

Credit: SEWRPC Staff

2.1 INTRODUCTION

Information regarding existing conditions and historic trends with respect to the demographic and economic base, natural environment, and built environment is essential to land use and transportation planning. The Commission has developed an extensive database pertaining to these and other aspects of the Region that is updated periodically. A major inventory update effort was conducted in the early 2010s in support of preparing the new regional land use and transportation plan and other elements of the comprehensive plan for the Region. This chapter presents a summary of the results of that inventory update pertaining to the population, economy, land use, sanitary sewer and water supply services, natural resource base, agricultural resource base, and existing planning framework within the Region. Transportation-related inventory data are presented in Chapters 4 and 5 of this volume.

2.2 DEMOGRAPHIC AND ECONOMIC BASE

Population

The Commission conducted a detailed inventory and analysis of the regional population following the release of the 2010 Federal Census. A summary of population trends is presented in this section. Detailed findings are presented in SEWRPC Technical Report No. 11 (5th Edition), *The Population of Southeastern Wisconsin*, dated April 2013.

Historic Trends and Distribution Among Counties

Table 2.1 shows population trends in the Region relative to the State and Nation. The population of the Region in 2010 was 2,020,000 people, which is an increase of 4.6 percent (88,800 people) over the 2000 population of 1,931,200 people. This was less than the 6.7 percent increase in regional population that occurred during the 1990s, but greater than the increases that occurred during the 1970s and 1980s.

The population of the Region was 2,020,000 people in 2010. That's an increase of 88,800 people from the year 2000.

Table 2.1Population in the Region, Wisconsin, and the United States: 1950-2010

| | R | egion Populatio | n | Wi | sconsin Populati | on | Region | |
|------|-----------|---------------------------------|---------|-----------|-------------------|----------------------------|--------------|--|
| | | Change from Preceding Census | | | Chang Precedin | Population as a Percent | | |
| Year | Number | Absolute | Percent | Number | Absolute | Percent | of Wisconsin | |
| 1950 | 1,240,618 | | | 3,434,575 | | | 36.1 | |
| 1960 | 1,573,614 | 332,996 | 26.8 | 3,951,777 | 517,202 | 15.1 | 39.8 | |
| 1970 | 1,756,083 | 182,469 | 11.6 | 4,417,821 | 466,044 | 11.8 | 39.7 | |
| 1980 | 1,764,796 | 8,713 | 0.5 | 4,705,642 | 287,821 | 6.5 | 37.5 | |
| 1990 | 1,810,364 | 45,568 | 2.6 | 4,891,769 | 186,127 | 4.0 | 37.0 | |
| 2000 | 1,931,165 | 120,801 | 6.7 | 5,363,675 | 471,906 | 9.6 | 36.0 | |
| 2010 | 2,019,970 | 88,805 | 4.6 | 5,686,986 | 323,311 | 6.0 | 35.5 | |

| | R | egion Populatio | n | Unit | ed States Populat | tion | Region |
|------|-----------|---------------------------------|---------|-------------|---------------------|-------------------------------|-------------------|
| | | Change from Preceding Census | | | Change Preceding | Population as a Percent of | |
| Year | Number | Absolute | Percent | Number | Absolute | Percent | the United States |
| 1950 | 1,240,618 | | | 151,325,798 | | | 0.82 |
| 1960 | 1,573,614 | 332,996 | 26.8 | 179,323,175 | 27,997,377 | 18.5 | 0.88 |
| 1970 | 1,756,083 | 182,469 | 11.6 | 203,302,031 | 23,978,856 | 13.4 | 0.86 |
| 1980 | 1,764,796 | 8,713 | 0.5 | 226,504,825 | 23,202,794 | 11.4 | 0.78 |
| 1990 | 1,810,364 | 45,568 | 2.6 | 249,632,692 | 23,127,867 | 10.2 | 0.73 |
| 2000 | 1,931,165 | 120,801 | 6.7 | 281,421,906 | 31,789,214 | 12.7 | 0.69 |
| 2010 | 2,019,970 | 88,805 | 4.6 | 308,745,538 | 27,323,632 | 9.7 | 0.65 |

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

In relative terms, the Region's population grew at a somewhat slower rate than the State (6.0 percent) and Nation (9.7 percent) between 2000 and 2010. As a result, the Region's share of Wisconsin's population declined slightly from 36.0 percent to 35.5 percent, with the Region's share of the national population also declining. Table 2.1 shows the Region's share of the State and national population has been gradually declining since 1960.

Table 2.2 and Figure 2.1 show 2010 population and population trends between 1950 and 2010 by county in the Region. All seven counties in the Region experienced population growth in the 2000s, including Milwaukee County after three decades of decline. Population growth between 2000 and 2010 by county includes:

- Kenosha County: 16,800 people, or 11.3 percent
- Milwaukee County: 7,600 people, or 0.8 percent
- Ozaukee County: 4,100 people, or 5.0 percent
- Racine County: 6,600 people, or 3.5 percent
- Walworth County: 10,200 people, or 11.1 percent
- Washington County: 14,400 people, or 12.2 percent
- Waukesha County: 29,100 people, or 8.1 percent

Although Milwaukee County gained population during the 2000s, its share of the regional population decreased by about 2 percent. The share of each

All seven counties in the Region experienced population growth in the 2000s, including Milwaukee County, which had previously experienced three decades of decline.

Table 2.2Population in the Region by County: 1950-2010

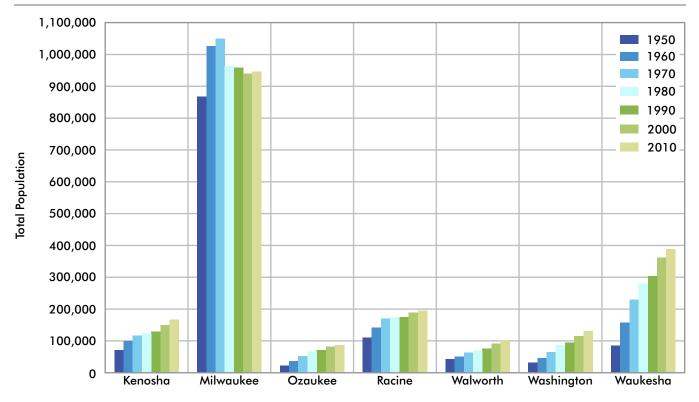
| | | Kenosha Cou | nty Populatio | n | | Milwaukee Co | unty Populatio | on |
|------|---------|--------------|---------------|---------------------|-------------|---------------|----------------|--------------|
| | | Chang | | | | Chang | | |
| | | Preceding | g Census | Percent of | | Preceding | g Census | Percent of |
| Year | Number | Absolute | Percent | Region Total | Number | Absolute | Percent | Region Total |
| 1950 | 75,238 | | | 6.1 | 871,047 | | | 70.2 |
| 1960 | 100,615 | 25,377 | 33.7 | 6.4 | 1,036,041 | 164,994 | 18.9 | 65.8 |
| 1970 | 117,917 | 17,302 | 17.2 | 6.7 | 1,054,249 | 18,208 | 1.8 | 60.0 |
| 1980 | 123,137 | 5,220 | 4.4 | 7.0 | 964,988 | -89,261 | -8.5 | 54.7 |
| 1990 | 128,181 | 5,044 | 4.1 | 7.1 | 959,275 | -5,713 | -0.6 | 53.0 |
| 2000 | 149,577 | 21,396 | 16.7 | 7.7 | 940,164 | -19,111 | -2.0 | 48.7 |
| 2010 | 166,426 | 16,849 | 11.3 | 8.2 | 947,735 | 7,571 | 0.8 | 46.9 |
| | | Ozaukee Cou | nty Populatio | 'n | | Racine Coun | ty Population | |
| | | Chang | | | | Chang | <i>i i</i> | |
| | | Preceding | g Census | Percent of | | Preceding | g Census | Percent of |
| Year | Number | Absolute | Percent | Region Total | Number | Absolute | Percent | Region Total |
| 1950 | 23,361 | | | 1.9 | 109,585 | | | 8.8 |
| 1960 | 38,441 | 15,080 | 64.6 | 2.5 | 141,781 | 32,196 | 29.4 | 9.0 |
| 1970 | 54,461 | 16,020 | 41.7 | 3.1 | 170,838 | 29,057 | 20.5 | 9.7 |
| 1980 | 66,981 | 12,520 | 23.0 | 3.8 | 173,132 | 2,294 | 1.3 | 9.8 |
| 1990 | 72,831 | 5,850 | 8.7 | 4.0 | 175,034 | 1,902 | 1.1 | 9.7 |
| 2000 | 82,317 | 9,486 | 13.0 | 4.2 | 188,831 | 13,797 | 7.9 | 9.8 |
| 2010 | 86,395 | 4,078 | 5.0 | 4.3 | 195,408 | 6,577 | 3.5 | 9.7 |
| | | Walworth Cou | nty Populatio | on . | | Washington Co | unty Populati | on |
| | | Change from | | | Change from | | e from | |
| | | Preceding | g Census | Percent of | | Preceding | g Census | Percent of |
| Year | Number | Absolute | Percent | Region Total | Number | Absolute | Percent | Region Total |
| 1950 | 41,584 | | | 3.4 | 33,902 | | | 2.7 |
| 1960 | 52,368 | 10,784 | 25.9 | 3.3 | 46,119 | 12,217 | 36.0 | 2.9 |
| 1970 | 63,444 | 11,076 | 21.2 | 3.6 | 63,839 | 17,720 | 38.4 | 3.7 |
| 1980 | 71,507 | 8,063 | 12.7 | 4.0 | 84,848 | 21,009 | 32.9 | 4.8 |
| 1990 | 75,000 | 3,493 | 4.9 | 4.1 | 95,328 | 10,480 | 12.4 | 5.3 |
| 2000 | 92,013 | 17,013 | 22.7 | 4.8 | 117,496 | 22,168 | 23.3 | 6.1 |
| 2010 | 102,228 | 10,215 | 11.1 | 5.1 | 131,887 | 14,391 | 12.2 | 6.5 |
| | | Waukesha Cou | unty Populati | on | | Region P | opulation | |
| | | Chang | e from | | | Chang | e from | |
| | | Preceding | g Census | Percent of | | Preceding | g Census | Percent of |
| Year | Number | Absolute | Percent | Region Total | Number | Absolute | Percent | Region Total |
| 1950 | 85,901 | | | 6.9 | 1,240,618 | | | 100.0 |
| 1960 | 158,249 | 72,348 | 84.2 | 10.1 | 1,573,614 | 332,996 | 26.8 | 100.0 |
| 1970 | 231,335 | 73,086 | 46.2 | 13.2 | 1,756,083 | 182,469 | 11.6 | 100.0 |
| 1980 | 280,203 | 48,868 | 21.1 | 15.9 | 1,764,796 | 8,713 | 0.5 | 100.0 |
| 1990 | 304,715 | 24,512 | 8.7 | 16.8 | 1,810,364 | 45,568 | 2.6 | 100.0 |
| 2000 | 360,767 | 56,052 | 18.4 | 18.7 | 1,931,165 | 120,801 | 6.7 | 100.0 |
| | 389,891 | 29,124 | 8.1 | 19.3 | 2,019,970 | | | 1 |

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

of the other six counties in the Region remained about the same or increased slightly. Figure 2.2 shows that the most notable change in the distribution over the last 60 years has been the increase in Waukesha County's share of the regional population from 7 percent to 19 percent, and the decrease in Milwaukee County's share from 70 percent to 47 percent.

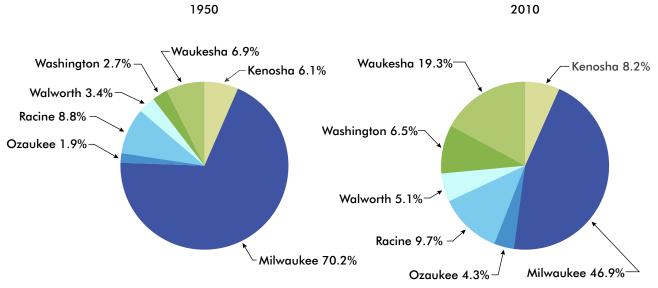
Current and historic population levels for cities, villages, and towns in the Region are set forth in Appendix A of SEWRPC Technical Report No. 11. Year 2010 data for the four largest cities in the Region and the remainder of their respective counties are presented in Table 2.3. These include the Cities of Milwaukee, Kenosha, Racine, and Waukesha. The table shows the City of Milwaukee's share of the regional population has decreased substantially Waukesha County's share of the regional population has increased from 7% to 19% over the last 60 years.

Figure 2.1 Population in the Region by County: 1950-2010



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

Figure 2.2 Share of Regional Population by County: 1950 and 2010



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

Table 2.3Population in the Region by Area: 1950-2010

| | | City of Milwauk | | on | Remainder of Milwaukee County Population | | | | |
|----------------------|------------------|------------------------|--------------|--------------|--|------------------|--------------|--------------|--|
| | | Change | | | | Change | | | |
| | | Preceding | Census | Percent of | | Preceding | Census | Percent of | |
| Year | Number | Absolute | Percent | Region Total | Number | Absolute | Percent | Region Total | |
| 1950 | 637,392 | | | 51.4 | 233,655 | | | 18.8 | |
| 1960 | 741,324 | 103,932 | 16.3 | 47.1 | 294,717 | 61,062 | 26.1 | 18.7 | |
| 1970 | 717,372 | -23,952 | -3.2 | 40.9 | 336,877 | 42,160 | 14.3 | 19.2 | |
| 1980 | 636,295 | -81,077 | -11.3 | 36.1 | 328,693 | -8,184 | -2.4 | 18.6 | |
| 1990 | 628,088 | -8,207 | -1.3 | 34.7 | 331,187 | 2,494 | 0.8 | 18.3 | |
| 2000 | 596,974 | -31,114 | -5.0 | 30.9 | 343,190 | 12,003 | 3.6 | 17.8 | |
| 2010 | 594,833 | -2,141 | -0.4 | 29.4 | 352,902 | 9,712 | 2.8 | 17.5 | |
| | | City of Kenos | na Populatio | n | Rema | inder of Kenos | pulation | | |
| | | Change | | | | Change | | • | |
| | | Preceding | Census | Percent of | | Preceding | Census | Percent of | |
| Year | Number | Absolute | Percent | Region Total | Number | Absolute | Percent | Region Total | |
| 1950 | 54,368 | | | 4.4 | 20,870 | | | 1.7 | |
| 1960 | 67,899 | 13,531 | 24.9 | 4.3 | 32,716 | 11,846 | 56.8 | 2.1 | |
| 1970 | 78,805 | 10,906 | 16.1 | 4.5 | 39,112 | 6,396 | 19.6 | 2.2 | |
| 1980 | 77,685 | -1,120 | -1.4 | 4.4 | 45,452 | 6,340 | 16.2 | 2.6 | |
| 1990 | 80,426 | 2,741 | 3.5 | 4.4 | 47,755 | 2,303 | 5.1 | 2.6 | |
| 2000 | 90,352 | 9,926 | 12.3 | 4.7 | 59,225 | 11,470 | 24.0 | 3.1 | |
| 2010 | 99,218 | 8,866 | 9.8 | 4.9 | 67,208 | 7,983 | 13.5 | 3.3 | |
| | | City of Racin | e Population | | Rem | ainder of Racin | e County Pop | ulation | |
| | | Change from | | | Change fr | | | | |
| | | Preceding | Census | Percent of | | Preceding | Census | Percent of | |
| Year | Number | Absolute | Percent | Region Total | Number | Absolute | Percent | Region Total | |
| 1950 | 71,193 | | | 5.7 | 38,392 | | | 3.1 | |
| 1960 | 89,144 | 17,951 | 25.2 | 5.7 | 52,637 | 14,245 | 37.1 | 3.3 | |
| 1970 | 95,162 | 6,018 | 6.8 | 5.4 | 75,676 | 23,039 | 43.8 | 4.3 | |
| 1980 | 85,725 | -9,437 | -9.9 | 4.9 | 87,407 | 11,731 | 15.5 | 5.0 | |
| 1990 | 84,298 | -1,427 | -1.7 | 4.7 | 90,736 | 3,329 | 3.8 | 5.0 | |
| 2000 | 81,855 | -2,443 | -2.9 | 4.2 | 106,976 | 16,240 | 17.9 | 5.5 | |
| 2010 | 78,860 | -2,995 | -3.7 | 3.9 | 116,548 | 9,572 | 8.9 | 5.8 | |
| | | City of Waukes | ha Populatio | n | Remai | nder of Wauke | sha County P | opulation | |
| | | Change | | | | Change | | | |
| | | Preceding | | Percent of | | Preceding | | Percent of | |
| Year | Number | Absolute | Percent | Region Total | Number | Absolute | Percent | Region Total | |
| | 21,233 | | | 1.7 | 64,668 | | | 5.2 | |
| 1950 | | 8,771 | 41.3 | 1.9 | , 128,245 | 63,577 | 98.3 | 8.1 | |
| 1950 1960 | 30,004 | 1 | 04.0 | 2.3 | 191,064 | 62,819 | 49.0 | 10.9 | |
| 1960 | 40,271 | 10,267 | 34.2 | 2.5 | | | | 1 | |
| | | 10,267 10,094 | 34.2 25.1 | 2.9 | 229,838 | 38,774 | 20.3 | 13.0 | |
| 1960 1970 | 40,271 | | | | , | 38,774 17,983 | 20.3 7.8 | 13.0 13.7 | |
| 1960 1970 1980 | 40,271 50,365 | 10,094 | 25.1 | 2.9 | 229,838 | | | | |

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

between 1950 and 2010, from about 51 percent to about 29 percent of the Region's population. The remainder of Milwaukee County's share of the regional population also decreased during this period, but only by about 1 percent. The portion of Waukesha County outside of the City of Waukesha increased its share of the regional population from about 5 percent in 1950 to almost 16 percent in 2010.

Components of Population Change

Population change can be attributed to natural increase and net migration. Natural increase is the balance between births and deaths in an area over a given period of time, which can be measured directly from historical records on the number of births and deaths for an area. Net migration is the balance

Table 2.4Levels of Population Change, Natural Increase, andNet Migration for the Region by County: 1950-2010

| | | 1950-1960 | | | 1960-1970 | |
|------------|------------|-----------|-----------|------------|-----------|-----------|
| | Population | Natural | Net | Population | Natural | Net |
| County | Change | Increase | Migration | Change | Increase | Migration |
| Kenosha | 25,377 | 13,931 | 11,446 | 17,302 | 15,125 | 2,177 |
| Milwaukee | 164,994 | 150,141 | 14,853 | 18,208 | 122,192 | -103,984 |
| Ozaukee | 15,080 | 5,926 | 9,154 | 16,020 | 6,090 | 9,930 |
| Racine | 32,196 | 21,473 | 10,723 | 29,057 | 20,441 | 8,616 |
| Walworth | 10,784 | 5,733 | 5,051 | 11,076 | 4,685 | 6,391 |
| Washington | 12,217 | 7,501 | 4,716 | 17,720 | 8,122 | 9,598 |
| Waukesha | 72,348 | 19,746 | 52,602 | 73,086 | 25,699 | 47,387 |
| Region | 332,996 | 224,451 | 108,545 | 182,469 | 202,354 | -19,885 |
| | | 1970-1980 | | | 1980-1990 | |
| | Population | Natural | Net | Population | Natural | Net |
| County | Change | Increase | Migration | Change | Increase | Migration |
| Kenosha | 5,220 | 7,746 | -2,526 | 5,044 | 8,177 | -3,133 |
| Milwaukee | -89,261 | 60,105 | -149,366 | -5,713 | 69,529 | -75,242 |
| Ozaukee | 12,520 | 4,798 | 7,722 | 5,850 | 5,141 | 709 |
| Racine | 2,294 | 12,842 | -10,548 | 1,902 | 13,720 | -11,818 |
| Walworth | 8,063 | 2,451 | 5,612 | 3,493 | 2,939 | 554 |
| Washington | 21,009 | 7,163 | 13,846 | 10,480 | 7,756 | 2,724 |
| Waukesha | 48,868 | 18,011 | 30,857 | 24,512 | 20,068 | 4,444 |
| Region | 8,713 | 113,116 | -104,403 | 45,568 | 127,330 | -81,762 |
| | | 1990-2000 | | | 2000-2010 | |
| | Population | Natural | Net | Population | Natural | Net |
| County | Change | Increase | Migration | Change | Increase | Migration |
| Kenosha | 21,396 | 9,365 | 12,031 | 16,849 | 9,028 | 7,821 |
| Milwaukee | -19,111 | 64,145 | -83,256 | 7,571 | 64,589 | -57,018 |
| Ozaukee | 9,486 | 3,916 | 5,570 | 4,078 | 2,156 | 1,922 |
| Racine | 13,797 | 11,127 | 2,670 | 6,577 | 10,463 | -3,886 |
| Walworth | 17,013 | 2,592 | 14,421 | 10,215 | 3,508 | 6,707 |
| Washington | 22,168 | 7,159 | 15,009 | 14,391 | 6,195 | 8,196 |
| Waukesha | 56,052 | 18,582 | 37,470 | 29,124 | 13,302 | 15,822 |
| Region | 120,801 | 116,886 | 3,915 | 88,805 | 109,241 | -20,436 |

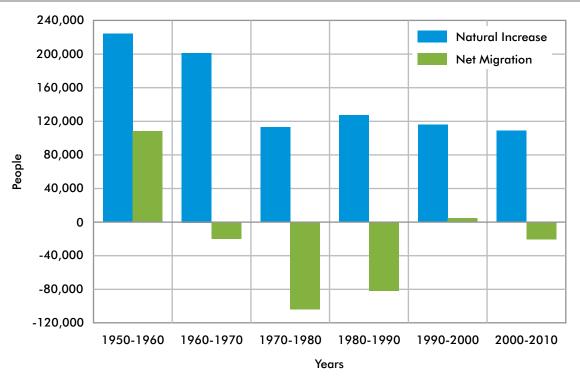
Source: U.S. Bureau of the Census, Wisconsin Department of Health Services, and SEWRPC

between migration to and from an area over a given period of time, which can be determined by subtracting natural increase from total population change for the time period concerned.

Table 2.4 and Figure 2.3 show that the population increase in the Region between 2000 and 2010 can be attributed to natural increase. There was a natural increase of about 109,200 people in the Region; however, there was a net out-migration of about 20,400 people. This resulted in a population increase of about 88,800 people in the Region during the 2000s. The level of natural increase has been relatively steady since the 1970s, averaging about 116,600 people per decade. This is significantly lower than the levels experienced during the 1950s and 1960s, which include much of the post-World War II Baby Boom era.

There has typically been a net out-migration of people from the Region during the decades from 1960 to 2010. The only decade to experience a net in-migration of people during this time period was the 1990s, which experienced a modest in-migration of about 3,900 people. The net outmigration experienced during the 2000s is similar to that experienced during the 1960s, and significantly less than the 1970s and 1980s.





Source: U.S. Bureau of the Census, Wisconsin Department of Health Services, and SEWRPC

The in-migration of people to the Region from abroad is an important aspect of net migration. There was a significant movement of foreign-born people into the Region during the 2000s. The U.S. Census Bureau's 2006-2010 American Community Survey (ACS) indicated that there were 43,400 foreign-born people residing in the Region who had entered the U.S. in or after 2000. This is about the same as reported in the 2000 decennial Census for the period from 1990 to 2000 and significantly more than reported in the 1970, 1980, and 1990 decennial Censuses. The in-migration of foreignborn population, including a significant Hispanic component, is a key aspect of the population migration pattern for the Region during 2000s.

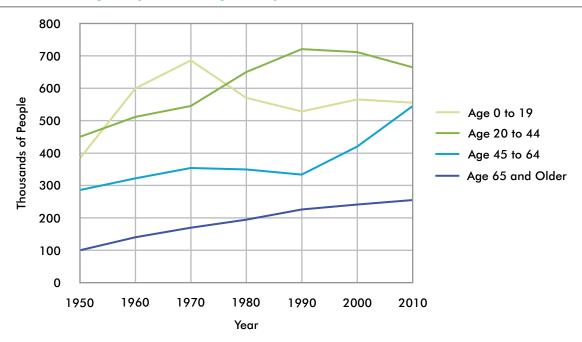
Population Characteristics

Change in the size and distribution of the Region's population has been accompanied by change in the characteristics of the population, including age composition and racial/ethnic makeup. Figure 2.4 shows population in the Region by general age group from 1950 to 2010. The figure shows significant growth in the 45- to 64-year age group between 2000 and 2010. This largely reflects the aging of the "Baby-Boomers" (those born from 1946 through 1964). There was also a decrease in the 20- to 44-year age group between 2000 and 2010. This is a reflection of Baby-Boomers moving out of the upper bounds of this age group coupled with a smaller number of people born in the late 1960s and early 1970s moving into this age group.

Table 2.5 shows the size of the minority population in the Region, identified on the basis of Hispanic origin and race, as reported in the past four Censuses. The minority population includes people reported in the Census as being of Hispanic origin and/or reporting their race as Black or African American, American Indian/Alaska Native, Asian, Native Hawaiian/Pacific There was a significant movement of foreignborn people into the Region during the 2000s.

There was significant growth in the 45- to 64-year age group between 2000 and 2010, reflecting the aging of the "Baby-Boomers."

Figure 2.4 Population in the Region by General Age Group: 1950-2010



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

Table 2.5Population by Race and Hispanic Origin in the Region: 1980-2010

| | 1980 Pop | oulation | 1990 Pop | ulation | 2000 Pop | ulation | 2010 Pop | ulation |
|-----------------------------------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|
| - | | Percent | | Percent | | Percent | | Percent |
| Race/Ethnicityª | Number | of Total |
| Non-Hispanic White | | | | | | | | |
| Population | 1,531,800 | 86.8 | 1,494,797 | 82.6 | 1,479,103 | 76.5 | 1,437,105 | 71.1 |
| Minority Population: ^b | | | | | | | | |
| Non-Hispanic | | | | | | | | |
| Black/African American | 166,532 | 9.5 | 217,573 | 12.0 | 259,881 | 13.5 | 288,550 | 14.3 |
| Non-Hispanic | | | | | | | | |
| Other Race | 20,135 | 1.1 | 30,057 | 1.7 | 67,530 | 3.5 | 94,096 | 4.7 |
| Hispanic—Any Race | 46,452 | 2.6 | 67,937 | 3.7 | 126,394 | 6.5 | 200,219 | 9.9 |
| Minority Subtotal | 233,119 | 13.2 | 315,567 | 17.4 | 453,805 | 23.5 | 582,865 | 28.9 |
| Total | 1,764,919 | 100.0 | 1,810,364 | 100.0 | 1,932,908 | 100.0 | 2,019,970 | 100.0 |
| | Change 19 | 80-1990 | Change 19 | 90-2000 | Change 20 | 00-2010 | Change 19 | 80-2010 |
| Race/Ethnicityª | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Non-Hispanic White | | | | | | | | |
| Population | -37,003 | -2.4 | -15,694 | -1.0 | -41,998 | -2.8 | -94,695 | -6.2 |
| Minority Population: ^b | | | | | | | | |
| Non-Hispanic | | | | | | | | |
| Black/African American | 51,041 | 30.6 | 42,308 | 19.4 | 28,669 | 11.0 | 122,018 | 73.3 |
| Non-Hispanic | | | | | | | | |
| Other Race | 9,922 | 49.3 | 37,473 | 124.7 | 26,566 | 39.3 | 73,961 | 367.3 |
| Hispanic—Any Race | 21,485 | 46.3 | 58,457 | 86.0 | 73,825 | 58.4 | 153,767 | 331.0 |
| Minority Subtotal | 82,448 | 35.4 | 138,238 | 43.8 | 129,060 | 28.4 | 349,746 | 150.0 |
| , Total | 45,445 | 2.6 | 122,544 | 6.8 | 87,062 | 4.5 | 255,051 | 14.5 |

Note: Population counts by race may exclude population adjustments made subsequent to the conduct of the decennial Censuses that were not allocated to the race categories.

^a In the 2000 and 2010 censuses, respondents were given the opportunity to specify more than one race when responding to questions on racial identity. On this table, all Non-Hispanic people reporting more than one race in 2000 and/or 2010 are included in the "Non-Hispanic Other Race" category.

^b The minority population includes people reported in the Census as being of Hispanic origin and/or reporting their race as Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Pacific Islander, some other race, or more than one race.

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

Islander, some other race, or more than one race. The minority population of the Region increased from 453,800 people in 2000 to 582,900 in 2010, which is an increase of about 28 percent. The minority share of the total regional population increased from about 24 percent to about 29 percent over the same time period. The non-Hispanic White population of the Region decreased from 1,479,100 people in 2000 to 1,437,100 in 2010, which is a decrease of about 3 percent. The non-Hispanic White share of the total regional population decreased from about 77 percent to about 71 percent over the same time period.

