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PRELIMINARY DRAFT

SEWRPC Community Assistance Planning Report No. __

CITY OF WAUKESHA COMPREHENSIVE PLAN

Chapter 1

INTRODUCTION AND BACKGROUND

This comprehensive plan report is a policy document intended to help guide and shape the growth of the City—from both development and redevelopment perspectives as well as social and economic perspectives—to meet the present and anticipated future needs of City residents and businesses.

COMPREHENSIVE PLANNING FOR THE CITY OF WAUKESHA

The City of Waukesha’s first land use plan was published in 1993.¹ To develop the plan, the City received assistance from the Southeastern Wisconsin Regional Planning Commission (SEWRPC),² which provides basic information and planning services needed to help solve problems that transcend city, village, town, and county boundaries. The 1993 plan contained land use development objectives and supporting

¹ *SEWRPC Community Assistance Planning Report (CAPR) No. 169, A Land Use Plan for the City of Waukesha and Environs: 2010, September 1993.*

² *The metropolitan planning organization and regional planning commission for local governments within the seven-county Southeastern Wisconsin Region, including Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha Counties.*

- Trends, Issues, and Opportunities
- Agricultural, Natural, and Cultural Resources
- Community Facilities and Utilities
- Housing
- Economic Development
- Land Use
- Transportation
- Implementation and Intergovernmental Cooperation

To develop a plan to meet the new requirements, the City again coordinated with the Commission, which was developing a similar plan for the County.⁴ The City's resulting comprehensive plan was adopted in September 2009. This report was prepared by the City and Commission staff as an update to the City's 2009 comprehensive plan.⁵

Wisconsin's comprehensive planning law recognizes the uniqueness of individual communities and provides flexibility for how municipalities address statutory requirements. Comprehensive plans are required to identify overall objectives, policies, goals and programs for each of the nine elements. For the purposes of this report, *objectives* and *goals* are considered to be synonymous and are used interchangeably. Specific programs that relate to each element are anticipated to change over the span of this comprehensive plan update. Therefore, this plan presents goals and policies for each element that serve as a framework for devising and implementing programs to address the City's broader objectives. Programs that were available or being evaluated by the City at this time this report was being prepared are described in Chapter 9 of this report.

⁴ *Waukesha County Department of Parks and Land Use, Waukesha County University of Wisconsin-Extension, and Waukesha County municipalities, A Comprehensive Development Plan for Waukesha County, February 2009.*

⁵ *This comprehensive plan update does not address agriculture in the same manner as other comprehensive planning elements. This is due to expectations that lands within the City will be developed at an urban density in accordance with the regional land use and transportation plan, VISION 2050, which recommends focusing urban development within planned urban service areas like those that encompass the City. Doing so can moderate the conversion of agricultural lands and other open space lands to accommodate urban growth in the County and Region. Some agricultural data are included in the land use chapter of this report (Chapter 2).*

PLAN UPDATE FRAMEWORK AND PROCESS

The first phase of the plan update process was the inventory or data collection phase. This phase involved gathering the information on existing conditions and trends in the County that is required as a basis for developing the comprehensive plan. Much of the inventory data in this report is presented in individual element chapters, whereas the economic development chapter, for example, contains data on existing employment and employment trends.

Given the relevance of socioeconomic and demographic data to multiple, interrelated comprehensive plan elements, this chapter contains a summary of population and household inventory data, trends, and projections, which establish 2050 as the design year for this report.⁶ This means of organization is intended to enable users to easily access and reference information for planning and regulatory efforts, including implementing this plan, creating design guidelines, conducting park and open space planning, enforcing complete streets guidelines or policies, and updating the City's zoning ordinance.

► **Recommendation: Use Data for Planning**

This plan recommends that the City use population, demographic, and household characteristics data in the chapter in all planning efforts.

Population, Household, and Demographic Trends and Projections

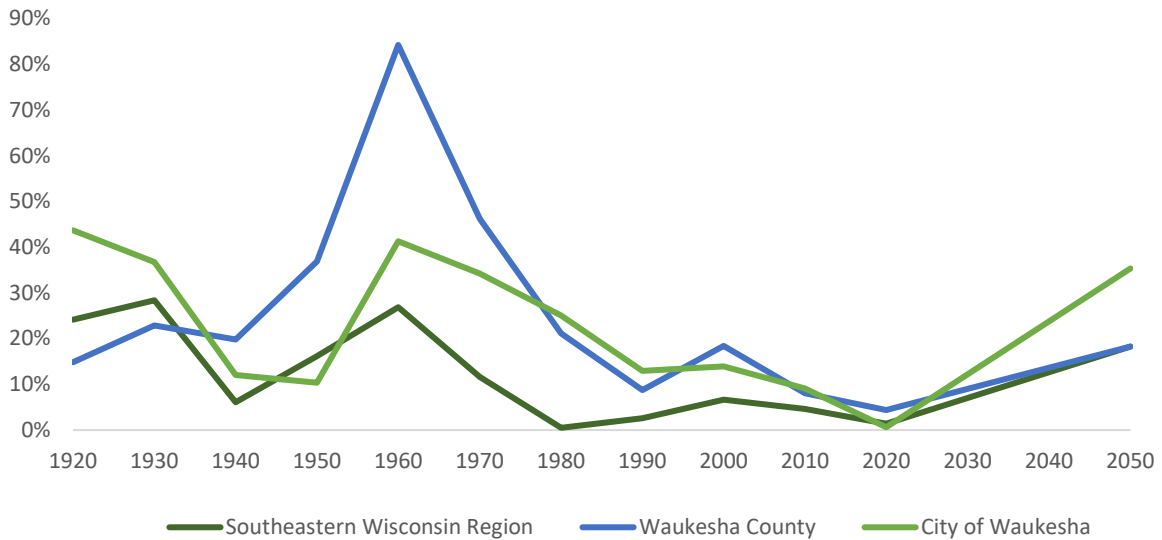
Population Levels

The City's population has increased fairly steadily over time. While the population more than tripled between 1950 and 2010, growth from 2010 to 2020 occurred at a much slower rate.

The City's population is projected to increase by approximately one third from 2020 to 2050. This increase is substantially higher than the anticipated population growth of the County or Region.

⁶ Appendix D of this report documents data sources and contains detailed population, household, employment, and jobs data, much of which comes from the 2016-2020 5-year American Community Survey (ACS).

Figure 1.2: Historic and Projected Population Growth Rate



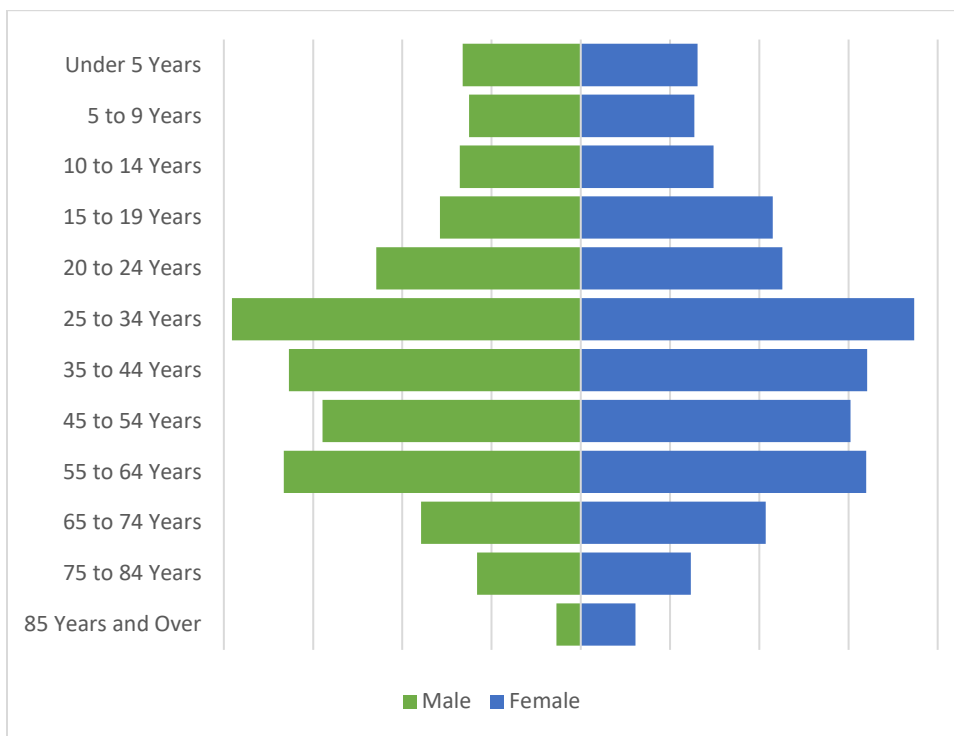
Data on current population levels and projected population growth provide information needed to assess future demand for resources in a community.

Age

The City has a relatively young population, with a higher proportion of residents aged 15 to 44 and a smaller proportion of residents over the age of 65 than in the County or Region. Although the median age of City residents is also lower than the County or Region, it has been steadily increasing. Trends and projections indicate that the age distribution in the City will continue to shift towards increasing proportions of residents aged 65 and older.

Understanding the City's age distribution has important comprehensive planning implications, including changes in the labor force and in demand or need for various types of housing, transportation access and modes, schools, child care and health care, and recreational facilities to best serve residents.

Figure 1.3: Age Distribution of City Residents



Insert graphic text: Median Age: City 39.7; County 43.2; Region 38.6

It is also worth noting that while females comprise a slightly higher proportion of the City's population than males overall, females also account for a significantly higher proportion of the older adult population.

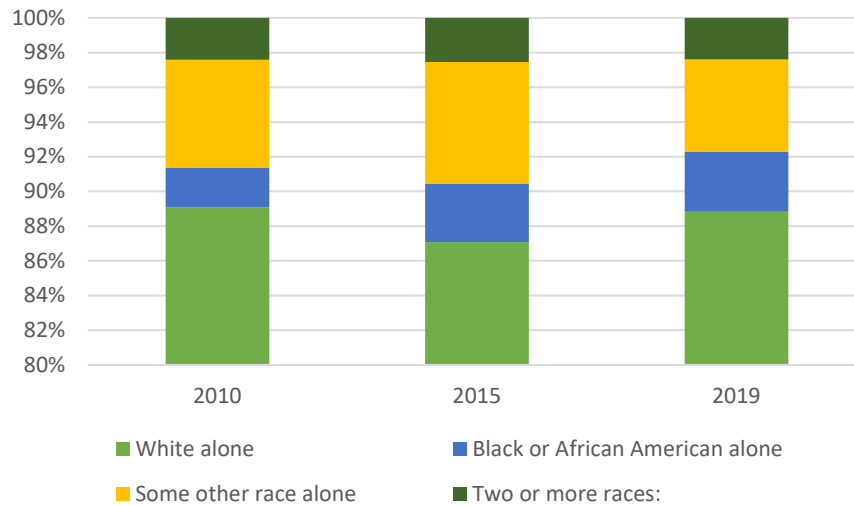
Insert graphic text: City of Waukesha Population by Sex: Female 51.1%; Male 48.9%.

Incorporating age and gender data into planning can enable a community to recognize the differing needs of various population groups, such as access to health care, and is useful in identifying gender disparities, both of which are essential to establishing community policies and programs that meet different populations' needs and prioritize addressing disparities.

Race/Ethnicity⁷

The City's population has been growing more racially and ethnically diverse. Between 2010 and 2020, the proportion of Waukesha residents identifying as Black or African American or as two or more races grew significantly.

Figure 1.4: Trends in Racial Distribution of City Population



Insert graphic text: The City's largest ethnic groups include residents identifying as non-Hispanic white or as Hispanic or Latino of any race.

Race and ethnicity data are important to planning to accurately describe conditions related to a variety of planning considerations, to look for potential differences based on race or ethnicity, and to measure any disparities. Race data may be used to evaluate how fairly and equitably programs and policies serve the needs of people of all races or ethnicities. With a responsibility to serve all residents, local governments need to address inequities and monitor compliance with antidiscrimination laws, regulations, and policies. Using race and ethnicity data in planning processes can also enable a community to access funding established for programs designed to serve specific groups.

⁷ Race and ethnicity data documented by the U.S. Census Bureau categorize people as White alone, Black or African American alone, American Indian and Alaska Native alone, Asian alone, Native Hawaiian and Other Pacific Islander alone, Some other race alone, Two or more races, Hispanic or Latino (of any race), and White alone (not Hispanic or Latino).

Residents with Disabilities

Disability data indicates the number of people that identify themselves as having disabilities, including hearing, vision, cognitive, ambulatory, self-care, or independent living difficulty.⁸ Data on disability levels and trends can guide development of policies, programs, and services to equalize opportunities for all residents.

The City has a higher percentage of residents with a disability than the County or Region. The percent of people with a disability is especially elevated for males and people identified as American Indian and Alaska Native, Hispanic, or Latino (of any race), and other race relative to the County and Region.

With respect to age, substantially higher percentages of City residents aged 5 to 17 and 35 to 64 have a disability compared to the County. City residents aged 65 and older, and especially those 75 and over, also have a significantly higher disability rate than residents of the County or Region.

Insert figure or graphic text: Approximately 12 percent of City residents are living with one or more disabilities, including seven percent of City residents who are experiencing ambulatory difficulty, which is important to consider when examining various housing and transportation needs.

Residents with Health Insurance

Health insurance metrics are useful for describing a population's access to health care. People without insurance are more likely not to receive regular preventative health care to address their health and wellness needs. People's health and wellness needs can vary somewhat based on demographics. While some of the population's needs may be met through lifestyle practices, like regular exercise and socialization that come through active transportation, recreation, and community engagement, greater external supports may be necessary for other populations, including the aging population and those with major health conditions and chronic diseases, for which uninsured people are less likely to receive service.

Disparities in health insurance coverage are particularly high among children under the age of 6 years; males; and among people identified as American Indian and Alaska Native, Hispanic or Latino (of any race), and other races relative to the County and Region.

⁸ As measured by the U.S. Census Bureau American Community Survey (ACS).

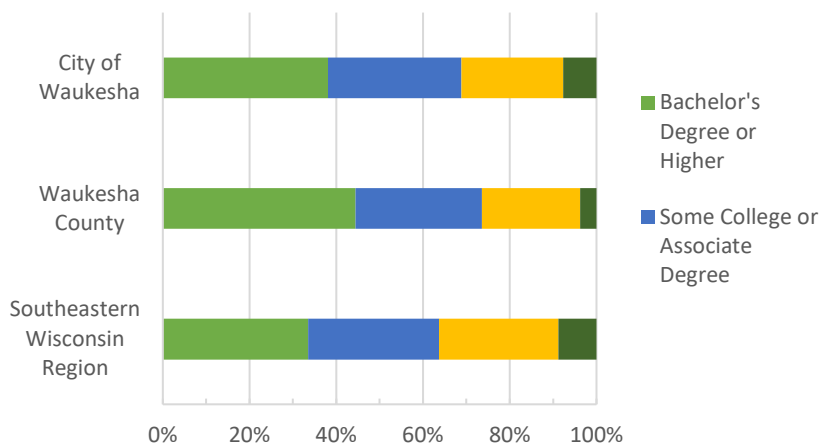
The percentage of City residents who are uninsured is higher than the County and Region in nearly all income ranges but is especially elevated for people with household incomes less than \$25,000. The percentage of uninsured City residents with a disability, however, is lower than the County and Region.

Insert graphic text: While nearly 94 percent of City residents have health insurance, the proportion of uninsured City residents is greater than that of the County or Region.

Educational Attainment

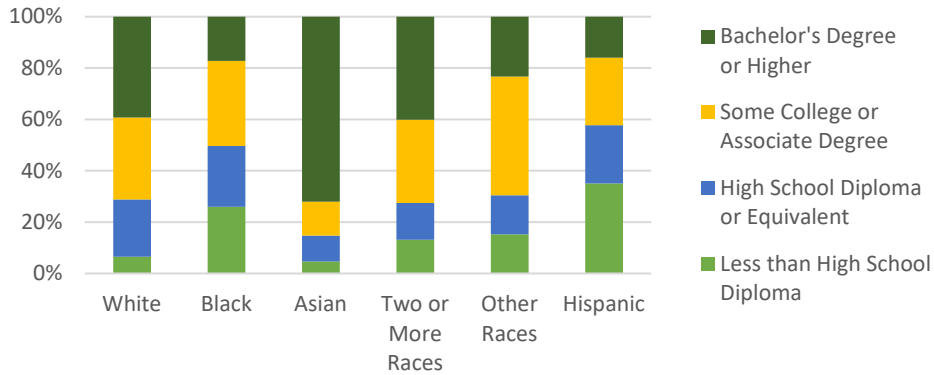
Educational attainment among City residents aged 25 and over is lower than that of the County but higher than that of the Region overall. More than two thirds of residents over the age of 25 have completed at least some college.

Figure 1.5: Educational Attainment of Residents Aged 25 or Older



There are disparities in educational attainment by race and ethnicity within the City. Residents who are Asian, white, or two or more races are more likely to have at least some college, while Black and Hispanic or Latino residents are more likely than other racial or ethnic groups to have secondary education as their highest level of educational attainment.

