SEWRPC Community Assistance Planning Report No. 378 (4th Edition)

KENOSHA COUNTY HAZARD MITIGATION PLAN UPDATE

# Chapter 2

# BASIC STUDY AREA INVENTORY AND ANALYSIS

## 2.1 INTRODUCTION

Information on certain pertinent natural and built features and aspects of the study area is an important consideration in sound hazard mitigation planning. Accordingly, the collection and collation of definitive information regarding basic demographic characteristics, existing and planned land use, surface water and Lake Michigan shoreline system characteristics, transportation and utility systems, critical community facilities, and existing hazard management programs constitute an important step in the planning process. The resulting information is an important element to the planning process since sound mitigation approaches cannot be formulated and evaluated without an in-depth knowledge of the relevant conditions in the study area.

## 2.2 CIVIL DIVISIONS

The geographic extent and functional responsibilities of civil divisions and special-purpose units of government are important factors to be considered in hazard mitigation planning, since these local units of government provide the basic structure of the decision-making framework, within which such planning must be addressed. The boundaries of the 12 civil divisions in Kenosha County are shown on Map 1.1 in Chapter 1 of this report. There are five towns in Kenosha County, including Brighton, Paris, Randall, Somers, and Wheatland. In addition, there are six villages, which include Bristol, Paddock Lake, Pleasant Prairie, Salem Lakes, Somers, and Twin Lakes, and the City of Kenosha located within the County. Three changes in civil divisions have occurred since the adoption of the initial hazard mitigation plan. In December 2009, a portion of the Town of Bristol incorporated as the Village of Bristol. Subsequent to this, the Village of Bristol annexed

the remaining portion of the Town of Bristol. In April 2015, a portion of the Town of Somers incorporated as the Village of Somers. In February 2017, the Village of Salem Lakes was created from the merger of the Village of Silver Lake and the Town of Salem. The total land area and proportion of the County within each civil division is presented in Table 2.1.

## 2.3 DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS

**Population**

The area that is now Kenosha County was first included in the Federal census in 1850. Historical population levels in Kenosha County are provided in Table 2.2. The resident population was 75,238 persons in 1950. Since then, Kenosha County has steadily continued to increase in population, with the greatest percent increase between the years of 1950 and 1960. As of 2020, there were 169,151 individuals residing in the County. The population in Kenosha County is expected to increase through the year 2050 by approximately 48 percent.

The City of Kenosha is the most populous municipality in the County with about 59 percent of the County's population, in 2020. The next most populous communities in year 2020 are the Village of Pleasant Prairie with 13 percent of the County's population; the Village of Salem Lakes with 9 percent of the County's population; and the Village of Somers with 5 percent of the County's population.

**Households**

In addition to total population, the number of households, or occupied housing units, is of importance in land use planning and public facility planning insofar as it greatly influences the demand for urban land as well as the demand for transportation and other public facilities and services. Trends in the number of households in the County are shown in Table 2.3. The County experienced significant gains in the number of new households between 1970 and 2020. Since 1970, the rate of increase in the number of households has exceeded the rate of population increase. Between 1970 and 2020, the number of households increased by about 88 percent, compared to a population increase of about 43 percent. With the number of households increasing at a faster rate than the population, the number of persons per household has decreased.

**Employment**

Trends in job growth in the County are set forth in Table 2.4. The jobs are enumerated at their location and the data thus reflect the number of jobs within the County, including both full- and part-time jobs. A

significant increase in the number of jobs may be expected to attract additional residents to the County, thus influencing population growth. As indicated in Table 2.4, employment growth was significant in the County between 1970 and 2020, with an increase in the number of jobs of about 98 percent.

**Property Value**

The value of the real estate and personal property in a municipality reflects the upper end of the potential for property damages in each municipality. The equalized value as of 2022 of the real estate and personal property in Kenosha County and each of the general-purpose units of government in the County is shown in Table 2.5. The three communities with the highest equalized values in the County in 2022 are the City of Kenosha, Village of Pleasant Prairie, and the Village of Salem Lakes.

## 2.4 LAND USE

Land use is an important determinant of the potential impact a particular hazard may have, and of the actions which may be taken to mitigate the hazard impacts. Accordingly, an understanding of the amount, type, and spatial distribution of urban and rural land uses within the County is an important consideration in the development of a sound hazard mitigation plan. This section presents a description of the land uses in the County.

**Existing Land Uses**

Land uses in Kenosha County in 2020 are set forth on Map 2.1 and in Table 2.6. Urban land uses occupied about 25 percent of the County in 2020. Intensive urban development, including most commercial, industrial, and multi-family residential development, is concentrated within or near the City of Kenosha and the Villages of Bristol, Pleasant Prairie, and Somers or along the IH 94 corridor. Much of the single-family residential development also occurred within or surrounding the County's urban centers, while scattered low-density development occurred outside these communities amid predominantly rural areas. Residential development was the largest component of urban land use, encompassing about 49 percent of urban land uses and about 12 percent of the total area of the County. Most of this consisted of single-family residential development which encompassed about 45 percent of the urban land uses and 11 percent of the total area of the County.

Land uses categorized as transportation, communication, and utilities constituted the second largest urban land use category in 2020, encompassing about 28 percent of the area of all urban land and 7 percent of the total area of the County.

Major arterial highways serving the County include Interstate Highway (IH) 94/41, USH 45, State Trunk Highways (STH) 31, 32, 75, and 83, which traverse the County in a north-south direction; and STH 50, 142, 158, and 165, which traverse the County in a generally east-west direction. Other uses in the transportation, communications, and utilities category within the County include Metra, a commuter rail service line, Amtrak, three railway freight service lines, and four airports which serve the public, including Kenosha Municipal Airport.

Nonurban land uses occupied about 75 percent of the County in 2020. Agricultural land use was the largest component of nonurban land use, encompassing about 60 percent of the area of all nonurban land and about 45 percent of the total area of the County. Other major nonurban land uses present in the County include wetlands, woodlands, open lands, and surface water.

Manufactured homes can be particularly vulnerable to some hazards such as high winds. Map 2.2 shows the locations of manufactured home parks and individual manufactured homes in Kenosha County. In 2021 there were 2,099 manufactured homes located in the County. Most of these were located in 22 manufactured home parks. In addition, there were nine sites in the County that contained isolated individual manufactured homes.

**Planned Land Use**

Planned land use must seek to accommodate the impending demand for land within the Region, which primarily depends on future population, household, and employment levels. SEWRPC recently completed projections of land use, population, households, and employment from the period of 2020 to 2050 to provide a basis for preparation of VISION 2050. Map 2.3 and Table 2.7 present the recommended development pattern from the VISION 2050 land use component as it pertains to Kenosha County.

Planned urban-density areas depicted on Map 2.3 include land uses such as medium and high density residential; mixed use development; commercial development, including office and professional services; industrial development; government and institutional land use; and parks and recreational areas. Urban density areas are associated with the City of Kenosha, and adjacent urban areas in the Towns of Randall and Somers, and the Villages of Bristol, Paddock Lake, Pleasant Prairie, Salem Lakes, Somers, and Twin Lakes.

Urban land uses in Kenosha County are projected to increase by approximately 21 percent between 2020 and 2050 (Table 2.7). Table 2.8 shows the forecast growth of population, households, and employment levels for Kenosha County between the same time period. Population and household growth is projected

to double between 2020 and 2050, while the number of jobs is projected to increase by about 20 percent. Anticipating the needs of future populations, rather than responding to problems as they occur, is a main goal of hazard mitigation planning. Therefore, sound land use planning is a necessary tool for reducing or eliminating the costs of future hazard events.

**Surface Waters, Floodplains, and Lake Michigan Coastline**

Surface water resources, consisting of streams and lakes, form a particularly important element of the natural resource base. Surface water resources provide recreational opportunities, influence the physical development of the County, and enhance its aesthetic quality. Watershed boundaries, wetlands, and major streams and lakes within the County are shown on Map 3.2.

