

**CHAPTER 2**

**TRENDS, ISSUES  
& OPPORTUNITIES**

## INTRODUCTION

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Information regarding the existing conditions and historic trends with respect to the demographic and economic base, the natural environment and the man made environment is essential to the comprehensive planning process. An extensive data base has been developed by the Southeastern Wisconsin Regional Planning Commission (SEWRPC) pertaining to these and other aspects of the Southeastern Wisconsin Region, who updates the data base periodically. A major inventory update effort was carried out by SEWRPC in early 2000 in support of the preparation of new land use and transportation plans and other elements of the Comprehensive Plan for the Region, including Waukesha County and its municipalities. This chapter represents the summary of the resulting inventory of the updates pertaining to the population and demographics of the Town of Mukwonago and the surrounding municipalities in the southwestern portion of Waukesha County. Much of the demographic data in this chapter is from the US Bureau of the Census. This data is collected every 10 years and is derived from both short and long form questionnaires. The short forms provide a complete count of all persons living in the United States with over 300 tables with counts and cross tabulations of race, ethnicity and general age data. The long form is sent to 1 out of every 6 households in the United States. It provides sample data for topics related to education, housing, income and other social and economic issues.

## DEMOGRAPHIC AND ECONOMIC BASE

### Waukesha County Community Population Trends

Between 1970 & 1980; the majority of the county's growth in population occurred in the Cities and Towns. In fact, 46% took place in Cities, 44% in Towns and only 10% in Villages. Between 1990-2000 the growth in Cities remained the same, (46%) with a more even distribution of growth between Villages 31% and Towns 23%. In 2005 an estimated 20% of the total Waukesha County population lived in Towns (75,626 people), 24% resided in villages (91,157 people) and 56% were residents of cities (210,565).

### Components of Population Changed

Population change can be attributed to the natural increase and net migration. Natural increase is the balance between the births and deaths in the area over a given period of time. It can be measured directly from historical records from the number of births and deaths for an area. Net migration is the balance between the migration to and from an area over a given period of time. As a practical matter, net migration is often determined as a derived number, obtained by subtracting natural increases from the total population change for a given time period. Of the total population increase of 56,052 persons in the County between the years 1990-2000 18,582 can be attributed to natural increase, the balance, of 37,470 persons, can be attributed to net migration.

In reviewing the municipalities in the southwestern portion of the County consisting of the Towns of Eagle, Genesee, Mukwonago, and Vernon and the Villages of North Prairie, and Mukwonago; the population growth from 1970-2000 was over 100% with the townships gaining the most population. The Town of Eagle grew 149%, the Town of Genesee grew 130%, the Town of Mukwonago grew 255%, the Town of Vernon grew 153%, the Village of Mukwonago grew 160% and the Village of North Prairie grew 134%.

**Table 1**

**Population Growth for the Southwestern Portion for Waukesha County  
1970-2000**

Communities	1970	1980	1990	2000	2006
Town of Eagle	1250	1758	2028	3117	3492
Town of Genesee	3172	5126	5986	7284	7542
Town of Mukwonago	1930	4979	5967	6868	7512
Town of Vernon	2857	6372	7549	7227	7455
Village of Mukwonago	2367	4014	4464	6162	6506
Village of North Prairie	669	938	1322	1571	1855

## **Racial Composition**

Almost 96% of the residents in Waukesha County were white in 2000; however, the population in Waukesha County continues to grow more diverse. Between 1990-2000 the Hispanic population in the County nearly doubled from 5448 to 9503. The City of Waukesha experienced the largest growth in the number of Hispanics. Several neighborhood block groups in the City of Waukesha report a population that is over 25% Hispanic. Asians with nearly 5400 people made up the 3<sup>rd</sup> largest racial group within Waukesha County. According to the 2000 census, 6724 persons or 97.9% were white in the Town of Mukwonago, 7 or .1% were African American, 11 or .2% were American Indian or Alaska Natives and 22 or .3% were Asians. Ninety-two people were more than 1 race.

## **Household Trends**

The number of households or occupied housing units is of importance in land use and public facilities planning. The number and location of households directly influences the demand for transportation and other public facilities and services. A household includes all persons who occupy a housing unit defined by the census bureau as a home, an apartment, a mobile home, a group of rooms or a single room that is occupied or intended for occupancy as separate living quarters. According to the 2000 census, the Town of Mukwonago had 2184 owner occupied living units which was 97.5% of the households and 57 rental units which was 2.5% of the households. The owner occupied residences were approximately 21% above the Waukesha County average and the rentals were 21% below the County average.

## **Table 2**

**Owner vs. Renter Occupied Living Units in the Southwestern Portion of Waukesha County Municipalities 2000**

Communities	Owner Occupied	Percent	Renter Occupied	Percent
Town of Eagle	1,049	93.8	69	6.2
Town of Genesee	2,431	98	50	2
Town of Mukwonago	2,184	97.5	57	2.5
Town of Vernon	2,380	99	25	1
Village of Mukwonago	1,516	63.4	876	36.6
Village of North Prairie	455	85.7	76	14.3
Waukesha County Total	103,373	76.4	31,856	23.6

Source: US Bureau of Census

The number of household in the County increased by 29,239 households or 28% from 105,990 households in 1990 to 135,229 households in 2000.

## **Household Size**

In 2000, the average household size in Waukesha County ranged in size from 2.05 persons in the Village of Butler to 3.26 persons in the Village of Merton. The figures continue to decline slightly in Waukesha County communities. From 1990 to 2000 the average household size declined in Waukesha County from 2.83 to 2.63 persons. According to the 2000 census, the average household size in the Town of Mukwonago was 3.14 people. This trend of decreasing

household size is occurring on a regional, state and national scale as families continue to become smaller. The growing population with a decreasing household size has implications for development of housing stock, common demand for future water and sanitary sewer system capacity, land use, other utilities and community facilities.

**Table 3**

**Average Household Size in the Southwest Portion of Waukesha County in 2000.**

Communities	Average Household Size
Town of Eagle	2.97
Town of Genesee	3
Town of Mukwonago	3.14
Town of Vernon	3
Village of Mukwonago	2.54
Village of North Prairie	2.96
Waukesha County	2.63

In evaluating the communities in the southwest part of Waukesha County including the Town of Mukwonago, it appears that the communities with the most types of rental units have lower person per household occupancy, such as the Villages of North Prairie and Mukwonago, as they typically have larger amounts of rental units than Towns.

**Median Age**

Waukesha County’s median age is increasing. The median age in 1970 for the County was 27. The median age increased to 34 in 1990 and 38.1 in 2000. The median age in 2000 for the Town of Mukwonago was 36.7 years old; whereas the County was 38.1.

**Age Composition**

The 45 to 64 age group and 65 and over age group will continue to grow in number reflecting the aging baby boomers (people born from 1946 to 1964). The 25 to 44 years age group will begin to decrease as baby boomers grow older and smaller numbers of individuals born in 1970s move into this age group. This changing age composition will have implications for school districts, housing, labor, and transportation. In reviewing the 2000 census statistics for the Town of Mukwonago, 21.8% of the population was between 35 and 44 years and 18.6% was between 45 to 54 years. These age trends are consistent with the rest of Waukesha County.

**Table 4****Southwestern Waukesha County Communities Population  
by Age Group and Median Age for the Year 2000.**

Communities	Under 5	5 – 14	15-24	25-44	45-64	65 & Older	Median Age
Town of Eagle	226	532	326	1030	799	204	36.9
Town of Genesee	437	1289	865	2101	2121	471	38.7
Town of Mukwonago	426	1316	856	2128	1839	303	36.7
Town of Vernon	346	1206	1353	864	2360	412	39.4
Village of Mukwonago	434	864	882	1980	1328	674	33.9
Village of North Prairie	98	296	188	515	392	92	36.3
Waukesha County	23,096	54,805	41,587	107,439	90,406	43,434	38.1

**Household Income**

Waukesha County has a substantially higher median household income than adjacent counties. The median household income was \$62,839 in 2000 for Waukesha County. These figures were over 60% higher than the median household income for the adjacent Milwaukee County residents. The median household incomes in Waukesha County communities range from \$33,883 in the Village of Butler to over \$160,000 in the Village of Chenequa. The year 2000 census indicates that the Town of Mukwonago has a median household income of \$75,067 which is substantially higher than other communities in Waukesha County.

**Table 5****Household Income for the Southwestern Waukesha County Communities 1999**

Communities	Median Household Income
Town of Eagle	\$69,071
Town of Genesee	\$78,740
Town of Mukwonago	\$75,067
Town of Vernon	\$71,366
Village of Mukwonago	\$56,250
Village of North Prairie	\$70,781
Waukesha County	\$62,839

## **Employment Trends**

Waukesha County has continued to enhance its economy through new job creations. Waukesha County has experienced a 43% growth in employment from 1990 – 2000 resulting in a net addition of 81,100 jobs. It should be noted that Milwaukee County has nearly 3 times as many jobs as Waukesha County; however, it recorded only a 2% increase in jobs during the 1990s. Waukesha County, like the rest of Wisconsin has experienced a decline in manufacturing jobs as a percent of total employment. Despite this fact, Waukesha County is still above the national average in manufacturing employment. Approximately 21% of all jobs in Waukesha County are in the manufacturing category. Nationally, only about 12% of all jobs are in manufacturing. Service employment has increased significantly over the last decade and now is the most important sector for jobs in Waukesha County, accounting for 28% of all jobs within the County.

The US Census Bureau information does not designate the types of the jobs available in the Town of Mukwonago, only what types of jobs the residents of the Town are employed in. According to the US Census there are 3789 persons over 16 years of age employed in the Town. The Census information indicates that 1440 or 38% are management, professional and related occupations, 298 or 7.9% are service occupations, 983 or 25.9% are sales and office occupations, 5 or 0.1% of the jobs are in farming, fishing, and forestry, 443 or 11.7% in construction or extraction and 620 or 16.4% in transportation and material moving occupation. The major types of industries that the residents of the Town are employed in are; manufacturing at 895 or 23.6%, educational health and social services at 759 or 20% and 339 or 10.4% in retail trade.

