Peninsula and lower than the rate for the state of Michigan and the United States as a whole.
### 3.6 Unemployment continued

#### Table 3-6

<table>
<thead>
<tr>
<th>Year</th>
<th>Marquette County Labor Force</th>
<th>Unemployment Percent Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Employed</td>
<td>Unemployed</td>
</tr>
<tr>
<td>1970</td>
<td>20,225</td>
<td>1,425</td>
</tr>
<tr>
<td>1975</td>
<td>24,775</td>
<td>2,275</td>
</tr>
<tr>
<td>1980</td>
<td>26,650</td>
<td>3,925</td>
</tr>
<tr>
<td>1985</td>
<td>24,875</td>
<td>3,575</td>
</tr>
<tr>
<td>1990</td>
<td>29,552</td>
<td>2,572</td>
</tr>
<tr>
<td>2000</td>
<td>31,757</td>
<td>1,600</td>
</tr>
<tr>
<td>2001</td>
<td>31,350</td>
<td>1,975</td>
</tr>
<tr>
<td>2002</td>
<td>30,075</td>
<td>2,325</td>
</tr>
<tr>
<td>2003</td>
<td>30,675</td>
<td>2,225</td>
</tr>
<tr>
<td>2004</td>
<td>33,054</td>
<td>2,149</td>
</tr>
<tr>
<td>2005</td>
<td>33,689</td>
<td>2,064</td>
</tr>
<tr>
<td>2006</td>
<td>34,001</td>
<td>2,173</td>
</tr>
<tr>
<td>2007</td>
<td>33,835</td>
<td>2,216</td>
</tr>
<tr>
<td>2008</td>
<td>33,205</td>
<td>2,548</td>
</tr>
<tr>
<td>2009</td>
<td>32,483</td>
<td>3,723</td>
</tr>
<tr>
<td>2010</td>
<td>32,086</td>
<td>3,472</td>
</tr>
<tr>
<td>2011</td>
<td>32,368</td>
<td>2,971</td>
</tr>
<tr>
<td>2012</td>
<td>31,240</td>
<td>2,746</td>
</tr>
<tr>
<td>2013</td>
<td>31,153</td>
<td>2,773</td>
</tr>
<tr>
<td>2014</td>
<td>31,369</td>
<td>2,365</td>
</tr>
<tr>
<td>2015</td>
<td>31,325</td>
<td>1,998</td>
</tr>
</tbody>
</table>


#### Figure 3-1
Unemployment Rate, Selected Areas
1970-2015

CHAPTER 3.0-ECONOMIC BASE

3.7 Major Employers

The majority of major employers, employing over 100 persons, are located in the Marquette area. Major Employers, Marquette County are presented in Table 3-7. Nearly all of the employers listed provides a service rather than create a manufactured product. The iron mining industry reflects a substantial portion of the local economy providing direct employment for about 1,431 people. All employee counts are estimated.

<table>
<thead>
<tr>
<th>Employer Name</th>
<th>Product</th>
<th>Estimated Number of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2009</td>
</tr>
<tr>
<td>Marquette General Health System</td>
<td>hospital</td>
<td>2,573</td>
</tr>
<tr>
<td>Cliffs Natural Resources</td>
<td>iron ore mining</td>
<td>1,431</td>
</tr>
<tr>
<td>Northern Michigan University</td>
<td>university</td>
<td>934</td>
</tr>
<tr>
<td>Peninsula Medical Center</td>
<td>medical services</td>
<td>630</td>
</tr>
<tr>
<td>Westwood Mall Merchants Association</td>
<td>retail</td>
<td>500</td>
</tr>
<tr>
<td>Bell Medical</td>
<td>hospital</td>
<td>510</td>
</tr>
<tr>
<td>Marquette Branch Prison</td>
<td>correctional institution</td>
<td>427</td>
</tr>
<tr>
<td>Wal-Mart Store</td>
<td>department store</td>
<td>434</td>
</tr>
<tr>
<td>Marquette Area Public Schools</td>
<td>education</td>
<td>425</td>
</tr>
<tr>
<td>Marquette County</td>
<td>local government</td>
<td>283</td>
</tr>
<tr>
<td>Marquette Co. Medical Care Facility</td>
<td>nursing care</td>
<td>254</td>
</tr>
<tr>
<td>Alger-Marquette Community Action Bd.</td>
<td>community action agency</td>
<td>250</td>
</tr>
<tr>
<td>AMR Regional Aircraft Maintenance Facility</td>
<td>aircraft maintenance</td>
<td>233</td>
</tr>
<tr>
<td>Pioneer Surgical (RTI Surgical)</td>
<td>medical device mnft’ing.</td>
<td>217</td>
</tr>
<tr>
<td>Eagle Mine</td>
<td>Nickle, copper mining</td>
<td>-</td>
</tr>
<tr>
<td>Eastwood Nursing Center</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>WE Energies</td>
<td>electric generation</td>
<td>205</td>
</tr>
<tr>
<td>Pathways</td>
<td>mental health counseling</td>
<td>200</td>
</tr>
<tr>
<td>Marquette City</td>
<td>local government</td>
<td>190</td>
</tr>
<tr>
<td>PCBMM Management-Country Village</td>
<td>retail and service</td>
<td>188</td>
</tr>
<tr>
<td>Lowes</td>
<td>hardware store</td>
<td>175</td>
</tr>
<tr>
<td>N.I.C.E. Public Schools</td>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Econo Foods</td>
<td>supermarket</td>
<td></td>
</tr>
<tr>
<td>D J Jacobetti Home for Veterans</td>
<td>nursing care</td>
<td>165</td>
</tr>
<tr>
<td>Menards, Inc.</td>
<td>hardware store</td>
<td>159</td>
</tr>
<tr>
<td>Mather Nursing Home (Lighthouse)</td>
<td>nursing care</td>
<td>147</td>
</tr>
<tr>
<td>Metz Baking Company</td>
<td>commercial bakery</td>
<td>144</td>
</tr>
<tr>
<td>Ojibwa Casino</td>
<td>gaming</td>
<td>143</td>
</tr>
<tr>
<td>Gwinn Area Community Schools</td>
<td>Education</td>
<td>140</td>
</tr>
<tr>
<td>Peninsula Sanitation</td>
<td>solid waste collection</td>
<td>139</td>
</tr>
</tbody>
</table>
Table 3-7
Major Employers, Marquette County

<table>
<thead>
<tr>
<th>Employer Name</th>
<th>Product</th>
<th>Estimated Number of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shopko Properties</td>
<td>department store</td>
<td>139</td>
</tr>
<tr>
<td>Superior Extrusion, Inc.</td>
<td></td>
<td>130</td>
</tr>
<tr>
<td>A. Lindberg and Sons, Inc.</td>
<td>road construction</td>
<td>127</td>
</tr>
<tr>
<td>Potlatch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negaunee School District</td>
<td>education</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td></td>
<td>190</td>
</tr>
<tr>
<td>Super One Foods</td>
<td>supermarket</td>
<td>119</td>
</tr>
<tr>
<td>Ishpeming School District</td>
<td>education</td>
<td>117</td>
</tr>
<tr>
<td>Marquette Area Public Schools</td>
<td>education</td>
<td>117</td>
</tr>
<tr>
<td>Target Corp.</td>
<td>department store</td>
<td>115</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2015) 120</td>
</tr>
<tr>
<td>Norlite Nursing Center, Marq.</td>
<td>nursing care</td>
<td>114</td>
</tr>
<tr>
<td></td>
<td></td>
<td>145</td>
</tr>
<tr>
<td>Holiday Inn of Marquette</td>
<td>hotel</td>
<td>101</td>
</tr>
<tr>
<td>Marquette Co. Road Comm.</td>
<td>local government</td>
<td>75</td>
</tr>
<tr>
<td>Marquette-Alger Regional Educational Service Agency</td>
<td>education</td>
<td>65</td>
</tr>
</tbody>
</table>


Township officials estimate that many Humboldt Township residents are employed at Northern Michigan University, Bell Hospital, Marquette General Hospital, NICE Community Schools, and the Tilden Mine.

CHAPTER 3.0-ECONOMIC BASE

3.8 Income and Wage Estimates

An examination of local income trends and comparison of local income information to state and national averages is useful in determining how much wealth is available locally to purchase goods and services. Income figures also reflect the wages and salaries paid to local workers.

Median incomes in the Upper Peninsula are significantly lower than statewide averages. While this can be offset somewhat by lower housing costs locally, the ability of local households to afford housing is impacted by these lower incomes.

*Per Capita Income* is determined by dividing the total reported income within a unit of government by its official population.

*Median Household Income* uses income from all households including families. The median income figure is the middle value of the incomes reported.

*Family Income* includes those of married-couple families and other households made up of persons related by blood, marriage or adoption. The median income figure is the middle value of the incomes reported. This category does not include persons living alone or unrelated persons sharing living quarters or other non-family households. Income Levels, Selected Areas, American Community Survey Estimates 2006-2010, are presented in Table 3-8.

<table>
<thead>
<tr>
<th>Table 3-8</th>
<th>Income Levels, Selected Areas, American Community Survey Estimates 2006-2010 &amp; 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Humboldt Township</td>
</tr>
<tr>
<td>Per Capita Income</td>
<td>$21,136</td>
</tr>
<tr>
<td>Median Household Income</td>
<td>$50,750</td>
</tr>
<tr>
<td>Median Family Income</td>
<td>$59,167</td>
</tr>
</tbody>
</table>


Per Capita Income reported for Humboldt Township is lower than Marquette County and the State. Median Household and Median Family Incomes reported by Humboldt Township are comparable to those reported by the County and the State.
CHAPTER 3.0-ECONOMIC BASE

3.9 Poverty Rates

The U.S. Bureau of the Census uses a complex formula that included 48 different thresholds that vary by family size and the number of children within the family and the age of the householder to determine if a person is poor. Not every person is included in the poverty universe: institutionalized people, people in military group quarters, people living in college dormitories and unrelated individuals less than 15 years old are considered neither as “poor” nor as “nonpoor.” For example, for a two person household, the weighted average threshold is $13,167, for a three person household the threshold is $16,079 and for a four person household the threshold is $20,614. The average Humboldt Township household size in 2010 was 2.22 persons.

Table 3-9, Poverty Rates, Selected Areas, 2006-2010 and 2011-2015 reflects income information reported for the American Community Survey 5-Year Estimates. The poverty rate for all people in 2015 in Humboldt Township was almost one-half what it had been and was 11.6 percent, significantly lower than poverty levels in the County and State. Incidence of poverty among female householder families with children under eighteen is much lower in Humboldt Township compared to the County and the State. Approximately six (6.1%) percent of elderly residents were reported as living below the poverty level; poverty levels among seniors have declined dramatically over the last 50 years. Social security, in combination with Medicare health insurance, is often mentioned as likely contributors to the decline in elderly poverty. Overall, poverty figures for Humboldt Township are similar to that of Marquette County.

| Table 3-9 |
| Poverty Rates, Selected Areas, 2006-2010 and 2015 |
| Poverty Rates by Group (Percentage) | Humboldt Township | Marquette County | State of Michigan |
| All People | 21.7 | 11.6 | 13.2 | 17.0 | 14.8 | 16.7 |
| Children under 18 | 32.4 | 16.3 | 13.3 | 17.7 | 20.5 | 23.5 |
| Persons 65 and older | 4.0 | 6.1 | 9.8 | 7.5 | 8.3 | 27.6 |
| All Families | 7.6 | 11.3 | 7.9 | 9.4 | 10.6 | 11.9 |
| Female Householder Families | 0.0 | 12.5 | 37.3 | 29.8 | 31.8 | 34.0 |
| Female Households with Children under 18 | 0.0 | 22.2 | 52.6 | 41.7 | 41.1 | 45.3 |
| Female Households with Children under 5 | 0.0 | 100.0 | 72.2 | 43.5 | 50.3 | 52.8 |

CHAPTER 3.0—ECONOMIC BASE

3.10 Issues and Opportunities

- The historical basis of the local economy is based on the area’s mining heritage and iron ore remains a large component of Humboldt Township’s economy.

- Mining related activities appear to be on the upswing, due to the rehabilitation and reuse of the Humboldt Mine/Mill for future milling operations by Eagle Mine for the processing of copper and nickel ore.

- A previously proposed County primary road, County Road 595 would have passed through Humboldt Township and would have provided a new north-south infrastructure to support the growing and future needs of area employers. Future prospects of this road are unclear.

- In 2010, Humboldt Township’s labor force participation rate was about 53 percent, comparable to Marquette County and the State.

- The leading employment categories for Humboldt Township in 2015 were (1) Arts, entertainment, recreation and food services, (2) Educational, health and social services; (3) Other services, and (4) Construction.

- There is a limited amount of smaller commercial activity located within Humboldt Township. Expansion is restricted by limited infrastructure, low population, rural location and generally a lack of economic development opportunities.

- Ninety-two (92%) percent of Humboldt Township residents found employment in Marquette County and over fifty (53.4%) percent of Humboldt Township residents travel less than 20 minutes to their place of work; the vast majority (93.1%) of workers drove to work alone. Only about seven (7%) percent of residents reported participating in a carpool.

- Marquette County’s unemployment rate decreased from 8.4 percent in 2011 to 6.0 percent in 2015 and is lower than the County’s historical average of 7.1 percent from 2000 to 2015. The County rate of 6.0 percent is slightly higher than the State rate of 5.4 percent and National average unemployment rate of 5.3 percent.

- Per capita income, median household income and median family income in Humboldt Township are all lower than that of Marquette County and State averages.

- Poverty rates for all persons in Humboldt Township are lower than rates reported by the County and State.

- A home-craft copper and/or nickel jewelry industry could become a follow-up business for the current Eagle Mine operation. (Black Hills gold out of S. Dakota would be an example.)
CHAPTER 4.0-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 should 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 established 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. 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 an impact on housing in a community. Public safety, or a lack thereof, can influence where people choose to buy a home and raise a family. Quality education is one of the location factors for families with school-age children; recent schools of choice policies have decreased the importance of selecting a residential location based on schools. Area access to employment, shopping and other entertainment needs also factor into the purchase of a home.

After 2007, nationwide trends indicated a rapid decline in housing prices. Consequently, new home sales in the United States remained relatively weak for some time, as the housing industry struggled with falling prices and rising mortgage foreclosures. From 2005 to 2012, the rate of homeownership steadily decreased, while the number of households renting steadily increased 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.

“Following the debacle of 2007-2008, the U.S. real estate market has since been characterized by a significant improvement in prices, number of transactions and mortgage originations. This has been the result of an economic recovery that will be completing its 8th year in June 2017, coupled with the generally expansionary monetary policy of the Federal Reserve. The combination of a fall in real estate prices in 2007-2012 and a GDP growth returning after June 2009 has contributed to an improvement in housing affordability nationwide.” (Source: The U.S. Real Estate Market-Trends, Characteristics And Outlook, Apr. 5, 2017, Seeking Alpha.)

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

4.2 Housing Characteristics

Trends

The US Bureau of the Census recorded a total of 441 housing units in Humboldt Township at the time of the 2010 Census. Since 2010, the number of housing units increased by 66 units to 507,
CHAPTER 4.0-HOUSING

4.2 Housing Characteristics continued

Trends continued
or by 15.0 percent in 2015 (Table DP04, U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates). [This increase may include seasonal camps. See occupancy discussion below.] Other communities in Marquette County have experienced varied growth rates; the cities have reported minimal growth, while many of the townships have experienced vast growth in the number of housing units. From 2010 to 2015, the number of housing units in Marquette County grew by 150 units, or +0.4 percent, while the number of housing units in the State of Michigan increased by 7,605 (+0.2%).

The limited increase in housing units within the cities and the more significant growth within the surrounding townships follows a nationwide trend. Most urban areas, large and small, have seen new housing develop at a greater rate in the surrounding outlying areas. Housing unit totals as recorded in the Decennial Census for the years 2000-2010 and the 2015 estimate are presented in the following Table 4-1, Total Housing Units, Selected Areas, 2000-2015.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Humboldt Township</td>
<td>419</td>
<td>441</td>
<td>507</td>
<td>5.3</td>
<td>21.0</td>
</tr>
<tr>
<td>Marquette County</td>
<td>32,877</td>
<td>34,330</td>
<td>34,480</td>
<td>4.4</td>
<td>4.9</td>
</tr>
<tr>
<td>State of Michigan</td>
<td>4,234,279</td>
<td>4,532,233</td>
<td>4,539,838</td>
<td>7.0</td>
<td>7.2</td>
</tr>
</tbody>
</table>


Humboldt Township does not encompass concentrated areas of housing development and existing housing within the Township is low density and scattered. Except for major highways, county roads and a short railroad spur, there are no utilities or infrastructure within Humboldt Township at this time and there are no specific areas of concern regarding existing housing. New housing development is only limited by the amount of land available and a current lack of demand. Much of the land in Humboldt Township is part of the Escanaba River State Forest. Large amounts of land are also corporately owned and private land ownership is highly protected and guarded.

Occupancy and Tenure
In 2010, only 47.8 percent of Humboldt Township’s housing units were occupied year-round. In 2015, this is estimated to have decreased to 40.6 percent. As shown in Table 4-2, Total Housing Units, Occupancy and Tenure, Selected Areas, 2010, this represents 211 of the 441 total housing units. The occupancy rate, expressed as a percentage, was lower for Humboldt Township when compared to Marquette County. Lower occupancy rates in Humboldt Township are largely a
CHAPTER 4.0-HOUSING

4.2 Housing Characteristics continued

result of numerous recreational and seasonal units. Forty-eight and one-half (48.5%) percent of the Township’s housing units are designated as seasonal, recreational or occasional use, and 93.0 percent of the total vacant housing units are used for seasonal, recreational or occasional use. Humboldt Township has a large number of recreational homes and many are concentrated around the Township’s lakes, including Casey, Helen and Fish Lakes.

<table>
<thead>
<tr>
<th>Table 4-2</th>
<th>Total Housing Units, Occupancy and Tenure, Selected Areas, 2010 and 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Humboldt Township</td>
</tr>
<tr>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>Total Units</td>
<td>441</td>
</tr>
<tr>
<td>Occupied</td>
<td>211</td>
</tr>
<tr>
<td>Owner</td>
<td>187</td>
</tr>
<tr>
<td>Renter</td>
<td>24</td>
</tr>
<tr>
<td>Vacant</td>
<td>230</td>
</tr>
<tr>
<td>Seasonal, Recr’t, Occasional Use</td>
<td>214</td>
</tr>
</tbody>
</table>


Units in Structure

Data outlined in Table 4-3, Units in Structure by Percentage, Selected Areas, 2010 & 2015, demonstrates that Humboldt Township’s housing stock consisted of 91.9 percent single family homes. Mobile homes, to which one or more permanent rooms have been added or constructed, are considered to be a detached unit single-family home. Attached structures include row houses, town houses or houses attached to a non-residential structure; Humboldt Township reported no attached structures. The high percentage rate of single family homes in Humboldt Township is much greater than Marquette County overall.

Most of the remaining housing stock is of the mobile home category. Humboldt Township reports a portion of its housing stock as mobile homes (7.3 percent). Humboldt Township has very few two-unit and no 3-4 unit structures. Multiple unit structures tend to be prevalent within more densely populated areas where people are closer to shopping, schools, etc. Housing types found in Humboldt Township and Marquette County are presented in Table 4-3, Units in Structure by Percentage, Selected Areas, 2010 & 2015.
CHAPTER 4.0-HOUSING

4.2 Housing Characteristics continued

<table>
<thead>
<tr>
<th>Table 4-3</th>
<th>Units in Structure by Percentage, Selected Areas, 2010 and 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Type/Area</td>
<td>1 detached</td>
</tr>
<tr>
<td>Humboldt Twp. 2010</td>
<td>89.8</td>
</tr>
<tr>
<td>Humboldt Twp. 2015</td>
<td>91.9</td>
</tr>
<tr>
<td>Marquette Co. 2010</td>
<td>71.1</td>
</tr>
<tr>
<td>Marquette Co. 2015</td>
<td>72.3</td>
</tr>
</tbody>
</table>


Age of Housing

Approximately 16.2 percent of the housing units in Humboldt Township were constructed prior to 1939, while only 9.9 percent of housing units were constructed after 2000. Over 23 percent of homes in Marquette County and 15.2 percent of homes in the State were constructed prior to 1939. Approximately 8.9 percent of homes in Marquette County and 11.1 percent of homes in the State were constructed after 2000. In recent years, many new homeowners have been looking for larger homes on larger lots and frequently, surrounding townships have the space. In response to the recent economic downturn, the demand for larger residences has dwindled. Home size typically dips during a recession and many experts believe that this downward trend will continue beyond the economic recovery. Humboldt Township has had a resurgence in growth since the reopening of the Eagle Mine’s Humboldt Mill.

While an older housing stock is not necessarily inadequate or of poorer quality than newer structures, it is more prone to deterioration if not properly maintained. Since a relatively large number of householders are over the age of 65 and are living alone, maintenance may become increasingly difficult and some of Humboldt Township’s housing stock may be vulnerable. Older housing units often lack the amenities desired by more affluent, younger households, such as multiple bathrooms, large bedrooms, family rooms and large garages. These older units often have narrow doorways, steep stairs and other features which make them difficult for older residents to enjoy, and increased maintenance demands may also make these homes less desirable to an aging population.
CHAPTER 4.0-HOUSING

4.2 Housing Characteristics continued

Figure 4-1, a.

Percentage of Housing Units by Year Structure Built from 1939 or earlier to 2005 or later, Selected Areas, 2010

<table>
<thead>
<tr>
<th>Political Entity</th>
<th>Year Built 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of Michigan</td>
<td>2.2</td>
</tr>
<tr>
<td>Marquette County</td>
<td>2.3</td>
</tr>
<tr>
<td>Humboldt Township</td>
<td>0.4</td>
</tr>
</tbody>
</table>

CHAPTER 4.0-HOUSING

Figure 4-1, b.
Percentage of Housing Units by Year Structure Built from 1939 or earlier to 2005 or later, Selected Areas, 2015


Household Type and Relationship
The U.S. Bureau of the Census categorizes households into two types: Family Household or Non-Family Household. A Household includes all of the people who occupy a housing unit. A Family Household consists of a householder and one or more persons living in the same Household related by birth, marriage or adoption. A Non-Family Household consists of a householder living alone or with non-relatives. People not living in Households are classified as living in Group Quarters.
CHAPTER 4.0-HOUSING

4.2 Housing Characteristics continued

Household Type and Relationship continued

The “Group Quarters” classification applies to persons in institutionalized and non-institutionalized settings. Institutionalized persons are those under authorized confinement, custody or supervised care such as in a correctional facility, juvenile detention facility, or nursing home. Non-Institutional Group Quarters include college dormitories, military facilities and group homes. There were no persons in Humboldt Township reported as living in non-institutional group quarters.