Major streams are defined as those which maintain, at a minimum, a small continuous flow throughout the year except under unusual drought conditions. There are approximately 110 miles of major streams in Kenosha County, located within four watersheds: the Des Plaines River, Fox (Illinois) River, Pike River, and Root River watersheds. A fifth watershed encompasses those areas adjacent to Lake Michigan which drain directly into the Lake through intermittent streams. The Fox River watershed generally encompasses the western portion of the County and includes the Lower Fox (Illinois) River portion of the watershed. The Des Plaines River watershed covers the central portion from the northern border to the southern border of the County and includes the Des Plaines River, Jerome Creek, Kilbourn Road Ditch, Center Creek, Brighton Creek, and the Dutch Gap Canal. The Root River watershed encompasses a small portion in the northern part of the County and includes the East Branch of the Root River Canal. The Pike River watershed, in the northeast portion of the County, includes the Pike River and Pike Creek.

There are also 20 major lakes, lakes of 50 acres or more, in Kenosha County. The major lakes include Benet Lake, Camp Lake, Center Lake, Cross Lake, Dyer Lake, George Lake, Hooker Lake, Lake Andrea, Lake Benedict, Elizabeth Lake, Lake Mary, Lake Shangri-La, Lilly Lake, Paddock Lake, Powers Lake, Rock Lake, Silver Lake, Vern Wolf Lake, and Voltz Lake. There are eight lake management districts in the County which have responsibilities related to the protection, rehabilitation, and management of 11 lakes.

Floodplains are the wide, gently sloping areas contiguous to, and usually lying on both sides of, a stream channel or lake. For planning and regulatory purposes, floodplains are normally defined as the areas subject to inundation by the 1-percent-annual-probability (100-year recurrence interval) flood event. Floodplain areas are generally not well suited to urban development, not only because of the flood hazard, but also because of the presence of high-water tables and, generally, of soils poorly suited to urban uses. Floodplain

areas often contain important natural resources, such as high-value woodlands, wetlands, and wildlife habitat and, therefore, constitute prime locations for parks and open space areas.

The floodplains shown on Map 3.2 in this report have been identified by Kenosha County, SEWRPC, and FEMA. Approximately 20,193 acres, not including surface water in lakes and existing stream channels, or about 11 percent of the total area of the County, are located within the 1-percent-annual-probability flood hazard area. Maps, tables, and more detailed hazard information related to floodplains in Kenosha County can be found in Chapter 3.

The Lake Michigan coastline in Kenosha County consists of about 15.4 miles of shoreline, encompassing portions of three local units of government, including the City of Kenosha and the Villages of Pleasant Prairie and Somers. Maps, tables, and more detailed hazard information related to Lake Michigan's coastline in Kenosha County can be found in Chapter 3.

**Environmental Corridors**

SWERPC has identified and delineated those areas of Kenosha County having concentrations of natural, recreational, historic, aesthetic, and scenic resources that should be preserved and protected in order to maintain the overall quality of the environment. Such areas normally include one or more of the following seven elements of the natural resource base which are essential to the maintenance of both the ecological balance and the natural beauty of the Region: 1) lakes, rivers, and streams and the associated underdeveloped shorelands and floodplains; 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. The foregoing seven elements constitute integral parts of the natural resource base. There are five additional elements that are important considerations in identifying and delineating areas with scenic, recreational, and educational value. These additional elements are: 1) existing outdoor recreation sites; 2) potential outdoor recreation and related open space sites; 3) historic, archaeological, and other cultural sites; 4) significant scenic areas, and 5) natural and scientific areas.

In southeastern Wisconsin, the delineation of these 12 natural resource and natural resource-related elements on maps result in an essentially linear pattern of relatively narrow, elongated areas which have been termed "environmental corridors" by SEWRPC. Primary environmental corridors include a wide variety of the aforementioned important resource and resource-related elements and are, by definition, at least 400 acres in size, two miles in length, and 200 feet in width. In Kenosha County in 2020 there were 29,176 acres of primary environmental corridors. These generally lie along rivers and streams and adjacent to lakes,

or are associated with woodlands, wetlands, or park and open space sites. In addition, smaller concentrations of natural resource features that have been 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. In Kenosha County there are 4,361 acres of isolated natural resource areas. Secondary corridors and isolated natural resources areas are generally not considered of regional significance and consequently are not shown on the existing and planned land use maps. However, such resources may be important at the local level and should be considered for preservation by local governments in the development of local plans.

## 2.5 EMERGENCY SERVICES AND CRITICAL FACILITIES

The type and location of public safety facilities are important considerations in hazard mitigation planning, because of the potential direct involvement of such facilities in certain hazard situations. The location of the fire stations, police stations, and associated emergency service areas are shown in Map 2.4. A listing of these facilities is included in Appendix C. The location of these stations in relationship to the floodplain areas are further analyzed and described in Chapter 3.

**Fire Suppression and Rescue Services**

Each of the 12 local units of government in Kenosha County either own or contract for fire suppression services or emergency medical services. The location of each of the fire stations and the fire service areas within Kenosha County are shown on Map 2.4. A variety of remote fire suppression systems are also present in Kenosha County. Throughout the County, fire departments, municipalities, and schools have installed devices such as fire suppression cisterns and dry hydrants to aid in fire suppression activities.

Each of the fire departments in Kenosha County, except the Town of Brighton, Randall, and Wheatland, and the Village of Paddock Lake, independently maintains an emergency medical service. The emergency medical service areas in Kenosha County are also shown on Map 2.4. Salem Lakes Fire and Rescue provides rescue services in the Town of Brighton and Village of Paddock Lake. Salem Lakes Fire and Rescue and Twin Lakes Fire and Rescue provide rescue services in the Towns of Randall and Wheatland. In the case of all jurisdictions, rescue service is provided by a publicly sponsored fire or fire and rescue department. The emergency medical service areas in Kenosha County are shown on Map 2.4.

All of the fire and rescue departments in Kenosha County participate in a mutual aid agreement with each other and numerous other Illinois and State of Wisconsin fire and rescue departments, and through a Mutual

Aid Box Alarm System (MABAS) agreement. This agreement enables each department to render assistance to, and receive assistance from, other departments in the County as needed to respond to fire and rescue emergencies. Under the agreement, departments render assistance without charge to the extent of available resources not required for the protection of their own service areas. This agreement enables individual departments to significantly supplement their own personnel, apparatus, and equipment with that from other departments in responding to emergencies.

Importantly, the agreement allows individual departments to access equipment, such as tankers, aerial trucks, and extraction equipment, which they themselves do not possess and which they may only need infrequently. In addition to the County mutual aid agreement, each department has reciprocal mutual agreements with one or more neighboring departments. Some of these are formal written agreements; others are unwritten. Many departments have indicated they would respond to any request for mutual aid, whether or not there is a mutual aid agreement, provided that they are able to do so without jeopardizing their own services.

Fire departments in the County participate in several specialized response teams. The Kenosha County Dive team consists of paid and volunteer members of the County's fire, rescue, police, and sheriff's departments. This team provides emergency response of trained personnel and equipment in water-related life-threatening situations, recovery of drowning victims, and search and recovery of crime evidence within the jurisdictional waters of Kenosha County. The Confined Space Rescue Team responds to any rescue involving victims trapped or incapacitated in an area having limited or restricted means for entry or exit. The High Angle Rescue Team responds to any rescue that requires rope and related equipment necessary to safely gain access to, and remove victim(s) from, hazardous areas with limited access such as water towers, ravines, high-rise buildings, above or below grade structures or terrain by means of a rope system. The Structural Collapse Rescue Team conducts search and rescue operations for victims at a structural collapse incident. The Trench Rescue Team responds to any incident involving victims trapped in a narrow excavation made below the surface of the ground. The Hazardous Materials Team responds to incidents involving hazardous materials. This team is responsible for identifying hazardous materials, assessing the hazard and risk associated with incidents, implementing control procedures, performing containment and confinement operations, rendering the incident area safe, and performing decontamination procedures.

**Law Enforcement**

Three of the 12 municipalities in Kenosha County provide for law enforcement through full-time police departments. In the remaining municipalities primary law enforcement is provided through the Kenosha

County Sheriff's Department. In addition, the Town of Wheatland provides limited law enforcement through a Town constable and the Village of Salem Lakes provides limited law enforcement through public safety and water patrol officers. The University of Wisconsin-Parkside also has a law enforcement agency that patrols County and State roads adjacent to the campus. The location of local law enforcement stations in Kenosha County is shown on Map 2.4. That map also shows the location of the State of Wisconsin Department of Corrections, correctional facilities and County detention centers in Kenosha County.