Figure 1.6: Educational Attainment by Race

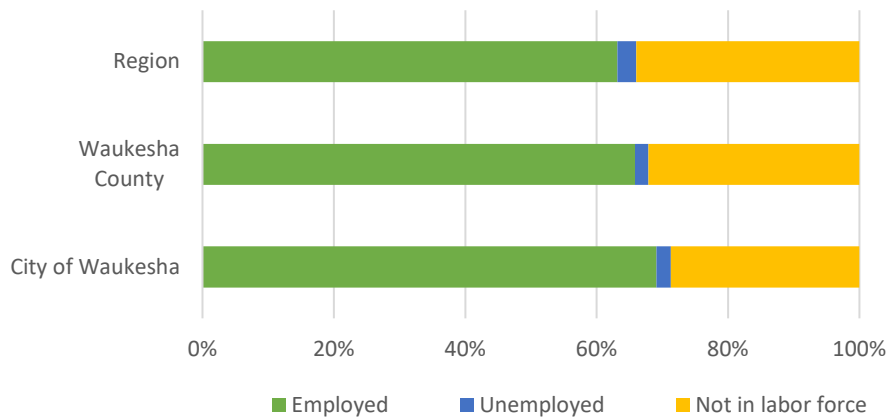


Labor Force

The City has a larger proportion of its population in the working age range than the County or Region, which corresponds to a high level of labor force participation. A higher proportion of the working age population is employed, and lower proportions are either not in the labor force or are unemployed, as compared to the County or Region.

Call Out: The City's labor force will likely change along with its shifting age distribution. Attracting new residents and making jobs accessible to non-resident workers will be important for the City's economy.

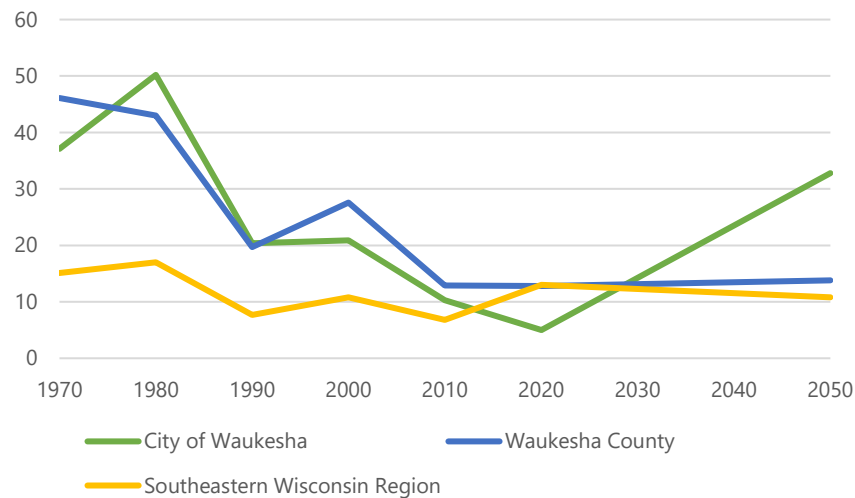
Figure 1.7: Labor Force Participation



Household Levels

The number of households⁹ in the City has been consistently increasing at a higher rate than the City's population. Waukesha County has experienced higher household growth than the Region since 1960, but the City's growth has been slower than the County's since 2000. The City has experienced relatively slow growth in the number of households since 2000 but is projected to grow substantially by 2050. Similarly, the City is projected to see a much higher rate of growth than either the County or Region.

Figure 1.8: Historical and Projected Household Levels

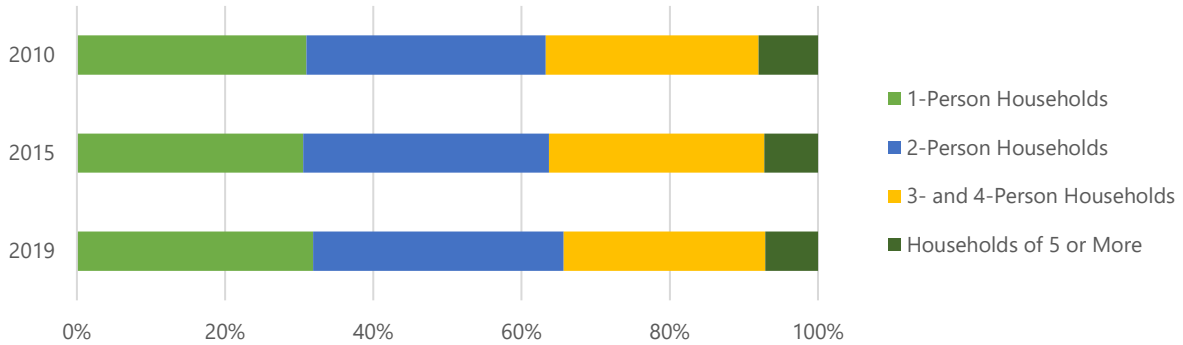


Household Size

The average household size in the City has decreased in recent decades, corresponding to national trends. The decline in household size is related, in part, to changing household types. In recent decades, single-person households and other non-family households have increased at a much faster rate than family households. Two thirds of all households, owner- and renter-occupied, in the City of Waukesha are one- or two-person households, higher than either the County or Region. An even greater proportion of renter-occupied households – nearly three quarters – are one- or two-person households. There is a higher proportion of one-person households in the City than the County, and every county in the Region with the exception of Milwaukee County.

⁹ 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.

Figure 1.9: Changes in Household Size



Household Composition

A smaller proportion of households in the City have people under the age of 18 living in them than either the County or Region. The City also has a smaller proportion of households with people over the age of 60 than the County and Region.

Household Income

The City's median household income is lower than that of the County but higher than that of the Region. The City has a higher proportion of moderate-income households (\$50,000 to \$100,000 per year) than the County or Region. Since 2015, the City's median household income has increased at a slower rate than either the County or State.

Figure 1.10: Household Income Distribution

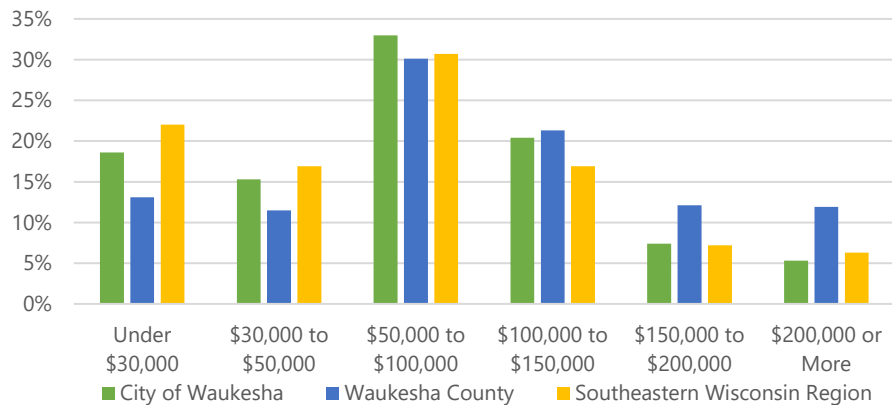
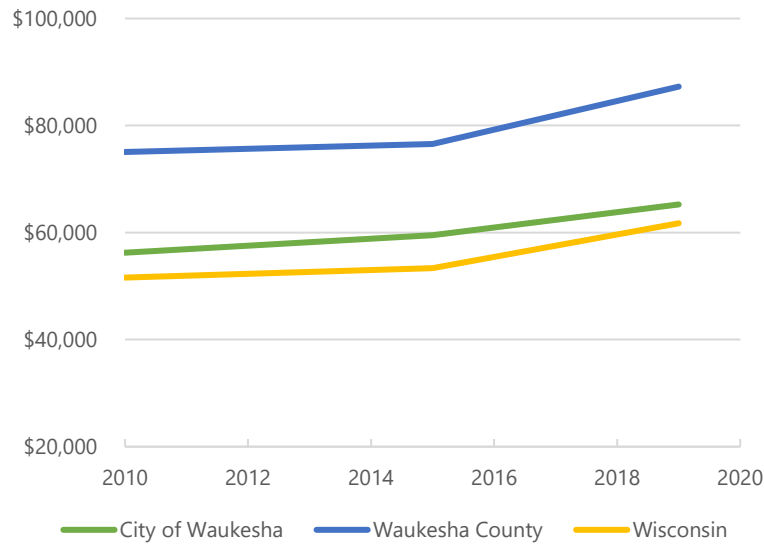


Figure 1.11: Median Household Income



Household Poverty Levels

The City has a larger percentage of households below the poverty level compared to the County, but a smaller percentage compared to the Region.

Households receiving food stamps or participating in the Supplemental Nutrition Assistance Program (SNAP) is a measure often used to provide an understanding of those households which may be struggling to meet basic needs. More than half of the households receiving SNAP in the City have children under 18 years of age, a higher proportion than the County and Region. Black or African American and Hispanic or Latino households are overrepresented in SNAP assistance relative to their share of the City's population.

Insert figures and/or graphic text: 9.8% of households in the City of Waukesha have been living below the poverty level in the past year.

Household Transportation Access

Households in the City are more likely to lack access to a private vehicle than those in the County as a whole. A higher proportion of households that do have a vehicle in the City have only one vehicle available as compared to the County or Region.

Geographic Mobility

A smaller proportion of City residents live in the same residence as they did the previous year when compared to the County and Region. Of City residents who had moved, a higher percentage moved to the City from another state or outside the U.S. than those who moved from elsewhere in the County or Region.

The City has a higher proportion of foreign born residents and a significantly smaller percentage of foreign-born residents who have become naturalized U.S. citizens than the County and Region. Many of these residents are relatively recent arrivals, with nearly a third having entered the U.S. after 2010, in contrast to the less than one quarter of County and Region residents. More than half of foreign-born residents were born in Latin America. The proportion of City residents born in Latin America is substantially higher than the Region as a whole, and more than twice that of the County. A higher percentage of City residents speak Spanish at home and are more likely to speak English less than “very well” than the County or Region.

Insert figures/graphic text on geographic mobility.

Review of Existing Plans, Studies, and Regulations

An important part of the comprehensive plan update process is reviewing plans, studies, and regulations affecting the City that have occurred since the City’s previous comprehensive plan was adopted. Such documents could include relevant local, County, State, and regional plans and studies that should be considered in the development of the City’s comprehensive plan update.

Examples of relevant resources include area or neighborhood plans affecting portions of the City; County strategic plans and plans for parks and open space; regional plans related to land use and transportation (VISION 2050), natural areas, and air and water quality; and State plans for health improvement and active transportation. Some resources may be prepared by more than one geography, like the Waukesha Area Transit Development Plan, which was prepared in a joint effort that included staff of the City of Waukesha and Waukesha County with support from Commission staff. In other instances, different agencies may prepare numerous resources on the same topic, like housing.

Resources reviewed during this update process are listed in an annotated bibliography in Appendix C of this report.¹⁰

Call Out: A community’s comprehensive plan provides a rational basis for local land use decisions with a vision for future planning and community decisions that should reflect state, regional, county, and local contexts to ensure the plan properly relates the community to its larger surroundings.

¹⁰ Information on the City’s zoning code in place as this update was being prepared is set forth in the land use chapter (Chapter 2) of this report.

Public Involvement

Wisconsin's comprehensive planning law requires public participation in every stage of developing a comprehensive plan or comprehensive plan update. Public involvement plays an important role in planning and can significantly help communities in numerous ways, including fostering connections and partnerships to better ensure that communities create sound plans that reflect public needs and interests and have public support to more easily implement those plans.

Public Participation Process

Public participation efforts conducted during this plan update process enable the City to interact with residents, business owners, and other stakeholders to provide and receive useful information relative to comprehensive planning. Adoption of written public participation procedures is one of the required components of public participation under Section 66.1001(4)(a) of the *Wisconsin Statutes*. In accordance with the *Statutes*, the City Council adopted a public participation plan (PPP) in June 2022.¹¹ The PPP set forth the City's multifaceted approach to gathering public input, including surveys and in-person events.

Call Out: Public participation efforts provide an opportunity to better explain complex issues and choices and encourage residents to share ideas and comments that can improve planning efforts.

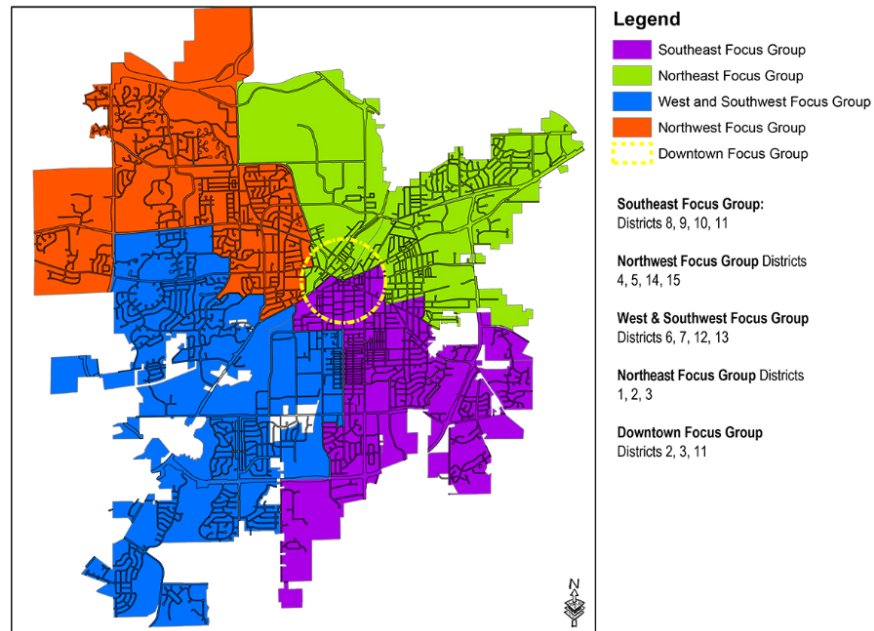
- Mayor's Celebrate Waukesha Breakfast - The comprehensive plan update kick-off in September 2021, with local leaders in attendance invited to identify the City's strengths and challenges

Insert photo of Mayor's Breakfast event.

- National Community Survey (NCS) – A benchmarking survey of residents citywide, distributed by mail and made available online in early 2022, provided statistically significant results regarding comprehensive plan-related topics, including housing, quality of life measures, municipal services, safety, and more
- Business Owner Survey - An anecdotal, online survey of business owners conducted by the City in winter and spring of 2022 focusing on considerations for worker recruitment/retention, business location and development, complementary businesses, and additional topics related to economic development

¹¹ See Appendix A for the PPP and City resolution adopting the PPP.

- Focus Groups - A series of five in-person events, including four neighborhood meetings and a fifth meeting specific to downtown, hosted by the City in the summer of 2022 that enabled City residents and business owners to provide input regarding comprehensive plan elements



Focus group map caption/call out: The public was welcome to attend any or all of the five focus groups, four of which were organized around aldermanic districts while a fifth was related to downtown, regardless of their place of residence or business.

- Public Meetings – In accordance with Section 66.1001(4)(a) of the *Wisconsin Statutes*, which requires holding public meetings for which advance notice has been provided, the City published a Public Hearing Notice on November 17, 2023. The notice established that a public hearing regarding the draft update, including a description of the planning process and report contents, was to be held during the December 19, 2023, meeting of the Common Council. Publication of the notice coincided with the draft comprehensive plan update being made available for public review at local government offices and on the planning website.

Call Out: Input and information gathered through the public involvement process for this update relates to each of the comprehensive plan elements and is highlighted in call outs throughout this report. These call outs identify current issues and opportunities and establish the foundation for updated goals and policies.

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PRELIMINARY DRAFT

SEWRPC Community Assistance Planning Report No. __

City of Waukesha Comprehensive Plan

Chapter 2

LAND USE

This chapter presents inventory data and an analysis of land use in the City of Waukesha and presents related goals and policies in accordance with the land use element required by State law.¹ It contains a description and data related to the City's historic growth and existing land uses. Further, it presents comprehensive planning data related to land use planning in the City, projections for future growth, and potential future development. This chapter also provides a land use policy plan and map intended as a blueprint for future urban growth and land use within the City.

The land use element of this comprehensive plan update has noteworthy differences from the City's 2009 comprehensive plan. Concerns about limitations on development due to the City's water supply at that time featured prominently in the 2009 plan. As these concerns have since been resolved by the diversion of Lake Michigan water, this update instead focuses on the City's urban form and increasing density within the City's defined boundaries. Additionally, the land use policy presented in this chapter suggests a more integrated mix of land uses than prior comprehensive plans.

¹ Requirements for the land use element of a comprehensive plan are set forth in Section 66.1001(2)(h) of the Wisconsin Statutes.

Call Out: The comprehensive planning process provides for continuity by determining where a community is at the present, how the community got to this point, where the community wants to go, and how the community will get there.

