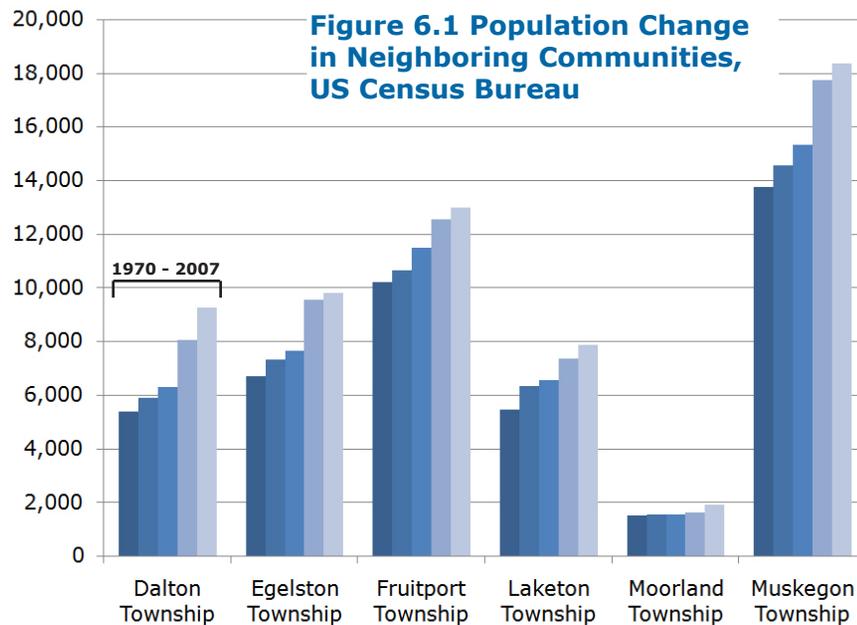


Chapter 6

Population and Land Use



Examining population and land use patterns provides insight on growth and change in a community. Population and land use are interconnected, because our human footprint on the land is reflected in population growth or recession. For example, college students often concentrate near campus, which may result in a need for rental units. On the other hand, families with children tend to prefer larger lots in close proximity to community facilities, such as high-quality schools and parks. This chapter will examine population and land use trends over time, their impact on each other and future population projections.



Muskegon Township is the most populated Township in Muskegon County with a 2007 estimated population of 18,352, according to the U.S. Census Bureau. Like many suburban communities in Michigan, the Township has seen relatively steady growth since 1970. From 1960 to 1970, however, the population declined significantly (by 12%); but this is a result of the City of Muskegon annexing a portion of the Township during that decade.

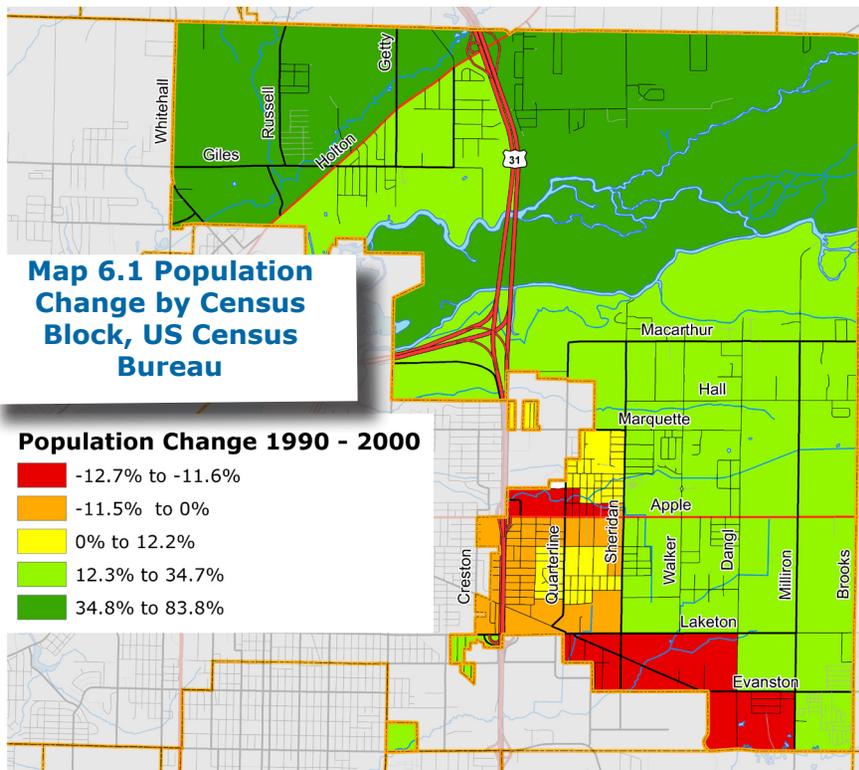
The Township's population in 2007 was estimated at 18,352.