The law enforcement agencies within Kenosha County have several special-purpose units and teams. The Kenosha County Bomb Squad operates under the authority of the Kenosha County Sheriff's Department and is made up of members from the Sheriff's Department, the City of Kenosha Police Department, and the City of Kenosha Fire Department. Members of this team have specialized training in handling suspected explosive devices, suspicious packages, bomb threats, and fireworks storage and disposal. The Sheriff's Department also has canine, all-terrain vehicle, and marine units. The City of Kenosha Police Department's special teams include a bike patrol and a canine unit. There are two special weapons and tactics (SWAT) type teams within the County in the Sheriff's Department and City of Kenosha Police Department.

**Critical Community Facilities**

In addition to fire stations and law enforcement stations, as described above, other community facilities which are of importance in hazard mitigation planning include schools, hospitals and major clinics, nursing homes, day care centers with a capacity of 20 children or more, and government administration buildings. Map 2.5 shows the location of selected types of critical community facilities within Kenosha County. Because of the need for access to and from these facilities, the hazard mitigation plan includes their location. Their location in relation to flood hazard areas is discussed further in Chapter 3. A listing of the critical community facilities is included in Appendix C.

**Historic Sites**

Historic sites in Kenosha County often have important recreational, educational, and cultural value. Certain sites of known historic significance are listed on the National Register of Historic Places. As of 2022, there were 26 individual sites and three historic districts[1] within the County listed on the National Register. The location of sites and districts in Kenosha County listed on the National Register of Historic Places are

[1] *A historic district is a geographically definable area, urban or rural, that contains a concentration of significant historic sites or structures from the same period of time.*

presented on Map 2.6. More detailed information on these historic sites can be found on the National Park Service's National Register of Historic Places Database and Research website.

## 2.6 CLIMATE AND CLIMATE CHANGE

Climate, which is the long-term weather conditions in an area, is significant for hazard mitigation planning. Wisconsin's climate continues to change. In the ten years since the initial 2011 Wisconsin Initiative on Climate Change Impacts (WICCI) Assessment Report, new data continues to show increases in warming, rain and snow, and more frequent extreme rainfall events. Statewide temperatures have warmed by about 3°F (Fahrenheit), and precipitation in the south has increased by nearly 20 percent since 1950.[2] For example, Southern Wisconsin has experienced the highest increase in precipitation over the last decade and nearly every region of the state has recently experienced extreme rainfall events that led to flooding of roads, homes, businesses, and farm fields. New analyses reaffirm previous projections indicating that many of these trends will continue with wide ranging consequences throughout Wisconsin's natural and built environments.[3]

The risk posed to Kenosha County by many of the natural hazards profiled in this plan have been estimated largely upon the historical occurrence of, and impacts attributed to, the hazard within the County. Over longer periods of time, climate change may render estimates of risk based on historical occurrences and impacts unreliable. The following subsections describe the changes that have occurred in Wisconsin's climate since 1950, and the changes that are projected to occur by the middle of the 21st century. For those hazards whose frequency of occurrence or impacts are likely to be affected by the changes in climate, these descriptions will form the basis of evaluating potential long-term changes in hazard conditions.

### Historical Climate Change Trends

Average annual temperatures in Wisconsin have increased over the last half of the 20th century and into the 21st century. In Kenosha County, the increase was about 2°F, as can be seen in Figure 2.1.[4] Much of this increase in average temperature occurred in the form of higher night-time low temperatures. For example, over the period 1950 through 2018, the average number of days in Kenosha County in which the daily low

[2] *Wisconsin Initiative on Climate Change Impacts, Wisconsin's Changing Climate: Impacts and Adaptation, Nelson Institute for Environmental Studies, University of Wisconsin-Madison and Wisconsin Department of Natural Resources, 2021.*

[3] *Wisconsin Initiative on Climate Change, 2021, op. cit.*

[4] *Wisconsin Initiative on Climate Change website, wicci.wisc.edu.*

temperature fell below 0°F decreased by about 7 days per year. The greatest increase in average temperatures occurred during winter months. Average winter temperatures in Kenosha County increased by about 4°F over this period.

Average annual precipitation in Wisconsin has increased over the last half of the 20th century and into the 21st century. In Kenosha County annual precipitation increased over the period of 1950 through 2018 by about 15 percent (see Figure 2.2).[5] Most of the increase in average precipitation occurred during winter months. In Kenosha County, average precipitation during winter months increased by about 20 percent between 1950 and 2018. Increases also occurred during spring and autumn in the County. Throughout the State, the changes in average precipitation during summer months were highly variable. In Kenosha County, average precipitation during summer months increased about 5 percent between 1950 and 2018. The frequency and magnitude of heavy precipitation events has also been increasing in Wisconsin. Extreme rainfall patterns in the City of Madison illustrates this trend. In the decade between 2001 and 2010, there were 24 days in which 2.0 inches or more of precipitation fell. This is twice the previous maximum of 12 days in the 1950s.

**Climate Change Projections**

The consensus from downscaled results from climate models indicate that average annual temperatures will continue to increase through the 21st century.[6] Depending on location, it is projected that average temperatures in the State of Wisconsin will increase by between 4.0°F and 5.0°F over the period 2041 to 2060 (see Figure 2.3). This increase is projected to be on the order of 4.0°F in most of Kenosha County, with a small portion in the southwestern part of the County projected to increase by about 5.0°F. The greatest changes are projected to occur during winter months, with average winter temperatures being projected to increase by about 5.0°F in Kenosha County. By contrast, average temperatures in Kenosha County during the summer are projected to increase by about 4.0°F. Changes in extreme temperatures will accompany these changes in average temperature. The frequency of extreme daily high temperatures is projected to increase. The average number of days per year with daily high temperatures greater than 90°F is currently about 12 in southern Wisconsin. This is likely to triple to about 36 days per year by 2055. By contrast, the frequency of extreme daily low temperatures is projected to decrease. The average number of days per year with daily low temperatures below 0°F is currently about 15 in southern Wisconsin. This is projected to decrease to about nine days per year by 2055.

[5] *Wisconsin Initiative on Climate Change, website, wicci.wisc.edu.*

[6] *Wisconsin Initiative on Climate Change Impacts, 2021, op. cit.*

The consensus from downscaled results from climate models project several changes in precipitation through the 21st century.[7] There is a projected increase in annual precipitation in the whole State of Wisconsin by about 5 percent (see Figure 2.4). The projections indicate that the amount of precipitation falling during winter is likely to increase by about 25 percent. Due to the projected increase in temperatures, it is projected that a greater amount of precipitation occurring during the winter will fall as rain rather than snow.[8] This will be accompanied by both an increase in the likelihood of freezing rain events and decreases in snow depth and snow cover. Model projections also show that Wisconsin will receive more precipitation and more frequent intense precipitation events during the spring, especially during early spring. As in winter, it will become more likely for early spring precipitation to fall as rain rather than snow.

The total amount of precipitation occurring during the summer is not projected to change much, however the frequency of intense rainfall events will increase. In southern Wisconsin, the frequency of precipitation events in which two or more inches fall in a 24-hour period is expected to increase from about 12 events per decade to 15 events per decade by the middle of the 21st century. These changes will be concentrated in the spring and fall. The projections indicate that the magnitude of the heaviest precipitation events will also increase. The shift to more heavy rainfall events, but little change in total summertime precipitation, implies that more dry days will occur in Wisconsin during the summer. More dry days, coupled with higher summer temperatures and the increases in evapotranspiration that are likely to result from higher temperatures, will lead to an increase in the likelihood of summer droughts.