**Table 6**

### **Waukesha County Employment and Industries Trends 1990-2000**

Waukesha County	1990	2000	1990-2000 Number Change in Employment	2000 % of Total Employment
Agricultural	1,191	1,011	-180	1
Construction	12,679	18,462	5,783	7
Manufacturing	44,871	56,754	11,883	21
Transportation Communication Utilities	8,185	9,516	2,434	4
Wholesale Trades	16,128	22,508	6,380	8
Retail Trades	31,054	43,132	12,078	16
Finance Insurance Real Estate	13,131	22,340	9,209	8
Services	46,293	76,265	29,979	28
Government and Governmental Enterprises	13,994	17,059	3,065	7
Other	2,135	3,749	1,614	1

Note: Services include business, repair, personal, entertainment, recreational, health education, accommodations and full social & professional services. Government and Governmental Enterprises includes all non-military governmental agencies and enterprises regardless of North American Industry Classification System (NAICS), other includes agricultural services, forestry, commercial fishing, mining, and unclassified jobs. Source: US Census Bureau

### **Educational Attainment**

In the State of Wisconsin, 31% of the residents age 25 and older have earned an associate, bachelor, graduate or professional degree. Waukesha County has the 3rd highest percentages of people with associate, bachelor, graduate, or professional degrees in Wisconsin. Over 41% of the people, 25 years of age and older have associate, bachelor, graduate, or professional degrees in Waukesha County. Within Waukesha County municipalities this figure ranges from 18% in the Village of Butler to 70% in the Village of Chenequa. In the Town of Mukwonago, 42.3% of the residents ages 25 and older have earned associate, bachelor, graduate or professional degrees. This figure is slightly higher than the average for Waukesha County.

**Table 7**

### **Residents 25 Years of Age and Over with Associate, Bachelor, Graduate or Professional Degrees by the Communities in the Southwest Portion of Waukesha County 2000.**

Community	Number	Percent
Town of Eagle	673	34.2
Town of Genesee	2100	45.5
Town of Mukwonago	1757	42.3
Town of Vernon	1428	30.1
Village of Mukwonago	1381	35
Village of North Prairie	370	36.6

### **Summary of the Population Characteristics of the Town Of Mukwonago**

The 1990 census indicated that the Town of Mukwonago had a population of 5967. The year 2000 census showed the population of the Town at 6868 persons, which is a 15.1% increase in the population, however, the 2005 population projection by Wisconsin Department of Administration shows the projection population to be 7482 persons. The average household size declined to 3.14 persons per household by 2000. Assuming development densities in the Town will remain relatively low and as indicated in the Public Facilities Needs Assessment and an Impact Fee Study conducted by Ruckert-Mielke for the Town of Mukwonago for new development, it is anticipated by the year 2025, that the Town's population will be 8796. The median age of the Town's residents at the time of the 2000 census was 36.7 years of age; with males being 50.9 % and females being 49.1 %.

### **Land Use**

Planners rely on two types of inventories and analyses in order to monitor urban growth and development in Southeastern Wisconsin—an urban growth ring analysis and a land use inventory. The urban growth ring analysis delineates the outer limits of concentrations of urban development and depicts the urbanization over the past 150 years. When related to urban population levels, the urban growth ring analysis provides a good basis for calculating urban



population and household densities. By contrast, SEWRPC's land use inventory is a more detailed inventory that places all land and water areas into 1 of 66 discrete land use categories, providing a basis for analyzing specific urban and non-urban land uses. Both the urban growth ring analysis and the land use inventory have been updated to the year 2000 under the continuing regional planning program. Therefore they serve as the basis for the land use trends present in this Plan.

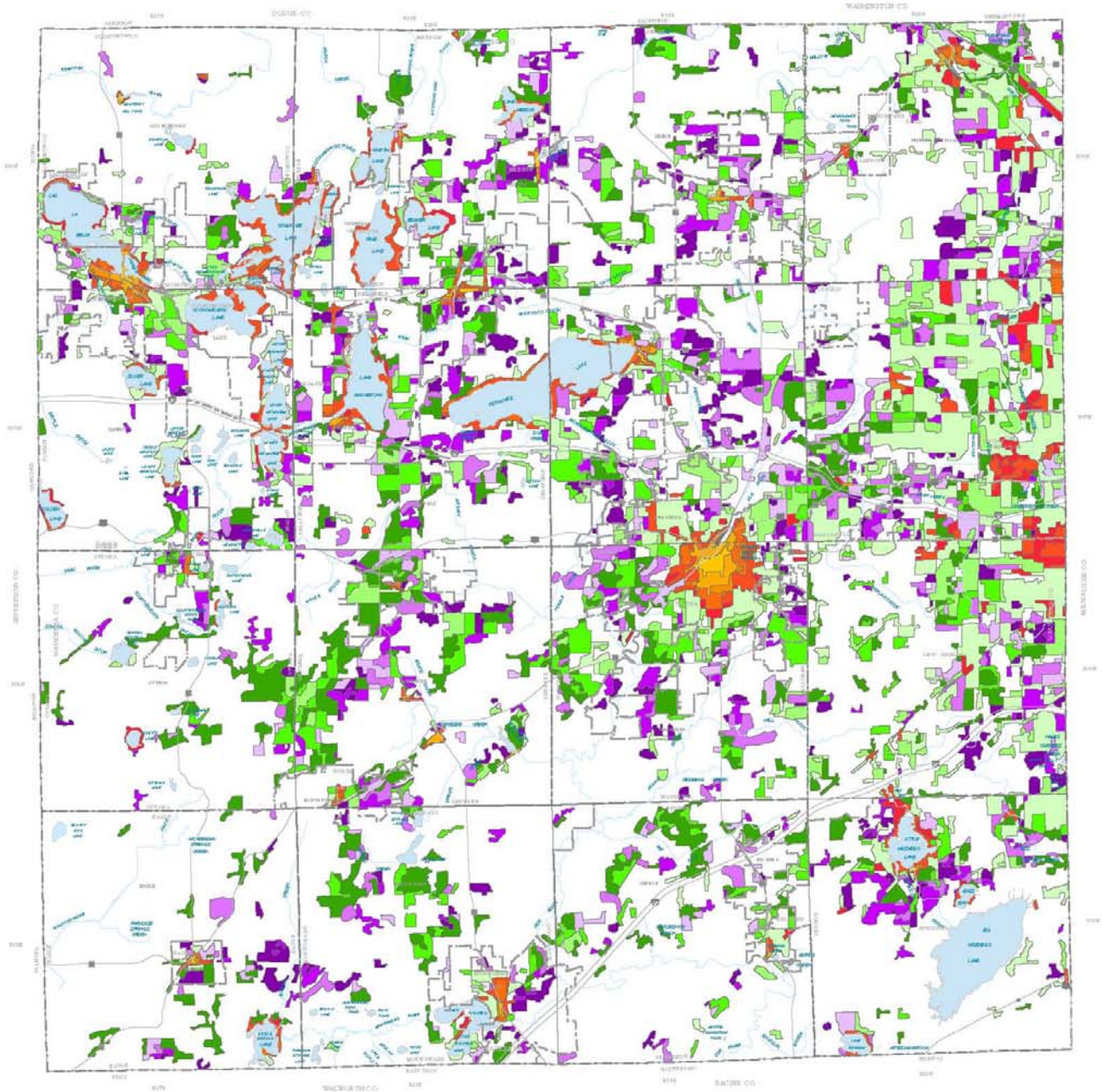
### **Urban Growth Ring Analysis**

The urban growth ring analysis shows the historical pattern of urban settlement, growth, and development since 1850 for selected points in time. Areas identified as urban under this time series analysis include areas where residential structures or other buildings have been constructed in relatively compact groups, thereby indicating a concentration of residential, commercial, industrial, governmental, institutional, or other urban land uses. In addition, the identified urban areas encompass certain open space lands such as urban parks and small areas being preserved for resource conservation purposes within the urban areas.

As part of the urban growth ring analysis, urban growth for the years prior to 1940 was identified using a variety of sources, including the records of local historical societies, land subdivision plat records, farm plat maps, U.S. Geological Survey maps, and Wisconsin Geological and Natural History Survey records. Urban growth for the years 1940, 1950, 1963, 1970, 1980, 1990, and 2000 was identified using aerial photographs. Because of limitations inherent in the source materials, information presented for the years prior to 1940 represents the extent of urban development at approximately those points in time, whereas the information presented for later years can be considered precisely representative of those respective points in time. The urban growth ring analysis, updated through 2000, is presented graphically on the map below.

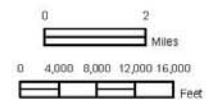
# HISTORIC GROWTH RING ANALYSIS IN WAUKESHA COUNTY: 1850-2000

## Historic Urban Growth in Waukesha County: 1850-2000



### Legend

Year	Color
1850	Orange
1880	Yellow-Orange
1900	Red-Orange
1920	Red
1940	Dark Red
1950	Bright Red
1963	Light Green
1970	Light Green
1975	Medium Green
1980	Dark Green
1985	Light Purple
1990	Medium Purple
1995	Dark Purple
2000	Very Dark Purple



Source: SEWRPC & Waukesha County

## **Town of Mukwonago Conversion of Land Use.**

A more detailed analysis is shown on Map K which indicates the conversion of agricultural land in the Town of Mukwonago from 1963-2005. This map is based upon the SEWRPC Land Use inventories from 1963-2000 and updated with changes to 2005. The acreages for these changes are on the conversion chart in the Land Use chapter of this document.