Since 1970, the population has increased by an average of .9% per year, as illustrated in Figure 6.1. In 2000, Muskegon Township comprised 10.42% of the total population in Muskegon County, an increase of .8% since 1990, and an increase of 1.19% since 1980. Total population in 2000 was 17,737, according to the U.S. Census. The Township's proximity to the City of Muskegon and the accessibility to US-31 provides excellent connectivity to regional attractions, jobs, schools and natural resources, helping to account for the steady population increases.

The 2007 U.S. Census indicates that population growth in Muskegon Township and in neighboring communities has moderated somewhat, with the exception of Dalton Township. Changes in economic conditions can often have a notable impact on population, as people will generally move to be near the best employment opportunities. Since population growth seems to be tapering off in many Muskegon County communities, it can be concluded that the cause for the Township's recent relatively moderated growth is because of regional issues, such as the West Michigan economy.

Mapping U.S. Census Data at the block level shows areas of population growth and decline. Map 6.1 illustrates areas in the Township where population shifts have occurred from 1990-2000. Population shifts show areas of the Township that are growing and may require additional services in the future, such as road improvements, utility expansion, provision of parks and recreational facilities, etc. Areas of decline may be candidates for redevelopment or be experiencing a shift in land use that may be reinforced in the future land use plan. Consideration should be given to the current zoning in these areas versus current land use and whether these areas of decline are no longer suitable or desirable for residential development.

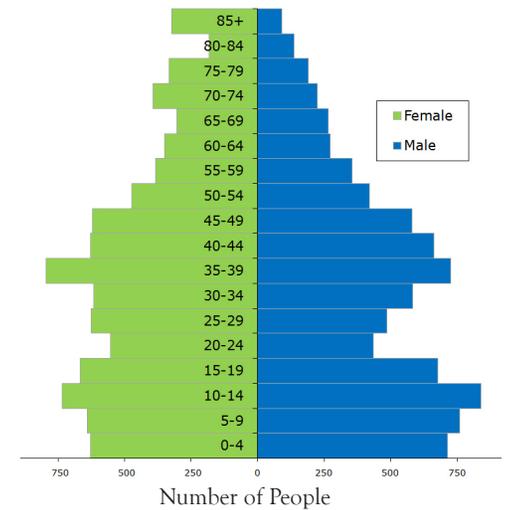
The northern and eastern sections of Muskegon Township, which are more rural and have more readily developable “green-field” sites, have seen the greatest increase in population from 1990 to 2000. This is



consistent with a national trend during this decade of moving out of the City to rural areas with large lots. Many areas immediately adjacent to the City of Muskegon saw a decrease in population of up to 12%, reinforcing this national trend.

In addition to understanding where people live, information about who they are is also a component of land use planning. Different age groups and population cohorts will have different needs and impacts on land use patterns. According to the 2000 U.S. Census, the median age in Muskegon Township was 34.3 years old, and the two largest age cohorts were between the ages of 35-39 and 10-14. This indicates that a significant number of families with school-aged children live in the Township, suggesting a need for parks, schools and other family amenities. It also provides some explanation to the residential development patterns within the Township, as families with children tend to prefer more suburban and rural neighborhoods with lower residential densities.

Figure 6.2 Gender and Age Distribution, US Census Bureau



The 20-to 24-year-old cohort is notably smaller than other age cohorts. This is typical in many suburban Michigan communities, as college-age individuals move away from home to pursue higher education opportunities or employment.

There are a significant number of families with school-age children in the Township.

Residents in the 30 to 49 age cohorts comprise the bulk of the working population and a large proportion of Township residents.