[7] *Wisconsin Initiative on Climate Change Impacts, 2021, op. cit.*

[8] *Michael Notaro, David J. Lorenz, Daniel Vimont, Stephen Vavrus, Christopher Kucharik, and Kristie Franz, "21st Century Wisconsin Snow Projections Based on an Operational Snow Model Driven by Statistically Downscaled Climate Data," International Journal of Climatology, Volume 31, pages 1615-1633, 2011.*

## Chapter 2

# BASIC STUDY AREA INVENTORY AND ANALYSIS

### TABLES

#265100-2 – Kenosha Co HMP Table 2.1
500-1148
CDP/MAS/mid
2/8/23,10/13/22

## Table 2.1
## Areal Extent of Civil Divisions in Kenosha County: 2022

| Community | Area | | Percent of County Area |
|---|---|---|---|
| | Acres | Square Miles | |
| Cities | | | |
| Kenosha | 18,424 | 28.8 | 10.3 |
| Villages | | | |
| Bristol | 21,120 | 33.0 | 11.9 |
| Paddock Lake | 2,067 | 3.2 | 1.2 |
| Pleasant Prairie | 21,548 | 33.7 | 12.1 |
| Salem Lakes | 21,208 | 33.1 | 11.9 |
| Somers | 16,526 | 25.8 | 9.3 |
| Twin Lakes | 6,475 | 10.1 | 3.6 |
| Towns | | | |
| Brighton | 22,897 | 35.8 | 12.8 |
| Paris | 22,025 | 34.4 | 12.4 |
| Randall | 8,783 | 13.7 | 4.9 |
| Somers | 1,570 | 2.5 | 0.9 |
| Wheatland | 15,418 | 24.1 | 8.6 |
| Total[a] | 178,207 | 278.4 | 100.0 |

[a] *Includes a 146-acre portion of the Village of Genoa City located in Kenosha County. The remainder of the Village is located in Walworth County.*

*Source: SEWRPC*

#265089-2 – Kenosha Co HMP Table 2.2
500-1148
CDP/mid
2/8/23; 9/28/22

## Table 2.2
## Historical Resident Population Levels in Kenosha County: 1950-2050

| Year | Population | Change from Preceding Census | |
|---|---|---|---|
| | | Incremental | Percent |
| 1950 | 75,238 | -- | -- |
| 1960 | 100,615 | 25,377 | 33.7 |
| 1970 | 117,917 | 17,302 | 17.2 |
| 1980 | 123,137 | 5,212 | 4.4 |
| 1990 | 128,181 | 5,044 | 4.1 |
| 2000 | 149,577 | 21,396 | 16.7 |
| 2010 | 166,426 | 16,849 | 11.3 |
| 2020 | 169,151 | 2,725 | 1.6 |
| 2050[a] | 251,100 | 81,949[b] | 48.4 |

[a] *Population based on projections from SEWRPC's* VISION 2050 Plan.

[b] *Relative to 2020.*

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

#265090-2 – Kenosha Co HMP Table 2.3
500-1148
CDP/mid
2/8/23; 9/28/22

## Table 2.3
## Number of Households in Kenosha County: Census Years 1970-2050

| Year | Number of Households | Change from Preceding Census | |
|---|---|---|---|
| | | Number | Percent |
| 1970 | 35,468 | -- | -- |
| 1980 | 43,064 | 7,596 | 21.4 |
| 1990 | 47,029 | 3,965 | 9.2 |
| 2000 | 56,057 | 9,028 | 19.2 |
| 2010 | 62,650 | 6,593 | 11.8 |
| 2020 | 66,842 | 4,192 | 6.7 |
| 2050[a] | 100,900 | 34,058 | 51.0 |

[a] *Household projection from SEWRPC's VISION 2050 Plan.*

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

#265091-2 – Kenosha Co HMP Table 2.4
500-1148
CDP/mid
2/8/23; 9/28/22

## Table 2.4
## Number of Jobs in Kenosha County: Census Years 1970-2050

| Year | Number of Jobs | Change from Previous Time Period | |
|---|---|---|---|
| | | Number | Percent |
| 1970 | 42,715 | -- | -- |
| 1980 | 54,631 | 11,916 | 27.9 |
| 1990 | 52,230 | -2,401 | -4.4 |
| 2000 | 68,654 | 16,424 | 31.4 |
| 2010 | 74,900 | 6,246 | 8.3 |
| 2020 | 84,636 | 9,736 | 13.0 |
| 2050[a] | 102,700 | 18,064[b] | 21.3 |

[a] *Estimated jobs for the year 2050 as projected reported in SEWRPC's* VISION 2050 Plan.

[b] *Relative to 2020.*

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

#265148-2 – Kenosha Co HMP Table 2.5
500-1148
CDP/mid
2/8/23; 10/5/22

## Table 2.5
## Equalized Value of Property in Kenosha County by Municipality: 2022

| Community | 2022 Equalized Value ($) |
|---|---|
| Cities | |
| Kenosha | 9,307,639,900 |
| Villages | |
| Bristol | 971,619,800 |
| Paddock Lake | 364,438,100 |
| Pleasant Prairie | 5,369,863,700 |
| Salem Lakes | 1,921,115,300 |
| Somers | 1,155,365,200 |
| Twin Lakes | 1,177,824,900 |
| Towns | |
| Brighton | 291,053,000 |
| Paris | 308,873,100 |
| Randall | 775,121,900 |
| Somers | 104,143,200 |
| Wheatland | 480,840,800 |
| Total[a] | 22,227,898,900 |

[a] *The total for Kenosha County, including the equalized value of the portion of the Village of Genoa City that is in Kenosha County, is $22,228,331,000. The Village is predominantly located in Walworth County and is not included under this plan.*

*Source: Wisconsin Department of Revenue and SEWRPC*

## Table 2.6
## Land Uses in Kenosha County: 2020

| Land Use Category[a] | Acres | Percent of Subtotal | Percent of County |
|---|---|---|---|
| Urban | | | |
| Single-Family Residential | 20,038 | 44.5 | 11.2 |
| Multi-Family Residential[b] | 1,797 | 4.0 | 1.0 |
| Commercial | 1,950 | 4.3 | 1.1 |
| Industrial | 2,599 | 5.8 | 1.5 |
| Transportation, Communications, and Utilities | 12,675 | 28.1 | 7.1 |
| Governmental and Institutional | 2,173 | 4.8 | 1.2 |
| Recreational | 3,838 | 8.5 | 2.2 |
| Urban Subtotal | 45,070 | 100.0 | 25.3 |
| Nonurban | | | |
| Agricultural | 79,385 | 59.6 | 44.6 |
| Woodlands | 11,526 | 8.7 | 6.5 |
| Wetlands | 18,877 | 14.2 | 10.6 |
| Surface Water | 5,734 | 4.3 | 3.2 |
| Extractive | 427 | 0.3 | 0.2 |
| Landfill | 418 | 0.3 | 0.2 |
| Open Lands[c] | 16,768 | 12.6 | 9.4 |
| Nonurban Subtotal | 133,135 | 100.0 | 74.7 |
| Total | 178,205 | -- | 100.0 |

[a] *Parking lots are included with the associated use.*

[b] *Includes two-family residential.*

[c] *Open lands include lands in rural uses that are not being farmed; land under development, except for single-family residential uses; and other lands that have not been developed including residential lands or outlots attendant to existing urban development that are not expected to be developed.*

*Source: SEWRPC*

#265094-2 – Kenosha Co HMP Table 2.7
500-1148
CDP/mid
2/8/23; 9/28/22

## Table 2.7
## Projected Changes in Land Uses in Kenosha County: 2020 and 2050

| Land Use Category | Acres | | | Percent Change |
|---|---|---|---|---|
| | 2020 | 2050 | Change | |
| Urban | | | | |
| Residential | 21,835 | 27,584 | 5,749 | 26.3 |
| Commercial | 1,950 | 2,560 | 610 | 31.3 |
| Industrial | 2,599 | 2,880 | 281 | 10.8 |
| Transportation, Communications, and Utilities | 12,675 | 14,272 | 1,597 | 12.6 |
| Governmental and Institutional | 2,173 | 2,368 | 195 | 9.0 |
| Recreational | 3,838 | 4,672 | 834 | 21.7 |
| Urban Subtotal | 45,070 | 54,336 | 9,266 | 20.6 |
| Nonurban Land | | | | |
| Agricultural and Other Open Lands | 96,998 | 89,463 | -7,535 | -7.8 |
| Surface Water | 5,734 | 5,734 | -- | -- |
| Wetlands | 18,877 | 18,496 | -381 | -2.0 |
| Woodlands | 11,526 | 10,176 | -1,350 | -11.7 |
| Nonurban Subtotal | 133,135 | 123,869 | -9,266 | -7.0 |
| Total | 178,205 | 178,205 | -- | -- |

*Source: SEWRPC*

#265095-2 – Kenosha Co HMP Table 2.8
500-1148
CDP/mid
2/8/23; 9/28/22

## Table 2.8
## Forecasted Growth in Kenosha County: 2050

| Type | Existing (2020) | Forecast (2050) | Percent Change: 2020-2050 |
|---|---|---|---|
| Population | 169,151 | 251,100 | 48.4 |
| Households | 66,842 | 100,900 | 51.0 |
| Employment | 84,636 | 102,700 | 21.3 |