Table 2.6 shows that the minority share of the total population has increased throughout the Region between 1980 and 2010; however, minority populations remain concentrated in the Region's largest cities. Concentrations of racial and ethnic groups in the Region are shown on Maps 2.1 through 2.8.

Households

In addition to population, the number of households (or occupied housing units) is important in land use and transportation planning. Households directly influence the demand for urban land as well as the demand for transportation and other public facilities and services. A household includes all people who occupy a housing unit, which is defined by the Census Bureau as a house, apartment, mobile home, group of rooms, or single-room that is occupied, or intended for occupancy, as separate living quarters. A summary of household trends is presented in this section. Detailed findings are presented in SEWRPC Technical Report No. 11 (5th Edition). Detailed data and findings regarding the Region's housing stock and housing costs are set forth in SEWRPC Planning Report No. 54, A Regional Housing Plan for Southeastern Wisconsin: 2035, dated March 2013.

Historic Trends and Distribution Among Counties

There were about 800,100 households in the Region in 2010. This is an increase of about 51,000 households, or 6.8 percent, over the 2000 level of 749,000 households. This follows increases of 72,900 households during the 1990s, 48,200 households during the 1980s, 91,500 households during the 1970s, 70,600 households during the 1960s, and 111,400 households during the 1950s.

All counties in the Region experienced increases in the number of households during the 2000s, led by Waukesha County. Waukesha County gained 17,400 households over the decade, which was a 13 percent increase. Table 2.7 shows changes in distribution of households in the Region over the last 60 years. These changes are similar to the distributional changes in population. Table 2.8 presents current and historic household data for the four largest cities in the Region as of 2010 and the remainder of their respective counties. The trends are similar to the population trends for these areas presented in the previous section.

Household Size

The rate of growth in number of households in the Region during the 2000s exceeded the rate of population growth (6.8 percent to 4.6 percent). Similar patterns were observed over each of the previous five decades. The number of households in the Region increased by 126 percent over the last 60 years, while the population increased by 63 percent. These differential growth rates in households and population have been accompanied by declining average household size.

The minority share of the total population increased throughout the Region between 1980 and 2010; however, minority populations remain concentrated in the Region's largest cities.

Table 2.6Population by Race and Hispanic Origin in the Region by Area: 1980-2010

| | | 1980 Po | pulation | 1990 Po | pulation | 2000 Po | pulation | 2010 Po | pulation |
|-------------------|--|---|--|-------------------|----------|-------------------|--------------|---|----------|
| | | | Percent | | Percent | | Percent | | Percen |
| | Race/Ethnicityª | Number | of Total | Number | of Total | Number | of Total | Number | of Toto |
| | Non-Hispanic White | | | | | | | | |
| | Population | 71,083 | 91.5 | 69,798 | 86.8 | 71,686 | 79.3 | 68,967 | 69.5 |
| Ĕ | Minority Population: ^b | | | | | | | | |
| City of Kenosha | Non-Hispanic | | | | | | | | |
| ē | Black/African American | 2,777 | 3.6 | 5,037 | 6.3 | 6,810 | 7.5 | 9,540 | 9.6 |
| ž | Non-Hispanic Other | | | | | | | | |
| Ö | Race | 715 | 0.9 | 785 | 1.0 | 2,853 | 3.2 | 4,581 | 4.6 |
| £ | Hispanic—Any Race | 3,110 | 4.0 | 4,732 | 5.9 | 9,003 | 10.0 | 16,130 | 16.3 |
| 0 | Minority Subtotal | 6,602 | 8.5 | 10,554 | 13.2 | 18,666 | 20.7 | 30,251 | 30.5 |
| | , Total | 77,685 | 100.0 | 80,352 | 100.0 | 90,352 | 100.0 | 99,218 | 100.0 |
| | Non-Hispanic White | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 100.0 | 00,002 | 100.0 | ,0,002 | 100.0 | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 100.0 |
| | Population | 44,608 | 98.1 | 46,425 | 97.1 | 55,601 | 93.9 | 60,925 | 90.6 |
| . ≩ | | 44,000 | 70.1 | 40,425 | 77.1 | 55,001 | 73.7 | 00,725 | 90.0 |
| 5 | Minority Population: ^b | | | | | | | | |
| 3 | Non-Hispanic | 70 | 0.0 | 150 | 0.0 | (0) | | 1 1 1 5 | 1 7 |
| enosha Count | Black/African American | 73 | 0.2 | 153 | 0.3 | 636 | 1.1 | 1,115 | 1.7 |
| - y | Non-Hispanic Other | | o = | (00 | | | | | |
| 2 | Race | 303 | 0.7 | 403 | 0.8 | 1,234 | 2.1 | 1,706 | 2.5 |
| Kenosha County | Hispanic—Any Race | 468 | 1.0 | 848 | 1.8 | 1,754 | 2.9 | 3,462 | 5.2 |
| - | Minority Subtotal | 844 | 1.9 | 1,404 | 2.9 | 3,624 | 6.1 | 6,283 | 9.4 |
| | Total | 45,452 | 100.0 | 47,829 | 100.0 | 59,225 | 100.0 | 67,208 | 100.0 |
| | Non-Hispanic White | | | | | | | | |
| | Population | 115,691 | 94.0 | 116,223 | 90.7 | 127,287 | 85.1 | 129,892 | 78.0 |
| Kenosha County | Minority Population: ^b | , | | | | | | | |
| ž | Non-Hispanic | | | | | | | | |
| 5 | Black/African American | 2,850 | 2.3 | 5,190 | 4.0 | 7,446 | 5.0 | 10,655 | 6.4 |
| פ | | 2,030 | 2.5 | 5,170 | 4.0 | 7,440 | 5.0 | 10,035 | 0.4 |
| S | Non-Hispanic Other | 1 0 1 0 | 0.0 | 1 100 | 0.0 | 1.007 | 0.7 | (007 | 2.0 |
| Ĕ | Race | 1,018 | 0.8 | 1,188 | 0.9 | 4,087 | 2.7 | 6,287 | 3.8 |
| e V | Hispanic—Any Race | 3,578 | 2.9 | 5,580 | 4.4 | 10,757 | 7.2 | 19,592 | 11.8 |
| | Minority Subtotal | 7,446 | 6.0 | 11,958 | 9.3 | 22,290 | 14.9 | 36,534 | 22.0 |
| | Total | 123,137 | 100.0 | 128,181 | 100.0 | 149,577 | 100.0 | 166,426 | 100.0 |
| | Non-Hispanic White | | | | | | | | |
| é, | Population | 453,576 | 71.3 | 381,714 | 60.8 | 270,989 | 45.4 | 220,219 | 37.0 |
| ¥ | Minority Population: ^b | | | | | | | | |
| 3 | Non-Hispanic | | | | | | | | |
| Š | Black/African American | 145,832 | 22.9 | 189,408 | 30.1 | 220,432 | 36.9 | 233,325 | 39.2 |
| Ξ | Non-Hispanic Other | , | | , | | | | / | |
| ÷ | Race | 10,693 | 1.7 | 17,557 | 2.8 | 33,907 | 5.7 | 38,282 | 6.5 |
| City of Milwaukee | Hispanic—Any Race | 26,111 | 4.1 | 39,409 | 6.3 | 71,646 | 12.0 | 103,007 | 17.3 |
| 5 | Minority Subtotal | 182,636 | 28.7 | | 39.2 | 325,985 | 54.6 | 374,614 | 63.0 |
| | | | | 246,374 | | | | | |
| | Total | 636,212 | 100.0 | 628,088 | 100.0 | 596,974 | 100.0 | 594,833 | 100.0 |
| | Non-Hispanic White | | <u> - </u> | | | | | | |
| Ę | Population | 319,703 | 97.2 | 317,150 | 95.7 | 312,492 | 91.1 | 294,739 | 83.5 |
| 5 | Minority Population: ^b | | | | | | | | |
| Milwaukee County | Non-Hispanic | | | | | | | | |
| ě | Black/African American | 2,475 | 0.8 | 4,175 | 1.3 | 8,039 | 2.3 | 15,469 | 4.4 |
| ž | Non-Hispanic Other | | | | | | | | |
| au | Race | 3,366 | 1.0 | 4,600 | 1.4 | 11,899 | 3.5 | 19,662 | 5.6 |
| ≥ | Hispanic—Any Race | 3,232 | 1.0 | 5,262 | 1.6 | 10,760 | 3.1 | 23,032 | 6.5 |
| ž | Minority Subtotal | 9,073 | 2.8 | 14,037 | 4.3 | 30,698 | 8.9 | 58,163 | 16.5 |
| | Total | 328,776 | 100.0 | 331,187 | 100.0 | 343,190 | 100.0 | 352,902 | 100.0 |
| | Non-Hispanic White | | | ,.0, | | , | | | |
| > | Population | 773,279 | 80.1 | 698,864 | 72.8 | 583,481 | 62.0 | 514,958 | 54.3 |
| Ē | | 113,219 | 00.1 | 070,004 | /2.0 | 505,401 | 02.0 | 514,730 | 04.3 |
| 2 | Minority Population: ^b | | | | | | | | |
| Ĵ, | Non-Hispanic | | | | | | - · · | | <u> </u> |
| e e | Black/African American | 148,307 | 15.4 | 193,583 | 20.2 | 228,471 | 24.3 | 248,794 | 26.3 |
| ž | Non-Hispanic Other | | | | | | | | |
| _ | Race | 14,059 | 1.5 | 22,157 | 2.3 | 45,806 | 4.9 | 57,944 | 6.1 |
| ō | | | 0.0 | 44 473 | | 00.407 | 8.8 | 126,039 | 13.3 |
| Ma | Hispanic—Any Race | 29,343 | 3.0 | 44,671 | 4./ | 82,400 | 0.0 | 120,037 | 10.0 |
| Milwaukee County | Hispanic—Any Race Minority Subtotal | 29,343 191,709 | <u> </u> | 44,671 260,411 | 4.7 | 82,406 356,683 | 38.0 | 432,777 | 45.7 |

Table continued on next page.

Table 2.6 (Continued)

| | | 1980 Po | | 1990 Po | | 2000 Po | | 2010 Po | pulation |
|-------------------------------|---|------------|------------|------------|------------|----------------|------------|----------------|----------|
| | | NL . I | Percent | NL . 1 | Percent | NI . I | Percent | | Percent |
| | Race/Ethnicityª | Number | of Total | Number | of Total | Number | of Total | Number | of Tota |
| unty | Non-Hispanic White Population Minority Population: ^b | 65,627 | 98.0 | 71,274 | 97.8 | 78,894 | 95.9 | 80,689 | 93.4 |
| Ozaukee County | Non-Hispanic Black/African American Non-Hispanic Other | 438 | 0.6 | 485 | 0.7 | 759 | 0.9 | 1,144 | 1.3 |
| ž | Race | 386 | 0.6 | 555 | 0.8 | 1,591 | 1.9 | 2,606 | 3.0 |
| DZ | Hispanic—Any Race | 530 | 0.8 | 517 | 0.7 | 1,073 | 1.3 | 1,956 | 2.3 |
| 0 | Minority Subtotal | 1,354 | 2.0 | 1,557 | 2.2 | 3,423 | 4.1 | 5,706 | 6.6 |
| | Total | 66,981 | 100.0 | 72,831 | 100.0 | 82,317 | 100.0 | 86,395 | 100.0 |
| | Non-Hispanic White | | | | | | | | |
| ine | Population Minority Population: ^b Non-Hispanic | 67,056 | 78.2 | 61,408 | 72.9 | 51,962 | 63.5 | 42,189 | 53.5 |
| City of Racine | Black/African American Non-Hispanic Other | 12,480 | 14.6 | 15,270 | 18.1 | 16,349 | 20.0 | 17,341 | 22.0 |
| ≥ | Race | 688 | 0.8 | 767 | 0.9 | 2,122 | 2.6 | 3,021 | 3.8 |
| ö | Hispanic—Any Race | 5,501 | 6.4 | 6,853 | 8.1 | 11,422 | 13.9 | 16,309 | 20.7 |
| | Minority Subtotal | 18,669 | 21.8 | 22,890 | 27.1 | 29,893 | 36.5 | 36,671 | 46.5 |
| | Total | 85,725 | 100.0 | 84,298 | 100.0 | 81,855 | 100.0 | 78,860 | 100.0 |
| Remainder of Racine County | Non-Hispanic White Population Minority Population: ^b | 83,880 | 96.0 | 86,337 | 95.1 | 98,276 | 91.9 | 103,225 | 88.6 |
| | Non-Hispanic Black/African American Non-Hispanic Other | 1,251 | 1.4 | 1,423 | 1.6 | 3,092 | 2.9 | 3,871 | 3.3 |
| | Race | 576 | 0.7 | 795 | 0.9 | 2,040 | 1.9 | 3,215 | 2.8 |
| ž | Hispanic—Any Race | 1,700 | 1.9 | 2,181 | 2.4 | 3,568 | 3.3 | 6,237 | 5.3 |
| | Minority Subtotal | 3,527 | 4.0 | 4,399 | 4.9 | 8,700 | 8.1 | 13,323 | 11.4 |
| | Total | 87,407 | 100.0 | 90,736 | 100.0 | 106,976 | 100.0 | 116,548 | 100.0 |
| ynty | Non-Hispanic White Population Minority Population: ^b Non-Hispanic | 150,936 | 87.2 | 147,745 | 84.4 | 150,238 | 79.6 | 145,414 | 74.4 |
| Racine County | Black/African American Non-Hispanic Other | 13,731 | 7.9 | 16,693 | 9.5 | 19,441 | 10.3 | 21,212 | 10.9 |
| Ģ | Race | 1,264 | 0.7 | 1,562 | 0.9 | 4,162 | 2.2 | 6,236 | 3.2 |
| å | Hispanic—Any Race | 7,201 | 4.2 | 9,034 | 5.2 | 14,990 | 7.9 | 22,546 | 11.5 |
| | Minority Subtotal | 22,196 | 12.8 | 27,289 | 15.6 | 38,593 | 20.4 | 49,994 | 25.6 |
| | Total | 173,132 | 100.0 | 175,034 | 100.0 | 188,831 | 100.0 | 195,408 | 100.0 |
| u th | Non-Hispanic White Population Minority Population: ^b | 69,090 | 96.6 | 71,834 | 95.8 | 85,428 | 91.1 | 88,690 | 86.8 |
| Walworth County | Non-Hispanic Black/African American Non-Hispanic Other | 416 | 0.6 | 443 | 0.6 | 747 | 0.8 | 904 | 0.9 |
| Ň | Race | 671 | 0.9 | 706 | 0.9 | 1,448 | 1.5 | 2,056 | 2.0 |
| ٧a | Hispanic—Any Race | 1,330 | 1.9 | 2,017 | 2.7 | 6,136 | 6.6 | 10,578 | 10.3 |
| > | Minority Subtotal | 2,417 | 3.4 | 3,166 | 4.2 | 8,331 | 8.9 | 13,538 | 13.2 |
| | Total | 71,507 | 100.0 | 75,000 | 100.0 | 93,759 | 100.0 | 102,228 | 100.0 |
| ounty | Non-Hispanic White Population Minority Population: ^b Non-Hispanic | 83,929 | 98.9 | 94,002 | 98.6 | 113,870 | 96.9 | 124,348 | 94.3 |
| Washington County | Black/African American Non-Hispanic Other | 65 | 0.1 | 121 | 0.1 | 447 | 0.4 | 1,115 | 0.8 |
| ıshinç | Race Hispanic—Any Race | 382 472 | 0.4 0.6 | 535 670 | 0.6 0.7 | 1,647 1,529 | 1.4 1.3 | 3,039 3,385 | 2.3 |
| Š | Minority Subtotal | 919 | 1.1 | 1,326 | 1.4 | 3,623 | 3.1 | 7,539 | 5.7 |
| - | Total | 84,848 | 100.0 | 95,328 | 100.0 | 117,493 | 100.0 | 131,887 | 100.0 |

Table continued on next page.

Table 2.6 (Continued)

| | | 1980 Po | pulation | 1990 Po | pulation | 2000 Po | pulation | 2010 Po | pulation |
|---------------------------------|-----------------------------------|---------|----------|---------|----------|---------|----------|---------|----------|
| | | | Percent | | Percent | | Percent | | Percent |
| | Race/Ethnicityª | Number | of Total |
| | Non-Hispanic White | | | | | | | | |
| ō | Population | 46,977 | 93.4 | 52,417 | 92.0 | 56,191 | 86.7 | 56,868 | 80.4 |
| ls, | Minority Population: ^b | | | | | | | | |
| ke | Non-Hispanic | | | | | | | | |
| G | Black/African American | 189 | 0.4 | 301 | 0.5 | 797 | 1.2 | 1,570 | 2.2 |
| City of Waukesha | Non-Hispanic Other | | | | | | | | |
| ę | Race | 570 | 1.1 | 874 | 1.6 | 2,274 | 3.5 | 3,751 | 5.3 |
| ₹. | Hispanic—Any Race | 2,583 | 5.1 | 3,366 | 5.9 | 5,563 | 8.6 | 8,529 | 12.1 |
| Ü | Minority Subtotal | 3,342 | 6.6 | 4,541 | 8.0 | 8,634 | 13.3 | 13,850 | 19.6 |
| | Total | 50,319 | 100.0 | 56,958 | 100.0 | 64,825 | 100.0 | 70,718 | 100.0 |
| | Non-Hispanic White | | | | | | | | |
| ≩ | Population | 226,271 | 98.4 | 242,438 | 97.9 | 283,714 | 95.9 | 296,246 | 92.8 |
| Ъ, | Minority Population: ^b | | | | | | | | |
| μŜ | Non-Hispanic | | | | | | | | |
| Ď g | Black/African American | 536 | 0.2 | 757 | 0.3 | 1,773 | 0.6 | 3,156 | 1.0 |
| Remainder of Waukesha County | Non-Hispanic Other | | | | | | | | |
| ř š | Race | 1,785 | 0.8 | 2,480 | 1.0 | 6,515 | 2.2 | 12,177 | 3.8 |
| au au | Hispanic—Any Race | 1,415 | 0.6 | 2,082 | 0.8 | 3,940 | 1.3 | 7,594 | 2.4 |
| 3 | Minority Subtotal | 3,736 | 1.6 | 5,319 | 2.1 | 12,228 | 4.1 | 22,927 | 7.2 |
| | Total | 230,007 | 100.0 | 247,757 | 100.0 | 295,942 | 100.0 | 319,173 | 100.0 |
| | Non-Hispanic White | | | | | | | | |
| ₹ | Population | 273,248 | 97.5 | 294,855 | 96.8 | 339,905 | 94.2 | 353,114 | 90.6 |
| 5 | Minority Population: ^b | | | | | | | | |
| County | Non-Hispanic | | | | | | | | |
| ō | Black/African American | 725 | 0.3 | 1,058 | 0.3 | 2,570 | 0.7 | 4,726 | 1.2 |
| hs | Non-Hispanic Other | | | | | | | | |
| ž | Race | 2,355 | 0.8 | 3,354 | 1.1 | 8,739 | 2.5 | 15,928 | 4.1 |
| Waukesha | Hispanic—Any Race | 3,998 | 1.4 | 5,448 | 1.8 | 9,503 | 2.6 | 16,123 | 4.1 |
| 3 | Minority Subtotal | 7,078 | 2.5 | 9,860 | 3.2 | 20,862 | 5.8 | 36,777 | 9.4 |
| | Total | 280,326 | 100.0 | 304,715 | 100.0 | 360,767 | 100.0 | 389,891 | 100.0 |

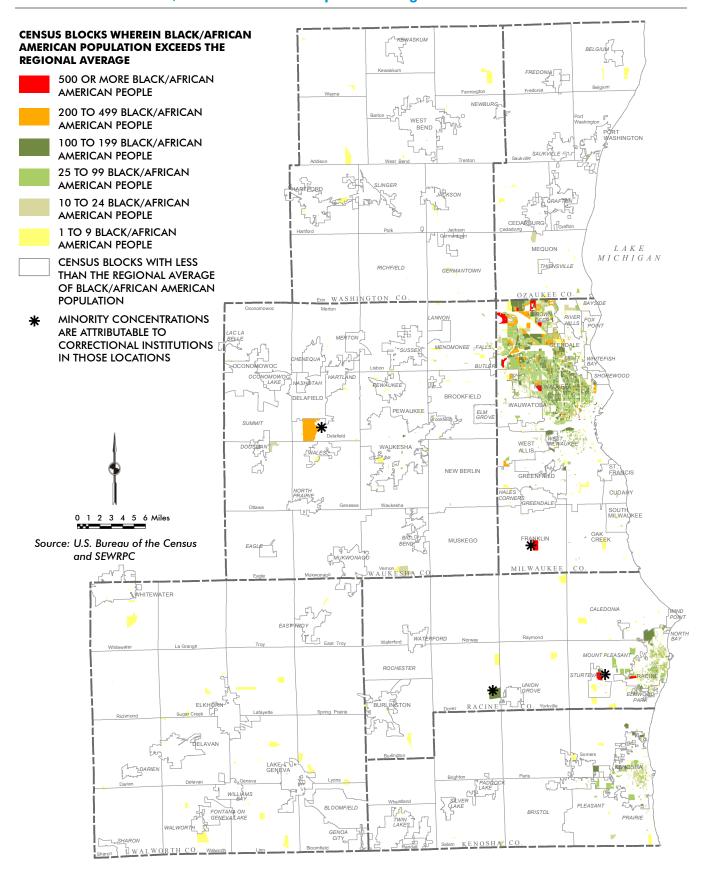
Note: Population counts by race may exclude population adjustments made subsequent to the conduct of the decennial Censuses that were not allocated to the race categories.

^a In the 2000 and 2010 Censuses, respondents were given the opportunity to specify more than one race when responding to questions about racial identity. On this table, all Non-Hispanic people reporting more than one race in 2000 and/or 2010 are included in the "Non-Hispanic Other Race" category.

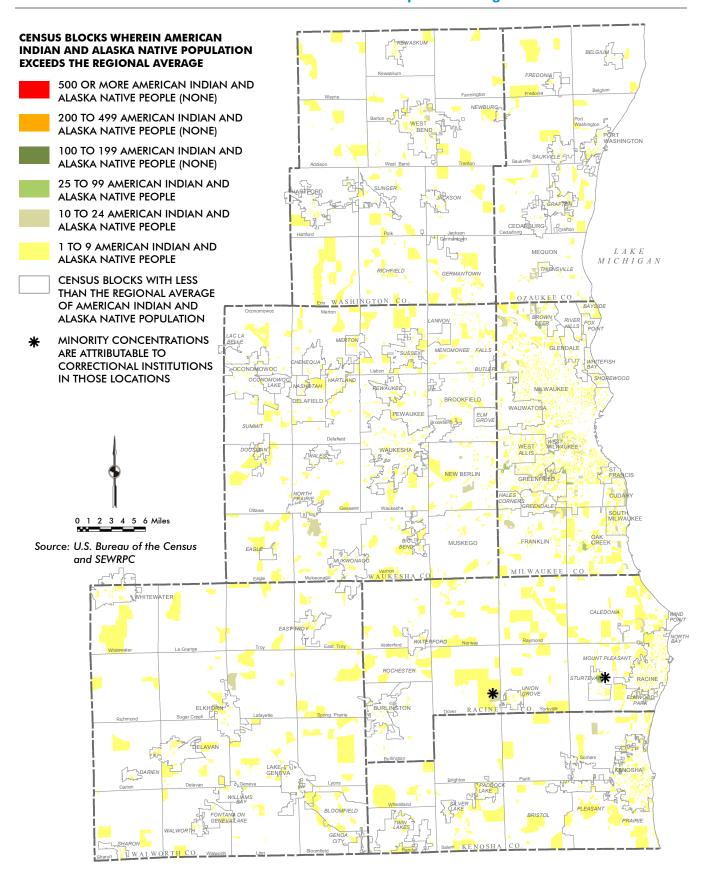
^b The minority population includes people reported in the Census as being of Hispanic origin and/or reporting their race as Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Pacific Islander, some other race, or more than one race.

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

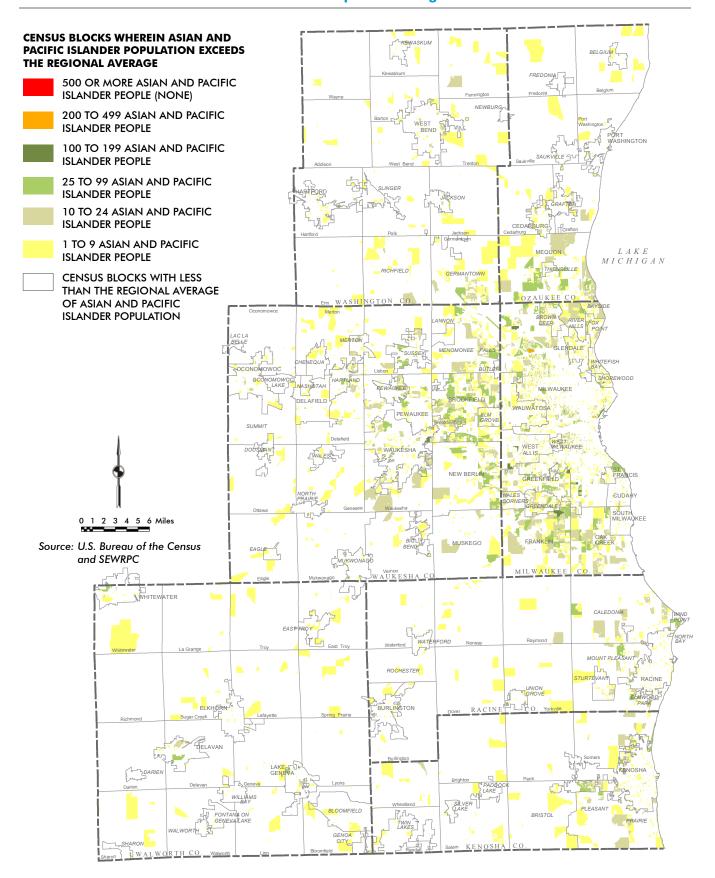
Map 2.1 Concentrations of Black/African American People in the Region: 2010



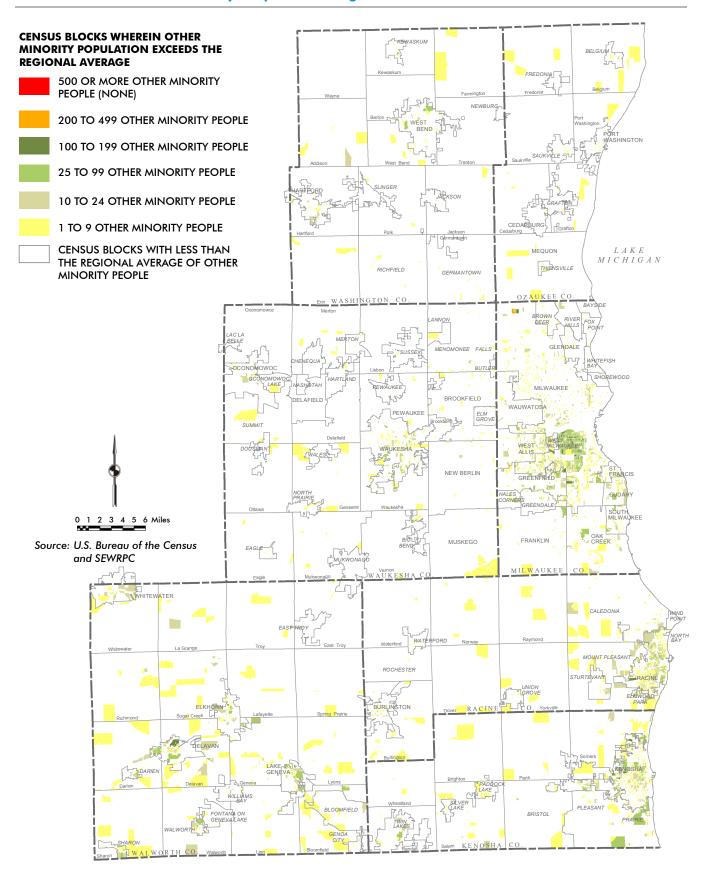
Map 2.2 Concentrations of American Indian and Alaska Native People in the Region: 2010