Table 2-5, Household Characteristics, Humboldt Township, 1990-2015 outlined in Chapter 2, illustrates household trends that may affect housing. From 2000 to 2015, the total number of Households in Humboldt Township increased. However, while the number of total Households increased, the percentage of Family Households and Husband-Wife Households first declined, and then rebounded. Non-Family Households may need different types of housing options, including multi-family units.

In 2015, 72.8 percent of Humboldt Township residents lived in Family Households. Nationwide there has been an increase in the number of people living in Non-Family Households. Among the more probable reasons for the greater increase in non-family households are: a growing proportion of the older population is continuing to live alone or with one or more unrelated persons following loss of a spouse; and, a growing proportion of younger adults are postponing marriage and choosing to live alone or with unrelated persons.

Household Size

Humboldt Township’s average household size has decreased as indicated in Figure 4-2, Average Household Size, Selected Areas, 2000-2015. The average size of a Humboldt Township owner household in 2015 (2.37 persons) decreased by approximately 2.1 percent since 2000. This trend is consistent with data compiled locally, regionally and statewide. A clear trend towards smaller households is apparent nationally as well.

![Figure 4-2](image)

CHAPTER 4.0 - HOUSING

4.2 Housing Characteristics continued

Housing Values
The U.S. Bureau of the Census, American Community Survey 5-Year Estimates 2006-2010 & 2011-2015 reported that the median housing value in Humboldt Township was $86,600, which is considerably lower than the median housing value of $125,100 in Marquette County and the median housing value of $144,200 for the State of Michigan, as illustrated in Table 4-4, Median Housing Values, Selected Areas, 2006-2010, and 2015. By 2015 these values are estimated to have changed as shown below. The Township’s increased considerably (+23.9%).

<table>
<thead>
<tr>
<th>Area</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humboldt Township</td>
<td>$86,600</td>
<td>$107,300</td>
</tr>
<tr>
<td>Marquette County</td>
<td>$125,100</td>
<td>$131,400</td>
</tr>
<tr>
<td>State of Michigan</td>
<td>$144,200</td>
<td>$122,400</td>
</tr>
</tbody>
</table>


4.3 Financial Characteristics

As discussed in Chapter 3, Median Incomes in the Upper Peninsula are significantly lower than statewide averages. While this can be offset somewhat by lower housing costs locally, the ability of local households to afford housing is impacted by these lower incomes. Per Capita Income is the mean money income received computed for every man, woman, and child in a geographic area. It is derived by dividing the total income of all individuals 15 years old and over in a geographic area, by the total population in that area. Household Income is the sum of money income received in a calendar year by all household members 15 years old and over, including household members not related to the householder, people living alone, and other nonfamily household members. Median Family Income reflects the income level at which half of all families earn more, and half earn less. Table 4-5, Income Levels, Selected Areas, 2006-2010 and 2015 illustrates Per Capita, Median Household and Median Family Income. Per Capita, Median Household and Median Family Incomes reported for Humboldt Township are all lower than for Marquette County and the State as estimated for 2015.
CHAPTER 4.0-HOUSING

4.3 Financial Characteristics continued

Table 4-5
Income Levels, Selected Areas, 2006-2010 & 2015

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Capita Income</td>
<td>$21,136</td>
<td>$22,690</td>
<td>$23,347</td>
<td>$23,785</td>
<td>$25,135</td>
<td>$26,607</td>
</tr>
<tr>
<td>Median Household Income</td>
<td>$50,750</td>
<td>$42,143</td>
<td>$45,130</td>
<td>$45,409</td>
<td>$48,432</td>
<td>$49,576</td>
</tr>
<tr>
<td>Median Family Income</td>
<td>$59,167</td>
<td>$49,063</td>
<td>$61,798</td>
<td>$60,492</td>
<td>$60,341</td>
<td>$62,247</td>
</tr>
</tbody>
</table>


A common method used to gauge the affordability of a community’s housing stock is the percentage of income spent on housing related expenses. Ideally, housing costs (mortgage, taxes, etc.) should consume no more than 25 to 30 percent of Gross Household Income. Tables 4-6, Monthly Owner Costs as a Percentage of Household Income, Selected Areas, 2006-2010 and Table 4-7, Gross Rent as a Percentage of Household Income, Selected Areas, 2006-2010, illustrate percentages of income directed to the cost of housing. Although the Census data is limited, it does illustrate the greater impact housing costs have on lower income households. In 2010 about 45 percent of Humboldt Township homeowners spent less than 20 percent of their income on housing costs. This increased to nearly 48% in 2015. In 2010 approximately, 34.1 percent of homeowners spent more than 30 percent of their monthly income on housing. This decreased to 24% in 2015.

Table 4-6
Monthly Owner Costs as a Percentage of Household Income, Selected Areas, 2010-2015

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Less than 20.0%</td>
<td>45.1</td>
<td>47.9</td>
<td>48.2</td>
<td>52.0</td>
<td>34.1</td>
<td>44.5</td>
</tr>
<tr>
<td>20.0 to 24.9%</td>
<td>12.1</td>
<td>22.9</td>
<td>18.2</td>
<td>15.2</td>
<td>16.9</td>
<td>16.1</td>
</tr>
<tr>
<td>25.0 to 29.9%</td>
<td>8.8</td>
<td>5.2</td>
<td>12.4</td>
<td>10.0</td>
<td>13.0</td>
<td>10.7</td>
</tr>
<tr>
<td>30.0 to 34.9%</td>
<td>14.3</td>
<td>2.1</td>
<td>5.3</td>
<td>7.2</td>
<td>8.9</td>
<td>7.1</td>
</tr>
<tr>
<td>35.0% or more</td>
<td>19.8</td>
<td>21.9</td>
<td>15.9</td>
<td>15.6</td>
<td>27.0</td>
<td>21.7</td>
</tr>
</tbody>
</table>


Statistics derived from respondents renting their place of residence in 2010 revealed that 100 percent of renters in Humboldt Township spent more than 30.0 to 34.9 percent of their income on housing expenses. There are very few rental units in Humboldt Township and the estimated results may be skewed. By 2015 this changed to 38.2% for more than 30 percent of income spent.
CHAPTER 4.0-HOUSING

4.3  Financial Characteristics continued

on rent. In 2010 about 53 percent of Marquette County residents spent more than 30 percent of their income on rental housing. By 2015 this Marquette County percentage decreased slightly to about 52%.

Table 4-7
Gross Rent as a Percentage of Household Income, Selected Areas, 2010-2015

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Humboldt Township</td>
<td>0.0</td>
<td>14.7</td>
<td>14.3</td>
<td>13.1</td>
<td>11.6</td>
<td>12.1</td>
</tr>
<tr>
<td>Humboldt Township</td>
<td>0.0</td>
<td>20.6</td>
<td>10.9</td>
<td>13.2</td>
<td>11.8</td>
<td>12.0</td>
</tr>
<tr>
<td>Marquette County</td>
<td>0.0</td>
<td>5.9</td>
<td>10.1</td>
<td>10.3</td>
<td>11.5</td>
<td>11.8</td>
</tr>
<tr>
<td>Marquette County</td>
<td>0.0</td>
<td>20.6</td>
<td>11.7</td>
<td>11.5</td>
<td>11.0</td>
<td>11.2</td>
</tr>
<tr>
<td>State of Michigan</td>
<td>100.0</td>
<td>14.7</td>
<td>9.2</td>
<td>9.9</td>
<td>9.0</td>
<td>8.6</td>
</tr>
<tr>
<td>State of Michigan</td>
<td>0.0</td>
<td>23.5</td>
<td>43.8</td>
<td>41.9</td>
<td>45.0</td>
<td>44.3</td>
</tr>
</tbody>
</table>


4.4  Selected Housing Characteristics

Substandard housing information is presented in Table 4-8, Substandard Occupied Housing, Selected Areas, 2006-2010 & 2011-2015. Housing units lacking complete plumbing (hot and cold piped water, flush toilet and bathtub or shower) or complete kitchen facilities (an installed sink, range or other cooking appliance and refrigerator) are considered substandard. Statistics on telephone service were also collected. In 2015 there were only 3 households in the Township that lacked complete kitchen facilities and only four lacking (land line) telephone service.

Table 4-8
Substandard Occupied Housing, Selected Areas, 2010-2015

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Humboldt Township</td>
<td>0.0</td>
<td>0.0</td>
<td>84</td>
<td>0.3</td>
<td>68</td>
<td>0.3</td>
</tr>
<tr>
<td>Humboldt Township</td>
<td>0.0</td>
<td>0.0</td>
<td>113</td>
<td>0.4</td>
<td>125</td>
<td>0.5</td>
</tr>
<tr>
<td>Marquette County</td>
<td>0.0</td>
<td>1.5</td>
<td>125</td>
<td>0.5</td>
<td>23,730</td>
<td>0.6</td>
</tr>
<tr>
<td>Marquette County</td>
<td>3.3</td>
<td>3.3</td>
<td>23,730</td>
<td>0.6</td>
<td>28,708</td>
<td>0.7</td>
</tr>
<tr>
<td>State of Michigan</td>
<td>17.2,644</td>
<td>4.5</td>
<td>103,318</td>
<td>2.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


The U.S. Bureau of the Census also collects data on the source of heating fuel occupied housing units employ. According to Census data detailed in Table 4-9, Occupied Housing Unit Heating
4.4 Selected Housing Characteristics continued

Fuel, Selected Areas, 2006-2010 & 2011-2015, approximately 30 percent of Humboldt Township’s occupied housing units use fuel oil, kerosene, etc. for heating, much higher than the rates reported for the county and the State. Approximately 31 percent of Township homes utilize bottled, tank or LP gas for heating, while 28.9 percent use wood. Rural communities tend to rely on fuel oil and bottled gas at higher rates than more densely developed communities. The Humboldt Mill is the only development in Humboldt Township that receives natural gas utility service; note that Table 4-9, Occupied Housing Unit Heating Fuel, Selected Areas, 2006-2010, reflects the approximate numbers and percentages.

<table>
<thead>
<tr>
<th>Table 4-9</th>
<th>Occupied Housing Unit Heating Fuel, Selected Areas, 2010-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>No.</td>
</tr>
<tr>
<td>Utility Gas</td>
<td>8</td>
</tr>
<tr>
<td>Bottled, Tank or LP Gas</td>
<td>53</td>
</tr>
<tr>
<td>Electricity</td>
<td>10</td>
</tr>
<tr>
<td>Fuel Oil, Kerosene, etc.</td>
<td>52</td>
</tr>
<tr>
<td>Coal or Coke</td>
<td>0</td>
</tr>
<tr>
<td>Wood</td>
<td>50</td>
</tr>
<tr>
<td>Solar Energy</td>
<td>0</td>
</tr>
<tr>
<td>Other Fuel</td>
<td>0</td>
</tr>
<tr>
<td>No Fuel</td>
<td>0</td>
</tr>
<tr>
<td>Total Occupied Units</td>
<td>173</td>
</tr>
</tbody>
</table>


4.5 Private Housing Developments

Manmade barriers to development in Humboldt Township include the lack of infrastructure, as well as a lack of demand for new housing. Natural barriers to development in Humboldt Township include rock outcrop and wetland areas as well as the physical constraints of various sites. Humboldt Township will continue to encourage development in areas capable of supporting residential development. There are no new anticipated developments at this time. Recent housing development has been limited; however, waterfront lots have been the most popular in recent years.
CHAPTER 4.0- HOUSING

4.5 Private Housing Developments continued

Table 4-10  
Building Permits Issued, Humboldt Township, 2013-2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Residential Permits</th>
<th>Type of Permit</th>
<th>Construction Value</th>
</tr>
</thead>
</table>
| 2013 | 30                            | 3-Residential New Home  
1-Residential Pole Building  
1-Residential Accessory Building  
23-Commercial New Construction  
1-Commercial Alteration  
1-Demolition           | $7,586,310                       |
| 2014 | 14                            | 2-Residential New Home  
2-Residential Garage  
2-Residential Addition  
4-Commercial New Structures  
1-Commercial Alteration  
2-Commercial Miscellaneous  
1-Demolition              | $1,359,157                       |
| 2015 | 8                             | 3-Residential New Home  
2-Residential Garage  
2-Residential Alterations  
1-Demolition              | $645,501                        |
| 2016 | 2                             | 1-Residential Addition  
1-Commercial Miscellaneous | $232,000                       |
| 2017 | 6                             | 2-Residential New Home  
1-Residential Garage  
1-Residential Alteration  
1-Residential Accessory Building  
1-Commercial New Structure | $302,000                       |

Source: Marquette County Resource Management Department, 2018

4.6 Public Housing Developments

There are no publicly subsidized housing developments within Humboldt Township at this time.

4.7 Housing Assistance Programs

Weatherization assistance is offered to low income households throughout Marquette County by the Alger-Marquette Community Action Board (AMCAB). The Home Weatherization Program provides low-income homeowners and renters with services such as weather-stripping, caulking, window repair and the insulation of attics, walls and crawl spaces. Applicants must meet established eligibility guidelines to qualify.
CHAPTER 4.0-HOUSING

4.7 Housing Assistance Programs continued

The United States Department of Agriculture (USDA) provides housing assistance through its Rural Development Program. USDA provides homeownership opportunities to rural Americans, as well as programs for home renovation and repair. USDA also makes financing available to elderly, disabled, or low-income rural residents of multi-unit housing buildings to ensure they are able to make rent payments.

The Marquette County Resource Management and Development Department currently administers a housing assistance program. The goal of the Marquette County Housing Rehabilitation Program is to preserve existing affordable housing stock throughout the County by providing assistance to low and moderate-income homeowners. The Housing Rehabilitation Program helps homeowners maintain their residence as safe, sanitary dwellings that meet local housing codes and helps to prevent houses from becoming dilapidated nuisance properties. Marquette County has been administering the housing rehab program since 1994, which has distributed millions of dollars in rehabilitation funds throughout the county. These are Federal and State funds provided to the County through the Michigan State Housing and Development Authority (MSHDA) so all projects are subject to federal regulations and must meet U.S. Department of Housing and Urban Development (HUD), MSHDA and local codes by the time the work is complete. (Source: http://www.co.marquette.mi.us/departments/planning/community_development.html.)

4.8 Specialized Housing

There are five nursing home facilities in Marquette County, including: Marquette County Medical Care Facility in the City of Ishpeming (140 beds), Mather Nursing Center in Ishpeming Township (122 beds), D.J. Jacobetti Home for Veterans in the City of Marquette (241 beds), Eastwood Nursing Center in the City of Negaunee (100 beds) and Norlite Nursing Center in the City of Marquette (99 beds). There are 23 licensed adult foster care homes and homes for the aged listed within Marquette County designed to provide supervision, personal care, meals, room, laundry and needed transportation to adults in a non-institutional setting. Homes usually provide residence for a maximum of 6 adults; some homes may be larger.

Those facilities requiring state licensing are regulated as to the number and type of residents, the services provided, and staffing requirements. If a home is a licensed facility, inspections of the building, safety code adherence, character of operators and other factors influencing living conditions must have been completed. There are no adult foster care homes or homes for the aged within Humboldt Township.

There are two facilities in Richmond Township. Warner Creek Residential Care Facility is located at 100 Isabella Avenue in the community of Palmer. The facility offers state licensed assisted living senior housing options to approximately 38 residents. Marigold Assisted Living is located...
CHAPTER 4.0-HOUSING

4.8 Specialized Housing continued

at 101 Kirkpatrick, also in Palmer, providing a small group residence for approximately 13 residents. There are also two facilities in the City of Ishpeming. Cedar Hills is located at 1560 Cypress Street in the City of Ishpeming and provides small group home care for up to six developmentally disabled or handicapped residents. Hillcrest Assisted Living is located at 160 Hillcrest Drive in the City of Ishpeming and also provides small group home care for up to six developmentally disabled or handicapped residents.

Residential care facilities generally provide supervision or assistance with activities of daily living. Assisted living facilities span the gap between independent living and nursing homes. These facilities may be temporary or long-term housing. They are especially designed to help seniors who are mostly independent but need help with some of the day-to-day activities. This can include assistance with medications, preparing meals/eating, bathing, dressing, housekeeping and transportation to and from medical facilities.

4.9 Housing – Radon Environmental Risk

Marquette County has verified elevated radon levels in homes in various locations. Radon is known to be the second leading cause of lung cancer in U.S. citizens. The only way to know if your home is radon free is to test for radon.

Testing should be conducted in the lowest livable level of your home, in a closed house environment at a time of year when the house is being heated.

The Marquette County Health Department sells both Short Term activated charcoal and Long Term alpha-track radon test kits to test your home. Cost of test kits is $12. You must come to the Marquette County Health Department at 184 U.S. 41 East to purchase.

4.10 Issues and Opportunities

- The number of housing units within Humboldt Township has increased since 2000; however, residential development in the Township is limited by the lack of employment opportunities and little demand for new housing. A significant amount of land within the Township is held by private entities or is reserved by state agencies such as the Escanaba River State Forest.

- Housing in Humboldt Township is low density and scattered.

- Manmade barriers to development in Humboldt Township include the lack of infrastructure. Natural barriers to development in the Township include rock outcrops and wetland areas as well as the physical constraints of various sites. The Township will continue to encourage development in areas capable of supporting residential development.
CHAPTER 4.0 - HOUSING

4.10 Issues and Opportunities continued

- Less than half of Humboldt Township’s housing units are occupied by year-round residents.

- Nearly half of Humboldt Township’s housing units are used seasonally or recreationally by seasonal residents.

- Census data from 2010 demonstrates that the Township’s housing stock consisted of 89.8 percent single family homes, which increased to 91.9 percent in 2015. Humboldt Township has very few multi-unit structures. It is important for the Township to provide a diverse and affordable housing stock.

- About 9.9 percent of the housing units in the Township were constructed after 2000, and about 16.2 percent were constructed before 1939. The Township is a mix of new and older housing units. Maintaining the aging housing stock within the Township is essential to community safety, beautification and growth.

- The number of people living in a household, as well as the age and relationship of those people, all influence the type of housing needed in the community. With the decrease in household size and increase in the number of non-family households, efforts should be initiated to provide diversified housing options within Humboldt Township.

- Median housing values in Humboldt Township are lower than Marquette County and State averages.

- The majority of homeowners in Humboldt Township spend less than 30 percent of their incomes on mortgage per month.

- There are camps and a few households in Humboldt Township that lack telephone service and kitchen facilities; mainly these structures are used for recreational and/or seasonal pursuits.

- Rural communities tend to rely more on fuel oil, bottled gas and wood than more densely developed communities. In Humboldt Township, nearly 35 percent use bottled, tank or LP gas. While approximately 22 percent of Humboldt Township homes utilize fuel oil or kerosene, and another 21 percent use wood.

- There are no publicly subsidized housing units within Humboldt Township.
• Housing assistance programs are available to qualified Humboldt Township residents, including programs administered by Marquette County. Humboldt Township encourages qualifying individuals to apply for assistance whenever required.

• There are four assisted living facilities for seniors located in nearby communities. The facilities provide supervision and/or assistance with activities of daily living for senior citizens.
CHAPTER 5.0-COMMUNITY FACILITIES AND SERVICES

5.1 Introduction

Services and facilities provided by local government are vital elements of a community’s progress and well-being. Services include police and fire protection, water and wastewater systems, street and park maintenance and operations and solid waste disposal. Community facilities include government buildings, parks, and maintenance and storage facilities. As a part of the Master Plan, Humboldt Township’s services and facilities are described and evaluated as to their present condition and adequacy to meet present and future needs of the Township. Communities around the Upper Peninsula are facing many economic challenges. Current budget constraints limit numerous government services. Innovative and responsible spending techniques will be necessary to continue to provide a high level of services with reduced funding.

5.2 Township Facilities and Services

Township Hall

The Humboldt Township Hall is located at 244 County Road FAF, Champion, MI. The original Hall was constructed in 1936 by the Works Progress Administration (WPA). Over the years, several structural upgrades were required and a new barrier free addition was completed in 1998. The Township Hall has been maintained in excellent condition. Humboldt Township also owns a pole barn adjacent to the hall. The Township Hall houses the offices of all elected officials and the Zoning Administrator. Humboldt Twp. currently employs an assessor, administrator and a maintenance employee; all are employed on a part-time basis.

Regular meetings held at the Township Hall include the Township Board, which meets on the second Monday of each month, the Planning Commission, which meets on the fourth Monday of each month, along with the Zoning Board of Appeals (ZBA), various committees, subcommittees and senior citizen activities. The Humboldt Township Hall is available to Township residents on a rental basis and it is used as a polling place for elections.

Fire Department

In 2014 the Champion Humboldt Volunteer Fire Department was split and we formed the Humboldt Township Volunteer Fire Department. The fire hall is located at 15350 US Highway 41 in Humboldt Township. Expansion of the fire hall was completed in the Fall of 2018 and includes a 40x40 foot addition with a shower, men’s and women’s bathrooms, an office and training room.

There are currently twenty-one (21) volunteers staffing the department. The Humboldt Township Volunteer Fire Department currently maintains the following equipment:

- 1987 Ford F8000 Class A pumper Tanker 1000 gallon capacity, 1000 gpm pump rate.
- 1990 Simon-Duplex Class A pumper Tanker 1250 gallon capacity, 1250 gpm pump rate.
- 1990 Ford Tanker 2500 gal capacity, 450 gpm pump rate.
- 2019 Freightliner Tender/Pumper 2000 gallon capacity, 1250 gpm pump rate.
- 1986 Chevrolet ¾ ton Pickup Brush Truck 250 gallon capacity, 250 gpm pump rate.
5.2 Township Facilities and Services continued

Mutual aid agreements currently exist with Republic, Ishpeming and Michigamme Townships in Marquette County and the Michigan Department of Natural Resources.

Cemetery
The Humboldt Township Cemetery is located along County Road FNO, immediately north of the Township Hall. There are currently 1,355 burial spaces located within the cemetery and approximately 250 burial plots available for Humboldt Township residents at a nominal fee and are also available to the general public based on fees established by the Township Board. There is more than adequate space available at the cemetery at this time.

Library
Library materials and services are available at the Ishpeming Carnegie Public Library at 317 North Main Street in Ishpeming. The library opened April 2, 1904 and serves the City and also serves the outlying Townships of Humboldt, Tilden, Ishpeming, Ely and Champion. The Carnegie Public Library also includes a children’s library as well as a teen library.

EMS
The Emergency services board was disbanded along with the Champion/Humboldt Fire Department. Currently the Township is discussing creation of an emergency first responder service, though volunteers are needed.

