

**MONTGOMERY ASSOCIATES, INC.**  
*Urban Planning Consultants*

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# **Supplement to the Comprehensive Master Plan**

**For The Charter Township of China**

**Minor Update – Extension of the Horizon Year to 2030**

**Draft: November, 2013**

**Released for Statutory Review and Comment**

# Minor Update of the Plan

The Michigan Planning Enabling Act requires that at least every 5 years after the adoption of a master plan the planning commission shall review the master plan and determine whether to commence the procedure to amend the master plan or to adopt a new Master Plan.

The China Township Planning Commission reviewed the current Comprehensive Master Plan for the years 2004-2020 and determined that while the plan remained substantially valid, some updating and amendments to the plan were required. The release of the results of the 2010 U.S. Census provided certain impetus to this decision.

In November, 2012, the township's planning consultant, Montgomery Associates, Inc., was retained to assist the planning commission with this updating process. Work began in January, 2013 and the planning commission completed its review of the draft update in November, 2013.

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## Content of the Supplement to the Comprehensive Master Plan

The following sections of the Comprehensive Master Plan have been updated and are included in this supplement:

- Population Projections
- Population Profile
- Economic Base (not including the Business List portion)
- Future Land Use (including Future Land Use Map)

Note: Page numbering of the various updated sections is not consecutive.

# Population Projections

The Land Use Plan is directly related to future population projections of China Township, making these projections one of the most significant steps in the planning program. The historical growth of the Township provides a basis for future estimates. Although generators of growth such as new highways and utilities are considered in the population forecast, they do not have significant impact on the historical growth. These projections should be viewed as a guide for the development plan and not as the ultimate goal. Thus, as China Township examines its total population growth, the development plan of the community can be accelerated or decelerated as the level of growth determines. For example, if the level of population expected in China Township in the year 2030 occurs by 2020, the development plan must be accelerated to meet the transportation and community facility needs of the population.

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## Methodology

Population projections can be determined by many varying methods. The four methods that are most appropriate for a community such as China Township are the following:

### ARITHMETIC PROJECTION

This simple method involves computing the average numerical population change per decade in the past and then projecting this numerical increase into the future. This procedure produces the same result as a straight-line graphic projection on plain coordinate paper.

### GEOMETRIC PROJECTION

This method involves computing the average rate of change per decade in the past and then projecting this average rate (or percentage change) into the future. This

corresponds to a straight-line graphic projection on semi-logarithmic coordinate paper.

Both the arithmetical and geometric techniques are founded on the assumption that the factors and conditions that produced population growth or decline in the past will continue unchanged and will have the same effects in the future, or that they are derived from an assumed curve of population growth.

### **SHARE OF COUNTY METHOD**

This is one of two *apportionment* methods used for this study. This method assumes that population growth in a community is often closely related to or affected by economic and population changes in the county in which it lies. Future population changes in the larger area may have an important influence on growth and decline in the smaller area. Therefore, past relationships between population growth in an area or community and that of its county are valuable guides for projection of the local population. If logically founded population projections for the county are available, projections for the community can be derived directly by apportioning part of the county's population to the community.

This apportionment is accomplished by a two-step process. In the first step, the ratio of the community's population to the county's population in the base year (often the base year is the last census year or the year with the most recent population estimates) is calculated. Then, in step two, this ratio, which is assumed to hold constant during the forecast period, is multiplied by the forecasts of the county population to derive the forecasts of the community's population.

In some cases, a definite trend can be seen in the ratio of the community's population to the county's population. For example, the community's share of county population may be either steadily growing or shrinking over time. When such a trend occurs, it is often desirable to calculate a *projected* ratio of community population to county population, instead of using a constant base year ratio.

### **SMALL AREA FORECAST**

This kind of apportionment method, utilized by the Southeast Michigan Council of Governments as a part of its Regional Development Forecast, attempts to forecast the township's share of the projected population of Southeastern Michigan. Small area forecasts consider variables such as: the relative suitability throughout the region of soils for on-site sewage disposal systems; existing and planned sewerage areas; agricultural land that is required to be preserved; the existing and planned highway networks; the relative demands for development of residential, commercial and industrial uses throughout the region. Updated small area Forecasts for the years 2015 through 2040 were released by SEMCOG in March 2012.

## Background

In the 80 years from 1930 to 2010, the population of China Township increased by 2,530 persons for an overall growth rate of approximately 248%. The largest portion of this growth took place during the 1990's when the population grew by 696 persons, which translates to a growth rate of 26.32% for that decade. The average population growth per decade for the Township is 316 persons, for an average growth rate per decade of 17.28%. These last two numbers will be used respectively for the arithmetic and geometric population projections given below.

**Table 2: Population of China Township from 1930 to 2010**

Year	Population	Change	
1930	1,021	—	—
1940	1,277	+256	25.07%
1950	1,361	+84	6.58%
1960	1,836	+475	34.90%
1970	2,106	+270	14.71%
1980	2,466	+360	17.09%
1990	2,644	+178	7.22%
2000	3,340	+696	26.32%
2010	3,551	+211	6.32%
Average Change per Decade:		+316	17.28%

Source: U.S. Bureau of the Census

**Table 3: China Township's Share of County Population**

ST. CLAIR COUNTY		CHINA TOWNSHIP	
Year	Population	Population	% Of County
1930	67,563	1,021	1.51%
1940	76,222	1,277	1.68%
1950	91,599	1,361	1.49%
1960	107,201	1,836	1.71%
1970	120,175	2,106	1.75%
1980	138,802	2,466	1.78%
1990	145,607	2,644	1.82%
2000	164,235	3,340	2.03%
2010	163,040	3,551	2.18%
2020	161,508	3,779	2.34%
2030	164,656	4,298	2.61%
2040	167,621	4,475	2.67%

Source: U.S. Bureau of the Census, Southeastern Michigan Council of Governments

In 2010, the China Township population of 3,551 amounted to 2.18% of the population of St. Clair County, which in 2010 was 163,040. This ratio appears to have increased over time, so projected ratios of 2.34% in 2020, 2.61% in 2030, and 2.67% in 2040 will be used instead of assuming that the 2010 ratio will hold



constant. The Southeastern Michigan Council of Governments (SEMCOG) Regional Development Forecast indicates that in the year 2020 the population of St. Clair County will fall to 161,508 and then increase again in 2030 to 164,656, with a further increase o 167,621 in 2040. These three County population forecasts will each be multiplied by the China Township's corresponding projected shares of the County population to calculate the share of county population projections given above.

## Population Projections

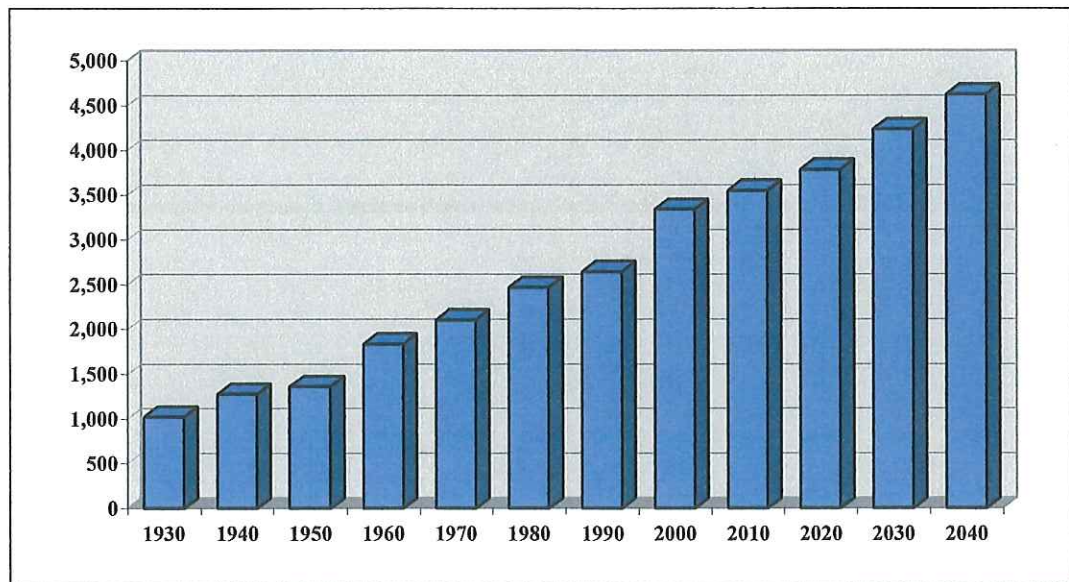
A summary of the results of the four methods of population projection is set forth below. This plan will utilize the results of the average of the four methods. In the later years of the past decade and continuing into the early years of this decade, the United States has experienced a significant downturn in economic prosperity. This has been especially pronounced in Michigan and the Metropolitan Detroit Area. While China Township has continued to grow, St. Clair County experienced a small decline in population during the last decade. Previous growth trendlines have been disrupted. Currently, the economy of the nation, state, and region remains relatively stagnant. This may continue to affect the ability of households to improve their housing conditions by constructing new homes in attractive low-density communities such as China Township. Uncertainty remains whether or not national, state, and regional leaders will be able to restore the competitive position of the United States in the world economy or take other measures to improve economic prosperity. However, China Township is well positioned to take advantage of growth trends when they resume. In the past, China Township has demonstrated the ability and willingness to provide necessary extensions of public utilities to accommodate growth. According to these projections, the population of the Township in the year 2020 will be approximately 3,785 persons, in 2030 the population will be approximately 4,237, and in 2040 there will be approximately 4,625 persons residing in the Township.

There are many factors that may modify these Township population projections such as: the extension of public water and sewer facilities in a portion of the Township; establishment of a single large residential development such as a mobile home park or planned unit development, continued economic depression, a war, significant civil disturbances, the locating of a very large employer, or numerous other natural and man-made occurrences. The Plan would have to be modified to account for these occurrences.

**Table 4: China Township Population Projection Summary**

Year	Arithmetic	Geometric	Share Of Co.	Small Area	Average
2020	3,867	4,165	3,779	3,329	3,785
2030	4,183	4,884	4,298	3,583	4,237
2040	4,499	5,728	4,475	3,798	4,625

**Figure 5: China Township Population—1930 to 2040**



### PROJECTIONS BY AGE GROUP

SEMGCOG's Regional Development Forecast provides population projections by age group (0 to 4, 5 to 17, 18 to 34, 35 to 64, and 65 and over). By calculating the relative proportions of each age group to SEMGCOG's total population projection for 2020 and 2030, and then multiplying these proportions by the population projections given above, the following projections by age group are derived.

**Table 5: Population Projections by Age Group**

Age Group	2010	2020	2030	%Change '10-'30
Age 0 to 4	132	172	197	+49.24%
Age 5 to 17	738	604	756	+2.44%
Age 18 to 34	488	667	670	+37.30%
Age 35 to 64	1,750	1,704	1758	+0.46%
Age 65 and over	443	638	855	+93.00%
<b>TOTAL</b>	<b>3,551</b>	<b>3,785</b>	<b>4,237</b>	<b>+19.32%</b>

*SOURCE: Southeastern Michigan Council of Governments; Montgomery Assoc., Inc.*

From 2010 to 2030 the 65 and over age group is expected to increase by 93%, a rate more than four times the expected 20-year growth rate for the total population (19.3%). Thus, this age group will assume a larger share of the total population during this time period. The school age group (5 to 17 age group) is expected to grow very little (2.4%). Therefore, there is not likely to be any need to increase school capacity during this period. However, the pre-school age population (0 to 4 age group) is expected to grow at more than twice (49.2%) the rate as the total population. The young adult group (18 to 34 age group) is expected to grow at nearly twice the rate of the general population; while the mature adult group (35 to 64 age group) is expected to remain stable during this time period.