While the size of each age cohort decreases after 45 to 49, it is worth noting that as the middle-aged population ages, demands for senior-related facilities and services will likely increase. The Township's Master Plan should include provisions for all age groups, including recreation, housing, barrier-free design and the promotion of social interaction within commercial nodes.

Population Projections

Predicting future population growth is a fundamental tool in making long-term planning decisions. For example, if a community is expected to experience a significant increase in population over the life of the plan, attention should be given to directing growth, employment opportunities and recreation. However, if a community is expecting a decline in population, more attention could be paid to the retention of the existing population, redevelopment of existing housing stock and improving quality of life for current residents. Michigan's economy, which is resulting in massive job losses, population losses, foreclosures and business closings makes it difficult to project future population, especially when Muskegon Township has seen population spikes in the last two decades.

Predicting future population growth is a fundamental tool in making long-term planning decisions.

Growth Rate. The growth rate method projects future population growth or decline based on the rate of growth the Township has experienced in the past. The growth rate method assumes that growth in the future will occur at the same rate as has occurred annually between 2000 and 2007. According to the Census data, the annual average growth rate of Muskegon Township was 0.68% during that period. Based on a continuation of this rate of growth, the Township's population will reach 18,726 by the year 2010, 20,349 by the year 2020, and 23,219 by the year 2030.

Average Annual Growth Rate	Population Estimate	Population Projections		
	2007	2010	2020	2030
+0.68%	18,352	18,726	20,349	23,219

Arithmetic Method. The arithmetic method is similar to the growth rate method in that population projections are based on growth that occurred in preceding decades. This method, however, bases population growth on the average increase in the number of persons per year, rather than on the rate of growth. The following projections are based on the average increase of 124 persons annually between 1970 and 2007 in Muskegon Township.

Average Change (number of persons)	Population Estimate	Population Projections		
	2007	2010	2020	2030
+124	18,352	18,725	19,968	21,210

Constant Proportion. The constant proportion method projects the Township's population based on its proportion of Muskegon County's population. It assumes that the Township will continue to comprise the same proportion of County residents and therefore, is based largely on the population projections for the County. The West Michigan Shoreline Regional Development Commission (WMSRDC) prepared population estimates for the County, which have been utilized to complete this table. In 2000, Muskegon Township comprised 10.42% of Muskegon County's population. Applying this percentage to the projections provided by WMSRDC, the Township's population will be 18,906 in the year 2010, 20,122 in the year 2020, and 21,416 in the year 2030.

The constant proportion method projects the Township's population based on its proportion of Muskegon County's population.

Percent of County Population	Population Estimate	Population Projections		
		2010	2020	2030
10.52%	2007	179,654	191,208	203,504
Muskegon County	174,386	179,654	191,208	203,504
Muskegon Township	18,352	18,906	20,122	21,416

Building Permit. The building permit method may be the most reliable projection method in this economy because it projects population trends based on actual building permit data. It was determined that Muskegon Township has issued an average of 15.6 building permits for new residential construction annually since 2006. While the Township has building permit data dating to 2004, the figures have seen a sharp decline in five years.

Muskegon Township has issued an average of 15.6 building permits annually since 2006.

Therefore, averages of the last three years were used. Assuming that the building activity will continue at an average of 15.6 permits per year and utilizing the Township’s average household size of 2.64 persons (according to the 2000 Census), future population figures can be estimated. This method predicts that Muskegon Township will increase by about 41 persons per year. Using this figure, the following projects the Township’s population using the building permit method.

Average Number of Permits	Average household size	Population Estimate	Population Projections		
			2007	2010	2020
15.6 permits	2.64 persons	18,352	18,495	18,905	19,315

Averages. Because each method has strengths and weaknesses, an average of each of the projections is likely to result in more accurate results. When the four methods of projecting population are averaged, it results in a projected population in Muskegon Township of 18,666 in 2010, 19,786 in 2020, and 21,237 in 2030.