Water and Wastewater System
Residents in Humboldt Township currently rely on private, on-site wells and septic systems for their potable water supply and wastewater disposal services.

Parks and Recreation
See the updated 2016 Humboldt Township 5-Year Recreation Plan, which is available for review at the Township Hall. It is also available on-line at www.humboldt.town/recreation.

Extremely Low Frequency (ELF) Transmission Site
The ELF Site was sold in 2017. The site was re-zoned to a commercial facility in 2017. The present owner is using the facility as a medical marihuana growing and processing facility. A medical marihuana facility permit is required annually through the Humboldt Township Board.

Zoning Administration
The Township’s Zoning Ordinance is administered by the Zoning Administrator. The Planning Commission is responsible for approval of Conditional Use Permits and review/recommendations concerning amendments to the Zoning Ordinance. Building permits are obtained through the Marquette County Resource Management and Development Department after a Zoning Compliance Permit has been issued by the Township Zoning Administrator.
CHAPTER 5.0-COMMUNITY FACILITIES AND SERVICES

5.2 Township Facilities and Services continued

Solid Waste Disposal/Recycling
Private contractors provide solid waste disposal services for residents in Humboldt Township. Recycling trailers are available at the Township Hall. There is no fee for recycling. More information on township recycling is available at: www.humboldt.town/sanitation.

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 and the landfill accepts both Type II (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 the Chair. Waste arriving into the landfill comes from all 22 units of government in the county.

Township Events
Humboldt Township’s annual fishing derby is held in June at the Township Hall Park and features a full day of fun and fishing for all Township residents, guests and the general public. This event coincides with the Michigan DNR’s free fishing weekend (the 2nd weekend in June).

Sleigh rides with a visit from Santa Claus are also provided for area children during the holiday season at the Township Hall.

5.3 Additional Public Facilities and Services

K-12 Education
Humboldt Township is served by the N.I.C.E. (N-National Mine, I-Ishpeming Township, C-Champion, Humboldt, Spurr Townships and E-Ely Township) Community Schools District and the Republic-Michigamme Schools. All N.I.C.E. School District instructional facilities are located within Ishpeming Township and include the Westwood High School and the Aspen Ridge Middle and Elementary School. The District is representative of four districts that consolidated in the late 1960s and early 1970s. Today, the N.I.C.E. Community School District spans more than 680 square miles. At the high school level, the N.I.C.E. District is in consortium with the Ishpeming and Negaunee School Districts to provide an alternative high school program via the Ishpeming, Negaunee and N.I.C.E. Community Education Program. The District projects 1,208 students for the 2018-2019 school year and the District has sufficient capacity to accommodate additional students.

Republic-Michigamme Schools is a Pre-Kindergarten through 12th grade school. The current school building was built in 1964 and is located at 227 Maple Street, in South Republic. It was first called Republic Central School, but was renamed Republic-Michigamme Schools when it joined with the Michigamme District in 1965. The school currently has an enrollment of about
CHAPTER 5.0-COMMUNITY FACILITIES AND SERVICES

5.3 Additional Public Facilities and Services continued

115 students and approximately 25 staff members. Republic-Michigamme Schools have been conducting classes 4 days per week since the 2004-2005 school year in an effort to reduce costs and save money. Students that reside within the Marquette-Alger Regional Education Service Agency (RESA) may attend any school in the district that offers “school of choice.”

Marquette County Road Commission
The Marquette County Road Commission (MCRC) is responsible for maintaining State, County and Local roads in Marquette County. The MCRC maintains 284 miles of Primary Roads and 988 miles of Local Roads. In addition, the MCRC maintain 169.42 miles (444 lane miles) of State Trunkline under contract with MDOT. The MCRC is also responsible for the maintenance of 93 bridges and employs approximately 48 individuals including administration and engineering staff, drivers, equipment operators and mechanics. Winter maintenance (plowing, sanding, salting) in addition to seasonal road construction, paving, mowing vegetation, and roadside ditch maintenance are the responsibility of the MCRC. MCRC Board meetings are held at the Road Commission office at 1610 North 2nd Street in the City of Ishpeming. The MCRC Republic Garage provides maintenance for roads located within Humboldt Township.

Marquette County Health Department
The Marquette County Health Department (MCHD) is located at 184 US-41 East in Negaunee Township. The mission of the MCHD is to serve people by assessing, promoting and assuring health within the community. The MCHD strives to: assure the quality and accessibility of health services, prevent epidemics and the spread of disease, promote safe and healthy behaviors and protect against environmental hazards. The MCHD offers a wide array of services including but not limited to: adolescent health promotions, breast and cervical cancer screening, cholesterol screening, communicable disease control, family planning, food service sanitation, general environmental health, immunizations, senior health screening, smoking cessation and well care, inspections and installations.

Marquette County Sheriff’s Department
The Marquette County Sheriff’s Department is located adjacent to the County Courthouse in the City of Marquette. The department is staffed by full and part-time employees, including road patrol officers, corrections officers, detectives, an under sheriff, a sheriff, and support staff.

The Department’s functions include road patrol, investigative, civil process, marine/snowmobile patrol, search and rescue, management of the 80-bed Marquette County Jail, and assistance with court activities (bailiff/transport/security). The Sheriff’s Department participates in the Upper Peninsula Substance Enforcement Team (UPSET). The Department also manages the renovated Marquette County Community Correction Detention Center (MCCCD), formerly known as Magnum Farm. MCCCD reopened in 2009 to reduce overcrowding at the Marquette County Jail and can house up to 80 minimum-security inmates.
CHAPTER 5.0-COMMUNITY FACILITIES AND SERVICES

5.3 Additional Public Facilities and Services continued

Michigan State Police
The Michigan State Police Post is located in Negaunee Township on M-28/US-41. All dispatch is handled by Central Dispatch located at the Michigan State Police Post in Negaunee. The troopers respond to incidents throughout Marquette County, as required. All of the officers are authorized to enforce the state and local laws and ordinances. The Motor Carrier Officer enforces the State’s Commercial Vehicle Code and the Fire Marshall investigates fires within the area. Statewide the number of state police posts has been cut by 53 percent, from 62 to 29, as part of a regional policing plan; 19 additional posts will be retained as detachments. Upon completion of the restructuring, seven state police posts will remain in the Upper Peninsula, located in Negaunee, Sault Ste. Marie, St. Ignace, Gladstone, Iron Mountain, Wakefield and Calumet. There will be associated detachments in outside locations at Munising, Stephenson, L'Anse, Iron River and at post facilities in Newberry and Manistique.

Enhanced 911 System
Emergency services in Marquette County including fire, police and ambulance services, are dispatched by the Marquette County Central Dispatch using an enhanced 911 system. The enhanced 911 service identifies the address from which an emergency call is made on the dispatch screen. This feature makes it easier for emergency personnel to locate a site if a caller is unable to provide directions. Central Dispatch is located within the Negaunee State Police Post, located along US-41 in Negaunee Township.

Marquette County Emergency Services
This office is responsible for multi-hazard mitigation planning, protection of public health and safety, preservation of essential services, prevention of property damage, preservation of the local economic base, and response to community disasters. A full-time director reports directly to the County Board. The Emergency Management office is located at 180 US-41 West in Negaunee Township, within the Marquette County Health Department.

Bell Hospital (UP Health System – Bell)
The original Bell Memorial Hospital was built in 1918 and was located in downtown Ishpeming. The former Bell Memorial Hospital facility was sold to a private investor and was demolished in April 2012. In September 2008, the new Bell Hospital celebrated its grand opening. The new 25 bed facility is located on 35 acres at 901 Lakeshore Drive in the City of Ishpeming. Bell Hospital has over 90 physicians on its active and consulting medical staff, with additional offices in several locations. The 130,000 square foot building is divided into two sections. The clinic features an eye care center, an in-house pharmacy and a gym, among other services, while the hospital is designed with small waiting rooms for each department and individual patient rooms. In January 2009, Bell opened the Cliffs Health Center. The new clinic provides access to physicians dedicated exclusively to Cliff Natural Resources employees and their families covered by Cliffs benefits
CHAPTER 5.0-COMMUNITY FACILITIES AND SERVICES

5.3 Additional Public Facilities and Services continued

plans. The center will provide risk appraisals, wellness programs, and disease management, as well as an on-site laboratory, pharmacy and fitness center.

Bell Hospital offers a full range of services, including: x-ray, mammography, ultrasound, laboratory, respiratory therapy, and nuclear medicine, plus general/ambulatory surgical units, a coronary care unit, and obstetrics with private birthing suites. The Surgical Center performs procedures on a daily basis, from colonoscopies, hysterectomies, gall bladder, total knee and hip replacements, plus arthroscopies, carpel tunnel, cataracts, endoscopies, hernias, tonsils, and vascular surgeries. Bell also offers rehabilitation services, including physical occupational therapy and speech therapy, with the newest addition being a Sports Health Department. Bell Behavioral Services, a department of Bell Hospital, also provides adult, child, and adolescent therapy services, plus substance abuse counseling and psychological assessment. Bell Behavioral is located at the Bell Medical Tobin Center, 97 South 4th Street in Ishpeming.

In 2013 the hospital was acquired by the Tennessee-based LifePoint Hospitals and became “UP Health System – Bell”.

Marquette General Hospital
About UP Health System - Marquette
UP Health System – Marquette (UPHS – Marquette) is a federally-designated Regional Referral Center for Michigan’s Upper Peninsula (UP). UPHS - Marquette is a Level II Trauma Center, as verified by the American College of Surgeons’ Committee on Trauma. The Joint Commission awarded the hospital the Gold Seal of Approval for its Primary Stroke Center in 2010, and Blue Cross Blue Shield of Michigan gave UPHS - Marquette its Blue Distinction Center+ Designation for Spine Surgery, Maternity Care, and Knee & Hip Replacement in 2016. The UP Health System – Marquette Cancer Care program is accredited by the American College of Surgeons Commission on Cancer, and is the only accredited cancer program in the Upper Peninsula. We have been granted designation by the National Accreditation Program for Breast Centers. UP Health System - Marquette received Chest Pain Center with Primary PCI accreditation by the Society of Cardiovascular Patient Care in December 2016.

Currently a 315-bed specialty care hospital, UPHS - Marquette is in the construction stage of a new state-of-the-art hospital, anticipated completion in 2019. As Upper Michigan’s Regional Medical Center, UPHS - Marquette recruits for employed and private practice positions in Marquette, Michigan, and similar positions at hospital-owned clinics in eight other communities throughout Michigan’s Upper Peninsula. The dynamic medical staff of more than 200 doctors upholds the highest standards of excellence. They work as a team with our 2300+ employees in caring for approximately 12,000 inpatients and more than 350,000 outpatients a year.
UP Health System – Marquette’s major services include its Heart & Vascular Institute, Cancer Center, Brain & Spine Center, Rehabilitation Center, Behavioral Health, Digestive Health, Bariatric Medicine & Weight Management Center and Women’s Health, Family Birthing, and Pediatrics Center. The hospital also provides the region’s premier services in imaging, surgery and laboratory and is home to the UP Telehealth Network, a leading telehealth network in the nation. We also service many of the communities in the Upper Peninsula of Michigan, with 42 primary and specialty care clinics spread throughout the region.

About Duke LifePoint Healthcare
Duke LifePoint Healthcare, a joint venture of Duke University Health System, Inc. and LifePoint Health (NASDAQ: LPNT), was established to build a dynamic network of hospitals and healthcare providers. The joint venture, which brings together LifePoint’s experience in community-based hospital management and Duke’s world-renowned leadership in patient safety and clinical quality systems, is strengthening and improving healthcare delivery by providing community hospitals the clinical, quality and operational resources they need to grow and prosper.

Sawyer International Airport
The Marquette County Airport operations moved from their original location on US-41/M-28 in Negaunee Township to the former K.I. Sawyer Air Force Base in September 1999. It is one of seven airports in the Upper Peninsula that provide local commuter and corporate charter service. Sawyer International Airport is served by Delta Airlines Connection to Detroit and Minneapolis and American Eagle Airlines to Chicago via Milwaukee. Jet service from Delta Airlines began in spring 2010, providing larger aircraft to improve service and enroute connections. Sawyer has a runway length of 9,071 feet.

Marquette Area Regional Educational Service Agency (MARESA)
Technical education, early childhood education, special education, and general services are provided by the Marquette Area Regional Educational Service Agency (MARESA), formerly the Marquette County Intermediate School District. Administrative offices and instructional facilities are located in the City of Marquette. The MARESA is a consortium of the public schools in Marquette County. Beyond direct and support services to students, the agency offers support services to teachers and administrators in areas such as professional development and regulatory compliance.

MARQ-TRAN
Marquette County Transit Authority (MARQ-TRAN) was created in 1985. MARQ-TRAN currently makes transit services available to all Marquette County citizens and operates both fixed-route and demand-response service to meet the public demand. MARQ-TRAN offers limited services on Sundays and holidays; and also door-to-door service only in the greater Marquette and Ishpeming-Negaunee areas. MARQTRAN operates 365 days per year and serves as the Indian Trails ticket agent. Tickets are available at MARQ-TRAN's new facility located at 1325 Commerce Drive in Marquette Township. All thirty-three (33) buses are lift equipped and accessible to persons with disabilities. In 2018 there were over 360,000 passengers served.
CHAPTER 5.0-COMMUNITY FACILITIES AND SERVICES

5.3 Additional Public Facilities and Services continued

Cable Television Service
Cable television service is currently available through Cable America to a small portion of Humboldt Township, along US-41 and M-95 and limited to adjacent areas. Residents in more remote areas of the Township utilize satellite television services.

Telephone Service
Local telephone service in Humboldt Township is provided by AT&T and long-distance service can be obtained from several carriers that serve the area. Cellular service is also available through several providers.

Electrical Service
Electrical service in Humboldt Township is provided by the Upper Peninsula Power Company (UPPCO) and WE Energies, formerly known as Wisconsin Electric.

Natural Gas Service
SEMCO Energies provides natural gas service to the Humboldt Mill location, which is utilized by the Lundin Mining Corporation as part of the Eagle Project.

Postal Service
The local United States Post Office is located along US-41 at 3953 US-41 West in Champion Township. Mail is currently processed through the United States Postal Service Regional Distribution Center in Green Bay, Wisconsin.

Northern Michigan University (NMU)
Northern Michigan University, located approximately 25 miles from Humboldt Township, within the City of Marquette, offers more than 180 programs in 32 different departments with credentialing that ranges from Certificates and Associate Degrees to Bachelors and Masters Degrees. The physical campus includes 61 buildings on the main campus of 359 acres, plus 160 acres-Longyear Forest and 206 acres-South Marquette. A 300-plus member faculty teaches the enrollment of approximately 9,400 students (2012).

Internet Service
NMU EAN (Educational Access Network) now covers most, if not all of the township and is available to students and the general public.

Other internet service is available only in some portions of Humboldt Township and service is provided by Dish Network, AT & T, Blue Sky and Hughes.Net.
NMU has deployed a Commercial Grade Band 41 LTE network in and around Humboldt Township. Following are four maps which show the approximate location of users that are serviced from their Champion, Republic, and Ely Cell Sites. The majority of the users connected to these sites live in Humboldt Township. A map with the Humboldt Township boundary is included below for generalized reference.
CHAPTER 5.0-COMMUNITY FACILITIES AND SERVICES

5.3 Additional Public Facilities and Services continued

NMU Champion Cell Site with Users

Map  Satellite
CHAPTER 5.0-COMMUNITY FACILITIES AND SERVICES

5.3 Additional Public Facilities and Services continued

NMU Republic Cell Site with Users
CHAPTER 5.0-COMMUNITY FACILITIES AND SERVICES

5.3 Additional Public Facilities and Services continued

NMU Ely Cell Site with Users
5.4 Issues and Opportunities

- The Humboldt Township Hall and ancillary buildings have been and will continue to be maintained in excellent condition.

- There are adequate burial sites and additional space available at the Township Cemetery.

- By mutual agreement, Humboldt Township Fire Department cooperates with Republic, Ishpeming and Michigamme Townships and the Michigan Dept. of Natural Resources.

- The Fire Department’s fire hall is located at 15350 US Highway 41. A 40x40 foot addition for showers, bathrooms, an office and training room was completed October 26, 2018.

- Currently the Township Board is discussing creation of an emergency first responder service. Volunteers will be needed.

- Humboldt Township has a partial ownership interest in the railroad spur to Eagle Mine’s Humboldt Mill. In the event that the Mill closes in about five (5) years, it is not clear what will become of the Township’s interest in the railroad spur.

- Humboldt and Republic Townships have entered into a preliminary agreement regarding the potential reactivation of the railroad line between Humboldt and Republic.

- In the event that significant additional and economically accessible ore body(ies) are discovered in the region near Humboldt Township (e.g. Sidnaw & Covington area), the Township might find it in their interests to take additional ownership interest in other railroad assets to facilitate ore shipment. This rail connection might be made in the same direction via Channing as the Republic connection mentioned above.

- The Township’s current (MDNR approved) 5-Year Recreation Plan is included in this Master Plan by reference.

- As the Eagle Mine and therefore also the Humboldt Mill nears the end of its useful operation, Humboldt Township will need to discuss with Lundin Mining Corporation, the disposition of the mill facilities. Simple demolition and disposal appears to be Lundin’s final or fallback position. However, if the discovery of a significant new ore body(ies) occurs within the nearby region (e.g. Sidnaw and/or Covington area), Lundin may decide to temporarily mothball the mill until new ore becomes available for processing.

Finally, Humboldt Township might want to discuss with Lundin Corporation whether there ultimately might be an alternative public use(s) for any of the mill facilities. For example: perhaps, a structure with a larger open space might be used for Road Commission winter
CHAPTER 5.0-COMMUNITY FACILITIES AND SERVICES

5.4 Issues and Opportunities

salt storage? (It is worth remembering this is the only site in the Township with utility natural gas service.)

Lundin Corporation has begun their 5-year plan for the Eagle Mine and Humboldt Mill closures now (2019).
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CHAPTER 6.0-CAPITAL IMPROVEMENTS PLAN

6.0 CAPITAL IMPROVEMENTS

6.1 Introduction

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

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

Section 65 of the MPEA states:
“‘To further the desirable future development of the local unit of government under the master plan, a planning commission, after adoption of a master plan, shall annually prepare a capital improvements program of public structures and improvements, unless the planning commission is exempted from this requirement by charter or otherwise.’

6.2 Capital Improvements Plan Elements

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

6.3 What is a Capital Improvement Plan?

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

- Any construction of a new asset (i.e., a public building, water/sanitary sewer mains, storm sewers, major/local roadways, pathways such as sidewalks and trails, recreation
6.3 What is a Capital Improvement Plan continued

facilities), an addition to rehabilitation of or extension of such a facility, provided that the cost is $5,000 or more and that the improvement will have a useful life of 5 years or more, or any equipment or facility physically attached to an existing capital improvement.

- Any purchase or replacement of major equipment to support Township services that cost $5,000 or more and will have a useful life of 3 years or more.

- Infrastructure: Basic assets, services, and installations needed for the functioning of the Township such as transportation systems, sanitary, storm, and water lines, parks, public buildings, etc., and the land affiliated with those assets, and often connected to the land.

6.4 Capital Outlay Projects vs Capital Improvement Plan Projects

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

6.5 Funding Sources

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

- Internal reserve funds or set aside funds
- Bonds and/or Other Financial Mechanisms
- State Tax act 51 Funding
- Tax Increment Funding
- Tax Millages
- Federal and State Funds (e.g. USDA Rural Development, CDBG)
- Special Assessments
- Donations
CHAPTER 6.0-CAPITAL IMPROVEMENTS PLAN

6.6 Who Must be Involved?

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

6.7 Planning Commission (PC) Role

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

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

6.8 Preparing a CIP

Define roles, policies and set a schedule

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

Policy Group

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

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

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

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

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

CIP 2019 Schedule (example)
2/5/2019 The Township Supervisor approves the schedule
3/5/2019 Policy group reviews criteria prepared by project leader and makes recommendation to the Planning Commission for adoption.
4/1/2019 Planning Commission adopts criteria
6.8 Preparing a CIP continued

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

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

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

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

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

CIP 2019 Work/Spreadsheet (example: prepared in Excel)
## 6.8 Preparing a CIP continued

### Humboldt Township: Capital Improvement Possibilities - 2019

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<td>Cemetery</td>
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<tr>
<td><strong>Totals</strong></td>
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</tr>
</tbody>
</table>
CHAPTEr 6.0-CAPITAL IMPROVEMENTS PLAN

6.8 Preparing a CIP continued

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

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

6.9 Creating a Priority System for Project Selection

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

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

The CIP needs to also include:
- Revenue projections/estimates
- Expenditure projections/estimates
- Discussion of alternative financing mechanisms
- An aim to identify specific, realistic funding sources

6.11 Public Engagement

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

6.12 Issues and Opportunities

- The Township has a fairly limited number of capital facilities.
- A Capital Improvements Planning process will help make the Township’s investments in capital facilities more transparent to its citizens.
- A Capital Improvements Plan should help the Township plan, implement and track a long-term strategy of capital investments.
- If the Eagle Mining operation comes to a close in 5-years the Township’s revenues may be affected. The CIP process could also be used to project those impacts.
CHAPTER 7.0-TRANSPORTATION

7.1 Introduction
The basic objective of a road system is to facilitate the safe and efficient movement of vehicles. Communities depend on the safe and effective movement of people and goods to sustain a functioning economy. Transportation efficiency is a key factor in decisions affecting land use and development.

Physical barriers such as rivers, lakes, swamps and rugged terrain greatly influence the location of roads and other transportation systems. Therefore, transportation routes were generally established where physical features offered the least resistance. The existing transportation facilities within Humboldt Township, along with a discussion of future transportation facilities and services are discussed in this chapter.

The Humboldt Township “Road Improvement and Prioritization Plan” (5/22/17) is incorporated into this Master Plan by reference. This document updates various elements of this Chapter.

7.2 Act 51 Road System
Michigan Public Act 51 of 1951 requires that all counties and incorporated cities and villages establish and maintain road systems under their jurisdiction, as distinct from state jurisdiction. 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 (MDOT) receive the remaining 39 percent. The roadways within Marquette County fall into one of three general classifications: State Trunklines, County Roads or City Streets. The MDOT maintains two categories of trunklines that run through Marquette County: US Highways and regular “M” (Michigan) State Trunklines.