HISTORICAL URBAN GROWTH

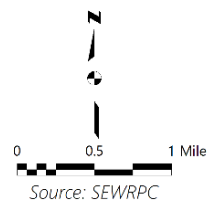
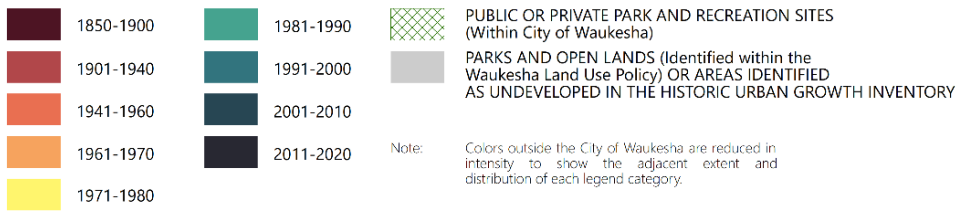
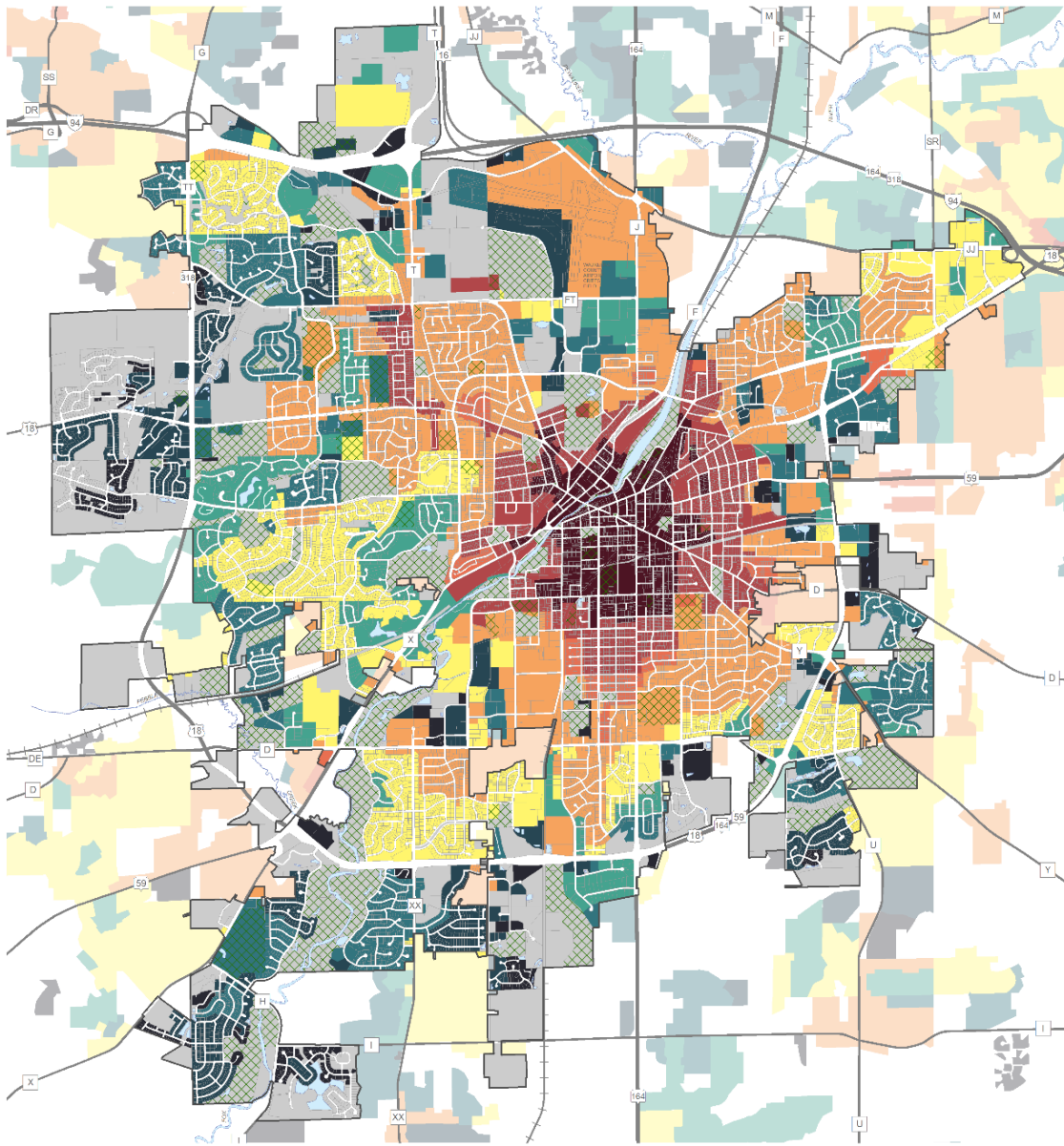
A historical urban growth analysis, maintained and updated by the Southeastern Wisconsin Regional Planning Commission (SEWRPC), approximates the extent of urban development at certain points in time since 1850.² The analysis depicts areas with relatively concentrated residential, commercial, industrial, governmental, institutional, or other urban development, including urban parks developed with intensive recreational facilities. Considered alongside other historical information, the analysis provides insight regarding the influence and impact of historical events on development trends. The analysis can also provide a good basis for calculating urban population and household densities using population levels.

Prior to European-American settlement in the mid-1800s, the area that became the City of Waukesha was home to Native American tribes, including the Potawatomi, Menomonee, and Ho-Chunk Nations. The newcomers settled around the Fox River just south of the current Pewaukee-Waukesha township line, in what now makes up the City's historic downtown. Shown on the map as developed before 1900, this area was first incorporated as a village in 1846, earning designation as the Waukesha County seat the same year, and then as a city in 1896.

Compact development extended from the City's central core along a conventional street grid system from the City's incorporation through 1940. The City's development pattern began to shift after 1940, favoring curvilinear streets and concentrating along collector roads in areas not contiguous to the City's core. This new trend continued, with most development occurring one or more miles away from the City's central core after 1970.

² *This analysis used orthophotography to ascertain the extent of development after 1940. Growth prior to 1940 was identified based on local historical societies' records, land subdivision plat records, farm plat maps, U.S. Geological Survey maps, and Wisconsin Geological and Natural History Survey records. The analysis does not depict redevelopment, which has an important role in the historical growth and continuation of urban areas.*

Map 1.1
City of Waukesha: Historic Urban Growth: 1850-2020



EXISTING LAND USE AND LAND USE TRENDS

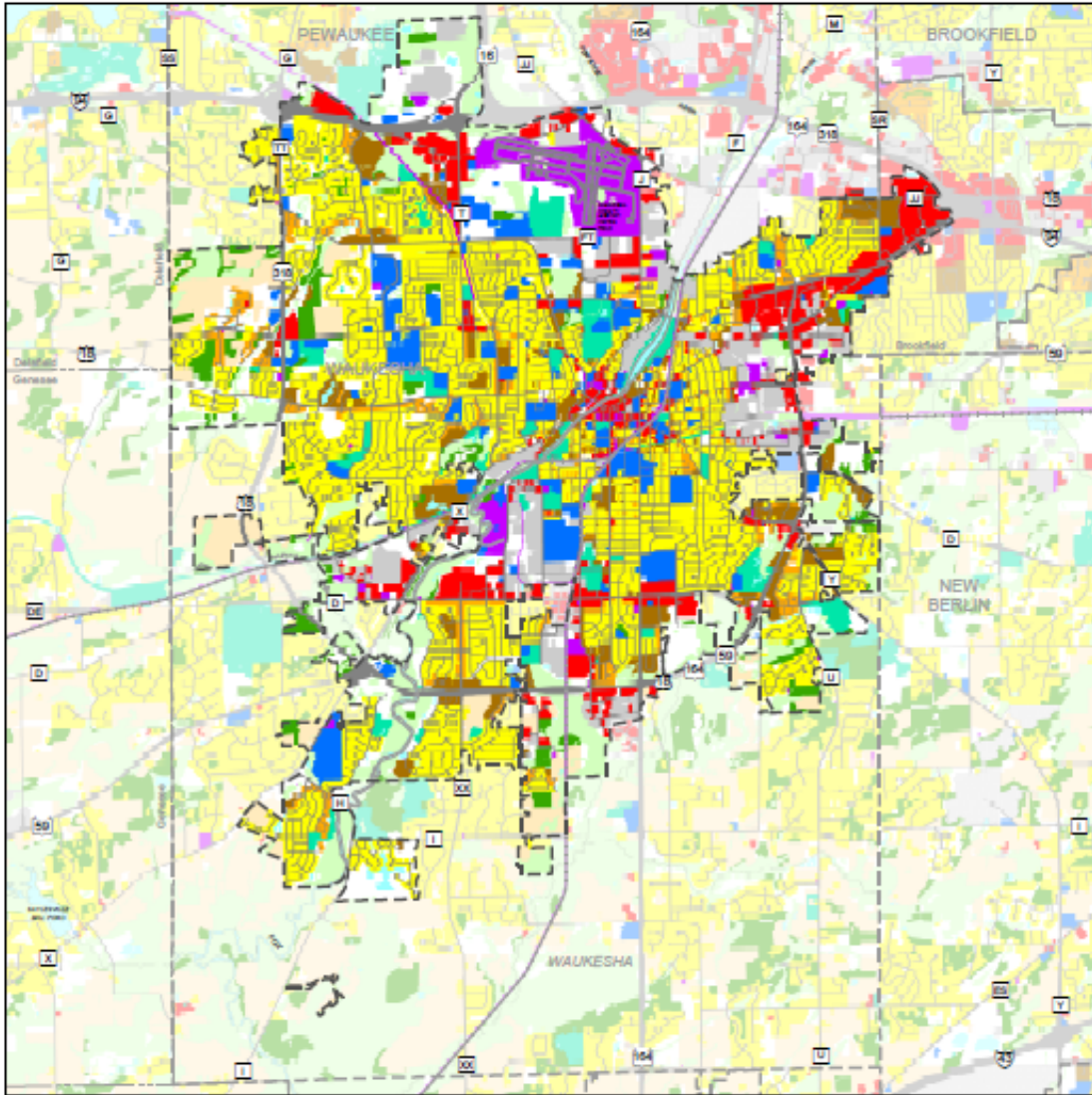
General classifications can be applied to geographic areas to describe existing land use. Comparing land use data at specific dates in time can provide insight regarding changes in land use and an understanding of community needs, values, and goals.

Data on existing land use in the City, including the following general uses, is based on information assembled by the Commission, which prepares and shares land use data for seven counties in Southeastern Wisconsin for use in preparing and updating local and regional plans.³

- Residential – housing of all types and densities
- Commercial – retail and office uses
- Industrial – manufacturing and warehousing
- Institutional/Governmental – institutional or public administration, safety, or assembly uses
- Transportation – streets, highways, and other transportation-relation uses
- Communication and Utilities - areas devoted to cellular, radio, television, water, sewer, energy, or other communication or utility uses
- Park – areas for intensive outdoor recreation

³ Existing land use classifications generally coincide with the Land-Based Classification Standards (LBCS) established by the American Planning Association (APA), a national organization that is focused on promoting sound planning practices at the local, regional, state, and national levels.

Generalized Land Uses Within the City of Waukesha: 2020



- | | |
|--|---|
| SINGLE-FAMILY RESIDENTIAL | AGRICULTURAL LANDS |
| TWO-FAMILY RESIDENTIAL | UNUSED URBAN LANDS |
| MULTIFAMILY RESIDENTIAL | EXTRACTIVE |
| COMMERCIAL | WETLANDS |
| INDUSTRIAL | WOODLANDS |
| GOVERNMENTAL AND INSTITUTIONAL | SURFACE WATER |
| RECREATIONAL | CITY OF WAUKESHA (MARCH 2022) |
| STREETS AND HIGHWAYS | OTHER CITY/VILLAGE BOUNDARY (MARCH 2022) |
| OTHER TRANSPORTATION, COMMUNICATION, AND UTILITIES | |

Note: Colors outside the City of Waukesha are reduced in intensity to show the adjacent extent and distribution of each legend category.



Call Out: While existing land use, plans and regulations are primarily of local concern, the aggregate effects of land uses are regional in scope. These aggregate effects relate to the demand placed upon transportation and utility facilities as well as to the natural resource base, which typically have limited capacities.

Proportional Land Use in the City of Waukesha: 1963-2020

Land Use Category	Acres as Percent of Lands Within the City						
	1963	1970	1980	1990	2000	2010	2020
Developed Land							
Residential							
Single-Family Residential	33.4	31.0	28.9	27.8	25.9	25.5	25.5
Two-Family Residential	2.1	2.5	3.0	2.9	2.3	2.6	2.9
Multifamily Residential	1.5	1.8	3.3	4.0	4.4	4.3	4.3
Residential Subtotal	37.0	35.3	35.3	34.8	32.6	32.4	32.7
Commercial	3.1	3.3	3.9	5.1	5.5	5.9	6.4
Industrial	4.7	5.6	5.7	6.6	6.6	6.0	5.8
Transportation, Communication, and Utilities	16.7	16.9	17.0	16.4	19.7	19.4	19.4
Governmental and Institutional	7.0	7.2	5.6	5.0	5.4	5.3	5.4
Recreational	3.4	3.3	3.6	3.5	3.4	3.6	3.5
Unused Urban Lands ^b	10.3	17.0	13.2	14.1	12.4	9.7	9.7
Developed Land Subtotal	82.2	88.6	84.3	85.3	85.6	82.3	82.8
Undeveloped Land							
Natural Resource Areas							
Wetlands	3.0	3.1	7.2	7.2	8.4	9.0	9.5
Woodlands	1.4	1.2	1.1	1.0	1.2	2.2	2.8
Surface Water	1.0	1.0	0.9	0.9	0.9	1.1	1.1
Natural Resource Areas Subtotal	5.3	5.4	9.2	9.1	10.4	12.3	13.3
Open and Agricultural Lands	12.4	6.0	6.5	5.5	4.0	5.4	3.9
Undeveloped Land Subtotal	17.8	11.4	15.7	14.7	14.4	17.7	17.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: To address that the size of the City of Waukesha has grown over the years and that direct comparisons of the number of acres of each land use presented in the previous table is only approximate, this table presents the percentage of each land use in relation to that inventory year.

^a See WD# 262251.

^b Includes lands in extractive use and landfills.

Call Out: Developable land within the City as of 2020 amounted to about 2,210 acres, including 1,590 acres of unused urban lands and 620 acres of open and agricultural land.

► Recommendation: Higher-Density Urban Redevelopment

This plan recommends the City support opportunities for urban growth within the City by redeveloping underutilized urban lands for higher-density uses. Urban lands suitable for higher-density redevelopment, which are not identified in regional inventories, are often served by existing infrastructure and allow for more compact, efficient, and sustainable growth.

Insert Table: Proportional Land Use in the City of Waukesha: 1963-2020

Equalized Value⁴

Each year, the Wisconsin Department of Revenue calculates and certifies an estimate of the taxable property value for each taxation district within the State.⁵ The resulting equalized value is calculated to estimate a municipality's total value in a standardized fashion to guarantee that each county's tax burden is fairly distributed.

Equalized value estimates the value of general property within two categories:

- General real property - land; improvements attached to the land, including buildings and other structures; and fixtures, rights, and privileges pertaining to that land. Classified in one of eight categories:
 - Residential
 - Commercial
 - Manufacturing
 - Agricultural
 - Undeveloped land
 - Agricultural forest
 - Productive forest land
 - Other (farm sites and buildings)
- General personal property - Wares, merchandise, and effects with marketable value not included in real property.⁶

The equalized value of all general property within the City increased about 80 percent from 2013 to 2023. Residential and commercial values increases were similar in proportion, accounting for the greatest real property increases during that time period.

⁴ Information in this section is attributable to the Wisconsin Department of Revenue (DOR).

⁵ Equalized value calculates only taxable property to exclude churches, merchant inventories, manufacturer processing machinery and equipment, and other nontaxable property; property exempted from the property tax due to other taxes paid on it, as with automobiles via license fees; and certain classes of taxable property not valued at full market value. f

⁶ Categorized as steam and other vessels; furniture, fixtures, and equipment; machinery tools and patterns; and all other general personal property.

Figure 2.1: State of Wisconsin - (All) Property

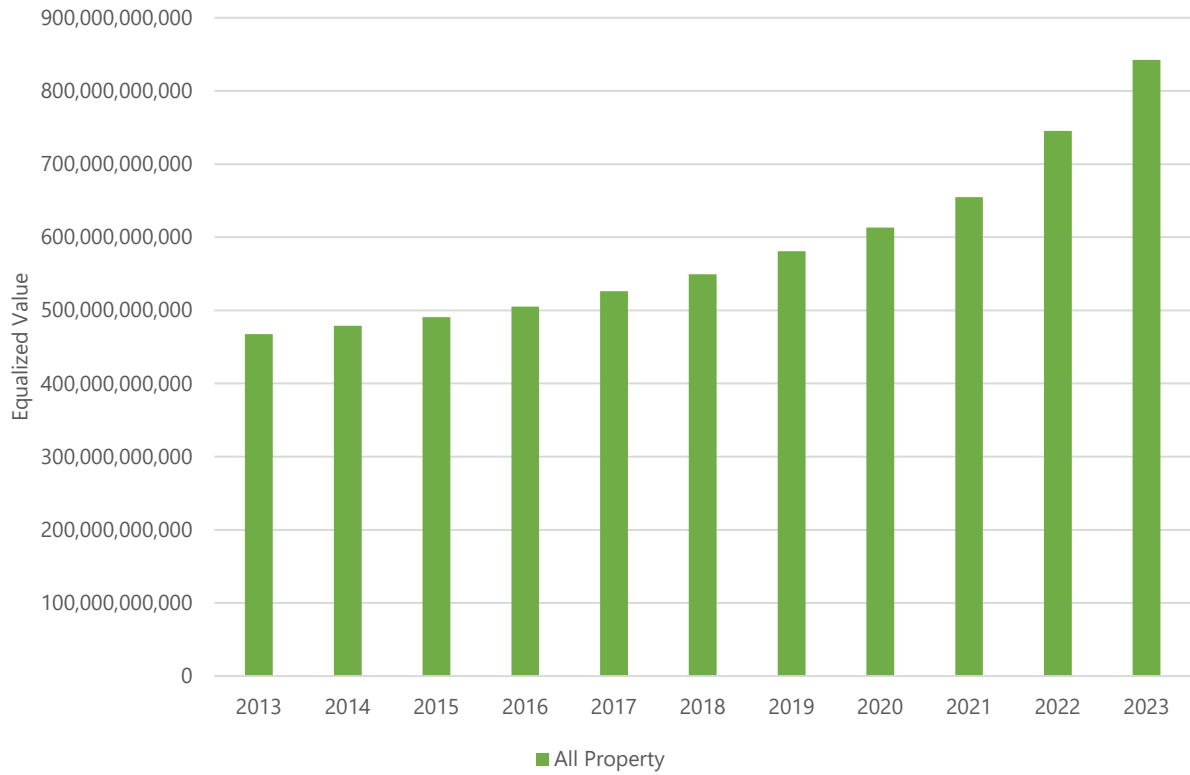
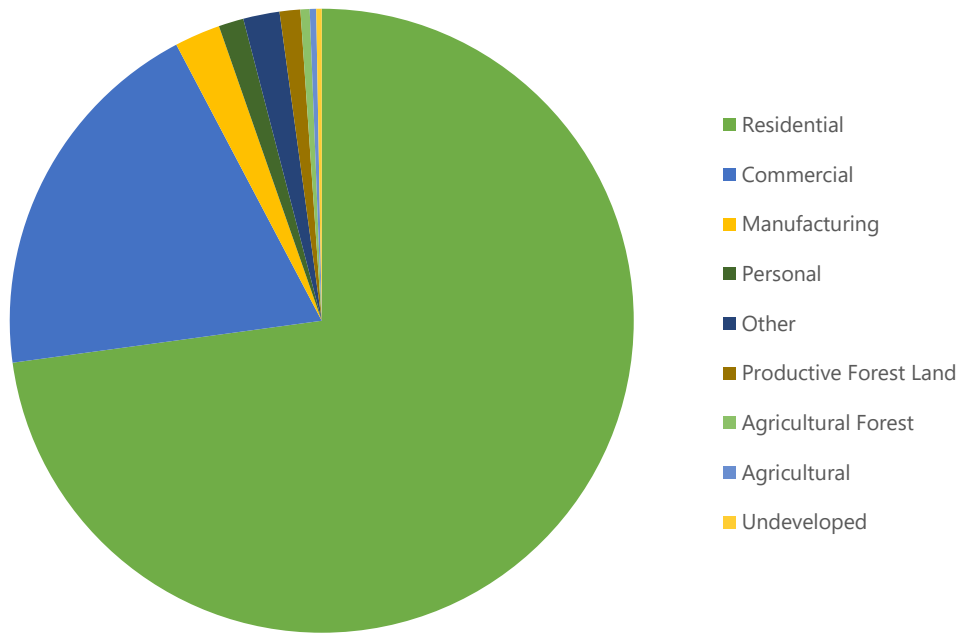


Figure 2.2: State of Wisconsin (Total) - 2023



Call Out: The City's total equalized value as of January 1, 2023, was approximately 9.5 billion dollars, or about 11 percent of the County's total equalized value.