## Growth of Households

In addition to forecasts of China Township population in its Regional Development Forecast/Small Area Forecast process, SEMCOG also issues forecasts of average household size. When used with the population projections derived above, allow us to project the number of households to be found in the Township. The resulting figures are presented in the following table.

**Table 6: China Township Households—Projected Size & Number**

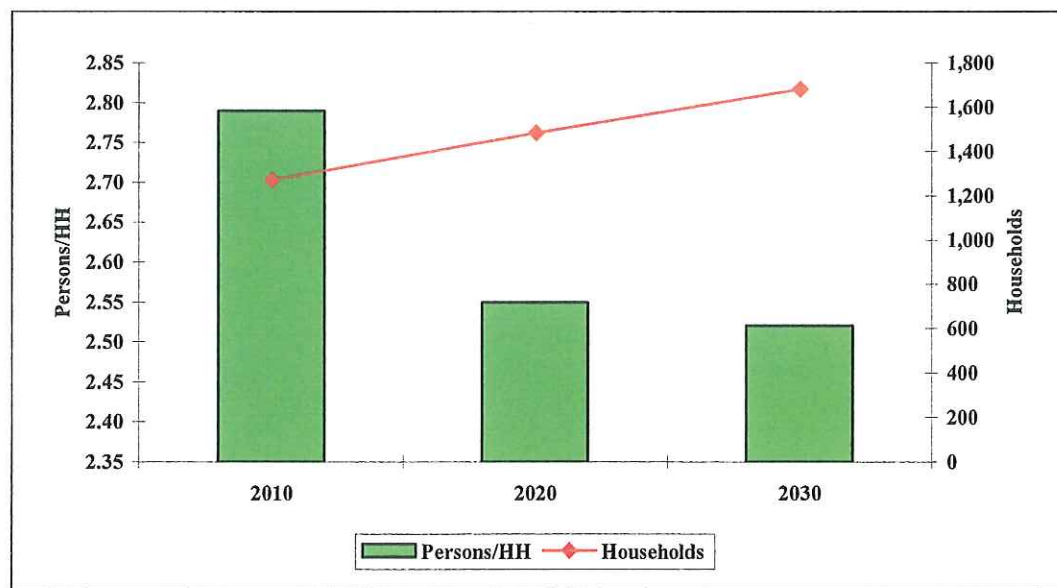
	2010	2020	2030
<b>Avg. Persons/Household</b>	2.79	2.55	2.52
<b>Number of Households</b>	1,271	1,484	1,681

*SOURCE: Southeastern Michigan Council of Governments; Montgomery Assoc., Inc.*

It is anticipated that the rate of growth of households will exceed the growth rate of population. This is because of the continuing trend toward a smaller household size. In 2010, China Township had 1,271 households with an average of 2.79 persons per household. By the year 2020, the average household size will have declined to 2.55 persons, resulting in a total of 1,484 households. In the year 2030 the average persons per household will decline further to 2.52, occupying 1,681 households. Thus, from 2010 to 2030 there will be an increase of 410 households, or an overall increase of 32.3%.

This household growth will be reflected in the construction of new dwelling units. It is expected that an average of 20.5 new dwelling units per year will have to be constructed to accommodate this growth. This does not include dwelling units that have to be replaced because of demolition.

**Figure 6: Projected Households vs. Household Size**





# Population Profile

A profile of the current population of the Township is just as important to the planning process as the projections of the Township's population into the future. Such a profile can help determine whether or not the current pattern of land uses within the Township and the facilities of the Township are sufficient to meet the needs of the population as currently composed. Any "deficiencies" in the current land uses or facilities can then be addressed by this Master Plan. For example, if the population profile indicates a large number of "senior citizens" and the inventory of community facilities indicates a lack of senior citizen facilities in the Township, then there probably is a deficiency in this kind of facility.

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## Methodology

This profile will look at five aspects of the population of the Township:

1. The general composition of the population, including age, sex and race.
2. The income and poverty levels of the population.
3. The labor force status of the population, as well as the occupations and industries that employ the population.
4. The education and school enrollment levels of the population.
5. The age, value, condition, composition and amenities of the housing stock.

In addition to the current (for the purposes of this plan the term "current" will refer to 2010 or 2007–2011 as necessary) population figures for the Township, current data for the State of Michigan and for St. Clair County, as well as 2000 data for the Township will be provided for comparison purposes (whenever possible). All data in this section, except as otherwise noted, is taken from the *US Bureau of the Census - Census of Population, 2010*, the *US Bureau of the Census - Census of Population, 2000* and the *2007–2011 American Community Survey 5-year estimates*.

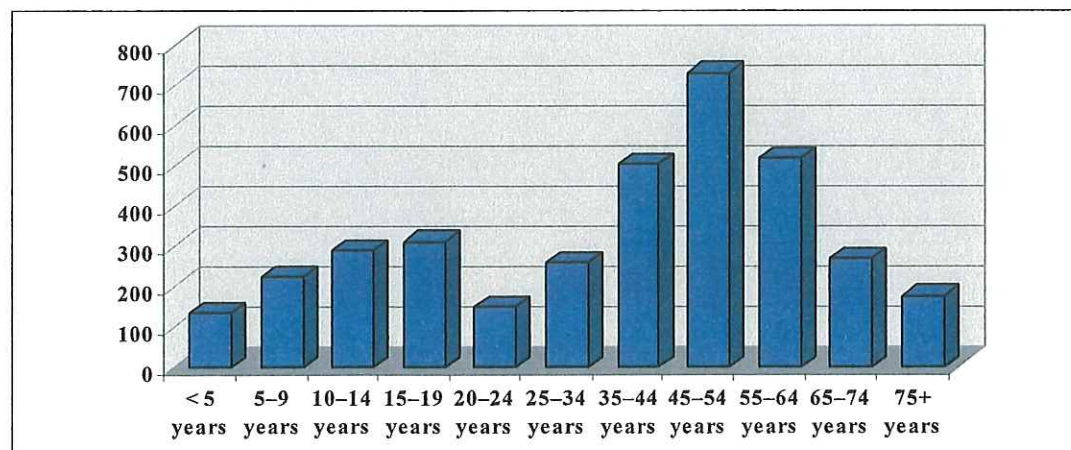
## Population Composition

In 2010, approximately 21% of China Township's population was between the ages of 45 and 54, making that age group the largest in the Township. The next largest were the 55 to 64 age group (14.56% of the population) and the 35 to 44 age group (14.17% of the population). The other age groups contained between 3% (the <5 age group) and 9% (the 15-19 age group) of the population each. This pattern is similar to the populations of St. Clair County and the State of Michigan. Between 2000 and 2010, the number of persons 55-64 years of age increased at a rate of 64.13%, faster than any other age group in the Township. The 75+ age group had the second greatest increase (54.39%), followed by the 65-74 age group (47.51%) and the 45-54 age group (31.29%). Except for the 15-19 and 20-24 age groups (increasing 6.9% & 7.25%, respectively), the populations of all other age groups decreased from 2000 to 2010.

**Table 6: Population by Age**

	Michigan	St. Clair County	China Twp. 2010		China Twp. 2000		Change '00-'10	
< 5 years	6.03%	5.70%	132	3.72%	202	6.05%	-70	-34.65%
5-9 years	6.45%	6.38%	223	6.28%	276	8.26%	-53	-19.20%
10-14 years	6.83%	7.01%	288	8.11%	305	9.13%	-17	-5.57%
15-19 years	7.48%	7.21%	310	8.73%	290	8.68%	20	6.90%
20-24 years	6.77%	5.34%	148	4.17%	138	4.13%	10	7.25%
25-34 years	11.78%	10.31%	257	7.24%	329	9.85%	-72	-21.88%
35-44 years	12.93%	13.46%	503	14.17%	634	18.98%	-131	-20.66%
45-54 years	15.28%	16.59%	730	20.56%	556	16.65%	174	31.29%
55-64 years	12.67%	13.49%	517	14.56%	315	9.43%	202	64.13%
65-74 years	7.33%	7.91%	267	7.52%	181	5.42%	86	47.51%
75+ years	6.44%	6.61%	176	4.96%	114	3.41%	62	54.39%
<b>Total</b>	9,883,640	163,040	3,551		3,340		211	6.32%
<b>Median Age</b>	38.9	41.3	44.0		37.2		18.28%	

**Figure 3: 2010 Township Population by Age**



In keeping with national trends over the last 20 years, the median age of the Township population increased from 37.2 to 44.0 between 2000 and 2010, an increase of over 18%.

**Table 7: Population by Gender**

	Michigan	St. Clair County	China Twp. 2010		China Twp. 2000		Change '00-'10	
<b>Male</b>	49.05%	49.51%	1,813	51.06%	1,690	50.60%	123	7.28%
<b>Female</b>	50.95%	50.49%	1,738	48.94%	1,650	49.40%	88	5.33%

From 2000 to 2010, the male and female populations of the Township both increased, at rates of 7.28% and 5.33%, respectively. Because the male population increased at a faster rate, the ratio of males to females in the Township widened from 50.6% male /49.4% female in 2000 to 51.06% male /48.94% female in 2010.

**Table 8: Population by Major Age Group**

	Michigan	St. Clair County	China Twp. 2010		China Twp. 2000		Change '00-'10	
<b>Pre-School</b>	6.03%	5.70%	132	3.72%	202	6.05%	-70	-34.65%
<b>School</b>	27.54%	25.95%	969	27.29%	1,009	30.21%	-40	-3.96%
<b>Labor Force</b>	52.65%	53.84%	2,007	56.52%	1,834	54.91%	173	9.43%
<b>Family Formation</b>	24.71%	23.77%	760	21.40%	963	28.83%	-203	-21.08%
<b>Seniors</b>	13.78%	14.52%	443	12.48%	295	8.83%	148	50.17%

Sometimes a clearer view of the age composition of a population can be seen when the population is broken down into the following major age groups:

- **Pre-School (age 0–4)**
- **School (age 5–24):** the age levels usually enrolled in school (at some level).
- **Labor Force (age 25–64):** the age levels usually in the labor force.
- **Family Formation (age 25–44):** the age levels that usually start a family.
- **Seniors (age 65 and above)**

Here we see a primarily young to middle-aged adult population, with the Family Formation, Labor Force and School major age groups containing most of the Township's population. The percentages of the Township population for each of these three major age groups are generally similar to those for the County and the State. The Seniors group, however, has a smaller percentage in the Township (12.48%) than in the County or the State (14.52% and 13.78%, respectively). Similarly, the Pre-School group has a smaller percentage in the Township (3.72%) than in the County or the State (5.70% and 6.03%, respectively).

In the following table, it can be seen that, as with the population of St. Clair County, that of China Township is composed mostly of whites. Blacks, Hispanics, American Indians, Eskimos, Aleuts, Asians, Pacific Islanders and all other races combined account for less than 2% of the Township's population, a proportion far

less than in either the County or the State. It is not expected that minorities will attain a significantly larger proportion of the population in the Township in the near future.