State Trunkline Highway
The State Trunkline System includes State and Federal Highways that connect communities to other areas within the same County, State and other States. These roadways provide the highest level of traffic mobility for the traveling public. While the highway system carries more than half the total statewide traffic, Michigan has a highway network of nearly 120,000 linear miles. While the Michigan highway network represents about 10,000 miles, approximately 8 percent of the lane miles currently fall under the jurisdiction of the MDOT and these roads carry nearly 50 percent of the total vehicle miles traveled in Michigan each year. (The remaining roads are under county or local jurisdiction). State and Federal Highways are designated by the prefixes “M”, “US” and “I” respectively. Act 51 requires that the state transportation department bear all maintenance costs consistent with department standards and specifications for all state highways including those within incorporated communities.

There are two State Trunklines that traverse Humboldt Township, representing a total of 13.67 miles. US-41 travels in an east-west direction throughout the northern portion of the Township. M-95 traverses north-south intersecting in the north with M-41.
CHAPTER 7.0-TRANSPORTATION

7.2 Act 51 Road System continued

County Road System (Primary and Local)
County roads are classified as either Primary or Local. Road funding is based on the mileage of each road system. Primary roads facilitate the movement of traffic from areas of smaller population to larger population centers within the county. The Primary Road System serves as an important supportive road network for the Trunkline System. Primary and Local roads are shown on Map 7-1, Base Map. There are 11.64 miles of county primary roads and 56.64 miles of county local roads in Humboldt Township.

7.3 Seasonal Roads

A Seasonal Road System was established in Marquette County by resolution of the Marquette Board of Road Commissioners on November 12, 1990. The County Road Commission has defined a seasonal road as being a County Road, or a portion thereof, which, during the months of November through April, has minimal use by motor vehicles, does not provide sole access to a building which is used as a principal residence during the months of November through April, and is not normally maintained or snowplowed by the Marquette County Road Commission (MCRC) during the months of November through April. Humboldt Township’s Seasonal Roads, totaling approximately 27.7 miles, are shown in Table 7-1, Seasonal Roads, Humboldt Township.
The information and data provided herewith has been compiled from various sources and is used by the County of Marquette for its own general purposes. The County does not warrant or guarantee that 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.
# Chapter 7.0-Transportation

## 7.3 Seasonal Roads continued

Table 7-1  
Seasonal Roads, Humboldt Township

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*Abandoned 0.07 in 2.07

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<td>47-29</td>
<td>36</td>
<td>Entire</td>
</tr>
<tr>
<td>FR</td>
<td>0.60</td>
<td>47-29</td>
<td>36</td>
<td>Entire</td>
</tr>
<tr>
<td>FT</td>
<td>0.50</td>
<td>46-29</td>
<td>3,4</td>
<td>Entire</td>
</tr>
<tr>
<td>FU</td>
<td>1.50</td>
<td>47-29</td>
<td>30,31,32</td>
<td>Entire</td>
</tr>
<tr>
<td>FW</td>
<td>1.80</td>
<td>46-29</td>
<td>1,2</td>
<td>Black River South</td>
</tr>
</tbody>
</table>

*Adjustment -0.60, 8.98

<table>
<thead>
<tr>
<th>Name</th>
<th>Length</th>
<th>Town-Range</th>
<th>Sections</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FZ</td>
<td>0.80</td>
<td>47-29</td>
<td>6</td>
<td>Entire</td>
</tr>
</tbody>
</table>

Source: Marquette County Road Commission, 2011.
CHAPTER 7.0-TRANSPORTATION

7.4 Private Roads

The development and maintenance of all Private Roads located in Humboldt Township are provided for in accordance with the requirements set forth in Article IV, Section 414, II of the Humboldt Township Zoning Ordinance, which outlines the responsibilities of property owners located and/or residing along these roads. The Marquette County Road Commission (MCRC) may plow Private Roads, parking lots and driveways on a contractual basis, charging the private owners the cost for time and overhead.

7.5 Bridges

There are two MDOT bridges and five MCRC bridges in Humboldt Township. Approximate bridge locations for MDOT and MCRC bridges are listed in Table 7-2, Bridges, Humboldt Township.

Table 7-2
Bridges, Humboldt Township

<table>
<thead>
<tr>
<th>Road</th>
<th>Owner</th>
<th>River</th>
<th>General Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>US-41</td>
<td>MDOT</td>
<td>W. Branch Escanaba</td>
<td>T47N, R29W, Section 1, 2.2 miles east of M-95</td>
</tr>
<tr>
<td>US-41</td>
<td>MDOT</td>
<td>Halfway Creek</td>
<td>T47N, R29W, Section 3, slightly west of M-95</td>
</tr>
<tr>
<td>County Road FX</td>
<td>MCRC</td>
<td>W. Branch Escanaba</td>
<td>T47N, R29W, Section 1, 0.2 miles north of US-41</td>
</tr>
<tr>
<td>County Road FNO</td>
<td>MCRC</td>
<td>Halfway Creek</td>
<td>T47N, R29W, Section 9, 0.75 mile south of US-41</td>
</tr>
<tr>
<td>County Road G01</td>
<td>MCRC</td>
<td>Lake Lory Outlet</td>
<td>T47N, R29W, Section 14, 3 miles south of M-95</td>
</tr>
<tr>
<td>County Road 478</td>
<td>MCRC</td>
<td>Black River</td>
<td>T47N, R29W, Section 34, 1.2 miles east of CR601</td>
</tr>
<tr>
<td>County Road FW</td>
<td>MCRC</td>
<td>Black River</td>
<td>T46N, R29W, Section 2, 0.3 miles south of CR478</td>
</tr>
</tbody>
</table>

Source: Humboldt Township, 2011.

7.6 Road Condition Evaluation

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

Future state trunkline system conditions are forecasted using the Pavement Management System data in conjunction with the Road Quality Forecasting System. It is anticipated that the percentage of pavement in poor condition will decrease over the next ten years. Bridge rehabilitation and replacement is scheduled on a “Worst First” basis, assuming that funding is available for construction.

The MCRC evaluates the condition of county roads every other year using the PASER (PAvement Surface and Evaluation and Rating) system. A survey team drives the roads to inventory surface type and condition. Segments of road are rated on a scale from one to ten based on factors such as surface distress, pavement strength, and deflection. A rating of "10" indicates the pavement surface is in excellent condition, displaying no visible signs of distress, and having a quality rating of "new construction". A roadway given the rating of "1" represents a failed roadway condition with extensive loss of surface integrity.

PASER Ratings are often classified into three Asset Management Strategies which are listed and described in Table 7-3, Asset Management Strategies. The three strategies are color-coded with Red being “Poor” (1-4), Blue being “Good” (5-7), and Purple being “Excellent” (8-10) condition. The Asset management approach shifts from the traditional “Worst First” approach to one that incorporates a “Mix of Fixes.” Investing smaller amounts of money in roads that are in “Good” condition extends the life of the road. Approximately one-half of the roads in the Federal Aid eligible system are rated every year.
7.6 Road Condition Evaluation continued

[Map of Humboldt Township showing road conditions with legend for 2018 Surface Condition Rating and Asset Management Surface Rating of Roads 2017 - 2018 Map 7-2]
7.6 Road Condition Evaluation continued

As illustrated in Table 7-4, PASER Rating Summary, Humboldt Township, the vast majority of roads in Humboldt Township are unrated (76.2 percent). The roads that have been rated in the Township are in fair or poor condition. The cost to fix roads in the Township that are currently in poor or fair shape is approximately $3.9 million. The more recent (5/22/17) Road Improvement and Prioritization Plan (pg.7) puts the cost to fix failed to fair roads at $8.5 million.

### Table 7-3 Asset Management Strategies

<table>
<thead>
<tr>
<th>PASER Ratings</th>
<th>Strategy</th>
<th>Description/Maintenance Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4</td>
<td>Structural Improvement</td>
<td>Total reconstruction, resurfacing, gravel resurfacing, patching with major overlay</td>
</tr>
<tr>
<td>5-7</td>
<td>Capital Preventive Maintenance</td>
<td>Crack sealing, asphalt overlay, chip seal</td>
</tr>
<tr>
<td>8-10</td>
<td>Routine Maintenance</td>
<td>Street sweeping, shoulder maintenance</td>
</tr>
</tbody>
</table>

### Table 7-4 PASER Rating Summary, Humboldt Township

<table>
<thead>
<tr>
<th>Condition Rating</th>
<th>Fix Needed</th>
<th>Miles</th>
<th>% of System</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Failed)</td>
<td>Reconstruction</td>
<td>1.457</td>
<td>2.5%</td>
<td>$509,950.00</td>
</tr>
<tr>
<td>2 (Very Poor)</td>
<td>Reconstruction</td>
<td>3.305</td>
<td>5.7%</td>
<td>$1,156,750.00</td>
</tr>
<tr>
<td>3 (Poor)</td>
<td>Reconstruction</td>
<td>3.648</td>
<td>6.3%</td>
<td>$1,276,800.00</td>
</tr>
<tr>
<td>4 (Fair)</td>
<td>Overlay</td>
<td>4.26</td>
<td>7.3%</td>
<td>$745,500.00</td>
</tr>
<tr>
<td>5 (Fair)</td>
<td>Overlay</td>
<td>1.14</td>
<td>2.0%</td>
<td>$199,500.00</td>
</tr>
<tr>
<td>6 (Good)</td>
<td>Chip Seal</td>
<td>--</td>
<td>0.0%</td>
<td>--</td>
</tr>
<tr>
<td>7 (Good)</td>
<td>Crack Filling</td>
<td>--</td>
<td>0.0%</td>
<td>--</td>
</tr>
<tr>
<td>8, 9, 10 (Excellent)</td>
<td>New</td>
<td>--</td>
<td>0.0%</td>
<td>--</td>
</tr>
<tr>
<td>Unrated</td>
<td>NA</td>
<td>44.248</td>
<td>76.2%</td>
<td>--</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>--</td>
<td><strong>58.058</strong></td>
<td><strong>100%</strong></td>
<td><strong>$3,888,500.00</strong></td>
</tr>
</tbody>
</table>

Source: MCRC, 2011.
CHAPTER 7.0-TRANSPORTATION

7.7 Financing

Local Funding
The Marquette County Road Commission allocates a certain amount of funds each year towards improvements to the local road system in each of the communities and/or townships, primarily utilizing monies from the Michigan Transportation Fund (MTF). The percentage of local road improvement funding allocated to each township and/or community varies year to year depending on the financial condition of the Road Commission. For each local road project, the community is required to pay 60 percent of the road construction cost, with the County Road Commission paying for the 40 percent balance. The Marquette County Road Commission has experienced sharp budget cuts in recent years and therefore has had limited funding to address maintenance and repair problems with the local county road system.

Michigan Transportation Fund (MTF)
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 (MTF), established under Public Act 51 of 1951. The formula uses factors such as road classification, road mileage, and population to distribute funds accordingly. A percentage of the funding received by each road commission is also set aside for engineering, snow removal, and urban roads. For 2011, the Marquette County Road Commission was allocated a total of $5,507,678 from the MTF, compared to $5,481,647 received in 2010. In 2016 the approved MTF amount was $5,478,588.

Michigan Transportation Economic Development Fund (TEDF)
This program was established in 1987 by the Michigan Legislature. The purpose of the program is to assist with road improvements that will attract industry and create and retain jobs in Michigan. The program provides funding to allow the state, local agencies and businesses to work together to meet the often-extensive urgent demands placed upon the transportation system by economic development. There are five separate funding categories, four of which are applicable to Marquette County. Two programs are of a competitive nature and two are a formula allocation to the road commission.

Category A: Economic Development Road Projects: These are road projects related to target industry development and redevelopment opportunities. Eligible projects are those that address a transportation need that is critical to an economic development project in one of the following target industries: manufacturing, high technology research, agriculture/food research, forestry, mining, tourism and office centers. This is a statewide competitive grant program.

Category D: Secondary All-Season Road System: This category provides road improvements in rural counties to create an all-season road network. These funds can only be used for construction and not for right-of-way acquisition or engineering, which are not eligible costs. This is a formula based program that benefits the Marquette County Road Commission.
CHAPTER 7.0-TRANSPORTATION

7.7 Financing continued

Michigan Transportation Economic Development Fund (TEDF) continued

Category E:  Forest Roads:  This category provides for construction or reconstruction of roads essential to the development of commercial forests in Michigan.  Eligible recipients are the county road commissions in each county in which a National Lakeshore or National Park is located or in which 34 percent or more of the land is commercial forestland.  This is another formula based program that benefits the Marquette County Road Commission.

Category F:  Cities in Rural Counties:  This category addresses road and street improvements within Small Urban Areas designed to create continuity with the established all-season road network.  The road improvement project must be to a Federal-Aid road (arterial or a major or minor collector).  This is a statewide competitive grant program.

Federal assistance

Federal assistance is supported mainly through motor fuel taxes.  Construction and repair costs associated with state trunkline systems are generated from these motor fuel taxes.  The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), and its reauthorization as the Transportation Equity Act for the 21st Century (TEA-21), has resulted in allocation changes that have benefited Michigan.  Under the concept of “intermodalism,” transportation planning is expected to encourage capital investments that include integrated modes of transportation which improve the reliability, safety, usability, and attractiveness of the regional public transportation system, including walking paths and bicycle lanes.

7.8 Road Improvements

Humboldt Township currently levies a road millage of 0.9487 mls for road improvements. Humboldt Township committed to making a number of road improvements in 2019. The following road repair work has been put out for bids; HMA Resurfacing:  CR FN CR FA to US41/M28, CR FA CR FNO to M95, CR FB CR FH to CR FNO, CR FH CR FB to M95 and Humboldt Township Driveway, Flex-patch:  CR FNO, US41to CR FB, and Chip Seal & Fog Seal:  CR FNO, US-41 to CR FB. According to the MCRC, there have not been any paving projects completed in Humboldt Township since 1991. Several roads have been re-graveled and minor culvert replacements have occurred when financially possible.

County Road 601 was reconstructed and widened in 2012. Funding for the project was provided by the Michigan Transportation Economic Development Fund and Lundin Mining Corporation’s subsidiary Eagle Mine.  County Road 601 provides direct access to the Humboldt Mill and was a narrow road not built to all-season standards. In addition to the widening and reconstruction, a steep hill was flattened, and two sharp curves were realigned to improve traffic safety and allow year-round access. Due to the anticipated increase in commercial traffic generated between the Eagle Mine and Humboldt Mill, M-95 was widened at its intersection with County Road 601 and a center left-turn lane was added to accommodate southbound M-95 traffic turning east onto County Road 601 and to improve safety at the intersection.
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7.9 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. Marq-Tran offers door to door service in the Ishpeming-Negaunee area, the greater Marquette area and the Gwinn-Little Lake-KI Sawyer area. All thirty-three (33) buses are lift equipped and accessible to persons with disabilities. In 2018 there were over 360,000 passengers served.

7.10 Intercity Transportation

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 Township. 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.

7.11 Rail Service

There are active rail lines traversing Humboldt Township. A Canadian National rail line passes through Humboldt Township from east to west; rail traffic travels daily in the morning from Sault Ste. Marie to L’Anse and returns from L’Anse back to Sault Ste. Marie in the afternoon. Rail service upgrades included rail reinstatement from the Humboldt Mill, crossing US-41 west to the switch north of Koski’s Korner (north of US-41). There maybe a need for an additional rail siding along the former Mesabi industrially zoned property on County Road FN.

Humboldt Township officials acquired and restored a section of abandoned railroad grade which has been utilized for industrial purposes, including shipping Eagle Mine ore from the Humboldt Mill to Sudbury, Ontario. Humboldt Township acquired the property known as the Humboldt Mill Grade in perpetuity for the benefit of economic development for Humboldt Township and western Marquette County. The length of the former Lake Superior & Ishpeming Railroad line involved is less than two miles. It was previously used as part of the Iron Ore Heritage Trail, which was relocated. The associated land parcel contains a total of about 35 acres. The spur begins at the property line of the Eagle Mine’s Humboldt Mill, and moves west across M-95, then north across US-41, before curving to the east to connect with the Canadian National Railroad line at Humboldt Junction.

Cliffs Natural Resources owned the rail spur from 1952 until 2004. The following year, 2005, the rails were removed and the land was managed under terms of an interim banking agreement via the National Transportation Board. That agreement allows a third party to reactivate the rail line, if Cliffs Natural Resources agrees, and Humboldt Township achieved its reactivation.

Humboldt and Republic Townships have entered into a preliminary agreement regarding the potential reactivation of the railroad line between Humboldt and Republic.
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7.11 Rail Service continued
In the event that significant additional and economically accessible ore body(ies) are discovered in the region near Humboldt Township (e.g. Sidnaw & Covington area), the Township might find it in their interests to take additional ownership interest in other railroad assets to facilitate ore shipment. This rail connection might be made in the same direction via Channing as the Republic connection mentioned above.

7.12 Air Transportation
The Marquette County Airport operations moved from its location in Negaunee Township to the former K.I. Sawyer Air Force Base in September 1999. It is one of six airports in the Upper Peninsula and it is the only U.P. airport that has an operating air traffic control tower. Sawyer International Airport is classified as a "Primary, Non-Hub, Commercial Airport" Facility. Primary Airports have more than 10,000 enplanements within a year. Charter air service is available at Sawyer International. The airport offers daily jet service to Detroit and Chicago.

7.13 Non-motorized Transportation Facilities
In recent years, the construction of Non-Motorized Facilities has increased in response to public interest. Walking (walking is number one), hiking, bicycling and running/jogging are among the top ten individual exercise activities according to a national survey¹. Alternate modes of transportation are encouraged and made safer by facilities such as bike lanes and walking paths. Ten percent of each state’s Surface Transportation Program (STP) funding is set aside for transportation enhancement projects. The Transportation Enhancement Program (TEP) is designed to strengthen cultural, aesthetic and environmental aspects of the transportation system. One category of funding for the TEP is Non-Motorized Facilities. Funding is available for bicycle and pedestrian facilities, preservation of abandoned railway corridors and pedestrian and bicycle safety and educational activities. There are several Multi-Use Trails traversing Humboldt Township.

7.14 Complete Streets
Michigan Public Act 135, defines complete streets as “...roadways planned, designed, and constructed to provide appropriate access to all legal users in a manner that promotes safe and efficient movement of people and goods whether by car, truck, transit, assistive devices, foot or bicycle.” Communities across the United States are instituting policies to “complete the streets” and provide “roads for all modes.” All modes of transportation may not be appropriate for all of the roads in a community. Establishing a complete streets policy helps to ensure that transportation planners and engineers consistently design the entire roadway with all users in mind, including cyclists, public transportation vehicles as well as riders and pedestrians of all ages and abilities.

¹ National Sporting Goods Association, Sports Participation in 2017
CHAPTER 7.0-TRANSPORTATION

7.14 Complete Streets continued

Complete streets policies can improve safety for all users. A Federal Highway Administration review found that streets designed with sidewalks, raised medians, improved bus stop placement, traffic-calming measures and treatments for disabled travelers improved safety. Complete streets also encourage walking and bicycling for health and address climate change and oil dependence. These policies may also provide transportation options for residents who do not drive, including children under 16, the elderly, disabled or low income residents.

Complete streets also play an important role in developing a livable community; providing connections to key destinations is essential. There is no one design recommendation for complete streets. Components that may be found on a complete street include sidewalks, bike lanes (or wide paved shoulders), special bus lanes, comfortable and accessible public transportation stops, frequent crossing opportunities, median islands, accessible pedestrian signals and curb extensions.

One of the issues often mentioned when discussing implementation of a complete streets policy is concern for the additional costs. Careful planning can minimize costs. When complete streets policies are in place, engineers can incorporate a variety of facilities into road projects during the planning and design process that will accommodate various users.

MDOT is currently using context sensitive solutions for their road projects, which creates road projects that blend with the current aesthetics and infrastructure in a community. Humboldt Township may have the opportunity to work with MDOT and the MCRC to plan for and implement improvements related to non-motorized facilities, transit, carpooling and commercial vehicle infrastructure.

7.15 Access Management

The MDOT publication entitled Reducing Traffic Congestion and Improving Traffic Safety in Michigan Communities: The Access Management Guidebook defines access management as follows: “Access management is a set of proven techniques that can help reduce traffic congestion, preserve the flow of traffic, improve traffic safety, prevent crashes, preserve existing road capacity and preserve investment in roads by managing the location, design and type of access to property.”

In 2004, the Cities of Marquette, Negaunee and Ishpeming as well as Chocolay, Marquette, Negaunee, Ishpeming and Ely Townships worked with CUPPAD and MDOT to create an access management plan, an integrated access management review process and ordinance regulations for the US-41/M-28 corridor. The project was initiated because of the concern that safety and capacity along the trunklines had suffered due to poor access management and accommodation of local traffic. Humboldt Township declined to participate in the original 2004 planning process,
CHAPTER 7.0-TRANSPORTATION

7.15 Access Management continued

however, due to concerns about future development along the US-41/M-28 corridor and in the interest of providing for a safe transportation network, Humboldt Township took action to adopt a Memorandum of Understanding recognizing the need to participate in a coordinated planning effort for the US-41/M-28 corridor in 2012.

The US-41/M-28 Access Management Action Plan sets forth an analysis of beneficial safety improvements along the US-41/M-28 corridor and identifies proposed driveway closures, consolidations and alternative access options. Therefore, those elements of the US-41/M-28 Access Management Action Plan that apply within Humboldt Township are hereby adopted by reference as the guide for future corridor and access management improvements within this jurisdiction. The Planning Area is defined as “1,000 feet on both sides of the centerline of US-41/M-28 from the US-41/M-28 intersection in the east to the US-41/M-95 intersection in the west.” The US-41/M-28 Access Management Action Plan will need to be amended to include specific recommendations pertaining to the corridor located within Humboldt Township.

In order to implement the US-41/M-28 Access Management Action Plan and the Memorandum of Understanding all of the participating jurisdictions signed to be a part of the team leading to the development of the US-41/M-28 Access Management Action Plan. To carry out the intent of the Plan, the Zoning Ordinance of participating jurisdictions were amended to reflect a uniform approach to access management advocated by the Plan. Those zoning amendments are based on the model access management ordinance sanctioned and promoted by the MDOT in the Access Management Guidebook published by the MDOT in 2001.

In addition, implementation of the recommendations in the US-41/M-28 Access Management Action Plan will be further facilitated by active participation by Humboldt Township in future corridor site plan review meetings as they relate to a particular site plan pending within Humboldt Township or an adjoining community. These meetings will involve review of access management issues and corridor improvement issues related to a particular site plan. These joint meetings will include representatives from Humboldt Township, CUPPAD, MDOT, Marquette County Resource Management and Development and the other corridor communities.