LAND USE PLANNING

Land use planning addresses how land may be used in the future by integrating and synthesizing data, input, and goals related to all aspects of a community, including environmental, social, and economic factors, including but not limited to housing, transportation, parks, agricultural, natural and cultural resources, and utilities and community facilities. Land use planning also provides the basis for plans related to each of the comprehensive planning elements set forth in State Statute 66.1001.

Call Out: While most land use development is financed privately, urban development inevitably exerts a demand on public facilities and services. In the aggregate, such demands require the investment of public capital in new or improved facilities and utilities.

Plans and Regulations

Reviewing plans and regulations was an important step in the comprehensive plan update process. Despite being prepared under different conditions and with varying scopes, numerous local, County, regional, and State plans and studies completed since 2009 contain information relevant to the City's comprehensive plan. Information from local, County, regional, and State plans and studies reviewed as this report was being prepared, which are summarized in Appendix B as they existed in 2023, was incorporated into the issues, opportunities, goals, and policies presented in this report.⁷

State law grants Wisconsin cities the authority to enact general zoning regulations and special-purpose zoning regulations.⁸ While special-purpose zoning regulations may govern floodplain and shoreland areas, general zoning regulations divide 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.

Regulations set forth in the City's municipal code include the City's zoning ordinance, which regulates the use of property in the public interest. As of 2023, the City's zoning ordinance supported a range of

⁷ *The summaries constitute an inventory of plans and studies and should not be confused with the recommendations developed and adopted as part of this comprehensive plan update.*

⁸ *Under Section 62.23 of the Wisconsin Statutes, general zoning regulations and special-purpose zoning regulations can be adopted as a single ordinance or as separate ordinances and may or may not be included in the same document.*

development types. Examples of development permissible under the City's zoning ordinance include the following:

- Residential development to accommodate individual, detached housing units as well as buildings containing multiple housing units
- A range of commercial development including large-scale community-oriented businesses; small, neighborhood-oriented businesses; and mixed-use structures with commercial street-level uses and residential upper story uses
- Industrial uses within general, light, and mixed-use manufacturing districts

The City's zoning ordinance also allows Planned Unit Development (PUD) within an overlay district to encourage development and redevelopment by allowing for flexibility in site and building design and overall density.

► **Recommendation: Revise Zoning Ordinance**

This plan recommends that the City evaluate its current zoning code and update the ordinance to ensure that it is aligned with the City's objectives and with this comprehensive plan. An updated zoning code should aim to reduce barriers to quality development and allow for a mix of land uses in the City.

After this comprehensive plan update is adopted, the City may undertake revising and updating its zoning ordinance to promote the type of development and redevelopment necessary to foster implementation of this comprehensive plan update. Such an update will be important to ensuring that the City's zoning ordinance and comprehensive plan are consistent with one another, including comprehensive plan updates and amendments, in accordance with the State comprehensive planning law. Per Section 66.1001 (1) (am) of the Statutes, this consistency requires that the zoning code furthers, or does not contradict, the objectives, goals, and policies contained in the comprehensive plan. This consistency is essential given that zoning is the primary tool available for implementing the City's comprehensive plan.

Population and Household Growth

Projecting future growth at the community level can be difficult. In an effort to lessen the uncertainty associated with projecting future population and household levels, four techniques were used to develop

potential projections for the City's consideration.⁹ The City's chosen projections are a best estimate that approximate regional planning projections to align with the City's municipal boundary as of March 2022.

The City's actual future population and number of households will depend significantly on the density and type of urban growth yet to occur within the City.

Table: Historic and Projected Population and Household Levels in City of Waukesha: 1960-2050

Year	Population			Households			Median Household Size
	Total	Change		Total	Change		
		Number	Percent		Number	Percent	
1960	30,004	--	--	8,572	--	--	3.5
1970	40,271	10,267	34.2	11,748	3,176	37.1	3.4
1980	50,365	10,094	25.1	17,644	5,896	50.2	2.9
1990	56,894	6,529	13.0	21,235	3,591	20.4	2.7
2000	64,825	7,931	13.9	25,663	4,428	20.9	2.5
2010	70,718	5,893	9.1	28,295	2,632	10.3	2.5
2020	71,758	440	0.6	29,704	1,409	5.0	2.4
2050	96,290	25,132	35.3	38,450	9,746	32.8	2.5

Anticipated Urban Growth

The City is envisioned to be a welcoming, attractive community whose abundant amenities provide an excellent quality of life for its diverse population, with a land use pattern designed to provide a range of housing options, including a variety of types, sizes, and costs to meet residents varying needs; accessible natural resource areas, cultural features, and recreational opportunities for health and wellness; and sufficient commercial and industrial development for employment and shopping opportunities.

While this vision may be attributed, at least in part, to the City's past planning efforts, this report anticipates urban growth to occur in a significantly different manner than has been the case in previous comprehensive plans. This comprehensive plan update anticipates the City's urban growth to occur primarily within existing City boundaries (i.e., without the annexation of lands¹⁰ or outward growth of the City). This difference is

⁹ While each of the four techniques could be used to develop population projections, only three techniques could be used to project household levels. These techniques are summarized in Appendix 2 of this report.

¹⁰ The City is unable to annex adjacent township lands and grow its boundary due to the Town of Waukesha's incorporation as a Village under Section 66.02162 of the Wisconsin Statutes on May 12, 2020.

primarily due to the approval of the City's application to divert and use Lake Michigan water by the Great Lakes Compact-St. Lawrence River Basin Water Resources Council, which established limitations on the City's water supply service. These factors combined now define the City's future growth area and effectively set in perpetuity the City's existing municipal border.¹¹ Thus, the City is anticipated to grow through new development and redevelopment at a greater overall density than in past decades.

Call Out: The City is in a different position than ever before in terms of its ability to grow, which, as recognized by residents, business owners, and local officials, presents both challenges and opportunities.

Though there is potential for demand to shift development towards more efficient street systems to increase opportunities for active transportation, it is anticipated that some new development will occur along collector roads extending to the edge of the City, an urban growth trend typically associated with automobile-oriented development. Redevelopment, which has contributed somewhat to the City's current growth, is anticipated to result in additional development of a new scale and mix of uses replacing existing structures to meet changing demands as result of evolving demographic, economic, and other market conditions.

Call Out: The City's future urban growth will likely look very different from its historical growth, as few open developable lands remain and future growth will be driven largely by redevelopment of existing urban land.

Land use projections can approximate potential land use changes over the planning period. Land use projections may be developed by conducting a spatial analysis incorporating development regulations and policies alongside population, household, and employment projections and existing land use data. As this approach makes several assumptions and cannot account for market fluctuations or unforeseen changes to current trends, land use projections may be less accurate over a longer planning period. This report, therefore, considers the amount of undeveloped land suitable for development alongside the land use policy map and currently proposed or planned development over a shorter time period. This approach establishes an approximation of the number of dwelling units that can be expected to be built to address the City's need for housing.

Over 300 acres of unused urban and agricultural lands will be developed for projects that were underway as this plan was being prepared or were anticipated over the five years following adoption of this report.

¹¹ Additional information is in the community facilities and utilities chapter (Chapter 6) of this report.

Most of this land will be developed for residential uses and is expected to provide about 2,000 new housing units. Additionally, it is anticipated that other areas of the City will be redeveloped over the planning period with redevelopment, including potential land use changes. More accurate land use projections may be developed as the City identifies areas where such redevelopment is most likely to occur.

Insert Image: New, higher density downtown area development [to be provided by City].

LAND USE POLICY

This comprehensive plan update establishes a land use policy developed to meet City residents' and businesses' existing and anticipated future needs. This land use policy is presented in lieu of a land use plan, which is more likely to be interpreted as a long-term goal. The City's land use policy, which does not discount existing development, is designed to acknowledge that, upon adoption of this report, the City is actively engaging in promoting environmentally sound, efficient, and effective development and redevelopment that benefits residents and businesses by maintaining and enhancing living and working conditions.

The land use policy map and categories were compiled from City objectives, policies, goals, maps and programs to guide the future development and redevelopment of public and private property within the City. The land use policy map concurrently shows the general location of existing and anticipated future land uses based on structure type.¹² It is anticipated that the City will enforce this land use policy with a zoning code that can refine the City's vision for each category.

Land Use Policy Categories

Residential Detached (RD)

Allows one or two housing units within a single detached structure per parcel. Zoning may allow for accessory dwelling units. Most nonresidential uses will be excluded. Zoning regulations will establish clear criteria and standards for form/design, lot size/building coverage, setbacks, ADU design, and parking requirements.

¹² While agricultural lands are mapped as an existing land use and may remain a permitted use based on City regulations, they are not shown on the City's land use policy map. In accordance with regional plans, land within the City's urban service area are intended to be developed as indicated on the City's land use policy map. As done for past land use inventories conducted by the Commission, wetlands, woodlands, floodplains, and other land cover are mapped as existing land uses and in the natural resources element of this plan plans. These land covers should be taken into account as the City implements the land use policy map in this report

Residential Attached (RA)

Allows existing detached and attached dwellings with individual entrances, including duplexes, triplexes, quads, rowhouses, stacked flats, and small apartment buildings up to six units. Zoning may allow for limited small-scale commercial uses.

Residential Multiple (RM)

Allows apartment buildings. Excludes detached (RD and RD2) and attached (RA) dwellings

Residential Flexible (RF)

Allows flexibility for various residential types, including detached, attached, and multiple unit dwellings.

Commercial (C)

Allows retail, service, and office uses. Most other noncommercial uses will be excluded.

Mixed Residential Commercial (MRC)

Allows a vertical or horizontal mix of commercial and residential uses. Walkable, ground floor hospitality, retail, or service uses, oriented along the street edge are required within community nodes.

Community Node

An intersection demarcated by parcels featuring walkable, ground-floor hospitality uses oriented along and accessible from the street edge.

Industrial/Commercial (I/C)

Allows a vertical or horizontal mix of industrial and commercial uses.

Industrial (I)

Allows manufacturing and assembly, service-oriented uses, construction supply, warehousing, distribution, and ancillary office uses. Also allows for food service, kennels, or indoor recreation.

Civic and Institutional (CIV)

Public and private schools, colleges, and universities. City-, County-, and State-owned facilities; and private institutions, churches, and hospitals.

Public Parks and Recreation (P)

Publicly owned areas for conservation or active or passive recreation.

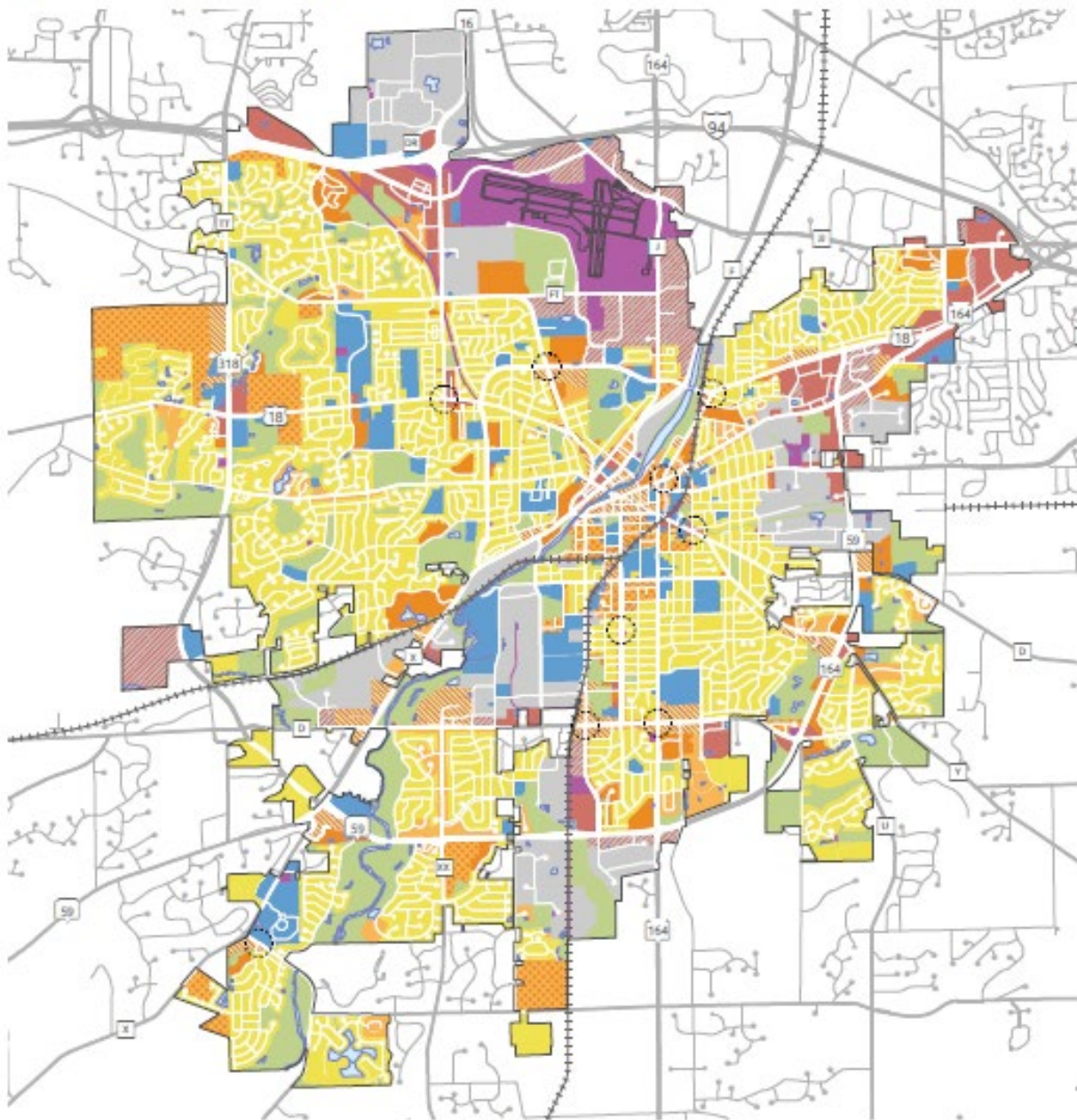
Private Open Space (OS)














Homeowner association and other privately owned areas for conservation or active or passive recreation.

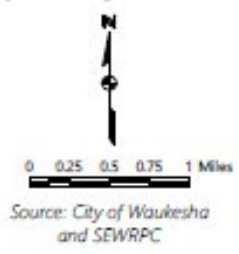
Utilities, Transportation, and Communication (UTC)

Parcels with privately owned railroads or utility and communication facilities.

City of Waukesha Land Use Policy



- | | | | |
|---|------------------------------------|---|--|
|  | COMMUNITY NODE |  | MIXED INDUSTRIAL/COMMERCIAL (I/C) |
|  | RESIDENTIAL DETACHED (RD) |  | INDUSTRIAL (I) |
|  | RESIDENTIAL ATTACHED (RA) |  | CIVIC AND INSTITUTIONAL (CIV) |
|  | RESIDENTIAL MULTIPLE (RM) |  | PARK AND OPEN SPACE (P, OS, CS) |
|  | RESIDENTIAL FLEXIBLE (RF) |  | UTILITIES, TRANSPORTATION, AND COMMUNICATION (UTC) |
|  | MIXED RESIDENTIAL/COMMERCIAL (MRC) |  | SURFACE WATER |
|  | COMMERCIAL (C) | | |



GOALS AND POLICIES

Land use is one of the primary factors that impacts a community's form, livability, and future growth. The goals and policies presented in this chapter are intended to provide a framework to guide land use within the City. This framework should be used by the City to create and evaluate objectives and standards, ensuring that specific programs and projects are consistent with this report.