## **Population Projections**

Projections are estimates of the population for future dates. They illustrate plausible courses of future population change based on assumptions about future births, deaths, international migration, and domestic migration.

While projections and estimates may appear similar, there are some distinct differences between the 2 measures. Estimates are for the past, while projections are based on assumptions about future demographic trends. Estimates generally use existing data collected from various sources, while projections must assume what demographic trends will be in the future.

In the report, *The Population of Southeastern Wisconsin*, SEWRPC projected a range of future population and household levels – using high, intermediate, and low growth scenarios for Waukesha County. The analysis uses the cohort-component projection model that projects population based on births, deaths, and migration rates. (Previously said fertility, survival, and migration rates). After analyzing the data, the intermediate growth projection was used for land use planning purposes. The intermediate population projection predicts a modest increase in birth rates, a slight improvement in death rates, and a relatively stable migration pattern through 2035. The intermediate projection of growth for Waukesha County is slightly higher than projections developed by the Wisconsin Department of Administration. SEWRPC in their study did not attempt to create projections for individual communities in Waukesha County. The Wisconsin Department of Administration developed projections through 2025 for communities within the County. The University of Wisconsin Applied Population Laboratory made the projections for years 2030 and 2035 with simple trend extrapolation techniques. These projections are built upon the Wisconsin Department of Administration's Demographic Services Center's population projections for municipalities (through 2025) and for counties (through 2030). At the community level it is more difficult to project future population growth. There is greater uncertainty with making demographic trend assumptions at the community level. For example, fertility is influenced by many factors including age of residents, income, educational attainment, race, and percentage of married couple families. Domestic migration or movement from one community to another is also difficult to project at a local community level. This variable is influenced by age, marriage, income, housing availability, and percentage of renters vs. homeowners. Between 1995 and 2000 over 66,000 Waukesha County residents moved to different houses within communities in the County. As a result, the projections for communities are a best projection guess, but may end up being quite different at the community level 20 years into the future.

**Table 8**

**Projected Population in Waukesha County: 2010-2035  
(Intermediate Projection)**

	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
Waukesha County	391,499	404,086	417,362	429,635	440,289	446,768

Source: Southeastern Wisconsin Regional Planning Commission

**Household Projections**

Based upon the intermediate projection, SEWRPC estimates that Waukesha County will gain an additional 38,900 households by 2035. The SEWRPC intermediate population growth projection for the County in 2035 is 446,768. This projected trend would result in a continued decline in household size to 2.37 persons in the year 2035.

**Table 9**

**Actual and Projected Households in Waukesha County  
2000-2035**

**(Intermediate Projection)**

<b>Year</b>	<b>Households</b>	<b>Change from Preceding Year</b>	
		<b>Absolute</b>	<b>Percent</b>
Actual Households:			
2000	135,200	--	--
Projected Households:			
2005	144,300	9,100	6.7
2010	150,800	6,500	4.5
2015	156,700	5,900	3.9
2020	162,300	5,600	3.6
2025	167,400	5,100	3.1
2030	171,900	4,500	2.7
2035	174,100	2,200	1.3
<b>Change: 2000-2035</b>	<b>--</b>	<b>38,900</b>	<b>28.8</b>

Source: U.S. Bureau of the Census and SEWRPC.

## **Town of Mukwonago Projections**

In the projecting of the population growth in 5 year increments through the year 2030, the Focus Group for the Town of Mukwonago analyzed a growth rate of 1.5% and 2% growth per year using the Waukesha County estimates and the growth and building permit data for the Town of Mukwonago from 1990-2007. Based upon that analysis they decided to use the continuation of the allotment system at 50 new residential living units per year which is lower than the actual growth in the last 17 years and larger than that projected in the update of the Waukesha County Development Plan.

Also used to analyze projected growth was the persons per household data from the Census data from 1960-2000 which indicates that the household size has been decreasing from 3.66 in 1960 to 3.14 in the year 2000 in the Town. The Focus Group reviewed the projected household size used in the Waukesha County Development Plan update of 2.48 persons per household by the year 2030 and determined that was to low because that included all types of living units such as multifamily and senior housing which typically are smaller than single family housing which is approximately 94% of the living units in the Town of Mukwonago. The Focus Group chose to use a household size of 2.75 persons per household which is a significant reduction in the 3.14 persons in the 2000 Census but somewhat higher than the 2.48 persons used by the County for the reasons stated above.

**Table 10**

**Town of Mukwonago Growth 1960-2007 and Population Projections 2007-2030**

Community	Actual Populations					Projected Growth Rate % per Year	Estimates					
	1960	1970	1980	1990	2000		2007	2010	2015	2020	2025	2030
Town of Mukwonago	1,579	1,930	4,979	5,967	6,868	1.5%	7,544	7,888	8,498	9,155	9,862	10,624
Town of Mukwonago	1,579	1,930	4,979	5,967	6,868	2.0%	7,544	8,006	8,839	9,759	10,775	11,896
Waukesha County Estimate for Town of Mukwonago	1,579	1,930	4,979	5,967	6,868	.93%	7,544	7,631	7,989	8,346	8,765	9,153

<sup>1</sup>Growth Rate by Decade

1960-1970 22%

1970-1980 158%

1980-1990 19.8%

1990-2000 13.1%

2000-2007 5.4%

Source Wisconsin Department of Administration

Note: the projections for the year 2030 were made on simple extrapolation techniques by University of Wisconsin Applied.

Population: Projections are built upon Wisconsin Department of DOA Demographic, Services Center.

**Table 11****Yearly Growth 1990 – 2007**

Year	Population	Population change	Change in population %	Building Permits for New Residential Units	Person per household in new dwelling units
1990	5,960	-	-	72	1.16
1991	6,051	91	1.53	71	4.13
1992	6,344	293	4.84	101	1.33
1993	6,479	135	2.13	104	1.44
1994	6,629	150	2.32	78	1.56
1995	6,751	122	1.84	56	1.83
1996	6,854	103	1.53	48	2.50
1997	6,974	120	1.75	45	1.48
1998	7,041	67	0.96	52	2.86
1999	7,190	149	2.12	53	0*
2000	6,868	-322	-4.48	50	1.66
2001	6,951	83	1.20	90	1.58
2002	7,093	142	2.02	82	2.02
2003	7,259	166	2.34	67	1.97
2004	7,391	132	1.82	34	2.67
2005	7,482	91	1.23	33	0.91
2006	7,512	30	0.40	17	1.88
2007	7,544	32	0.43	-	-

Based upon a 17-year average, there were 1.5 persons per household for all new houses built. The average percentage population change from 1990 through 2007 was 1.41 % per year.

\* Negative population based upon Border agreement with the Village of Mukwonago and the number of new houses.

**Table 12**

**Projected Population and Households in the Town Of Mukwonago  
2000 – 2030**

<b>YEAR</b>	<b>PROJECTED POPULATION</b>	<b>PROJECTED LIVING UNITS</b>
2000	6,868*	2,155*
2005	7,482**	2,691**
2010	8,170	2,881***
2015	8,857	3,221
2020	9,545	3,471
2025	10,232	3,721
2030	10,920	3,971

These projections were based upon 50 new living units per year and a household size of 2.75 persons

\* Based upon 2000 Census data

\*\* Population based upon DOA Data and building permits issued from 2000-2005

\*\*\*Based upon building permit data from 2005-2006 and 50 per year for 2007-2009

**Results of Surveys of Town of Mukwonago Citizens**

Two surveys were conducted of the citizens of the Town of Mukwonago in order to establish the goals and objectives of the residents of the Town. The first survey was in the fall of 2002, which was mailed to the residents between August 29 and September 17. That survey was sent to all households within the Town to assess their attitudes and opinions on long-range growth and development issues. This information was needed in order to guide the Town in the update of the Town's Comprehensive Plan in accordance with the new Comprehensive Planning Law (Wisconsin Statutes: ss 66.1001) also, commonly referred to as the Wisconsin Smart Growth Law. This law requires community comprehensive plans to address different issues and elements including, land use, housing, economic development, agricultural, natural and cultural resources, transportation, utilities and community facilities, inter-governmental cooperation and implementation. The Town Survey questions were selected to obtain household opinions pertaining to the general and specific planning issues affecting residents of the Town in each of the elements. It was the intent that the survey would contribute to and be part of the public involvement process for the Town's Comprehensive Plan. There were 2,505 surveys mailed to the households within the Town; 1,341 surveys were returned for a response rate of 53.5%.

Subsequently, in October of 2006, as part of the participation of the Town of Mukwonago in the update of the Waukesha County Development Plan, a new survey was sent out to provide the decision makers of the Town of Mukwonago with accurate, up-to-date information regarding the views of the Town's residents regarding planning issues. In October of 2006, the County questionnaires were mailed to 1,065 households in the Town of Mukwonago. After 2 weeks, postcards were mailed to those who had not returned the questionnaire, a second questionnaire was sent to the remaining non-respondents in mid November. 3 hundred sixty-9 questionnaires were returned for a response rate of 35%. This percentage was based upon the 2000 census



population data. The estimates provided in the County's report were expected to be accurate within a + or - 4.9% with a 95% confidence rating.

That questionnaire indicated that quality of life issues such as the rural atmosphere, natural environment, open space, quality of the school system, property taxes, and the natural resource base were the top reasons that people choose to live in Waukesha County. Furthermore, 36% of the Town of Mukwonago residents said that the quality of life had declined during the last 5 to 10 years, 26% said it had improved and 25% believed it had not changed. Town residents ranked the amount of development as the most important factor that had changed the Town's quality of life. In the agricultural/ natural resource category, 67% of the Town respondents rated environmental quality in the county as either good at 57% or excellent at 10%. Air quality and groundwater were the 2 County resources residents most wanted to see protected.