7.16 County Road 595

County Road 595 was the roughly 22-mile proposed north-south route from the Triple A Road in Michigamme Township to the intersection of US-41 with County Road FY located within Humboldt Township. Draft documents from the MCRC indicate that the dual purpose of the route was “to construct a primary north-south road that (1) connects and improves emergency, commercial, industrial and recreational access to a somewhat isolated, but key, industrial, commercial and recreational area in northwest Marquette County to US-41, and (2) to reduce truck travel from this area through Marquette County’s population centers.”
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7.16 County Road 595 continued

Humboldt Township indicated several needs for the road project. The County Road 595 project would enhance public safety by rerouting truck traffic away from existing residential areas. The project was considered essential to the industrial development of Humboldt Township and also to facilitate and enhance the protection of Township residents’ health, safety and welfare.

The executive summary of the application cites that the County Road 595 project was necessary for the mining, timber, aggregate and recreation industries as well as for the emergency services within Marquette County. One of the economic benefits of County Road 595 would be the overall reduction of travel distance required to access these activities in northwest Marquette County by replacing the existing seasonal and circuitous current routes.

The project was expected to impact approximately 23.25 acres of wetlands. Road commission officials intended to mitigate the wetlands impacts as required at five sites, located in three of the four watersheds involved in the project. Some stream restoration work was also planned, which was expected to increase the benefits to the ecosystems involved. The proposed CR 595 was to be a public road, with all of the associated benefits that go with that designation.

In the fall of 2011, the MCRC voted unanimously to move forward with securing environmental permits for the construction of County Road 595. The MCRC previously held several public meetings and received public comment regarding the proposed route.

The Humboldt Township Board went on record as supporting the Eagle Mine project and by resolution endorsed the proposed County Road 595, with the stipulation that the location of the proposed route would not be located, nor impact Township residents currently residing within Humboldt Township along the existing Wolf Lake Road and County Road FX right-of-way. This resolution was initially adopted by the Township Board shortly after the announcement of Kennecott Mineral Co.’s plan proposed for the Eagle Project and once again ratified by the Humboldt Township Board at the February 2012 regular meeting. This resolution was to assure that the public health, safety and welfare of the residents residing in the established residential areas located along Wolf Lake Road and the County Road FX right-of-way situated within Humboldt Township would be protected.

7.17 Issues and Opportunities

- Two State Trunklines traverse Humboldt Township; US-41 travels in an east-west direction and M-95 travels a north-south route ending at its intersection with US-41.

- Given the current fiscal situation, the Marquette County Road Commission appears to have limited ability to fund its 40 percent match required for road improvement projects within Humboldt Township.
CHAPTER 7.0-TRANSPORTATION

7.17 Issues and Opportunities continued

- Humboldt Township currently levies a millage of 3 mils for road improvements.

- All of the roads in Humboldt Township that have been rated using the PAvement Surface Evaluation Rating (PASER) system are considered to be in fair or poor condition. The estimated cost to fix these roads is approximately $8.5 million.

- The widening and reconstruction of County Road 601 has improved traffic safety and allowed year-round access. Additional improvements to M-95 has safely accommodated the increase in commercial traffic between the Eagle Mine and Humboldt Mill.

- Humboldt Township will continue to review PASER ratings and consider a “Mix of Fixes” asset management approach to road improvements. The Board should consider developing a 5-year project priority list and update it annually.

- Humboldt Township has adopted Zoning Ordinance regulations for private roads and those requirements should be utilized to address all proposed private roads within the Township.

- Rail service upgrades included rail reinstatement initiating at the Humboldt Mill, crossing US-41, then east to the switch north of Koski’s Korner (north of US-41). There may be a need for an additional rail siding along the former Mesabi industrially zoned property on County Road FN.

- Humboldt Township acquired the Humboldt Mill Grade to benefit economic development within the Township and western Marquette County.

- Humboldt Township has a partial ownership interest in the railroad spur to Eagle Mine’s Humboldt Mill. In the event that the Mill closes in about five (5) years, it is not clear what will become of the Township’s interest in the railroad spur.

- Humboldt and Republic Townships have entered into a preliminary agreement regarding the potential reactivation of the railroad line between Humboldt and Republic.

- In the event that significant additional and economically accessible ore body(ies) are discovered in the region near Humboldt Township (e.g. Sidnaw & Covington area), the Township might find it in their interests to take additional ownership interest in other railroad assets to facilitate ore shipment(s). This rail connection might be made in the same direction via Channing as the Republic connection mentioned above.

- Air service is available at Sawyer International Airport.
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7.17 Issues and Opportunities continued

- There are several existing Multi-Use Trails currently traversing Humboldt Township.

- The Humboldt Township Board supported the development of County Road 595 in accordance with the resolutions adopted to protect established residential districts along any proposed routes. This project was also intended to enhance the public safety by rerouting truck traffic away from existing residential areas and the project was intended to promote a critical link to the future industrial development of the Township.

- The Humboldt Township “Road Improvement and Prioritization Plan” (5/22/17) is incorporated into this Master Plan by reference. Recommendations are included.
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CHAPTER 8.0-NATURAL FEATURES

8.1 Introduction

A direct relationship exists between an area’s natural features and the development that occurs in that area. Often, communities are established, or grow and shrink based on one or more natural features and resources. In the case of the Humboldt Township and neighboring communities, the presence of iron ore was critical to the development of the region. Mining and logging were mainstays of the early local economy in Humboldt Township and throughout Marquette County. These natural features are often interrelated and disturbance in one area has the potential to affect other areas. An understanding of these relationships is important for effective planning. More recently nickel and copper were discovered in the region.

8.2 Geology and Bedrock Geology

Bedrock is the solid material that forms the earth’s crust. Bedrock geology consists of solid rock formations found below the soil formed during the early periods of the earth’s development that form the earth’s crust. These formations have undergone extensive folding, uplifting, eroding and weathering during the millions of years that have since passed and are now overlain by surface geology and soil.

Data from the Michigan Department of Environmental Quality (MDEQ) - Geologic Survey Division, 1987 illustrates two groups of rock in Humboldt Township; Precambrian and Paleozoic. Much of the bedrock of Humboldt Township is buried beneath glacial drifts, but data from outcrop observations, drilling and mining records exists to illustrate subsurface bedrock. Precambrian rocks are the oldest rocks, generally more than 600 million years old and are part of the Laurentian Shield. The Laurentian Shield is a mass of bedrock covering much of Canada and dipping into the United States and cuts diagonally across Marquette County. Paleozoic bedrock is the youngest bedrock in the area, at 425-600 million years old.

Among the primary factors that make geology important to a community’s development is the ability to supply groundwater. The quality and quantity of groundwater are influenced by the types of bedrock in which it is found and also influenced by the layers through which the water passes before it is extracted. Certain types of bedrock increase the potential for groundwater contamination, particularly when the bedrock is close to the surface. When bedrock is close to the surface, the opportunity to filter out contaminants is diminished. This situation increases the potential for polluted runoff to enter the groundwater table. Bedrock at or near the surface also increases construction costs. Buildings must be constructed without basements and in some cases, blasting is required for utility and street construction or even for building site preparation. Bedrock in Marquette County has also provided substantial mineral deposits, as observed in Humboldt, Republic, Richmond, Tilden and Michigamme Townships.
CHAPTER 8.0-NATURAL FEATURES

8.2 Geology and Bedrock Geology continued

The Negaunee Iron Formation, Archean Granite and Gneissic and the Michigamme Formation are all types of Precambrian bedrock. As shown on Map 8-1, Bedrock Geology Map, the vast majority of Humboldt Township’s Bedrock Geology consists of the Archean Granite and Gneissic group. The hard crystalline Precambrian rock is a poor aquifer. Paleozoic rocks are generally better producers of ground water; there are no Paleozoic rock formations underlying Humboldt Township. These ancient igneous and metamorphic rocks contain granite, gneiss and iron ore. In upland areas, many wells will fail to obtain enough potable water for domestic purposes.
Map 8-1 Bedrock Geology

Legend

Bedrock Geology

- ARCHEAN GRANITE & GNEISSIC
- MICHIGAMME FORMATION
- NEGAUNEE IRON FORMATION

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8.3 Surface Geology

Surface geology is an important factor in terms of the ability to filter contaminants, the ability of the soil to support structures, roads, etc. and the suitability of a site for various uses. Immense masses of ice passed through the region, removing soft surface materials. Melting glaciers left materials behind. The glacial deposits occurred in one of three ways: materials (till) deposited directly by glaciers, with little or no further movement as a result of surface water; materials deposited by moving streams, or outwash; and materials deposited by glacial lakes, known as lake deposits. End or recessional moraines are a type of till, deposited at the edge of a glacier, or left as the glacier melts and recedes.

Areas of till/bedrock may lead to issues associated with development including shallow depth to bedrock, poor groundwater source and inadequacy for septic systems. Areas where rock outcrops are present from thin glacial drift have been accessible for mineral exploration and have made extraction economical. Communities, such as Humboldt, have developed in many such areas. Surface geology also ties in closely with surface water flow, in that infiltration and consequently runoff are directly related to the permeability of the underlying materials. This factor governs the amount of water available for streams and the development and size of drainage patterns (Source: Marquette County Comprehensive Plan).

Map 8-2, Surface Geology Map, displays the types of Surface Geology within Humboldt Township using data from the Michigan Natural Features Inventory and Michigan Department of Natural Resources, 1998. By categorizing the deposits into general classes, certain assumptions about the material can be made. Humboldt Township’s surface geology is identified as coarse textured glacial till, medium textured glacial till, glacial outwash sand and gravel and postglacial alluvium as well as thin to discontinuous glacial till over bedrock.

**Thin to Discontinuous Glacial Till over Bedrock, Medium-textured Glacial Till, and Coarse-textured Glacial Till**

Glacial till is unsorted or poorly sorted un-stratified drift, deposited directly underneath a glacier without subsequent reworking by wind or water. It is a very heterogeneous material, ranging from clay fines to large boulders; thickness may range from six-sixty feet. Various deposits are distributed around the county.

There are areas where very thin glacial till (less than six feet thick) covers Precambrian bedrock. These areas generally have high relief, as much of the glacial deposition was literally washed off the rocky crests by melting ice. Large areas in this category occur in the central and northern parts of the county.
CHAPTER 8.0-NATURAL FEATURES

8.3 Surface Geology continued

Glacial Outwash Sand and Gravel and Postglacial Alluvium
These formations consist of stratified sand and gravel deposited by glacial melt-water streams and flows “washed out” in front of the glacier. They are commonly very permeable and range from ten feet to as much as 300 feet in depth. Outwash deposits are composed of sand and gravel, with few fines. Rough knobby areas, where rock outcrops form thin glacial drift, have been accessible for mineral exploration and have made extraction economical.

End Moraines of Coarse-textured Till and End Moraines of Medium-textured Till
The majority of moraines in Humboldt Township are end moraines from the Wisconsin Period. As glaciers receded, a series of hills were left behind. These hills formed when the melting rate equaled the forward advance rate, creating a “conveyor belt” effect. There are several types of moraines. Lateral moraines occur along the ice front edges. Ground moraines can often be confused with till plains and are a result of deposition of materials carried within the ice after retreat. Often times true identity of many glacial features are masked, such as when a moraine from one glacial retreat is modified or buried by another advance. Permeability is quite variable, being high in outwash areas and considerably lower near clay and till deposits. Thickness can reach as much as 400 feet.

Peat and Muck
Since the passing of the glaciers, organic deposition has occurred in many of the shallow, slow-moving surface water bodies. The result has been the formation of peat bogs and mucks along riverbanks. These materials are basically saturated organic materials mixed with small amounts of mineral soils and have the greatest limitations for development.

Surface geology also ties in closely with surface water flow, in that infiltration and consequently runoff are directly related to the permeability of the underlying materials, this factor governs the amount of water available for streams and the development and size of drainage patterns. Groundwater is also governed by the amount (thickness and area) and permeability of the sub-strata. Developed areas, which lie on top of impermeable Precambrian bedrock, rely totally on glacial drift for the supply and recharge of water systems. Outwash deposits, for example, are the best aquifers, as they have high permeability and can be quite extensive. Moraines and tills are generally poorer producers, containing impermeable clay. Glacial deposits are also an important source of gravel. Major users of this resource include construction companies and the Marquette County Road Commission. (Source: Marquette County Comprehensive Plan).
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8.4 Soils

A firm understanding and knowledge of the soil types, soil suitability and soil permeability within Humboldt Township is useful when considering future land use development. For example, some soil types limit infiltration of fluids, presenting limitations to the use of on-site wastewater treatment systems. These limitations can be very important to developers given that Humboldt Township relies upon on-site wastewater treatment systems. Soil is the surface layer of the land that was formed through the interaction of many factors. Physical, chemical and mineral composition of the parent material combined with climate, plant and animal life on and in the soil are major factors. Other factors include time and relief, or lay of the land.

Parent materials in Humboldt Township are the result of glacial deposition or outwash from meltwater. Glaciers moving over bedrock material, whose massive pressure and slow movement turn the solid rock into extremely fine-ground material. The different types of soil created from the contractions of these glacial sheets were deposited throughout the area and scattered patterns of soil types are displayed throughout Humboldt Township.

Soils are grouped into associations based on common characteristics such as drainage, slope, and texture. The soils in these associations respond similarly to the various uses to which they may be subjected. Development should be planned in such a way as to take into account the suitability of the soils in the project area. Residential subdivisions should avoid areas of shallow and/or poorly drained soils or areas where the water table is close to the surface, since such soils are unsuitable for septic drain fields and are problematic for roads. Limitations can sometimes be overcome by careful applications of technology. Technological tampering with natural features should be done carefully and immediate and long-range consequences need to be considered and steps taken to minimize negative results. A study and analysis of soils in Humboldt Township is one of the first steps in locating suitable areas for development.

Soil Types found within Humboldt Township are identified in Map 8-3, General Soils Map, and defined in Table 8-1, General Soil Associations, Humboldt Township, by the United States Department of Agriculture (USDA) and the Natural Resources Conservation Service (NRCS) in the Soil Survey of Marquette County (2007). A Soil Association is made up of one or more soil types, having similar characteristics. By relating the characteristics of each type with its proportion of the association, an interpretation is made of the soil suitability for various uses. Development limitations, including slopes greater than 10 percent and hydric soils in Humboldt Township are identified in Map 8-4, Critical Soils and Slopes Map. Slopes greater than 10 percent are mainly located in the northern third of Humboldt Township, near the Humboldt Mill site and hydric soils are scattered throughout Humboldt Township. Hydric soils are soils that formed under conditions of saturation, flooding or ponding long enough during the growing season to have anaerobic conditions in the upper part and may restrict development.
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### Table 8-1
General Soil Associations, Humboldt Township

<table>
<thead>
<tr>
<th>Association</th>
<th>Description</th>
<th>Management Concerns</th>
<th>Management Considerations</th>
<th>Sanitary Facilities</th>
</tr>
</thead>
</table>
| Keewaydin-Michigamme-Rock Outcrop Association | Rock outcrop and very deep and moderately deep, nearly level to very hilly, well drained soils; on bedrock controlled moraines | Erosion hazard, equipment limitations and plant competition | • Building roads on the contour, installing water bars and seeding logging roads to help prevent excessive soil loss  
• Special logging methods, such as yarding with a cable may be necessary in the very hilly areas  
• Selective cutting can reduce the wind throw hazard  
• Site preparation helps to control plant competition. | • Severe limitations for septic tank absorption fields due to slope, poor filtration and depth to rock  
• *See footnote* |
| Pits-Dumps-Mike-Slickens Association | On site investigation is needed to determine the suitability for specific uses | | | |
| Kalkaska-Carbondale-Deford Association | Very deep, nearly level to very hilly, somewhat excessively drained, very poorly drained and poorly drained, sandy and mucky soils; on outwash plains and outwash terraces | Erosion hazard, equipment limitations, seedling mortality, wind throw hazard and plant competition | • Building roads on the contour, installing water bars and seeding logging roads to help prevent excessive soil loss  
• Access is easiest during the winter. Year round logging roads require a gravel base. Culverts are needed to maintain the natural drainage system  
• Because of wetness, seedling mortality and plant competition, trees are generally not planted on the Carbondale and Deford soils  
• Planting special nursery stock or containerized seedlings can reduce the seedling mortality rate in areas of Kalkaska soils  
• Harvest methods that do not leave the remaining trees widely spaced can reduce the wind throw hazard. | • Severe limitations for septic tank absorption fields due to slope and poor filtration  
• *See footnote* |

* This is the dominant soil condition but does not eliminate the need for onsite investigation.
### Table 8-1
**General Soil Associations, Humboldt Township continued**

<table>
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<th>Description</th>
<th>Management Concerns</th>
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</tr>
</thead>
</table>
| Pence Association      | Very deep, nearly level to very hilly, somewhat excessively drained, sandy soils; on outwash plains and outwash terraces | Erosion hazards and equipment limitations | • Building roads on the contour, installing water bars and seeding logging roads to help prevent excessive soil loss  
• Special care is needed in laying out logging roads and operating logging equipment in the very hilly areas. The grade should be kept as low as possible. | • Severe limitations for septic tank absorption fields due to slope and poor filtration  
• *See footnote                                                                 |
| Rubicon-Keweenaw       | Very deep, gently undulating to very hilly, excessively drained and well drained, sandy soils; on disintegration moraines | Erosion hazard, equipment limitations and plant competition | • Building logging roads on the contour, installing water bars and culverts and seeding logging roads help to prevent excessive soil loss in the very hilly areas  
• Because loose sand can interfere with the traction of wheeled equipment, logging roads should be stabilized  
• Special care is needed in laying out logging roads and operating logging equipment in the very hilly areas. The grade should be kept as low as possible  
• Site preparation helps to control plant competition. | • Slight to severe limitations for septic tank absorption fields due to slope and poor filtration  
• *See footnote                                                                 |
| Sagola-Rubicon         | Very deep, gently undulating to very hilly, well drained and excessively drained, loamy and sandy soils; on disintegration moraines | Equipment limitations, seedling mortality and plant competition | • Year round logging roads should be stabilized  
• Planting special nursery stock or containerized seedlings can reduce the seedling mortality rate in areas of Rubicon soils  
• Site preparation to control plant competition | • Slight to severe limitations for septic tank absorption fields due to poor filtration  
• *See footnote                                                                 |
**CHAPTER 8.0-NATURAL FEATURES**

**Table 8-1**  
*General Soil Associations, Humboldt Township continued*

<table>
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</thead>
</table>
| Kalkaska-Ishpeming Rock Outcrop Association | Rock outcrop very deep, & moderately deep, gently rolling to very hilly, somewhat excessively drained, sandy soils; on bedrock controlled moraines | Erosion hazard, equipment limitations, and seedling mortality | • Building roads on the contour, installing water bars, and seeding logging roads help to prevent excessive soil loss.  
• Special logging methods, such as yarding with a cable, may be necessary in the very hilly areas.  
• Planting special nursery stock or containerized seedlings can reduce the seedling mortality rate. | • Severe limitations for septic tank absorption fields due to slopes and poor filtration.  
• *See footnote* |
| Sundog-Minocqua-Channing Association | Very deep, nearly level to very hilly, well drained, poorly drained, and somewhat poorly drained, loamy soils; on outwash plains and outwash terraces | Erosion hazard, equipment limitations, seedling mortality, wind throw hazard, and plant competition | • Building roads on the contour, installing water bars, and seeding logging roads help to prevent excessive soil loss.  
• The seasonal high water table in areas of the Minocqua and Channing soils restricts the use of equipment to midsummer, when the soils are dry, or midwinter, when there is adequate snow cover. Year-round logging roads require a gravel base. Culverts are needed to maintain the natural drainage system.  
• Special care is needed in laying out logging roads and operating logging equipment in the very hilly areas of the Sundog soils. The grade should be kept as low as possible.  
• Because of wetness, seedling mortality, and plant competition, trees are generally not planted on the Minocqua and Channing soils.  
• Harvest methods that do not leave the remaining trees widely spaced reduce the wind throw hazard in areas of the Minocqua and Channing soils. | • Severe limitations for septic tank absorption fields due to wetness, ponding and poor filtration.  
• *See footnote* |

* This is the dominant soil condition but does not eliminate the need for onsite investigation.
CHAPTER 8.0-NATURAL FEATURES

Table 8-1
General Soil Associations, Humboldt Township continued

<table>
<thead>
<tr>
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<th>Management Concerns</th>
<th>Management Considerations</th>
<th>Sanitary Facilities</th>
</tr>
</thead>
</table>
| Goodman-Sundog-Greenwood Association | Very deep, nearly level to very hilly, well drained, loamy soils and very poorly drained, peaty soils; on disintegration moraines | Erosion hazard, equipment limitations, and plant competition                                                            | • Building logging roads on the contour, installing water bars and culverts, and seeding logging roads help to prevent excessive soil loss in the very hilly areas.  
• Special care is needed in laying out logging roads and operating logging equipment in the very hilly areas. The grade should be kept as low as possible.  
• Such harvest methods as selective cutting can reduce the seedling mortality rate.  
• Because of extreme acidity and wetness, the Greenwood soils are generally unsuited to woodland. | • Moderate to severe limitations for septic tank absorption fields due to slow perc, wetness, ponding and poor filtration.  
• *See footnote                                                                                                                   |

* This is the dominant soil condition but does not eliminate the need for onsite investigation.

Impermeable soils do not allow effluent to filter through the underlying soil and highly permeable soils allow effluent to pass through rapidly. In both instances, the conditions impose limitations on building development requiring on-site septic systems. Soil limitations for building site development include the presence of shallow bedrock that can make the 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.

Construction and maintenance of roads are affected by a soil’s shrink-swell potential, frost action potential, depth to bedrock or water table and slope. As with other soil constraints, construction techniques are available to overcome many limitations, however, they may be costly. Moreover, more frequent maintenance may be required to sustain a good condition. All soil data available should be used when evaluating any land use proposal.

8.5 Topography

The unique character of an area is derived from the physical features of its landscape. Topography describes this character in terms of elevation above mean sea level. This reveals the size and shape of watersheds and places to avoid with future development because grades may be in excess of recommended standards. The topography of Humboldt Township is characterized by extremely old bedrock covered with large amounts of glacial drift and rock
CHAPTER 8.0-NATURAL FEATURES

8.5 Topography continued

Outcappings. Topography is dominated by rocky knobs and wetlands; however, some of the land was high and fertile enough for marginal farming in the early 20th century.

The area with the greatest relief and the highest densities of rock outcroppings is the former Humboldt Mine area located in the northeast corner of Humboldt Township. There are areas throughout Humboldt Township exceeding a ten percent gradient on certain slopes, located particularly in the northern third near the former Humboldt Mine (See Map 8-4, Unsuitable Land).