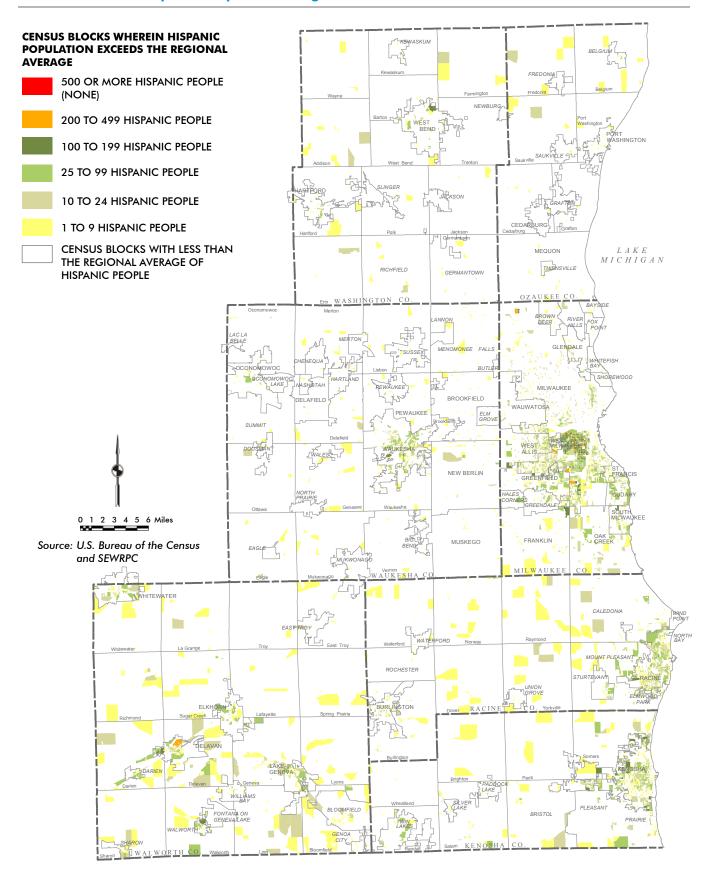
Map 2.3 Concentrations of Asian and Pacific Islander People in the Region: 2010



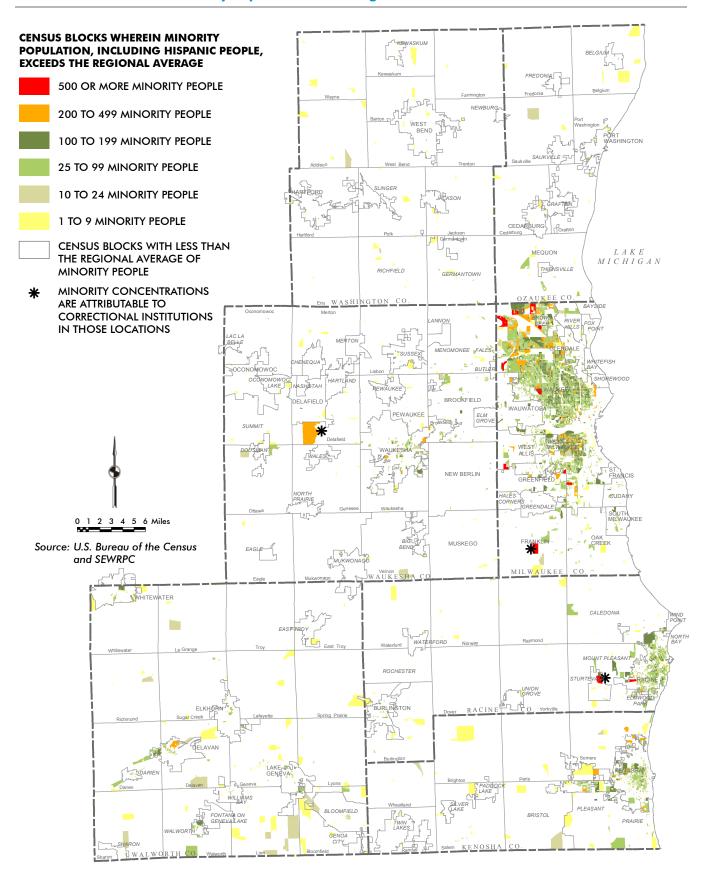
Map 2.4 Concentrations of Other Minority People in the Region: 2010



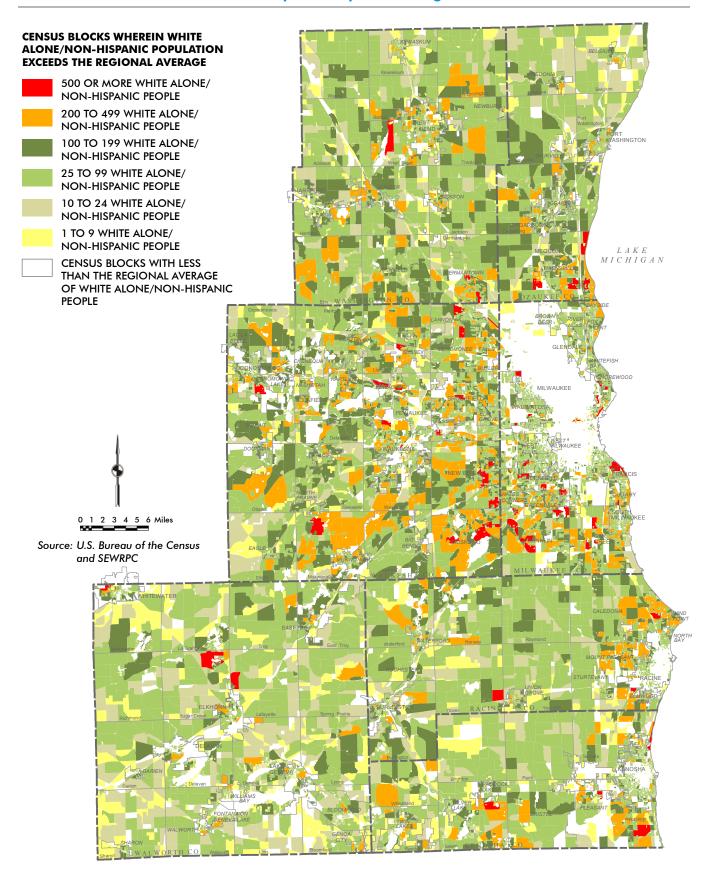
Map 2.5 Concentrations of Hispanic People in the Region: 2010



Map 2.6 Concentrations of Total Minority Population in the Region: 2010



Map 2.7 Concentrations of White Alone/Non-Hispanic People in the Region: 2010



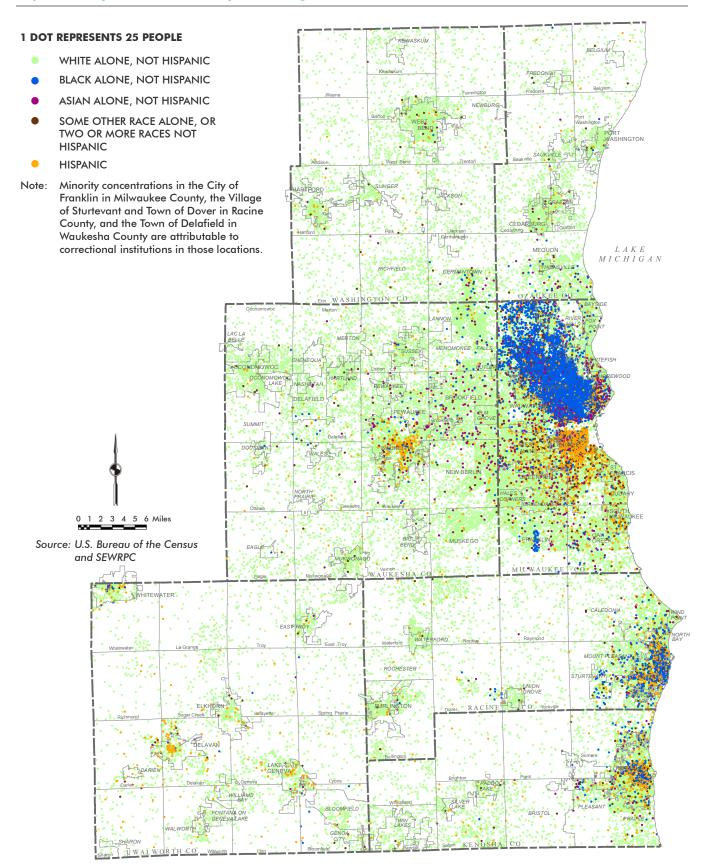


Table 2.7Households in the Region by County: 1950-2010

| | | Kenosha Cou | | S | Milwaukee County Households | | | | | |
|--------------|---------|--------------|---------------|-----------|-----------------------------|--------------------------|---------------|-----------|--|--|
| | | | e from | Percent | | Chang | | Percent | | |
| | | Preceding | - | of Region | | Preceding | | of Region | | |
| Year | Number | Absolute | Percent | Total | Number | Absolute | Percent | Total | | |
| 1950 | 21,958 | | | 6.2 | 249,232 | | | 70.3 | | |
| 1960 | 29,545 | 7,587 | 34.6 | 6.3 | 314,875 | 65,643 | 26.3 | 67.6 | | |
| 1970 | 35,468 | 5,923 | 20.0 | 6.6 | 338,605 | 23,730 | 7.5 | 63.1 | | |
| 1980 | 43,064 | 7,596 | 21.4 | 6.9 | 363,653 | 25,048 | 7.4 | 57.9 | | |
| 1990 | 47,029 | 3,965 | 9.2 | 6.9 | 373,048 | 9,395 | 2.6 | 55.2 | | |
| 2000 | 56,057 | 9,028 | 19.2 | 7.5 | 377,729 | 4,681 | 1.3 | 50.4 | | |
| 2010 | 62,650 | 6,593 | 11.8 | 7.8 | 383,591 | 5,862 | 1.6 | 47.9 | | |
| | | Ozaukee Cou | nty Household | s | | Racine County Households | | | | |
| | | Chang | | Percent | | Chang | | Percent | | |
| | | | g Census | of Region | | Preceding | - | of Region | | |
| Year | Number | Absolute | Percent | Total | Number | Absolute | Percent | Total | | |
| 1950 | 6,591 | | | 1.9 | 31,399 | | | 8.8 | | |
| 1960 | 10,417 | 3,826 | 58.0 | 2.3 | 40,736 | 9,337 | 29.7 | 8.7 | | |
| 1970 | 14,753 | 4,336 | 41.6 | 2.7 | 49,796 | 9,060 | 22.2 | 9.3 | | |
| 1980 | 21,763 | 7,010 | 47.5 | 3.5 | 59,418 | 9,622 | 19.3 | 9.5 | | |
| 1990 | 25,707 | 3,944 | 18.1 | 3.8 | 63,736 | 4,318 | 7.3 | 9.4 | | |
| 2000 | 30,857 | 5,150 | 20.0 | 4.0 | 70,819 | 7,083 | 11.1 | 9.5 | | |
| 2010 | 34,228 | 3,371 | 10.9 | 4.3 | 75,651 | 4,832 | 6.8 | 9.5 | | |
| | | Walworth Cou | nty Household | ls | v | Vashington Cou | nty Household | ls | | |
| | | Change from | | Percent | | Chang | Percent | | | |
| | | Preceding | g Census | of Region | | Preceding | g Census | of Region | | |
| Year | Number | Absolute | Percent | Total | Number | Absolute | Percent | Total | | |
| 1950 | 12,369 | | | 3.5 | 9,396 | | | 2.6 | | |
| 1960 | 15,414 | 3,045 | 24.6 | 3.3 | 12,532 | 3,136 | 33.4 | 2.7 | | |
| 1970 | 18,544 | 3,130 | 20.3 | 3.5 | 17,385 | 4,853 | 38.7 | 3.3 | | |
| 1980 | 24,789 | 6,245 | 33.7 | 3.8 | 26,716 | 9,331 | 53.7 | 4.3 | | |
| 1990 | 27,620 | 2,831 | 11.4 | 4.1 | 32,977 | 6,261 | 23.4 | 4.9 | | |
| 2000 | 34,505 | 6,885 | 24.9 | 4.6 | 43,843 | 10,866 | 33.0 | 5.9 | | |
| 2010 | 39,699 | 5,194 | 15.1 | 5.0 | 51,605 | 7,762 | 17.7 | 6.4 | | |
| | | Waukesha Cou | untv Househol | ds | | Region He | ouseholds | | | |
| | | Chang | | Percent | | Chang | | Percent | | |
| | | Preceding | | of Region | | Preceding | | of Region | | |
| Year | Number | Absolute | Percent | Total | Number | Absolute | Percent | Total | | |
| 1950 | 23,599 | | | 6.7 | 354,544 | | | 100.0 | | |
| 1960 | 42,394 | 18,795 | 79.6 | 9.1 | 465,913 | 111,369 | 31.4 | 100.0 | | |
| 1970 | 61,935 | 19,541 | 46.1 | 11.5 | 536,486 | 70,573 | 15.1 | 100.0 | | |
| 1980 | 88,552 | 26,617 | 43.0 | 14.1 | 627,955 | 91,469 | 17.0 | 100.0 | | |
| | 105,990 | 17,438 | 19.7 | 15.7 | 676,107 | 48,152 | 7.7 | 100.0 | | |
| 1990 | | | | | | , | | | | |
| 1990 2000 | 135,229 | 29,239 | 27.6 | 18.1 | 749,039 | 72,932 | 10.8 | 100.0 | | |

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

Table 2.8Households in the Region by Area: 1950-2010

| | Ηοι | useholds in the | City of Milwa | ukee | Household | ds in the Remainder of Milwaukee County | | | |
|------|---------|------------------|----------------------|---------------------|-----------|---|--------------------|---------------------|--|
| | | Chang | e from g Census | Percent of | | | e from g Census | Percent of | |
| Year | Number | Absolute | Percent | Region Total | Number | Absolute | Percent | Region Total | |
| 1950 | 185,734 | | | 52.4 | 63,498 | | | 17.9 | |
| 1960 | 230,987 | 45,253 | 24.4 | 49.6 | 83,888 | 20,390 | 32.1 | 18.0 | |
| 1970 | 236,981 | 5,994 | 2.6 | 44.2 | 101,624 | 17,736 | 21.1 | 18.9 | |
| 1980 | 241,818 | 4,837 | 2.0 | 38.5 | 121,835 | 20,211 | 19.9 | 19.4 | |
| 1990 | 240,540 | -1,278 | -0.5 | 35.6 | 132,508 | 10,673 | 8.8 | 19.6 | |
| 2000 | 232,188 | -8,352 | -3.5 | 31.0 | 145,541 | 13,033 | 9.8 | 19.4 | |
| 2010 | 230,221 | -1,967 | -0.8 | 28.8 | 153,370 | 7,829 | 5.4 | 19.2 | |
| | Ho | ouseholds in the | e City of Kend | osha | Househol | ds in the Rema | inder of Kend | osha County | |
| | | 1 | e from | | | Chang | Change from | | |
| | | | g Census | Percent of | | | g Census | Percent of | |
| Year | Number | Absolute | Percent | Region Total | Number | Absolute | Percent | Region Total | |
| 1950 | 16,102 | | | 4.5 | 5,856 | | | 1.7 | |
| 1960 | 20,593 | 4,491 | 27.9 | 4.4 | 8,952 | 3,096 | 52.9 | 1.9 | |
| 1970 | 24,245 | 3,652 | 17.7 | 4.5 | 11,223 | 2,271 | 25.4 | 2.1 | |
| 1980 | 27,964 | 3,719 | 15.3 | 4.5 | 15,100 | 3,877 | 34.5 | 2.4 | |
| 1990 | 29,919 | 1,955 | 7.0 | 4.4 | 17,110 | 2,010 | 13.3 | 2.5 | |
| 2000 | 34,411 | 4,492 | 15.0 | 4.6 | 21,646 | 4,536 | 26.5 | 2.9 | |
| 2010 | 37,376 | 2,965 | 8.6 | 4.7 | 25,274 | 3,628 | 16.8 | 3.2 | |
| | Н | louseholds in tl | he City of Rac | ine | Househo | lds in the Rem | ainder of Rac | ine County | |
| | | 1 | e from | | | Chang | e from | | |
| | | | g Census | Percent of | | Preceding | g Census | Percent of | |
| Year | Number | Absolute | Percent | Region Total | Number | Absolute | Percent | Region Total | |
| 1050 | 01 145 | | | 6.0 | 10.004 | | | 20 | |

| Tear | Number | Absolute | rercent | Region Total | INUMBER | Absolute | rercent | Region Total |
|------|--------|----------|---------|--------------|---------|----------|---------|--------------|
| 1950 | 21,165 | | | 6.0 | 10,234 | | | 2.9 |
| 1960 | 27,064 | 5,899 | 27.9 | 5.8 | 13,672 | 3,438 | 33.6 | 2.9 |
| 1970 | 29,851 | 2,787 | 10.3 | 5.6 | 19,945 | 6,273 | 45.9 | 3.7 |
| 1980 | 31,744 | 1,893 | 6.3 | 5.1 | 27,674 | 7,729 | 38.8 | 4.4 |
| 1990 | 31,767 | 23 | 0.1 | 4.7 | 31,969 | 4,295 | 15.5 | 4.7 |
| 2000 | 31,449 | -318 | -1.0 | 4.2 | 39,370 | 7,401 | 23.2 | 5.3 |
| 2010 | 30,530 | -919 | -2.9 | 3.8 | 45,121 | 5,751 | 14.6 | 5.6 |

| | Ноц | seholds in the | City of Wauk | esha | Household | s in the Remai | nder of Wauk | esha County |
|------|--------|----------------|--------------------|---------------------|-----------|----------------|--------------------|---------------------|
| | | | e from g Census | Percent of | | | e from g Census | Percent of |
| Year | Number | Absolute | Percent | Region Total | Number | Absolute | Percent | Region Total |
| 1950 | 5,782 | | | 1.6 | 17,817 | | | 5.0 |
| 1960 | 8,572 | 2,790 | 48.3 | 1.8 | 33,822 | 16,005 | 89.8 | 7.3 |
| 1970 | 11,748 | 3,176 | 37.1 | 2.2 | 50,187 | 16,365 | 48.4 | 9.4 |
| 1980 | 17,644 | 5,896 | 50.2 | 2.8 | 70,908 | 20,721 | 41.3 | 11.3 |
| 1990 | 21,235 | 3,591 | 20.4 | 3.1 | 84,755 | 13,847 | 19.5 | 12.5 |
| 2000 | 25,663 | 4,428 | 20.9 | 3.4 | 109,566 | 24,811 | 29.3 | 14.6 |
| 2010 | 28,295 | 2,632 | 10.3 | 3.5 | 124,368 | 14,802 | 13.5 | 15.5 |

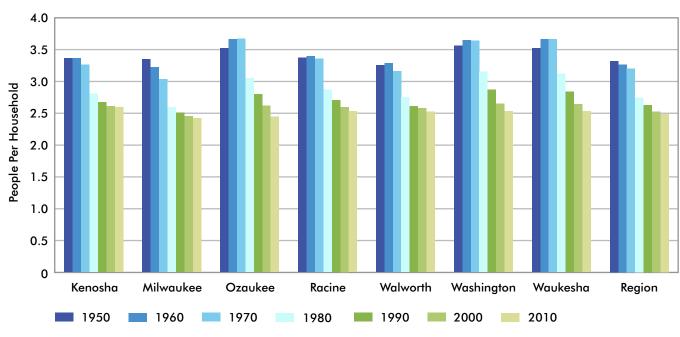
Source: U.S. Bureau of the Census and SEWRPC

Table 2.9Average Household Size in the Region by County: 1950-2010

| | | | Average | e People per Ho | usehold | | |
|------------|------|------|---------|-----------------|---------|------|------|
| County | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 | 2010 |
| Kenosha | 3.36 | 3.36 | 3.26 | 2.80 | 2.67 | 2.60 | 2.58 |
| Milwaukee | 3.34 | 3.21 | 3.04 | 2.59 | 2.50 | 2.43 | 2.41 |
| Ozaukee | 3.51 | 3.65 | 3.66 | 3.04 | 2.79 | 2.61 | 2.47 |
| Racine | 3.37 | 3.39 | 3.35 | 2.86 | 2.70 | 2.59 | 2.52 |
| Walworth | 3.25 | 3.28 | 3.16 | 2.74 | 2.60 | 2.57 | 2.51 |
| Washington | 3.55 | 3.64 | 3.63 | 3.14 | 2.86 | 2.65 | 2.53 |
| Waukesha | 3.51 | 3.66 | 3.66 | 3.11 | 2.83 | 2.63 | 2.52 |
| Region | 3.36 | 3.30 | 3.20 | 2.75 | 2.62 | 2.52 | 2.47 |

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





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

The average household size⁵ for the Region decreased from 2.52 people in 2000 to 2.47 people in 2010. This decrease is a continuation of a longterm trend in declining average household size for the Region over the past 60 years. A particularly large decrease in average household size occurred between 1970 and 1980. Table 2.9 and Figure 2.5 show that each of the seven counties in the Region have experienced a similar long-term trend of declining household size. The decline in household size is related in part to changing household types. Single-person households and other nonfamily households have increased at a much faster rate than family households in the Region over the past four decades.

⁵ Average household size is calculated by dividing the household population by the number of households.

Table 2.10Employment in the Region, Wisconsin, and the United States: 1950-2010

| | | Region | | | Wisconsin | | |
|------|-----------|--------------------|---------|-----------|---------------------|---------|--------------------------------------|
| | | Chang Preceding | | | Change Preceding | | Region Employment as a Percent of |
| Year | Jobs | Number | Percent | Jobs | Number | Percent | Wisconsin |
| 1950 | 573,500 | | | 1,413,400 | | | 40.6 |
| 1960 | 673,000 | 99,500 | 17.3 | 1,659,400 | 246,000 | 17.4 | 40.6 |
| 1970 | 784,900 | 111,900 | 16.6 | 1,929,100 | 269,700 | 16.3 | 40.7 |
| 1980 | 945,900 | 161,000 | 20.5 | 2,423,800 | 494,700 | 25.6 | 39.0 |
| 1990 | 1,054,000 | 108,100 | 11.4 | 2,789,200 | 365,400 | 15.1 | 37.8 |
| 2000 | 1,209,800 | 155,800 | 14.8 | 3,385,800 | 596,600 | 21.4 | 35.7 |
| 2010 | 1,176,600 | -33,200 | -2.7 | 3,422,300 | 36,500 | 1.1 | 34.4 |

| | | Region | | | United States | | |
|------|-----------|--------------------|--------------------|-------------|----------------------|---------|--|
| | | Chang Preceding | e from g Census | | Change Preceding | | Region Employment as a Percent of the |
| Year | Jobs | Number | Percent | Jobs | Number | Percent | United States |
| 1950 | 573,500 | | | 61,701,200 | | | 0.93 |
| 1960 | 673,000 | 99,500 | 17.3 | 72,057,000 | 10,355,800 | 16.8 | 0.93 |
| 1970 | 784,900 | 111,900 | 16.6 | 88,045,600 | 15,988,600 | 22.2 | 0.89 |
| 1980 | 945,900 | 161,000 | 20.5 | 111,482,200 | 23,436,600 | 26.6 | 0.85 |
| 1990 | 1,054,000 | 108,100 | 11.4 | 135,612,900 | 24,130,700 | 21.6 | 0.78 |
| 2000 | 1,209,800 | 155,800 | 14.8 | 163,303,800 | 27,690,900 | 20.4 | 0.74 |
| 2010 | 1,176,600 | -33,200 | -2.7 | 171,525,700 | 8,221,900 | 5.0 | 0.69 |

Note: Excludes military employment, which amounted to 6,100 jobs in the Region, 16,700 jobs in Wisconsin, and 2,101,000 jobs in the United States in 2010.

Source: U.S. Bureau of Economic Analysis and SEWRPC

Employment

Information regarding the number and type of employment opportunities, or jobs, in an area is an important measure of the size and structure of the area's economy. A summary of employment and personal income data is presented in this section. The data pertain to both wage and salary employment and the self-employed, and include full- and part-time jobs. Detailed findings are presented in SEWRPC Technical Report No. 10 (5th Edition), *The Economy of Southeastern Wisconsin*, dated April 2013. Technical Report No. 10 also includes current and historic data regarding the Region's labor force.

Historic Trends and Distribution Among Counties

The number of jobs in the Region, as reported by the U.S. Bureau of Economic Analysis, fluctuated somewhat between 2000 and 2010. The number of jobs decreased during the early 2000s, increased during the mid-2000s, and decreased again after 2008. The number of jobs in the Region stood at 1,176,600 in 2010, about 33,200 jobs, or 2.7 percent, less than in 2000. The Region's share of Statewide jobs decreased from 36 percent in 2000 to 34 percent in 2010. The Region's share of national employment also decreased during the 2000s.

Table 2.10 shows that Wisconsin and the Nation gained jobs during the 2000s, but at a much slower rate than previous decades. The State gained 36,500 jobs in the 2000s (1.1 percent increase), compared to 596,600 during the 1990s (21.4 percent increase). The Nation gained 8,221,900 jobs in the 2000s (5.0 percent increase), compared to 27,690,900 during the 1990s (20.4 percent increase). Job gains in the Region were more modest than the State and Nation during the 1990s. The Region gained 155,800 jobs, which was a 14.8 percent increase.

There were 1,176,600 jobs in the Region in 2010, which is 2.7% fewer jobs than in 2000.

Wisconsin and the Nation gained jobs during the 2000s, but at a much slower rate than previous decades.

Table 2.11Employment in the Region by County: 1950-2010

| | | Kenosho | | | | Milwauke | | |
|------|---------|----------|--------------------|--------------------|-----------|--------------------|-----------|--------------------|
| | | Chang | e from g Census | Percent | | Chang Preceding | | Percent |
| Year | Jobs | Number | Percent | of Region Total | Jobs | Number | Percent | of Region Total |
| 1950 | 29,100 | | | 5.1 | 453,500 | | | 79.1 |
| 1960 | 42,200 | 13,100 | 45.0 | 6.3 | 503,300 | 49,800 | 11.0 | 74.8 |
| 1970 | 42,100 | -100 | -0.2 | 5.4 | 525,200 | 21,900 | 4.4 | 66.9 |
| 1980 | 54,000 | 11,900 | 28.3 | 5.7 | 581,700 | 56,500 | 10.8 | 61.5 |
| 1990 | 51,800 | -2,200 | -4.1 | 4.9 | 604,700 | 23,000 | 4.0 | 57.4 |
| 2000 | 67,900 | 16,100 | 31.1 | 5.6 | 618,300 | 13,600 | 2.2 | 51.1 |
| 2010 | 74,900 | 7,000 | 10.3 | 6.4 | 575,400 | -42,900 | -6.9 | 48.9 |
| 2010 | /4,/00 | Ozauke | | 0.4 | 3/3,400 | , | County | 40.7 |
| | | | e from | Percent | | Chang | | Percent |
| | | • | g Census | of Region | | Preceding | | of Region |
| Year | Jobs | Number | Percent | Total | Jobs | Number | Percent | Total |
| 1950 | 6,600 | | | 1.1 | 44,500 | | | 7.7 |
| 1960 | 10,200 | 3,600 | 54.5 | 1.5 | 49,900 | 5,400 | 12.1 | 7.4 |
| 1970 | 21,300 | 11,100 | 108.8 | 2.7 | 64,600 | 14,700 | 29.5 | 8.2 |
| 1980 | 28,200 | 6,900 | 32.4 | 3.0 | 81,000 | 16,400 | 25.4 | 8.6 |
| 1990 | 35,100 | 6,900 | 24.5 | 3.3 | 88,900 | 7,900 | 9.8 | 8.4 |
| 2000 | 50,400 | 15,300 | 43.6 | 4.2 | 93,800 | 4,900 | 5.5 | 7.8 |
| 2010 | 52,500 | 2,100 | 4.2 | 4.5 | 88,300 | -5,500 | -5.9 | 7.5 |
| | | Walwort | h County | | , | Washingt | on County | |
| | | Chang | | Percent | | Change from | | Percent |
| | | | g Census | of Region | | Preceding | | of Region |
| Year | Jobs | Number | Percent | Total | Jobs | Number | Percent | Total |
| 1950 | 13,200 | | | 2.3 | 10,200 | | | 1.8 |
| 1960 | 19,600 | 6,400 | 48.5 | 2.9 | 15,200 | 5,000 | 49.0 | 2.3 |
| 1970 | 26,400 | 6,800 | 34.7 | 3.4 | 24,300 | 9,100 | 59.9 | 3.1 |
| 1980 | 33,400 | 7,000 | 26.5 | 3.5 | 35,100 | 10,800 | 44.4 | 3.7 |
| 1990 | 39,600 | 6,200 | 18.6 | 3.8 | 45,800 | 10,700 | 30.5 | 4.3 |
| 2000 | 51,200 | 11,600 | 29.3 | 4.2 | 60,300 | 14,500 | 31.7 | 5.0 |
| 2010 | 52,700 | 1,500 | 2.9 | 4.5 | 63,900 | 3,600 | 6.0 | 5.4 |
| | | Waukesh | a County | | | Reg | lion | |
| | | | e from | Percent | | Chang | | Percent |
| | | Precedin | g Census | of Region | | Preceding | g Census | of Region |
| Year | Jobs | Number | Percent | Total | Jobs | Number | Percent | Total |
| 1950 | 16,400 | | | 2.9 | 573,500 | | | 100.0 |
| 1960 | 32,600 | 16,200 | 98.8 | 4.8 | 673,000 | 99,500 | 17.3 | 100.0 |
| 1970 | 81,000 | 48,400 | 148.5 | 10.3 | 784,900 | 111,900 | 16.6 | 100.0 |
| 1980 | 132,500 | 51,500 | 63.6 | 14.0 | 945,900 | 161,000 | 20.5 | 100.0 |
| 1990 | 188,100 | 55,600 | 42.0 | 17.9 | 1,054,000 | 108,100 | 11.4 | 100.0 |
| 2000 | 267,900 | 79,800 | 42.4 | 22.1 | 1,209,800 | 155,800 | 14.8 | 100.0 |
| 2010 | 268,900 | 1,000 | 0.4 | 22.8 | 1,176,600 | -33,200 | -2.7 | 100.0 |

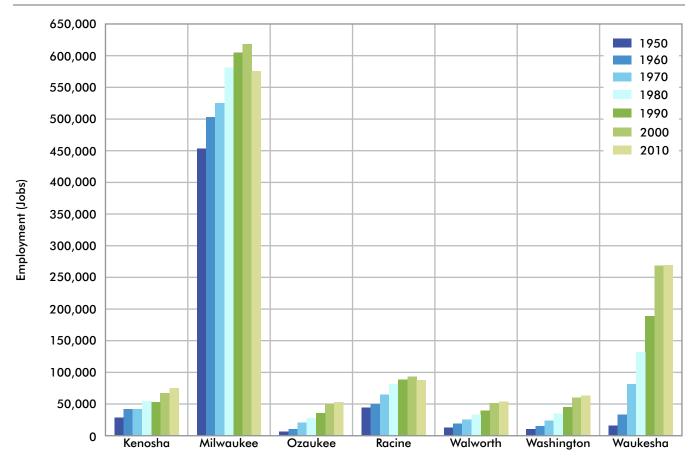
Source: U.S. Bureau of Economic Analysis and SEWRPC

Historically, both national and regional employment levels tend to fluctuate in the short-term, rising and falling in accordance with business cycles. The long period of uninterrupted job growth between 1983 and 2000 is unusual in this respect. Total employment increased each year nationally and in the Region, with the exception of a slight decrease in 1991.