*Source: SEWRPC*

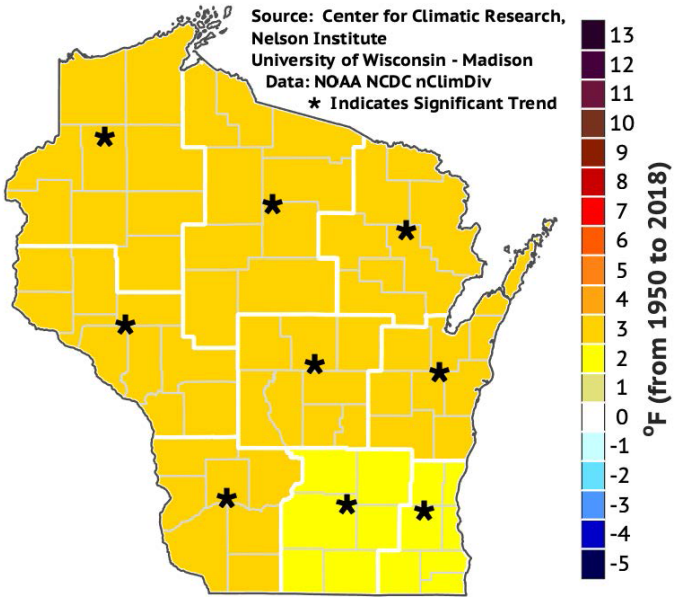
## Chapter 2

# BASIC STUDY AREA INVENTORY AND ANALYSIS

**FIGURES**

#265144 – Kenosha Co HMP Figure 2.1
500-1148
CDP/mid
2/10/2023; 10/4/22

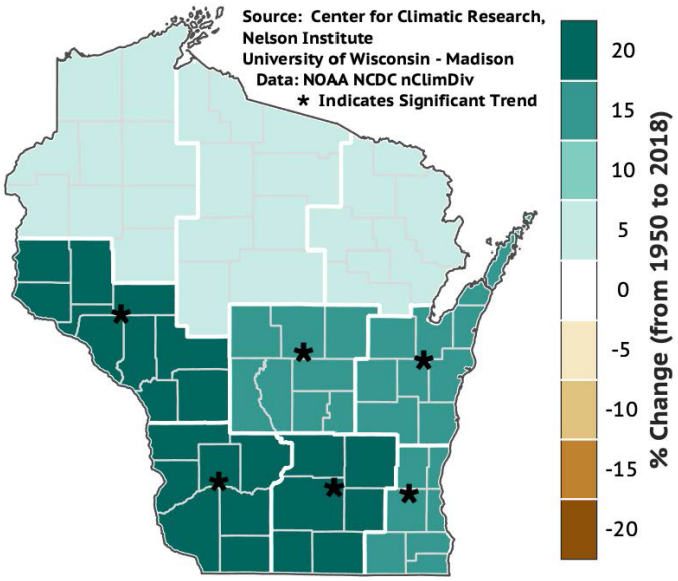
## Figure 2.1
## Change in Annual Average Temperature from 1950 to 2018




*Source: Wisconsin Initiative on Climate Change Impacts, Trends and Projections, wicci.wisc.edu*

#265145 – Kenosha Co HMP Figure 2.2
500-1148
CDP/mid
2/10/2023; 10/4/22

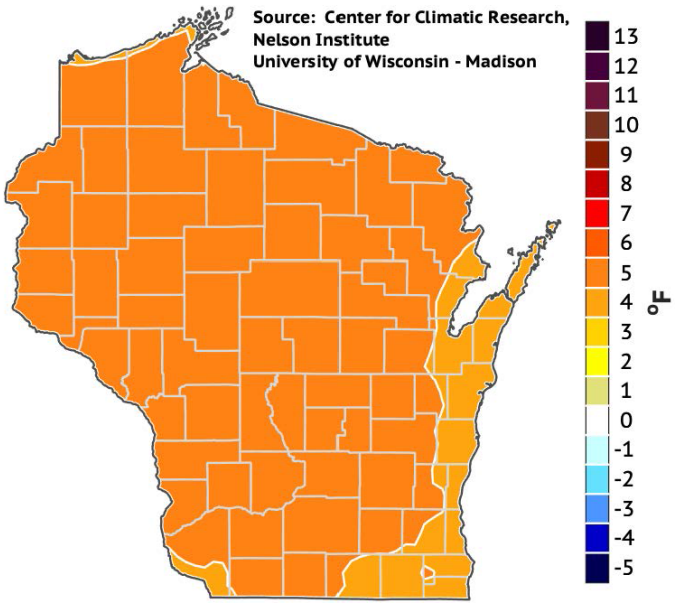
## Figure 2.2
## Change in Annual Precipitation from 1950 to 2018




*Source: Wisconsin Initiative on Climate Change Impacts, Trends and Projections, wicci.wisc.edu*

#265146 – Kenosha Co HMP Figure 2.3
500-1148
CDP/mid
2/10/2023; 10/4/22

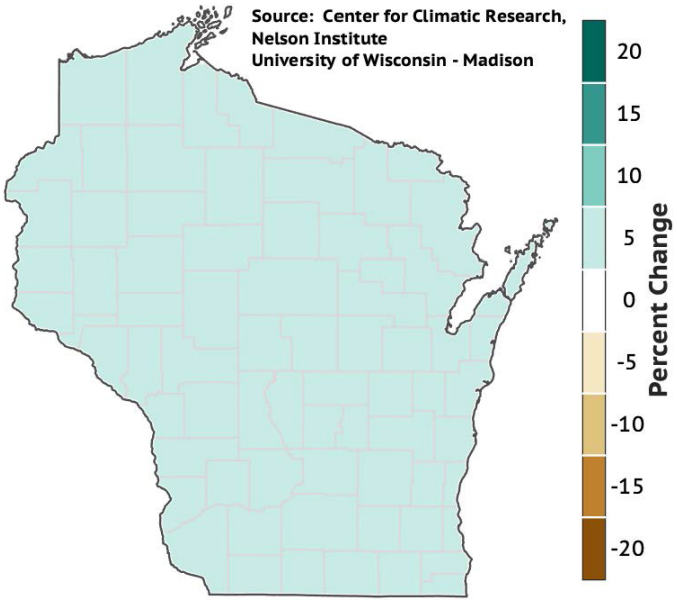
## Figure 2.3
## Projected Change in Annual Average Temperature from 2041 to 2060




*Source: Wisconsin Initiative on Climate Change Impacts, Trends and Projections, wicci.wisc.edu*