### **Housing**

When given County growth data, 38% of the residents thought the rate of growth was about right, 61% thought too much development had occurred and 1% said there was too little. A majority (55%) of the Mukwonago residents said that the County needs more housing for seniors. In addressing land use and growth issues the top issues of residents countywide were tax rates and green space preservation. When Town residents were asked how countywide growth issues were being dealt with, the majority of the Town residents rated 2 of 14 issues as being satisfactory, solid waste management and crime rate/safety. About half were satisfied with the quality of roads and no item had more than 50% dissatisfaction.

### **Transportation**

57% of the Town of Mukwonago residents believe that the overall road network currently meets the needs of the county's residents. About 47% either disagreed or strongly disagreed that they will be adequate to meet future growth needs. 55% of Town residents desired more biking and walking trails.

### **Economic Development**

Mukwonago residents emphasized the development of knowledge based types of businesses such as emerging technology and medical services as the most desirable for the County's future economic base. It did not appear in the survey that more than 50% of the people in the Town were in favor of sharing services with neighboring governments.

Overall, the County's survey which was conducted in 2006 reinforced the Town's survey from 2002 as the residents continued to support the retention and protection of the rural atmosphere, preserving the natural resources such as water quality for the lakes and streams, farm lands, open spaces and ground water. The Town's survey indicated that 76% agreed with purchase of development rights and the County's survey verified that 73% of the residents of the Town continued to support some kind of Purchase of Development Rights Program (PDR).

At the kick off meeting which was conducted on May 30, 2007, issues that were discussed by the committee were as follows:

1. The long term maintenance of open spaces in the existing subdivisions or planned unit developments in the Town.
2. The possibility of transfer of development rights.
3. The maximum lot size, with the idea that if someone wanted larger acreage, that they would purchase multiple lots.
4. The aging population of the Town.
5. The status of the existing transportation arterials.
6. The possibility of combining the Mukwonago Community Library and the Eagle Library.
7. The use of outside contractors versus Town employees.
8. The expanding of different types of commercial Conditional Use Permits in the Town's ordinance.
9. The definition of rural character in discussing the issue of rural character, there was a wide range of visions of what the members felt was rural character, ranging in size from 1.5 to 2 acre lots, another 3 acre lots density and open space, farm open space, private ownership and maximum lot sizes.

### **Vision Statement**

Based on the input of many people and the results of the two opinion surveys that were conducted, a vision statement has been developed to help describe what the Town of Mukwonago hopes to be like in the coming years. As issues and opportunities arise in the future, the Town Board and Plan Commission will need to review this vision statement to ensure it remains fresh and looks to the future with anticipation.

Much of the Town retains its rural character. Homes blend in with and complement their natural surroundings. Forests, wetlands, lakes, and agricultural lands are dominant in the landscape. The water quality of surface waters remains high and groundwater resources are protected from contamination and overuse. By 2025, the Town's population will likely increase to 10,232 residents, representing an increase of 1,030 new dwelling units since 2005. New residential developments are designed to minimize the impact on the natural environment and environmentally sensitive lands and to protect open space, including productive agricultural lands. Improvements are made to the Town's infrastructure in a cost-effective manner to accommodate a growing population. Residents are served by a safe, efficient, and convenient comprehensive transportation system with vehicular, pedestrian, and recreational modes of transportation. The Town offers a range of recreational opportunities, such as organized activities for the youth and passive recreational areas. Town residents and visitors alike enjoy the lands in public ownership, including the Vernon Marsh Wildlife Area and the newly-acquired Rainbow Springs State Park [verify name]. The Town's fire and police departments continue to provide exceptional service. Town government continues to proactively address issues and opportunities for the benefit of town residents.

## **Objectives of the Update of the Waukesha County Development Plan and 2035 Regional Plan**

Since the Town of Mukwonago is participating with 27 other communities in the update of the Waukesha County Development Plan, the Focus Group for the Town of Mukwonago has reviewed the objectives and supporting principles and related standards used in the update of the County Plan to determine and analyze whether the Town concurs with and support those objectives, standards and principles.

Planning may be described as a rational process for formulating and achieving objectives. The formulation of objectives is an essential task to be undertaken before plans can be prepared. The land use objectives along with supporting principles and related standards recommended by the Comprehensive Development Plan Advisory Committee for Waukesha County were the basis for the preparation of a Waukesha County Comprehensive Development Plan. The objectives are derived from the objectives contained in the Regional Land Use Plan for Southeastern Wisconsin: 2035.

The key steps in the comprehensive planning process are 1) formulation of objectives and standards, 2) inventory, 3) analyses and forecasts, 4) plan design, 5) plan evaluation, and 6) plan refinement and plan adoption. Plan implementation, although a step beyond the planning process is considered throughout the process, realization of the plan may be achieved.

The terms “objective,” “principle,” “standard,” “plan,” “policy,” and “program” are subject to a range of interpretations. Although this chapter deals with only the first 3 of these terms, an understanding of the interrelationship between the foregoing terms and the basic concepts which they represent is essential to any consideration of objectives, principles, and standards. Under the regional planning program, these terms have been defined as follows:

1. Objective: a goal or end toward the attainment of which plans and policies are directed.
2. Principle: a fundamental, primary, or generally accepted tenet used to support objectives and prepare standards and plans.
3. Standard: a criterion used as a basis of comparison to determine the adequacy of plan proposals to attain objectives.
4. Plan: a design that seeks to achieve agreed-upon objectives.
5. Policy: a rule or course of action used to ensure plan implementation.
6. Program: a coordinated series of policies and actions to carry out a plan.

### **General Development Objectives**

The Town of Mukwonago Focus Group has reviewed the following general development objectives, presented as part of the year 2035 regional land use plan, which have been reaffirmed by the Comprehensive Development Plan Advisory Committee for use in the preparation of the Waukesha County Comprehensive Development Plan, no ranking is implied by the order in which these objectives are listed:

1. Economic growth at a rate consistent with county resources, including land, water, labor, and capital, and primary dependence on free enterprise in order to provide needed employment opportunities for the expanding labor force.
2. A wide range of employment opportunities through a broad diversified economic base.

3. Preservation and protection of desirable existing residential, commercial, industrial, and agricultural development in order to maintain desirable social and economic values, renewal of obsolete and deteriorating areas in both urban and rural areas, and prevention of slums and blight.
4. A broad range of choice among housing designs, sizes, types, and costs, recognizing changing trends in age group composition, income, and family living habits.
5. An adequate, flexible, and balanced level of community services and facilities.
6. An efficient and equitable allocation of fiscal resources within the public sector of the economy.
7. An attractive and healthful physical and social environment with ample opportunities for high-quality education, cultural activities, and outdoor recreation.
8. Protection, sound use, and enhancement of the natural resource base.
9. Development of communities having distinctive individual character, based on physical conditions, historical factors, and local desires.

The Town Board and Planning Commission has reviewed the above objectives and supports them countywide, but realizes they all may not be appropriate for the Town of Mukwonago as discussed in subsequent chapters.

### **Specific Development Objectives**

Within the framework established by the general development objectives, a secondary set of more specific objectives, which are directly related to physical development plans, and which can be at least crudely quantified has been developed. The specific development objectives are concerned primarily with spatial allocation to and distribution of the various land uses, land use compatibility, resource protection, and accessibility.

The following specific development objectives have been formulated by the Comprehensive Development Plan Advisory Committee. No ranking is implied by the order in which these objectives are listed:

1. A balanced allocation of space to the various land use categories, which meets the social, physical, and economic needs of the county population.
2. A spatial distribution of the various land uses that will result in a convenient and compatible arrangement of land uses.
3. A spatial distribution of the various land uses which maintains biodiversity and which will result in the preservation and sustainable management of the natural resources of the County.
4. A spatial distribution of the various land uses which is properly related to the supporting transportation, utility, and public facility systems in order to assure the economical provision of transportation, utility, and public facility services.
5. The development and preservation of residential areas within a physical environment that is healthy, safe, convenient, and attractive.
6. The preservation, development, and redevelopment of a variety of suitable industrial and commercial sites both in terms of physical characteristics and location.
7. The conservation, renewal, and full use of existing urban service areas of the Region and the County.
8. The preservation of productive agricultural lands.

9. The preservation and provision of open space to enhance the total quality of the environment, maximize essential natural resource availability, give form and structure to urban development, and provide opportunities for a full range of outdoor recreational activities.

The Town Board and Planning Commission has reviewed the above objectives and supports them countywide but realizes they all may not be appropriate for the Town of Mukwonago as discussed in subsequent chapters.

### **Formulation of Standards**

Each set of standards is directly related to the objective. The standards facilitate application of the objectives in plan design and evaluation. The Focus Group has reviewed the standards relating to the 9 specific land use objectives that were developed by the County subcommittee which address the particular planning element, and although they may concur with them on a countywide basis, they feel they may not be appropriate for every community in the County. However, the Town does support these objectives and standards on a larger scale.

The following objective and standards serve as an example for industrial and commercial sites.

#### **Objective**

The preservation, development, and re-development of a variety of suitable industrial and commercial sites, are in terms of physical characteristics and location.

#### **Standards**

1. Industrial, retail, and office uses should meet the following standards:

- a. Available adequate water supply, sanitary sewer service or soils suitable for installation for a mound or in-ground onsite septic system, storm water drainage facilities, and power supply.
- b. Ready access to the arterial and highway system.
- c. Adequate off-street parking and loading areas.
- d. Provisions for spacing of ingress and egress points appropriately controlled to prevent congestion on adjacent arterial streets.
- e. Site design appropriately integrating the site with adjacent land uses.