Table 2.11 and Figure 2.6 show current and historic employment levels in the Region by county. Five of the seven counties in the Region gained jobs between 2000 and 2010. Kenosha County gained 7,000 jobs during the 2000s, which was the most of any county in the Region. There were also job increases in Washington County (3,600 jobs), Ozaukee County (2,100 jobs), Walworth County (1,500 jobs), and Waukesha County (1,000 jobs).

Kenosha, Ozaukee, Walworth, Washington, and Waukesha Counties gained jobs during the 2000s.

Figure 2.6 Employment in the Region by County: 1950-2010



Source: U.S. Bureau of Economic Analysis and SEWRPC

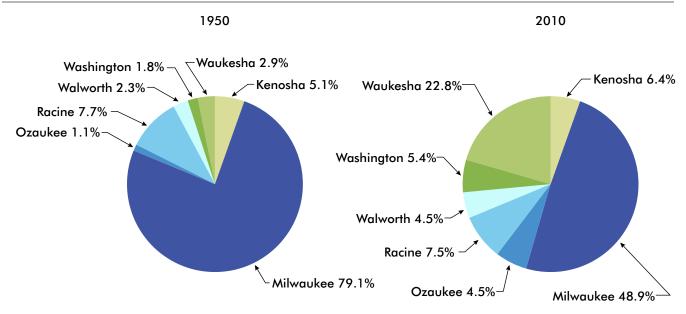
The number of jobs decreased in both Milwaukee and Racine Counties, with much of the decrease occurring during the recession in the late 2000s.

Milwaukee and Racine Counties both experienced a decrease in their share of total regional employment during the 2000s, while the share in each of the other five counties increased. Figure 2.7 shows that Milwaukee County has experienced a substantial decrease in its share of regional employment over the last six decades, and Waukesha County has experienced a substantial increase. Ozaukee, Walworth, and Washington Counties have experienced gradual increases. The regional share in Kenosha County has increased between 1950 and 2010 with some fluctuations. Racine County has also experienced fluctuations over this time period, with its share of total regional employment about the same in 2010 as it was in 1950.

Providing affordable housing for workers is important in areas of the Region experiencing employment growth, and workforce housing was one of the primary concerns raised by business groups, employers, and communities when the Commission was developing the regional housing plan (adopted in March 2013). A job/housing analysis was conducted as part of the housing plan to help determine the balance between job wages and housing costs in the Region. The analysis was conducted at a necessarily general, regionwide scope, which was appropriate for use in developing housing recommendations at a regional level. The analysis compares the percentage of lower-cost

Providing affordable housing for workers is important in areas of the Region experiencing job growth.

Figure 2.7 Share of Regional Employment by County: 1950 and 2010



Source: U.S. Bureau of the Economic Analysis and SEWRPC

housing (generally defined as multifamily and two-family housing) and moderate-cost housing (generally defined as smaller single-family homes on smaller lots) to the percentage of lower- and moderate-wage jobs in 39 subareas of the Region. Map 2.9 shows that both lower- and moderate-cost job/housing imbalances can be found in the outlying portions of the Region where recent employment growth has occurred.⁶

Employment by Industry

Information regarding employment by industry group provides insight into the structure of the regional economy and changes in that structure over time. Table 2.12 shows that the service sector made up the largest portion of regional employment in 2010, accounting for half of total employment. Retail trade and manufacturing were the next largest industry sectors, accounting for 16 percent and 13 percent of the total regional employment, respectively. These three industry sectors collectively accounted for almost 80 percent of the jobs in the Region.

Service sector employment in the Region is further broken down in Table 2.13. Health care and social assistance jobs accounted for 26 percent of all service jobs in 2010, followed by administrative and waste management services (13 percent); finance and insurance (12 percent); and professional, scientific, and technical services (11 percent).

The service, retail trade, and manufacturing sectors account for almost 80% of the Region's jobs.

⁶ The job/housing balance analysis is fully documented in the regional housing plan (SEWRPC Planning Report No. 54, A Regional Housing Plan for Southeastern Wisconsin: 2035). The job/housing balance analysis includes an analysis of potential existing imbalances based on 2010 wage and housing data, shown on Map 2.9, and projected imbalances for the year 2035 based on local government comprehensive plans. Projected job/housing imbalances are shown on Map 100 of the regional housing plan.

Map 2.9 Potential Job/Housing Imbalances by Housing Analysis Area in the Region: 2010

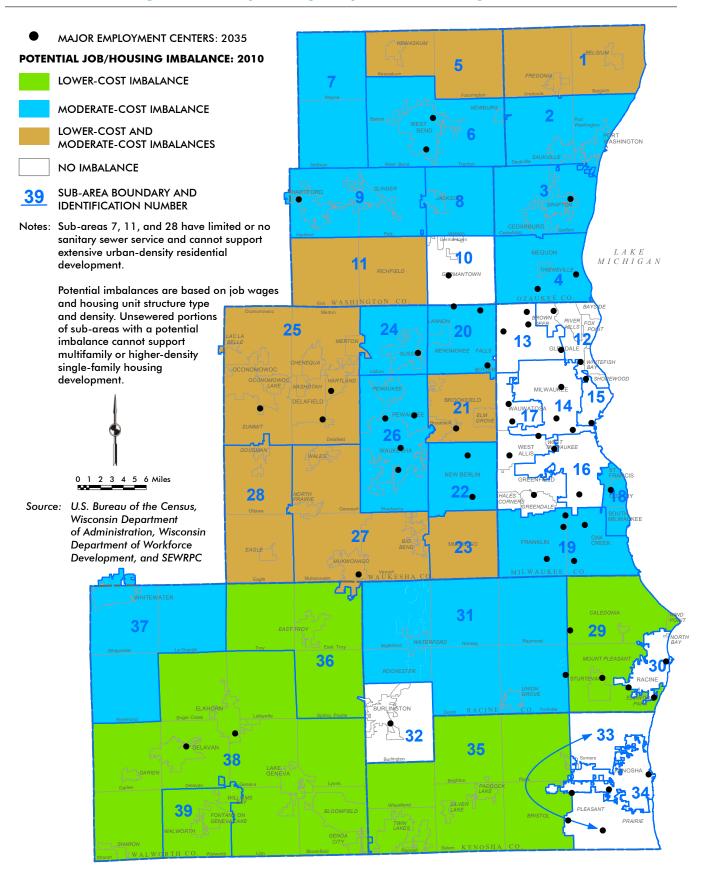


Table 2.12 Employment by General Industry Group in the Region, Wisconsin, and the United States: 2010

| | Regie | on | Wiscor | nsin | United St | tates |
|---------------------------|-----------|---------------------|-----------|---------------------|-------------|---------------------|
| General Industry Group | Jobs | Percent of Total | Jobs | Percent of Total | Jobs | Percent of Total |
| Agriculture | 5,200 | 0.4 | 92,900 | 2.7 | 2,657,000 | 1.5 |
| Construction | 45,900 | 3.9 | 156,700 | 4.6 | 8,863,700 | 5.2 |
| Manufacturing | 148,100 | 12.6 | 445,200 | 13.0 | 12,107,900 | 7.1 |
| Wholesale Trade | 48,800 | 4.1 | 123,200 | 3.6 | 6,045,000 | 3.5 |
| Retail Tradeª | 185,800 | 15.8 | 570,500 | 16.7 | 27,850,200 | 16.2 |
| Services | 584,400 | 49.7 | 1,470,700 | 43.0 | 83,207,100 | 48.5 |
| Government ^ь | 117,700 | 10.0 | 420,600 | 12.3 | 22,578,000 | 13.2 |
| Other | 40,700 | 3.5 | 142,500 | 4.1 | 8,216,800 | 4.8 |
| Total | 1,176,600 | 100.0 | 3,422,300 | 100.0 | 171,525,700 | 100.0 |

^a Retail trade employment includes the standard NAICS retail employment categories (NAICS codes 44 and 45), plus food services/drinking places (NAICS code 722).

^b Government employment includes all employees who work for government agencies and enterprises, regardless of the NAICS code of such entities. Government employment includes, among others, Federal, State, county, and local government staff; police; firefighters; public utility workers; and public school teachers.

Source: U.S. Bureau of Economic Analysis and SEWRPC

Table 2.13Services Employment by Service Sector in the Region: 2010

| Service Sector | Jobs | Percent of Service Jobs | Percent of Total Jobs |
|--|---------|----------------------------|--------------------------|
| Information | 19,700 | 3.4 | 1.7 |
| Finance and insurance | 67,700 | 11.6 | 5.8 |
| Real estate and rental and leasing | 44,100 | 7.5 | 3.7 |
| Professional, scientific, and technical services | 63,300 | 10.8 | 5.4 |
| Management of companies and enterprises | 24,000 | 4.1 | 2.0 |
| Administrative and waste management services | 74,100 | 12.7 | 6.3 |
| Educational services | 37,900 | 6.5 | 3.2 |
| Health care and social assistance | 154,500 | 26.4 | 13.1 |
| Arts, entertainment, and recreation | 25,500 | 4.4 | 2.2 |
| Accommodation ^a | 8,900 | 1.5 | 0.8 |
| Other services | 64,700 | 11.1 | 5.5 |
| Total | 584,400 | 100.0 | 49.7 |

^a Excludes food service and drinking places (NAICS code 722).

Source: U.S. Bureau of Economic Analysis and SEWRPC

Table 2.14 and Figure 2.8 show regional trends in employment by industry from 1970 to 2010.⁷ The continuing shift in the regional economy from manufacturing to a service orientation was the most significant economic trend during this time period. Manufacturing employment decreased by 31 percent between 2000 and 2010, and by 38 percent over the last four decades. Conversely, service-related employment increased by 10 percent during the 2000s, and by 183 percent over the last four decades.

Service jobs have increased by 183% and manufacturing jobs have decreased by 38% since 1970.

⁷ The North American Industry Classification System (NAICS) has replaced the prior Standard Industrial Classification System (SIC) for classifying employment. Employment by industry data for the years 2001-2010 are largely based on the NAICS. Data for the years 1970-2000 are based on SIC, with adjustments made to certain industry groups to achieve as much consistency with NAICS data as possible. Additional explanation is presented in Table 11 of SEWRPC Technical Report No. 10.

Table 2.14

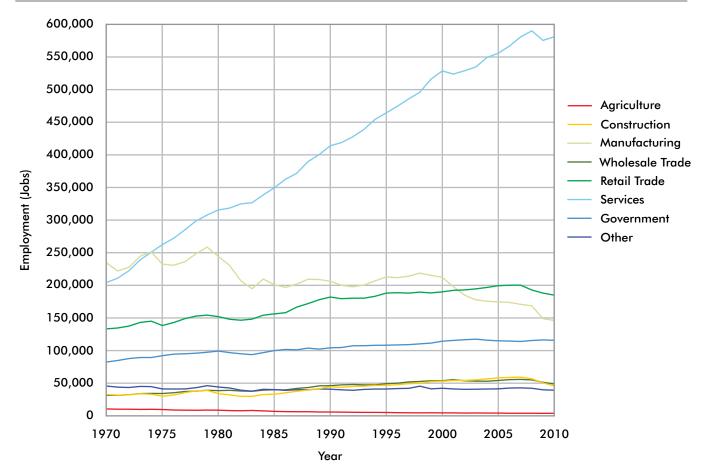
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| | 1970 | 70 | 1980 | 0 | 1990 | 0 | 2000 | 2 | 2010 | 0 |
|---------------------------|------------------|---------------------|-----------|---------------------|------------------|---------------------|------------------|---------------------|------------------|---------------------|
| General Industry Group | Number | Percent of Total | Number | Percent of Total | Number | Percent of Total | Nimber | Percent of Total | Number | Percent of Total |
| Aariculture | 12.000 | 1.5 | 10.000 | 1.0 | 7.200 | 0.7 | 5.900 | 0.5 | 5.200 | 0.4 |
| Construction | 32,400 | 4.1 | 33,700 | 3.6 | 44,300 | 4.2 | 53,000 | 4.4 | 45,900 | 3.9 |
| Manufacturing | 237,500 | 30.2 | 246,500 | 26.1 | 208,400 | 19.8 | 214,500 | 17.7 | 148,100 | 12.6 |
| Wholesale Trade | 31,200 | 4.0 | 38,500 | 4.1 | 46,100 | 4.4 | 53,700 | 4.4 | 48,800 | 4.1 |
| Retail Trade | 133,900 | 17.1 | 152,600 | 16.1 | 182,900 | 17.3 | 190,800 | 15.8 | 185,800 | 15.8 |
| Services | 206,400 | 26.3 | 317,900 | 33.6 | 416,800 | 39.5 | 531,900 | 44.0 | 584,400 | 49.7 |
| Government | 84,400 | 10.8 | 101,100 | 10.7 | 106,100 | 10.1 | 116,400 | 9.6 | 117,700 | 10.0 |
| Other | 47,100 | 6.0 | 45,600 | 4.8 | 42,200 | 4.0 | 43,600 | 3.6 | 40,700 | 3.5 |
| Total | 784,900 | 100.0 | 945,900 | 100.0 | 1,054,000 | 100.0 | 1,209,800 | 100.0 | 1,176,600 | 100.0 |
| General | Change 1970-1980 | 970-1980 | Change 19 | 1980-1990 | Change 1990-2000 | 90-2000 | Change 2000-2010 | 00-2010 | Change 1970-2010 | 970-2010 |
| Industry Group | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Agriculture | -2,000 | -16.7 | -2,800 | -28.0 | -1,300 | -18.1 | -700 | -11.9 | -6,800 | -56.7 |
| Construction | 1,300 | 4.0 | 10,600 | 31.5 | 8,700 | 19.6 | -7,100 | -13.4 | 13,500 | 41.7 |
| Manufacturing | 6,000 | 3.8 | -38,100 | -15.5 | 6,100 | 2.9 | -66,400 | -31.0 | -89,400 | -37.6 |
| Wholesale Trade | 7,300 | 23.4 | 7,600 | 19.7 | 7,600 | 16.5 | -4,900 | -9.1 | 17,600 | 56.4 |
| Retail Trade | 18,700 | 14.0 | 30,300 | 19.9 | 7,900 | 4.3 | -5,000 | -2.6 | 51,900 | 38.8 |
| Services | 111,500 | 54.0 | 98,900 | 31.1 | 115,100 | 27.6 | 52,500 | 9.9 | 378,000 | 183.1 |
| Government | 16,700 | 19.8 | 5,000 | 4.9 | 10,300 | 9.7 | 1,300 | 1.1 | 33,300 | 39.5 |
| Other | -1,500 | -3.2 | -3,400 | -7.5 | 1,400 | 3.3 | -2,900 | -6.7 | -6,400 | -13.6 |
| Total | 161,000 | 20.5 | 108,100 | 11.4 | 155,800 | 14.8 | -33,200 | -2.7 | 391,700 | 49.9 |

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Source: U.S. Bureau of Economic Analysis and SEWRPC





Source: U.S. Bureau of Economic Analysis and SEWRPC

The proportion of manufacturing jobs relative to total jobs in the Region has decreased from 30 percent in 1970 to 13 percent in the 2010 and the proportion of service-related jobs has increased from 26 percent in 1970 to 50 percent in 2010 due to these differential growth rates. Other major industry groups have maintained a relatively stable proportion of the total employment in the Region. The State and the Nation have experienced a similar shift from manufacturing to service-related employment; however, both the Region and the State have a larger share of manufacturing relative to total employment than the Nation.

Personal Income

Personal income is another indicator of the general trend of the economy of an area. Table 2.15 shows the Region's per capita income was \$25,900 in 2010, which is about the same as per capita income for the State and Nation. Per capita income in the Region decreased by 11.3 percent during the 2000s (measured in constant dollars). Constant dollar per capita income for Wisconsin and the Nation also decreased. The Region's median family income was \$65,400 in 2010, which exceeded that of the State and Nation. Median family income (constant dollar) in the Region decreased by 11.0 percent during the 2000s, and also decreased for the State and the Nation. The Region and State have a larger share of manufacturing jobs relative to total jobs than the Nation.

| eographic Area | Personal Income | 1999 | 2010 | Percent Change |
|-------------------|-----------------------|----------|----------|----------------|
| Ś | Per Capita Income | | | |
| ate | Reported Dollars | \$21,600 | \$26,100 | 20.8 |
| Ste | Constant 2010 Dollars | 27,700 | 26,100 | -5.8 |
| ed | Median Family Income | | | |
| United States | Reported Dollars | \$50,000 | \$60,600 | 21.2 |
| | Constant 2010 Dollars | | 60,600 | -5.5 |
| | Per Capita Income | | | |
| Wisconsin | Reported Dollars | \$21,300 | \$25,500 | 19.7 |
| | Constant 2010 Dollars | 27,300 | 25,500 | -6.6 |
| isco | Median Family Income | | | |
| 3 | Reported Dollars | \$52,900 | \$62,100 | 17.4 |
| | Constant 2010 Dollars | 67,800 | 62,100 | -8.4 |
| | Per Capita Income | | | |
| _ | Reported Dollars | \$22,800 | \$25,900 | 13.6 |
| jö | Constant 2010 Dollars | 29,200 | 25,900 | -11.3 |
| Region | Median Family Income | | | |
| - | Reported Dollars | \$57,400 | \$65,400 | 13.9 |
| | Constant 2010 Dollars | 73,500 | 65,400 | -11.0 |

Table 2.15 Personal Income Levels in the United States, Wisconsin, and the Region: 1999 and 2010

Source: U.S. Bureau of the Census, U.S. Bureau of Labor Statistics, and SEWRPC

Table 2.16 shows there are considerable differences in personal income levels among the seven counties in the Region and between the Region's largest cities and their surrounding areas. Ozaukee County (\$39,000) and Waukesha County (\$34,900) had the highest per capita income levels among the Region's counties in 2010. Milwaukee County (\$22,400) had the lowest per capita income level, and the City of Milwaukee (\$17,900) had a significantly lower per capita income level than the remainder of Milwaukee County (\$29,500). Each of the Region's seven counties and four largest cities experienced a decrease in constant dollar per capita income during the 2000s. Median family income levels follow similar patterns.

Table 2.17 shows there are also considerable differences in poverty levels among the seven counties in the Region and between the Region's largest cities and their surrounding areas. Ozaukee County (3.2 percent) had the lowest percentage of families in poverty among the Region's counties in 2010 and Milwaukee County (17.3 percent) had the highest. The Cities of Milwaukee, Racine, Kenosha, and Waukesha each had a significantly higher percentage of families in poverty than the remainders of their respective counties. These concentrations of families in poverty are shown on Map 2.10.

Population and Employment Trends in Northeastern Illinois

Table 2.18 shows that Lake and McHenry Counties, located immediately south of the Region, continued to grow and develop during the 2000s, although at a slower rate than the 1990s. The population of Lake County grew by 9 percent during the 2000s, compared to 25 percent during the 1990s. The population of McHenry County grew by 19 percent during the 2000s, compared to 42 percent during the 1990s. The combined population of the two counties was over 1,012,000 people in 2010. Both counties also experienced moderate employment growth during the 2000s. The combined total employment for the two counties was about 535,000 jobs in 2010. A significant number of Kenosha and Walworth County residents are employed in Northeastern Illinois.

The Cities of Milwaukee, Racine, Kenosha, and Waukesha each have significantly more families in poverty than the rest of their respective counties.

Table 2.16Personal Income Levels in the Region by Area: 1999 and 2010

| | P | er Capita Inco | me | Med | dian Family In | |
|---|----------|--------------------|---------|--------------------|--------------------|---------|
| | | | Percent | | | Percent |
| Geographic Area | 1999 | 2010 | Change | 1999 | 2010 | Change |
| City of Kenosha | | | | | | |
| Reported Dollars | \$19,600 | \$21,900 | 11.7 | \$51,000 | \$56,300 | 10.4 |
| Constant 2010 Dollars | 25,100 | 21,900 | -12.7 | 65,300 | 56,300 | -13.8 |
| Remainder of Kenosha County | | | | | | |
| Reported Dollars | \$23,600 | \$30,100 | 27.5 | \$64,900 | \$74,500 | 14.8 |
| Constant 2010 Dollars | 30,200 | 30,100 | -0.3 | 83,100 | 74,500 | -10.3 |
| Kenosha County | | | | | | |
| Reported Dollars | \$21,200 | \$25,500 | 20.3 | \$56,500 | \$65,500 | 15.9 |
| Constant 2010 Dollars | 27,200 | 25,500 | -6.3 | 72,400 | 65,500 | -9.5 |
| City of Milwaukee | | | | | | |
| Reported Dollars | \$16,200 | \$17,900 | 10.5 | \$37,900 | \$38,300 | 1.1 |
| Constant 2010 Dollars | 20,800 | 17,900 | -13.9 | 48,600 | 38,300 | -21.2 |
| Remainder of Milwaukee County | | | | | | |
| Reported Dollars | \$26,500 | \$29,500 | 11.3 | \$61,900 | \$72,200 | 16.6 |
| Constant 2010 Dollars | 33,900 | 29,500 | -13.0 | 79,300 | 72,200 | -9.0 |
| Milwaukee County | | | | | | |
| Reported Dollars | \$19,900 | \$22,400 | 12.6 | \$47,200 | \$50,700 | 7.4 |
| Constant 2010 Dollars | 25,500 | 22,400 | -12.2 | 60,500 | 50,700 | -16.2 |
| Ozaukee County | | | | | | |
| Reported Dollars | \$31,900 | \$39,000 | 22.3 | \$72,500 | \$89,200 | 23.0 |
| Constant 2010 Dollars | 40,900 | 39,000 | -4.6 | 92,900 | 89,200 | -4.0 |
| City of Racine | | | | | • | |
| Reported Dollars | \$17,700 | \$18,200 | 2.8 | \$45,200 | \$39,100 | -13.5 |
| Constant 2010 Dollars | 22,700 | 18,200 | -19.8 | 57,900 | 39,100 | -32.5 |
| Remainder of Racine County | | | | | , | |
| , Reported Dollars | \$24,900 | \$29,500 | 18.5 | \$65,000 | \$77,100 | 18.6 |
| Constant 2010 Dollars | 31,900 | 29,500 | -7.5 | 83,300 | 77,100 | -7.4 |
| Racine County | | | | | • | |
| Reported Dollars | \$21,800 | \$25,600 | 17.4 | \$56,300 | \$62,200 | 10.5 |
| Constant 2010 Dollars | 27,900 | 25,600 | -8.2 | 72,100 | 62,200 | -13.7 |
| Walworth County | | , | | , | , | |
| Reported Dollars | \$21,200 | \$24,200 | 14.2 | \$55,300 | \$61,200 | 10.7 |
| Constant 2010 Dollars | 27,200 | 24,200 | -11.0 | 70,800 | 61,200 | -13.6 |
| Washington County | | /200 | | | / = 0 0 | |
| Reported Dollars | \$24,300 | \$28,800 | 18.5 | \$63,500 | \$74,400 | 17.2 |
| Constant 2010 Dollars | 31,100 | 28,800 | -7.4 | 81,300 | 74,400 | -8.5 |
| City of Waukesha | 01,100 | 20,000 | 7.7 | 01,000 | , 1,400 | -0.5 |
| , , , , , , | \$23,200 | \$26,500 | 14.2 | \$60,800 | \$69,200 | 13.8 |
| Reported Dollars Constant 2010 Dollars | 29,700 | \$28,500 26,500 | -10.8 | 77,900 | \$89,200 69,200 | -11.2 |
| Remainder of Waukesha County | 27,700 | 20,300 | -10.0 | 77,700 | 07,200 | -11.2 |
| Reported Dollars | \$30,500 | \$36,200 | 18.7 | \$74,700 | \$92,300 | 23.6 |
| Constant 2010 Dollars | 39,100 | \$38,200 36,200 | -7.4 | \$74,700 95,700 | \$92,300 92,300 | -3.6 |
| Waukesha County | 37,100 | 30,200 | -/.4 | /3,/00 | /2,000 | -3.0 |
| Reported Dollars | \$29,200 | \$34,900 | 19.5 | \$71,800 | \$87,600 | 22.0 |
| | | | | | | |
| Constant 2010 Dollars | 37,400 | 34,900 | -6.7 | 92,000 | 87,600 | -4.8 |

Source: U.S. Bureau of the Census, U.S. Bureau of Labor Statistics, and SEWRPC

Table 2.17Families in Poverty in the Region by Area: 2010

| Geographic Area | Total Families | Families in Poverty | Percent |
|-------------------------------|----------------|---------------------|---------|
| Kenosha County | 41,329 | 4,762 | 11.5 |
| City of Kenosha | 23,306 | 4,216 | 18.1 |
| Remainder of Kenosha County | 18,023 | 546 | 3.0 |
| Milwaukee County | 211,936 | 36,736 | 17.3 |
| City of Milwaukee | 125,710 | 31,721 | 25.2 |
| Remainder of Milwaukee County | 86,226 | 5,015 | 5.8 |
| Ozaukee County | 23,890 | 757 | 3.2 |
| Racine County | 47,084 | 5,675 | 12.1 |
| City of Racine | 17,512 | 3,984 | 22.8 |
| Remainder of Racine County | 29,572 | 1,691 | 5.7 |
| Walworth County | 27,957 | 2,704 | 9.7 |
| Washington County | 36,759 | 1,883 | 5.1 |
| Waukesha County | 108,718 | 4,142 | 3.8 |
| City of Waukesha | 17,305 | 1,554 | 9.0 |
| Remainder of Waukesha County | 91,413 | 2,588 | 2.8 |
| Region | 497,673 | 56,659 | 11.4 |

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

The Commission's land use inventory places all land and water areas of the Region into one of 65 discrete land use categories, which provides a basis for analyzing land use.

2.3 LAND USE

The Commission relies on two types of inventories and analyses in order to monitor urban growth and development in the Region—an urban growth analysis and a land use inventory. The urban growth analysis identifies concentrations of urban development and depicts the urbanization of the Region over the past 160 years. When related to urban population levels, the urban growth analysis provides a good basis for calculating urban population and household densities. By contrast, the Commission land use inventory is a more detailed inventory that places all land and water areas of the Region into one of 65 discrete land use categories, providing a basis for analyzing specific land uses. Both the urban growth analysis and the land use inventory for the Region have been updated to the year 2010 under the continuing regional planning program.