Table 6.1 Population Projection Summary

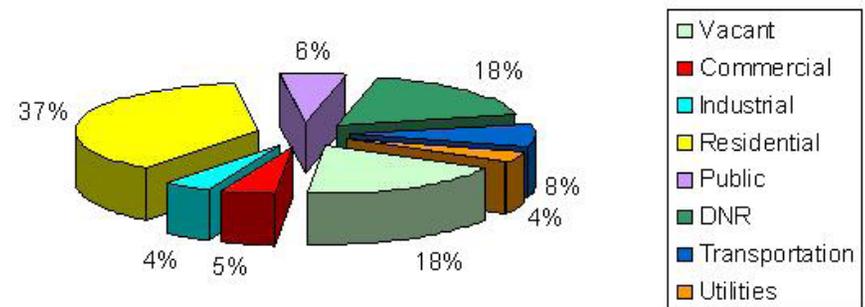
Projection Method	Population Estimate	Population Projections		
		2010	2020	2030
Growth Rate	18,352	18,726	20,349	23,219
Arithmetic	18,352	18,725	19,968	21,210
Constant Proportion	18,352	18,720	19,924	21,205
Building Permit	18,352	18,496	18,905	19,315
Average	18,352	18,666	19,786	21,237

This projected increase in population will result in a modest increase in demand for public utilities and police and fire services; it may also result in greater land consumption if people continue the national trend of living on large lots outside of cities. In the context of a Master Plan, the population projections allow the Township to properly prepare for the additional demand with tools such as zoning, capital improvement planning and recreation planning, and by further strengthening cooperation with neighboring municipalities.

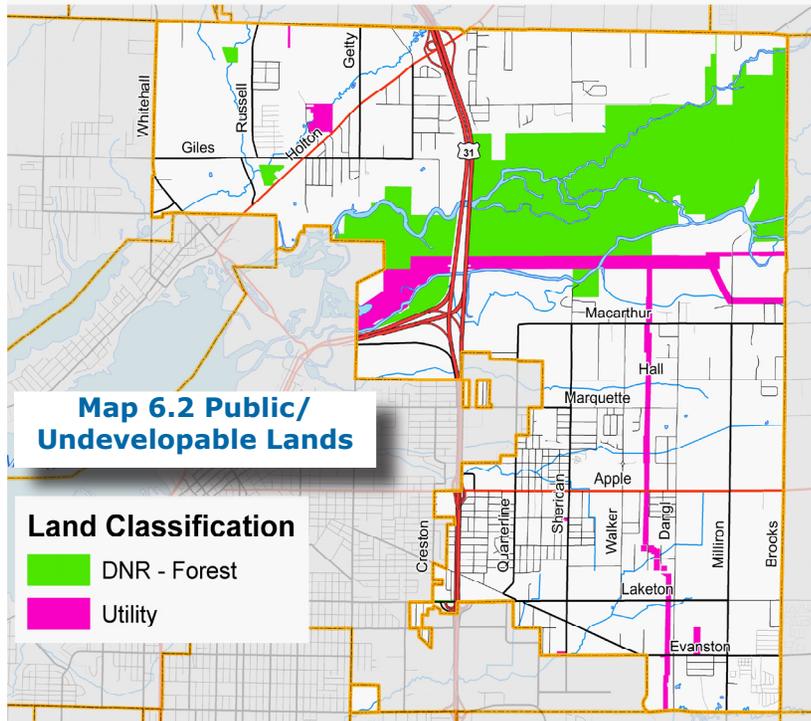
Land Use

Muskegon Township contains more than 15,257 acres of land according to data from Muskegon County’s Mapping and GIS Department. One-third of that, or 5,510 acres, is not developed. This includes 2,700 acres of forestland and wetlands owned by the State of Michigan Department of Natural Resources. Residential

Figure 6.3 Land Use Distribution



land containing a dwelling accounts for 37% of the Township, or 5,697 acres. Consumers Energy owns 583 acres, or 3.8% of land in the Township containing high power transmission lines and access easements. Roadways account for 8% of the land use within the Township, including rights-of-way and developed roadways. Commercial and industrial lands occupy 5% and 4% of land respectively, while public lands, including churches, schools and government buildings, account for 6%.