### **Balancing Of Planning Standards**

In applying the planning standards and preparing the Waukesha County Comprehensive Development Plan, it should be recognized that it is unlikely that the County Plan can meet all of the standards completely. It should be recognized that some objectives are complementary, with the achievement of 1 objective supporting the achievement of others. Conversely, some objectives may be conflicting, requiring reconciliation through compromise.

For example, as part of the planning process, the objectives of preserving agricultural and other open space lands must be balanced with the need to convert certain lands to other uses in support of the orderly growth and development of the Town.

Most of County's land use development objectives, principles, and standards were incorporated without significant change from the set of planning objectives, principles, and standards included in the adopted Year 2035 Regional Land Use Plan. The intent of this chapter is to analyze general objectives for the Town's Plan, and subsequent chapters will detail planning principles and standards as they relate to the particular planning element.

## **Planning Objectives and Standards**

### **Agricultural, Natural and Cultural Resources Objective No. 1**

A spatial distribution of the various land uses which maintains biodiversity and which will result in the preservation and sustainable use of the natural resources of the Town and County.

### **Environmental Corridors and Isolated Natural Resource Areas**

#### **Principle**

The preservation of environmental corridors and isolated natural resource areas in essentially natural, open use yields many benefits, including recharge and discharge of groundwater, maintenance of surface water and groundwater quality, attenuation of flood flows and flood stages, maintenance of base flows of streams and watercourses, reduction of soil erosion, abatement of air and noise pollution, provision of wildlife habitat, protection of plant and animal diversity, protection of rare and endangered species, maintenance of scenic beauty, and provision of opportunities for recreational, educational, and scientific pursuits. Conversely, since some environmental corridors and isolated natural resource areas are poorly suited for urban development, their preservation can help avoid serious and costly development problems while protecting the Town's most valuable natural resources.

*Notes: Environmental corridors are elongated areas in the landscape which contain concentrations of natural resource features (lakes, rivers, streams, and their associated shorelands and floodlands, wetlands, woodlands, prairies, wildlife habitat areas, wet, poorly drained, and organic soils, and rugged terrain and high-relief topography) and natural resource-related features (existing park and open space sites, potential park and open space sites, historic sites, scenic areas and vistas, and natural areas and critical species habitat sites). Primary environmental corridors include a variety of these features and are at least 400 acres in size, 2 miles long, and 200 feet in width. Secondary environmental corridors also contain a variety of these features and are at least 100 acres in size and 1 mile in length. Isolated natural resource areas are smaller concentrations of natural resource features that are physically separated from the environmental corridors by intensive urban or agricultural uses, by definition, such areas are at least 5 acres in size and 200 feet in width.*

#### **Standards**

- a. Primary environmental corridors shall be preserved in natural and open uses to the extent practical.
- b. Secondary environmental corridors and isolated natural resource areas should be preserved in essentially natural, open uses to the extent practicable, as determined in the Town Plan.

Uses considered being compatible with the preservation of environmental corridors and isolated natural resource areas are indicated in Table 13.

**Table 13**

**GUIDELINES FOR DEVELOPMENT CONSIDERED COMPATIBLE WITH ENVIRONMENTAL CORRIDORS**

Component Natural Resource and Related Features within Environmental Corridors <sup>a</sup>	Permitted Development															Rural Density Residential Development (see General Development Guidelines below)
	Transportation and Utility Facilities (see General Development Guidelines below)				Recreational Facilities (see General Development Guidelines below)											
	Streets and Highways	Utility Lines and Related Facilities	Engineered Stormwater Management Facilities	Engineered Flood Control Facilities <sup>b</sup>	Trails <sup>c</sup>	Picnic Areas	Family Camping <sup>d</sup>	Swimming Beaches	Boat Access	Ski Hills	Golf	Playfields	Hard-Surface Courts	Parking	Buildings	
Lakes, Rivers, and Streams ...	X <sup>e</sup>	X <sup>f,g</sup>	--	X <sup>h</sup>	X <sup>i</sup>	-	--	X	X	--	--	--	--	--	--	--
Shoreland .....	X <sup>p</sup>	X	X	X	X	X	--	X	X	--	X <sup>s</sup>	--	--	X <sup>p</sup>	X <sup>j</sup>	--
Floodplain .....	X <sup>k</sup>	X	--	X	X	X	--	X	X	--	X <sup>s</sup>	X	--	X <sup>p</sup>	X <sup>l</sup>	--
Wetland <sup>m</sup> .....	X <sup>k</sup>	X	--	--	X <sup>n</sup>	-	--	--	X	--	X <sup>o</sup>	--	--	--	--	--
Wet Soils .....	X <sup>p</sup>	X	X	X	X	-	--	X	X	--	X	--	--	X <sup>p</sup>	--	--
Woodland .....	X <sup>p</sup>	X <sup>p</sup>	X <sup>p</sup>	--	X	X	X	--	X	X	X <sup>p</sup>	X <sup>p</sup>	X <sup>p</sup>	X <sup>p</sup>	X <sup>p</sup>	X <sup>p</sup>
Steep Slope....	X <sup>p</sup>	X	--	--	X <sup>q</sup>	-	--	--	--	X <sup>r</sup>	X	--	--	--	--	--
Park .....	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	--
Historic Site ..	--	X <sup>g</sup>	--	--	X <sup>q</sup>	-	--	--	--	--	--	--	--	--	--	--
Scenic Viewpoint.....	X	X	--	--	X	X	X	--	X	X	X	--	--	X	X	X
Natural Area or Critical Species Habitat Site .....	--	--	--	--	X <sup>q</sup>	-	--	--	--	--	--	--	--	--	--	--

*NOTE: An "X" indicates that facility development is permitted within the specified natural resource feature. In those portions of the environmental corridors having more than 1 of the listed natural resource features, the natural resource feature with the most restrictive development limitation should take precedence.*



## GENERAL DEVELOPMENT GUIDELINES

- Transportation and Utility Facilities: All transportation and utility facilities proposed to be located within the important natural resources should be evaluated on a case-by-case basis to consider alternative locations for such facilities. If it is determined that such facilities should be located within sensitive natural resources, development activities should be sensitive to, and minimize disturbance of these resources, and to the extent possible following construction, such resources should be restored to preconstruction conditions.

The above table (Table 13) presents development guidelines for major transportation and utility facilities. These guidelines may be extended to other similar facilities not specifically listed in the table.

- Recreational Facilities: In general, no more than 20 % of the total environmental corridor area should be developed for recreational facilities. Furthermore, no more than 20 % of the environmental corridor area consisting of upland wildlife habitat and woodlands should be developed for recreational facilities. It is recognized, however, that in certain cases these percentages may be exceeded in efforts to accommodate needed public recreational and game and fish management facilities within appropriate natural settings.

The above table presents development guidelines for major recreational facilities. These guidelines may be extended to other similar facilities not specifically listed in the table.

- Residential Development: Limited residential development may be accommodated in upland environmental corridors, provided that buildings are kept off steep slopes. The maximum number of housing units accommodated at a proposed development site within the environmental corridor should be limited to the number determined by dividing the total corridor acreage within the site by 5, with only a limited portion of the site which is covered by surface water, floodplain and wetlands being counted in the total corridor acreage. The permitted housing units may be in single-family or multi-family structures. When rural residential development is accommodated, conservation subdivision designs are strongly encouraged to locate development outside the corridor while maintaining an overall development density of no more than 1 dwelling per 5 acres.

Single-family development on existing lots of record should be permitted as provided for under county or local zoning at the time of adoption of the land use plan.

### Footnotes to Table 13

<sup>a</sup>*The natural resource and related features are defined as follows:*

Lakes, Rivers, and Streams: Includes all lakes greater than 5 acres in area and all perennial and intermittent streams as shown on U. S. Geological Survey quadrangle maps.

Shoreland: Includes a band 50 feet in depth along both sides of intermittent streams; a band 75 feet in depth along both sides of perennial streams; a band 75 feet in depth around lakes.

Floodplain: Includes areas, excluding stream channels and lake beds, subject to inundation by the 100-year recurrence interval flood event.

Wetlands: Includes areas that are inundated or saturated by surface water or groundwater at a frequency, and with a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wet Soils: Includes areas covered by wet, poorly drained, and organic soils.

Woodlands: Includes areas 1 acre or more in size having 17 or more deciduous trees per acre with at least a 50 % canopy cover as well as coniferous tree plantations and reforestation projects, excludes lowland woodlands, such as tamarack swamps, which are classified as wetlands.

Wildlife Habitat: Includes areas devoted to natural open uses of a size and with a vegetative cover capable of supporting a balanced diversity of wildlife.

Steep Slope: Includes areas with land slopes of 12 % or greater.

Prairies: Includes open, generally treeless areas which are dominated by native grasses; also includes savannas.

Park: Includes public and nonpublic park and open space sites.

Historic Site: Includes sites listed on the National Register of Historic Places. Most historic sites located within environmental corridors are archeological features such as American Indian settlements and effigy mounds and cultural features such as small, old cemeteries. On a limited basis, small historic buildings may also be encompassed within delineated corridors.

Scenic Viewpoint: Includes vantage points from which a diversity of natural features such as surface waters, wetlands, woodlands, and agricultural lands can be observed.

Natural Area and Critical Species Habitat Sites: Includes natural areas and critical species habitat sites as identified in the regional natural areas and critical species habitat protection and management plan.

<sup>b</sup>Includes such improvements as stream channel modifications and such facilities as dams.

<sup>c</sup>Includes trails for such activities as hiking, bicycling, cross-country skiing, nature study, and horseback riding, and excludes all motorized trail activities. It should be recognized that trails for motorized activities such as snowmobiling that are located outside the environmental corridors may of necessity have to cross environmental corridor lands. Proposals for such crossings should be evaluated on a case-by-case basis, and if it is determined that they are necessary, such trail crossings should be designed to ensure minimum disturbance of the natural resources.