Urban Growth Analysis

The urban growth analysis shows the historical pattern of urban settlement, growth, and development of the Region since 1850 for selected points in time. Areas identified as urban under this time series analysis include areas of the Region 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.⁸

⁸ As part of the urban growth analysis, urban areas are defined as concentrations of residential, commercial, industrial, governmental, or institutional buildings or structures, along with their associated yards, parking, and service areas, having a combined area of five acres or more. In the case of residential uses, such areas must include at least 10 structures—over a maximum distance of one-half mile—located along a linear feature, such as a roadway or lakeshore, or at least 10 structures located in a relatively compact group within a residential subdivision. Urban land uses that do not meet these criteria because they lack the concentration of buildings or structures—such as cemeteries, airports, public parks, and golf courses—are identified as urban where such uses are surrounded on at least three sides by urban land uses that do meet the aforementioned criteria.

Map 2.10 Concentrations of Families in Poverty in the Region: 2008-2012

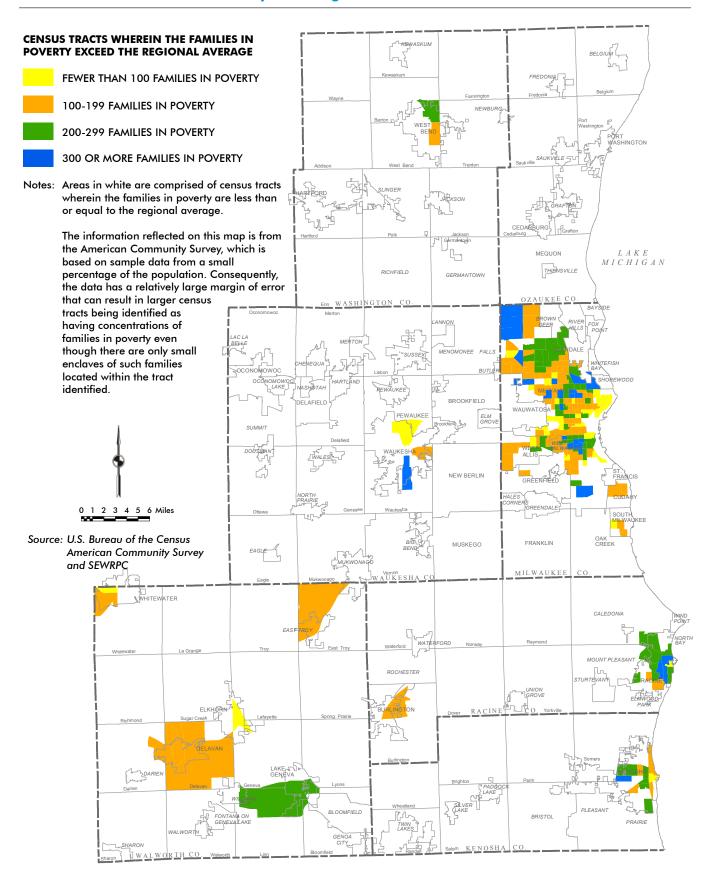


Table 2.18 Population and Employment in Lake and McHenry Counties, Illinois: 1980-2010

| | | | Population | | | Employment | |
|-------------------|------|------------|--------------------|--------------------|--------------|--------------------|---------|
| | | Population | Chang Preceding | e from g Census | Employment | Chang Preceding | |
| | Year | Level | Number | Percent | Level (Jobs) | Number | Percent |
| | 1980 | 440,372 | | | 186,200 | | |
| Lake ounty | 1990 | 516,418 | 76,046 | 17.3 | 273,100 | 86,900 | 46.7 |
| Lake County | 2000 | 644,356 | 127,938 | 24.8 | 390,000 | 116,900 | 42.8 |
| Ŭ | 2010 | 703,462 | 59,106 | 9.2 | 413,600 | 23,600 | 6.1 |
| > | 1980 | 147,987 | | | 56,300 | | |
| lenry unty | 1990 | 183,241 | 35,254 | 23.8 | 82,500 | 26,200 | 46.5 |
| McHenry County | 2000 | 260,077 | 76,836 | 41.9 | 110,400 | 27,900 | 33.8 |
| ΣŬ | 2010 | 308,760 | 48,683 | 18.7 | 121,200 | 10,800 | 9.8 |

Source: U.S. Bureau of the Census, U.S. Bureau of Economic Analysis, and SEWRPC

As part of the urban growth 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. 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. Urban growth for the years 1940, 1950, 1963, 1970, 1980, 1990, 2000, and 2010 was identified using aerial photographs for those years.

The urban growth analysis, updated through 2010, is presented graphically on Map 2.11. In 1850, the urban portion of the Region was concentrated primarily in the larger urban centers located at Burlington, Kenosha, Milwaukee, Port Washington, Racine, Waukesha, and West Bend, along with many smaller settlements throughout the Region. Over the 100-year period from 1850 to 1950, urban development in the Region occurred in a pattern resembling concentric rings around existing urban centers, resulting in a relatively compact regional settlement pattern. After 1950, there was a significant change in the pattern and rate of urban development in the Region. While substantial amounts of development continued to occur adjacent to established urban centers, considerable development also occurred in isolated enclaves in outlying areas of the Region. Map 2.11 indicates a continuation of this trend during the 2000s, with significant amounts of development occurring adjacent to existing urban centers, and with considerable development continuing to occur in scattered fashion in outlying areas.

The urban growth analysis, in conjunction with the Federal Censuses, provides a basis for calculating urban population and household densities in the Region and changes in density over time. Table 2.19 relates the urban area identified by the urban growth analysis with the urban population and urban households, going back to 1940. With minor exception, the "urban population" indicated in Table 2.19 is the total population of the Region excluding the rural farm population, as reported by the U.S. Bureau of the Census. Similarly, "urban households" as reported in that table consist of all households other than rural farm households.⁹

Urban development occurred in concentric rings around urban centers prior to 1950, resulting in a relatively compact regional settlement pattern. Considerable development started to occur in isolated enclaves in outlying areas of the Region after 1950.

⁹ The rural farm population and household data for 2010 were not reported in the 2010 Census; accordingly, those figures have been estimated for purposes of this analysis.

Map 2.11 Historic Urban Growth in the Region: 1850-2010

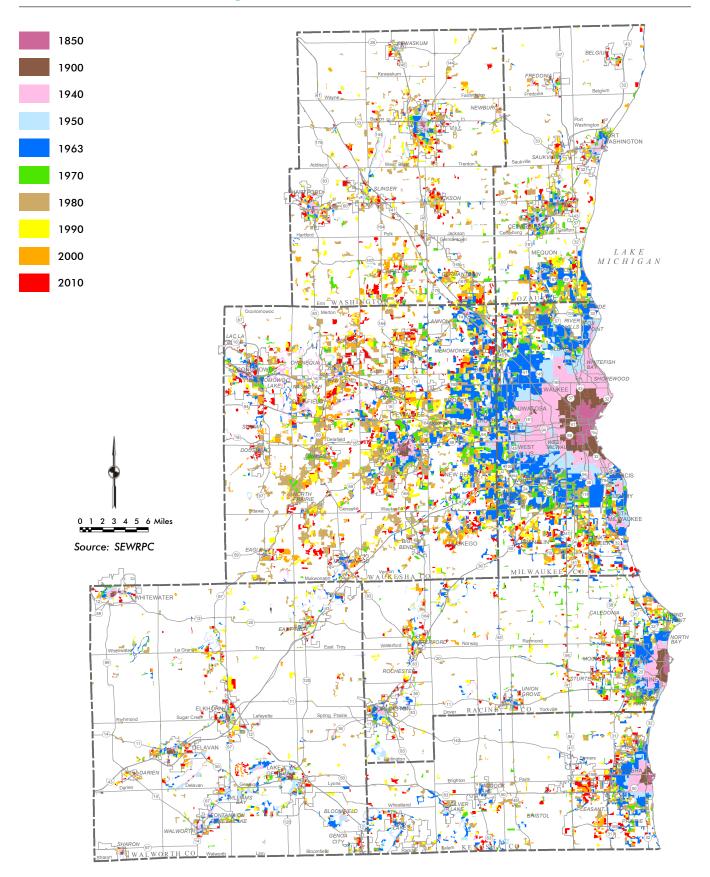


Table 2.19Urban Population and Household Density in the Region: 1940-2010

| | | Urban | Population | Urban I | louseholds |
|------|-------------------------------|---------------------|--|-------------------------|--|
| Year | Urban Areaª (square miles) | People ^b | Density (people per urban square mile) | Households ^c | Density (households per urban square mile) |
| 1940 | 93 | 991,535 | 10,662 | 272,077 | 2,926 |
| 1950 | 146 | 1,179,084 | 8,076 | 338,572 | 2,319 |
| 1963 | 282 | 1,634,200 | 5,795 | 470,856 | 1,670 |
| 1970 | 338 | 1,728,666 | 5,114 | 529,404 | 1,566 |
| 1980 | 444 | 1,749,238 | 3,940 | 623,441 | 1,404 |
| 1990 | 509 | 1,800,751 | 3,538 | 672,896 | 1,322 |
| 2000 | 579 | 1,923,674 | 3,322 | 746,500 | 1,289 |
| 2010 | 633 | 2,012,741 | 3,180 | 797,621 | 1,260 |

^a Based upon the Regional Planning Commission urban growth analysis.

^b Total population, excluding rural farm population, as reported in the Census; 1963 and 2010 are Commission estimates.

^c Total households, excluding rural farm households, as reported in the Census; 1963 and 2010 are Commission estimates.

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

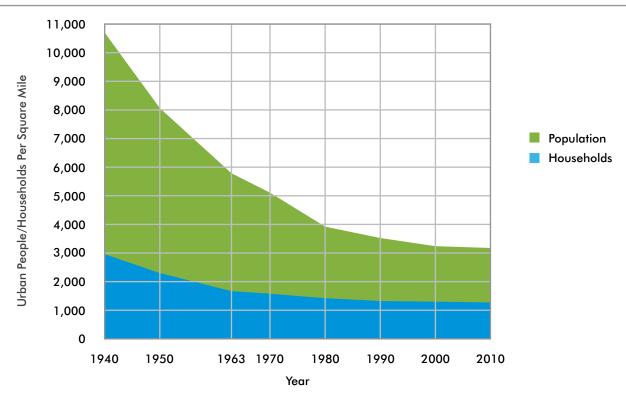


Figure 2.9 Urban Population and Household Density in the Region: 1940-2010

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

Urban population density has decreased every decade between 1940 and 2010, with the greatest decreases happening in the 1940's and 1950's. As indicated in Table 2.19 and Figure 2.9, the population density of the urban portion of the Region decreased modestly over the past two decades from about 3,500 people per square mile in 1990 to 3,300 in 2000 and 3,200 in 2010. This stands in marked contrast to the substantial decrease in urban population density that occurred in the Region between 1940 and 1980. The urban household density experienced a only slight decrease over the past two decades—from about 1,320 households per square mile in 1990 to 1,290 in 2000 and 1,260 in 2010.

Land Use Inventory

The Commission land use inventory identifies existing land use by detailed land use category for the entire area of the Region at selected points in time. The land use classification system used in the inventory consists of nine major categories that are divisible into 65 sub-categories, making the inventory suitable for land use and transportation planning; adaptable to stormwater drainage, public utility, and community facility planning; and compatible with other land use classification systems. Aerial photographs (orthophotographs) serve as the primary basis for identifying existing land use, supplemented by available oblique aerial photography and other secondary source material as appropriate. The most recent regional land use inventory was carried out based upon aerial photography taken in spring of 2010. Existing 2010 land use in the Region is shown on Map 2.12. The extent of existing land use in the Region in 2010 and prior years is indicated in Table 2.20.

Developed Land

As indicated in Table 2.20, developed lands in the Region—consisting of lands that have been developed for residential; commercial; industrial; transportation, communication, and utility; governmental and institutional; and recreational uses—encompassed about 779 square miles, or 29.0 percent of the total area of the Region, in 2010. Residential land encompassed 401 square miles, accounting for more than half of the developed land area of the Region, followed by transportation, communication, and utilities, with 214 square miles. Commercial land and industrial land each encompassed over 35 square miles. Governmental/institutional land and recreational land encompassed 37 square miles and 56 square miles, respectively.

The developed land area of the Region increased by 67 square miles, or 9.4 percent between 2000 and 2010, including the following:

- Residential land: 39.2 square miles (10.8 percent increase)
- Commercial land: 5.4 square miles (17.9 percent increase)
- Industrial land: 2.3 square miles (7.0 percent increase)
- Transportation, communication, and utility land: 11.1 square miles (5.5 percent increase)
- Governmental and institutional land: 3.3 square miles (9.8 percent increase)
- Recreational land: 5.6 square miles (11.1 percent increase)

Based upon available annual data on building permits and land subdivision activity, development activity in the Region slowed considerably during the major economic recession that began in late 2007.¹⁰

Undeveloped Land

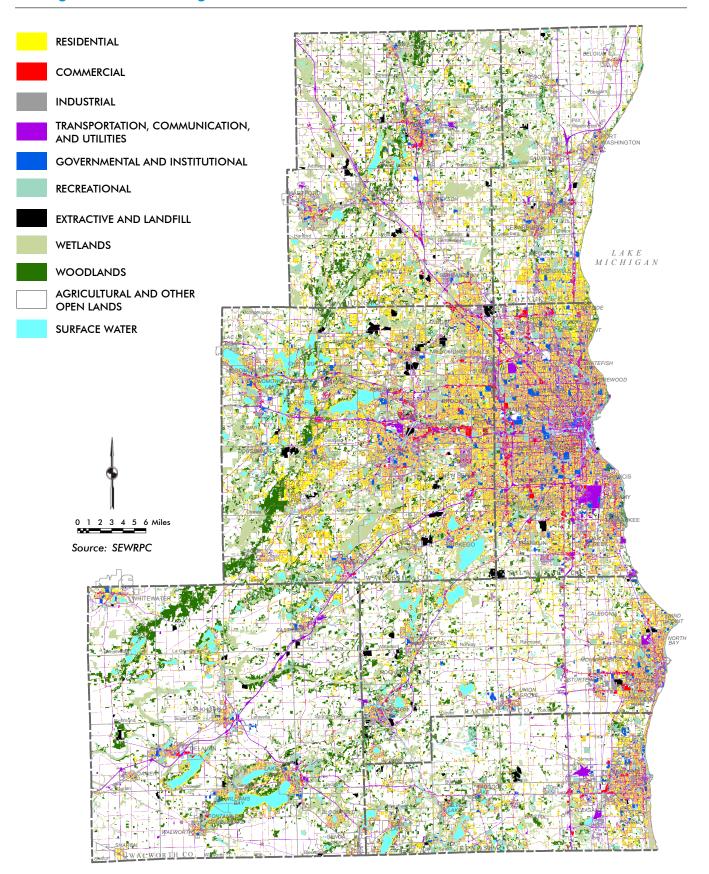
As further indicated in Table 2.20, in 2010 about 1,911 square miles, or 71.0 percent of the Region, consisted of undeveloped lands. Agricultural land encompassed 1,156 square miles, or about 60 percent of all undeveloped

Aerial photos are the primary basis for identifying existing land use.

Development activity in the Region slowed considerably during the major economic recession that began in late 2007.

¹⁰ An average of about 3,000 new housing units per year were built in the Region from 2008 through 2010, compared to an average of more than 9,400 per year from 2000 through 2005. An average of about 670 new residential lots per year were created through subdivision plats in the Region from 2008 through 2010, compared to about 4,100 per year from 2000 through 2005.

Map 2.12 Existing Land Use in the Region: 2010



| 1963-2010 | |
|-------------------|--|
| Region: | |
| e in the | |
| and Use | |
| 2.20 alized La | |
| Table 2 Genera | |

| | | | | EXISTING | EXISTING ENTIN USC | | | | | |) , , , , , , , , , , , , , , , , , , , | | | |
|---|-----------------|---------------------|-----------------|---------------------|--------------------|---------------------|----------------------|---------------------|-----------------|------------|---|-----------|-----------------|-----------|
| | 19 | 1963 | 19 | 1980 | 20 | 2000 | 2010 | 10 | 1963- | 1963-1980 | 1980 | 1980-2000 | 2000 | 2000-2010 |
| Land Use Category ^a | Square Miles | Percent of Total | Square Miles | Percent of Total | Square Miles | Percent of Total | Square Miles | Percent of Total | Square Miles | Percent | Square Miles | Percent | Square Miles | Percent |
| Developed Land | | | | | | | | | | | | | | |
| Residential | 180.0 | 6.7 | 269.1 | 10.0 | 361.7 | 13.4 | 400.9 | 14.9 | 89.1 | 49.5 | 92.6 | 34.4 | 39.2 | 10.8 |
| Commercial | 11.5 | 0.4 | 19.3 | 0.7 | 30.2 | ۱.۱ | 35.6 | 1.3 | 7.8 | 67.8 | 10.9 | 56.5 | 5.4 | 17.9 |
| Industrial | 13.5 | 0.5 | 22.0 | 0.8 | 32.9 | 1.2 | 35.2 | 1.3 | 8.5 | 63.0 | 10.9 | 49.5 | 2.3 | 7.0 |
| Transportation, | | | | | | | | | | | | | | |
| and Utilities | 134.9 | 5.0 | 166.1 | 6.2 | 202.7 | 7.5 | 213.8 | 8.0 | 31.2 | 23.1 | 36.6 | 22.0 | 1.11 | 5.5 |
| Governmental and Institutional | 21.8 | 0.8 | 30.0 | 1.1 | 33.7 | 1.3 | 37.0 | 1.4 | 8.2 | 37.6 | 3.7 | 12.3 | 3.3 | 9.8 |
| Recreational | 26.0 | 1.0 | 39.3 | 1.5 | 50.4 | 1.9 | 56.0 | 2.1 | 13.3 | 51.2 | 1.11 | 28.2 | 5.6 | 11.1 |
| Developed Land Subtotal | 387.7 | 14.4 | 545.8 | 20.3 | 711.6 | 26.4 | 778.5 | 29.0 | 158.1 | 40.8 | 165.8 | 30.4 | 66.9 | 9.4 |
| Undeveloped Land Agricultural | 1 637 1 | 6 U 9 | 1 475 4 | 549 | 1 256 4 | 46.7 | 1.155.5 ^b | 43 U | -1617 | 6 6' | -219.0 | -14 8 | -100 9 | 0 8- |
| Natural Resource | | | |) | | - | | | | | |) | | 0 |
| Areas Surface Water | 71.6 | 2.7 | 76.2 | 2.8 | 77.4 | 2.9 | 84.7 | 3.1 | 4.6 | 6.4 | 1.2 | 1.6 | 7.3 | 9.4 |
| Wetlands | 274.3 | 10.2 | 266.6 | 9.9 | 276.5 | 10.3 | 315.2 | 11.7 | -7.7 | -2.8 | 9.9 | 3.7 | 38.7 | 14.0 |
| Woodlands | 186.8 | 6.9 | 181.9 | 6.8 | 184.3 | 6.9 | 191.4 | 7.1 | -4.9 | -2.6 | 2.4 | 1.3 | 7.1 | 3.9 |
| Natural Resource Areas Subtotal | 530 7 | 19.8 | 5747 | 19 5 | 538.7 | 1 06 | 591.3 | 919 | 08- | م | 13 5 1 | 26 | 53 1 | 6 6 |
| Unused & Other Open Lands ^c | 131.7 | 4.9 | 143.4 | 5.3 | 183.7 | 6.8 6.8 | 164.5 | 6.1 | 11.7 | 9.6 8.9 | 40.3 | 28.1 | -19.2 | -10.5 |
| Undeveloped Land Subtotal | 2,301.5 | 85.6 | 2,143.5 | 79.7 | 1,978.3 | 73.6 | 1,911.3 | 71.0 | -158.0 | -6.9 | -165.2 | -7.7 | -67.0 | -3.4 |
| Total | 2,689.2 | 100.0 | 2,689.3 | 100.0 | 2,689.9 | 100.0 | 2.689.8 | 100.0 | 0.1 | 1 | 0.6 | : | -01 | 1 |

As a result of a change in inventory procedures, the 2010 data for agriculture, wetlands, and surface water are not directly comparable with data for the year 2000 and prior years. As part of the 2010 land use inventory, wetlands were mapped at a much finer scale and level of detail as compared to prior inventories, increasing the accuracy and precision of wetland mapping throughout the Region and providing for basic consistency with the Wisconsin Wetlands Inventory. This resulted in the identification of more, smaller wetlands than in the past, contributing to the reported increase in the wetland area. This effort also resulted in the identification of more, smaller surface water areas than in the past, contributing to the reported increase in the overall surface water area. The more comprehensive mapping of wetlands and surface water is, in turn, responsible for part of the reported decrease in the agricultural land area of the Region. Note:

^a Off-street parking is included in the associated land use.

^b Includes farmed wetlands, which encompassed 9.6 square miles in 2010.

^a Includes landfills, mineral extraction sites, and unused land.

Source: SEWRPC

lands.¹¹ Wetlands, woodlands, and surface water combined encompassed 591 square miles, while unused and other open land encompassed 164 square miles.¹² Undeveloped lands in the Region decreased by 67 square miles, or 3.4 percent, between 2000 and 2010.

It should be noted that, as a result of a change in inventory procedures, the 2010 data for agriculture, wetlands, and surface water are not directly comparable with data for the year 2000 and prior years as presented in Table 2.20. As part of the 2010 land use inventory, wetlands were mapped at a much finer scale and level of detail as compared to prior inventories, increasing the accuracy and precision of wetland mapping throughout the Region and providing for basic consistency with the Wisconsin Wetlands Inventory. This resulted in the identification of more, smaller wetlands than in the past, contributing to the reported increase in the wetland area. This effort also resulted in the identification of more, smaller surface water areas than in the past, contributing to the reported increase in the overall surface water area. The more comprehensive mapping of wetlands and surface water is, in turn, responsible for part of the reported decrease in the agricultural land area of the Region.

The change in inventory procedures notwithstanding, much of the change in wetlands, agriculture, and woodlands between 2000 and 2010 indicated in Table 2.20 reflects real change in use, hydrology, or land cover, as discussed below.

Change in Wetlands

The increase in the wetland area indicated in Table 2.20 is attributable in part to the more comprehensive mapping of wetlands in 2010, as noted above, and to actual wetland gains in excess of wetland losses in the past 10 years. Wetland gains typically occur as a result of failure to maintain agricultural drainage systems and managed wetland restoration efforts, while wetland losses typically occur as a result of drainage or filling activities attendant to urban development. During the land use inventory update, many areas were identified as having reverted to wetlands since the previous inventory in 2000. A striking example of this is the wetland restoration effort in the Wisconsin Department of Natural Resources (DNR) Turtle Valley Wildlife Area, which resulted in the restoration of about two square miles of agricultural-related land to wetlands.

Change in Agricultural Land

The decrease in the agricultural area indicated in Table 2.20 is attributable in part to the more comprehensive mapping of wetlands noted above; to the actual conversion of agricultural land to urban use; and to agricultural lands being taken out of production but remaining in open use—reverting to wetlands or woodlands or otherwise lying fallow.

Change in Woodlands

The increase in woodland area indicated in Table 2.20 primarily reflects actual gains in woodlands in excess of woodland losses in the Region since

¹² Unused land consists of open lands other than wetlands and woodlands that were not used for agriculture and not developed for any particular use at the time of the land use inventory.

Many areas were identified as having reverted to wetlands between 2000 and 2010. A striking example is in the DNR Turtle Valley Wildlife Area, where about two square miles were restored to wetlands.

¹¹ Farmed wetlands are included in the agricultural land use category in Table 2.20. Farmed wetlands consist for the most part of wetlands that are cultivated only during drought years and periods of low water table. Such areas encompassed 9.6 square miles in the Region in 2010.

Table 2.21Existing Area and Population Served by Public Sanitary Sewersin the Region by County: 2000 and 2010

| | Area | Served by Pub | lic Sanitary S | Sewers | Populati | on Served by | Public Sanitar | y Sewers |
|------------|-----------------|---------------------------------|-----------------|---------------------------------|-----------|---------------------------------|----------------|---------------------------------|
| | 20 | 000 | 2 | 010 | 20 | 00 | 20 | 10 |
| County | Square Miles | Percent of County/ Region | Square Miles | Percent of County/ Region | People | Percent of County/ Region | People | Percent of County/ Region |
| Kenosha | 41.2 | 14.8 | 45.8 | 16.5 | 133,800 | 89.5 | 150,200 | 90.3 |
| Milwaukee | 193.2 | 79.6 | 198.7 | 81.9 | 938,800 | 99.9 | 947,000 | 99.9 |
| Ozaukee | 29.3 | 12.4 | 33.3 | 14.1 | 64,400 | 78.2 | 67,800 | 78.5 |
| Racine | 51.6 | 15.1 | 57.0 | 16.7 | 169,900 | 90.0 | 176,100 | 90.1 |
| Walworth | 27.6 | 4.8 | 30.3 | 5.3 | 62,100 | 67.5 | 70,500 | 69.0 |
| Washington | 23.2 | 5.3 | 29.1 | 6.7 | 71,500 | 60.9 | 84,300 | 63.9 |
| Waukesha | 110.7 | 19.1 | 130.3 | 22.4 | 272,200 | 75.5 | 301,100 | 77.2 |
| Region | 476.8 | 17.7 | 524.5 | 19.5 | 1,712,700 | 88.7 | 1,797,000 | 89.0 |

Source: SEWRPC

the last inventory in 2000. During the land use inventory update, many new woodland areas were identified, appropriately reflecting the results of managed reforestation efforts and natural succession over time.

2.4 PUBLIC UTILITIES

Sanitary sewerage and water supply utilities are particularly important to land use planning because the location and density of urban development influences the need for such facilities and, conversely, the existence of such facilities influences the location and density of new urban development. The extent and location of areas served by existing sanitary sewerage and water supply utilities are thus important considerations in land use and transportation planning.

Sanitary Sewer Service

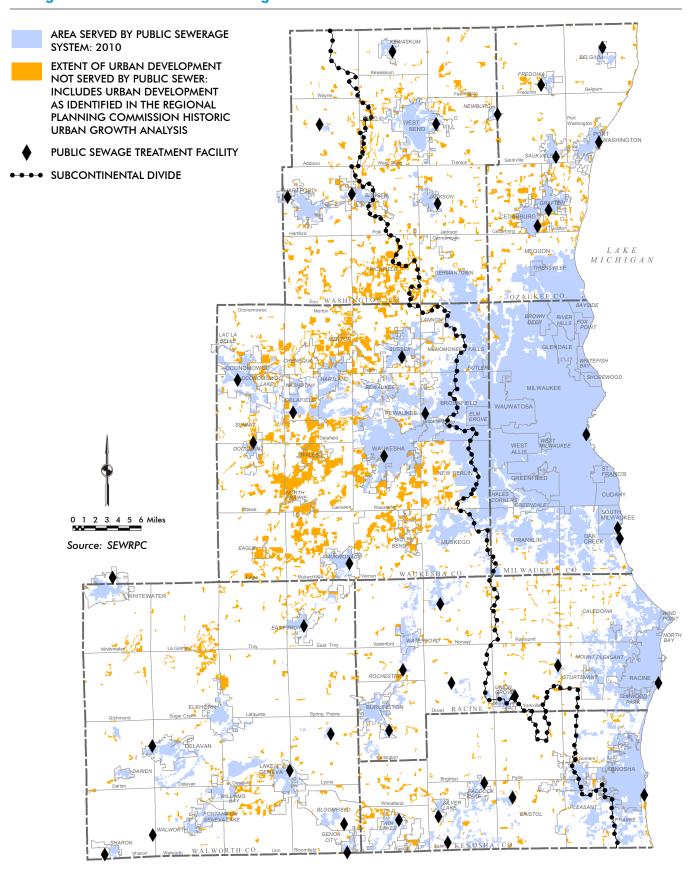
Areas served by public sanitary sewers in 2010 encompassed about 525 square miles, or about 19.5 percent of the total area of the Region—compared to about 477 square miles, or about 17.7 percent of the Region, in 2000 (see Table 2.21 and Map 2.13). An estimated 1.80 million people, or 89.0 percent of the regional population, were served by public sanitary sewers in 2010, compared to 1.71 million people, or 88.7 percent of the regional population, in 2000.

The increase in the land area and population served by public sanitary sewers primarily reflects new development designed to be served by sanitary sewers that occurred during the 2000s. Some of the increase is also the result of the retrofitting of certain developed areas—initially served by private onsite wastewater treatment systems—with public sanitary sewers. Examples of such retrofitting efforts include the extension of sanitary sewer service to developed areas around Upper and Lower Nashotah Lakes, Upper and Lower Nemahbin Lakes, and Silver Lake in Waukesha County.