**Table 9: Population by Race**

	Michigan	St. Clair County	China Twp. 2010		China Twp. 2000		Change '00-'10	
<b>White</b>	78.95%	93.87%	3,490	98.28%	3,280	98.20%	210	6.40%
<b>Black</b>	14.17%	2.44%	6	0.17%	11	0.33%	-5	-45.45%
<b>American Indian &amp; Alaska Native</b>	0.63%	0.45%	8	0.23%	11	0.33%	-3	-27.27%
<b>Asian &amp; Pacific Islander</b>	2.44%	0.49%	12	0.34%	9	0.27%	3	33.33%
<b>Other</b>	3.82%	2.75%	14	0.39%	29	0.87%	-15	-51.72%
<b>Hispanic</b>	4.41%	2.89%	28	0.79%	36	1.08%	-8	-22.22%

**Table 10: Household Population and Type**

	Michigan	St. Clair County	China Twp. 2010		China Twp. 2000		Change '00-'10	
<b>Pop. in households:</b>	97.68%	98.77%	3,543	99.77%	3,328	99.64%	215	6.5%
<b>Pop. in group quarters:</b>	2.32%	1.23%	8	0.23%	12	0.36%	-4	-33.3%
<b>Institutionalized</b>	1.11%	0.71%	0	0.00%	0	0.00%	0	—
<b>Noninstitutionalized</b>	1.21%	0.52%	8	0.23%	12	0.36%	-4	-33.3%
<b>Family households:</b>	65.95%	69.29%	1,048	82.45%	945	85.44%	103	10.9%
<b>Married-couple family</b>	47.96%	52.94%	909	71.52%	860	77.76%	49	5.7%
<b>Female Householder</b>	20.12%	11.38%	82	6.45%	56	5.06%	26	46.4%
<b>Nonfamily households:</b>	34.05%	30.71%	223	17.55%	161	14.56%	62	38.5%
<b>Householder alone</b>	25.66%	25.50%	190	14.95%	141	12.75%	49	34.8%
<b>Householder &gt; age 65</b>	10.76%	10.84%	84	6.61%	59	5.33%	25	42.4%
<b>Persons/Household</b>	2.56	2.52	2.79		3.01		-0.22	-7.3%
<b>Persons/Family</b>	3.10	3.01	3.08		3.29		-0.21	-6.4%

In 2010, 99.77% of China Township's population lived in households, with the remainder living in noninstitutionalized group quarters (group homes and other similar facilities). The percentage of persons living in households in the Township is higher than that for the County and the State.

Just over 82% of all households in the Township were family households (where all members of the household are related by birth or marriage), 71.52% were married-couple family households and 6.45% were households headed by a single/widowed/divorced female. The percentages of family households and married-couple family households in China Township are higher than those for the County and the State, however, the percentage of female-householder family households in the Township is lower than in the County and the State. Over 17% of all households in the Township were nonfamily households, 14.95% were single-person households and 6.61% were households with householders of age



65 or more. The percentages in these three categories are much lower than those for the County and the State. Here, all three percentages are higher than in 2000. In absolute terms, all types of households increased in the Township from 2000 to 2010.

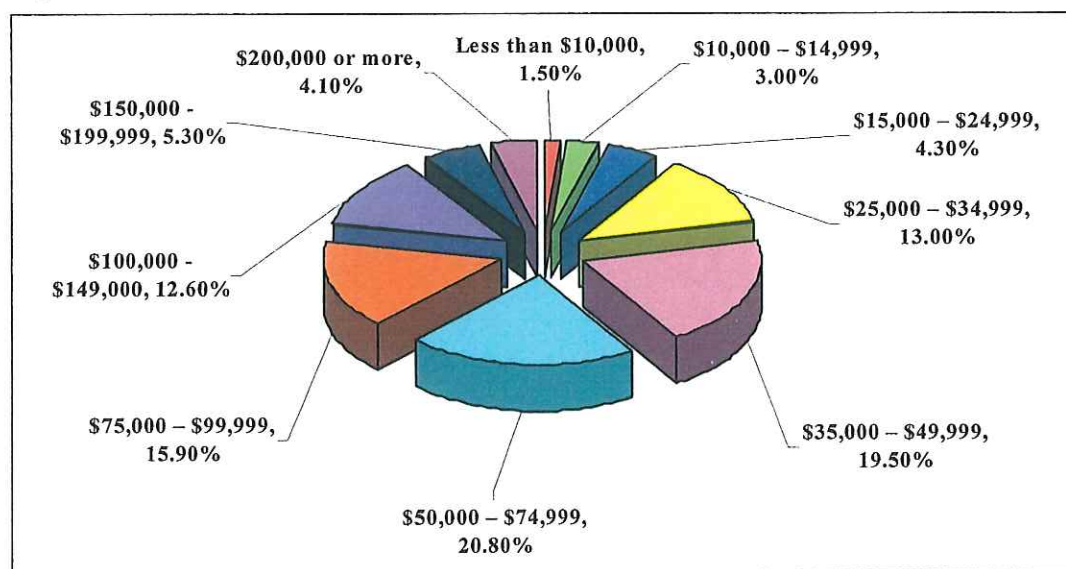
In 2010, China Township had 2.79 persons per household, higher than either the County or the State. The Township has 3.08 persons per family, a little higher than that for the County, but slightly lower than that for the State. These figures decreased 7.3% and 6.4%, respectively, from their 2000 levels.

## Income & Poverty

**Table 11: Households by Income**

	Michigan	St. Clair County	China Township
<b>Less than \$10,000</b>	7.9%	6.0%	1.50%
<b>\$10,000 – \$14,999</b>	5.7%	5.40%	3.00%
<b>\$15,000 – \$24,999</b>	11.6%	12.30%	4.30%
<b>\$25,000 – \$34,999</b>	11.1%	12.00%	13.00%
<b>\$35,000 – \$49,999</b>	14.8%	15.10%	19.50%
<b>\$50,000 – \$74,999</b>	18.7%	20.40%	20.80%
<b>\$75,000 – \$99,999</b>	12.1%	13.50%	15.90%
<b>\$100,000 – \$149,999</b>	11.5%	10.60%	12.60%
<b>\$150,000 – \$199,999</b>	3.7%	3.10%	5.30%
<b>\$200,000 or more</b>	2.9%	1.70%	4.10%
<b>Median household income</b>	\$48,669	\$48,869	\$60,858
<b>Per capita income</b>	\$25,482	\$23,960	\$30,374

**Figure 4: China Township Households by Income**



According to the 2007–2011 American Community Survey 5-year estimates, 20.8% of all households in the Township had incomes of \$50,000–\$74,999, more than in any other income bracket. The next most populous income brackets were the \$35,000–\$49,999 and the \$75,000–\$99,999 brackets, with 19.5% and 15.9% of all households, respectively. In St. Clair County as a whole, 20.4% of all households had incomes of \$50,000–\$74,999, followed by the \$35,000–\$49,999 income bracket (15.1% of County households) and the \$75,000–\$99,999 income bracket (13.5% of County households). For the State of Michigan as a whole, households fell into generally similar proportions as did St. Clair County.

2007–2011 American Community Survey 5-year estimates indicate that median household income in China Township was \$60,858 and per capita income was \$30,374. Both median household and per capita income in China Township were greater than in the County and in the State.

**Table 12: Population Below Poverty Level**

	Michigan	St. Clair County	China Township
<b>All persons</b>	15.7%	13.2%	5.0%
<b>Persons 65 years and over</b>	8.1%	7.3%	8.0%
<b>Related children under 18 years</b>	21.4%	18.5%	0.1%
<b>Related children 5 to 17 years</b>	19.8%	16.2%	0.1%
<b>Unrelated individuals</b>	28.4%	26.0%	20.2%

According to the 2007–2011 American Community Survey 5-year estimates, 5.0% of all persons in China Township had incomes below poverty level income. The poverty rate in the Township was much lower than in the County and the State. For persons age 65 and over, the poverty rate was 8.0%, similar to the rates for the County and the State. Poverty rates in the Township for related children under 18 years, related children 5 to 17 years and unrelated individuals (0.1%, 0.1% and 20.2%, respectively) were dramatically less than the rates for the County and the State.

## Labor

**Table 13: Labor Force Status**

<b>Total pop. 16 years and over:</b>	Michigan	St. Clair County	China Township
<b>in labor force</b>	62.7%	62.3%	65.3%
<b>civilian labor force</b>	62.6%	62.2%	65.3%
– employed	54.9%	53.5%	58.8%
– unemployed	7.7%	8.7%	6.6%
<b>Armed Forces</b>	0.1%	0.1%	0.0%
<b>not in labor force</b>	37.3%	37.7%	34.7%

Of the population in China Township 16 years and over (per the 2007–2011 American Community Survey 5-year estimates), 65.3% participated in the labor

force, 65.3% were in the civilian labor force, 58.8% were employed and 6.6% were unemployed. These rates (except for the unemployment rate) were all higher than those for St. Clair County and for the State.

**Table 14: Commuting to Work**

<b>Workers 16 years and over:</b>	<b>Michigan</b>	<b>St. Clair County</b>	<b>China Township</b>
<b>Car, truck, or van: drove alone</b>	82.8%	83.9%	88.6%
<b>Car, truck, or van: carpooled</b>	9.0%	10.3%	5.8%
<b>Public transport</b>	1.3%	0.5%	0.1%
<b>Walked</b>	2.2%	1.7%	0.0%
<b>Other means</b>	1.2%	1.1%	1.0%
<b>Worked at home</b>	3.5%	2.6%	4.5%
<b>Mean travel time to work (minutes)</b>	23.9	28.0	32.8

Table 14 shows that (per the 2007–2011 American Community Survey 5-year estimates), 88.6% of workers 16 years and older in China Township drove alone to work (a higher percentage than in the County and the State), 5.8% carpooled (a lower percentage than in the County and the State), 0.1% used public transport (lower than for the County and for the State), 0% walked to work (a lower percentage than in the County and the State), and 1.0% used some other means to get to work. 4.5% of workers in the Township worked at home, greater than the percentage found in the County and in the State.

The mean travel time to work for workers in the Township is 32.8 minutes, which is over 4 minutes more than for workers in the County as a whole and almost 9 minutes more than for workers in the State.

**Table 15: Population by Industry**

	<b>Michigan</b>	<b>St. Clair County</b>	<b>China Township</b>
<b>Agriculture, forestry, fisheries, hunting &amp; mining</b>	1.4%	0.9%	1.1%
<b>Construction</b>	5.0%	7.0%	8.5%
<b>Manufacturing</b>	17.3%	20.6%	17.5%
<b>Wholesale trade</b>	2.7%	1.7%	0.7%
<b>Retail trade</b>	11.7%	12.7%	15.6%
<b>Transportation &amp; warehousing, &amp; utilities</b>	4.2%	5.2%	6.0%
<b>Information</b>	1.8%	1.7%	0.1%
<b>Finance, insurance, real estate &amp; rental &amp; leasing</b>	5.6%	4.1%	6.9%
<b>Professional, scientific, management, administrative, &amp; waste management services</b>	8.9%	6.2%	9.1%
<b>Educational, health &amp; social services</b>	23.7%	2.7%	20.4%
<b>Arts, entertainment, recreation, accommodation &amp; food services</b>	9.3%	9.1%	10.0%
<b>Other services</b>	4.8%	4.4%	1.4%
<b>Public administration</b>	3.8%	3.9%	2.7%

According to the 2007–2011 American Community Survey 5-year estimates, the industries that employed the most persons (16 years of age or over) overall living in the Township were: educational, health & social services (20.4% of the Township's population), manufacturing (17.5%), retail trade (15.6%) and arts, entertainment, recreation, accommodation and food services (10.0%). Most of the other industries accounted for approximately 0.1% to 9% of Township employment each. In the County, most of the citizens are employed in manufacturing (20.6%), retail trade (12.7%), arts, entertainment, recreation, accommodation and food services (9.1%) and construction (7.0%). For the State, the top four most populous industries were: educational, health & social services (23.7%), manufacturing (17.3%), retail trade (11.7%) and arts, entertainment, recreation, accommodation and food services (9.3%).