#265147 – Kenosha Co HMP Figure 2.4
500-1148
CDP/mid
2/10/2023; 10/4/22

## Figure 2.4
## Projected Change in Annual Precipitation from 2041 to 2060



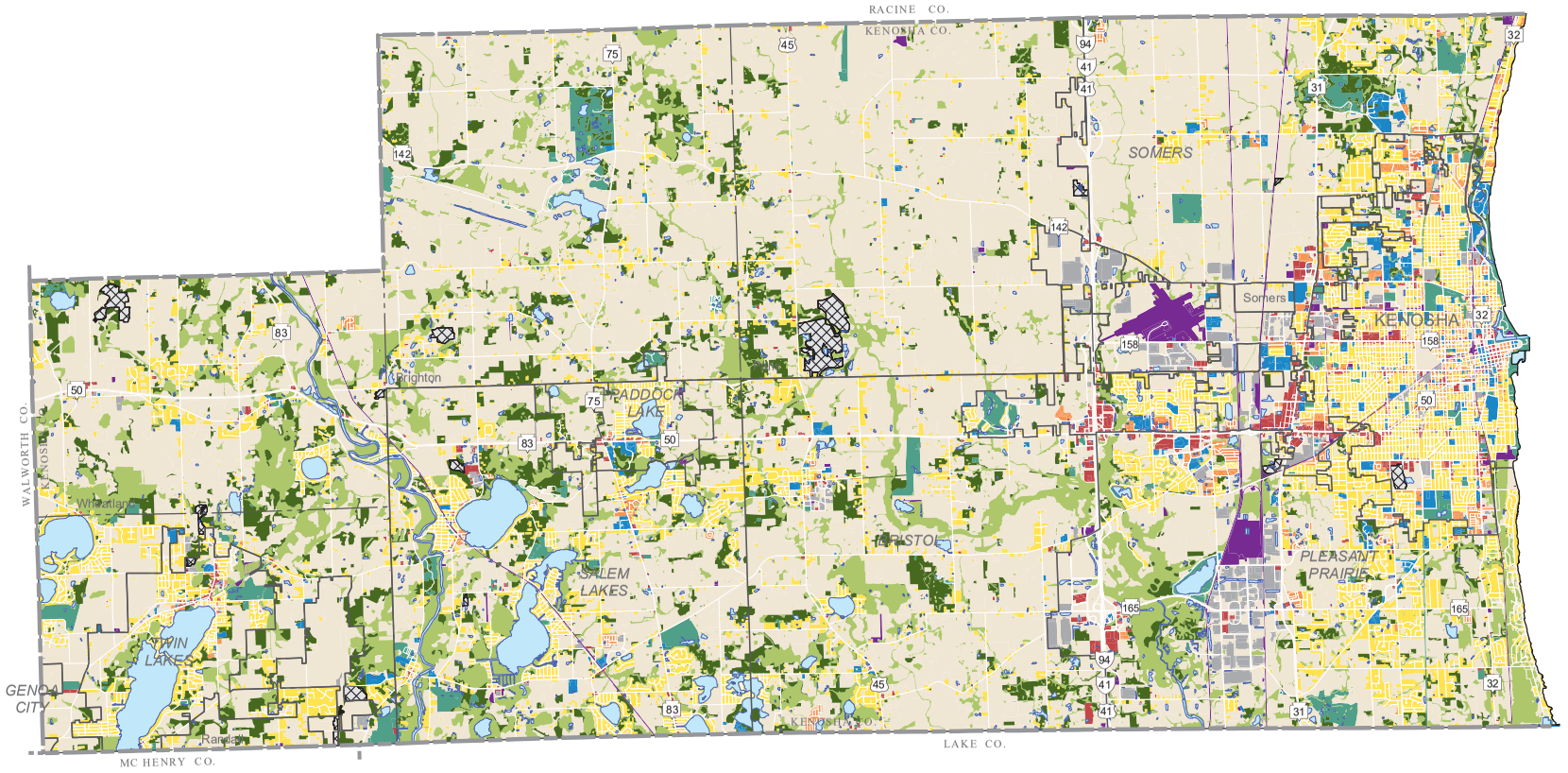

*Source: Center for Climatic Research, Statistical Downscaling for Wisconsin, ccr.nelson.wisc.edu*

## Chapter 2

# BASIC STUDY AREA INVENTORY AND ANALYSIS

### MAPS

## Map 2.1
## Existing Land Uses in Kenosha County: 2020



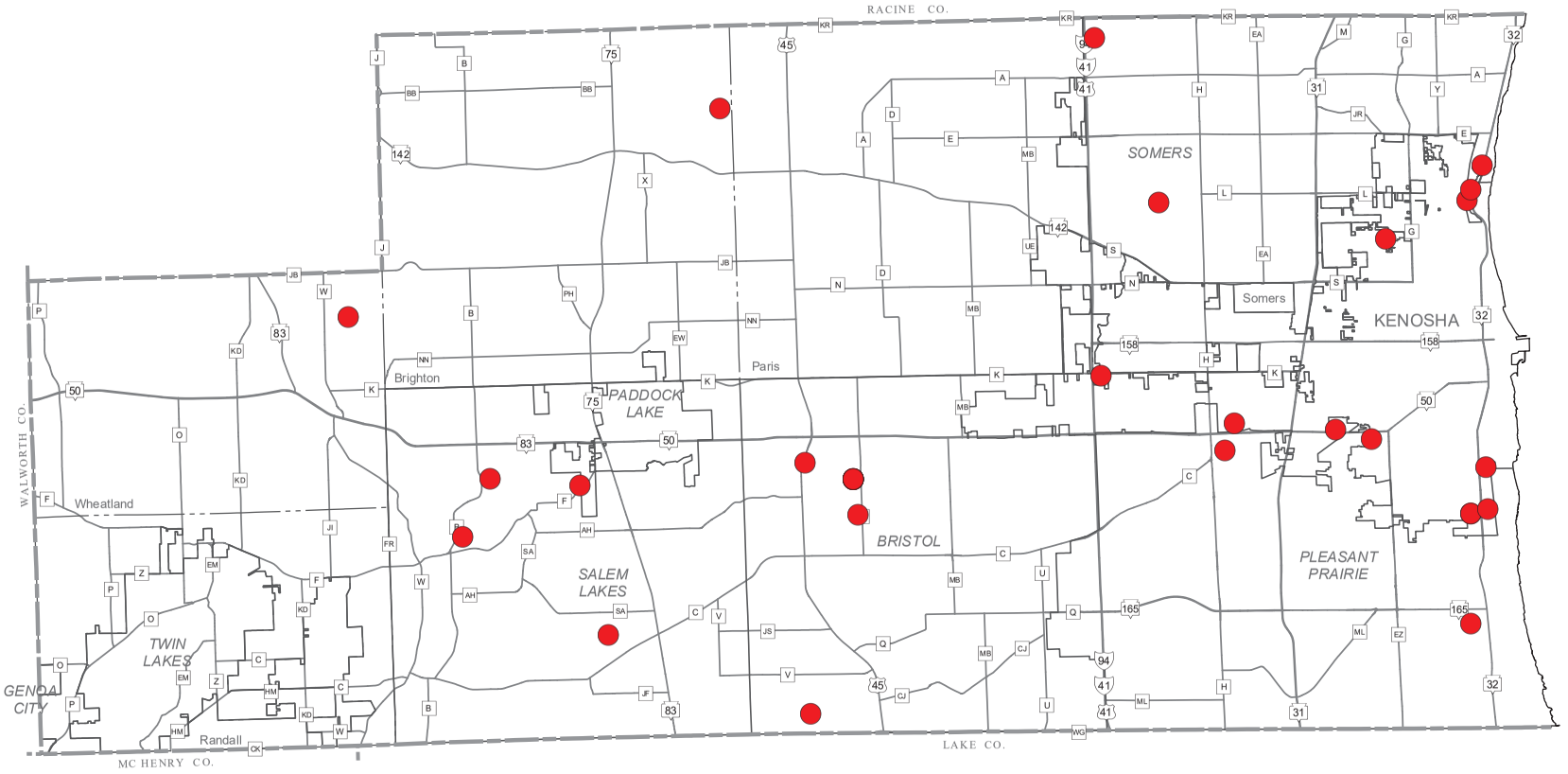

- SINGLE-FAMILY RESIDENTIAL
- MULTIFAMILY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- GOVERNMENTAL AND INSTITUTIONAL
- RECREATIONAL
- STREETS AND HIGHWAYS
- OTHER TRANSPORTATION, COMMUNICATION, AND UTILITIES
- AGRICULTURAL AND OTHER OPEN LANDS
- WOODLANDS
- WETLANDS
- SURFACE WATER
- EXTRACTIVE OR LANDFILL