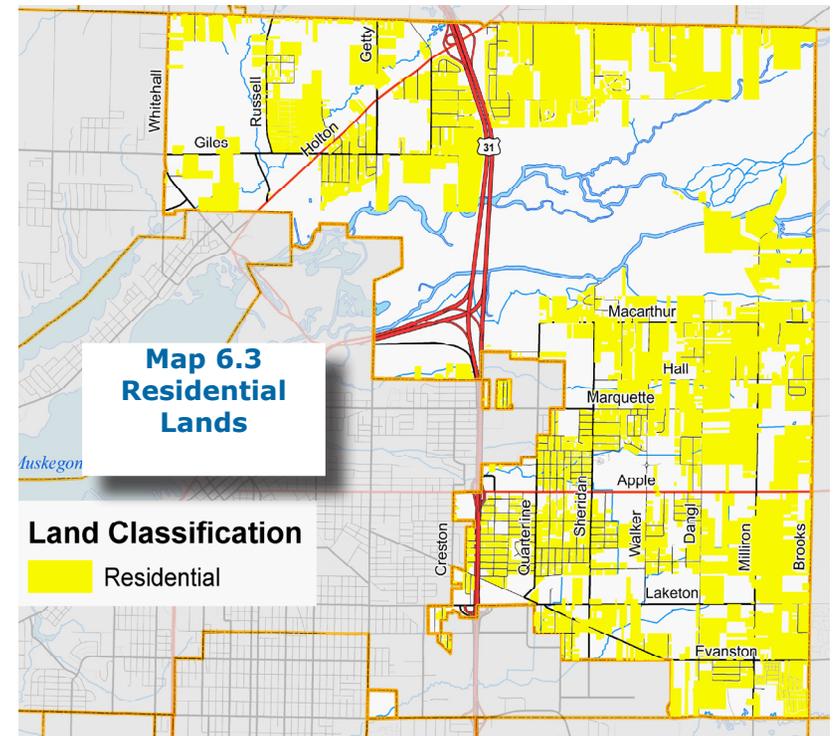


Department of Natural Resources and Consumers Energy Lands
Accounting for approximately 18% of the Township land area, the State of Michigan Department of Natural Resources and Environment (DNRE) is the largest single landowner within the Township. The State owned land runs along both sides of the river from the City of Muskegon across the Township and into Egelston Township to the east. Comprised of a combination of forest and wetlands, this area is undeveloped. While these areas are not likely to be developed, they have the potential to be used for recreation purposes, such as bike and

walking paths. Land owned by Consumers Energy carries transmission lines from the Cobb plant in the City of Muskegon.

Residential Lands

Residential land uses comprise the bulk land in the Township. With 5,697 acres, or 37% of the total land area in residential use, the majority is detached single-family residential. This also includes the Township's three manufactured housing communities, which account for approximately 220 acres. As shown in map 6.3, most of the residential land is located east of the City of Muskegon or north of the City of North Muskegon. In most areas, the residential use continues from one municipality to the next, avoiding significant land use conflicts. Residential land (vacant and improved) accounts for 72.86% of the total developed area within the Township.

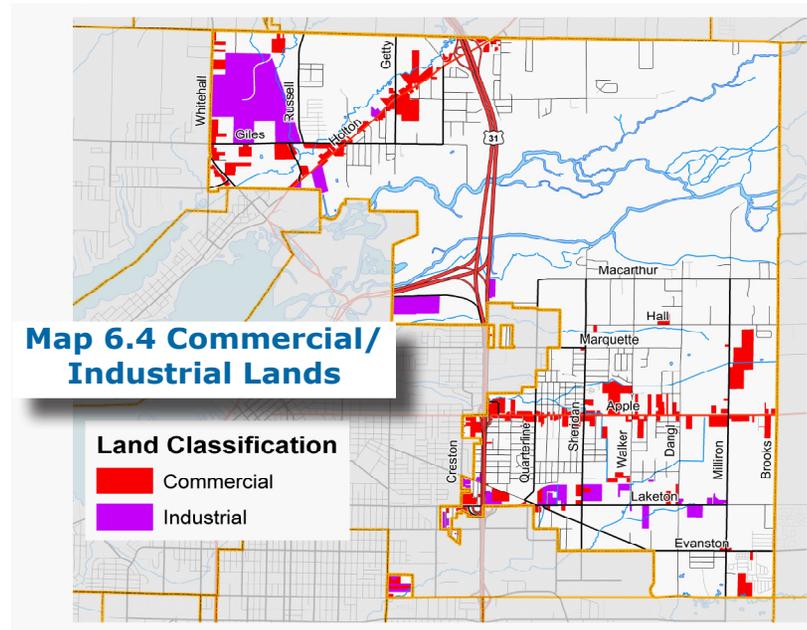


Commercial and Industrial Lands

Developed commercial and industrial land consumes a total of 1,338

acres of land within the Township.