Steep topography or slopes of 10 percent or greater (a rise in gradient of more than 10 feet in a horizontal distance of 100 feet) can be aesthetically attractive for residential development and some commercial establishments. However, the steep grade increases the likelihood of soil movement or slides and the weight of structures is an added force that encourages this movement. In addition, there is an added expense if development occurs on the sloping surface itself. Excavation of a hillside and/or construction of retaining walls can greatly increase building costs. There is also a problem of erosion as the water rushes down the steep grades. Natural water courses provide the pathway for such water and should be maintained in this capacity. Soil disturbance of one or more acres or within 500 feet of a lake or stream generally requires a permit as authorized under Part 91 (Soil Erosion and Sedimentation Control) of the Natural Resources Environmental Protection Act, Public Act 451 of 1994, as amended.

Map 8-5, Topographic Map, has been developed using digital elevation models. The current lowest elevation is located in the far southeastern portion of Humboldt Township and is approximately +1,352 feet above sea level datum and the highest point is at the top of a berm in the northeast corner of Humboldt Township and is +1,792 feet above mean sea level datum. For comparison purposes, the elevation of Lake Superior is 602 feet (See Map 8-5).

Map 8-5, Topographic Map, illustrates contours which join points of equal elevation above a given level. A contour map is illustrated with contour lines, which show valleys and hills, and the steepness of slopes. The contour interval of a contour map is the difference in elevation between successive contour lines. The highest elevations are located in the northeast corner of Humboldt Township.
Map 8-5 Topographic Map

Legend

Elevations in ft.

1212 - 1272
1273 - 1372
1373 - 1472
1473 - 1552
1553 - 1632
1633 - 1712
1713 - 1792
1793 - 1952

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CHAPTER 8.0-NATURAL FEATURES

8.6 Water Features

Water features, i.e. lakes, streams and rivers have important functions as natural resources. Among those important functions is the source of water for residential and commercial development. Land use and development patterns are heavily influenced by the presence of water features. While lakes and rivers are physical barriers that limit growth of communities and/or transportation facilities, they are attractive for residential, waterfront development or for industries requiring large volumes of water. Sufficient amounts of surface water are necessary for a variety of industries, especially critical for mining activities, and for the generation of electricity. Surface water features are also important for recreational use and often add scenic beauty to an area.

One of the most valuable natural resources in the area is the abundance of fresh water. According to the Marquette County Hazard Mitigation Plan prepared by the Marquette County Resource Management/Development Department, Humboldt Township lies within the East and Middle Branches of the Escanaba River, Black River and Peshekee River watersheds. The Escanaba and Michigamme rivers flow through Humboldt Township and each river has had a history of flooding in the area. In addition, the Black River and other tributaries of the Escanaba and Michigamme systems flow through Humboldt Township.

Humboldt Township boasts numerous water features used for recreational and residential purposes. Much of the land in the southern end of the Township is part of the Escanaba River State Forest. The Black, Escanaba and Michigamme Rivers and Fish, Helen and Casey Lakes are all utilized for residential, recreational development. There is also potential for residential development along Lake Lory, however, that would require analyzing existing sediment issues. Tailings from the former Humboldt Mine were disposed of in Lake Lory and have settled in recent years. Past mining activities may require additional water quality testing to be conducted to deal with any potential environmental concerns.

8.7 Floodplains and Wetlands

Floodplains and wetlands are important from a planning standpoint due to their potential limitations on future development. With floodplains, it is important to also consider their possible impact on existing development. These important storage areas affect the discharge characteristics of streams. Loss of floodwater storage areas to development causes rainfall to run off more rapidly and increases the potential for flooding. An existing plain that may be submerged by flood waters defines a floodplain and 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 define wetlands. A wetland area may be referred to as a swamp, bog or marsh and is normally characterized by the presence of water at a frequency and duration sufficient to support wetland vegetation and aquatic life. Wetland areas help to improve water quality by filtering pollutants and trapping sediments.
CHAPTER 8.0-NATURAL FEATURES

8.7 Floodplains and Wetlands continued

The Federal Emergency Management Agency (FEMA) determines flood hazard areas in accordance with the administration of the National Flood Insurance Program. Humboldt Township does not participate in the flood insurance program. Michigan remains one of only two states to have assumed administration of the Section 404 Program under the provision of Section 404(g) of the Clean Water Act 33 U.S.C. §1251 et seq. (1972). Michigan's wetland program is administered by the Department of Environmental Quality (MDEQ). Any development occurring in wetland areas is subject to the regulatory authority of the MDEQ.

According to the Marquette County Hazard Mitigation Plan, flood prone areas encompass approximately 322 structures worth an estimated $10.2 million within Humboldt Township. Of these, 165 structures of the total number of structures, over 50 percent, were associated with permanent residences. The Township Supervisor identified areas where capital improvements could mitigate flood hazards:

1. Elevate Wolf Lake Road where it crosses the Escanaba River floodplain.
2. Metered regulation of flow on the Michigamme River. The dam that formerly controlled levels on Lake Michigamme has been partially removed and another dam at Republic may also be removed.

8.8 Jack Pine Forest

For millennia wildfire has been a natural component of the life cycle of forests. It has only become a problem since human development has encroached upon the forest. This is especially true in jack pine areas. The species is highly combustible. It requires intense heat for its cones to release seed for regeneration. Wildfire becomes a disaster when it threatens human lives or property. In most instances today, human activity causes and exacerbates wildfire. Fires can be started within the forest and spread to structures or start in a structure or yard area and spread to a forest. In many of these cases, negligence or faulty equipment are involved. The Hazard Mitigation Plan indicates that the southern half of Humboldt Township is forested with jack pines and eighty-five (85) structures were located within areas of jack pine forest, with an estimated value of $2.6 million. Nineteen of the structures, or approximately 22 percent, were associated with permanent residences.

“The western part of Marquette County is characterized by rocky terrain dissected by streams and swamps. Forests tend to be more coniferous than in the eastern part of the County. Some areas of this zone were farmed until the mid-20th century. Fire departments are located along US-41 and M-95, and access to interior areas can be difficult.”

“While the Western Marquette County zone shows less wildfire risk than other parts of the county, it was the site of the largest wildfire over the past 30 years, the Tower Lake Fire of 1999. The fire began during a dry spring and at one point
threatened the community of Champion. A wind shift helped firefighters to control the blaze. Some of the affected area had been burned the previous year in the Autio Lake Fire. Tower Lake was the only wildfire in Michigan history to be given a Presidential Disaster Declaration. Responding units: Michigamme-Spurr Township, Republic Township, Champion Township, Humboldt Township, Ishpeming Township, Richmond Township, Negaunee Township, City of Ishpeming, City of Negaunee.” *Marquette County Community Wildfire Protection Plan, July, 2014.*

Map 8-6
8.9 Mineral Resources

Iron mining on the Marquette Range is an old extractive industry, going back over 160 years. Substantial amounts of the high-grade, easily accessible, direct-shipping ore have been reduced by various methods of underground mining. The Humboldt Mine has created significant landforms as a part of the mining process. Humboldt Township has adopted zoning standards and regulations that are intended to minimize the negative affects of any future mining operations. Mining operations are discussed in detail in Chapter 3, Economic Base.

CHAPTER 8.0-NATURAL FEATURES

8.10 Climate

Climate has a strong influence on the way of life and the activities of the people of Humboldt Township. Like the rest of the State, Humboldt Township has four distinctive seasons that allow for a wide variety of outdoor activities. Generally, January and February are the coldest months, with average maximum temperatures from 22.7°F to 27.3°F and average minimum temperatures from 5.6°F to 7.7°F. The warmest months are July and August, with average maximum temperatures from 77.0°F and 74.9°F and average minimum temperatures from 53.4°F and 52.6°F.

Snowfall in Humboldt Township generally occurs from November through April. Weather greatly impacts transportation systems within Marquette County, necessitating seasonal weight restrictions on roads during spring breakup, causing access issues.

8.11 Issues and Opportunities

- The iron ore contained within the bedrock lying beneath Humboldt Township is linked to the area’s development as a mining community. Original settlement and the existing land uses are directly related to the Township’s natural features and resources.

- Soil suitability and steep slopes, especially in the southerly portion of the Township make some areas less suitable for future development. Land stability in and around mining sites is a factor which should be considered in all proposed development or redevelopment plans.

- All available soil data should be reviewed for all development proposals.

- Humboldt Township does not participate in the National Flood Insurance Program and approximately 320 structures are located in flood-prone areas, with over 50 percent of the structures being associated with permanent residential development.

- Fish, Helen and Casey Lakes and the Black, Escanaba and Michigamme Rivers are all utilized for residential development and recreationally. There is potential for residential
• 8.11 Issues and Opportunities continued

development on Lake Lory, provided that water quality issues can be addressed and reconciled.

• Wildfire is a natural component to the lifecycle of forests and jack pine cover is prominent in many portions of Humboldt Township and it can quickly become a disaster when it threatens human lives or property. To reduce such risks, zoning should address and limit development in remote areas with limited accessibility.

• Mining and its support facilities can have a substantial impact to area natural features. Humboldt Township has adopted zoning standards and regulations that have been designed to help minimize the negative effects of any future mining operations.

• The climate of Humboldt Township presents a variety of challenges, and with the need for snow removal from streets and parking lots along with building codes which dictate adequate support for snow loads. The local climate may be attractive to a number of people and can be suitable for businesses or industries which specialize in certain types of goods or services/seasons.
CHAPTER 9.0-LAND USE

9.1 Land Use Patterns

Patterns of land use evolved from economic necessity. The economy was firmly linked to trade routes that followed natural features such as lakes and streams. The general historic land use patterns which are common to the Upper Peninsula are reflected in the patterns that have developed in the Marquette County area. Settlements were established at, or close by, active points of commercial activity, namely mining and timber production. Humboldt Township is an example of a community that was developed near mining activities. This chapter discusses current land use and ownership throughout Humboldt Township.

9.2 Factors Affecting Land Use

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

Location tends to be the most important factor for home buyers and commercial interests. The availability of public and private services, accessibility, existing conditions of the area and price are other important considerations. Owners of business and industrial ventures initiate, expand or close their operations based on economic probability. Many factors may be considered in determining economic feasibility including supply and demand for the goods or services produced, cost and quality of transportation and site availability. Local decisions have a bearing on these factors.

Other factors affecting land use include the existing transportation system, taxation, land values, natural features, and changing technology and market conditions. Changes in lifestyles, family size, shopping preferences and customer attitudes also affect land use decisions. Mobility is greater than at any previous time in history, families are smaller, and life expectancies have increased. These changes are reflected in employment patterns and housing and shopping preferences. From a land use standpoint, some pertinent issues have been recent preferences for larger homes situated on larger parcels, the apparent willingness to endure longer commuting distances to work and the growing market for housing specifically designed for elderly residents, particularly those residing in the area for only part of the year. Current trends have indicated that some residents are reconsidering the “urban” lifestyle and moving back to the cities.
CHAPTER 9.0-LAND USE

9.2 Factors Affecting Land Use continued

Laws and Regulations
Laws and regulations have been enacted giving local units of government the means to deal with land use issues. These legal tools allow federal, state and local governments to address the overall compatibility and appropriateness of development and land use.

Federal legislative actions have created a number of loans and grant programs for community facilities, water and wastewater systems, housing, economic development and planning. Drinking water standards, air quality and many other environmental factors are addressed in federal regulations.

The traditional role of the state has been limited to providing the enabling legislation for local units of government to regulate growth and development through implementation of planning and zoning. Consolidated zoning enabling legislation, the Michigan Zoning Enabling Act, Public Act 110 of 2006, as amended, and consolidated planning enabling legislation, the Michigan Planning Enabling Act, Public Act 33 of 2008, were adopted to guide local units of government on the statutory requirements. The State of Michigan regulates land use and development in regions of environmental concern including wetlands, floodplains and coastal areas, which may have a direct effect on local land use. The state also enforces standards for municipal water systems and wastewater systems that are at least as strict as federal standards. A community’s ability to provide water and wastewater treatment systems is directly affected by these regulatory standards.

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

Transportation
The transportation system that serves a community determines how quickly and easily raw materials and finished goods can be received and shipped. It also is directly related to product cost, a crucial factor for business. The vast network of roadways in the U.S., together with the proliferation of private automobiles, has enabled residents of rural areas to commute to larger communities for employment and shopping and has increased the accessibility of many areas to tourists. This increased mobility has, in many cases, facilitated scattered suburban residential development. One negative impact of suburban residential development often referred to as “sprawl,” frequently converts open space and forested agricultural lands to more intensive uses. Alternatively, carefully planned road systems and improvements to existing roads should dictate where future residential development occurs.
CHAPTER 9.0-LAND USE

9.2 Factors Affecting Land Use continued

Land Use Patterns
Land values in rural areas may be much lower than urban areas, thus more attractive to potential residents. Commercial and industrial enterprises are generally less willing to forego municipal services such as water and sewer and they are also more likely to locate in areas of population concentrations rather than in very rural areas. Tax rates and land values are also important considerations for businesses as well. Changing technology, including computer networking, cellular telephones, voice mail, teleconferencing, video conferencing, and e-mail provide businesses with location options that were previously not practical. However, the quality of life associated with these rural locations is an additional attraction.

Land Ownership
Land ownership in Humboldt Township has been dominated by major corporate landowners. Lands in corporate ownership have essentially been used for timber production and mining. Use of these lands has been determined by ownership. Several mining interests control through ownership a small amount of the surface area of Humboldt Township, which constricts standard development options which do not involve active mining or mining support. As discussed in Chapter 3, Eagle Mining, a subsidiary of Toronto Canada-based Lundin Mining Corporation, has rehabilitated and modernized the former Humboldt Mill and has been using it as a milling facility to support the Eagle Mine. Large amounts of land in Humboldt Township are also held by Verso Corporation (formerly New Page and earlier Escanaba Paper Company) and International Paper (formerly Champion International Corp.).

The State of Michigan is also a large landholder in the Upper Peninsula and owns acreage in the southern two-thirds of Humboldt Township (approximately 11,000 acres). This land makes up approximately 25 percent of Humboldt Township’s total land area. Lands held in State ownership are part of the Escanaba River State Forest and the Michigan Department of Natural Resources (MDNR) also owns approximately 3,700 acres in Humboldt Township. Public land holdings are illustrated on Map 9-1, Public Lands Map.

Private land ownership comprises a large portion of Humboldt Township’s land area as well. Privately held lands are concentrated along the Michigamme and Black Rivers and the northern third of Humboldt Township. Fish, Granite, Perch, Beaver, Donaldson and Petcuson Lakes maintain pockets of private land ownership. Humboldt Properties, LLC owns approximately 2,500 acres of property that was purchased from Cliffs Natural Resources. Additional substantial landowners in Humboldt Township include (all acreages are approximate): Murphs Camp, Inc. own 1,000 acres located in the southeast corner, Dave and Patricia Holli (1,100 acres), Republic Wetlands Preserve (1,100 acres), Republic Lands, LLC (600 acres) and GMO Threshold Timber (500 acres).
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.
CHAPTER 9.0-LAND USE

9.2 Factors Affecting Land Use continued

Land Ownership continued
Approximately 28 percent of Humboldt Township’s total land area is held in Commercial Forest Reserve, or commercial forest land. The commercial forest program provides a property tax reduction to private landowners as an incentive to retain and manage forestland for long-term timber production. Landowners participating in this program pay a reduced property tax of $1.30 (through 2021 rate) per acre for land over forty acres. These rates are scheduled to increase $0.05 every 5-years thereafter. Additionally, the State of Michigan pays $1.20 per acre annually to each county where land is listed in the program. Lands listed in this program must remain open to the public for hunting, trapping and fishing only. Landowners are not required to allow motor vehicle access to the property. Commercial forest lands are private lands held under the control of private owners. Landowners include private individuals, clubs, forest industry, and other businesses and are required to have an approved forest management plan. Tracts of commercial forest land are dispersed throughout Humboldt Township, held under multiple owners; the largest amount of land is held by Weyerhaeuser (approximately 11,700 acres).

Natural Features
The physical characteristics of the land have a considerable effect on the determination of potential land use. Slope, soils and drainage are just several natural characteristics that have an effect on land use. The natural features of Humboldt Township are described in detail in Chapter 8, Natural Features, along with detailed maps to graphically depict specific features.

9.3 Existing Land Use Inventory
Land cover is the natural landscape recorded as surface components: forest, water, wetlands, urban, etc. Land cover can be documented by analyzing spectral signatures of satellite and aerial imagery. In 1978, the Michigan Resource Information System (MIRIS) Land Cover Maps were produced. The data obtained from the maps generated an inventory of land cover for the state. Ideally the MIRIS data was to be updated by the State every five years; the efforts have proved to be cost prohibitive. Updating the MIRIS land use information is very helpful and is necessary to identify trends in land use and in developing plans to encourage development or discourage what is taking place.

In 2005, the County was flown and aerial imagery was obtained. The 2005 imagery was used to identify land that has become “urban and built up” since the 1978 MIRIS data were created. Map 9-2, Existing Land Use Map for Humboldt Township has been developed utilizing this data, providing an up to date description of the current existing Land Use. Land Use is the documentation of human uses of the landscape: residential, commercial, agricultural, etc. Land Use can be inferred but not explicitly derived from satellite and aerial imagery. The Land Use Categories and approximate total Acreage are described in Table 9-1, Current Land Use, Humboldt Township and Figure 9-1, Current Land Use, Humboldt Township.
The information and data provided herewith has been compiled from various sources, and is used by the County of Marquette for its own general purposes. The County does not warrant or guarantee that 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.
CHAPTER 9.0-LAND USE

9.3 Existing Land Use Inventory continued

Table 9-1
Current Land Use, Humboldt Township

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture/Forest Lands</td>
<td>51,019.4</td>
</tr>
<tr>
<td>Urban &amp; Built Up</td>
<td>1,186.8</td>
</tr>
<tr>
<td>Water</td>
<td>1,182.6</td>
</tr>
<tr>
<td>Wetlands</td>
<td>7,807.5</td>
</tr>
<tr>
<td><strong>Total Acreage</strong></td>
<td><strong>61,196.3</strong></td>
</tr>
</tbody>
</table>

Figure 9-1
Current Land Use, Humboldt Township

9.4 Urban and Built Up Land

Urban and built up land is a general land use category that encompasses several “developed” land uses such as residential, commercial, extractive, institutional and industrial.

Residential Land Use
Residential land use includes single family homes, multi-family homes and mobile homes, in a low to medium density pattern. Humboldt Township is predominately a bedroom community with an economy that is very dependent upon outside economic venues. Humboldt Township does not encompass concentrated areas of housing development and existing housing is low density and scattered. There is limited infrastructure in Humboldt Township at this time. All homes utilize on-site private potable water wells and septic systems. There are no areas of concern regarding existing housing and development issues are generally site specific. New housing development is limited by the amount of land available and a current lack of demand. Much of the land in Humboldt Township is part of the Escanaba River State Forest and large amounts of land are corporately owned, with private land ownership highly protected and guarded.
9.4 Urban and Built Up Land continued

Residential Land Use continued

Manmade barriers to development in Humboldt Township include the lack of infrastructure, as well as a lack of demand for new housing. Natural barriers to development include rock and wetland areas as well as the physical constraints of specific sites. Humboldt Township will continue to encourage development in areas capable of supporting residential development. There are no new anticipated developments at this time. Recent housing development has been limited and waterfront lots have been the most popular in recent years. Humboldt Township only has a limited number of rental units. Future residential development will be encouraged in areas easily accessible to major transportation routes and the limited utilities that are currently available. Year-round residential development will not be encouraged in areas where public services, such as mail, garbage pickup, emergency services, snowplowing, school bus pickup as well as adequate roads, are not available.

As illustrated in Chapter 4, Housing, Table 4-10, Residential Building Permits Issued, Humboldt Township, 2013-2017, sixty building permits were issued for Humboldt Township. Total construction costs for all building permits issued in 2017 totaled $302,000. The largest share of building permits in recent years was for 23 commercial new constructions in 2013. Currently, Humboldt Township does not have curb and/or sidewalk, which is typical for rural Townships in the Upper Peninsula.

Commercial Land Use

As discussed in Chapter 3, Humboldt Township has limited commercial development, mainly due to the modest number (481) of residents and limited infrastructure available to support large scale commercial activity. The lack of available land also presents a barrier to future commercial growth. According to Humboldt Township estimates, many residents are employed out of the area at Northern Michigan University (NMU), UP Health System-Bell Hospital, Marquette General Hospital, NICE Community Schools, and the Tilden Mine. Very few residents are employed within Humboldt Township. Commercial forestry represents a major long-term profitable industry in Humboldt Township and logging trucks pass through Humboldt Township along major traffic routes as well as local roads daily.

Commercial development is permitted by right and conditionally in the Town Development (TD) District, which is primarily located along US-41 and M-95, the two major transportation corridors traversing Humboldt Township. There have been few new business developments within the Township since the mid-to-late 1990’s. Future commercial development is most likely to occur along the major traffic routes, including US-41 and M-95. Humboldt Township would entertain a variety of proposals for new business developments within appropriate locations throughout the Township.
Chap9Para1 12pt

CHAPTER 9.0-LAND USE

9.4 Urban and Built Up Land continued

Industrial Land Use
The Humboldt Mill represents the largest industrial land use in Humboldt Township. The Humboldt Mill had remained idle since the mid 1990s and had fallen into disrepair and subsequently, the site was designated as a Brownfield industrial site. Kennecott Eagle Minerals Company purchased the Humboldt Mine in September 2008 and initiated plans to invest an estimated $80-$100 million in site clean up, environmental reclamation and equipment upgrades. Eagle Mill, a subsidiary of Lundin Mining Corporation, purchased Kennecott’s interests in the mine and mill in 2013 and invested an estimated $275 million is all aspects of redevelopment.

After the reclamation process, the Humboldt Mill has been used for essentially the same purpose as in the past. After milling, the product is shipped to Sudbury, Ontario for smelting and further refinement. A water treatment plant has also been built at the Humboldt Mill site, as a contingency, to ensure that the water used during the milling process meets state and federal discharge requirements prior to being returned to the Middle Branch of the Escanaba River.

Several mining companies own large tracts of land within Humboldt Township and a major concern is the constraints placed upon Humboldt Township for residential and commercial development due to the large amount of land held by mining companies as well as land owned by the state. Land for commercial and residential development is largely unavailable at this time; however, future industrial development will be encouraged along major transportation routes or in areas with access to a Class A road. Industrial development may also be an option along the existing railway at potential decking and loading sites.

There are several gravel mining sites located within Humboldt Township, mainly located along US-41 and M-95. Hamel Inc., a construction company, provides crushed gravel and topsoil and is located along US-41. The Marquette County Road Commission maintains a gravel pit along M-95 near Humboldt Township’s southern boundary. An additional gravel pit owned by O’Dovero Construction is located along US-41, west of M-95.