<sup>d</sup>Includes areas intended to accommodate camping in tents, trailers, or recreational vehicles, which remain at the site for short periods of time, typically ranging from an overnight stay to a 2-week stay.

<sup>e</sup>Certain transportation facilities such as bridges may be constructed over such resources.

<sup>f</sup>Utility facilities such as sanitary sewers may be located in or under such resources.

<sup>g</sup>Electric power transmission lines and similar lines may be suspended over such resources.

<sup>h</sup>Certain flood control facilities such as dams and channel modifications may need to be provided in such resources to reduce or eliminate flood damage to existing development.

<sup>i</sup>Bridges for trail facilities may be constructed over such resources.

<sup>j</sup>Consistent with Chapter NR 115 of the Wisconsin Administrative Code.

<sup>k</sup>Streets and highways may cross such resources. Where this occurs, there should be no net loss of flood storage capacity or wetlands. Guidelines for mitigation of impacts on wetlands by Wisconsin Department of Transportation facility projects are set forth in Chapter Trans 400 of the Wisconsin Administrative Code.

<sup>l</sup>Consistent with Chapter NR 116 of the Wisconsin Administrative Code.

<sup>m</sup>Any development affecting wetlands must adhere to the water quality standards for wetlands established under Chapter NR 103 of the Wisconsin Administrative Code.

<sup>n</sup>Only an appropriately designed boardwalk/trail should be permitted.

*o*Wetlands may be incorporated as part of a golf course, provided there is no disturbance of the wetlands.

*p*Only if no alternative is available.

*q*Only appropriately designed and located hiking and cross-country ski trails should be permitted.

*r*Only an appropriately designed, vegetated, and maintained ski hill should be permitted.

*s* Allow only if proper safeguards can be put into place to preserve the environmental characteristics.

Source: SEWRPC

## **Other Environmentally Sensitive Areas**

### **Principle**

Care in locating urban and rural development in relation to other environmentally sensitive areas can help to maintain the overall environmental quality of the Town and to avoid developmental problems.

### **Standards**

- a. All wetlands, woodlands, and prairies not identified as part of an environmental corridor or isolated natural resource area should be preserved to the extent practicable, as designated on the Town Plan.
- b. All natural areas and critical species habitat sites identified for preservation in the Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin SEWRPC Planning Report # 42 adopted by the Waukesha County Board on April 27, 1999 shall be preserved to the extent practical.
- c. One hundred year recurrence interval floodlands should not be allocated to any development, which would cause or be subject to flood damage; and only structures and those land uses specifically authorized and designed for that purpose (i.e., water- boat landings, trails, parks, athletic fields) shall be allowed to encroach upon and obstruct the flow of water in perennial stream channels and floodways.
- d. Urban and rural development should be directed away from areas, with steep slopes (12% or greater) or with seasonally high groundwater 1 foot or less from the surface.
- e. Land Use patterns should be designed to discourage development of below grade structures on soils with seasonally high groundwater less than 3 feet from the surface. The intent is to allow development on these marginal soils, providing below grade structures (including basements) maintain a minimum of 1 foot separation from the seasonally high groundwater level.

## **Restoration/Enhancement of Natural Conditions**

### **Principle**

The restoration of unused farmland and other open space land to more natural conditions, resulting in the re-establishment or enhancement of wetlands, woodlands, prairies, grasslands, and forest interiors, can increase biodiversity and contribute to the overall environmental quality of the Town by providing additional functional values as set forth in Objective No. 1 above.

### **Standard**

Carefully planned efforts to restore unused farmland and other open space land to more natural conditions should be encouraged.

## **Agricultural, Natural and Cultural Resources Objective No. 2**

### **The Preservation of Productive Agricultural Land.**

#### **Principle**

The preservation of productive agricultural land is important for meeting future needs for food and fiber. Agricultural areas, in addition to providing food and fiber, can provide wildlife habitat and contribute to the maintenance of an ecological balance between plants and animals. Moreover, the preservation of agricultural areas also contributes immeasurably to the maintenance of the scenic beauty and cultural heritage of the County. Maintaining agricultural lands near urban areas can facilitate desirable and efficient production-distribution relationships, including community-supported agriculture operations.

The preservation of agricultural lands can maximize return on investments in agricultural soil and water conservation practices, and minimize conflicts between farming operations and urban land uses.

#### **Standard**

Prime agricultural lands in the Town of Mukwonago includes those lands in agricultural use, unused/open lands, primary/secondary environmental corridor or isolated natural areas and within a 5 square mile contiguous area (including adjacent counties) that meet all of the following criteria: 1) is outside of any planned sewer service area boundary, 2) 75% is agricultural or open/unused land use, 3) 50% is Class I or Class II soils which meet Natural Resources Conservation Service standards and 4) 75% consists of land ownership parcels of 35 acres or more. This standard is a modification of the standard used to prepare the Development Plan for Waukesha County in 1996.

The standard in the 1997 Development Plan read “Prime agricultural lands in Waukesha County includes those lands in agricultural use which meet the following criteria: 1) the farm unit must be at least 35 acres in area, 2) at least 50 % of the farm unit must be covered by soils which meet Natural Resources Conservation Service standards for National prime farmland, and 3) the farm unit must be located within a block of farmland at least 5 square miles in size”. The definition

used in 1997 became difficult to map using land information system technology. As a result, the Agriculture, Natural and Cultural Resources Element Subcommittee of the Comprehensive Development Plan Advisory Committee at their August 3, 2005 meeting approved the modification of the standards used for the delineation of prime agricultural lands. The modified standards can be mapped using land information system technology. In general, the modified standards produced the same map results used in the 1997 Development Plan.

The standard utilized in the identification of prime agricultural lands in the design year 2010 regional land use plan, including the criterion indicating that the farm unit be located within a block of farmland at least 100 acres in size, and the criterion indicating that at least 50 % of the farm unit must be covered by Class I, Class II, or Class III soils was, to a large extent, based upon criteria utilized in the identification of farmland preservation areas in county farmland preservation plans completed within the Region in the early 1980s, including the Waukesha County Agricultural Land Preservation Plan. The 100-acre minimum combined farmland area was chosen for such plans because it was consistent with the State's minimum acreage planning criterion for farmland preservation areas under Wisconsin's Farmland Preservation Program. This relatively small area would enable the largest number of farmers to qualify for tax credits under the State Farmland Preservation Program.

While the recognition in a land use plan of smaller blocks of farmland may enable a larger number of farmers to qualify for tax credits, the maintenance of long-term agricultural use within such smaller blocks in an urbanizing region such as Southeastern Wisconsin has proven to be very difficult. Among those reasons frequently cited to explain that difficulty is the following:

1. Relatively large blocks of farmland are necessary to support such agriculture-related businesses as distributors of farm machinery and parts and farm supplies. Scattered, relatively smaller blocks of farmland do not provide the critical mass necessary for such agribusiness support enterprises. Consequently, farmers remaining in such smaller blocks must travel ever increasing distances for support services.
2. In many cases, smaller blocks of farmland are merely remnants of formerly larger blocks which have been subject to intrusion by urban residential development. This intrusion has resulted in significant urban-rural conflicts, including problems associated with the objection by residents of urban-type land subdivision developments to odors associated with farming operations, to the use of fertilizers, herbicides and pesticides, and other agriculturally related chemicals, to the noise associated with the operation of farm machinery during the early and late hours of the day and to the movement of large farm machinery on rural roads being used increasingly for urban commuting.
3. For most farming enterprises, the economies of scale require relatively large tracts of land, frequently involving many hundreds of acres. The breakup of large blocks of farmland by urban intrusion makes it more difficult for farmers to assemble such larger tracts either through ownership or rental arrangements. Tract assembly is thus complicated by scattered field locations, resulting in costly and inconvenient related travel distances and, therefore, in unproductive time and higher fuel consumption.
4. In agricultural communities on the fringe of urbanizing areas, there is often a declining interest among the next generation of farmers to continue farm operations. This is particu-

larly true where alternative land uses are perceived to be available. This phenomenon is reinforced by the rigors of day-to-day farm life when compared with urban lifestyles.

The criterion specifying that prime agricultural lands include those areas where 50 % or more of the farm unit is covered by soils meeting U. S. Natural Resources Conservation Service standards for National prime farmland or farmland of statewide importance was valid when the first county farmland preservation plans were prepared in the early 1980's. Inclusion of soils of statewide importance, or Class III soils, in the standard was appropriate even though such soils may have had marginal crop production value because a high proportion of the farms within the County then were dairy operations. Dairy operations can be viable even though a relatively large portion of the farm unit may be covered by Class III soils because such soils are suitable for grazing, production of animal feed crops, and the use of cover crops related to the dairy operations. However, increased specialization of farm operations, and loss of smaller "family" farms and dairy farms in Waukesha County has now raised questions concerning continued utilization of farmland of statewide importance, or Class III soils, as a criterion in the identification of prime agricultural lands within Waukesha County.

Local public officials, farmers, landowners, and soil scientists stated, at meetings held to review the preliminary 1997 Development Plan for Waukesha County land use plan, that lands covered by Class III soils should not be considered as prime farmland. It was noted that such soils in Waukesha County, being excessively wet, droughty or steep, rendering them unsuitable for the production of cash grain crops such as corn or soybeans. Because Class III soils are not as well-suited for intensive cash grain farming as Class I and II soils, and because of the significant loss of dairy farm operations within Waukesha County over the past 3 decades, lands covered by Class III soils no longer have the same inherent value as an agricultural resource as when dairy farms were prevalent. The criterion for the 5 square mile farmland block size is not a new criterion. Indeed, the Southeastern Wisconsin Regional Planning Commission (SEWRPC) utilized the 5-square-mile-block criterion in the identification of prime agricultural land under the first-generation, design year 1990, regional land use plan adopted by the Commission in 1996. This criterion was established with direct input from, and utilizing the collective judgment of, University of Wisconsin-Extension agricultural agents working in the Region at that time.