N

0 1 2 3 Miles

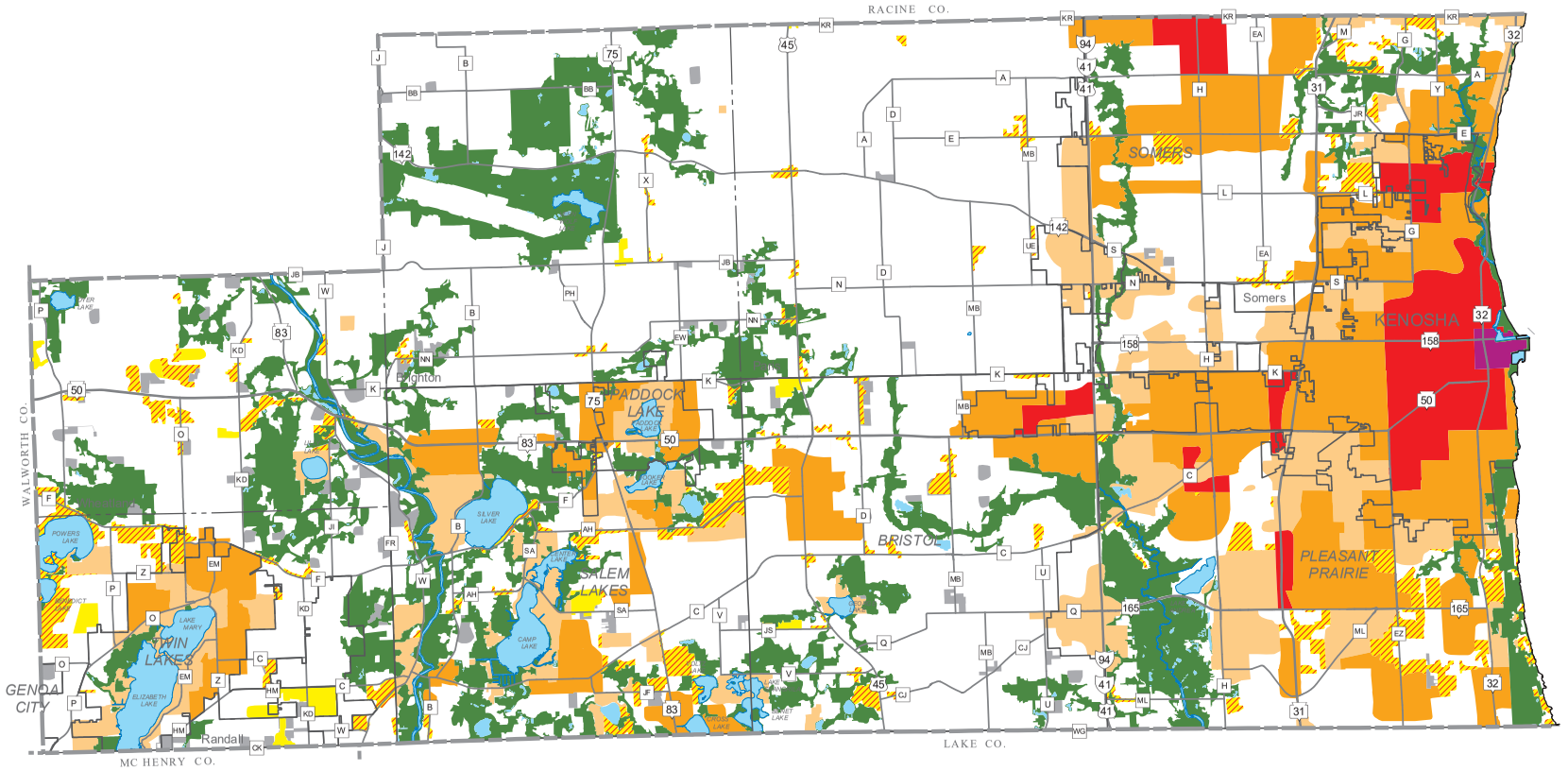
*Source: SEWRPC*

## Map 2.2
## Manufactured Homes and Parks in Kenosha County: 2021




*Source: Wisconsin Department of Safety and Professional Services and SEWRPC*

## Map 2.3
## Regional Land Use Plan as it Pertains to Kenosha County: 2050



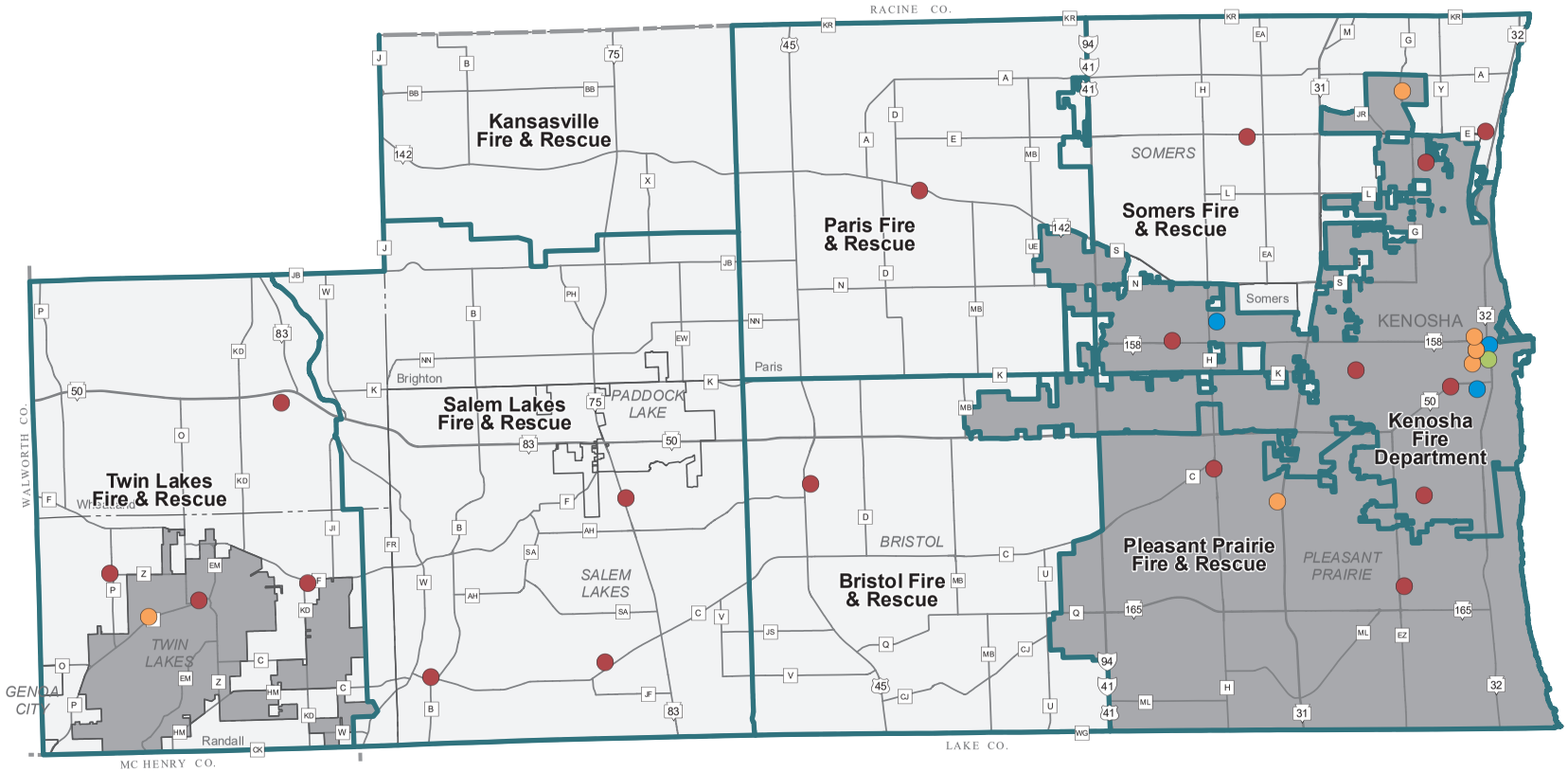

- MIXED-USE CITY CENTER (Residential and Other Urban Land—At Least 18.0 Dwelling Units per Net Residential Acre)
- MIXED-USE TRADITIONAL NEIGHBORHOOD (Residential and Other Urban Land—At Least 7.0 to 17.9 Dwelling Units per Net Residential Acre)
- SMALL LOT TRADITIONAL NEIGHBORHOOD (Residential and Other Urban Land—At Least 4.4 to 6.9 Dwelling Units per Net Residential Acre)
- MEDIUM LOT NEIGHBORHOOD (Residential and Other Urban Land—At Least 2.3 to 4.3 Dwelling Units per Net Residential Acre)
- LARGE LOT NEIGHBORHOOD (Residential and Other Urban Land—At Least 0.7 to 2.2 Dwelling Units per Net Residential Acre)
- LARGE LOT EXURBAN (Residential Land—0.2 to 0.6 Dwelling Units per Net Residential Acre)
- RURAL ESTATE (0.1 TO 0.2 Dwelling Units per Acre)
- AGRICULTURAL AND OTHER OPEN LANDS
- PRIMARY ENVIRONMENTAL CORRIDOR
- SURFACE WATER