## Education & Enrollment

**Table 16: Educational Attainment**

<b>Total population –25 years and over:</b>	<b>Michigan</b>	<b>St. Clair County</b>	<b>China Township</b>
<b>Less than 9th grade</b>	3.5%	2.9%	2.5%
<b>9th to 12th grade</b>	8.1%	9.0%	4.2%
<b>High School graduate</b>	31.1%	36.6%	36.0%
<b>Some college</b>	23.8%	26.5%	35.0%
<b>Associate Degree</b>	8.2%	9.4%	7.7%
<b>Bachelor Degree</b>	15.6%	9.5%	8.8%
<b>Graduate Degree</b>	9.7%	6.0%	5.7%
<b>At least High School. graduate</b>	88.4%	88.1%	93.3%
<b>Bachelor's degree or higher</b>	25.3%	15.6%	14.6%

According to the 2007–2011 American Community Survey 5-year estimates, 93.3% of persons age 25 and over in China Township have earned at least a high school diploma and 14.6% of persons age 25 and over have earned a Bachelor's degree or higher. The high school graduation rate in the Township is higher than in the County and the State, but the rate for those in the Township with at least a Bachelor's degree is lower.

**Table 17: School Enrollment**

<b>Enrolled in school - age 3 and over</b>	<b>Michigan</b>	<b>St. Clair County</b>	<b>China Township</b>
<b>Preschool</b>	5.4%	5.3%	7.3%
<b>Kindergarten</b>	4.8%	4.8%	5.3%
<b>Elementary school (grades 1-8)</b>	38.6%	41.6%	32.4%
<b>High school (grades 9-12)</b>	21.8%	24.4%	30.6%
<b>College or graduate school</b>	29.3%	23.9%	24.4%

Table 17 shows that (per the 2007–2011 American Community Survey 5-year estimates), for persons age three and over in China Township enrolled in school, 68.3% were enrolled in grades K through 12, a higher rate than in the State but



lower than in the County (65.2% and 70.8%, respectively). The proportions of persons age 3 and over enrolled in pre school, 7.3%, was greater than in the State and the County (5.4% and 5.3%, respectively). Over 24% of persons age 3 and over were enrolled in college, a lower proportion than the State but slightly greater than the County (29.3% and 23.9%, respectively).

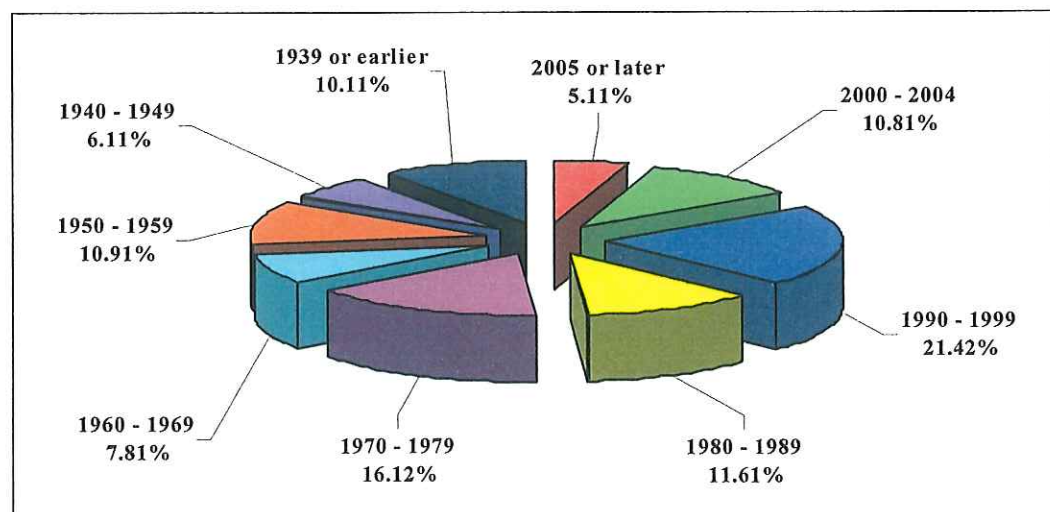
## Housing

**Table 18: Year When Housing Structure Built**

	Michigan	St. Clair County	China Township
2005 or later	2.7%	2.7%	5.1%
2000 – 2004	7.1%	8.5%	10.8%
1990 – 1999	12.8%	16.4%	21.4%
1980 – 1989	10.0%	10.5%	11.6%
1970 – 1979	15.6%	14.2%	16.1%
1960 – 1969	12.1%	9.2%	7.8%
1950 – 1959	15.5%	12.5%	10.9%
1940 – 1949	8.4%	7.3%	6.1%
1939 or earlier	15.8%	18.5%	10.1%

In China Township (per the 2007–2011 American Community Survey 5-year estimates), 65% of the total number of housing structures still standing were built during or after 1970 and approximately 49% were built after 1980. Only 10.1% of the existing housing stock was built before 1939. The Township has a higher proportion of newer housing (post 1990) than both the State and the County. The Township has a lower proportion of older housing (pre 1939) than the State and the County.

**Figure 5: Year When Township Housing Built**



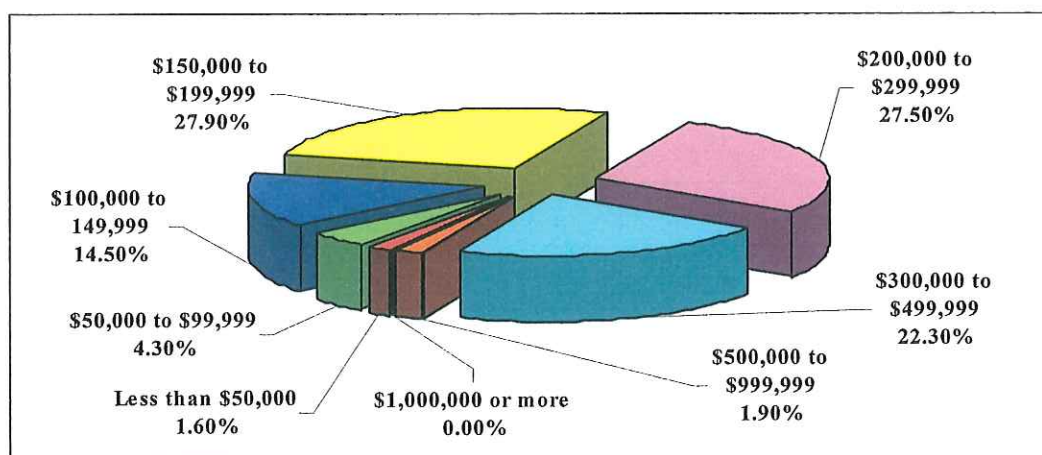
As shown below in Table 19, almost all of the owner-occupied housing in the Township (per the 2007–2011 American Community Survey 5-year estimates) was valued at less than \$500,000 per unit, with less than 2% of all units in the

Township worth more than \$500,000. For St. Clair County as a whole, just over 2% of owner-occupied housing was worth more than \$500,000, and for the State of Michigan, just over 3% of owner-occupied housing was worth more than \$500,000. However, the median value of housing in the Township was significantly greater than that of the County or of the State.

**Table 19: Value of Owner-Occupied Housing Units**

	Michigan	St. Clair County	China Township
Less than \$50,000	11.20%	9.30%	1.60%
\$50,000 to \$99,999	21.60%	20.40%	4.30%
\$100,000 to \$149,999	22.30%	23.80%	14.50%
\$150,000 to \$199,999	18.40%	20.70%	27.90%
\$200,000 to \$299,999	15.50%	16.70%	27.50%
\$300,000 to \$499,999	7.90%	7.10%	22.30%
\$500,000 to \$999,999	2.40%	1.60%	1.90%
\$1,000,000 or more	0.70%	0.50%	0.00%
Median value	\$137,300	\$141,800	\$205,000

**Figure 6: Value of Owner-Occupied Housing Units**



**Table 20: Housing Occupancy & Tenure**

	Michigan	St. Clair County	China Township
Occupied units	84.40%	89.00%	98.30%
Owner-occupied	73.50%	78.00%	94.20%
Renter-occupied	26.50%	22.00%	5.80%
Vacant units	15.60%	11.00%	1.70%
Persons per Owner-occupied unit	2.61	2.60	2.86
Persons per Renter-occupied unit	2.31	2.34	2.68

According to the 2007–2011 American Community Survey 5-year estimates, 94.20% of the housing units in the Township were owner-occupied, a much higher percentage than in the County and the State. The percentage of renter-occupied

housing in the Township, 5.80%, was much lower than in the State and the County. The vacancy rate in the Township was 17%, higher than both the County and the State. There were more persons per owner-occupied housing unit and per renter-occupied housing unit in China Township than in the County and the State.

**Table 21: Residence Previous Year**

	Michigan	St. Clair County	China Township
Same house previous year	85.40%	86.90%	91.90%
Different house	14.10%	13.00%	8.10%
Same county	9.20%	9.50%	6.60%
Different county	4.90%	3.40%	1.50%
Same state	3.60%	2.60%	1.50%
Different state	1.30%	0.90%	0.00%
Elsewhere previous year	0.50%	0.10%	0.00%

According to the 2007–2011 American Community Survey 5-year estimates, 91.9% of the persons age 1 or older in the Township lived in the same house as they did the previous year, 8.1% lived in a different house, 6.6% lived in a different house in St. Clair County, 1.5% lived in a different county in Michigan and none lived in a different county in another state.

A higher percentage of persons age 1 or older in the Township lived in the same house as they did the previous year as did the corresponding populations in the County and in the State. This indicates that the Township population is somewhat more stable and less transient than that of the County and State.

**Table 22: Units in Structure**

	Michigan	St. Clair County	China Township
1-unit, detached	71.80%	77.70%	99.10%
1-unit, attached	4.50%	2.90%	0.90%
2 units	2.80%	2.90%	0.00%
3 or 4 units	2.60%	2.60%	0.00%
5 to 9 units	4.20%	2.90%	0.00%
10 to 19 units	3.60%	1.40%	0.00%
20 or more units	4.90%	3.00%	0.00%
Mobile home	5.50%	6.60%	0.00%
Boat, RV, van, etc.	0.00%	0.00%	0.00%

According to the 2007–2011 American Community Survey 5-year estimates, 99.1% of all housing units in China Township are in one-unit detached housing structures (with open space on all four sides of the structure), a much greater percentage than the County and the State. The remainder of housing units in the Township are in one-unit attached housing structures (that have one or more walls extending from ground to roof separating them from adjoining structures).



# Economic Base

The economic resources of a community are often just as important as a community's natural resources. In fact, certain natural resources, such as prime farmland (for the agriculture industry) and woodlands (for the logging and recreation industries) can be economic resources as well. Furthermore, as with natural resources, the economic resources of a community can help to determine the kinds of land uses that are possible within the community, both currently and in the future. For example, communities with large numbers of high income households could be expected to attract retail businesses (such as shopping centers, etc.) to serve the needs of those households, thus creating a demand for commercial land. Other communities with large tax bases are generally able to afford to provide the kinds of public services, such as public water, sewer and paved roads, which make the community an attractive place for persons and industries to locate. In addition, the number and kinds of employment opportunities (present and future) that a community can offer will affect the demand for residential land in that community. The various economic resources of a community, along with those of the surrounding county or region (since no community is truly self-sufficient) form the community's **economic base**. It is the purpose of this section to delineate the various economic resources that make up the economic base of China Township.

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## Methodology

We will attempt to identify the various elements of China Township's economic base by:

1. Reviewing employment, payroll and business establishment data for St. Clair County from the *2010 County Business Patterns* data.
2. Analyzing employment and population forecasts for the County and the Township generated by the SEMCOG *2040 Regional Development Forecasts*.
3. Examining the State Equalized Value of property within the Township for



each class of real property.