As a practical matter, the application of the "block" standard would involve the delineation of gross areas of at least 5 square miles containing concentrations of farmland meeting the 3 criteria cited above. At least 75% of the gross area should be comprised of such farmland or of environmental corridor lands that occur within the blocks of such farmland.

In 2005, the Agriculture, Natural and Cultural Resources Subcommittee of the Comprehensive Development Plan Advisory Committee reaffirmed the concerns over the inclusion of Class III soils and using a farmland block size smaller than 5 square miles in the standards for prime agricultural lands.

The Town Board and Plan Commission discussed as an alternative to the large blocks of agricultural lands that sustainable agriculture should be encouraged on smaller areas for truck farming or small specialty type farming operations. These areas could include open space areas in planned unit developments and conservation design developments.

*Notes: National prime farmland consists of agricultural lands covered by U. S. Natural Resources Conservation Service-designated Class I and Class II soils. Class I soils are deep, well drained, and moderately well drained, nearly level soils with no serious limitation that restrict their use for cultivated crops. Class II soils are generally deep and well drained but may have some limitations that reduce the choice of plants that can be economically produced or require some conservation practices.*

*Farmland of Statewide importance consists of agricultural lands covered by U. S. Natural Resources Conservation Service-designated Class III soils. Class III soils have moderate limitations due to wetness, steepness or drought conditions that restrict the choice of plants or require special conservation practices or both.*

### **Agricultural, Natural and Cultural Resources Objective No. 3**

The preservation and provision of open space to enhance the total quality of the Town environment, maximize essential natural resource availability, give form and structure to urban development, and provide opportunities for a full range of outdoor recreational activities.

#### **Principle**

Open space is the fundamental element required for the preservation and sustainable use of such natural resources as soil, water, woodlands, wetlands, native vegetation, and wildlife, it provides the opportunity to add to the physical, intellectual, and spiritual growth of the population, it enhances the economic and aesthetic value of certain types of development and it is essential to outdoor recreational pursuits.

#### **Standards**

- a. Major park and recreation sites providing opportunities for a variety of natural resource-oriented, self-actualized outdoor recreational activities should be provided by the County within a 4-mile service radius of every dwelling unit in the County and should have a minimum gross site area of 250 acres. Examples of such uses include: camp site, swimming beach, picnic area, golf course, ski hill, hiking and cross country ski trails, horseback riding, boat launch, nature study area, and play field area.
- b. The Town of Mukwonago will provide 1 large park complex in the central portion of the Town adjacent to the Town Hall by combining and expanding the existing park facilities east and west of Beulah Road. It is the intent of the Town to acquire portions of the Swan Property through the development process either as a planned unit or conservation design development. Additionally the Town has other park facilities and open space areas which have been dedicated to the Town through the development process prior to the adoption of the Town Park Plan. It is not the intension of the Town to develop these areas as active recreational areas or obtain addition lands not designated on the Town Park Plan.
- c. The Town of Mukwonago intends to provide outdoor recreation facilities to afford the resident population of the opportunities to participate in intensive non-resource-oriented

outdoor recreation activities. These types of facilities are activity specific such as tennis, baseball, basketball, soccer and playgrounds.

- d. Areas having unique scientific, cultural, scenic, or educational value should not be allocated to any urban or agricultural land uses, adjacent surrounding areas should be retained in open space use, such as agricultural or limited recreational uses.
- e. The County should acquire or otherwise protect land and establish Greenways along the following major streams; the Fox River and Mukwonago River. For the purposes of this plan, greenways are located along a stream or river and are intended to provide aesthetic and natural resource continuity and often serve as ideal locations for trail facilities.
- f. The Town will continue to encourage development of play areas, walking trails, tot lots and other private recreational facilities in the open space areas of planned unit developments and conservation design developments which are to be owned and maintained by the homeowners in each particular development.

#### **Agricultural, Natural and Cultural Resources Objective No. 4**

A spatial distribution of land uses and specific site development designs which protects or enhances the surface and ground water resources of the Town.

#### **Principle**

Information regarding existing and potential surface and ground water quality conditions is essential to any comprehensive land use and natural resource planning program. The existing quality condition of the surface and ground water resource provides important baseline data. The potential condition becomes the goal upon which planners and resource managers target their land use efforts.

#### **Standards**

- a. Potentially contaminating land uses should not be located in areas where the potential for groundwater contamination is the highest.
- b. Storm water management planning should seek to meet the potential biological use objectives of the streams in the Town.

*Notes: The Wisconsin Department of Natural Resources (DNR) is required, under Wisconsin Statutes and the State Water Resources Act of 1965, to establish a set of water use objectives and supporting water quality standards applicable to all surface waters of the state. The type of aquatic community a particular surface water resource is capable of supporting is represented by the biological use objectives. The potential biological use of streams indicates the biological use or trout stream class a stream could achieve if it was well managed and pollution sources were controlled.*

*The Wisconsin Department of Natural Resources (DNR) has established Administrative Code NR 140 to establish groundwater quality standards for substances detected in or having a*



*reasonable probability of entering the groundwater resources of the state, to specify scientifically valid procedures for determining if a numerical standard has been attained or exceeded, to specify procedures for establishing points of standards application, and for evaluating groundwater monitoring data, to establish ranges of responses the department may require if a groundwater standard is attained or exceeded and to provide for exemptions for facilities, practices and activities regulated by the department.*

### **Principle**

Information regarding existing ground water quantity conditions is essential to any comprehensive land use and natural resource planning program. The studying and documenting of the existing condition of ground water quantity provides important baseline data. Potential ground water quantity conditions provide important data upon which planners, municipal officials and resource managers can make comprehensive development planning decisions.

### **Standards**

- a. Land use development patterns and practices should be designed to preserve important groundwater recharge areas and should support maintaining or enhancing the natural surface and groundwater hydrology to the extent practicable.
- b. Storm water management planning should seek to encourage or enhance to the extent practicable ground water recharge to maintain the natural groundwater hydrology.

*Notes: As of the writing of this Plan, the Southeastern Wisconsin Regional Planning Commission (SEWRPC) is engaged in the preparation of a Regional Water Supply Plan. The recommendations contained in the plan will be incorporated into future amendments to this Comprehensive Development Plan for Waukesha County.*

### **Agricultural, Natural and Cultural Resources Objective No. 5**

A spatial distribution of the various land uses which maintains biodiversity and clean air and will result in the protection and wise use of the natural resources of the Town including its soils, nonmetallic minerals, inland lakes and streams, groundwater, wetlands, woodlands, prairies, and wildlife.

### **Principle**

The proper allocation of uses to land can assist in maintaining an ecological balance between the activities of man and the natural environment.

### **Soils**

### **Principle**

The proper relation of urban and rural land use development to soil types and distribution can serve to avoid many environmental problems, aid in the establishment of better regional settlement patterns, and promote the wise use of an irreplaceable resource.

## **Standards**

- a. Sewered urban development, particularly for residential use, should not be located in areas covered by soils identified in the detailed operational soil survey as having severe limitations for such development.
- b. Unsewered suburban residential development should not be located in areas covered by soils identified in the detailed operational soil survey as unsuitable for such development.
- c. Rural development, including agricultural and rural residential development, should not be located in areas covered by soils identified in the detailed operational soil survey as unsuitable for such uses.
- d. Urban and rural development should be directed away from areas, with steep slopes (12% or greater) or with seasonally high groundwater 1 foot or less from the surface.
- e. Land use patterns should be designed to discourage development of below grade structures on soils with seasonally high groundwater less than 3 feet from the surface. The intent is to allow development on these marginal soils, providing below grade structures (including basements) maintain a minimum of 1 foot separation from the seasonally high groundwater level.

## **Nonmetallic Minerals**

### **Principle**

All minerals, including sand and gravel, dimensional building stone and organic materials, have significant commercial value and are an important economical supply of the construction materials needed for the continued development of Waukesha County and the Region and for the maintenance of the existing infrastructure. Urban development of lands overlying these resources and urban development located in close proximity to these resources may make it impossible to economically utilize these resources in the future and thus may result in shortages and concomitant increases in the costs of those materials, which would ultimately be reflected in both consumer prices and in the community tax structure. Existing rural development in the Town of Mukwonago in close proximity to these resources may also make it impossible to economically utilize these resources in the future.

### **Standard**

Consideration for short term mining projects for public improvement projects will be allowed with approval of the Town Board where the resource is available in close proximity to the project in order to eliminate unnecessary trucking costs which are paid for by the general public.

## **Clean Air**

## **Principle**

Air is a particularly important determinant of the quality of the environment for life, providing the vital blend of oxygen and other gases needed to support healthy plant and animal life. Air, however, contains pollutants contributed by both natural and human sources which may be harmful to plant and animal life that may injure or destroy such life, and that may severely damage personal and real property.

## **Standards**

Encourage protection of existing woodlands, wetlands, and prairies to enhance atmospheric oxygen supply levels.

## **Land Use Development Objective No. 1**

A balanced allocation of space to the various land use categories which meets the social, physical, and economic needs of the Town population.

## **Principle**

The only planned urban land use within the Town is around the Phantom Lakes and within the planned sewer service area.

## **Land Use Development Objective No. 2**

The various land uses shall be convenient and compatible.

## **Principle**

The proper allocation of uses to land can avoid or minimize hazards and dangers to health, safety, and welfare and maximize amenity and convenience in terms of accessibility to supporting land uses.

## **Standards**

Rural residential development should be located in such a way as to minimize conflicts attendant to dust, odors, and noise associated with farming activity that may arise when residences are located in the vicinity of agricultural operations. Rural residential development should also be located in such a way as to minimize impacts on the natural resource base including wildlife habitat.