GOAL 2.1

Establish and enforce land use goals, objectives, policies, and programs to reflect existing uses and provide guidance and flexibility for new development and redevelopment.

Policy 2.1.1

Create a new land use plan for residential and mixed uses that promotes redevelopment, efficiency, flexibility, and affordability given sharply rising land costs and limits on municipal growth.

GOAL 2.2

Allow for greater flexibility, variety, and affordability in residential land use types, while maintaining a high quality of life in new and existing neighborhoods.

Policy 2.2.1

Allow additional density and new housing types along major thoroughfares and gateways, such as Madison Street, Oakdale Drive, Grand Avenue, and Sunset Drive, as mapped under the Residential Attached land uses.

Policy 2.2.2

Update the City's zoning regulations to establish clear criteria and standards for form/design, lot size/building coverage, setbacks, and parking requirements to support implementation of the land use policy map. Updated zoning regulations should support each land uses policy category to diversify the City's housing stock and promote mixed uses.

Policy 2.2.3

Study the potential to allow for accessory dwelling units (ADUs), accessory apartments, and duplexes in areas planned for Residential Detached land uses and establish a set of criteria for these uses.

Policy 2.2.4

Continue to monitor the City's housing stock at the neighborhood scale and study potential actions and policies to maintain or redevelop as the stock ages.

Policy 2.2.5

Permit the residential redevelopment of underutilized parking lots or commercial buildings in areas Mixed Residential Commercial areas.

GOAL 2.3

Integrate land use and transportation planning to maximize the value of the City's transportation assets.

Policy 2.3.1

Explore opportunities to add housing density along public transit routes within the City.

Policy 2.3.2

Promote downtown as the City's transit hub, utilizing the Downtown Transit Center as an amenity for new development on the west side of the river.

Policy 2.3.3

Study the housing and mobility needs of the City's growing aging population and consider steps to encourage new housing for the aging population in walkable and transit accessible locations.

GOAL 2.4

Promote walkable neighborhoods by allowing for a better/substantial mix of uses within walkable distances, including neighborhood retail, service, hospitality, and community gathering places.

Policy 2.4.1

Plan for walkable community nodes at selected intersections as shown on the Land Use Policy Plan and ensure that any change from commercial to a mixed use residential retains commercial storefronts at key locations.

Policy 2.4.2

Draft new form-based zoning for community nodes so that new mixed-use projects provide direct access from sidewalks to required storefronts.

Policy 2.4.3

Establish placemaking as an urban design goal for neighborhood commercial areas.

Policy 2.4.4

Consider actions to provide alternative access routes to neighborhood commercial areas with expansions and improvements to the City's bicycle and pedestrian trail network, including routes through homeownership association (HOA) common areas.

Policy 2.4.5

Work to ensure safe, comfortable, and convenient pedestrian and bicycle access to City parks and schools from neighborhoods.

GOAL 2.5

Plan for a mix of uses along selected commercial corridors to address housing supply and to create walkable places with a variety of goods and services.

Policy 2.5.1

Promote a mix of residential and commercial development along Sunset Drive as shown on the land use policy plan map.

Policy 2.5.2

Prepare additional detailed planning and zoning recommendations to create an urban design framework for walkable community nodes at key intersections along Sunset Drive, including Oakdale Drive, East Avenue, and West Avenue.

GOAL 2.6

Maintain selected areas for industrial uses, as well as service commercial, wholesale and warehousing businesses, and work to mitigate any environmental impacts of current or past industrial uses.

Policy 2.6.1

Ensure that areas with known or suspected environmental contaminants are monitored and consider actions to remediate soil or water pollutants.

Policy 2.6.2

Through long range planning actions, transition heavy industry out of neighborhood contexts and work to keep new residential projects from locating next to heavy industry.

Policy 2.6.3

Encourage redevelopment and parcel consolidation in older industrial and business parks to accommodate the changing needs of industrial users while ensuring that these areas have multimodal connections to adjacent areas to establish walkable places for workers and users.

Policy 2.6.4

Identify large tracts of land suitable for new industrial or business park development along major transportation corridors while ensuring that these areas have safe multimodal connections to adjacent areas.

Policy 2.6.5

Coordinate efforts with the County on the redevelopment of County-owned lands located northeast of the corner of Grandview Boulevard and Northview Road, referencing information in the *Waukesha County Northview, Expo, Highway, and Airport Grounds Master Plan*.

GOAL 2.7

Celebrate the City's downtown as the heart of the community.

Policy 2.7.1

Continue to add new housing units of all types and price ranges to the central City.

Policy 2.7.2

Maintain existing storefront streets and establish zoning that requires storefronts or other active uses at the ground level of new mixed-use developments on designated streets.

Policy 2.7.3

Collaborate with downtown businesses and business organizations to facilitate or support events that attract visitors and add vibrancy to downtown.

Policy 2.7.4

Continue implementation of plans for downtown, including the 2012 central city plan and integrated street plan, focusing on the priority redevelopment projects identified for the downtown and the surrounding neighborhoods. Start considering preparing updates to central city plans.

Policy 2.7.5

Maximize the potential of downtown by increasing the employment base, with daytime workers supporting local business along with residents.

GOAL 2.8

Plan for robust commercial areas that maintain the City as a regional shopping destination and explore opportunities to attract office development.

Policy 2.8.1

Create a detailed plan for the Moreland/Main corridor that recognizes its value as a major commercial area and transit corridor and as an important entrance to the City.

Policy 2.8.2

Conduct periodic market research on supply and demand for commercial space, and study attitudes and potential to market the City's downtown as a professional office address.

Policy 2.8.3

Identify underutilized commercial buildings and surface parking lots for potential redevelopment into a variety of housing types to provide needed housing supply, create customers for nearby commercial spaces, and to otherwise activate commercial corridors.

GOAL 2.9

Provide needed school and park lands and utilize these assets to create a rich civic and cultural life.

Policy 2.9.1

Consider new uses for excess school lands, including excess frontage and undeveloped school sites, particularly to meet social needs of neighborhoods.

GOAL 2.10

Protect and conserve the City's environmental resources, including environmental corridors, critical habitats, and the lands along the Fox River.

NOTE: Charts, figures, and tables in this preliminary draft may differ from those in subsequent drafts. These variations, intended to facilitate effective visual communication, are solely graphic in nature and do not indicate changes in the data used to prepare this report.

PRELIMINARY DRAFT

SEWRPC Community Assistance Planning Report No. __

City of Waukesha Comprehensive Plan

Chapter 3

HOUSING

This chapter describes housing in the City of Waukesha and presents related goals and policies in accordance with the housing element required by State law.¹ It contains an inventory and descriptive analysis of data related to the age, structural condition, value, and occupancy characteristics of the City's existing housing stock. In addition, population and household data is presented to provide context for the ability of the City's housing to meet current and future needs. The job/housing balance, demand, and need are also discussed.

The inventory data topics in the housing element of this comprehensive plan update are similar to those in the City's 2009 comprehensive plan. It should be noted that many of the concerns and weaknesses identified by that plan remain opportunities for the City today. The 2009 plan included an inventory of funding programs for housing, which is not included in this plan update as the availability of such programs changes frequently. This plan identifies several goals and policies aimed at meeting current needs and ensuring the long-term suitability of the City's housing stock to serve its residents.

¹ Requirements for the housing element of a comprehensive plan are set forth in Section 66.1001(2)(b) of the Wisconsin Statutes.

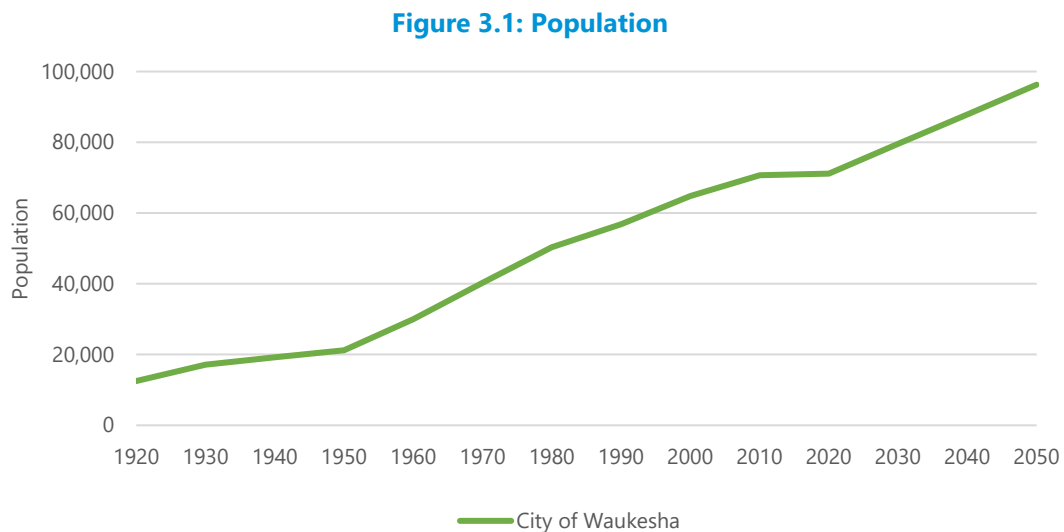
POPULATION AND HOUSEHOLD DATA AND PROJECTIONS

To better understand the suitability of the City's housing stock to serve the current and future residents of the City, this chapter references demographic and socioeconomic data that can inform efforts to develop or redevelop housing now and in the future.² It is important to consider this data to best understand the quantity, type, size and cost of housing needed for the City's population. This data can also provide important context in determining the appropriate placement of housing, particularly regarding access to transportation, employment centers, and community facilities such as parks, health care, and schools.

Call Out: Housing was identified as a challenge by 40 percent of respondents of the Fall 2021 comprehensive plan kickoff survey.

Population Growth

The City has experienced a steady increase in population and a corresponding need for housing—trends that are predicted to continue.³



² See Chapter 1 for a summary of population, household, and employment inventory data and projections and Appendices D and F for detailed data. Information in this chapter also comes from other housing-related planning efforts, which are summarized in Appendix B of this report.

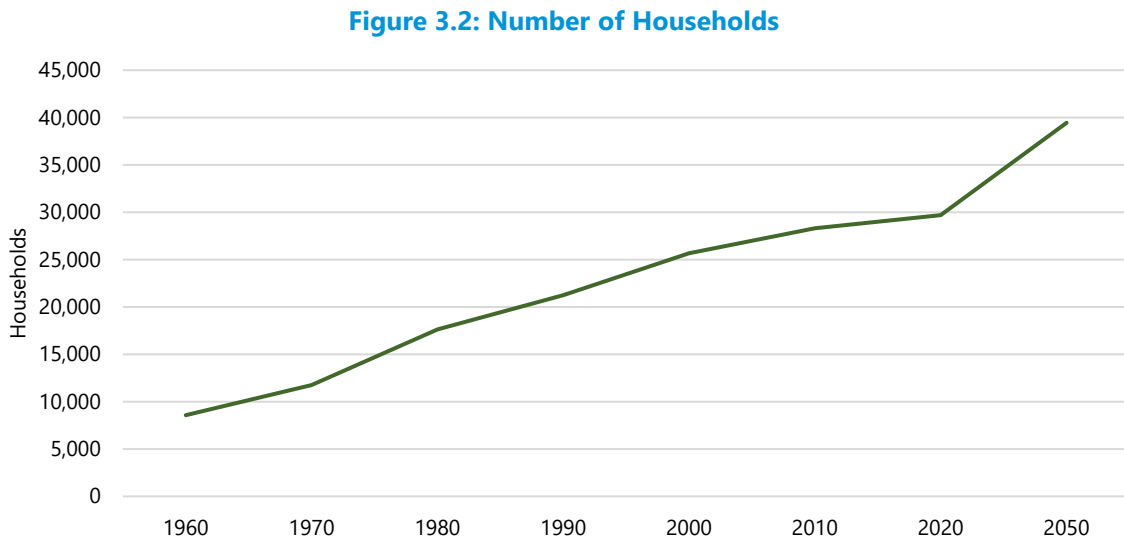
³ City of Waukesha, Housing Study and Needs Assessment, February 2019 (noting that similarly sized cities throughout Wisconsin are experiencing similar trends).

► **Recommendation: Increased Development Density**

With a growing population and limited land available for new development, this plan recommends increasing development density within the City, with increased housing density in some areas and residential redevelopment in others.

Number of Households⁴

The number of households in the City has increased over time and is expected to continue increasing steadily through 2050.



Call Out: Number of households in 2000 (25,663), 2020 (29,704), and 2050 (est. 39,450).

Call Out: Underlying trends in population and household growth indicate there has been and continues to be a long-term decrease in household size, which began around 1950 and was especially dramatic during the 1970s. The reduction in household size has been smaller for each succeeding decade since the 1970s.

Household Size

Household size, the number of persons per household, has been decreasing over the last several decades in the City, and elsewhere. This trend can be attributed to an increase in the number of one-person

⁴ A household includes all persons who occupy a single housing unit.

households and a decrease in the number of children in family households.⁵ Trends in declining household size may be expected to continue, though at a slower rate than in past decades, as a result of multiple factors associated with changes in household types.

Changes in the proportions of certain household types, including family and nonfamily households and households with or without children, will affect household size. National trends reveal notable increases in two-occupant households, single-occupant households, and single-parent households. Increases in older population age groups, for which the average household sizes tend to be smaller, will also impact household size.

Call Out: The demand for housing with desirable characteristics, including housing of a certain size, cost, type, and location, will vary with changes in household size—and composition.

Insert Graphic: Showing different rates of increase for the population of and number of households in the City

Population and Households in the City of Waukesha: 1950-2020

Year	Population		Households		Household Size	
	Number	Percent Change	Number	Percent Change	Number	Percent Change
1950	21,233	--	5,782	--	3.42	--
1960	30,004	41.3	8,572	48.3	3.33	-2.6
1970	40,258	34.2	11,748	37.1	3.29	-1.2
1980	50,319	25.0	17,644	50.2	2.76	-16.1
1990	56,958	13.2	21,235	20.4	2.59	-6.2
2000	64,825	13.8	25,663	20.9	2.43	-6.2
2010	70,718	9.1	28,295	10.3	2.40	-1.2
2020	71,158	0.6	30,097	6.4	2.31	-3.7

Source: U.S. Census Bureau and SEWRPC

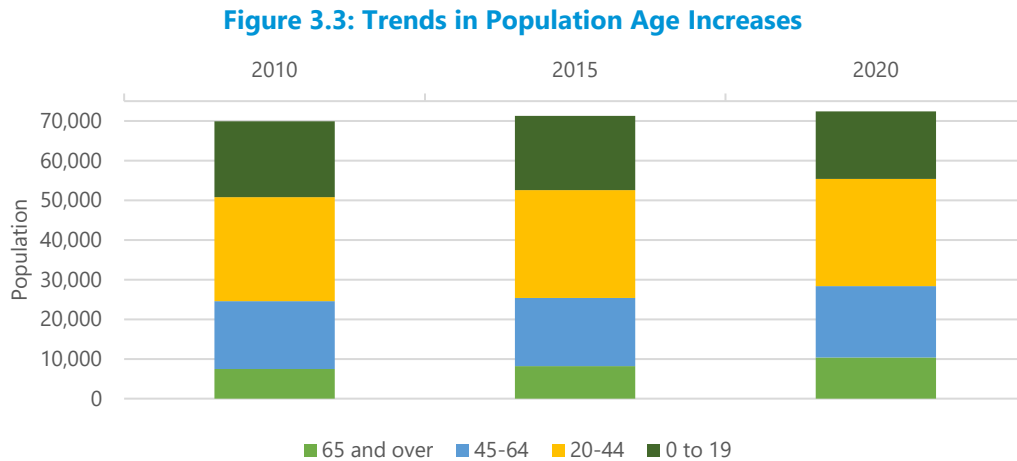
Insert Graphic: Matching household to type of housing unit: 4-person household with standard house, aging individual with facility by transit, professional in apartment by airport with caption: The demographic composition of City residents is directly related to certain characteristics such as housing type.

⁵ SEWRPC Community Assistance Planning Report No. 169, A Land Use Plan for the City of Waukesha Planning Area: 2010.

Demographics

Age

The median age of City residents has been increasing over the past several decades, though at a slower rate than the County and Region. Trends indicate that the potential age distribution of the City's anticipated future population will include increasing proportions of residents aged 65 and over.



Call Out: Resident age is an important consideration relevant to the type of housing needed, preference for housing styles, and the connectivity of housing to residents' daily needs, including community and transportation facilities and commercial areas. This is especially important for older populations residing in automobile-dependent communities as they begin to drive less frequently.

Race and Ethnicity

Waukesha has been gradually growing more ethnically and racially diverse. A mix of housing choices dispersed throughout the City can best ensure that neighborhoods reflect the City's growing diversity.

Call Out: Diversity was identified as one of the City's strengths by 17 percent of respondents of the Fall 2021 comprehensive plan kickoff survey.

Image/s: Showing diversity [To be provided by City]

Household Income

Household size and household income⁶ are two of the metrics used by the U.S. Department of Housing and Urban Development (HUD) to establish thresholds related to cost-attainable housing. Presented as ranges for an area's median income (AMI), the household income thresholds used by HUD follow:

- Moderate Income - 80 to 95 percent of AMI
- Low Income - 50 to 80 percent of AMI
- Very Low Income - 30 to 50 percent of AMI
- Extremely Low Income - less than 30 percent of AMI

Graphic showing 2020 median household income [City \$65,700; County \$89,000; Region \$64,500] with caption: The median household income of a geographic area establishes an income level to which all households in that area can be compared, with half of that area's households earning more than the area's median household income and half of the households earning less.