4. Comparing the Township's property tax rate with those of neighboring communities.
5. Listing and classifying the businesses that are located in the Township.

## St. Clair County Business Patterns

The 2010 *County Business Patterns* data contains information for St. Clair County on the employment<sup>1</sup>, payroll and business establishments of industries (as defined by the NAICS industry code) located in the county.

Note: Government and other public sector employment may not be included.

**Table 23: Employees, Payroll & Establishments by Industry—2010**

	Employees		Annual Payroll		Establishments	
<b>Utilities:</b>	1,018	2.66%	90,755,000	6.81%	12	0.38%
<b>Construction:</b>	1,475	3.85%	\$63,943,000	4.80%	377	11.94%
<b>Manufacturing:</b>	6,910	18.02%	\$325,108,000	24.40%	239	7.57%
<b>Wholesale Trade:</b>	951	2.48%	\$51,214,000	3.84%	116	3.67%
<b>Retail Trade:</b>	6,960	18.15%	\$146,606,000	11.01%	538	17.04%
<b>Trans. &amp; Warehousing:</b>	996	2.60%	\$42,661,000	3.20%	118	3.74%
<b>Information:</b>	756	1.97%	\$36,770,000	2.76%	42	1.33%
<b>Finance &amp; Insurance:</b>	1,315	3.43%	\$61,961,000	4.65%	170	5.38%
<b>Real Estate:</b>	354	0.92%	\$10,326,000	0.78%	99	3.13%
<b>Pro., Sci. &amp; Tech. Services:</b>	1,018	2.66%	\$36,310,000	2.73%	223	7.06%
<b>Management:</b>	270	0.70%	\$21,532,000	1.62%	17	0.54%
<b>Admin, Support, Waste mgt, Remediation Services:</b>	1,492	3.89%	\$42,937,000	3.22%	151	4.78%
<b>Educational Services:</b>	491	1.28%	\$11,564,000	0.87%	31	0.98%
<b>Health Care/Social Asst:</b>	7,923	20.67%	\$298,258,000	22.39%	375	11.87%
<b>Arts, Entmnt. &amp; Rec.:</b>	639	1.67%	\$9,764,000	0.73%	56	1.77%
<b>Acc. &amp; Food Services:</b>	4,303	11.22%	\$52,930,000	3.97%	290	9.18%
<b>Other Services:</b>	1,468	3.83%	\$29,508,000	2.22%	304	9.63%
<b>Total:</b>	<b>38,339</b>		<b>\$1,332,147,000</b>		<b>3,158</b>	

In terms of employees, the leading industry in St. Clair County is the Health Care and Social Assistance Services industry, with 7,923 employees in the County (20.67% of all employees in the County). The Retail Trade industry is second in the County with 6,960 employees (18.15%) and in third place is Manufacturing, with 6,910 employees (18.02%).

The Manufacturing industry leads in annual payroll, with \$325,108,000 in payroll

<sup>1</sup>Here we refer not to the employment of the population of the County (as in the socio-economic section of this Plan, but rather the **employment positions existing** in the County.

(24.40% of the total annual payroll in the County). In this category, Health Care and Social Assistance Services moves up to second place in the County, with \$298,258,000 in annual payroll (22.39%). Retail Trade drops to third place, with an annual payroll of \$146,606,000 (11.01%).

In terms of the number of business establishments, Retail Trade leads with 538 establishments (17.04% of all establishments in the County). Construction is in second with 377 establishments (11.94%) and the Health Care and Social Assistance Services category is a close third, with 375 establishments (11.87%).

Note: Employee and payroll data for the Utilities industry has been withheld by the Census Bureau to avoid disclosing data for individual companies. However, the data included for this sector, as shown in the above table, was able to be derived due to that fact that it was included in the total figures.

**Table 24: Industry Establishments by Employment-Size Class—2010**

	1-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000+
Forestry, Fish., Hunt., Ag.:	2	0	0	0	0	0	0	0
Mining:	3	0	0	0	0	0	0	0
Utilities:	5	0	2	2	2	1	0	0
Construction:	346	19	9	1	2	0	0	0
Manufacturing:	129	40	29	24	14	3	0	0
Wholesale Trade:	98	9	6	2	1	0	0	0
Retail Trade:	385	87	39	17	7	3	0	0
Trans. & Wrhsg.:	86	20	8	4	0	0	0	0
Information:	32	4	4	0	1	1	0	0
Finance & Ins.:	136	23	5	5	1	0	0	0
Real Estate:	91	7	1	0	0	0	0	0
Prof., Sci. & Tech. Services:	191	25	7	0	0	0	0	0
Management:	10	4	1	2	0	0	0	0
Admin, Support, Waste mgt, Remed. Services:	127	9	8	3	4	0	0	0
Educational Services:	20	4	6	0	1	0	0	0
Health Care & Social Assistance:	228	99	28	10	5	3	1	1
Arts, Ent. & Rec.:	37	13	4	1	1	0	0	0
Acc. & Food Serv.:	154	61	58	16	1	0	0	0
Other Services:	270	27	7	0	0	0	0	0
Unclassified:	5	1	0	0	0	0	0	0
<b>Total:</b>	<b>2,355</b>	<b>452</b>	<b>222</b>	<b>87</b>	<b>40</b>	<b>11</b>	<b>1</b>	<b>1</b>
<b>Percentage:</b>	<b>74.31%</b>	<b>14.26%</b>	<b>7.01%</b>	<b>2.75%</b>	<b>1.26%</b>	<b>0.35%</b>	<b>0.03%</b>	<b>0.03%</b>

Most industry establishments in St. Clair County are quite small, with just under three-quarters (74.31%) having only 1 to 9 employees per establishment. Only the Health Care & Social Assistance industry has establishments with over 500

employees.

## COMPARISON WITH 2000 COUNTY BUSINESS PATTERNS

**Table 25: Employees—2000 & 2010**

	2010		2000		Change (2000-2010)	
<b>Utilities:</b>	1,018	2.66%	1,214	2.51%	-192	-15.82%
<b>Construction:</b>	1,475	3.85%	3,593	7.42%	-2,118	-58.95%
<b>Manufacturing:</b>	6,910	18.02%	12,958	26.75%	-6,048	-46.67%
<b>Wholesale Trade:</b>	951	2.48%	1,195	2.47%	-244	-20.42%
<b>Retail Trade:</b>	6,960	18.15%	8,097	16.72%	-1,137	-14.04%
<b>Trans. &amp; Warehousing:</b>	996	2.60%	950	1.96%	46	4.84%
<b>Information:</b>	756	1.97%	938	1.94%	-182	-19.40%
<b>Finance &amp; Insurance:</b>	1,315	3.43%	1,243	2.57%	72	5.79%
<b>Real Estate:</b>	354	0.92%	467	0.96%	-113	-24.20%
<b>Pro., Sci. &amp; Tech. Services:</b>	1,018	2.66%	1,275	2.63%	-257	-20.16%
<b>Management:</b>	270	0.70%	479	0.99%	-209	-43.63%
<b>Admin, Support, Waste mgt, Remediation Services:</b>	1,492	3.89%	1,599	3.30%	-107	-6.69%
<b>Educational Services:</b>	491	1.28%	397	0.82%	94	23.68%
<b>Health Care/Social Asst:</b>	7,923	20.67%	6,888	14.22%	1,035	15.03%
<b>Arts, Entmnt. &amp; Rec.:</b>	639	1.67%	413	0.85%	226	54.72%
<b>Acc. &amp; Food Services:</b>	4,303	11.22%	4,471	9.23%	-168	-3.76%
<b>Other Services (incl. Aux. &amp; Unc.):</b>	1,468	3.83%	2,262	4.67%	-794	-35.10%
<b>Total:</b>	<b>38,339</b>		<b>48,439</b>		<b>-10,100</b>	<b>-20.85%</b>

When comparing 2010 County Business Pattern data from 2010 with that from 2000, it can be seen that the number of employees in County decreased from 48,439 in 2000 to 38,339 in 2010, a change of -20.85%. The industry losing the most employees in the County was the Manufacturing industry, losing 6,048 employees, a change of -46.67%. This is followed by the Construction industry, losing 2,118 (-58.95%) and the Retail Trade industry, losing 1,137 (-14.04%).

A few industries in the County managed to gain employees, in particular the Health Care & Social Assistance industry, gaining 1,035 employees (15.03%), and the Arts, Entertainment & Recreation industry, gaining 226 employees (54.72%).

St. Clair County also experienced a loss of business establishments from 3,515 in 2000 to 3,158 in 2010, a decrease of 10.16%. Most of this loss came from the Construction and Manufacturing industries, with losses of 219 and 47 establishments, respectively (-36.74% & -16.43%). A significant portion also comes from the Other Services industry (combined with the Auxiliary and Unclassified industries), which lost 124 establishments (-28.97%).

Note: the Auxiliary and Unclassified industries are combined with the Other Services industry because those two industries are not included in the 2010 County Business Patterns. Also, data for

the Utilities industry for 2010 was been withheld by the Census Bureau to avoid disclosing data for individual companies. However, this data has been derived and included, as discussed above.

**Table 26: Establishments—2000 & 2010**

	2010		2000		Change (2000-2010)
<b>Utilities:</b>	12	0.38%	15	0.43%	-3 -20.00%
<b>Construction:</b>	377	11.94%	596	16.96%	-219 -36.74%
<b>Manufacturing:</b>	239	7.57%	286	8.14%	-47 -16.43%
<b>Wholesale Trade:</b>	116	3.67%	114	3.24%	2 1.75%
<b>Retail Trade:</b>	538	17.04%	585	16.64%	-47 -8.03%
<b>Trans. &amp; Warehousing:</b>	118	3.74%	109	3.10%	9 8.26%
<b>Information:</b>	42	1.33%	42	1.19%	0 0.00%
<b>Finance &amp; Insurance:</b>	170	5.38%	146	4.15%	24 16.44%
<b>Real Estate:</b>	99	3.13%	115	3.27%	-16 -13.91%
<b>Pro., Sci. &amp; Tech. Services:</b>	223	7.06%	209	5.95%	14 6.70%
<b>Management:</b>	17	0.54%	12	0.34%	5 41.67%
<b>Admin, Support, Waste mgt, Remediation Services:</b>	151	4.78%	167	4.75%	-16 -9.58%
<b>Educational Services:</b>	31	0.98%	26	0.74%	5 19.23%
<b>Health Care/Social Asst:</b>	375	11.87%	343	9.76%	32 9.33%
<b>Arts, Entmnt. &amp; Rec.:</b>	56	1.77%	52	1.48%	4 7.69%
<b>Acc. &amp; Food Services:</b>	290	9.18%	270	7.68%	20 7.41%
<b>Other Services:</b>	304	9.63%	428	12.18%	-124 -28.97%
<b>Total:</b>	3,158		3,515		-357 -10.16%