## **Land Use Development Objective No. 3**

The various land uses should be distributed so they are properly related to the supporting transportation, utility and public facility systems in order to assure the economical provision of transportation, utility and public facility services.

## **Principle**

The transportation and public utility facilities and the land use pattern which these facilities serve and support are mutually interdependent, in that the land use pattern determines the demand for, loading upon transportation and utility facilities. These facilities, in turn, are essential to, and form a basic framework for land use development.

## **Standards**

- a. Development should be located and designed so as to maximize the use of existing transportation and utility systems.
- b. The transportation system should be located and designed to serve not only all land presently devoted to development but to land planned to be used for such development.
- c. Land developed or planned to be developed for urban type residential use should be located in areas serviceable by an existing or planned public sanitary sewerage system.
- d. In the absence of public sanitary sewer service, onsite sewage disposal systems should be utilized only in accordance with the following:
  1. Onsite soil absorption sewage disposal systems should be sited and designed in accordance with Chapter Comm. 83 of the Wisconsin Administrative Code.
  2. The use of onsite sewage disposal systems should be limited to the following types of development:
    - Rural density residential development.
    - Sub-urban density residential development as planned unit or conservation design developments.
  3. New urban development served by onsite sewage disposal systems in areas planned to receive sanitary sewer service is not allowed.

## **Land Use Development Objective No. 4**

The development and preservation of residential areas within a physical environment that is healthy, safe, convenient, and attractive.

## **Principle**

Residential development in the form of planned residential neighborhoods can provide a desirable environment for families as well as other household types, can provide efficiency in the provision of neighborhood services and facilities and can foster safety and convenience.

## **Standards**

- a. Urban high-, medium-, and low-density residential neighborhoods should be designed as cohesive units properly related to the larger community of which they are a part. Such neighborhoods should be physically self-contained within clearly defined and relatively permanent recognizable boundaries, such as arterial streets and highways, major park and open space reservations, or significant natural features, such as rivers, streams, or hills. Desirably, the neighborhoods should contain enough area to provide the following: housing for the population served by 1 elementary school and 1 neighborhood park, an interconnected internal street, bicycle-way, and pedestrian system which provides multiple opportunities for access and circulation, and those community and commercial facilities necessary to meet the day-to-day living requirements.

**Table 14**

**PERCENT OF AREA IN LAND DEVELOPMENT CATEGORY**

Land use Category	Rural Residential 5 Acre Density	Agricultural Residential 3.2 Acre Density	Suburban Density II 3 Acre	Low Density 1 Acre Density	Medium Density 30,000 sq ft Density
Residential					
Conventional	88%	NA	83%	81%	77%
P.U.D	58%	58%	58%	56%	56%
Conservation Design	52%	52%	46%	49%	49%
Park & Open Space					
Conventional	0%	NA	0%	0%	0%
P.U.D.	30%	30%	30%	30%	30%
Conservation Design	40%	40%	40%	40%	40%
Streets					
Conventional	12%	NA	17%	19%	23%
P.U.D	10%	12%	12%	14%	14%
Conservation Design	08%	08%	14%	11%	11%

Density based upon Planned Unit Development and Conservation Design Conditional Use Standards of 130,680 sq. ft. per unit in R-1 and R-2 and 1 acre in R-1 and R-2 respectively.

Areas of development based upon .23 acres for streets on 1 acre and 30,000 sq. ft. lots, .3 acres for streets on 1.5-acre lots, .6 acres for streets on acre lots and .7 acres for streets on 5-acre lots consistent with Table 139 in the Waukesha County Development Plan

- b. Where appropriate, residential neighborhoods should accommodate a mix of housing sizes, structure types, and lot sizes, resulting in an overall density that is within the planned density range for each neighborhood.
- c. Conservation subdivision design concepts should be incorporated in all land use categories, as appropriate.
- d. To the extent practicable, efforts directed at the conservation and renewal of existing residential areas should be undertaken on a neighborhood basis and should seek to preserve those cultural features which contribute to the promotion of neighborhood identity.

### **Principle**

Residential development in a rural setting can provide a desirable environment for households seeking proximity to open space.

### **Standards**

- a. The Town's Plan to seek and maintain the rural character of lands located outside planned urban service areas.
- b. Continued agricultural and other open space uses are encouraged in such areas.
- c. Where residential development is to be accommodated, the overall density of the Town shall be no more than 1 dwelling unit per 5 acres with a 3.2 density in individual developments. The use of residential cluster designs, with homes developed in clusters surrounded by agriculture or other open space sufficient to maintain the maximum recommended density.
- d. A development density of no more than 1 home per 3.2 acres in rural areas is recommended to help accomplish the following:
  - Minimize traffic volumes on rural highways and the need to widen highways beyond 2 lanes.
  - Preserve natural drainage systems insofar as possible and minimize drainage problems and the need for storm water management facilities.
  - Preserve open space and rural character, especially through the use of cluster design, to accommodate residential development while avoiding "wall to wall" residential subdivisions.
  - Sustain development served by onsite sewage treatment systems and wells.
  - Minimize the risks to the groundwater supply which the widespread use of onsite wells at higher densities may pose in the long term.
  - Preserve, through careful design, the overall integrity of the rural landscape, including environmental corridors and wildlife habitat areas.
  - Minimize the loss of farmland covered by agricultural soil suitability Class I and Class II soils.

### **Land Use Development Objective No. 5**

Limited commercial type uses may be considered as Conditional Uses.

#### **Principle**

These limited commercial type Conditional Uses require areas and locations suitable to their purposes.

#### **Standards**

- a. Limited type Commercial Conditional Uses should meet the following standards:
  1. Available adequate water supply, sanitary sewer service or soils suitable for an in ground septic system, storm water management facilities, and power supply.
  2. Ready access to the arterial street and highway system.
  3. Adequate on-street and off-street parking and loading areas.
  4. Provision of properly located points of ingress and egress appropriately controlled to prevent congestion on adjacent arterial streets.
  5. Site design appropriately integrating the site with adjacent land uses.
  6. The uses may be allowed by Conditional Use permits, where it is determined that the use is compatible with the adjacent residential and agricultural uses.

### **Land Use Development Objective No. 6**

The renewal and upgrading of existing nonconforming structures and uses in the area near Phantom Lake within the Village of Mukwonago sewer service area.

#### **Principle**

Such effort, along with infill development on vacant land within the sewer service area, serves to maximize the use of public infrastructure and public service systems.

#### **Standards**

- a. Existing urban uses with the sewer service area should be updated and renewed, as appropriate.
- b. Infill of undeveloped lands within the urban areas.

### **Transportation Objective No. 1**

A multi-modal transportation system which, through its location, capacity, and design, will effectively serve the existing Town and County land use pattern and promote the implementation of the regional land use plan and the County comprehensive development plan, meeting and managing the anticipated travel demand generated by the existing and proposed land uses.



## **Principle**

An integrated multi-modal regional transportation system connects major land use activities within the Town and County, providing the accessibility essential to the support of these activities. The transportation system should provide higher accessibility to areas recommended for development and redevelopment, and lower accessibility to areas not recommended for development.

## **Standards**

1. The transportation system should be consistent with and serve to support, and promote the implementation of the Town and County Land Use Plans.
2. Higher relative transportation accessibility should be provided to areas recommended for development than to areas not recommended for development.
3. Improvements in accessibility should be provided to areas recommended for development rather than to areas not recommended for development.

## **Transportation Objective No. 2**

A multi-modal transportation system, which provides appropriate types of transportation needed by all residents of the Town, at an adequate level of service, provides choices, among transportation modes and provides inter-modal connectivity.

## **Principle**

A transportation system is necessary to provide transportation service to all segments of the population and to support and enhance the economy and quality of life.

## **Standards**

### **a. Street and Highways System**

1. Highways should be provided in the County in each direction in urban high-density areas, at intervals of no more than 1 mile in each direction in urban medium-density areas, and at intervals of no more than 2 miles in each direction in urban low-density and suburban-density areas.
2. In rural areas, arterials should be provided at intervals of no less than 2 miles in each direction.
3. Arterial street and highway facilities should be provided with adequate traffic-carrying capacity to minimize traffic congestion and in accordance with the Tables contained on page 248 of the Southeastern Wisconsin Regional Transportation Plan for 2035.

b. Bicycle and Pedestrian Facilities

1. All County Trunk Highways (including their bridge and underpass facilities) should provide accommodation for bicyclists upon construction or reconstruction, when resurfaced.
2. Off-street bicycle paths should be provided in accordance with the recommendations set forth in the adopted County Park and open space plans. These off-street bicycle paths should provide reasonably direct connections between residential on safe and aesthetically attractive routes with separation from motor vehicle traffic.

**Community Facilities Objective No. 1**

To provide police, fire and other emergency service facilities necessary to maintain high-quality and cost effective protection throughout the Town.

**Principle**

The adequacy of police, fire and other emergency protection in the Town is dependent upon the relationship between the distribution of land uses and the location of facilities available to serve those uses.

**Standard**

The future placement and current use of emergency service facilities needs to be coordinated to optimize emergency response times and to eliminate overlap of service areas and equipment.

**Housing Objective No. 1**

To provide for an adequate stock of decent, safe, and sanitary housing to meet the Town's total housing requirement. The requirement should meet the market demand and the needs for the different types of housing.

**Principle**

Increases in the total number of households within the Town, are a result of new household formations and net in-migration of additional households, as well as changing size and composition of existing households.

**Standards**

- a. The supply of vacant and available housing units should be sufficient to maintain and facilitate ready housing consumer turnover. The creation of new residential lots shall be controlled by an allotment system, so that lots are not created which exceed the projected growth of the Town.
- b. The supply of sound housing units should be provided through the working of the private housing sector to the maximum extent possible with use of the residential permit system, with continued assistance from governmental agencies as necessary.