9.5 Contaminated Sites
Part 201 (Environmental Remediation) and Part 213 (Leaking Underground Storage Tanks) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), regulate most sites of environmental contamination in Michigan. The Part 201 and Part 213 cleanup programs are administered by the Remediation Division of the Michigan Department of Environmental Quality (MDEQ). Leaking Underground Storage Tanks (LUST) have resulted in more stringent requirements for the placement of storage tanks and many aging fuel tanks that complied with the guidelines in place at the time of installation have deteriorated and fuel may
CHAPTER 9.0-LAND USE

9.5 Contaminated Sites continued
then be able to enter the surrounding soil.

Current sites are listed by the MDEQ and are available at the MDEQ website. These sites will remain listed until corrective action(s) are complete. There are four leaking underground storage tank sites listed for Humboldt Township, one (C-2363-90) from 1990, is along County Road 601 associated with the Callahan Mining Corporation and the others (C-0462-97)(C-0125-18)(C-0942-97) are adjacent to US-41 at Koski Korners.

The majority of the tanks at these sites have been removed from the ground; several tanks are still in use at the Koski Korners site. In order to remove these sites from the list, a qualified underground storage tank consultant must certify and submit a closure report as described in Part 213 of the NREPA with documentation that the release has been adequately investigated and that contamination does not exceed residential criteria as developed under Part 201 of the NREPA, Environmental Remediation. If the groundwater exceeds residential criteria, institutional controls, land use restrictions or an alternate mechanism (an ordinance to address contamination exceeding drinking water criteria) must be in place. This would provide mechanism for the prevention of contaminated groundwater coming in contact with the general public.

9.6 Issues and Opportunities

- The availability of public and private services, accessibility, existing constraints of the site and the price are important considerations for residential development.

- The Zoning Ordinance provides a tool to regulate new development and allows Humboldt Township to have an influence on future changes in land use.

- Planned transportation systems and strategic road improvements can encourage and guide future development.

- Two main transportation corridors, US-41 and M-95, traverse 4.75 miles and 8.9 miles respectively in the Township and intersect in its north. These provide excellent access to adjacent land and provide the necessary traffic generation for commercial and industrial endeavors.

- Approximately 25 percent of land in Humboldt Township is held by the State of Michigan as part of the Escanaba River State Forest, somewhat limiting development.

- Low density residential development prevails within Humboldt Township.
9.6 Issues and Opportunities continued

- Humboldt Township offers a very desirable rural environment for residential development.

- Commercial development in Humboldt Township is limited due to lack of infrastructure and distances to more urban populations and centers of development.

- Infrastructure improvements and expansions will be necessary to attract additional residential, commercial and industrial development to Humboldt Township, particularly natural gas service.

- Reclamation and reuse of the Humboldt Mill has benefitted Humboldt Township. The Mill site is the only location in the Township with utility natural gas service.

- There are two LUST (leaking underground storage tank) sites that had four leaks in Humboldt Township; however, the majority of the tanks have been removed from the ground.

- Humboldt Township officials are attempting to attract new and appropriate development to the area and will consider utilizing various incentives.
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CHAPTER 10.0-PLANNING COMMISSION GOALS AND RECOMMENDATIONS

10.1 Introduction

Throughout the preceding chapters of the Master Plan, detailed information has been presented defining the historic trends and existing conditions in Humboldt Township. Information helps achieve an understanding of the forces which historically have shaped the growth and development of Humboldt 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. Goals are broad statements which reflect desired future conditions and are based on the background information, assumptions and policy variables defined earlier. More specific recommendations are then developed, defining actions that can be taken initially to implement the goals.

The final and most important stage of the planning process is implementation, which begins after the goals and recommendations have been defined. The first step in implementation is the adoption of the Master Plan by the Planning Commission and the Township Board following a public hearing and with thoughtful consideration of any public comments received.

The Master Plan implementation is a dynamic process and it evolved through adherence to the goals and recommendations set forth in its content. It should be emphasized, however, that these goals and recommendations are a guide and provide a long-term vision, and that the ideas and projects mentioned are adjustable and dictated in accordance with Humboldt Township’s needs. While the Planning Commission has developed goals and recommendations based on the best information available, the needs of the community at any point in time, changing needs and desires within the community, or changes in the local population or economy may dictate that these goals and recommendations may need to be reevaluated. The Master Plan must remain dynamic and flexible enough to respond to changing needs and conditions, while still providing a strong guiding mechanism for future development. It is imperative that the Planning Commission and Township Board, together with other groups, organizations and individuals, utilize this Master Plan as a dynamic decision-making tool and assure that the plan is referred to frequently and that it is reviewed annually and updated every five years in accordance with statutory requirements.
CHAPTER 10.0-PLANNING COMMISSION GOALS AND RECOMMENDATIONS

To assist in a complete understanding of the nature of the goals and recommendations presented within this Chapter, the following definitions are presented:

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

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

10.2 Population

**Discussion:** Humboldt Township has experienced a 7.9 percent population loss between 1940 and 2015, from 522 residents in 1940 to 481 residents in 2015 (2017 est. 444). Humboldt Township’s population peaked in 1980 at 577. Population totals for 2015 indicate a slight population increase (2.6%) for the Township since 2000 (12 persons). A portion of the population base in Humboldt Township may have located in the area due to mining activities and associated employment opportunities, the natural beauty of the area, logging, limited agricultural activities and recreation opportunities. Humboldt Township may experience a change in population in the near future, due to the potential closer of the Humboldt Mine as a milling operation for Lundin Mining Corporation’s subsidiary Eagle Mining. The median age of Humboldt Township residents in 2015 was 47.0 years. Communities such as Humboldt Township are experiencing declines in the birth rate and a rapid increase in the proportion of elderly people, contributing to the increase in median age. The Township has a low population density, due in part to the large extent of state and corporate land holdings and large tracts of land held in private ownership.

**Goal:**

Continuously monitor population trends and encourage various opportunities to retain population density in Humboldt Township and surrounding areas as part of the Master Planning process.

**Recommendations:**
- Update Master Plan demographic information whenever new Census data becomes available.
- Support land use policies that maintain the population density in the Township.
- Continue to improve employment and recreational opportunities, to attract families with children to the area.
- Encourage local residents who work within Humboldt Township to locate their residences within the Township.
CHAPTER 10.0-PLANNING COMMISSION GOALS AND RECOMMENDATIONS

10.3 Economic Base

Discussion: There is a limited amount of small commercial activity in Humboldt Township and future expansion is restricted by limited infrastructure, low population, rural location and a lack of economic development opportunities. Humboldt Township’s labor force is employed largely outside of the Township; therefore the Township is predominately a bedroom community with an economy that is very dependent upon outside economic venues. According to Township estimates, many residents are employed at Northern Michigan University, Bell Hospital, Marquette General Hospital, NICE Community Schools, and the Tilden Mine.

Lundin Mining Corporation’s Eagle Mine Project invested $275 million in the site cleanup, environmental reclamation and equipment upgrades for the rehabilitated Humboldt Mill. This has had a significant and positive economic impact on the Township.

Goal:

- Encourage home occupations (e.g. copper/nickel/Lake Superior agate jewelry hand-crafting) where appropriate and feasible.
- Continue to support and encourage mining efforts within Humboldt Township.
- Improve internet and cellular service availability.
- Encourage the extension of natural gas line service throughout Humboldt Township.
- Consider offering various incentives to attract commercial and industrial development, including tax incentives.
- Explore the possibility of developing a Renaissance Zone within Humboldt Township.
- Continue to accentuate the positive business climate within Humboldt Township, including direct access to US-41, M-95 and also the availability of rail access and the willingness of Township officials to encourage and cooperate with potential new business enterprises.
- The existing Humboldt Mill site has a rail spur and (uniquely in the twp.) has utility natural gas service available. These features may help the Township to maintain and/or promote industrial activities within Humboldt Township at that site or near it.
- Cleanup and redevelop of former Brownfield sites within the Township. Pursue formal Brownfield Designation for these sites and explore associated brownfield redevelopment funding.
10.4 Housing

Discussion: Humboldt Township does not encompass concentrated areas of housing development and the existing housing in the Township is low density and scattered. There are limited utilities and infrastructure within Humboldt Township at this time. Infrastructure extensions are cost prohibitive. Humboldt Township has a large number of recreational homes and approximately 49 percent of housing units are for seasonal, recreational or occasional use. Many are concentrated around Humboldt Township’s lakes, including Casey, Helen and Fish Lake. Areas of concern regarding future housing within Humboldt Township are site specific and essentially would be dictated by physical constraints. There are concerns with existing seasonal and recreational housing units being utilized as full-time, year-round dwelling units by current residents and also by retirees moving into Humboldt Township.

Manmade barriers to development in Humboldt Township include the lack of infrastructure, a lack of demand for new housing and the limited amount of private land available. Much of the land in the Township is part of the Escanaba River State Forest. Large amounts of land are corporately owned, and private land ownership is highly protected and guarded. Natural barriers to development in the Township include rock and wetland areas as well as the physical constraints of individual sites. Humboldt Township will continue to encourage development in desirable areas physically capable of supporting residential development. There are no new anticipated developments planned at this time, and recent housing development has been limited to waterfront lots which have been the most popular in recent years.

Goal:

Develop a varied housing stock that meets the needs, preferences and financial capabilities of existing and future Humboldt Township residents.

Recommendations:

- Promote and preserve the quiet, rural and safe nature of Humboldt Township.
- Encourage residents to participate in available housing programs, including Alger/Marquette Community Action Board (AMCAB) weatherization assistance, various U.S. Department of Agriculture housing programs and the Marquette County housing rehabilitation program.
- Support the development of a variety of affordable housing options.
- Encourage residential development in accessible areas physically capable of supporting residential dwelling units.
- Limit recreational and seasonal dwelling units for the purpose intended as much as possible through the administration of local zoning controls and standards.
- Identify potential residential development sites and provide all available site-specific information to potential developers, along with possible development incentives.
CHAPTER 10.0-PLANNING COMMISSION GOALS AND RECOMMENDATIONS

10.5 Community Facilities and Services

Discussion: Current budget constraints require innovative and responsible spending. The Humboldt Township Hall was recently expanded to accommodate existing and future residents. The existing hall was integrated into the addition and it is well maintained and in excellent condition. All residents in Humboldt Township essentially rely on private on-site wells and septic systems for their potable water supply and wastewater treatment services. Humboldt Township’s fire protection is provided by the Humboldt Volunteer Fire Department. An Emergency Services Board may need to be established by Humboldt Township for the purpose of protecting the public, health, safety and general welfare of residents in the community.

In 2012, Humboldt Township acquired the vacant 6.9 acre Extremely Low Frequency (ELF) Transmission Facility located within the Township, which had been owned and operated by the Federal Government since the late 1970s. The ELF Facility was sold to a private entity in 2017. Humboldt Township contracts for solid waste disposal services and provides a limited drop-off recycling program at the Township Hall at this time.

Goal:

Provide, maintain and improve the quality and efficiency of current community facilities and services for the public benefit in a cost-effective manner.

Recommendations:

- Continue to encourage and promote intergovernmental cooperation when feasible for providing community facilities and services.
- Continue to maintain the Township Hall for the public benefit.
- Explore the options for the development of the forty acres of land adjacent with the Township Hall.
CHAPTER 10.0-PLANNING COMMISSION GOALS AND RECOMMENDATIONS

10.6 Recreation

Discussion: Humboldt Township provides and maintains recreational facilities for residents and guests. Township officials have developed a five-year Recreation Plan and Recreation Development Schedule. The Township Planning Commission has been designated to address recreational planning and development within the Township; however, a Recreation Committee has been established by the Township Board to help address this issue. Humboldt Township maintains the Township Park, baseball field, Fish Lake access site and a basketball court and ice rink. There is a Michigan Department of Natural Resources-maintained snowmobile trail traversing through the Township in a north-south direction and there are also several existing recreational multi-use trails interspersed throughout the Township traversing both north/south and east/west. Humboldt Township has developed a list of several potential recreation projects for completion and the ability to accomplish the planned projects will depend on the availability of funding. Humboldt Township also plans to continue to develop multi-use trails where feasible.

Goal:

Maintain and improve recreation opportunities for all current and future Humboldt Township residents of all ages and abilities.

See the Humboldt Township 5-Year Recreation Plan (2016-2020) at www.humboldt.town/recreation
CHAPTER 10.0-PLANNING COMMISSION GOALS AND RECOMMENDATIONS

10.7 Transportation

Discussion: Communities depend on the safe and effective movement of people and goods to sustain a thriving economy. The ability of the Marquette County Road Commission (MCRC) to keep up with maintenance and construction needs on the county road system has decreased in recent years due to funding limitations. If additional funding cannot be secured, the Road Commission may have to defer maintenance, and the condition of many roads will continue to deteriorate. Humboldt Township currently levies a millage of 3 mils for road repairs and maintenance and Township officials have developed a five-year road improvement plan which utilizes asset management practices to prioritize projects.

Two main transportation corridors, US-41 and M-95, traverse 4.75 miles and 8.9 miles respectively in the Township intersecting in its north. These provide excellent access and traffic generation for commercial and industrial endeavors. In 2012, Humboldt Township took action to adopt a Memorandum of Understanding recognizing the need to participate in a coordinated access management planning effort for the US-41/M-28 corridor.

According to the MCRC, there have not been any paving projects completed in the Township since 1991; however, several roads have been re-graveled and minor culvert replacements have been completed when financially possible. CR 601, which provides direct access to the Humboldt Mill, was widened and reconstructed in 2012. The project included flattening of a steep hill and the realignment of two sharp curves to improve traffic safety and allow year-round access. This project was funded by Michigan Transportation Economic Development Funds and by the Lundin Mining Corporation’s Eagle Mine Project.

There are existing Canadian National active railroad lines traversing through Humboldt Township and rail upgrades, including a rail spur reinstallation running from the Humboldt Mill to the active line, were completed. Additional upgrades would be beneficial to the Township. The Township acquired and restored this section of abandoned railroad grade and utilized it for industrial purposes, including shipping of Eagle Mine milled ore from the Humboldt Mill to active rail lines, and subsequently to Sudbury, Ontario, where the ore is received for finish processing.

Goal:

Provide a safe, well maintained and efficient transportation network, utilizing various options.
10.7 Transportation continued

Recommendations:

- Encourage the Marquette County Road Commission to improve primary roads.
- Inform residents of available MARQ-Tran demand-response services through posted schedules.
- Continue to develop a road maintenance priority list for existing and future projects.
- Apply the Asset Management approach to selecting and prioritizing road improvement projects.
- Continue to review Complete Streets policies and incorporate design standards into the Township’s planning efforts if and where appropriate.
- Consider increasing the Township road millage allocation to develop a road fund for future road construction and maintenance.
- Use the railroad spur user fees to support future road and/or rail spur maintenance and construction within Humboldt Township.
- Actively participate in future US-41/M-28 Access Management site plan review meetings.
- Work with the Central Upper Peninsula Planning and Development Regional Commission (CUPPAD) and the Michigan Department of Transportation (MDOT) to amend the US-41/M-28 Access Management Action Plan to include that part of Humboldt Township terminating one mile west of M-95.
- Through the statutory authority granted to Townships, enact Load Limit Regulations applying to specific County Roads within the jurisdiction of the Township, not only to protect the public health, safety and welfare of Humboldt Township residents, but also to protect established residential areas from potential negative impacts of heavy industrial truck traffic.

10.8 Natural Features

Discussion: The bedrock lying beneath Humboldt Township is directly linked to the area’s development as a mining community and is a result of the iron ore contained within the bedrock. Original settlement and land use patterns are directly related to the Township’s natural features and resources. Soil suitability and steep slopes make some areas less suitable for future development than others. Mining and its support facilities have a substantial relationship and also significant impact upon the area’s natural features. The Humboldt Township Zoning Ordinance includes mining-related regulations, designed to minimize the negative effects of mining activities and provide for required reclamation. Humboldt Township boasts numerous water features being actively utilized for recreational purposes. Humboldt Township does not participate in the National Flood Insurance Program and approximately 320 structures are located in flood-prone areas.
CHAPTER 10.0-PLANNING COMMISSION GOALS AND RECOMMENDATIONS

10.8 Natural Features continued

**Goal:**

Fully exploit the mineral resources, while protecting and enhancing the natural setting of the Township, and allowing development to occur only on suitable sites.

**Recommendations:**
- Participate in the development of the Marquette County hazard mitigation plan update.
- Discourage development in unsuitable areas utilizing zoning regulations.
- Continue to review and upgrade zoning regulations regarding mining activities and reclamation as necessary, and as State zoning enabling legislation may allow.
- Continue to monitor levels of radon within Humboldt Township residences.
- Locate, identify and support the cleanup and reuse of brownfield sites within Humboldt Township.

10.9 Land Use

**Discussion:** Humboldt Township is an example of a community that was developed essentially because of the potential for mining activities. Approximately twenty-five percent of the land within Humboldt Township is owned by the State of Michigan and is part of the Escanaba River State Forest. Several mining companies own a small amount of land in the Township, somewhat limiting development that is not associated with the mining industry. Private land ownership also comprises a large portion of the Township’s land area. Privately held lands are concentrated along the Michigamme River, the Black River and the approximate northern third of the Township. Various lakes, including Fish, Granite, Perch, Beaver, Donaldson and Petcuson Lakes are preserved pockets of private land ownership. Significant portions of Humboldt Township are also designated as Commercial Forest Reserve, or Commercial Forest Land.

Low density development prevails within Humboldt Township and there is very limited public infrastructure in the Township at this time. Future residential development will be encouraged in areas easily accessible to the major transportation routes and the limited utilities that are currently available. Commercial development is Permitted by Right and Conditionally in the Town Development (TD) District, which is primarily located along US-41 and M-95, the two major transportation corridors traversing through Humboldt Township. There have been few new business developments in Humboldt Township since the late 1990’s. Future commercial development is most likely to occur along major traffic routes, including US-41 and M-95.
The Humboldt Mill represents the largest industrial land use within the Township. Kennecott Eagle Minerals Co. purchased the Humboldt Mine in September 2008, which was subsequently bought by Lundin Mining Corporation in 2013. Upon the completion of the Humboldt Mill renovation, the mill has been utilized to process ore from the Eagle Project prior to its transport to Sudbury, Ontario for additional processing.

Infrastructure improvements and expansions will be necessary to attract additional residential, commercial and industrial development to Humboldt Township, particularly natural gas services.

Goal:

Establish land use patterns that protect the public health, safety and welfare of all Humboldt Township residents.

Recommendations:
- Review and approve rezonings that are consistent with the Future Land Use Map and in accord with Humboldt Township’s goals.
- Discourage and deny development from taking place on unsuitable lands.
- Encourage the development of commercial uses along transportation corridors.
- Encourage higher density and infill development in areas where utilities are available.
- Ensure that future land uses are adequately supported by existing infrastructure and natural features through the administration of zoning regulations.
- Ensure that adequate land area exists for the installation of private, potable water wells and septic systems for all types of development.
- Review the recurring incidents of similar variance requests to determine whether or not zoning requirements should be modified or revised.
- Review the zoning ordinance periodically to ensure that the requirements reflect provisions for suitable sites and design guidelines that promote the desired future characteristics of the area.
- Solicit comments and recommendations from related agencies, organizations, adjacent communities and local residents regarding land use matters.
- Review the Humboldt Township Master Plan and Zoning Ordinance prior to acting on land use decisions and review and update each document on an annual basis as necessary.
- Participate in US-41/M-28 Access Management Planning to implement controlled land use development and access control standards along this major corridor.
- Future land use decisions must be sensitive to the needs of local residents and respectful to the ceded lands held by Native Americans.
CHAPTER 11.0-FUTURE LAND USE AND ZONING PLAN

11.1 Introduction

The previous chapters of the Master Plan provide an overview of the existing conditions in Humboldt Township and surrounding areas. A Future Land Use Plan is representative of the “preferred future” of how the Township desires to grow and the Plan includes recommendations on how development should be implemented. A Future Land Use Plan is based on analyses of environmental opportunities and constraints, existing trends and conditions and projected future land use needs. While developing a Future Land Use/Zoning Plan, the Planning Commission was assigned the difficult task of projecting development within Humboldt Township, envisioned over the next five to ten years. The Goals and Recommendations presented in the Chapter 10 and principals of sound Land Use Planning are the foundation upon which this Future Land Use Chapter is based. The Future Land Use Plan consists of the text within this chapter as well as the Future Land Use Map for Humboldt Township.

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

The Michigan Zoning Enabling Act (MZEA) Sec. 203 (1) requires that zoning be based on a “Plan.” Similarly, the Michigan Planning Enabling Act (MPEA) Sec. 7 (2), sets forth the purpose for which a Master Plan must be created. In order for a Master Plan to serve as the basis for future zoning, it should promote the purposes in the MZEA and MPEA.

A “Zoning Plan” is another term for a “Zone Plan” which is used in the Michigan Zoning Enabling Act (PA 110 of 2006) and the Michigan Planning Enabling Act (PA 33 of 2008). Section 33(2) (d) of the Michigan Planning Enabling Act 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 the Districts on the Zoning Map.”

A Zoning Plan describes:

- The purpose, general location, and main uses allowed for each existing and proposed Zoning District;
- The difference between the Land Use categories of the Future Land Use Map and those found on the Zoning Map;
- The recommended standards for the Schedule of Regulations concerning Height, Bulk, Setback, Yard, Lot Size and related features.
CHAPTER 11.0-FUTURE LAND USE AND ZONING PLAN

11.1 Introduction continued

- The existing Zoning Map, along with proposed changes, clearly details the circumstances under which those changes should be made.
- Standards or criteria to be used to consider Rezonings consistent with the Master Plan.

The relationship between the Master Plan and Zoning Ordinance is often misunderstood. The Master Plan is a guide for Land Use; the Zoning Ordinance regulates the existing land use. The Master Plan is not a binding, legal document however, the Zoning Ordinance by law is an adopted Township Ordinance and must be followed by the Humboldt Township residents and anyone intending to develop or do business within the Township. The Future Land Use recommended for an area may be the same as the Existing Zoning for that area, while in some cases the Future Land Use recommended is different from the Existing Zoning. The Future Land Use Map does not change the Existing Zoning District in an area. A property owner must utilize the property as it is currently zoned and according to all of the standards and requirements of the Zoning Ordinance.