Under State administrative rules, sanitary sewers may be extended only to areas located within planned sanitary sewer service areas identified in local sanitary sewer service area plans adopted as part of the Commission's regional water quality management plan. Sewer service area plans are long-range plans intended to guide the provision of sanitary sewer service over a 20-year period. Sewer service area plans are prepared through a cooperative planning process involving the local unit of government An estimated 1.8 million people, or about 89% of the Region's population, were served by public sewers in 2010.

Public sewers can only be extended within planned sanitary sewer service areas identified in local sanitary sewer service area plans adopted as part of the Commission's regional water quality management plan.

Map 2.13 Areas Served by Public Sanitary Sewerage Systems and Sewage Treatment Facilities in the Region: 2010



responsible for operation of the sewage treatment facility; in some instances, a different local unit of government served by the sewage treat facility; the Regional Planning Commission; and the DNR. Such plans may be amended in response to changing local conditions and needs as well as in response to new population projections, subject to the provisions of *Wisconsin Administrative* Code Chapter NR 121. Currently adopted sanitary sewer service areas in the Region are shown on Map 2.14.

Water Supply Service

Areas with water supply service provided by public water utilities in 2010 encompassed about 444 square miles, or 16.5 percent of the total area of the Region—compared to about 390 square miles, or 14.5 percent of the Region, in 2000 (see Map 2.15 and Table 2.22). An estimated 1.68 million people, or 83.2 percent of the regional population, were served by public water utilities in 2010, compared to 1.58 million people, or 81.9 percent of the regional population, in 2000. The increase in the land area and population served by public water supply systems primarily reflects new urban development during the 2000s, and, to a lesser extent, the retrofitting of certain already developed areas—initially served by private wells—with public water supply service.

2.5 NATURAL RESOURCE BASE

Land use and transportation planning must recognize the existence of a limited natural resource base to which urban and rural development should be properly adjusted. This section provides a description of some of the key elements of the natural resource base of the Region.

Physiography and Topography

Glaciation has largely determined the physiography and topography, as well as the soils of the Region. Of the four major stages of glaciation, the last and most influential in terms of present physiography and topography was the Wisconsin Stage, which is believed to have ended in the area about 11,000 years ago. As shown on Map 2.16, the dominant physiographic and topographic feature in the Region is the Kettle Moraine, which consists of a complex system of glacial landforms including kames, kettle holes, moraines, eskers, drumlins, outwash plains, and lake basin deposits. The resulting topography ranges from steep and rolling hills in the western portion of the Region to level or gently sloping areas in the eastern portion of the Region.

Soils

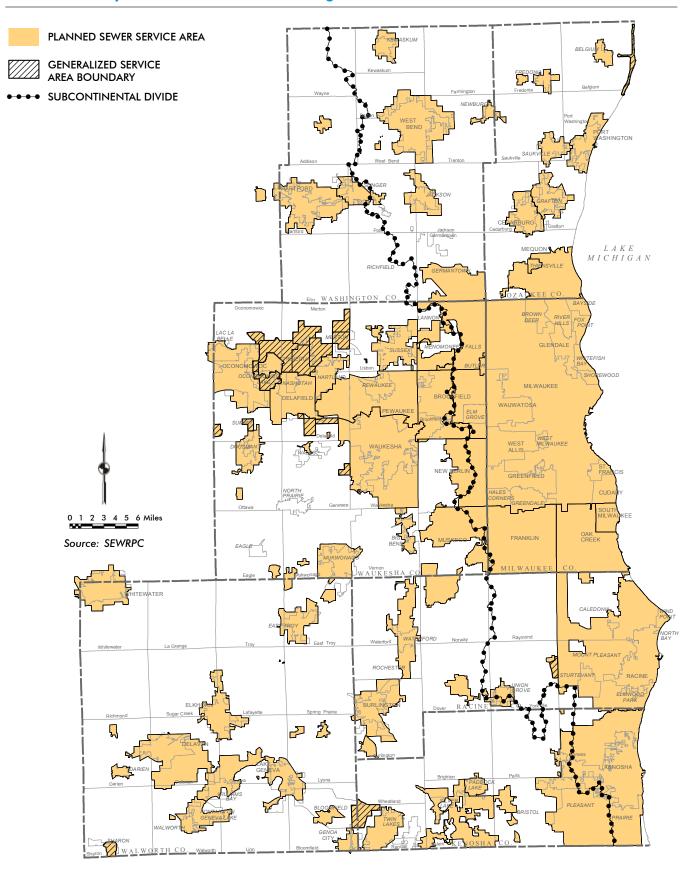
Soil properties exert a strong influence on the manner in which land is used. Consequently, a need exists in any comprehensive planning effort to examine not only how soils and land are currently used, but also how they can best be used and managed over time. Map 2.17 shows the location and extent of eight broad groups of soils in Southeastern Wisconsin, providing an overview of the general pattern of soils that exists in the Region. Underlying this generalized soils map are detailed soil surveys that provide definitive data on the physical, chemical, and biological properties of specific soil types, along with interpretations of the soil properties for planning, engineering, agricultural, and resource conservation purposes. Soil survey maps and soil attribute data can be accessed through the U.S. Natural Resources Conservation Service website.

Surface Drainage and Surface Water

The surface drainage pattern of the Region is very complex because of the effects of glaciation. The land surface is complex as a result of being covered

An estimated 1.68 million people, or about 83% of the Region's population, were served by public water utilities in 2010.

Map 2.14 Planned Sanitary Sewer Service Areas in the Region: December 2013



Map 2.15 Areas Served by Public Water Utilities in the Region: 2010

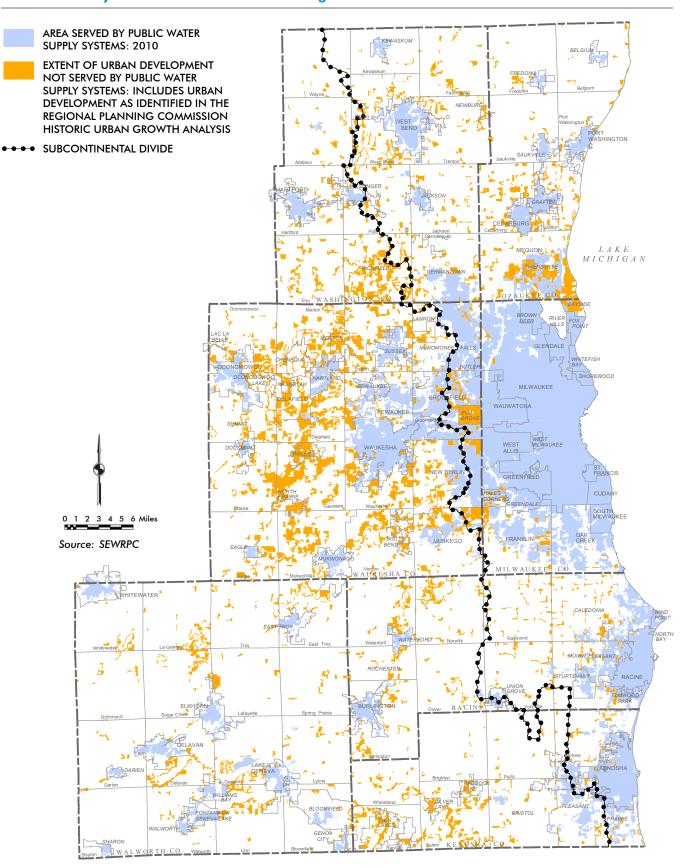


Table 2.22Existing Area and Population Served by Public Water Utilitiesin the Region by County: 2000 and 2010

| | Are | a Served by Pu | blic Water Ut | liities | Populat | ion Served by | Public Water | Utilities |
|------------|-----------------|---------------------------------|-----------------|---------------------------------|-----------|---------------------------------|---------------------|---------------------------------|
| | 2 | 000 | 2 | 010 | 20 | 00 | 20 | 10 |
| County | Square Miles | Percent of County/ Region | Square Miles | Percent of County/ Region | People | Percent of County/ Region | People | Percent of County/ Region |
| Kenosha | 29.8 | 10.7 | 34.7 | 12.5 | 111,000 | 74.2 | 125,800 | 75.6 |
| Milwaukee | 180.9 | 74.5 | 187.3 | 77.2 | 927,300 | 98.6 | 938,400 | 99.0 |
| Ozaukee | 15.7 | 6.7 | 23.4 | 9.9 | 45,400 | 55.2 | 55,800 | 64.6 |
| Racine | 37.9 | 11.1 | 44.3 | 13.0 | 146,400 | 77.5 | 154,900 | 79.3 |
| Walworth | 22.0 | 3.8 | 24.4 | 4.2 | 56,200 | 61.1 | 63,400 | 62.0 |
| Washington | 21.4 | 4.9 | 27.1 | 6.2 | 66,800 | 56.9 | 80,100 | 60.7 |
| Waukesha | 82.3 | 14.2 | 102.6 | 17.7 | 228,100 | 63.2 | 261,500 | 67.1 |
| Region | 390.0 | 14.5 | 443.8 | 16.5 | 1,581,200 | 81.9 | 1,679,900 | 83.2 |

Source: SEWRPC

by glacial deposits containing thousands of closed depressions that range in size from potholes to large areas. Significant areas of the Region are covered by wetlands, and many streams are mere threads of water through these wetlands.

There are 11 major watersheds in the Region as shown on Map 2.18. Also shown on this map, a major subcontinental drainage divide, oriented in a generally northwesterly-southeasterly direction, bisects the Region. About 1,680 square miles, or 62 percent of the Region, are located west of the divide and drain to the Upper Mississippi River system; the remaining 1,009 square miles, or 38 percent, drain to the Great Lakes-St. Lawrence River system. The subcontinental divide is a major feature of the overall drainage pattern of the Region, having important implications for the use of Lake Michigan as a source of water supply. The Great Lakes-St. Lawrence River Water Resources Compact, implemented in Chapter 281 of the Wisconsin Statutes, prohibits the diversion of water from the Great Lakes Basin, with very limited exceptions.

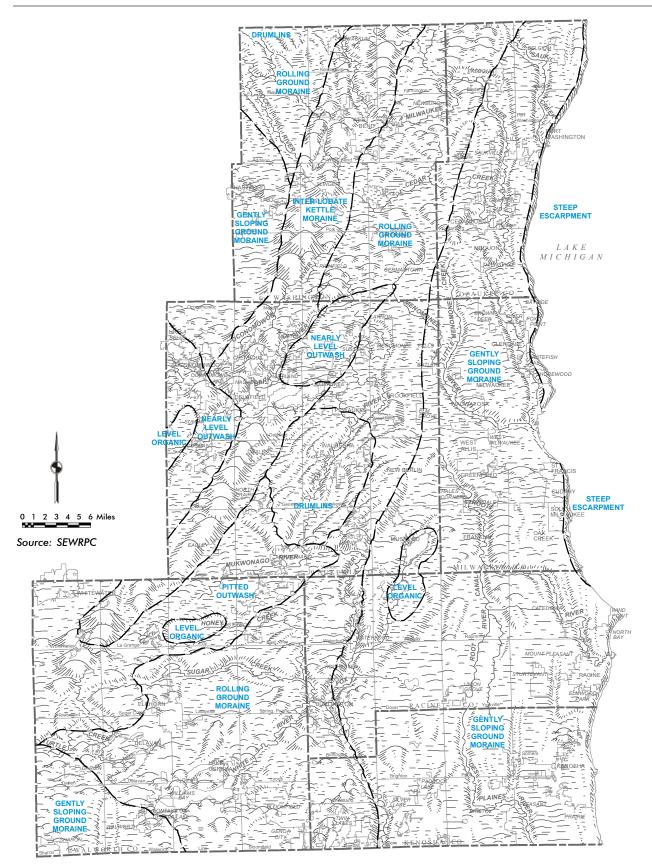
Also shown on Map 2.18 are the 101 major lakes of at least 50 acres in area and the 1,150-mile perennial stream network in the Region. In addition, the Region encompasses numerous lakes and ponds less than 50 acres in size and an extensive network of smaller, intermittent streams. The Region is bounded on the east by Lake Michigan, with 77 miles of shoreline extending from the Wisconsin-Illinois border to the Ozaukee-Sheboygan County line.

The quality of the Region's surface waters can potentially degenerate as a result of—among other factors—malfunctioning or improperly placed private onsite wastewater treatment systems; inadequate operation of wastewater treatment facilities; inadequate soil conservation and other agricultural practices; construction site erosion; and urban runoff. Lakes and streams may also be adversely affected by the excessive development of lacustrine and riverine areas and the filling of peripheral wetlands.

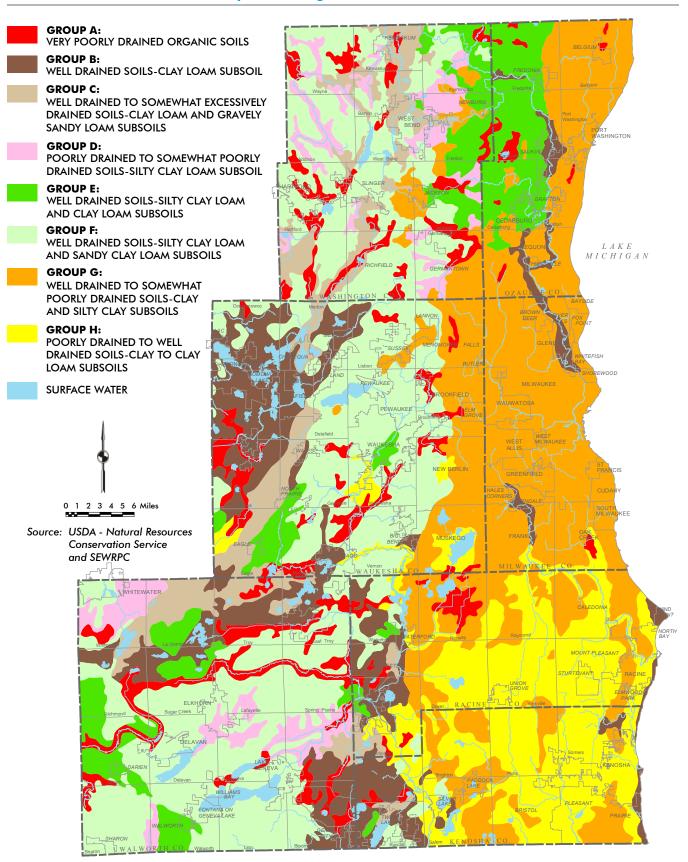
Objectives, or classifications, for biological and recreational uses, as well as for public health and welfare and wildlife protection, have been developed for streams and lakes by the DNR and integrated into the regional water quality management plan developed by the Regional Planning Commission. The objectives for biological and recreational uses range from coldwater fishery and full recreational use to limited aquatic life and limited recreational

About 62% of the Region is located west of a major subcontinental divide and drains to the Mississippi River. The remaining 38% is east of the divide and drains to the Great Lakes Basin.

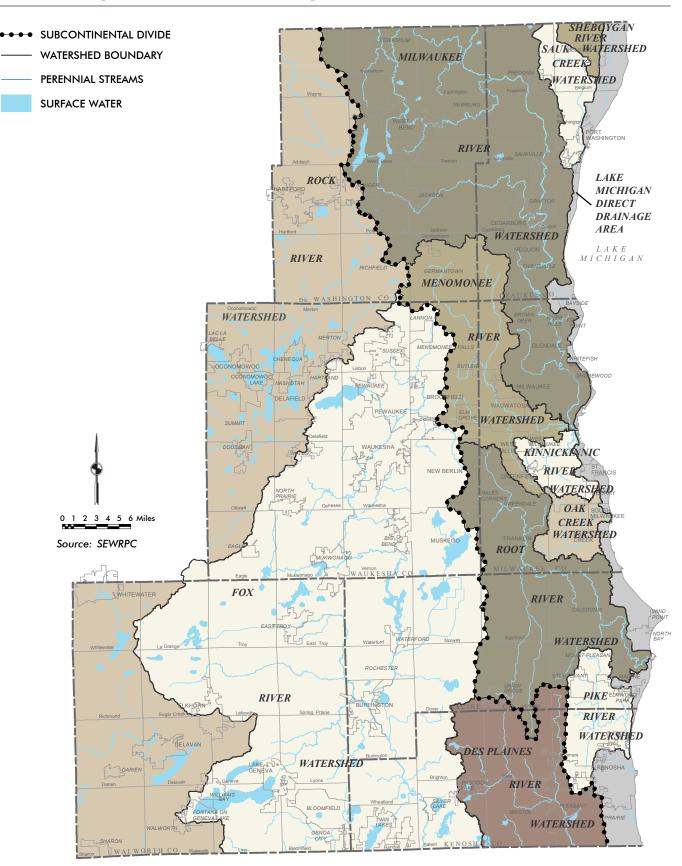
The Great Lakes Compact prohibits diverting water from the Great Lakes Basin, with very limited exceptions.



Map 2.17 Generalized Soil Association Groups in the Region



Map 2.18 Surface Drainage and Surface Water in the Region



use. Water use objectives for streams and lakes are set forth in Chapter NR 102 of the Wisconsin Administrative Code and are summarized in SEWRPC Memorandum Report No. 93, A Regional Water Quality Management Plan for Southeastern Wisconsin: An Update and Status Report, and SEWRPC Planning Report No. 50, A Regional Water Quality Management Plan Update for the Greater Milwaukee Watersheds.

In addition, the DNR has identified a limited number of streams and lakes as "outstanding" and "exceptional" resource waters. "Outstanding" resource waters have the highest value as a resource, excellent water quality, and high-quality fisheries; they do not receive wastewater discharges, and point source discharges will not be allowed in the future unless the quality of such a discharge meets or exceeds the quality of the receiving water. Within the Region, Bluff, Potawatomi, and Van Slyke Creeks, all in Walworth County, along with Lulu Lake in Walworth County and Spring Lake in Waukesha County have been classified as outstanding resource waters. "Exceptional" resource waters have excellent water quality and valued fisheries but already receive wastewater discharges or may in the future receive discharges necessary to correct environmental or public health problems. Within the Region, the following have been classified as exceptional resource waters: the East Branch of the Milwaukee River from the Long Lake outlet to STH 28 in Washington County; and Genesee Creek above STH 59, the Mukwonago River from Eagle Springs Lake to Upper Phantom Lake, and the Oconomowoc River below North Lake to Okauchee Lake, all in Waukesha County.

Groundwater Resources

Groundwater resources constitute another key element of the natural resource base of the Region. Groundwater not only sustains lake levels and wetlands and provides the base flows of streams in the Region, it also comprises a major source of water supply for domestic, municipal, industrial, and agricultural water users.

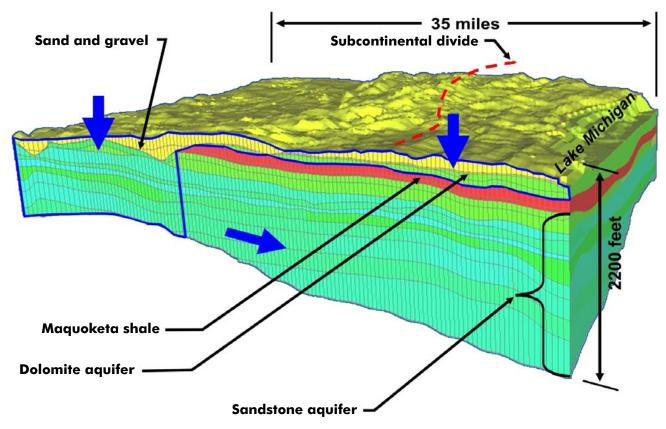
Groundwater occurs within three major aquifers that underlie the Region. From the land's surface downward, they are: 1) the sand and gravel deposits in the glacial drift; 2) the shallow dolomite strata in the underlying bedrock; and 3) the deeper sandstone, dolomite, siltstone, and shale strata. Because of their proximity to the land's surface and hydraulic interconnection, the first two aquifers are commonly referred to collectively as the "shallow aquifer," while the latter is referred to as the deep aquifer. Within most of the Region, the shallow and deep aquifers are separated by the Maquoketa shale, which forms a relatively impermeable barrier between the two aquifers (see Figure 2.10).

Like surface water, groundwater is susceptible to depletion in quantity and to deterioration in quality as a result of urban and rural development in the Region. Natural conditions may limit the use of groundwater as a source of water supply, including the relatively high levels of naturally occurring radium in groundwater in the deep sandstone aquifer, found in certain areas of the Region.

Recharge of the aquifers underlying the Region is derived largely by precipitation. Areas of groundwater recharge potential are shown on Map 2.19. The map identifies areas based upon the rate of annual groundwater recharge from precipitation in the Region. The areas with high or very high recharge potential are particularly important to the maintenance of groundwater resources.

Groundwater is a major source of water supply for domestic, municipal, industrial, and agricultural users.

Groundwater is susceptible to depletion and deterioration as a result of urban and rural development.



Source: US Geological Survey

Vegetation

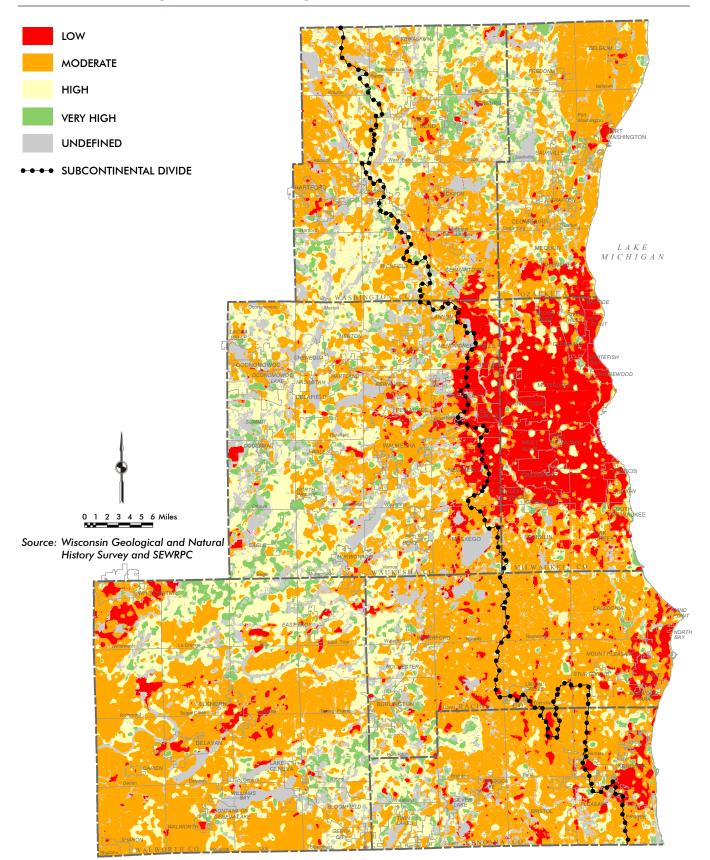
Presettlement Vegetation

Historically, vegetational patterns in the Region were influenced by such factors as climate, soils, fire, topography, and natural drainage patterns. Historical records, particularly the records of the original U.S. Public Land Survey carried out within the Region in 1835 and 1836, indicate that large portions of Southeastern Wisconsin once consisted of open, level plains containing orchard-like stands of oak or prairies dominated by big blue-stem grass and colorful prairie forbs. Other portions of the Region were covered by mixed hardwood forests.

Prairies

Prairies are treeless or generally treeless areas dominated by perennial native grasses. For the purpose of this report, prairies also include savannas, which are defined as areas dominated by native grasses but having between one and 17 trees per acre. In Southeastern Wisconsin, there are two types of savannas: oak openings and cedar glades. Prairies, which once covered extensive areas of Southeastern Wisconsin, have been reduced to scattered remnants, primarily in the southern and western portions of the Region. The chief causes of the loss of prairies is their conversion to urban and agricultural use and the suppression of wildfires, which had served to constrain the advancing shrubs and trees that shade out the prairie plants. The remaining prairies in the Region have important ecological and scientific value. Many of the remaining prairies are encompassed within the natural areas and critical species habitat sites described later in this section.

Map 2.19 Groundwater Recharge Potential in the Region



Woodlands

Six woodland types are recognized in the Region: northern upland hardwoods, southern upland hardwoods, northern lowland hardwoods, southern lowland hardwoods, northern lowland conifers, and northern upland conifers. The northern and southern upland hardwood types are the most common in the Region. The remaining stands of trees within the Region consist largely of even-aged mature, or nearly mature specimens, with insufficient reproduction and saplings to maintain the stands when the old trees are harvested or die of disease or age. Located largely on ridges and slopes and along lakes and streams, woodlands are a natural resource of immeasurable value. Woodlands enhance the natural beauty of, and are essential to the overall environmental wellbeing of, the Region.

Woodlands encompassed about 191 square miles, or 7 percent of the total area of the Region, in 2010.¹³ Existing woodlands in the Region are shown on Map 2.20. It should be noted that lowland wooded areas, such as tamarack swamps, are classified as wetlands.

Wetlands

Wetlands generally occur in depressions and near the bottom of slopes, particularly along lakeshores and stream banks, and on large land areas that are poorly drained.¹⁴ Wetlands may, however, under certain conditions, occur on slopes and even on hilltops. Wetlands perform an important set of natural functions, which include support of a wide variety of desirable, and sometimes unique, forms of plant and animal life; water quality protection; stabilization of lake levels; reduction in peak rates of stormwater runoff and streamflows by providing areas for floodwater impoundment and storage; protection of shorelines from erosion; and provision of groundwater discharge areas.

Wetlands encompassed about 325 square miles, or 12 percent of the total area of the Region, in 2010. Those wetlands are shown on Map 2.20. The wetlands shown on Map 2.20 are based upon the Wisconsin Wetlands Inventory completed in the Region in 2008, updated to the year 2010 as part of the regional land use inventory. It should be noted that the wetlands shown on Map 2.20 include wetlands that have been identified as "farmed wetlands," which are subject to Federal wetland regulations. These areas meet the definition of a wetland but were being actively farmed in 2010. In 2010, farmed wetlands encompassed about 10 square miles in the Region.

Wetlands and their boundaries are continuously changing in response to changes in drainage patterns and climatic conditions. While wetland inventory maps provide a sound basis for areawide planning, detailed field investigations are often necessary to precisely identify wetland boundaries for individual tracts of land at a given point in time. Woodlands covered about 191 square miles, or about 7% of the total area of the Region in 2010.

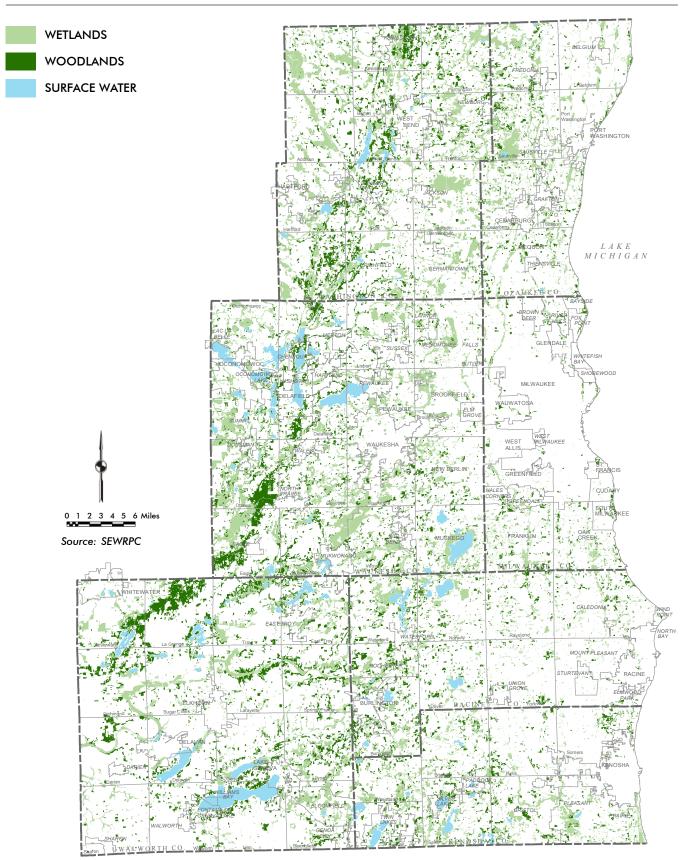
Wetlands support a variety of plant and animal life, protect water quality, and reduce streamflows.

Wetlands covered about 325 square miles, or about 12% of the total area of the Region in 2010.

¹³ For purposes of this report, woodlands are defined as areas having 17 or more deciduous trees per acre each measuring at least four inches in diameter at breast height and having at least a 50 percent canopy cover. In addition, coniferous tree plantations and reforestation projects are defined as woodlands.