**Table 27: Annual Payroll—2000 & 2010**

	2010		2000		Change (2000-2010)
<b>Utilities:</b>	90,755,000	6.81%	\$105,233,000	6.00%	-14,478,000 -13.76%
<b>Construction:</b>	\$63,943,000	4.80%	\$155,017,000	8.84%	-\$91,074,000 -58.75%
<b>Manufacturing:</b>	\$325,108,000	24.40%	\$579,962,000	33.09%	-\$254,854,000 -43.94%
<b>Wholesale Trade:</b>	\$51,214,000	3.84%	\$84,887,000	4.84%	-\$33,673,000 -39.67%
<b>Retail Trade:</b>	\$146,606,000	11.01%	\$190,128,000	10.85%	-\$43,522,000 -22.89%
<b>Trans. &amp; Warehousing:</b>	\$42,661,000	3.20%	\$39,287,000	2.24%	\$3,374,000 8.59%
<b>Information:</b>	\$36,770,000	2.76%	\$39,257,000	2.24%	-\$2,487,000 -6.34%
<b>Finance &amp; Insurance:</b>	\$61,961,000	4.65%	\$49,805,000	2.84%	\$12,156,000 24.41%
<b>Real Estate:</b>	\$10,326,000	0.78%	\$12,709,000	0.72%	\$2,383,000 -18.75%
<b>Pro., Sci. &amp; Tech. Services:</b>	\$36,310,000	2.73%	\$45,633,000	2.60%	\$9,323,000 -20.43%
<b>Management:</b>	\$21,532,000	1.62%	\$36,084,000	2.06%	-\$14,552,000 -40.33%
<b>Admin, Support, Waste mgt, Remediation Services:</b>	\$42,937,000	3.22%	\$43,973,000	2.51%	-\$1,036,000 -2.36%
<b>Educational Services:</b>	\$11,564,000	0.87%	\$7,096,000	0.40%	\$4,468,000 62.97%
<b>Health Care/Social Asst:</b>	\$298,258,000	22.39%	\$255,009,000	14.55%	\$43,249,000 16.96%
<b>Arts, Entmnt. &amp; Rec.:</b>	\$9,764,000	0.73%	\$7,958,000	0.45%	\$1,806,000 22.69%
<b>Acc. &amp; Food Services:</b>	\$52,930,000	3.97%	\$51,988,000	2.97%	\$942,000 1.81%
<b>Other Services:</b>	\$29,508,000	2.22%	\$48,898,000	2.79%	-\$19,390,000 -39.65%
<b>Total:</b>	\$1,332,147,000		\$1,752,922,000		-\$420,775,000 -24.0%



From 2000 to 2010, total annual payroll in St. Clair County decreased by over \$420 million, or 24%, adjusted for inflation. The industry with the largest decrease in annual payroll was the Manufacturing industry, a loss of nearly \$255 million (44%), followed by the Construction industry, which lost over \$91 million (approx. 59%). The Educational Services and Arts, Entertainment & Recreation sectors, though small in size, showed fairly hefty increases in payroll, perhaps reflecting the need to provide services to displaced and unemployed workers.

These decreases are partially offset by the increase in annual payroll in the Health Care & Social Assistance industry, which had an increase in excess of \$43 million (approx. 17%), and the Finance & Insurance industry, which had an increase of over \$12 million (approx. 24%).

Note: data for the Utilities industry for 2010 has been withheld by the Census Bureau to avoid disclosing data for individual companies. However, this data is included in the total figures.

## Regional Development Forecasts

Periodically the Southeastern Michigan Council of Governments (SEMCOG) makes forecasts of population and employment for the entire seven-county SEMCOG region. These Regional Development Forecasts are apportioned to the various counties, cities and townships of the SEMCOG region using the Apportionment Method similar to the Share of County method described earlier in the *Population Trends & Projections* section of this Plan. The projections apportioned to St. Clair County and China Township are presented on the following pages.

### ST. CLAIR COUNTY

The total population of St. Clair County is expected to increase by 4,581 persons from 2010 to 2040, which translates to an overall growth rate of 2.80%. Much of this growth will likely come from persons moving into the County from the Detroit area.

**Table 28: St. Clair County Population 2010–2040**

	2010	2015	2020	2025	2030	2035	2040	2010–2040	
<b>Ages 0-4</b>	9,288	8,788	9,201	9,672	9,634	9,338	9,070	-218	-2.3%
<b>Ages 5-17</b>	29,325	26,656	24,502	23,871	25,143	26,354	26,415	-2,910	-9.9%
<b>Ages 18-24</b>	12,977	13,221	11,140	10,150	9,077	9,071	10,061	-2,916	-22.5%
<b>Ages 25-34</b>	16,807	17,933	21,389	21,735	20,050	19,151	18,281	1,474	8.8%
<b>Ages 35-59</b>	60,902	56,302	50,878	47,904	49,143	51,149	53,630	-7,272	-11.9%
<b>Ages 60-64</b>	10,070	11,296	12,341	12,238	10,604	8,961	8,142	-1,928	-19.1%
<b>Ages 65-74</b>	12,894	16,050	18,941	21,087	21,979	20,456	17,600	4,706	36.5%
<b>Ages 75 +</b>	10,777	11,425	13,116	15,896	19,026	22,179	24,422	13,645	126.6%
<b>Total</b>	163,040	161,671	161,508	162,553	164,656	166,659	167,621	4,581	2.80%
<b>Persons/HH</b>	2.52	2.47	2.44	2.41	2.39	2.40	2.40	-0.12	-4.82%

From 2010 to 2040, the number of persons in the County aged 75 or older is expected to increase over 126%, followed by the 65–74 age group, increasing 36.5% and the 25–34 age group, increasing 8.8%. All other age groups are expected to decrease in population from 2010 to 2040.

The number of persons per household is expected to continue its declining trend, dropping 4.82% from 2010 to 2040.

The total employment offered in the County is predicted to increase by 8,866 positions between 2010 and 2040 (14%). These positions may be held either by County residents or by non-residents who commute into the area. The fastest growing employment group in the County (in terms of employment) should be the Private Education & Healthcare sector, which is anticipated to grow by 49%, or 4,737 positions. This is followed by the Services to Households & Firms sector, which should grow by 24.7%, adding 1,920 jobs, the Knowledge-based Services sector, growing by 20.7% (1,717 positions), the Natural Resources, Mining & Construction sector, with an expected growth of 13.7% (573 jobs) and the Leisure & Hospitality sector, with an expected growth of 10.3% (589 jobs). The number of jobs in Manufacturing is expected to decrease approximately 6%, resulting in the loss of 414 positions.

**Table 29: St. Clair County Total Employment (By Industry) 2010–2040**

	2010	2015	2020	2025	2030	2035	2040	2010–2040
Nat. Resources, Mining, Const.	4,181	4,481	4,560	4,693	4,788	4,802	4,754	573 13.70%
Manufacturing	7,043	7,406	6,951	6,715	6,640	6,629	6,629	-414 -5.90%
Whol. Trade, Trans., Warehousing, Util.	4,312	4,397	4,279	4,250	4,268	4,338	4,419	107 2.50%
Retail Trade	8,245	8,033	7,746	7,677	7,630	7,672	7,623	-622 -7.50%
Knowledge-based Services	8,288	8,942	9,289	9,410	9,545	9,756	10,005	1,717 20.70%
Services to Households & Firms	7,787	8,365	8,666	8,884	9,147	9,448	9,707	1,920 24.70%
Private Education & Healthcare	9,667	10,806	11,799	12,452	13,087	13,777	14,404	4,737 49.00%
Leisure & Hosp.	5,745	5,805	5,670	5,784	5,944	6,154	6,334	589 10.30%
Government	7,346	7,008	7,101	7,180	7,301	7,462	7,605	259 3.50%
<b>Total Employment:</b>	<b>62,614</b>	<b>65,243</b>	<b>66,061</b>	<b>67,045</b>	<b>68,350</b>	<b>70,038</b>	<b>71,480</b>	<b>8,866 14.20%</b>

## CHINA TOWNSHIP

Here, SEMCOG forecasts a population increase of 247 persons, resulting in a 2040 population of 3,798. The forecast overall growth rate of approximately 7% is slightly higher than the rate reported for the County.

From 2010 to 2040, The number of persons in the Township aged 75 or older is expected to increase over 124%, followed by the 25–34 age group, increasing

43.2%, the 65–74 age group, increasing 24%, the 0–4 age group, increasing 16.7% and the 18–24 age group, increasing 5.6% All other age groups are expected to decrease in population from 2010 to 2040.

**Table 30: Township Population 2010–2040**

	2010	2015	2020	2025	2030	2035	2040	2010–2040
<b>Ages 0-4</b>	132	131	151	154	167	144	154	22 16.70%
<b>Ages 5-17</b>	738	578	531	531	639	652	637	-101 -13.70%
<b>Ages 18-24</b>	231	240	215	199	182	199	244	13 5.60%
<b>Ages 25-34</b>	257	294	372	365	385	352	368	111 43.20%
<b>Ages 35-59</b>	1,494	1,299	1,178	1,118	1,225	1,359	1,468	-26 -1.70%
<b>Ages 60-64</b>	256	284	321	316	262	228	201	-55 -21.50%
<b>Ages 65-74</b>	267	296	349	385	410	415	331	64 24.00%
<b>Ages 75 +</b>	176	186	212	259	313	371	395	219 124.40%
<b>Total</b>	3,551	3,308	3,329	3,327	3,583	3,720	3,798	247 7.00%
<b>Persons/HH</b>	2.79	2.60	2.55	2.54	2.51	2.48	2.52	-0.27 -9.74%

The average household size is expected to drop from 2.79 persons per household to 2.52 persons per household. This will be a decrease of 9.74% between 2010 and 2040, which is more than double the decrease in household size projected for the County.

**Table 31: Township Total Employment (By Industry) 2010–2040**

	2010	2015	2020	2025	2030	2035	2040	2010–2040
<b>Nat. Resources, Mining, Const.</b>	168	134	150	180	171	168	153	-15 -8.90%
<b>Manufacturing</b>	114	245	245	219	223	247	252	138 121.10%
<b>Whol. Trade, Trans., Warehousing, Util.</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a
<b>Retail Trade</b>	69	57	53	61	69	74	78	9 13.00%
<b>Knowledge-based Services</b>	202	235	254	251	249	264	307	105 52.00%
<b>Services to Households &amp; Firms</b>	35	32	44	38	35	41	35	0 0.00%
<b>Private Education &amp; Healthcare</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a
<b>Leisure &amp; Hosp.</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a
<b>Government</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a n/a
<b>Total Employment:</b>	1,012	1,104	1,114	1,093	1,085	1,131	1,159	147 14.50%

A net total of 147 employment positions (which may be held either by Township residents or by non-residents who commute into the area) are expected to be created in China Township between 2010 and 2040, amounting to a growth rate of 14.5%, slightly higher than the County job creation rate for the same period. This job creation will come primarily from the Manufacturing sector, which will add 138 new positions (an increase of approximately 121%), the Knowledge-based Services sector, which will add 105 new positions (an increase of 52%) and the

Retail Trade sector, which will add 9 new positions (an increase of 13%). The Natural Resources, Mining & Construction sector will experience a decrease, losing 15 positions between 2010 and 2040 (a decrease of approximately 9%).

The data for all other sectors has been blocked by SEMCOG due to confidentiality reasons and is not available. However, this data is still included in the Total Employment figures.

## Taxable Value & Property Tax Rates

Taxable value is a measure of the portion of property (both real and personal) in a municipality subject to property taxes. In Michigan, taxable value is no greater than the State Equalized Value (S.E.V.), which is equal to 50% of the actual, or sales value of property (the value of property if sold).

The total taxable value in a municipality is multiplied by the municipality's tax millage rate to calculate the total amount of property tax revenue available in the municipality. In China Township, the total taxable value, \$382,240,920 for real property in 2012 (also known as the "tax base"), multiplied by the Township millage rate (\$2.29 per \$1,000 of Taxable Value in 2012), plus revenues from fees (for licenses, reviews, appeals, services to other communities and other services), interest on investments, grant income (if any) and income and other taxes (such as personal property and specialized taxes for police, fire, schools, etc.), is that which could be spent for municipal facilities, services and personnel.