With a household income of less than \$50,000, nearly 40 percent of City households are low-, very low-, and extremely low-income households. Presuming that trends in the distribution of household incomes continue, there will be approximately 15,800 low-, very low-, and extremely low-income households in the City in 2050.

Graphic: 5,800 low-income, 2,300 very low-income, and 3,200 extremely low-income households in City in 2020.

Call Out: Median household income varies from one geographic area to another due to numerous factors, including the educational attainment of an area's residents, employment levels within the area, and the types of jobs available in that area.

⁶ Defined by the U.S. Census Bureau as the combined gross income of all people 15 years of age and older that occupy the same housing unit.

HOUSING INVENTORY

Total Housing Units

The total number of existing housing units is a key inventory item that establishes a foundation for understanding the existing housing supply. A single housing unit may be accommodated in variety of different structures, including a house, an apartment, or in a group of rooms or single room intended for occupancy as separate living quarters.⁷

Graphic: Approximately 30,920 existing housing units were in the City as of 2020.

Call Out: Despite increases in the City's supply of apartments between 2000 and 2019, cost-attainable housing has been a major issue for City residents that rent⁸

Number of Housing Units by Tenure in the City, County, and Region: 2020

Area	Owner-Occupied		Renter-Occupied		Vacant		Total	
	Housing Units	Percent of Total	Housing Units	Percent of Total	Housing Units	Vacancy Rate	Housing Units	Percent of Total
City of Waukesha	16,888	56.9	12,816	43.1	1,214	4.1	29,704	100.0
Waukesha County	121,773	76.2	38,007	23.8	6,923	4.3	159,780	100.0
Southeastern Wisconsin Region	503,926	58.0	314,167	42.0	69,125	8.5	887,218	100.0

Note: Data are based on the 2016-2020 American Community Survey (ACS).

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

Vacancy

The vacancy rates of owner- and renter-occupied housing units are also key components of a housing supply inventory. Vacant units may be categorized as units for rent; units for sale only; units for seasonal, recreational, or occasional use; units for migrant workers; and other vacant units. A healthy housing market has a balance of enough vacant properties for people to move into, but not so many as to create an oversupply of vacancies.

⁷ As defined by the U.S. Census, a separate living quarters is one in which the occupant or occupants live separately from any other individuals in the building and have a direct access from the outside of the building or through a common hall.

⁸ City of Waukesha, Housing Study and Needs Assessment, February 2019 (noting that the same has been true for residents of other cities in the State).

HUD has historically recommended an area to have a minimum overall vacancy rate of 3 percent to ensure people have access to adequate housing choices. Ideally, this vacancy rate would include a homeowner housing unit vacancy rate of between 1 and 2 percent and a rental housing unit vacancy rate of between 4 and 6 percent.

Call Out: The overall vacancy rates for homeowner housing units in the City were lower than the minimum HUD-recommended vacancy rate, indicating that the City's supply of housing units is limiting resident access to housing choices.

► **Recommendation: A Variety of Housing Options**

This plan recommends providing a substantial mix of housing choices for renters and homeowners.

Vacant Housing Units by Tenure in the City, County, and Region: 2020

Tenure of Housing Units	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number of Housing Units	Percent of Vacant Units	Number of Housing Units	Percent of Vacant Units	Number of Housing Units	Percent of Vacant Units
Year-Round Vacant ^a						
For Rent	563	46.4	1,495	21.6	17,503	25.3
Rented, Not Occupied	46	3.8	294	4.2	2,597	3.8
For Sale Only	48	4.0	915	13.2	5,296	7.7
Sold, Not Occupied	92	7.6	475	6.9	2,401	3.5
For Seasonal, Recreational, or Occasional Use	85	7.0	2,169	31.3	17,224	24.9
For Migrant Workers	--	--	--	--	25	--
Subtotal	834	68.7	5,348	77.2	45,046	65.2
Other Vacant ^b	380	31.3	1,575	22.8	24,079	34.8
Total	1,214	100.0	6,923	100.0	69,125	100.0

Note: Data are based on the 2016-2020 American Community Survey (ACS).

^a Year-round vacant housing units are units for rent, for sale, rented or sold but not yet occupied, occasional use, or temporarily occupied by persons with a usual residence elsewhere.

^b A housing unit is classified as other vacant when it does not fit into any other year-round vacant category. Common reasons a housing unit is labeled other vacant is that no one lives in the unit and the owner either does not want to rent or sell, is using the unit for storage, or is elderly and living in a nursing home with family members. Additional reasons may be that the unit is being held for settlement of an estate or is being repaired or renovated. Other vacant units may also be under foreclosure, though foreclosures may appear in any of the vacant or occupied categories.

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

Structure Type and Size

Structure type, or residential building type, is one of the most important considerations in providing market-rate housing that may be cost-attainable to a wide range of households. The most cost-attainable, market-rate housing units tend to be in attached and multiple-unit residential structures, including apartment buildings, rowhouses, and duplexes.

While detached single-unit structures are generally more costly, smaller detached structures tend to be more cost-attainable for a larger range of households. Both attached and smaller detached structures also require less upkeep than larger detached structures and their provision could benefit the City's aging population and households with a range of incomes, including those that make less than the City's median household income.

Meanwhile, larger, more costly detached structures may be desirable to larger households and households with an income above the City's median household income.

Insert image of attached residential [To be provided by City].

Housing Units by Structure Type for the City, County, and Region: 2020

Residential Structure Type	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number	Percent	Number	Percent	Number	Percent
Detached Single-Unit Structure	15,521	50.2	116,181	69.7	512,913	57.8
Attached Two-Unit Structure/ Townhome	4,150	13.4	14,430	8.7	138,535	15.6
Attached Multiple-Unit Building						
3 or 4 Units	2,071	6.7	5,291	3.2	42,239	4.8
5 to 9 Units	1,770	5.7	9,071	5.4	53,177	6.0
10 to 19 Units	1,788	5.8	4,956	3.0	32,691	3.7
20 to 49 Units	3,443	11.1	8,772	5.3	47,008	5.3
50 or More Units	2,074	6.7	7,099	4.3	51,579	5.8
Subtotal Multiple-Unit Building	11,146	36.1	35,189	21.1	226,694	25.6
Mobile Home or Other Structure	101	0.3	903	0.5	9,076	1.0
Total Housing Units	30,918	100.0	166,703	100.0	887,218	100.0

Note: Data are based on the 2016-2020 American Community Survey (ACS).

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

Table caption/Call Out: A slight majority of the City's housing units are detached single-unit structures, which tend to be more costly to construct and less cost-attainable for households than other residential structure types.

► **Recommendation: Smaller Housing Units**

The City should evaluate the local housing market and consider encouraging developers to include a higher proportion of smaller housing units in new construction. In addition to being more affordable, demand for smaller housing units typically increases as average household sizes decrease.

Longer term trends preceding the 2019 housing study have had single-unit residential structures accounting for a smaller proportion of new housing in the City than multiple unit structures, which were more often built as apartments than as condominiums. Breaking these trends, more than half of the new housing units constructed in the City between 2013 and 2016 were single-, two-, and three-unit residential structures. In addition, the size of new housing units in the City has increased steadily—contrasting with national trends towards smaller housing units.⁹

Call Out: Larger projects accounted for more of the City's new residential development than smaller projects in years preceding the City's 2019 housing study.

Number of Bedrooms

The number of bedrooms in a housing unit is a significant factor in determining the number of people, or household size, that a housing unit can accommodate.

Call Out: Approximately 46 percent of all housing units in the City with three bedrooms or more are owner-occupied while only 7 percent are renter-occupied.

Year Built

The age of the City's housing stock can provide some insight into the potential condition and character of the existing housing units in the City. Older housing may be more cost-attainable than newer housing, especially in areas with a balanced supply of housing units that vary in age and cost. Older housing is more often located in higher density areas than newer detached, single-unit residential development and may therefore be easier to serve by transit. Such density and transit service can boost a neighborhood's quality

⁹ Per the City's 2019 housing study, which attributes these national trends to the economic recession and housing crisis that began in 2008, events that resulted in home price declines, credit restrictions for home mortgages, foreclosures and abandoned homes in many neighborhoods, and a lack of funding for cost-attainable housing through tax credit programs.

of life by ensuring that residential development has reasonable access to neighborhood amenities, including commercial establishments and community facilities, which can promote social interactions.

Older housing can also present challenges that inhibit its long-term economic feasibility. Older housing is likely to be less energy efficient than newer housing, which can contribute to higher energy costs. Older housing may also require more general maintenance than newer housing. These costs may be cumbersome for households that occupy older housing due to a rent or mortgage that is comparatively lower than newer housing. Older housing, especially detached single- or two-unit structures, may also have more features that do not comply with Americans with Disabilities Act (ADA) requirements for buildings and facilities to be easy to approach, to enter, and to be used safely and with dignity by a person with a disability. Overall, it can be assumed that older housing will increasingly need rehabilitation or replacement as a community's housing stock ages.

Housing in the City, County, and Region and Median National Cost of Rent by Year Built: 2020

Year Built	City of Waukesha		Waukesha County		Southeastern Wisconsin Region		Median Rent (\$)ª
	Number	Percent	Number	Percent	Number	Percent	
2014 or later	566	1.8	5,146	3.1	16,318	1.8	1,450
2010 to 2013	457	1.5	3,669	2.2	12,929	1.5	1,280
2000 to 2009	4,189	13.5	22,290	13.4	82,201	9.3	1,263
1990 to 1999	5,728	18.5	33,733	20.2	104,051	11.7	1,122
1980 to 1989	3,687	11.9	20,157	12.1	71,370	8.0	1,073
1970 to 1979	5,739	18.6	27,374	16.4	115,148	13.0	1,005
1960 to 1969	3,097	10.0	18,468	11.1	100,830	11.4	1,038
1950 to 1959	2,818	9.1	18,237	10.9	135,553	15.3	1,051
1940 to 1949	836	2.7	4,869	2.9	58,388	6.6	1,014
1939 or earlier	3,801	12.3	12,760	7.7	190,430	21.5	1,057
Total/Overall	30,918	100.0	166,703	100.0	887,218	100.0	1,096

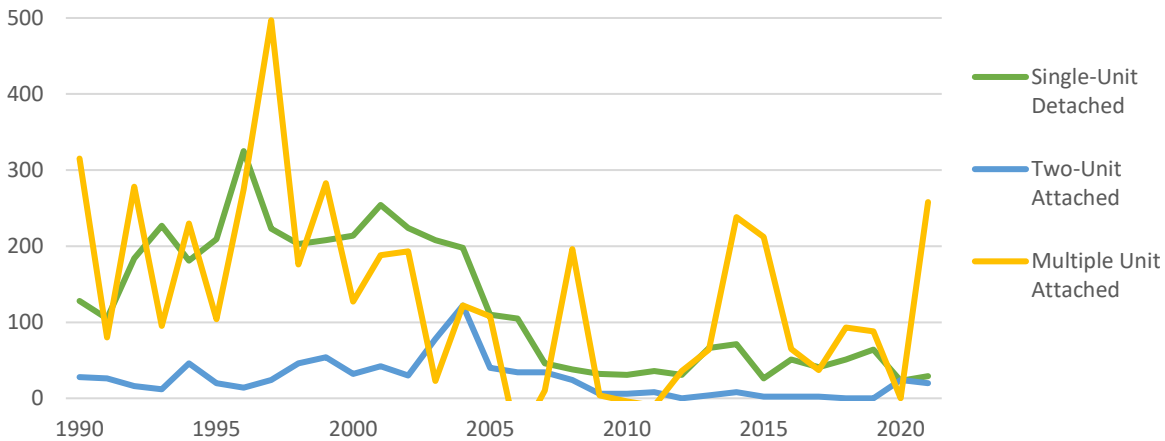
Note: All data are based on the 2016-2020 American Community Survey (ACS). Data for housing units by year built are for all housing units regardless of tenure, i.e., both owner-occupied and rental housing units. Median rent data by year built are for renter-occupied housing units nationwide for which cash rent is paid.

ª In 2020 U.S. dollars.

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

Caption/Call Out: Housing units built after 1970, which account for approximately 47% of the City's housing stock, have higher median rents nationwide than older housing units.

Figure 3.4: Building Permits Issued in the City of Waukesha by Residential Structure Type: 1990-2021¹⁰



Source: Wisconsin Department of Administration and SEWRPC

Building permits issued in the City from 1990 to 2021 include single- and two-family residential development as well as multifamily residential development, which includes residential development with three or more housing units. With nearly half of these permits issued for housing units in multiple unit residential structures, the City has gained approximately 9,070 housing units.¹¹

Call Out: Approximately half of the City’s building permits issued between 1990 and 2021 were issued before 2000. This indicates that residential development has slowed since 2000 despite strong demand for housing and suggests that the City’s housing stock may benefit from more flexible development policies.

Condition

The condition of housing, which can help identify housing units that should be removed from a community’s housing stock, can be assessed separately from the age of housing. Information on housing conditions can be obtained through assessments that are conducted by municipal assessor’s offices and private assessors under contract. Public and private assessors assign each housing unit within their jurisdiction a condition score to measure the present physical condition of each housing unit or dwelling.

¹⁰ Total housing units by type account for the number and type of housing units for which demolition permits were issued.

¹¹ Total housing units by type account for the number and type of housing units for which demolition permits were issued. Not all permits are acted upon to result in actual new housing units and the year a development obtains a building permit may precede the year of construction.

Ranging from excellent to unsound, the City’s condition ratings are defined as follows:

- Excellent – Building is in perfect condition; very attractive and highly desirable
- Very Good – Slight evidence of deterioration; still attractive and quite desirable
- Good – Minor deterioration is visible; slightly less attractive and desirable, but useful
- Average – Normal wear and tear is apparent, average attractiveness and desirability
- Fair – Marked deterioration but quite useable; rather unattractive and undesirable
- Poor – Definite deterioration is obvious; definitely undesirable and barely useable
- Very Poor – Condition approaches unsoundness; extremely undesirable and barely useable
- Unsound – Building is unsound and unfit for use

Conditions of Residential Structures: 2022

Residential Building Type	Building Condition							Total
	Excellent	Very Good	Good	Average	Fair	Poor	Very Poor	
Single-Unit Structure	-	153	3,082	14,261	789	36	11	18,332
Two-Unit Structure	-	1	56	803	43	3	-	906
Apartment Structure								
Two- to Three-Unit	-	2	63	357	115	11	2	550
Four or more units	-	-	149	328	47	8	2	534
Manufactured Home	-	-	19	46	16	3	8	92
Total	-	156	3,369	15,795	1,010	61	23	20,414

Source: City of Waukesha and SEWRPC.

As of 2022, the majority of each residential structure type was in average or better condition. Meanwhile, approximately 5 percent of single-unit and two-unit residential structures in the City were in fair, poor, or very poor condition.

Call Out: Finding a quality home within a suitable living environment is an important, but often challenging, objective for many residents of the seven-county Southeastern Wisconsin Region.

Cost

Considered alongside household income, the cost of housing is a significant factor in determining the quantity of housing units available for community residents.¹² Households with housing costs exceeding 30 percent of their gross, pre-tax household income are considered to have a high housing cost burden.¹³ Based on the City's median household income of \$65,700, monthly housing costs over \$730 amount to a high housing cost burden.

Monthly Gross Contract Rent Costs for Renter-Occupied Housing Units in the City, County, and Region: 2020

Monthly Gross Rent	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number	Percent	Number	Percent	Number	Percent
With Cash Rent						
Less than \$300	393	3.1	931	2.4	14,275	4.5
\$300 to \$499	691	5.4	1,379	3.6	19,745	6.3
\$500 to \$749	2,654	20.7	6,166	16.2	102,800	32.7
\$750 to \$999	5,457	42.6	12,437	32.7	94,004	29.9
\$1,000 to \$1,499	3,163	24.7	11,957	31.5	57,957	18.4
\$1,500 or More	305	2.4	4,283	11.3	17,229	5.5
With Cash Rent Subtotal	12,663	98.8	37,153	97.8	306,010	97.4
No Cash Rent	153	1.2	854	2.2	8,157	2.6
Total	12,816	100.0	38,007	100.0	314,167	100.0

Note: Data are based on the 2016-2020 American Community Survey (ACS).

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

¹² Some analytics, including assessments of an area's job/housing balance, account for the costs of both housing and of transportation from the location of that housing to determine the cost-attainability of housing.

¹³ Another cost-attainability measure relates to a long-standing lending practice that establishes home loan approval conditions that limit borrower costs to 28 or 29 percent of their gross pre-tax income, beyond which housing is not considered cost-attainable. Most borrowers prefer to spend a lower proportion of their household income on housing but are generally unable to find housing costing less than 30 percent of their monthly income.

Monthly Owner Costs for Specified Housing Units with a Mortgage in the City, County, and Region: 2020

Monthly Mortgage Cost	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number	Percent	Number	Percent	Number	Percent
Under \$700	165	1.3	1,272	1.5	9,127	2.2
\$700 to \$799	153	1.2	1,005	1.2	9,082	2.2
\$800 to \$899	282	2.3	1,418	1.7	12,675	3.0
\$1,000 to \$1,249	1,785	14.5	7,488	9.1	57,276	13.7
\$1,250 to \$1,499	2,191	17.8	10,697	13.0	67,181	16.1
\$1,500 to \$1,999	4,159	33.7	24,331	29.5	117,693	28.2
\$2,000 to \$2,499	2,110	17.1	16,531	20.1	64,767	15.5
\$2,500 or more	1,066	8.7	17,644	21.4	62,415	15.0
Total	12,323	100.00	82,365	100.00	416,634	100.00

Note: Data are based on the 2016-2020 American Community Survey (ACS).