¹⁴ The definition of wetlands utilized by the Commission is the same as that of the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency. Under this definition, wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency, and with a duration sufficient to support, and that under normal circumstance do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Map 2.20 Wetlands and Woodlands in the Region: 2010



Natural Areas and Critical Species Habitat Sites

A comprehensive inventory of "natural areas" and "critical species habitat sites" in the Region was completed by the Commission in 1994. The inventory sought to identify the most significant remaining natural areas—essentially, remnants of the pre-European settlement landscape—as well as other areas vital to the maintenance of endangered, threatened, and rare plant and animal species in the Region. A comprehensive update to the inventory was conducted by the Commission in 2009 as part of an amendment to the regional natural areas and critical species habitat protection and management plan.15

Natural areas are tracts of land or water so little modified by human activity, or sufficiently recovered from the effects of such activity, that they contain intact native plant and animal communities believed to be representative of the landscape before European settlement. Natural areas are classified into one of three categories: natural areas of statewide or greater significance (NA-1), natural areas of countywide or regional significance (NA-2), and natural areas of local significance (NA-3). Classification of an area into one of these three categories is based upon consideration of the diversity of plant and animal species and community types present; the structure and integrity of the native plant or animal community; the extent of disturbance from human activity; the commonness of the plant or animal community; the uniqueness of the natural features; the size of the site; and the educational value. A total of 494 natural areas were identified in the Region in 2009. In combination, these sites encompassed 101 square miles, or 4 percent of the total area of the Region. The location of the natural area sites in the Region is shown on Map 2.21.

Critical species habitat sites consist of areas, located outside natural areas, which are important for their ability to support endangered, threatened, or rare plant or animal species. Such areas constitute "critical" habitat considered to be important to the survival of a species or group of species of special concern. A total of 271 critical species habitat sites were identified in the Region in 2009. Together, these critical species habitat sites encompassed 31 square miles, or 1 percent of the Region. These sites are also shown on Map 2.21. Most of the identified natural areas and critical species habitat sites in Southeastern Wisconsin are located within the Commission-identified environmental corridors and isolated natural resource areas described below.

Environmental Corridors

One of the most important tasks completed under the regional planning program for Southeastern Wisconsin has been the identification and delineation of areas of the Region in which concentrations of the best remaining elements of the natural resource base occur. It was recognized that preservation of such areas is important to both the maintenance of the overall environmental quality of the Region and to the continued provision of amenities required to maintain a high quality of life for the resident population.

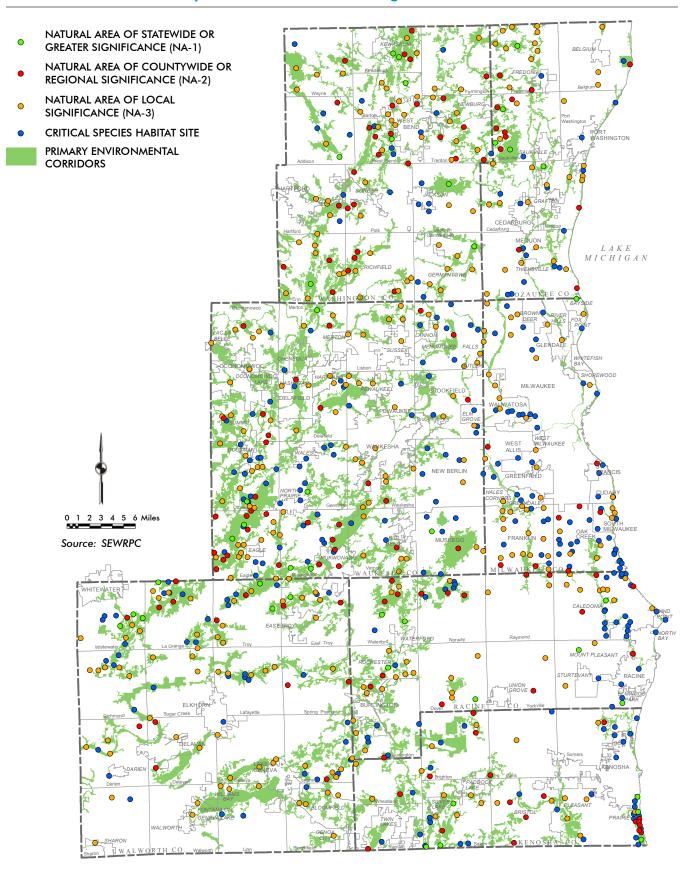
Under the regional planning program, seven elements of the natural resource base have been considered essential to the maintenance of the ecological balance, natural beauty, and overall quality of life in Southeastern Wisconsin: 1) lakes, rivers, and streams, and their associated shorelands

Natural areas are tracts of land or water that contain intact native plant and animal communities representative of the pre-Europeansettlement landscape. There are 494 natural areas in the Region covering 101 square miles.

Critical species habitat sites support endangered, threatened, or rare plant or animal species. There are 271 sites in the Region covering 31 square miles.

¹⁵ SEWRPC Planning Report No. 42, A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin, dated September 1997, as amended in 2010.

Map 2.21 Natural Areas and Critical Species Habitat Sites in the Region: 2009



and floodlands; 2) wetlands; 3) woodlands; 4) prairies; 5) wildlife habitat areas; 6) wet, poorly drained, and organic soils; and 7) rugged terrain and high-relief topography. In addition, certain other elements, although not part of the natural resource base per se, are closely related to, or centered upon, that base and are a determining factor in identifying and delineating areas with recreational, aesthetic, ecological, and cultural value. These five additional elements are: 1) existing park and open space sites; 2) potential park and open space sites; 3) historic sites; 4) scenic areas and vistas; and 5) natural areas and critical species habitat sites.

The delineation of these 12 natural resource and natural resource-related elements on maps results, in most areas of the Region, in an essentially linear pattern of relatively narrow, elongated areas that have been termed "environmental corridors" by the Commission.16 Primary environmental corridors include a variety of the aforementioned important natural resource and resource-related elements and are at least 400 acres in size, two miles in length, and 200 feet in width. Secondary environmental corridors generally connect with the primary environmental corridors and are at least 100 acres in size and one mile in length. In addition, smaller concentrations of natural resource base elements that are separated physically from the environmental corridors by intensive urban or agricultural land uses have also been identified. These areas, which are at least five acres in size, are referred to as isolated natural resource areas.

The preservation of environmental corridors and isolated natural resource areas in essentially natural, open uses, yields many benefits, including recharge and discharge of groundwater; maintenance of surface and groundwater quality; attenuation of flood flows and 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 these areas are generally poorly suited for urban development, their preservation can help avoid serious and costly development problems.

Because of the many interacting relationships existing between living organisms and their environment, the destruction or deterioration of one important element of the total environment may lead to a chain reaction of deterioration and destruction of other elements. The drainage of wetlands, for example, may destroy fish spawning areas, wildlife habitat, groundwater recharge areas, and natural filtration and floodwater storage areas of interconnecting stream systems. The resulting deterioration of surface-water guality may, in turn, lead to a deterioration of the guality of the groundwater that serves as a source of domestic, municipal, and industrial water supply, and upon which low flows of rivers and streams may depend. Similarly, destruction of ground cover may result in soil erosion, stream siltation, more rapid runoff, and increased flooding, as well as the destruction of wildlife habitat. Although the effect of any one of these environmental changes may not in and of itself be overwhelming, the combined effects may eventually lead to a serious deterioration of the underlying and sustaining natural resource base and of the overall quality of the environment for life. In addition to such environmental impacts, the intrusion of intensive urban land uses into such

The most important elements of the Region's natural resource base often occur in a linear pattern of relatively narrow, elongated areas termed "environmental corridors."

Environmental corridors are generally poorly suited for urban development. Preserving them can help avoid serious and costly development problems.

¹⁶ A detailed description of the process of delineating environmental corridors in Southeastern Wisconsin is presented in the March 1981 issue (Volume 4, No. 2) of the SEWRPC Technical Record.

areas may result in the creation of serious and costly development problems, such as failing foundations for pavements and structures, wet basements, excessive operation of sump pumps, excessive clear-water infiltration into sanitary sewerage systems, and poor drainage.

Primary Environmental Corridors

As shown on Map 2.22, the primary environmental corridors in the Region are generally located along major stream valleys, around major lakes, and along the Kettle Moraine. These primary environmental corridors contain almost all of the best remaining woodlands, wetlands, and wildlife habitat areas in the Region, and represent a composite of the best remaining elements of the natural resource base. As indicated in Table 2.23, primary environmental corridors encompassed about 484 square miles, or about 18 percent of the total area of the Region, in 2010. The protection of the primary environmental corridors from additional intrusion by incompatible land uses, degradation, and destruction is one of the key objectives of the adopted regional land use plan.

Secondary Environmental Corridors

As further shown on Map 2.22, secondary environmental corridors are generally located along the small perennial and intermittent streams within the Region. Secondary environmental corridors also contain a variety of resource elements, often remnant resources from primary environmental corridors that have been developed for intensive urban or agricultural purposes. Secondary environmental corridors facilitate surface water drainage, maintain pockets of natural resource features, and provide corridors for the movement of wildlife, as well as for the movement and dispersal of seeds for a variety of plant species. In 2010, secondary environmental corridors encompassed about 79 square miles, or about 3 percent of the total area of the Region.

Isolated Natural Resource Areas

In addition to the primary and secondary environmental corridors, other smaller pockets of wetlands, woodlands, surface water, or wildlife habitat exist within the Region (see Map 2.22). These pockets are isolated from the environmental corridors by urban development or agricultural use, and although separated from the environmental corridor network, these isolated natural resource areas have significant value. They may provide the only available wildlife habitat in an area, usually provide good locations for local parks, and lend unique aesthetic character and natural diversity to an area. Widely scattered throughout the Region, isolated natural resource areas encompassed about 70 square miles, or just under 3 percent of the total area of the Region, in 2010.

It should be noted that the extent of environmental corridors and isolated natural resources identified in 2010 is somewhat greater than in 2000. Thus, the primary environmental corridors encompassed 484 square miles in 2010, compared to 462 square miles in 2000. Secondary environmental corridors encompassed 79 square miles in 2010, compared to 75 square miles in 2000. Isolated natural resource areas encompassed 70 square miles in 2010, compared to 63 square miles in 2000. These patterns are generally consistent with the increase in the extent of wetlands and woodlands identified in 2010 compared to 2000, described earlier in this chapter.

Primary environmental corridors contain almost all the best remaining woodlands, wetlands, and wildlife habitat in the Region. They covered about 484 square miles, or about 18% of the Region, in 2010.

Secondary

environmental corridors contain a variety of resource elements, often remnants from primary corridors that were developed for intensive urban or agricultural uses. They covered about 79 square miles, or about 3% of the Region, in 2010.

Isolated natural resource areas are pockets of natural resources isolated from corridors by urban or agricultural uses. They covered about 70 square miles, or a little less than 3% of the Region, in 2010.

Map 2.22 Environmental Corridors and Isolated Natural Resource Areas in the Region: 2010

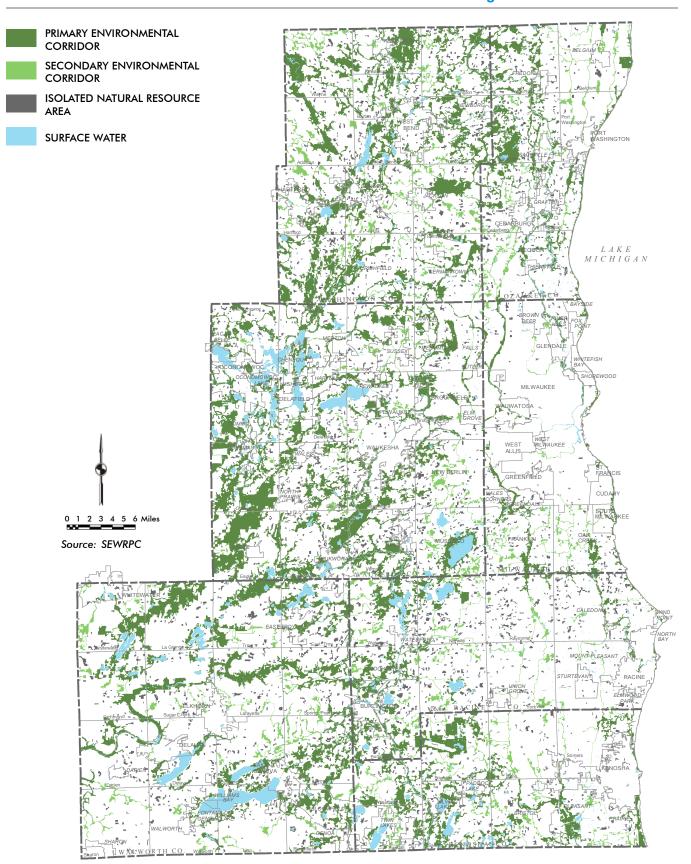


Table 2.23 Environmental Corridors and Isolated Natural Resource Areas in the Region by County: 2010

| | Enviro | imary onmental rridors | Enviro | ondary onmental rridors | | d Natural rce Areas | т | otal |
|------------|-----------------|---------------------------------|-----------------|---------------------------------|-----------------|---------------------------------|-----------------|---------------------------------|
| County | Square Miles | Percent of County/ Region |
| Kenosha | 45.1 | 16.2 | 10.6 | 3.8 | 6.5 | 2.3 | 62.2 | 22.3 |
| Milwaukee | 15.5 | 6.4 | 5.7 | 2.3 | 3.7 | 1.5 | 24.9 | 10.2 |
| Ozaukee | 33.8 | 14.3 | 8.4 | 3.6 | 6.3 | 2.7 | 48.5 | 20.6 |
| Racine | 36.9 | 10.8 | 11.2 | 3.3 | 13.2 | 3.9 | 61.3 | 18.0 |
| Walworth | 106.3 | 18.4 | 14.8 | 2.6 | 14.4 | 2.5 | 135.5 | 23.5 |
| Washington | 97.6 | 22.4 | 16.2 | 3.7 | 11.3 | 2.6 | 125.1 | 28.7 |
| Waukesha | 148.8 | 25.6 | 12.1 | 2.1 | 14.2 | 2.5 | 175.1 | 30.2 |
| Region | 484.0 | 18.0 | 79.0 | 2.9 | 69.6 | 2.6 | 632.6 | 23.5 |

Source: SEWRPC

Air Quality

The Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to set national ambient air quality standards (NAAQS) for six criteria pollutants (carbon monoxide, lead, nitrogen dioxide, particulate matter, ozone, and sulfur oxides) that are considered harmful to public health and the environment. Benefits of attaining air quality standards include reduced mortality, hospital admissions due to respiratory ailments, school and work absenteeism, and incidence of asthma. Areas not meeting the NAAQS for one or all of the criteria pollutants are designated as nonattainment areas by the EPA. In areas where observed pollutant levels exceed the established NAAQS and are designated as "nonattainment" areas by the EPA, growth and development patterns may be constrained. For example, major sources of pollutants seeking to locate or expand in a designated nonattainment area, or close enough to impact upon it, must apply emission control technologies. In addition, new or expanding industries may be required to obtain a greater than one-for-one reduction in emissions from other sources in the nonattainment area so as to provide a net improvement in ambient air quality. Nonattainment area designation may, therefore, create an economic disincentive for industry with significant emission levels to locate or expand within or near the boundaries of such an area. To eliminate this disincentive and relieve the potential constraint on development, it is necessary to demonstrate compliance with the NAAQS and petition the EPA for redesignation of the nonattainment areas. Areas designated as being in nonattainment or in maintenance of a NAAQS are also required to demonstrate that transportation plans and programs are consistent with air quality goals established by State implementation of maintenance plans to ensure that the plans and programs do not prevent continued improvement in air quality and achievement or maintenance of a NAAQS.

Over the past decade, the combination of local controls and offsets implemented within and external to the Region, along with national vehicle emissions control requirements, have resulted in a significant improvement in ambient air quality within the Region as well as nationally. The Southeastern Wisconsin Region currently meets all but the ozone NAAQS. The EPA has designated Kenosha County east of IH 94 as part of the Tri-State Chicago-Naperville, IL-IN-WI Marginal Nonattainment Area for the 2008 8-hour

The combination of local controls and offsets implemented within and outside the Region and national vehicle emissions control requirements have resulted in a significant improvement in ambient air quality. ozone standard.¹⁷ Ozone is formed when precursor pollutants, such as volatile organic compounds and nitrogen oxides, react in the presence of sunlight. The ozone air quality problem within the Region is complex because ozone is meteorologically dependent. In addition, the ozone problem in the Region is believed to be attributable in large part to precursor emissions generated in the large urban areas located to the south and southeast and carried by prevailing winds into the Region. The ozone problem thus remains largely beyond the control of the Region and State and can be effectively addressed only through a multi-state abatement effort.

2.6 AGRICULTURAL RESOURCE BASE

About 1,156 square miles, or 43 percent of the total area of the Region, were in agricultural use in 2010. This figure includes lands actually used for agriculture—primarily cultivated lands and lands used for pasture. As shown on Map 2.23, large, essentially uninterrupted blocks of agricultural land remain in the Region, particularly in outlying areas. In other areas, farmland is more fragmented, being intermixed with nonagricultural uses.

As further shown on Map 2.23, much of the existing agricultural land in the Region is covered by highly productive soils—comprised of soils in agricultural capability Class I and Class II, as classified by the U.S. Natural Resources Conservation Service. Agricultural lands covered by Class I and Class II soils encompassed about 887 square miles, or 77 percent of all agricultural land in the Region, in 2010. The adopted regional land use plan recommends the preservation of Class I and Class II soils insofar as practicable.

2.7 EXISTING PLANS AND ZONING

There is a long history of planning at the regional, county, and local level in Southeastern Wisconsin. This section provides an overview of the existing planning framework of the Region, focusing on adopted regional plans and county and local comprehensive plans. This section also describes existing zoning arrangements in the Region, zoning being one of the most important measures available to county and local units of government to implement their plans.

Regional Plans

The Regional Planning Commission has prepared and adopted a number of regional plans that together provide a comprehensive plan for the Region. The regional land use and transportation plans are the most basic regional plan elements. A description of the currently adopted year 2035 regional land use and transportation plans, and the implementation status of these plans, is presented in Chapter 3 of this volume. Other key elements of the overall plan for the Region are described as follows.

Regional Water Quality Management Plan

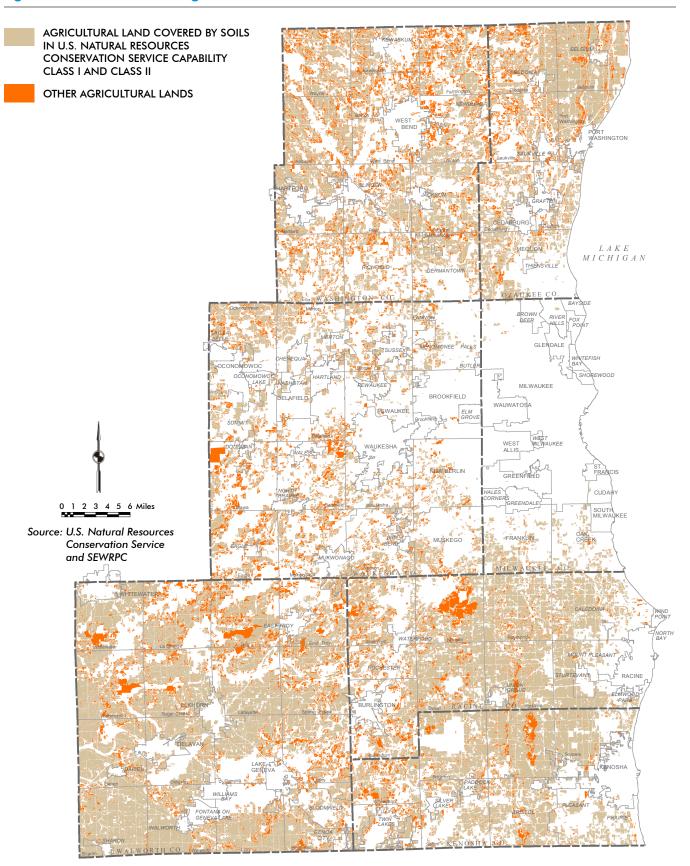
The Commission completed and adopted a regional water quality management plan in 1979, in part to meet the Congressional mandate that the waters of the United States be made "fishable and swimmable" to the extent practical. The plan is documented in SEWRPC Planning Report No. 30, A Regional Water Quality Management Plan for Southeastern Wisconsin, Volume One, Inventory Findings; Volume Two, Alternative Plans; and Volume

¹⁷ There is also a three-county maintenance area for the 2006 24-hour fine particulate standard consisting of Milwaukee, Racine, and Waukesha Counties, which requires offsets and other measures to ensure that this standard continues to be met.

About 1,156 square miles, or 43% of the Region, were in agricultural use in 2010. Most of this land has highly productive soils.

The Commission has prepared and adopted a number of regional plans that together provide a comprehensive plan for the Region.

Map 2.23 Agricultural Lands in the Region: 2010



Three, Recommended Plan, July 1979. It provides recommendations for controlling water pollution from point sources such as wastewater treatment plants, points of separate and combined sewer overflow, and industrial waste outfalls. It also recommends controlling nonpoint sources such as urban and rural stormwater runoff. The plan provides the basis for:

- Continued eligibility of local units of government for Federal and State grants that support sewerage system development and redevelopment
- Issuance of waste discharge permits by the DNR
- Review and approval of public sanitary sewer extensions by the DNR
- Review and approval of private sanitary sewer extensions and large onsite wastewater treatment systems and holding tanks by the Wisconsin Department of Safety and Professional Services

The Commission adopted an update of the regional water quality management plan for the Greater Milwaukee Watersheds in December 2007.¹⁸ This effort was coordinated with a parallel sewerage facilities planning program carried out by the Milwaukee Metropolitan Sewerage District (MMSD). It was designed to utilize the watershed planning approach consistent with historic SEWRPC practice and evolving EPA policies. The update resulted in the re-evaluation and, as necessary, revision of the three major elements comprising the original plan (land use, point source pollution abatement, and nonpoint source pollution abatement). In addition, a groundwater element was added based largely on companion work programs. The updated plan is documented in SEWRPC Planning Report No. 50, A Regional Water Quality Management Plan Update for the Greater Milwaukee Watersheds, December 2007.

Regional Water Supply Plan

The Commission adopted a regional water supply plan in December 2010 that represents the third, and final, element of the SEWRPC regional water supply management program. The first two elements included the development of basic groundwater inventories and the development of a groundwater simulation model for the Region. The program involved interagency partnerships with the U.S. Geological Survey, Wisconsin Geological and Natural History Survey, University of Wisconsin-Milwaukee, DNR, and water supply utilities serving the Region. The plan is documented in SEWRPC Planning Report No. 52, A Regional Water Supply Plan for Southeastern Wisconsin, December 2010, and includes the following major components:

- Development of recommended water supply service areas and forecast demand for water use
- Development of recommendations for water conservation efforts to reduce water demand
- Evaluation of alternative sources of supply, culminating in identification of recommended sources of supply for each service area and in

The regional water quality management plan provides a basis for review and approval of public sewer extensions by the DNR.

Important groundwater recharge areas were identified as part of the regional water supply plan.

¹⁸ The greater Milwaukee watersheds include the Kinnickinnic, Menomonee, Milwaukee, and Root River watersheds; the Oak Creek watershed; the Lake Michigan direct drainage area from the northern boundary of the Town of Grafton to the northern boundary of the Root River watershed at Lake Michigan; the Milwaukee Harbor estuary; and the nearshore area of Lake Michigan from the northern boundary of the Village of Fox Point south to the Village of Wind Point.

recommendations for development of the basic infrastructure required to deliver that supply

- Identification of important groundwater recharge areas
- Specification of new institutional structures found necessary to carry out the plan recommendations

Regional Park and Open Space Plan

The Commission adopted a regional park and open space plan for Southeastern Wisconsin in December 1977. The plan has an open space preservation element and an outdoor recreation element. The open space preservation element consists of recommendations for preserving environmental corridors and other environmentally significant areas in the Region. The outdoor recreation element consists of:

- A resource-oriented outdoor recreation plan providing recommendations for the number and location of large parks, recreation corridors to accommodate trail-oriented activities, and water-access facilities to enable the recreational use of rivers, inland lakes, and Lake Michigan
- An urban outdoor recreation plan providing recommendations for the number and distribution of local parks and outdoor recreational facilities located in urban areas of the Region

The initial regional park and open space plan is documented in SEWRPC Planning Report No. 27, A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000, November 1977. The Commission assists counties in the Region in preparing county-level park and open space plans. These plans refine, detail, and extend the regional park and open space plan. The county plans serve as amendments to the regional plan upon their adoption by the Commission.

Regional Natural Areas Plan

A regional natural areas and critical species habitat protection and management plan for Southeastern Wisconsin was adopted by the Commission in 1997 and amended in 2010. The plan is documented in SEWRPC Planning Report No. 42, A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin, as amended in 2010. The planning effort was undertaken to identify the most significant remaining natural areas in the Region that are essentially remnants of the pre-European-settlement landscape. Other areas vital to the maintenance of endangered, threatened, and rare plant and animal species in the Region were also identified. The plan recommends preserving 494 natural areas and 271 critical species habitat sites, primarily through public and private conservancy ownership.

Regional Housing Plan

The Commission adopted the year 2035 regional housing plan in March 2013. That plan is documented in SEWRPC Planning Report No. 54, A Regional Housing Plan for Southeastern Wisconsin: 2035. The regional housing plan provides further detail to the residential component of the year 2035 regional land use plan. The focus of the housing plan is providing an adequate supply of affordable housing for all current residents and the anticipated future population of the Region through the design year 2035.

The regional park and open space plan includes recommendations to preserve environmental corridors.

The regional natural areas plan identifies areas vital to the maintenance of endangered, threatened, and rare plant and animal species. Implementing the plan recommendations will benefit current and future residents by:

- Providing housing affordable to all residents of the Region, with a focus on housing affordable to the existing and projected workforce
- Reinforcing the need for improved and expanded public transit in Southeastern Wisconsin
- Providing enough subsidized and low-income tax credit housing to meet the needs of extremely and very low-income households and help address the problem of dilapidated, substandard, and unsafe housing in the Region
- Better meeting the existing and future need for accessible housing for people with disabilities
- Increasing racial and economic integration throughout the Region
- Promoting compact development to achieve more efficient, costeffective development and preservation of farmland

County and Local Comprehensive Plans

The Wisconsin Legislature enacted legislation that expanded the scope and significance of comprehensive planning in the State in 1999. The legislation, sometimes referred to as the State's "Smart Growth" law, provides a framework for the development, adoption, implementation, and amendment of comprehensive plans by county, city, village, and town units of government. The law is set forth in Section 66.1001 of the Wisconsin Statutes and has been amended periodically since its enactment. The law effectively requires the adoption of a comprehensive plan by cities, villages, towns, and counties that administer a general zoning ordinance, a shoreland zoning ordinance, a land subdivision ordinance, or an official mapping ordinance. The law requires consistency between comprehensive plans and such ordinances enacted or amended on or after January 1, 2010. The law also requires comprehensive plans to address the following nine elements: issues and opportunities; housing; transportation; utilities and community facilities; agricultural, natural, and cultural resources; economic development; intergovernmental cooperation; land use; and implementation.

Existing Comprehensive Plans

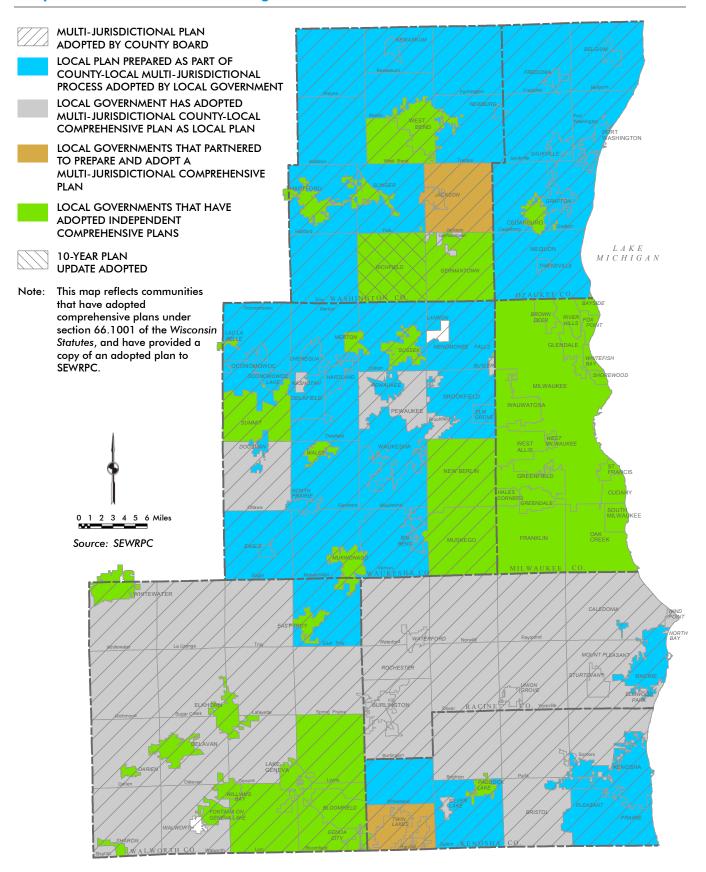
Map 2.24 shows that almost every city, village, and town in the Region has adopted a comprehensive plan per State legislation.¹⁹ Six of the seven counties (all except Milwaukee County) have also adopted comprehensive plans.²⁰ The development of the Region is heavily influenced by these plans, which provide a guide for general location and density of development at least 20 years into the future. Community comprehensive plans were considered in the regional planning process due to their influence. An important step in this process was to understand the amount of development that could be potentially accommodated by community comprehensive plans.