Commercial lands are located along major arterials and have been developed in a traditional strip pattern. Apple Avenue, Holton Road and Whitehall Roads are the primary commercial corridors, whereas Laketon is transitioning from a mixed residential corridor to a primarily industrial corridor. Along Apple Avenue, the portion of the corridor from US 31 east to Sheridan is densely developed and contains many retail strip centers setback from the road, allowing parking in front of the building. The Township Hall is located on Apple Avenue, and the bulk of the older, residential neighborhoods are nearby, providing opportunities for area residents to walk to nearby shops and restaurants. The Holton Road corridor contains a Meijer store, drawing customers from the Townships north of the Muskegon River. Whitehall Road contains more office development and less convenience commercial development as either Holton Road or Apple Avenue. Redevelopment of commercial corridors, especially those portions of commercial corridors closest to dense residential



development, should be considered during the planning process.

The industrial areas are generally adjacent to or near the west

side of the Township, near arterial roadways. Muskegon Township has two industrial parks. The John Wierengo Industrial Park is located at Evanston Avenue and Laketon Avenue, has an area of eighteen acres and is completely developed, but only 11 of those acres are currently occupied. The second industrial park is the Don Aley Industrial Park, which is located at Laketon Avenue and Milliron Road. The industrial parks have water and sewer service and are located on major arterial roadways.

Vacant Lands

The Township's vacant land is separated into one of several available

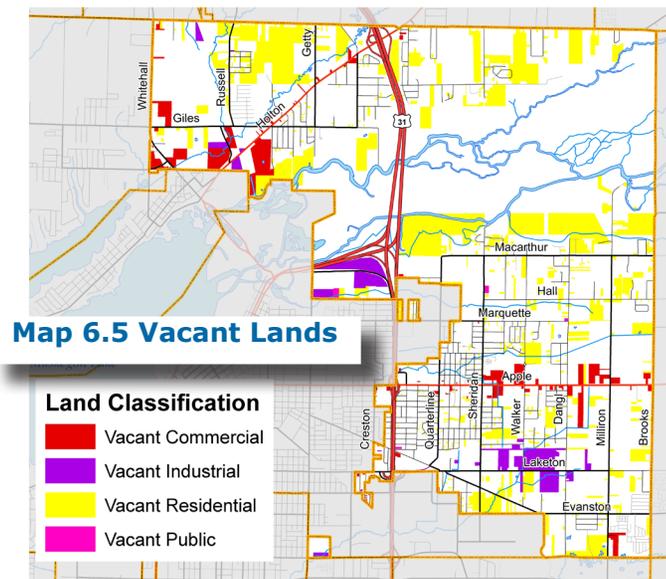
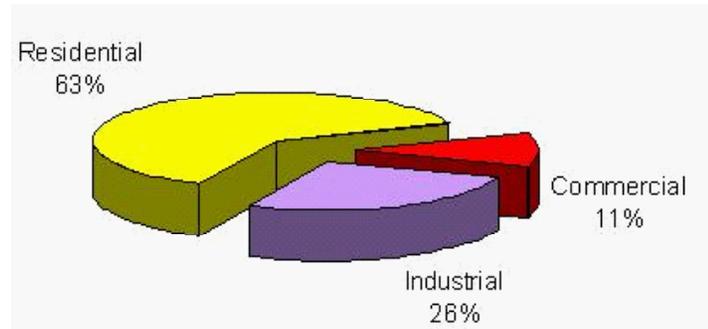


Figure 6.4 Distribution of Vacant Lands



land use classifications by Muskegon County Mapping and GIS Department. Approximately 63% of the total vacant land is classified for residential uses. There are approximately 2,109 acres of vacant residential land based on the land use map provided by the County. As shown in Map 6.5, the vacant residential land is distributed across the Township with the highest concentrations along the Muskegon River, which may be difficult to develop due to soil and floodplain restrictions. Another area of vacant residential development is along the northern boundary of the Township, between Getty and Russell Road. Since this area is removed from developed commercial land, future land uses should be less intense, not requiring a significant demand for services.