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

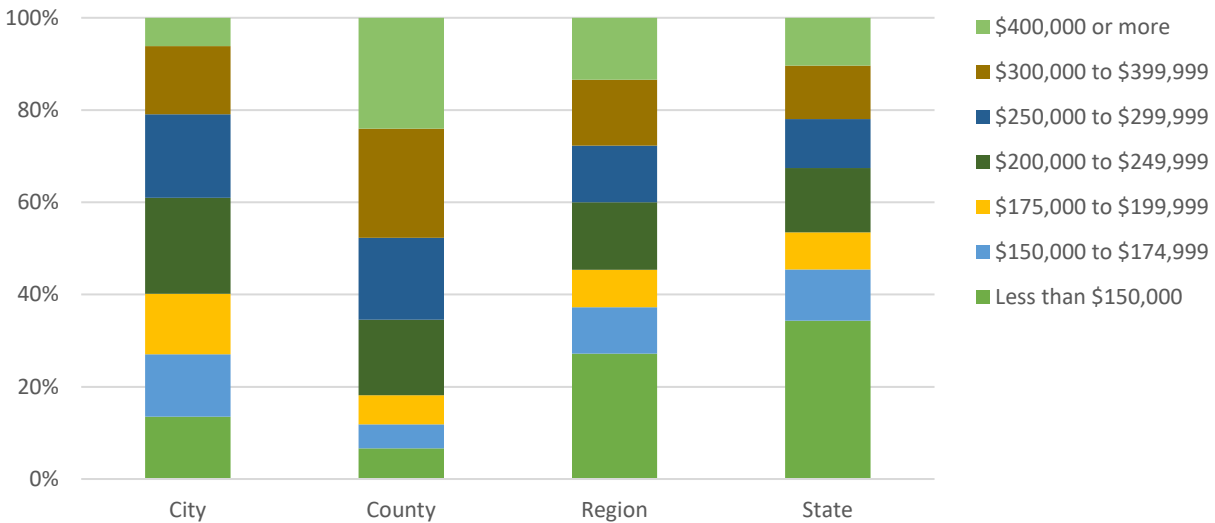
Caption/Call Out: Housing costs are a major issue for renters in the City. Approximately 30 percent of the City's renter-occupied housing units have monthly gross rents under \$750 and 42 percent of renters spent more than 30 percent of their income on housing costs in 2021. As only 2 percent of housing units with a mortgage had monthly costs under \$800, few cost-attainable options exist to enable renters to transition to home ownership.

Value

Call Out: The per-square-foot value of new homes in the City has increased in recent decades compared to older homes. (Source: City of Waukesha 2019 Housing Study and Needs Assessment)

It is important to have housing in a range of values available for purchase to provide households with adequate home-ownership opportunities. This variety enables residents of all income levels to become homeowners and allows existing homeowners to afford maintenance, repairs, and renovations to existing housing, enhancing the condition of their community's housing stock. This variety also enables existing homeowners to upsize to larger homes when needed, allowing other potential homeowners access to starter homes.

Figure 3.5: Values of Owner-Occupied Housing Units for the City, County, Region, and State: 2020



Note: Data are from the 2016-2020 American Community Survey (ACS).

Source: U.S. Census and SEWRPC

Call Out: The availability of mid- to high-value housing units was identified as a strength in the City's 2019 housing study.

There is an even distribution in the value range of the City's owner-occupied housing units, which includes similar proportions of mid- to high-value units. The City also offers a sizeable proportion of low- to mid-value housing units. Given these ranges, owner-occupied housing units in the City may be more cost-attainable to households with a variety of incomes than housing units for purchase in the County.

JOB/HOUSING BALANCE

The concept of a job/housing balance generally refers to a desirable ratio of jobs to housing units in a geographic area. The job/housing balance concept has been used as an objective in housing, land use, transportation, and comprehensive planning efforts throughout the Nation.

Information on the relationship between jobs and housing within the City is based on the framework set forth in the Commission's regional housing plan, which focuses on portions of the Region with the largest concentrations of jobs. These areas, classified as major employment centers, meet minimum job

concentration thresholds, and are designated to indicate the predominant type of economic activity in the area.¹⁴

The regional plan's job/housing balance analysis also incorporates information on cost-attainable housing located near major employment centers. Public transit connections between areas with existing cost-attainable housing and major employment centers is also part of that analysis. Ultimately, the housing plan identifies imbalances of jobs and housing as a primary component of housing problems within the Region. The job/housing balance analysis in the regional housing plan indicates that the City is projected to have a shortage of moderate-cost housing compared to moderate-wage jobs.

► **Recommendation: Conduct a City-Level Job/Housing Analysis**

This plan recommends that a detailed job/housing analysis specific to the City be conducted, with an analysis of community-specific wage data and housing price data. The analysis should also consider the effect of multiple workers in a household.

HOUSING DEMAND AND NEED

Determining housing demand and housing need requires accounting for numerous considerations that vary somewhat for the two different metrics.

Need

Housing need reflects the total number of housing units needed for existing and anticipated households within a community. An assessment of housing need should account for the quantity of existing housing units within the community as well as population, household size, and projected growth.

The key means of determining a community's overall housing need relates to the total quantity of housing units, which should contain a variety of structure types and sizes, and the current and projected population and household size. The population and household size, and projected growth in each, directly determine the number of households in the community. The housing need is thus the number housing units that are needed to accommodate every household in the community. Housing need does not make any consideration for the affordability of housing.

¹⁴ Major employment centers are described further in the economic development chapter of this report.

A minimum of approximately 2,900 new housing units is necessary within the City by 2038 to meet the City's projected housing need. This estimate does not account for new housing units necessary to accommodate existing City residents whose needs are not met by market-rate housing; households with aging residents who may be accommodated by senior housing; and college students who may be accommodated in dormitories.

Call Out: Accounting for the age, value, and condition of the community's existing housing stock can ensure that a community considers the quantity of housing units that may need to be renovated, demolished, or redeveloped.

Demand

Housing demand reflects the interest and ability of households to purchase a residence. Inventory data that directly correspond with housing demand include existing and projected household levels as well as additional demographic and socioeconomic data on households and housing units. In contrast to housing need, housing demand takes affordability into account. If a household needs a house, but cannot afford to buy one, it does not constitute housing demand.

Data on household income, the population's age distribution, household size, and other characteristics addressed in this report should be considered to ensure that the community's housing supply contains an appropriate variety of housing types and sizes to meet differing household demand. Housing demand should also account for the condition, value, and cost of existing and potential future housing to ensure that homeownership is feasible for eligible households at all income levels.

The household income/housing cost balance can be determined by comparing household income with housing costs, which were estimated based on housing unit types and densities. The balance, determined by comparing the number of lower-, moderate-, and higher-income households to the number of lower-, moderate-, and higher-cost housing units in a geographic area, can be used to determine the housing demand of current residents..¹⁵

¹⁵ *Standards for such housing are set forth in the regional housing plan.*

► **Recommendation: Quality Housing Options for Households of All Income Levels**

This plan recommends that all households within the City have access to quality housing options within the City that meet their needs at a cost of no more than 30 percent of their household income.

Call Out: The City needs more housing types and sizes at different price points to meet housing needs, including additional three- and four-bedroom housing units for renters.

GOALS AND POLICIES

Maintaining a suitable housing supply to meet the needs of current and future residents is essential to the overall vitality of the City. The goals and policies presented in this chapter are intended to provide a framework to guide the future development of the City’s housing supply. This framework should be used by the City to create and evaluate objectives and standards, ensuring that specific programs and projects are consistent with this comprehensive plan.

GOAL 3.1

Recognize the City’s role in ensuring a balanced housing supply.

Call Out: A local government must create, adopt, implement, evaluate, and update plans, policies, and regulations that establish a variety of opportunities for residential, mixed-use, and complimentary and development to ensure that the private sector can adequately address residents’ housing needs.

Policy 3.1.1

Implement the City’s comprehensive plan, including the land use policy map, to promote residential, mixed-use residential, and complimentary uses within appropriate structure types and at appropriate densities as part of a cohesive, efficient, and flexible development pattern.

Policy 3.1.2

Review, research, update, and enforce zoning and subdivision regulations to promote an appropriate variety of market-rate housing in the City that corresponds with the land use policy map.

Call Out: Zoning excessive amounts of land for single-family residential uses can create a housing supply gap that can artificially increase rents and property taxes.

Policy 3.1.3

Engage the public in information-sharing and decision-making processes regarding new development to build support for structure types and densities that support implementing this plan.

Call Out: Simulation tools can significantly enhance public involvement by enabling community members to better understand how to balance growth- and planning-related factors. As result, community members can be more willing to consider a variety of approaches to address community issues and opportunities.

GOAL 3.2

Establish and maintain a balanced housing supply composed of an adequate variety of housing types and sizes for ownership and for rent that is cost-attainable across a wide range of income levels to ensure all City residents have access to quality housing options.

Call Out: Multiple respondents of the Fall 2021 comprehensive plan kickoff survey identified property taxes as one of the greatest challenges facing the City.

Policy 3.2.1

Develop programs that prioritize providing sufficient housing for households of all income levels as a key component of a balanced housing supply.

Call Out: The quantity, type, size, and cost of housing units to serve the City's total anticipated households should be determined based on the City's projected population, household income, age distribution, and household size to best meet residents' needs.

Policy 3.2.2

Housing programs should recognize the correlation between an imbalanced housing supply and rates of homelessness.

GOAL 3.3

Acknowledge that the most important initial factor related to the City's livability is the cost of housing.

Policy 3.3.1

Recognize that cost-attainable housing requires a mix of available housing units costing no more than 28% to 30% of a household's income.

Policy 3.3.2

Promote the availability of land for the development or redevelopment of cost-attainable housing.

Call Out: A significant quantity of new and rehabilitated housing will be necessary to meet the current need for housing in the City and to support the City's projected population and household growth, which is anticipated to occur at a faster rate for the City than for the County or Region.

Policy 3.3.3

Review housing needs established in the City's annually updated housing affordability report and review and implement recommendations from the City's 2019 housing study and needs assessment. Consider creating an update to the 2019 housing study and needs assessment to reflect changes in the housing market that have occurred since it was completed.

Policy 3.3.4

Consider housing-related goals and information in each element of this comprehensive plan when updating the City's annual housing affordability report to ensure the updated housing affordability report recognizes the role of development density; a variety of structure types and sizes; access to jobs, parks, stores, and community facilities; and other factors in sustaining quality, cost-attainable housing, and to evaluate how the City is achieving housing-related goals.

Call Out: It is important to provide a variety of housing options dispersed throughout the City. Doing so can ensure that neighborhoods reflect the City's growing diversity and that all residents have equal access to desirable housing that meets their household's evolving needs.

GOAL 3.4

Conduct a jobs/housing balance analysis immediately after this plan's adoption and again within five years of this plan's adoption using data on areas with concentrations of jobs, including data on wages; data on housing (supply, cost, types, size, and other characteristics) located near concentrations of jobs; data on household income levels; and on public transit connections between areas with existing cost-attainable housing and major employment centers.

Call Out: In addition to transportation network considerations, a balanced distribution of jobs and housing requires that the quantity and wages of jobs in an area are balanced with the quantity, quality, variety, size, and cost of housing in that area.

Policy 3.4.1

Implement recommendations set forth in this plan and develop additional strategies to prevent any job/housing imbalance.

Policy 3.4.2

Take action to address any jobs/housing imbalance by researching best housing practices and connecting with local and regional builders/developers, nonprofit organizations, realtors, landlords, financial institutions, housing advocacy groups, and other stakeholders.

GOAL 3.5

Establish policies that recognize the housing needs of populations that are not well addressed by the private sector, including low-, very low-, and extremely low-income households; the aging population; people living with disabilities; and people experiencing homelessness.

Policy 3.5.1

Coordinate the efforts of City departments with those of the County and private social service organizations to provide essential supportive services to those in need.

Policy 3.5.2

Study the housing and mobility needs of the City's growing aging population, support lifecycle housing strategies, and promote the creation of new housing for the aging population in walkable and transit-

accessible locations to enable the City's aging population, specifically residents aged 65 and over, to continue to live within the City.

Call Out: Although 85% of National Community Survey respondents plan to remain in Waukesha for the next five years, more residents surveyed rate the City as 'poor' than 'excellent' as a place to retire.

Insert image of existing housing for the aging population [To be provided by City].

Policy 3.5.3

Support programs and services to track the prevalence of homelessness, shelter people experiencing homelessness, support people who have previously experienced homelessness, and ultimately end homelessness in the City.

Policy 3.5.4

Continue to work through the Housing Action Coalition of Waukesha County to meet the needs of people experiencing homelessness.

Policy 3.5.5

Identify strategies and resources to assist those experiencing homelessness in achieving long-term housing stability. Such strategies and resources could include opportunities to provide for short-term housing and rapid rehousing through non-traditional or temporary housing.

GOAL 3.6

Ensure that the City's housing stock is maintained, rehabilitated, and improved for the safety and comfort of owners and tenants, neighborhood life, and the City's tax base.

Insert image of existing, well-maintained, smaller detached housing unit [To be provided by City].

Policy 3.6.1

Conduct an annual evaluation of the conditions of the City's existing housing stock using data from the municipal assessor's office and from private assessors. Examine results geographically, by property owner, by year built, and using other criteria to determine if structures less than average condition ratings are concentrated within distinct areas, under certain ownership, by year built, or in other ways.

Policy 3.6.2

Develop strategies and financial assistance programs to address necessary improvements to structures with a poor/very poor condition score. Evaluate purchase and demolition options of unsound residential structures for new residential redevelopment.

Policy 3.6.3

Maintain code compliance through building inspections during permitting or following complaints.

Call Out: By promoting rehabilitation and replacement, a community can ensure that residents of areas with an older housing stock can continue to access existing neighborhood amenities, including transit service, as well as newer household amenities, technology, and safety features, all of which enhance quality of life.

Insert graphic depicting historical urban growth, walk sheds, transit routes, and community nodes or commercial clusters.

GOAL 3.7

Sustain programs administered by the City of Waukesha Redevelopment Authority (RDA) that provide financial resources for rehabilitating cost-attainable housing and constructing new housing for residents at or below 100 percent of the County median household income level.

Policy 3.7.1

Continue the RDA's Homeowner Rehab Loan Program, the objective of which is to improve the quality of cost-attainable, owner-occupied housing in the City and to incentivize reinvestment in the City's central neighborhoods.

Policy 3.7.2

Continue the RDA's Rental Rehab Loan Program, which makes loans available to improve eligible rental properties affirmatively marketed and rented to households at or below 80% of the area median income level.

Policy 3.7.3

Provide financial assistance through the RDA’s Affordable Housing Development Fund for a variety of redevelopment activities, including smaller scale residential redevelopment activities that create new, cost-attainable housing units for home ownership and for rent.

Policy 3.7.4

Utilize available Community Development Block Grants (CDBG) for projects that will result in improving the quality and increasing the quantity of cost-attainable housing.

Call Out: More than half of National Community Survey respondents rated the availability of quality affordable housing in the City as ‘fair’ or ‘poor.’

Policy 3.7.5

Identify opportunities to use CDBG funding for neighborhood improvements, such as streetscaping, sidewalk installation, playgrounds, and other quality-of-life amenities in eligible areas.

Policy 3.7.6

Work with the County and University of Wisconsin-Madison Extension on five-year neighborhood revitalization strategy area (NRSA) plans for the City’s three NRSA’s: Phoenix Heights, Haertel Field, and West Side.

GOAL 3.8

Support the Waukesha Housing Authority (WHA) as it works to maintain and improve its stock of public housing and assisted housing programs.

Policy 3.8.1

Develop and sustain programs that help low-, very low-, and extremely low-income residents find and obtain accessible and appropriate quality housing.

Policy 3.8.2

Support and budget for the WHA to maintain the City’s public housing units and programs.

► **Recommendation: Increased Development Density**

This plan recommends that policy considerations set forth in this report, including locating jobs, regulating development, and investigating and addressing discriminatory activity relative to the sale and rental of housing, ensure that residential development, which is generally provided by the private sector, is properly coordinated with other aspects of regional development.

NOTE: Charts, figures, and tables in this preliminary draft may differ from those in subsequent drafts. These variations, intended to facilitate effective visual communication, are solely graphic in nature and do not indicate changes in the data used to prepare this report.

PRELIMINARY DRAFT

SEWRPC Community Assistance Planning Report No. __

City of Waukesha Comprehensive Plan

Chapter 4

ECONOMIC DEVELOPMENT

This chapter describes the economic characteristics of the City of Waukesha and presents related goals and policies as required by State law.¹ It contains data on workforce characteristics, describes existing businesses and industries within the City, and presents information on sites for potential future commercial and industrial development, including environmentally contaminated sites that may be remediated and redeveloped.²

This element contains similar topics as the City's 2009 comprehensive plan but with a greater emphasis on City-level data. Additional differences are inherent in the new conditions and trends identified in this report, including input from business leaders gathered during the plan update process to reflect changes in economic development-related issues and opportunities since 2009. To the extent possible, this report considers the short- and potential long-term economic impacts of the COVID-19 pandemic upon the City's economy and contains an emphasis on economic resiliency.

Call Out: It is essential to understand existing economic conditions to plan for economic growth and development, which is vital to ensuring that a community can maintain and expand residents' quality of life..

¹ Section 66.1001(2)(f) of the Wisconsin Statutes establishes requirements for the economic development element of a comprehensive plan.

² This chapter contains data from the U.S. Bureau of Labor Statistics and references to the Comprehensive Economic Development Strategy for Southeastern Wisconsin: 2021-2025 (CEDS).