N

0 1 2 3 Miles

Source: SEWRPC

## Map 2.4
## Emergency Services in Kenosha County: 2022




FIRE/EMS STATION

POLICE STATION

COUNTY COURT HOUSE

CORRECTIONAL FACILITY

FIRE DEPARMENT DISTRICTS

AREA SERVED BY A LOCAL POLICE DEPARTMENT

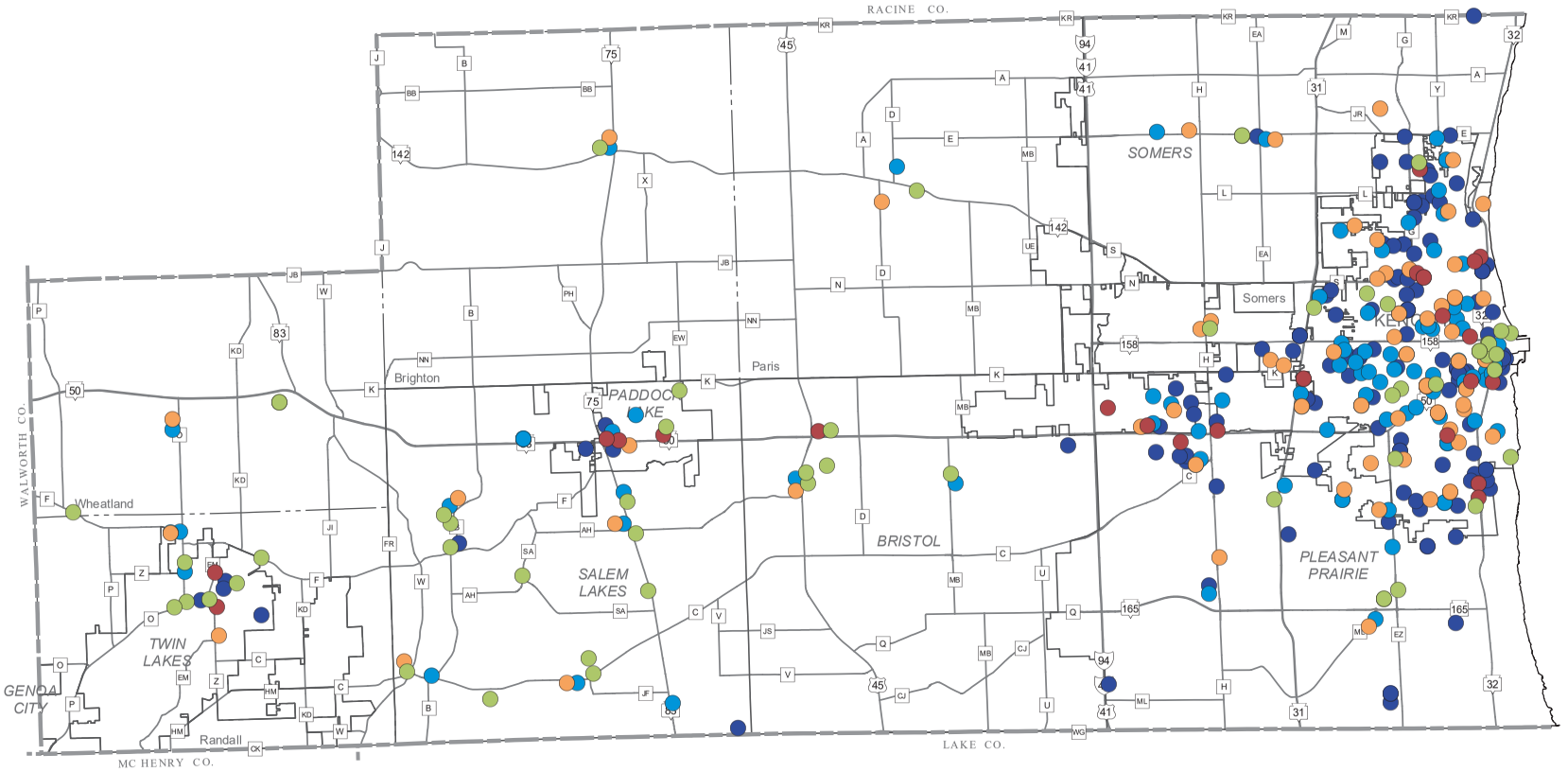
AREA SERVED BY KENOSHA COUNTY SHERIFF'S DEPARTMENT ONLY

N

0 1 2 3 Miles

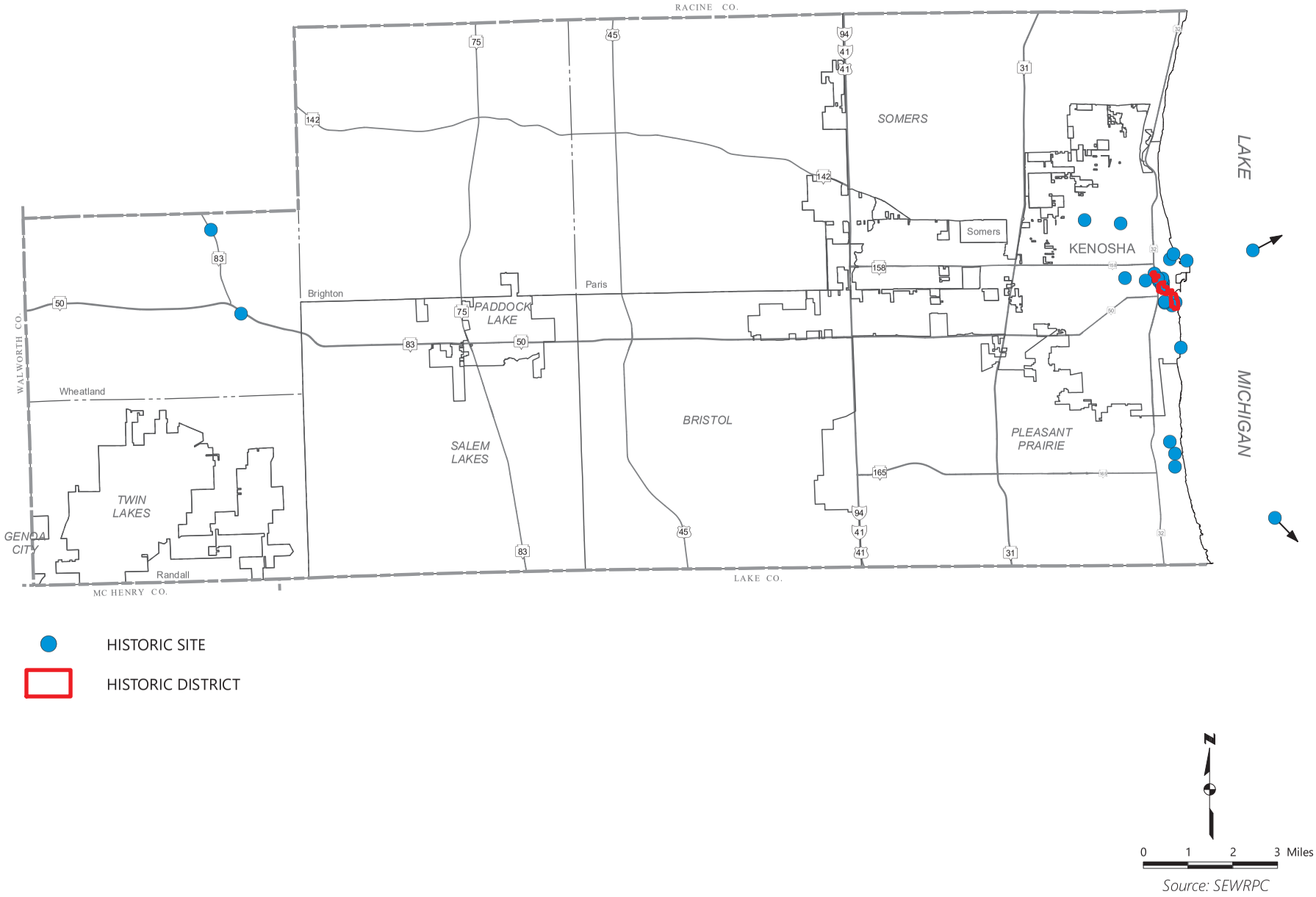
*Source: Wisconsin Department of Justice (WILENET), Racine County Office of Emergency Management Department, Racine County, and SEWRPC*

## Map 2.5
## Critical Community Facilities in Kenosha County: 2022




*Source: Wisconsin Department of Children and Families, Wisconsin Department of Health and Social Services, Wisconsin Department of Public Instruction, Kenosha County, and SEWRPC*

## Map 2.6
## National and State Registers of Historic Sites and Districts in Kenosha County: 2020




Source: SEWRPC