Vacant commercial and industrial land account for 377 acres and 890 acres, respectively. As indicated in Map 6.5 there is ample vacant commercial land remaining along the commercial corridors, however, it is located away from dense residential areas. Vacant industrial land is primarily located along Laketon, which is becoming the Township's primary industrial area. Figure 6.4 shows the distribution of vacant land by percent.

Proportion of Land Use to Future Growth Projections

There is no generally accepted ratio of commercial, industrial and residential land use based on population or area of a municipality. What may seem like excessive industrial land in one community may not meet demand in another. Since communities are constantly evolving and dependent on demands and growth patterns beyond their borders, it is difficult to determine how much land should be devoted to each use. However, some generalizations can be made based on population projections for residential uses, national trends and studies conducted by the Urban Land Institute about commercial and industrial density based on employees per acre.

Residential: The Township contains approximately 2,109 acres of vacant residential land and 5,697 acres of improved residential land. Average density is the number of households (6,828 from the 2000 U.S. Census) divided by the number of acres of improved residential land. Average density in Muskegon Township is .83 or one dwelling unit per .83 acres of land.

Dividing density by available residential land, there are approximately 2,540 housing sites available. Population projections show an estimated increase of 2,571 people in the Township by the year 2030. With an average household size of 2.64 people per household (2000 US Census), there is a projected demand for 937 dwelling units by the year 2030 to accommodate projected population growth. Based on this data, there is a surplus of residential land equivalent to 1,603 dwelling units, or 1,330 acres of residential land in the Township.

Commercial/Industrial/Office: According to the 2000 Census data, there are approximately 5,828 people employed in the Township. In terms of employees per square foot of building type, the Urban Land Institute estimates the following:

- 1 employee per 500 square feet of commercial
- 1 employee per 300 square feet of office
- 1 employee per 1,030 square feet of industrial
- Average of 610 square feet per employee

With 5,828 employees and a national average of 610 square feet of commercial/office/industrial land per employee, the Township would need 3,555,080 square feet of commercial/office/industrial land to accommodate the number of workers in the Township. However, looking at Muskegon County land use data, the Township has the following number of acres developed as commercial/office/industrial:

- 707 acres of developed commercial/office land
- 631 acres of developed industrial land
- 1,338 acres or 58,283,280 square feet of commercial/office/industrial land

The Township has approximately 58,283,280 square feet of developed commercial/office/industrial land. Common planning practice indicates that only about 75% of a parcel of land use is used for buildings, and the remainder is devoted to parking, setbacks, drainage, etc. Therefore, there is approximately 43,712,460 square feet of building area devoted to commercial/office/industrial buildings in the Township. If there is approximately one employee per 610 square feet of building area, the Township has enough building area for 71,659

employees.

As mentioned previously, there are only 5,828 people working in the Township. Based on the estimates using existing land use and assuming national trends in square footage per employee, the Township has a large surplus (54,728,200 square feet or 1,256 acres) of existing commercial and industrial square footage. If the Township were to factor in the vacant commercial and industrial land, this surplus would grow even higher.

Conclusion

The interdependency of population and land use are evident in the development patterns within Muskegon Township. Areas showing a higher concentration of residential structures are in close proximity to the City of Muskegon and Apple Avenue, which is the main commercial corridor in the Township. The more suburban and rural areas of the community have lower residential density and less commercial development.

The suburban and rural neighborhoods are often the most desirable for families, and this age group (ages 35-44) makes up a large demographic group within the Township. It will be important to direct resources to these areas of the Township having the potential for continued residential growth. It will also be important for the Township to focus resources in areas where foreclosure rates are high to prevent deterioration of the existing residential fabric (see Chapter 7, Housing and Neighborhoods).

As the population projections indicate, the Township should not expect high levels of growth over the next 20 years. In fact, Muskegon Township residents are getting older, the younger generations are leaving after high school and the birth rates are decreasing. As a result, Township resources may be strained, and it will be important to prioritize available services to areas with the greatest need, highest potential and greatest population densities. Ensuring that the existing commercial corridors continue to maintain their competitive advantage will be essential. Connecting these commercial nodes to strong residential neighborhoods will provide more options for residents as they are able to walk, bike and drive to meet their daily