State comprehensive planning law effectively requires the adoption of a comprehensive plan by cities, villages, towns, and counties that administer a general zoning ordinance, a shoreland zoning ordinance, a land subdivision ordinance, or an official mapping ordinance.

¹⁹ The State comprehensive planning law and adopted county and local government comprehensive plans are discussed further in Appendix B.

²⁰ Milwaukee County has not prepared a comprehensive plan because it does not administer a zoning, subdivision, or official mapping ordinance.

Map 2.24 Comprehensive Plan Status in the Region: 2014



An analysis of comprehensive plans adopted by communities in the Region was undertaken by the Commission during preparation of the year 2035 regional housing plan. The analysis identifies the amount of residential and job-supporting development—and the associated increase in housing and jobs—that could be expected in the Region if community comprehensive plans were to be fully implemented. The analysis was limited to areas planned by communities to be provided with sanitary sewer service and was conducted at a necessarily general, regionwide scope, which was appropriate for use in the development of a regional-level housing plan.

The analysis indicates that local comprehensive plans would accommodate substantial growth in housing and employment levels in the Region. It is estimated that local comprehensive plans for sewered communities in the Region could potentially accommodate a total of about 1,052,000 housing units and 2,091,000 jobs under full development—or "buildout"—conditions. In comparison, the currently adopted regional land use plan, which is based upon an intermediate-growth scenario, indicates that sewered communities in the Region may be expected to accommodate a total of 864,000 housing units and 1,327,000 jobs by the year 2035 (see Table 2.24).

The higher level of growth associated with the comprehensive plans is primarily due to the practice of many communities to plan for the full buildout of the community and adjacent areas that may be annexed over a relatively long period of time. In many cases these conditions would likely not materialize until long after the stated plan design year (typically 2035). In a number of communities, planned future growth areas extend beyond the long-range planned sewer service areas embodied in the regional land use plan.

Counties and communities often work to align the goals and objectives set forth in other planning efforts, such as county land and water resource management plans or community sustainability plans, with their comprehensive plans. An example is the City of Milwaukee's *ReFresh Milwaukee* sustainability plan, which was published in 2013. *ReFresh Milwaukee* is a citywide strategic plan to develop a sound environmental, economic, and socially sustainable future. The plan seeks to implement sustainable projects and complement many of the policies set forth in the City's comprehensive plan by creating goals, targets, and strategies that refine and detail the comprehensive plan.

Local Zoning Regulations

A zoning ordinance is a public law that regulates the use of property in the public interest. Local zoning regulations include general zoning regulations and special-purpose regulations governing floodplain and shoreland areas. General and special-purpose zoning regulations may be adopted as a single ordinance or as separate ordinances, and may or may not be included in the same document. As previously noted, the State comprehensive planning law establishes a close link between comprehensive plans and zoning, by requiring consistency between comprehensive plans and general zoning and shoreland zoning ordinances enacted or amended on or after January 1, 2010. A description of existing zoning arrangements in cities, villages, towns, and counties in the Region follows.

General Zoning

General zoning divides a community into districts for the purpose of regulating the use of land, water, and structures; the height, size, shape, and placement of structures; and the density of population. Cities in Wisconsin are granted authority under Section 62.23 of the *Wisconsin Statutes* to enact general Community comprehensive plans call for significantly more housing units (1,052,000 compared to 864,000) and jobs (2,091,000 compared to 1,327,000) than reasonably expected under the 2035 regional land use plan.

State comprehensive planning law requires consistency between comprehensive plans and zoning ordinances.

Table 2.24 Housing and Employment Accommodated by Community Comprehensive Plans and the Year 2035 Regional Land Use Plan^a

| | | Housing Units | | | Jobs | |
|------------|--|------------------------|------------|---------------------------|------------------------|------------|
| County | Regional Land Use Plan ^b | Comprehensive Plans | Difference | Regional Land Use Plan | Comprehensive Plans | Difference |
| Kenosha | 79,000 | 84,100 | 5,100 | 86,200 | 306,200 | 220,000 |
| Milwaukee | 427,400 | 448,000 | 20,600 | 628,000 | 787,000 | 159,000 |
| Ozaukee | 34,800 | 61,900 | 27,100 | 59,800 | 99,800 | 40,000 |
| Racine | 77,500 | 92,300 | 14,800 | 101,100 | 186,300 | 85,200 |
| Walworth | 43,800 | 77,900 | 34,100 | 62,300 | 153,700 | 91,400 |
| Washington | 46,400 | 61,600 | 15,200 | 68,900 | 144,900 | 76,000 |
| Waukesha | 155,100 | 225,800 | 70,700 | 320,000 | 412,900 | 92,900 |
| Region | 864,000 | 1,051,600 | 187,600 | 1,327,200 | 2,090,800 | 763,600 |

^a Limited to areas planned by local governments to be provided with sanitary sewer service.

^b Refers to the number of occupied housing units, or households, under the regional land use plan.

Source: SEWRPC

General zoning divides a community into districts to regulate the use of land, water, and structures; the height, size, and placement of structures; and population density. General zoning is in effect for all of the communities in the Region. zoning. The same authority is granted to villages under Section 61.35 of the Statutes. General zoning in unincorporated areas is enabled under several statutory provisions. Counties are granted general zoning authority in unincorporated areas under Section 59.69 of the Statutes; however, a county zoning ordinance is only effective in towns that ratify the county ordinance. This is referred to as "county-town" zoning because it is administered jointly by the county and the ratifying towns.

Towns that do not adopt a county zoning ordinance may adopt village powers to use city and village general zoning authority, subject to county board approval where a general county zoning ordinance exists. This is referred to as "town-county" zoning because no town zoning ordinance or ordinance amendment may take effect unless approved by a county board. A town may adopt a zoning ordinance under Section 60.61 of the Statutes in counties that have not adopted a general zoning ordinance, but only if the county board fails to adopt a county ordinance at the request of the town board concerned.

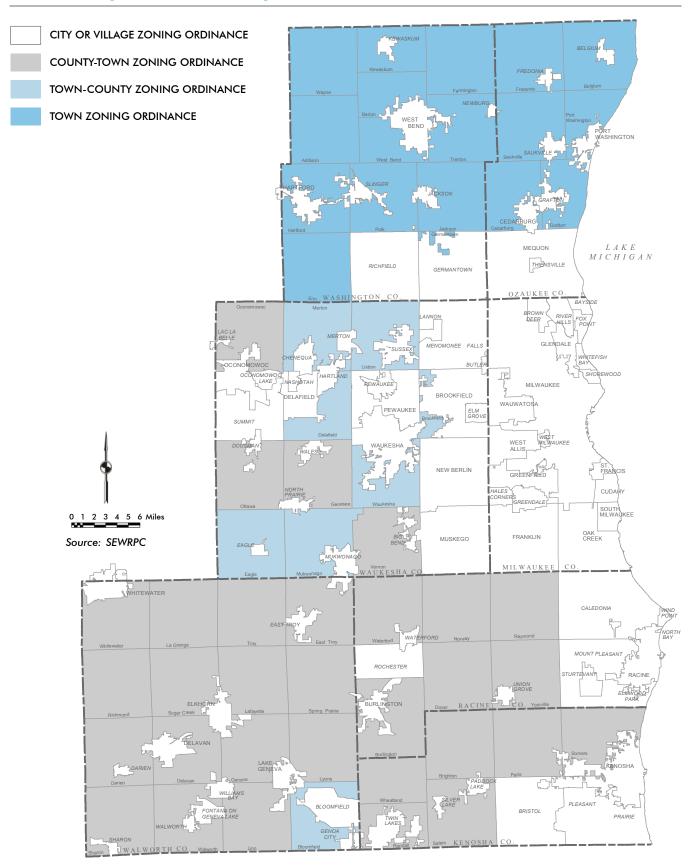
The status of general zoning in the Region in 2014 is shown on Map 2.25. General zoning was in effect in each of the 29 cities, 61 villages, and 57 towns. There were 31 towns under the jurisdiction of county zoning ordinances in Kenosha, Racine, Walworth, and Waukesha Counties.

In addition, Section 62.23 of the Statutes grants cities and villages the authority to enact extraterritorial zoning in adjoining unincorporated areas. Extraterritorial zoning jurisdiction is limited to the unincorporated areas within three miles of the corporate limits of a city of the first, second, or third class and within 1.5 miles of a city of the fourth class or a village. Cities and villages must follow a procedure that involves adjoining towns before enacting a permanent extraterritorial zoning ordinance and map.

Floodplain Zoning

Floodplain zoning is intended to preserve the floodwater conveyance and storage capacity of floodplain areas and to avoid flood-damage-prone urban development in flood hazard areas. Cities, villages, and counties (in their unincorporated areas) are required to adopt floodplain zoning under Section 87.30 of the *Wisconsin Statutes*, provided that the hydraulic and engineering data required to create the ordinance are available. The

Map 2.25 General Zoning Ordinances in the Region: 2014



minimum standards for floodplain zoning ordinances are set forth in Chapter NR 116 of the Wisconsin Administrative Code. These regulations must govern filling and development activities within the entire one-percent-annualprobability (100-year recurrence interval) floodplain, which is the area subject to inundation during a flood event with a one percent probability of occurrence during any year. Local floodplain zoning regulations must prohibit nearly all forms of development in the floodway under minimum State requirements. The floodway is the area of the floodplain required to convey the one-percent-probability peak flood flow. Local regulations must also restrict filling and development in the flood fringe, which consists of the portion of the floodplain located outside the floodway that would be covered by floodwaters during a one-percent-probability flood event.

The status of floodplain zoning in the Region in 2014 is shown on Map 2.26. Floodplain ordinances have been adopted throughout almost all of Southeastern Wisconsin. They were in effect in all six counties with unincorporated territory, as well as 83 of the 90 cities and villages in the Region.

Shoreland Zoning

Section 59.692 of the Wisconsin Statutes requires counties to adopt regulations to ensure protection and proper development of shorelands in their unincorporated areas. Shoreland areas are those lands within 1,000 feet of a navigable lake, pond, or flowage, or within 300 feet of a navigable stream or to the landward side of the floodplain, whichever distance is greater. Minimum standards for county shoreland regulations are set forth in Chapter 115 of the Wisconsin Administrative Code. Shoreland regulations must include minimum requirements for lot sizes and building setbacks as well as restrictions on the cutting of trees and shrubbery. State regulations also require that counties place all shoreland wetlands at least five acres in size in a protective conservancy district. Under Sections 62.231 and 61.351 of the Wisconsin Statutes, cities and villages are also required to enact regulations that protect wetlands five acres in size lying in shoreland areas as defined above. Rules pertaining to city and village shoreland-wetland zoning are set forth in Chapter NR 117 of the Wisconsin Administrative Code.

The status of shoreland zoning in the Region in 2014 is shown on Map 2.27. Shoreland ordinances were in effect in each of the six counties with unincorporated areas. Shoreland-wetland zoning was in effect in 74 of the 90 cities and villages in the Region.

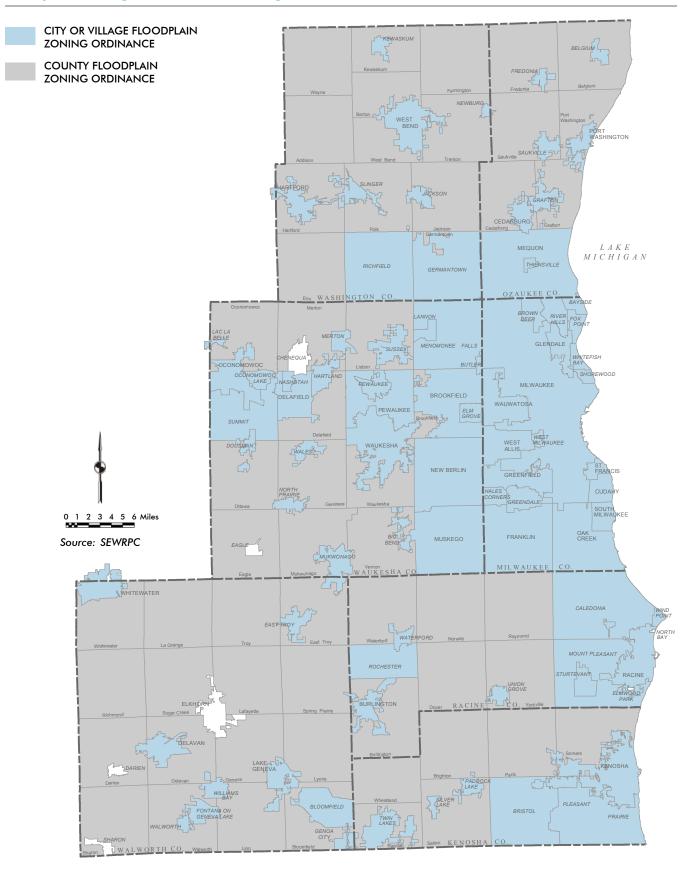
2.8 SUMMARY

A major inventory update effort was conducted in the early 2010s in support of preparing VISION 2050 and other elements of the comprehensive plan for the Region. This chapter presents a summary of the results of that inventory update pertaining to the population, economy, land use, sanitary sewer and water supply services, natural resource base, agricultural resource base, and existing planning framework within the Region. Transportation-related inventory and survey data are presented in Chapters 4 and 5 of this volume.

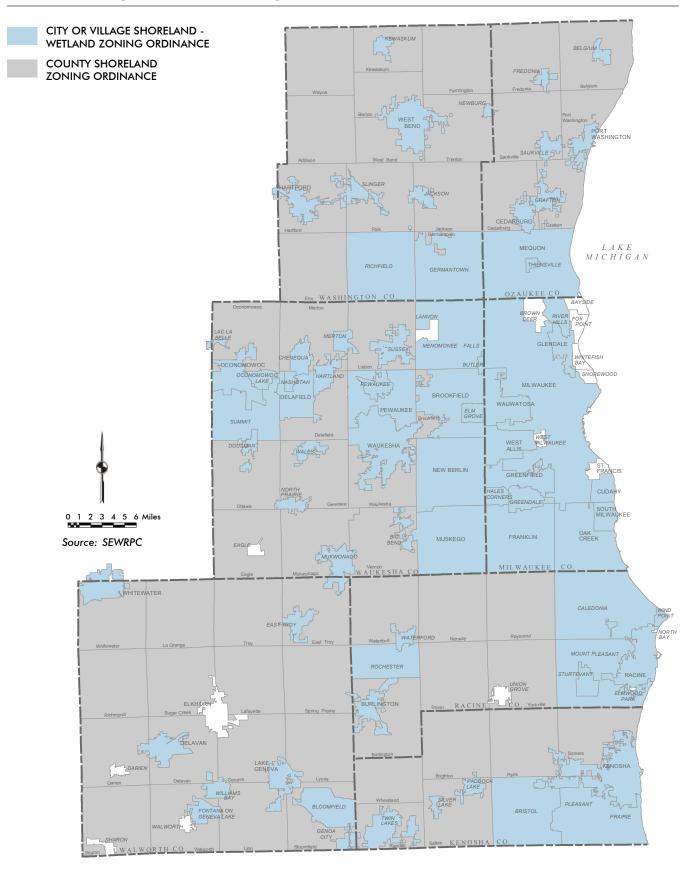
Demographic and Economic Base

 The population of the Region in 2010 was 2,020,000 people, which is an increase of 4.6 percent (88,800 people) over the 2000 population of 1,931,200 people. The population increase in the Region between 2000 and 2010 can be largely attributed to natural increase. There was

Map 2.26 Floodplain Zoning Ordinances in the Region: 2014



Map 2.27 Shoreland Zoning Ordinances in the Region: 2014



a natural increase of about 109,200 people in the Region; however, there was a net out-migration of about 20,400 people. All seven counties gained population, including Milwaukee County after three decades of decline. Although Milwaukee County gained population during the 2000s, its share of the regional population decreased by about 2 percent. The share of the other six counties remained about the same or increased slightly.

- The minority share of the total population increased throughout the Region between 1980 and 2010; however, minority populations remain concentrated in the Region's largest cities.
- There were about 800,100 households in the Region in 2010. This is an increase of just over 51,000 households, or 6.8 percent, over the 2000 level of 749,000 households. The rate of growth in number of households in the Region during the 2000s exceeded the rate of population growth, which has been a continuing pattern observed since 1950. The differential growth rates in households and population over the long term have been accompanied by a decline in average household size. The average household size for the Region decreased from 2.52 people in 2000 to 2.47 people in 2010.
- The number of jobs in the Region, as reported by the U.S. Bureau of Economic Analysis, fluctuated somewhat between 2000 and 2010. The number of jobs decreased during the early 2000s, increased during the mid-2000s, and decreased again after 2008. This fluctuation resulted in a decrease of about 33,200 jobs, or 2.7 percent, during the 2000s, to 1,176,600 jobs in 2010. There was a long period of uninterrupted job growth between 1983 and 2000. Historically, both national and regional employment levels tend to fluctuate in the short-term, rising and falling in accordance with business cycles. The long period of uninterrupted job growth between 1983 and 2000 is unusual in this respect.
- Five of the seven counties in the Region gained jobs between 2000 and 2010. Kenosha County gained 7,000 jobs during the 2000s, which was the most of any county in the Region. There were also job increases in Washington County (3,600 jobs), Ozaukee County (2,100 jobs), Walworth County (1,500 jobs), and Waukesha County (1,000 jobs). The number of jobs decreased in both Milwaukee and Racine Counties, with much of the decrease occurring during the recession of the late 2000s.
- The shift in the regional economy from manufacturing to a service orientation continued during the 2000s. Manufacturing employment decreased by 31 percent between 2000 and 2010, and by 38 percent over the last four decades. Conversely, service-related employment increased by 10 percent during the 2000s, and by 183 percent over the last four decades. The State and the Nation have experienced a similar shift from manufacturing to service-related employment; however, both the Region and the State have a larger share of manufacturing relative to total employment than the Nation.
- The Region's per capita income was \$25,900 in 2010, which is about the same as per capita income for the State and Nation. Per capita income in the Region decreased by 11.3 percent during the 2000s (measured in constant dollars). Constant dollar per capita income

for Wisconsin and the Nation also decreased. The Region's median family income was \$65,400 in 2010, which exceeded that of the State and Nation. Median family income (constant dollar) in the Region decreased by 11.0 percent during the 2000s, and also decreased for the State and the Nation.

Land Use

- Developed lands in the Region—consisting of lands that have been developed for residential; commercial; industrial; transportation, communication, and utility; governmental and institutional; and recreational uses—encompassed about 779 square miles, or 29.0 percent of the total area of the Region, in 2010. Residential land encompassed 401 square miles, accounting for more than half of the developed land area of the Region, followed by transportation, communication, and utilities, with 214 square miles. Commercial land and industrial land each encompassed just over 35 square miles. Governmental/institutional land and recreational land encompassed 37 square miles and 56 square miles, respectively.
- The developed land area of the Region increased by 67 square miles, or 9.4 percent, between 2000 and 2010, including the following: residential land—39.2 square miles, or 10.8 percent; commercial land—5.4 square miles, or 17.9 percent; industrial land—2.3 square miles, or 7.0 percent; transportation, communication, and utility land—11.1 square miles, or 5.5 percent; governmental and institutional land—3.3 square miles, or 9.8 percent; and recreational land—5.6 square miles, or 11.1 percent.
- Undeveloped lands encompassed about 1,911 square miles, or 71.0 percent of the total area of the Region in 2010. This includes 1,156 square miles of agricultural lands; 591 square miles of wetlands, woodlands, and surface water combined; and 164 square miles of unused land other open land. Undeveloped lands decreased by 67 square miles, or 3.4 percent, between 2000 and 2010.
- The population density of the urban portion of the Region, based upon the Commission's urban growth analysis, decreased modestly over the past two decades from about 3,500 people per square mile in 1990 to 3,300 in 2000 and 3,200 in 2010. This stands in marked contrast to the substantial decrease in urban population density that occurred in the Region between 1940 and 1980. The urban household density experienced an only slight decrease over the past two decades—from about 1,320 households per square mile in 1990 to 1,290 in 2000 and 1,260 in 2010.

Public Utilities

 Areas served by public sanitary sewers in 2010 encompassed about 525 square miles, or 19.5 percent of the total area of the Region compared to about 477 square miles, or 17.7 percent of the Region in 2000. An estimated 1.80 million people, or 89.0 percent of the regional population, were served by public sanitary sewers in 2010, compared to 1.71 million people, or 88.7 percent of the regional population, in 2000. The increase in the land area and population served primarily reflects new development designed to be served by sanitary sewers that occurred during the 2000s. Some of the increase is also the result of the retrofitting of certain developed areas—initially served by private onsite wastewater treatment systems—with public sanitary sewers.

 Areas served by public water utilities in 2010 encompassed about 444 square miles, or 16.5 percent of the total area of the Region, compared to 390 square miles, or 14.5 percent of the Region in 2000. An estimated 1.68 million people, or 83.2 percent of the regional population, were served by public water utilities in 2010, compared to 1.58 million people, representing 81.9 percent of the regional population, in 2000. The increase in the land area and population served primarily reflects new urban development designed to be served by public water supply during the 2000s, and, to a lesser extent, the retrofitting of certain already developed areas—initially served by private wells—with public water supply service.

Natural Resource Base

- Surface and groundwater resources comprise an extremely important component of the natural resource base of the Region. The Region encompasses 101 major lakes (lakes of at least 50 acres in area) and 1,150 miles of perennial streams. In addition, the Region encompasses numerous lakes and ponds less than 50 acres in area and an extensive network of smaller, intermittent streams. Groundwater sustains lake levels and provides the base flows of streams in the Region. Groundwater also comprises a major source of water supply for domestic, municipal, industrial, and agricultural water users.
- A major subcontinental drainage divide, oriented in a generally northwesterly-southeasterly direction, bisects the Region. About 1,680 square miles, or 62 percent of the Region, are located west of the divide and drain to the Upper Mississippi River system; the remaining 1,009 square miles, or 38 percent, drain to the Great Lakes-St. Lawrence River system. The subcontinental divide is a major feature of the overall drainage pattern of the Region, having important implications for the use of Lake Michigan as a source of water supply. The Great Lakes Compact, implemented in Chapter 281 of the Wisconsin Statutes, prohibits the diversion of water from the Great Lakes Basin, with very limited exceptions.
- Upland woodlands encompassed about 191 square miles, or 7 percent of the total area of the Region, in 2010. Wetlands encompassed about 325 square miles, or 12 percent of the Region. Prairies, which once covered extensive areas of Southeastern Wisconsin, have been reduced to scattered remnants, primarily in the southern and western portions of the Region.
- A comprehensive inventory of "natural areas" and "critical species habitat sites" in the Region was completed by the Regional Planning Commission in 1994 and updated in 2009. Natural areas are tracts of land or water so little modified by human activity, or sufficiently recovered from the effects of such activity, that they contain intact native plant and animal communities believed to be representative of the landscape before European settlement. A total of 494 natural areas, encompassing a total of 101 square miles, have been identified in the Region. Critical species habitat sites consist of areas that are important for their ability to support endangered, threatened, or rare plant or animal species. A total of 271 critical species habitat sites encompassing a total of 31 square miles have been identified. Most

of the critical species habitat sites in the Region are located within the Commission-identified environmental corridors and isolated natural resource areas.

- The most important elements of the natural resource base and features closely related to that base—including wetlands; woodlands; prairies; wildlife habitat; major lakes and streams and associated shorelands and floodlands; and historic, scenic, and recreational sites-when combined result in essentially elongated patterns referred to by the Commission as "environmental corridors." "Primary" environmental corridors, which are the longest and widest type of environmental corridor, are generally located along major stream valleys, around major lakes, and along the Kettle Moraine. They encompassed 484 square miles, or 18 percent of the total area of the Region, in 2010. "Secondary" environmental corridors are generally located along small perennial and intermittent streams. They encompassed 79 square miles, or 3 percent of the Region, in 2010. In addition to the environmental corridors, "isolated natural resource areas," consisting of small pockets of natural resource base elements separated physically from the environmental corridor network, have been identified. Widely scattered throughout the Region, isolated natural resource areas encompassed about 70 square miles, or just under 3 percent of the Region, in 2010.
- Over the past decade, the combination of local controls and offsets implemented within and external to the Region, along with national vehicle emissions control requirements have resulted in a significant improvement in ambient air quality within the Region as well as nationally. The Region currently meets all national ambient air quality standards except for ozone. The EPA has designated Kenosha County east of IH 94 as a part of the Tri-State Chicago-Naperville, IL-IN-WI Marginal Nonattainment Area for the 2008 8-hour ozone standard. Ozone is formed when precursor pollutants, such as volatile organic compounds and nitrogen oxides, react in the presence of sunlight. The ozone air quality problem within the Region is a complex problem because ozone is meteorologically dependent. In addition, the ozone problem in the Region is believed to be attributable in large part to precursor emissions that are generated in the large urban areas located to the south and southeast and carried by prevailing winds into the Region. The ozone problem thus remains largely beyond the control of the Region and State and can be effectively addressed only through a multi-state abatement effort.

Agricultural Resource Base

- About 1,156 square miles, or 43 percent of the total area of the Region, were in agricultural use in 2010. This figure includes lands actually used for agriculture—primarily cultivated lands and lands used for pasture. Large, essentially uninterrupted blocks of agricultural land remain in the Region, particularly in outlying areas. In other areas, farmland is more fragmented, being intermixed with nonagricultural uses.
- Much of the existing agricultural land in the Region is covered by highly productive soils—comprised of soils in agricultural capability Class I and Class II, as classified by the U.S. Natural Resources Conservation Service. Agricultural lands covered by Class I and Class II soils encompassed about 887 square miles, or 77 percent of all agricultural land in the Region, in 2010. The 2035 regional land use

plan recommends the preservation of Class I and Class II soils insofar as practicable.

Existing Plans and Zoning

- The Regional Planning Commission has prepared and adopted a number of regional plans that together provide a comprehensive plan for the Region. The regional land use and transportation plans are the most basic regional plan elements. Additional plan elements include water quality management, water supply, parks and open space, natural areas, and housing. Together, these plans set forth the fundamental concepts that are recommended to guide the development of Southeastern Wisconsin. Regional plan recommendations can be implemented, in part, by integrating them into county and local government comprehensive plans.
- The Wisconsin Legislature enacted legislation that expanded the scope and significance of comprehensive planning in the State in 1999. The legislation, sometimes referred to as the State's "Smart Growth" law, provides a framework for the development, adoption, implementation, and amendment of comprehensive plans by county, city, village, and town units of government. The law effectively requires the adoption of a comprehensive plan by cities, villages, towns, and counties that administer a general zoning ordinance, a shoreland zoning ordinance, a land subdivision ordinance, or an official mapping ordinance. The law requires consistency between comprehensive plans and such ordinances enacted or amended on or after January 1, 2010.
- Almost every city, village, and town in the Region has adopted a comprehensive plan per State legislation. Community comprehensive plans were considered in the regional planning process. An important step in this process was to understand the amount of development that could be potentially accommodated by community comprehensive plans. It is estimated that local comprehensive plans for sewered communities in the Region could potentially accommodate a total of about 1,052,000 housing units and 2,091,000 jobs under full development—or "buildout"—conditions. In comparison, the 2035 regional land use plan, which is based upon an intermediate-growth scenario, indicates that sewered communities in the Region may be expected to accommodate a total of 864,000 housing units and 1,327,000 jobs by the year 2035.
- A zoning ordinance is a public law that regulates the use of property in the public interest. It is one of the most important measures available to a community to implement its comprehensive plan. Local zoning regulations include general zoning regulations and special-purpose regulations governing floodland and shoreland areas. General zoning was in effect in each of the 29 cities, 61 villages, and 57 towns in the Region in 2014. Floodplain zoning was in effect in all six counties with unincorporated territory, as well as 83 of the 90 cities and villages in the Region. Shoreland ordinances were in effect in each of the six counties with unincorporated areas. Shoreland-wetland zoning was in effect in 74 of the 90 cities and villages in the Region.