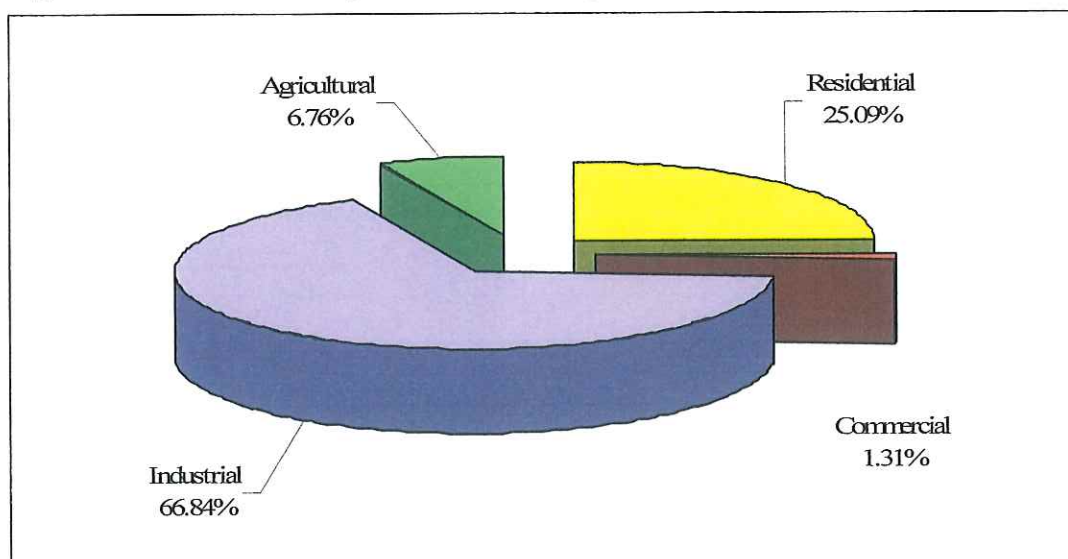
**Table 32: China Township S.E.V. & Taxable Value—2012**

Property Class	S.E.V.	Taxable Value
RESIDENTIAL	\$98,138,200	\$95,902,306
COMMERCIAL	\$5,292,200	\$5,023,272
INDUSTRIAL	\$255,658,300	\$255,475,727
AGRICULTURAL	\$33,094,700	\$25,839,615
<b>Total:</b>	<b>\$392,183,400</b>	<b>\$382,240,920</b>

SOURCE: St. Clair Co. Equalization Dept.



**Figure 7: China Township Taxable Value by Class—2012**



SOURCE: St. Clair Co. Equalization Dept.

The property tax base in the Township has been generally maintained at relative taxable valuations of 25.09% residential, 1.31% commercial, 66.84% industrial and 6.76% Agricultural. In 2012 the Township had a millage rate of \$2.29 per \$1,000 of State Equalized Value.

**Table 33: 2012 Property Taxes—China Township & Nearby Communities**

Community	Millage Rate	Taxable Value	Real Property Taxes
CHINA TOWNSHIP	\$2.29	\$382,240,920	\$875,140.59
Casco Township	\$1.78	\$127,720,621	\$226,793.51
Cottrellville Township	\$0.71	\$112,669,237	\$80,310.63
East China Township	\$3.85	\$359,709,951	\$1,384,595.54
St. Clair Township	\$0.76	\$237,552,160	\$181,014.75
City of Marine City	\$19.79	\$92,201,055	\$1,824,723.42
City of St. Clair	\$16.98	\$164,408,941	\$2,791,450.09

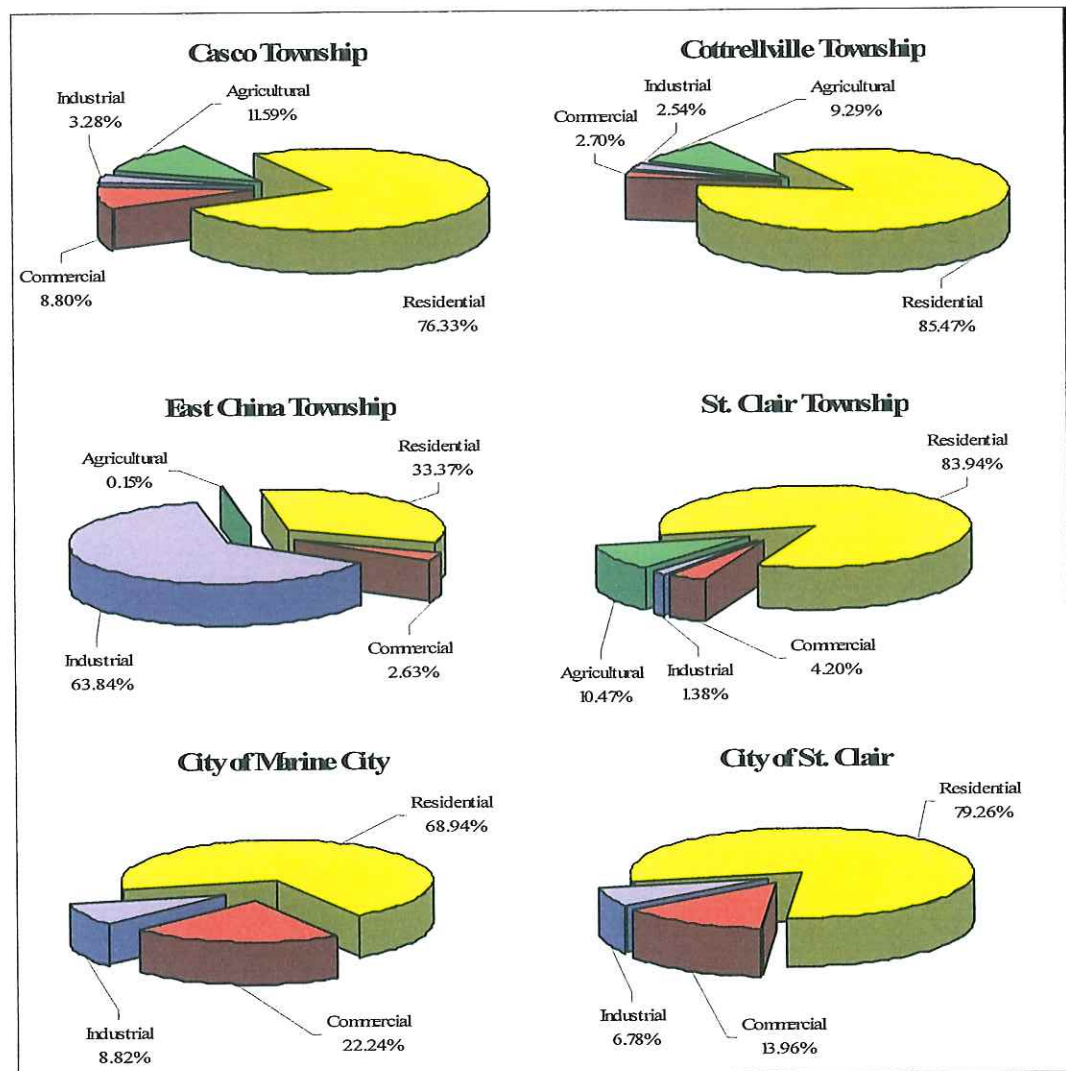
SOURCE: St. Clair Co. Equalization Dept.

China Township has the second highest millage rate of the townships in the area, behind East China Township, but much higher than in Casco, Cottrellville and St. Clair Townships. It is over 17 mills less than the rate for the City of Marine City and over 14 mills less than the rate for the City of St. Clair. Cities are allowed much higher millage rates than townships. Also, the Township, because of the location within the Township of part of the Detroit Edison Belle River Power Plant, has the highest tax base among townships in the area just ahead of East China Township, where the remainder of the Detroit Edison Belle River Power Plant is located.

With regard to taxable value by class, the percentage of taxable value classified as agricultural in China Township is the second lowest of the Townships in the area, with only East China Township having less value classified as agricultural. Almost 7% of the Township's taxable value is classed as agricultural, compared

with 11.58% in Casco Township, 9.29% in Cottrellville Township, 10.47% in St. Clair Township, and 0.15% in East China Township. Again, because of the Detroit Edison Belle River Power Plant, China Township has the highest percentage of taxable value classified as industrial of all the communities in the area, including Marine City and the City of St. Clair.

**Figure 8: 2012 Taxable Value by Class—Nearby Communities**



SOURCE: St. Clair Co. Equalization Dept.

# Future Land Use Plan

The goal of land use planning is the improvement of the general welfare of the people of China Township through the proper development of vacant land and where necessary, the redevelopment of existing areas for new uses that create a better community in which to live, work and recreate. In general, this land use plan is a guide for locating private and public uses in China Township.

The land use plan is intended to be long range, comprehensive, generalized, flexible and regional, with the following broad objectives:

- Long range planning for land development to the year 2030.
- Comprehensive planning to provide for a variety of types of land uses, bearing a relationship to the land capability and transportation system.
- Generalized planning based upon broad principles of land use allocations and relationships.
- Flexible planning that is able to accept changes, yet not detract from the total plan.
- Regional planning transcending arbitrary boundaries and which is an integrated part of the regional system.

The land use plan is more than just a graphic presentation. Behind the graphics and maps are spatial distributions and relationships reflecting the specific goals and objectives described in the “*Goals & Objectives*” section of this Master Plan.

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## Concept Plan

The possible physical arrangements of the various land uses on vacant ground are infinite in number. Regional consideration, roads, existing land use, soils, topography, population growth and economic potential each are constraints on the number of possible arrangements. The goals and objectives set out earlier in this

Master Plan direct the possible array to a narrow band of alternatives. These possibilities are developed into a concept of the preferred general arrangement of land uses.

Due to the absence of concentrated development, the provisions of public utilities for all of China Township would be expensive. One of the assumptions in the land use plan is that sewer and water service will only be available to selected areas in the Township by the year 2040.

The long range land use plan for China Township is based on analysis of the basic data presented in this Master Plan of trends in the Township and the surrounding areas. The plan for the Township is generally compatible with the Master Plan developed for St. Clair County by the St. Clair County Metropolitan Planning Commission. The recommendations for the separate land uses are graphically and statistically presented in 11 classifications:

1. Agriculture & Rural Residential
2. Very Low Density Rural Residential
3. Rural Estates
4. Suburban Density Residential
5. Multiple Family Residential
6. Commercial
7. Office
8. Public, Quasi-Public, Institutional
9. Open Space, Conservation & Recreation
10. Light Industrial
11. Heavy Industrial

In developing the land use plan, evaluations were made of locations in the Township and adjacent communities in regard to where development will and should occur.

The majority of the Township is still in agricultural and rural uses and to provide utility service is very costly. Population densities must be planned accordingly.

The generalized land use plan for China Township is designed so as to derive the maximum benefit for the residents. The land use plan illustrates the arrangement of land uses to meet the goals, capacity and trends in the Township.

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## Land Use Plan Map

A Land Use Plan Map has been prepared and is a part of this document. Following is a description of the general locations of the Plan's land use classifications:



## **AGRICULTURAL & RURAL RESIDENTIAL**

One of the Township objectives is to preserve the rural character of the Township through the thoughtful and proper arrangement of urban and rural land uses within the Township. The Land Use Plan has attempted to designate well defined areas for future urban development. By doing so, agricultural and rural uses can remain relatively free from urban competition for land. Scattered urban development could put an end to the agricultural practices still operating in the Township.

The areas outlined for agricultural and rural residential use, comprising most of the area of the Township (14,669 acres), would be the last to receive any municipal services. It is not anticipated that there will be urban pressures on this land by the year 2040, but if changes are proposed in these areas, they should be carefully examined in light of the problems they may create in providing services such as utilities, schools, fire protection and roads.