The Future Land Use Map reflects the conclusion that land use patterns in Humboldt Township will continue to be heavily influenced by existing mining and forestry uses as reflected by the large amount of land located within the Escanaba River State Forest. Other major considerations which help shape the Future Land Use Map are a desire to establish appropriate land uses and densities throughout the Township as well as provide suitable areas for residential use and future mining activities. Potential updates to the Humboldt Township Zoning Ordinance are discussed throughout the following sections and necessary changes can be pursued as the need or opportunity presents itself. The Planning Commission’s intent is to identify major Goals and Recommendations they desire to implement and begin to work on the corresponding zoning changes required.

11.2 Zoning Districts and Zoning Plan

Humboldt Township is currently divided into ten Zoning Districts. The intent and general purpose for each Zoning District listed within the Master Plan have been obtained directly from the Zoning Ordinance. The amount of land represented by each district has been calculated using Geographic Information Systems (GIS); water bodies are also included in the totals, skewing the numbers slightly. The Permitted by Right and Conditional Uses within each Zoning District are listed in the specific District regulations of the Humboldt Township Zoning Ordinance (Article III). A Schedule of Regulations is included for the existing Zoning Districts.
CHAPTER 11.0-FUTURE LAND USE AND ZONING PLAN

11.2 Zoning Districts and Zoning Plan continued

Existing Zoning Classifications

R, Residential District
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, Residential District is designed to accommodate residents 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 wastewater on the same lot.

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

LS/R, Lakeshore and River District
The LS/R, Lakeshore and River District, is established to preserve for residential and recreational uses those areas with frontage on inland lakes and rivers which, because of existing development, natural characteristics and accessibility, are suitable for this type of development.

RS-1, Recreational Structure District
The RS-1, Recreational Structure-One District, is established and maintained essentially for recreational uses. The district is designed for areas with frontage on inland 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 Lakeshore and River District. Governmental services will not be provided on a year-round basis and may not be provided at all.

RS-5, Recreational Structure Five District
The RS-5, Recreational Structure Five District, is established and maintained for recreational uses. This district is designed for areas with frontage on inland lakes and rivers, which because of their natural characteristics, accessibility and high cost of providing public services, these areas are suited for less intensive development than the RS-1, Recreational Structure District, and are intended for recreational or seasonal development. Governmental services will not be provided on a year-round basis and may not be provided at all.
CHAPTER 11.0-FUTURE LAND USE AND ZONING PLAN

11.2 Zoning Districts and Zoning Plan continued

Existing Zoning Classifications continued

RP-10, Resource Production Ten District
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.

The RP-10, Resource Production Ten District, is similar in many ways to the RP-20, Resource Production Twenty District. Minimum lot size is one of the major differences. The purpose of establishing this RP-10, Resource Production Ten District, is to allow greater opportunities for low density single family residential development in certain areas. Some of the necessary requirements for the RP-10, Resource Production Ten District include the availability of electrical service and being located adjacent with a year-round county road.

RP-20, Resource Production Twenty District
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 intense development but rather for a wide range of forestry, agriculture, mineral extraction, natural resource and recreational uses. Governmental services will not be provided on a year round basis or may not be provided at all.

TP-40, Timber Production District
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 production and mining.

TD, Town Development District
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.

I, Industrial District
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.
CHAPTER 11.0-FUTURE LAND USE AND ZONING PLAN

11.2 Zoning Districts and Zoning Plan continued

Existing Zoning Classifications continued

<table>
<thead>
<tr>
<th>District</th>
<th>Minimum Lot Size (Square Feet or Acreage)</th>
<th>Minimum Lot Width (Feet)</th>
<th>Minimum Setback (Feet)</th>
<th>Maximum Height of Structure (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Front L</td>
<td>Side</td>
</tr>
<tr>
<td>R</td>
<td>1 acre</td>
<td>100 A</td>
<td>30</td>
<td>10B</td>
</tr>
<tr>
<td>RR-5</td>
<td>5 acres</td>
<td>300 A</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>LS/R</td>
<td>1 acre</td>
<td>100 A</td>
<td>30</td>
<td>10B</td>
</tr>
<tr>
<td>RS-1</td>
<td>1 acre</td>
<td>150 A</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>RS-5</td>
<td>5 acres H</td>
<td>300 A</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>RP-10</td>
<td>10 acres H</td>
<td>300 A</td>
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<td>30</td>
</tr>
<tr>
<td>RP-20</td>
<td>20 acres H</td>
<td>470 A</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>TP-40</td>
<td>40 acres H</td>
<td>660 A</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>TD</td>
<td>1 acre I</td>
<td>100 A</td>
<td>30</td>
<td>10B</td>
</tr>
<tr>
<td>I</td>
<td>1 acre</td>
<td>150 A</td>
<td>40</td>
<td>E/F</td>
</tr>
</tbody>
</table>

Footnotes to the Schedule of Regulations Table
A. Lot width shall be measured at front setback line and shall not include any encumbrances, such as easements or other such restrictions. Regardless of actual lot size, the maximum depth to width ratio shall be 4 to 1.
B. An accessory building or structure may be located 6 feet from a side lot line.
C. An accessory building or structure in the R-Residential District and TD-Town Development District may be located 20 feet from a rear lot line.
D. An accessory building or structure shall not exceed 14 feet in height.
E. All structures shall be provided with access to their rear yard, with a minimum of 30 feet clear and unobstructed access way or easement. Setbacks from the existing residential parcels shall be: 50 feet from all buildings; 25 feet for driveways, entrances or exits; and 10 feet for parking areas.
F. Height at any point on a structure shall not exceed the horizontal distance to any lot line.
G. The minimum lot size may be reduced to one acre by application and issuance of a Conditional Use Permit meeting the standards set out in Sec. 312(D) and Sec. 704. The minimum lot width shall be 150 feet.
H. The determination of lot size when adjoining a road shall be made as if the road was a part of the lot in question. For example, a 20 acre parcel fronting on a road will lose approximately one-half acre in the road right-of-way. This will make the parcel size 19.5 acres, however, it will still conform to the 20 acre minimum lot size requirement.
I. The minimum landscaped open space ratio shall be 25 percent in the Town Development District.
CHAPTER 11.0-FUTURE LAND USE AND ZONING PLAN

11.2 Zoning Districts and Zoning Plan continued

J. Customary accessory buildings or structure shall be at least located 30 feet from the rear lot line and waterfront. Rear setback for parcels not abutting water courses shall be 30 feet for all structures.

K. Waterfront Development

a) Setbacks from water-All structures on lots abutting any body of water, as defined in Act No. 346 of the Public Acts of 1972, including but not limited to, inland lakes, rivers, streams, and impoundments, shall maintain a minimum setback of 75 feet as measured from the high water mark or lot line. All uses shall be subject to this setback except private bathing facilities, saunas, storage sheds, and associated facilities which shall maintain a minimum setback of 30 feet as measured from the high water mark or lot line.

There are two lakes: Helen and Casey Lakes, zoned as Recreational Structure which are intensely developed. Limited opportunity exists to further develop these lakes, however, there are individual lots scattered around these lakes which can be developed recreationally. Rather than require 75 foot waterfront setbacks for isolated parcels, in most cases different than adjoining parcels, a 30 foot waterfront setback will be required. This reduction in waterfront setback will allow for uniformity and consistency with established patterns of lakefront development.

The two lakes where 30 rather than 75 foot waterfront setbacks will be required are described below:

Casey Lake-All of the Recreational Structure District found in Section 22, T45N-R29W.

Helen Lake-All of the Recreational Structure District found in Sections 3 and 4, T45N-R29W.

b) Shore and Bank Area Alterations-The part of that setback which lies within 30 feet of the water edge shall be maintained in its natural condition. Trees and shrubs in a space 50 feet wide may be trimmed or pruned for a view of the fronting waters and for access thereto. No change shall be made in its natural grade. A lot shall be regarded in its natural condition when there is at least one tree or shrub having a height of at least 15 feet for each 75 square feet of area thereof in wooded areas or sufficient natural ground cover in open areas.

c) Limitation of “Funnel Development”. Any development in any zoning district which shares a common lakefront or stream area may not permit more than one single family home, cottage, condominium or apartment unit to the use of each 100 feet of lake or stream frontage in such common lakefront or stream area as measured along the water’s edge of normal high water mark of the lake or stream. This restriction is intended to limit the number of users or the lake or stream frontage to preserve the quality of the waters, avoid congestion and to preserve the quality of recreational use of all waters and recreational lands within the Township. This restriction shall apply to any parcel regardless of whether access to the water shall be gained by easement, common fee ownership, single fee ownership or lease. This restriction shall not apply to an official public access site.

L. Where the right-of-way is established under the McKnitt Act (PA 130 of 1931 as amended) and varies from the standard 66 feet of width, the setback shall be not less than 63 feet from the centerline of the roadway.
CHAPTER 11.0-FUTURE LAND USE AND ZONING PLAN

11.3 The Relationship between Zoning and the Future Land Use Plan

The Future Land Use Map is not the same as the Zoning Map, either in the legal sense or in its purpose. An Existing Land Use Map is a graphic representation of how land is now physically being used. The Future Land Use Map is general in nature and is an official graphical depiction of where and to what level future zoning should be permitted. The Zoning Map is a graphic representation of the boundaries for which Zoning District regulations have been adopted by Humboldt Township.

The Future Land Use Map, along with its associated descriptions for Future Land Use classifications make up the Future Land Use Plan. The Future Land Use Map serves as a guide for making decisions on the rezoning of land. However, the Planning Commission and Township Board should consider the map to be only one of many tools available to help them in making land use decisions, recommendations and addressing rezoning requests. The information contained on the Maps should be complemented by site-specific information as considered necessary by Township officials prior to any final decisions.

<table>
<thead>
<tr>
<th>Future Land Use Classification</th>
<th>Zoning Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR, Urban Residential</td>
<td>R, Residential</td>
</tr>
<tr>
<td>CR, Country Residential</td>
<td>RR-5, Rural Residential</td>
</tr>
<tr>
<td>WF/R, Waterfront Residential</td>
<td>LS/R, Lakeshore and River</td>
</tr>
<tr>
<td>SD-1, Seasonal Dwelling One</td>
<td>RS-1, Recreational Structure One</td>
</tr>
<tr>
<td>SD-5, Seasonal Dwelling Five</td>
<td>RS-5, Recreational Structure Five</td>
</tr>
<tr>
<td>NR-10, Natural Resources Ten</td>
<td>RP-10, Resource Production Ten</td>
</tr>
<tr>
<td>NR-20, Natural Resources Twenty</td>
<td>RP-20, Resource Production Twenty</td>
</tr>
<tr>
<td>FP, Forest Production</td>
<td>TP-40, Timber Production</td>
</tr>
<tr>
<td>MU, Mixed Use</td>
<td>TD, Town Development</td>
</tr>
<tr>
<td>M, Manufacturing</td>
<td>I, Industrial</td>
</tr>
</tbody>
</table>
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.

Map 11-2 Future Land Use

DEDETAIL

"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."
CHAPTER 11.0-FUTURE LAND USE AND ZONING PLAN

11.4 Commercial Development

Humboldt Township officials estimate that many Township residents are employed at Northern Michigan University, Bell Hospital, Marquette General Hospital, NICE Community Schools, and the Tilden Mine. Businesses located within Humboldt Township include: UP Propane, Superior Oil, Eliason Property Management, Range Bank, Bucket List Whitetails, Sportsman’s Taxidermy, Hamel Excavating & Septic, Sodergren Septic, Timber Joy storage facility, Raven Graphics, Unadolce Artist Studio, Carlisle Sanitation, The Mudmen Masonry, Eagle Mine’s Humboldt Mill, a quilting shop, candle maker, seamstress and additional small home-based businesses. Many Humboldt Township businesses are located along the two major transportation corridors, US-41 and M-95.

Humboldt Township will continue to encourage additional compatible commercial development along the US-41 corridor and along M-95. The Mixed Use District has been expanded to encompass the vast majority of US-41, including existing commercial and residential development. The Mixed Use District also traverses south along M-95 from the US-41/M-95 intersection to immediately south of County Road 601, thence proceeds east along County Road 601. The Mixed Use District also covers a pocket of existing commercial development located along US-41 in the northeast corner of Humboldt Township.

Expansion of commercial development in Humboldt Township is restricted by limited infrastructure, low population, rural location and generally a lack of economic development opportunities. The location of proposed Mixed Use areas accomplishes an efficient delivery of goods and services to residents with the least amount of impact on adjacent land uses. Future development along the US-41/M-28 corridor will require the proper administration of Access Management standards. Humboldt Township has created a Mixed-Use District, to encourage creative development that promotes exceptional design along its major corridors. These areas are intended for the development of commercial enterprises that incorporate well-planned access and parking areas. This category provides for a mix of land uses within the same development, including a mix of commercial uses, providing employment opportunities and supporting residential uses.
CHAPTER 11.0-FUTURE LAND USE AND ZONING PLAN

11.5 Industrial Development

The historical basis of the local economy is based on the area’s mining heritage and iron ore mining remains a large component of Humboldt Township’s economy. Map 11-2, Future Land Use Map, identifies two areas where future industrial development may occur. Each area is located within relatively easy access to major transportation corridors, in areas with appropriate environmental conditions and fits into the overall land use pattern of Humboldt Township.

Eagle Mine’s Humboldt Mill represents the largest industrial land use in Humboldt Township. As discussed in Chapter 9, Land Use, Lundin Mining Corporation’s subsidiary Eagle Mine purchased the Humboldt Mill in 2013 and has invested an estimated $275 million in site clean up, environmental reclamation and equipment upgrades. Upon completion of reclamation activities, the Humboldt Mill has been used for essentially the same purpose as in the past. A second desirable location for industrial development includes the former Pepin Ireco Explosives site, located in the north central portion of Humboldt Township, along County Road FN. Future industrial development may also be an option along the existing railway at potential decking and loading sites.

11.6 Residential Development

Residential land use includes single family homes, multi-family homes and mobile homes, in a low to medium density pattern. Humboldt Township does not encompass concentrated areas of housing development and existing housing is low density and scattered. There is limited infrastructure in Humboldt Township at this time, which will limit future residential development. All homes utilize on-site private potable water wells and septic systems. New housing development is also limited by the amount of land available and a current lack of demand. Future residential development will be encouraged in areas easily accessible to major transportation routes and the limited utilities that are currently available.

New residential development should be encouraged to preserve the rural character and the environmental integrity of Humboldt Township. Low Density Residential areas designated on Map 11-1, Future Land Use Map include the Country Residential District, generally located south and west of the US-41/M-95 intersection, west of Fish Lake and along County Roads FAB, 478 and FS and along M-95 west of the Michigamme River in the southern portion of Humboldt Township. High Density Residential areas are generally located adjacent to Mixed Use areas near the US-41 corridor and north of US-41 along County Road FX. High Density Residential development currently exists in these areas and infill development will be encouraged where feasible. Single-family residential development is also permitted in the Waterfront Residential District, located around Fish Lake and a small portion of the Michigamme River.
CHAPTER 11.0-FUTURE LAND USE AND ZONING PLAN

11.6 Residential Development continued
Recent housing development has been limited and waterfront lots have been the most popular in recent years. Year-round residential development will not be encouraged in areas where public services, such as mail, garbage pickup, emergency services, snowplowing, school bus pickup as well as adequate roads, are not available. Recreational and seasonal development will only be encouraged in the Seasonal Dwelling Districts.

11.7 Recreational Development
See the Humboldt Township 5-Year Recreation Plan (2016-2020).

11.8 Transportation
As discussed in Chapter 7, Transportation, communities depend on the safe and effective movement of people and goods to sustain a functioning economy. The Marquette County Road Commission has experienced sharp budget cuts in recent years and therefore has had limited funding to address maintenance and repair problems with the local county road system. Roads in Humboldt Township that have been rated using the PASER system are generally in fair or poor shape and the cost to fix roads in the Township that are currently in poor or fair condition is approximately $3.9 million. Humboldt Township does not have any road improvements planned at this time.

Humboldt Township took action to adopt a Memorandum of Understanding recognizing the need to participate in a coordinated planning effort for the US-41/M-28 corridor in 2012, and has joined the US-41/M-28 Corridor Advisory Group. The Humboldt Township Zoning Ordinance will require amendments in the near future to reflect a uniform approach to access management advocated by the US-41/M-28 Access Management Action Plan.

Future transportation improvements in Humboldt Township are focused on rail activity. There are active rail lines traversing Humboldt Township. A Canadian National rail line passes through the Township from east to west; rail traffic travels daily in the morning from Sault Ste. Marie to L’Anse and returns from L’Anse back to Sault Ste. Marie in the afternoon. Rail service upgrades included rail reinstatement from the Humboldt Mill, crossing US-41 west to the switch north of Koski’s Korner (north of US-41). There is a need for an additional rail spur to be located along the former Mesabi blasting property. Humboldt Township officials acquired and restored a section of abandoned railroad grade, which has been utilized for industrial purposes, including shipping Eagle Mine ore from the Humboldt Mill to Sudbury, Ontario. Humboldt Township has acquired the property known as the Humboldt Mill Grade in perpetuity for the benefit of economic development for Humboldt Township and western Marquette County. The length of the former Lake Superior & Ishpeming Railroad line involved is less than two miles. It was formerly used as part of the Iron Ore Heritage Trail, which was relocated. The associated land parcel contains a
11.8 Transportation continued

total of about 35 acres. The spur begins at Eagle Mine’s property line at the Humboldt Mill, and moves west across M-95, then north across US-41, before curving to the east to connect with the Canadian National Railroad line at Humboldt Junction.

11.9 Alternative Energy Resources

Humboldt Township recognizes the importance of alternative energy resources. To the greatest extent possible, zoning performance standards for developing alternative energy resources will be based on the protection of single family dwellings from noise and vibration issues. Regulations regarding alternative energy sources will continue to be reviewed by Township officials and incorporated into the Zoning Ordinance as appropriate.

Wind energy is an emerging technology that will require the Township to consider updates to the zoning ordinance. Regulations should be added for small and large scale wind turbines. Small wind generators that serve private homes, farms or small businesses and turbines up to a maximum height may be permitted for single family dwellings; however, minimum lot sizes will be required. Zoning definitions will need to be added and updated, as the types of turbines will differ by use, height or capacity. Regulations for anemometers (meteorological or MET towers) will also be included; a site plan will be required. Appropriate development standards will be created and adopted for each type of wind energy facility.

11.10 Potential Zoning Ordinance Updates

As discussed throughout the Master Plan, Zoning must be based on a Plan. The Zoning Plan is the guide for all zoning decisions. The main purpose of zoning is to improve the health, safety, and welfare of the population and to direct land use towards implementation of the Master Plan. Through land use planning and land use controls, including zoning, Humboldt Township intends to allow for reasonable growth to be accommodated with minimal land use conflicts or negative environmental impacts, while allowing for the continuation of existing industrial, commercial, residential and recreational uses.
Potential Zoning Ordinance amendments include:

- Update entire Zoning Ordinance to comply with the Michigan Zoning Enabling Act, PA 110 of 2006, as amended.
- Include Access Management regulations.
- Review and update definitions.
- Include regulations to accommodate new trends in land use and zoning, including but not limited to:
  - Outdoor Wood Burners
  - Wind Energy
  - Solar Energy
- Update all administrative procedures and standards.
- Update the Zoning Map.
- Review and strengthen the language listed for the intent for each zoning district.
CHAPTER 11.0-FUTURE LAND USE AND ZONING PLAN

11.11 Conclusion

Planning is intended to guide the forces of change in ways that encourage desirable outcomes while striking an appropriate balance with development and preservation. Consideration for review of the Master Plan will occur on an annual basis and amending the Plan every five (5) years as necessary, will maintain its use as a reliable planning tool. Michigan law states that the Master Plan shall be reviewed at least every five years to determine if updating is necessary.

As the creators and most frequent users of this document, the Planning Commission is the authority responsible for reviewing the recommendations and progress of this Master Plan. An outdated Plan that is not consistently reviewed will diminish the decision making process. Therefore, the Planning Commission should conduct an annual review of the Master Plan and suggest additions and amendments as deemed appropriate.

Suggested amendments and considerations for annual review:
- Delete Goals and Recommendations that have been accomplished and add new recommendations as needs and desires arise.
- Modify the Future Land Use Map to reflect any zoning decisions that have changed the direction of development in the township.
- Update demographic information whenever Census data is available.

This Master Plan Update represents a significant effort by the Planning Commission, township staff and residents. Development of the Master Plan Update involved collection and analysis of data on population, housing, land use, transportation, infrastructure and socioeconomic conditions. The Master Plan Update sets forth recommendations and this updated Plan will only be successful if the implementation measures are taken to achieve the vision set forth in the previous chapters.
CHAPTER 11.0-FUTURE LAND USE AND ZONING PLAN

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Humboldt Township Planning Commission

Resolution No. PC 01-2019

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

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

WHEREAS, the Humboldt Township Planning Commission has noticed and conducted a public hearing in accordance with the requirements of the Michigan Planning Enabling Act (Public Act 33 of 2008, as amended), said hearing was held on __________, 2019, following distribution of the draft master plan update amendment to the planning commissions of the adjacent townships, and Marquette County on __________, 2019.

NOW, THEREFORE, BE IT RESOLVED, that the Humboldt Township Planning Commission hereby adopts the Humboldt Township 2019 Master Plan Update amendment, including with all the associated maps.

YEAS: __________, __________, __________, __________, __________, __________

NAYS: ___________________

ABSENT: _________________

RESOLUTION DECLARED ADOPTED/NOT ADOPTED.

I certify that the foregoing resolution was adopted by the Humboldt Township Planning Commission at its meeting on __________, 2019.

__________________________
Jim Kippola, Planning Commission Chair
Humboldt Township Planning Commission

_____________, 2019
Humboldt Township Board
Resolution No. BD. 01-2019

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

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

WHEREAS, the Humboldt Township Planning Commission has noticed and conducted a public hearing in accordance with the requirements of the Michigan Planning Enabling Act (Public Act 33 of 2008, as amended), said hearing was held on __________, 2019, following distribution of the draft master plan update amendment to the planning commissions of the adjacent townships and Marquette on __________, 2019, and the Planning Commission adopted the Master Plan Update amendment at their __________, 2019 meeting.

NOW, THEREFORE, BE IT RESOLVED, that the Humboldt Township Board of Trustees hereby adopts the Humboldt Township 2019 Master Plan Update amendment, including with all the associated maps.

YEAS: __________________, __________________, __________________, __________________, __________________

NAYS: __________________

ABSENT: __________________

RESOLUTION DECLARED ADOPTED/NOT ADOPTED.

I certify that the foregoing resolution was adopted by the Humboldt Township Board of Trustees at its meeting on __________, 2019.

__________________________
Sarah Etelamaki, Clerk
Humboldt Township Board
__________, 2019