## **VERY LOW DENSITY RURAL RESIDENTIAL**

Very low density rural residential uses (2,164 acres) are designated for most of the area along and near the Belle River. Much of this land is in the 100-year floodplain, contains wetlands and therefore would not be suitable for any kind of development or intensive agricultural use. However, there are several higher elevation areas that would be suitable for very low density, single-family residential development.

## **RURAL ESTATES**

Rural Estates uses (808 acres) are primarily rural, single-family residential uses that are intended to serve as a transition from agriculture/rural residential uses to suburban density residential uses. Most of the planned Rural Estates acreage is located in Sections 2 and 11, adjacent or near to planned suburban density residential areas. The remainder is located along and near King Road in Sections 14, 25 and 26.

## **SUBURBAN DENSITY RESIDENTIAL**

The Land Use Plan Map shows five suburban density residential areas in the Township (429 acres), each along or near King Road. These areas are located where public water and sewer currently exist or are expected to be extended by 2030. Thus, these areas would be the best in the Township for residential development of this density (approximately 3.4 dwelling units per gross acre). The first three areas are located near and between the intersections of King Road and St. Clair Highway and Fred W. Moore Highway in Sections 1, 2, 11 and 12. The next area is located south of the intersection of King Road and Puttygut Road, running along the west side of King Road for approximately ¼ mile. The last area runs along the west side of King Road between Booth Road and Marine City Highway.

## **MULTIPLE FAMILY RESIDENTIAL**

In accordance with the stated objective of providing sufficient sites for multiple family residential development where public sewer and water services are possible and adequate road access is available or planned, the Land Use Plan provides for four multiple family residential areas in the Township (155 acres). Two of these areas, located south of the intersection of King Road and St. Clair Highway and north of the intersection of King Road and Marine City Highway, contain large parcels that would be ideal for a relatively large scale multiple family development such as a mobile home park. The other two multiple family residential area, north of the intersection of King Road and St. Clair Highway, are somewhat smaller than the other two and thus, would be more suited to small scale garden apartment or duplex condominium developments.

## **COMMERCIAL**

The Land Use Plan Map designates six areas in the Township for commercial use (206 acres). To ensure proper access for commercial uses, each of these areas is at or near an intersection of two paved public roads. These commercial areas are located as follows:

1. Fred W. Moore Highway and King Road
2. St. Clair Highway and Wadhams Road
3. King Road and Meisner Road
4. Marine City Highway and Indian Trail
5. Marine City Highway near King Road

Areas 2 & 4, located in more rural areas of the Township, are expected to contain relatively low density neighborhood commercial uses. The others, which are located in areas expected to receive public sewer and water, could contain relatively higher density general commercial uses.

## **OFFICE**

The Land Use Plan Map designates three areas in the Township for business and professional office use (35 acres). To ensure proper access for office uses, each of these areas is adjacent to or near a planned commercial area. These office areas are located as follows:

1. Fred W. Moore Highway west of King Road
2. The southwest corner of St. Clair Highway and King Road
3. The northwest corner of Marine City Highway and King Road

## **PUBLIC, QUASI-PUBLIC, INSTITUTIONAL**

There are three main areas in the Township designated for public, quasi-public and institutional uses (180 acres). The first area is the existing site of Pine River

Elementary School, on the east side of King Road just south of St. Clair Highway. The second is Township-owned property located at the intersection of King Road and Recor Road. The third is the Lions Club property at King Road and St. Clair Highway. The fourth is the area around the existing Township Hall, consisting of the Township Hall property, the neighboring property to the west and the neighboring properties to the east between Indian Trail Road and Belle River Road. These properties will be combined to form a new Township Civic Center that would contain the following facilities:

- A Department of Public Safety building, which would house Township police and fire protection facilities;
- A Department of Public Works building;
- A Township Library, to be housed in the existing Township Hall building;
- An expansion of the existing Township Hall Park;
- A "Town Square" that would serve as the focal point of the Civic Center Complex. This town square would be located on a triangle of land formed by Indian Trail Road, Belle River Road and a proposed extension and realignment of Lindsey Road west of Indian Trail to Belle River Road.

It is not likely that all of these Township Civic Center facilities will be needed by the Township within the time frame of this Master Plan. However, the Township should reserve a sufficient amount of land now for these facilities so that they may be more easily developed when needed.

Finally, the sites of various existing churches and cemeteries are also designated as public, quasi-public and institutional uses.

## **OPEN SPACE, CONSERVATION & RECREATION**

In order to meet the various open space and natural resource objectives of the Township, various areas of the Township have been designated as open space, conservation and recreation areas (884 acres). Two of these areas, located along the east side of King Road in Sections 12 and 13, are meant to serve as buffers between the Belle River Power Plant facilities and the residential and agricultural areas on the west side of King Road. Two other areas are located within the floodplain of the Belle River in Sections 23 and 24 on land proposed for Township parks. The floodplain of that part of the Pine River located in Section 1 is also designated as a open space, conservation and recreation area to protect this environmentally sensitive area from development. A sixth area is the existing site of the Rattle Run Golf Course, located on St. Clair Highway in Section 7, along with a neighboring site in Section 6. The site of the St Clair Gun & Fishing Club on Remer Road is also included in this classification. The seventh area is located in Section 8 at the northwest corner of Puttygut and McKinley, containing County-owned land used for wetland mitigation. The last area designated as open space, conservation and recreation contains the Indian Trail Road Park as well as the abandoned landfill adjacent to the south.

## **LIGHT INDUSTRIAL**

Seven areas in the Township are designated on the Land Use Plan Map for light industrial uses (669 acres). All of these areas are located near or adjacent to the Detroit Edison Belle River Power Plant property and already contain some light industrial activities. In particular is the ½-mile wide light industrial corridor along Puttygut Road that links the Detroit Edison complex with the Michigan Natural Gas facilities between Indian Trail and Wadhams Road and the Continental Coatings facility on Puttygut Road east of King Road.

## **HEAVY INDUSTRIAL**

There are only two areas in the Township planned for heavy industrial use. The first comprises most of the site of the existing Detroit Edison Belle River Power Plant, located in Section 12 and Section 13. The second is the site of a heavy equipment storage yard near Puttygut Road between Radike Road and Indian Trail Road.

### **Proposed Utility Transmission Corridor**

China Township is presently traversed by numerous high pressure gas transmission pipelines and high voltage electric power transmission lines. Since 1974, the Township through its zoning ordinance has regulated the location of such gas and electric transmission lines. In determining the location for such lines the following factors and objectives should be taken into account.

1. The lines should be aligned and located so as to not create unusable parcels of land or preclude development under existing zoning.
2. To encourage location within or abutting the rights-of-way of major thoroughfares where feasible, and where such location will not conflict with existing or future public utilities lines (water, sewer, storm sewer, etc.).
3. To minimize the possible adverse effect on future land use development in accordance with the Future Land Use Plan and sound planning practices.
4. To minimize interruptions or breaks in the continuity of the present or future thoroughfare system.
5. To follow a common corridor of other similar lines where possible.
6. To minimize possible adverse impacts upon residents and adjacent properties from noise, falling tower structures, electric fields, fire explosion, chemical spills, interference with radio, television or communication signals, etc.
7. Within a designated corridor, individual lines shall be placed so that the maximum number of lines can be accommodated. Specifically, lines shall be placed beginning at the south line of the corridor progressively working to the north for succeeding lines.

Numerous applications have been received to construct high pressure natural gas transmission pipelines within the Township. A number of such pipelines have been constructed and are in operation. There appears to be a desire on behalf of pipeline companies to construct pipelines connecting the Michigan Consolidated



Gas Co. facility (and adjacent facilities) on Puttygut Road in Section 11 with other pipelines and facilities across the St. Clair River in Ontario. In order to accommodate this need, a planned common corridor, with a minimum width of 200 feet is proposed. This corridor has been planned so as to provide the least disruptive direct routing for placement of high pressure transmission pipelines between these points. The corridor route has been selected to avoid interference with the siting and development of future industrial plants in the Puttygut Road Industrial Development Corridor. All future high pressure transmission pipelines located between the two points described above should follow this corridor where possible.

## RIGHT-OF-WAY

The remainder of the land in the Township is designated as right-of-way for streets and roads.

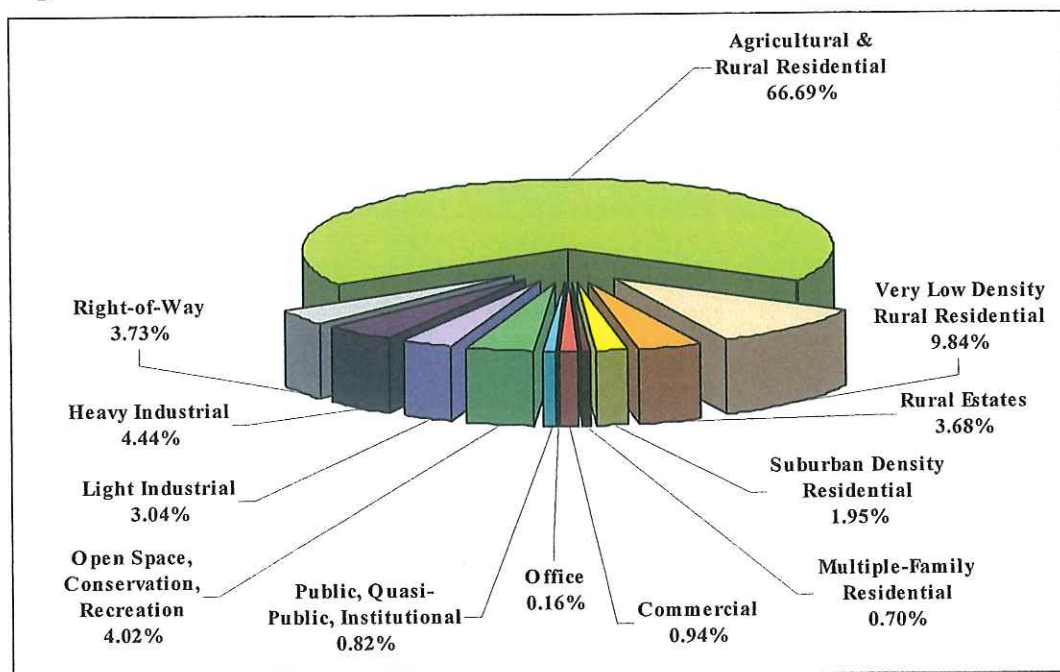
## Acreage Allocations

The areas allocated to the various planned land use categories were measured from the Land Use Plan Map. The planned land use category measurements are summarized in the following table and graph.

**Table 34: Planned Acreage Allocations**

Land Use Category	Planned Acreage	
Agricultural & Rural Residential	14,669.23	66.69%
Very Low Density Rural Residential	2,163.93	9.84%
Rural Estates	808.45	3.68%
Suburban Density Residential	428.91	1.95%
Multiple-Family Residential	154.96	0.70%
Commercial	205.84	0.94%
Office	34.61	0.16%
Public, Quasi-Public, Institutional	180.40	0.82%
Open Space, Conservation & Recreation	883.68	4.02%
Light Industrial	668.73	3.04%
Heavy Industrial	977.04	4.44%
Right-of-Way	820.91	3.73%
<b>TOTAL:</b>	<b>21,996.68</b>	












**Figure 10: Planned Land Use Allocations**





# CHINA TOWNSHIP LAND USE PLAN

2013-2030

-  Agricultural & Rural Residential
-  Very Low Density Rural Residential
-  Rural Estates
-  Suburban Density Residential
-  Multiple Family Residential
-  Commercial
-  Office
-  Public, Quasi Public, Institutional
-  Open Space, Conservation & Recreation
-  Light Industrial
-  Heavy Industrial



1000 500 0 500 1000 2000 3000 4000 5000  
Feet

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