INVENTORY

Labor Force

The labor force is the segment of the resident population most directly related to the economy. Labor force data is enumerated based on the residence of individuals in the labor force. The labor force includes individuals who live in the City of Waukesha that are currently employed or are unemployed while actively seeking employment.³

Labor Availability and Employment Status

The City had a total civilian labor force of approximately 42,800 residents aged 25 years and older in 2020, which accounted for about 71 percent of the City's population aged 25 and older. Thus, about 29 percent of City residents 25 years old and older are unemployed and not actively seeking employment. The City's unemployment rate was roughly equal to that of the County and was less than that of the Region.

Employment Status of the Civilian Labor Force of the City, County, and Region: 2010, 2015, and 2020

City of Waukesha						
Employment Status	2010		2015		2020	
	Number of People	Percent of Total	Number of People	Percent of Total	Number of People	Percent of Total
In Civilian Labor Force	40,567	73.7	40,902	72.0	42,738	71.3
Employed	38,403	69.8	38,812	68.3	41,432	69.1
Unemployed	2,164	3.9	2,090	3.7	1,306	2.2
Unemployment Rate	5.3	--	5.1	--	3.1	--
Not in Labor Force	14,475	26.3	15,870	28.0	17,224	28.7
Total	55,042	100.0	56,772	100.0	59,962	100.0

Waukesha County						
Employment Status	2010		2015		2020	
	Number of People	Percent of Total	Number of People	Percent of Total	Number of People	Percent of Total
In Civilian Labor Force	216,029	71.1	218,670	69.2	222,484	67.9
Employed	205,653	67.7	209,461	66.3	215,753	65.8
Unemployed	10,376	3.4	9,209	2.9	6,731	2.1
Unemployment Rate	4.8	--	4.2	--	3.0	--
Not in Labor Force	87,935	28.9	97,132	30.8	105,147	32.1
Total	303,964	100.0	315,802	100.0	327,631	100.0

Southeastern Wisconsin Region						
Employment Status	2010		2015		2020	
	Number of People	Percent of Total	Number of People	Percent of Total	Number of People	Percent of Total
In Civilian Labor Force	1,070,576	68.6	1,077,607	67.2	1,076,726	66.0
Employed	989,383	63.4	996,119	62.1	1,030,000	63.2
Unemployed	81,193	5.2	81,488	5.1	46,726	2.8
Unemployment Rate	7.58	--	7.56	--	4.3	--
Not in Labor Force	490,126	31.4	526,804	32.8	553,607	34.0
Total	1,560,702	100.0	1,604,411	100.0	1,630,333	100.0

Note: Labor force data in this table includes area residents 25 years of age and older who are either employed or are unemployed and actively seeking employment. Data are based on the 2006-2010, 2011-2015, and 2016-2020 American Community Survey.

Source: U.S. Census Bureau and SEWRPC

³ The labor force of an area includes residents of that area that are 25 years of age and older who are not in the military.

Call Out: Unemployment rates in April 2020 more than tripled from their 2019 annual averages for every County as result of the COVID-19 pandemic. Unemployment rates in the Region have decreased since that peak but the long-term economic impacts of the pandemic remain unknown.

The City's civilian labor force increased approximately 5 percent overall from 2010 to 2020. This growth, however, occurred at a slower rate than the proportional increases of residents not in the labor force. This trend cannot be attributed solely to workforce challenges associated with impacts of the COVID-19 pandemic given that the City, County, and Region each experienced increases in the proportion of the population leaving the labor force between 2010 and 2015. These changes are part of a longer-term, nationwide trend in declining labor force participation rates, due, in part, to the aging of the population.

Businesses have become less reliant on the local community to provide their workforce. This is due, in part, to decades-long increases in the general population's willingness to travel greater distances between their place of employment and place of residence. As a result of economic shifts due to the COVID-19 pandemic, it is likely that some business will continue to grow their workforce from outside of their community due to the increasing acceptance of and preference for remote work among employers and employees.

► **Recommendation: Commuter Flow Analysis**

This plan recommends that the City conduct an analysis of commuter flow data to understand where residents are commuting for work and where workers are traveling to the City from. This analysis can help to inform a wide range of investments and policy decisions related to housing, transportation, and economic development.

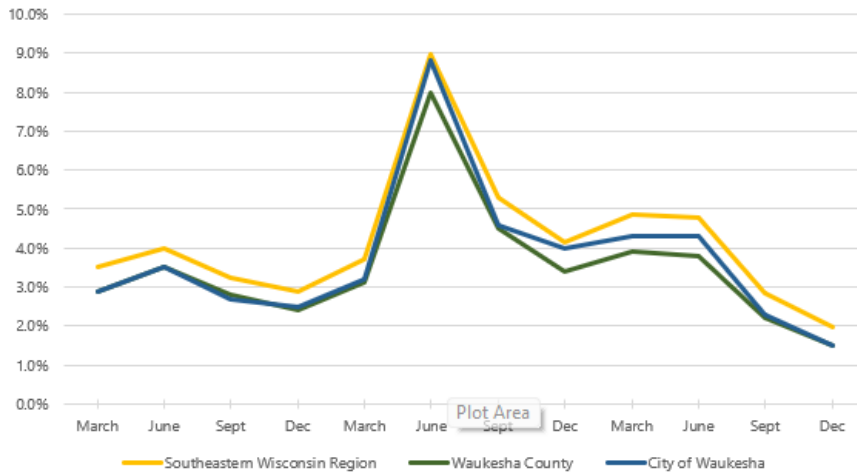
Call Out: Changes in the size, composition, and distribution of an area's labor force can reflect a variety of changes in that area, including changes to the area's economy and changes in population levels, especially in the working-age groups. Changes in an area's labor force may also be indicative of changes in the personal decision-making patterns of area residents regarding whether to seek work, continue working, or retire.

Unemployment rates for the City, County, and Region have fluctuated extensively since 2019, primarily as a result of impacts attributable to the COVID-19 pandemic. Unemployment rates for the City, County, Region, State, and Nation were highest in mid-2020. Rates declined and plateaued somewhat over the next year before beginning another decline in the second half of 2021. As of December 2021, the City's unemployment rate was 3.7 percent. It should be noted that some economists suggest an unemployment

rate below 5 percent represents an economy nearing capacity—that more workers will be needed to fill jobs— and the long-term impact of the pandemic on employment levels is unknown.

Call Out: The COVID-19 pandemic has had disparate impacts on the workforce, particularly on women, people of color, and low-income populations.

Figure 4.1: Unemployment Rates for the City, County, and Region: 2019-2021



Source: Wisconsin Department of Workforce Development and SEWRPC

The City's labor force and labor force participation rate have increased over time while the proportion of City residents in the labor force has declined. This trend may be attributed to many factors, including workers taking earlier retirements and declines in two-parent working households due challenges associated with finding childcare. A primary factor contributing to this trend is the population's age distribution, as a continually increasing proportion of baby boomers age out of the workforce. The City (and County) will need to recruit and retain a younger workforce to fill positions left vacant by retiring baby boomers. This strategy is best accomplished by working at a regional level in southeastern Wisconsin to market the economic strengths and quality of life that the area offers.

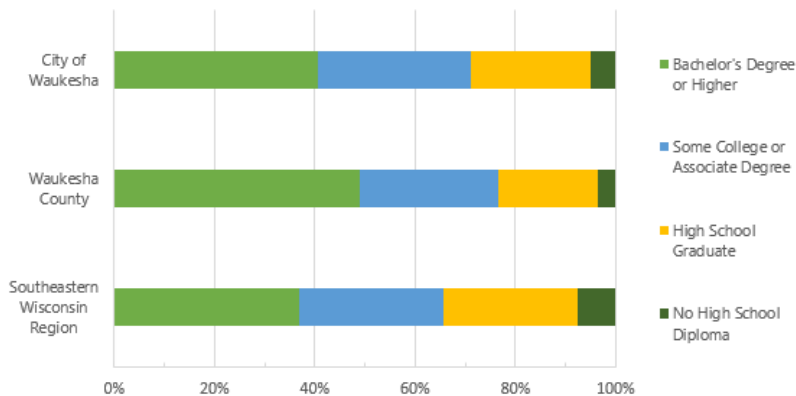
Changes in the City's demographics over time will affect the makeup of the City's labor force. Anticipated increases in the population 65 years of age and older will create a considerable need for replacement workers.

Educational Attainment

Educational attainment is an indicator of the type of occupations the City's workforce is best suited to fill. Information on the population's educational attainment is useful for formulating strategies to retain and expand existing businesses in the City and to attract new businesses to the City over the planning period.

The educational attainment of City residents aged 25 years and older indicates that about 70 percent of residents have attended some college or earned a college degree. These educational attainment levels are slightly lower than those of the County but slightly higher than those of the Region.

Figure 4.2: Educational Attainment of Residents Aged 25 and Older in the City, County, and Region: 2019



Note: Data are based on the 2015-2019 American Community Survey.
 Source: U.S. Census Bureau and SEWRPC

Call Out: Most businesses are increasingly requiring potential employees to have some job-related skills, as well as a primary and secondary education. Employers that do not require staff to have specialized skills or advanced training are exceptions to this trend.

Workers can advance their economic prospects at various locations within the City through post-secondary education and additional workforce training opportunities, including associate, bachelor, and graduate degree programs and other life-long learning opportunities.⁴ Numerous additional higher education opportunities, including major colleges and universities and technical college campuses, also exist elsewhere in the County and the Region.

Call Out: As individuals with a higher education often have increased geographic mobility, it is important to consider how to retain educated residents despite inevitable shifts in the local economy, including the availability of and preference for remote work opportunities.

⁴ Information on educational facilities is set forth in Chapter 6 of this report.

Occupation

Based on educational attainment, the City's workforce may be well-suited for skilled employment such as management, professional, business, and financial occupations and skilled and high-tech production positions.

The majority of City residents are employed in sales and office; management, business, and financial; production, transportation, and material moving; and education, legal, community service, arts, and media occupations.

The proportion of residents employed in computer, engineering, and science occupations and management, business, and financial occupations, which are among the occupations with the highest average annual wages, is greater for the City (24 percent) than for the Region (22 percent).⁵

Occupation of Residents of the City, County, and Region: 2020

Occupation	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Management, Business, and Financial	6,368	15.4	44,318	20.5	162,474	15.8
Computer, Engineering, and Science	3,407	8.2	17,374	8.1	62,865	6.1
Education, Legal, Community Service, Arts, and Media	4,428	10.7	23,017	10.7	108,443	10.5
Healthcare Practitioners and Technical	2,664	6.4	17,879	8.3	67,672	6.6
Healthcare Support	1,351	3.3	4,874	2.3	40,913	4.0
Protective Service	535	1.3	2,775	1.3	18,033	1.8
Food Preparation and Serving Related	2,720	6.6	10,153	4.7	56,003	5.4
Building and Grounds Cleaning and Maintenance	1,287	3.1	4,724	2.2	32,760	3.2
Personal Care and Service	997	2.4	4,489	2.1	25,308	2.5
Sales and Office	9,554	23.1	49,086	22.8	219,393	21.3
Farming, Fishing, and Forestry	69	0.2	301	0.1	3,099	0.3
Construction and Extraction	1,230	3.0	7,589	3.5	39,468	3.8
Installation, Maintenance, and Repair	1,204	2.9	5,356	2.5	27,341	2.7
Production, Transportation, and Material Moving	5,618	13.6	23,818	11.0	166,228	16.1
Total	41,432	100.0	215,753	100.0	1,030,000	100.0

Note: Data are based on the 2016-2020 American Community Survey (ACS).

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

⁵ ACS data for average annual wages are based on Waukesha County workers.

Income

Median Household Income

The median household income of an area is an important measure of an area's overall economic well-being. Determining the median household income of a geographic area provides an income level to which all households in the area can be compared. The median household income for an area divides all of the households in that area into two equal groups, where one group earns more than half of the households in that area and one group earns less. Median household income varies from one geographic area to another due to a number of factors, including the educational attainment of an area's residents, employment levels within the area, and the types of jobs available in that area.

In 2019, the median household income for City was approximately \$72,400 while the median household income for residents of the County and Region were approximately \$90,500 and \$65,900, respectively.

Per Capita Personal Income

Per capita personal income is defined as an area's total personal income divided by its total resident population. This measure is among the most widely used indicators of a location's economic health.⁶

In 2020, per capita personal income in Waukesha County was approximately \$76,000 and was ranked as the second highest of the 72 counties in Wisconsin—just below Ozaukee County. These counties and Washington County, which ranked fifth in the State, each had a higher per capita personal income than that of the Nation. The per capita personal incomes for the remaining counties within the Region were each lower than the State's per capita personal income.

⁶ *The U.S. Bureau of Economic Analysis makes per capita personal income data available on a County level.*

**Per Capita Personal Income for Counties Within the Southeastern Wisconsin Region
and for the State and Nation: 2018-2020**

Geography	Per Capita Personal Income (dollars)			Rank in State
	2018	2019	2020	2020
Kenosha	46,964	48,550	51,229	30
Milwaukee	46,792	48,107	51,002	31
Ozaukee	82,753	85,526	87,395	1
Racine	49,191	50,729	53,094	25
Walworth	49,623	51,156	53,546	21
Washington	58,412	59,878	62,506	5
Waukesha	71,918	73,883	75,958	2
Wisconsin	51,250	52,918	55,593	--
United States	54,098	56,047	59,510	--

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

Jobs

Information regarding the number and type of employment opportunities, or jobs, in an area is an important measure of the size and structure of that area’s economy.⁷ The total number of jobs in an area is a means of measuring the demand for labor in that area. Alongside labor force and employment status data, the total number of jobs can be used to describe the strength of an area’s labor market.

The concentration of jobs in the Region has shifted; as result, some counties in the Region have experienced notable employment growth while others have not.

⁷ Total jobs may not be directly equated with labor force data. One reason for this is that at least some jobs in a municipality are likely held by people that are not residents of that municipality. It is also likely that at least some members of a municipality’s labor force are employed outside of that municipality, have more than one job, or are unemployed.

Total Jobs Within the City and Region: 2010, 2015, and 2019

Geographic Area	2010		2015		2019	
	Total Jobs	Percent of Jobs in Region	Total Jobs	Percent of Jobs in Region	Total Jobs	Percent of Jobs in Region
Kenosha County	77,060	7.5	82,773	8.2	86,204	8.9
Milwaukee County	429,808	42.1	448,993	44.4	445,487	46.2
Ozaukee County	44,157	4.3	46,393	4.6	47,492	4.9
Racine County	90,325	8.8	93,644	9.3	94,146	9.8
Walworth County	51,392	5.0	54,266	5.4	55,686	5.8
Washington County	69,648	6.8	73,109	7.2	74,867	7.8
Waukesha County	202,455	19.8	212,689	21.0	217,978	22.6
City of Waukesha	37,937	3.7	39,903	3.9	40,299	4.2
Southeastern Wisconsin Region	1,021,860	100.0	1,011,867	100.0	964,845	100.0

Source: Wisconsin Department of Workforce Development and SEWRPC.

The County has historically expanded its economy through new job creation and has accounted for a significant portion of the Region’s employment growth over time.⁸

Employers

In 2021, the County had about 12,700 businesses; about 2,700 or 21 percent, of those businesses were located within ZIP code areas that include the City. The largest employers in the City are doing business in the health services, medical product innovation, manufacturing, information/utilities, government, education, and business and other services industry sectors.

Call Out: The City has a rich history of entrepreneurship in its economic development, whereas small, local businesses have fostered the growth of larger companies and jobs.

As the County seat, one of the City’s major employers is Waukesha County. Educational establishments including Carroll University, University of Wisconsin-Milwaukee at Waukesha, and Waukesha County Technical College are also notable employers within the City. Other major private employers in the City include:

- Eaton/Cooper Power Systems
- GE Power & Water
- GE Healthcare
- Generac Power Systems

⁸ Substantial employment growth in Ozaukee, Walworth, and Washington Counties also resulted in each county accounting for a greater proportion of the Region’s total employment.

- HUSCO International
- Metal Tek International
- Prohealth Waukesha Memorial Hospital
- SPX Transformer Solutions
- Waukesha State Bank
- Weldall Manufacturing

PROJECTIONS

Projecting the probable nature and magnitude of changes in certain factors, including employment levels, is an important and necessary step in preparing or updating a comprehensive plan. Creating projections for these factors, which may be beyond the influence of the planning process, is important to ensure that a comprehensive plan can account for likely and preferred future conditions.

Section 66.1001(2) of the *Wisconsin Statutes* requires that comprehensive plans project employment growth for a twenty-year planning period. This comprehensive plan update therefore utilizes employment projections established for a design year of 2050.⁹ Prepared to support systems-level regional planning, projections used in this update are based on economic studies conducted by the Commission as a basis for updating and extending the regional comprehensive land use and transportation plan and are adapted to support local comprehensive planning efforts.

Labor Force Projections

Labor force projections prepared by the Commission were developed based upon future population levels by age and sex for the Region from the Commission's year 2050 population projections, along with reasonable assumptions regarding future labor force participation rates by age and sex. It was assumed that, for most age-sex groups, the labor force participation rate would remain essentially unchanged over the projection period, and it was assumed that the labor force would have a modest increase in those 65 years of age and over. These assumptions reflect several factors: people are living longer; with greater education and investment in their careers, seniors may choose to remain longer in their jobs; and many seniors are facing changing financial prospects for their retirement years.

⁹ *SEWRPC Technical Report No. 10 (5th Edition)*, The Economy of Southeastern Wisconsin (April 2013). *These regional projections were prepared using 2010 Census data; past trends, including past industry trends and future regional, state, and national trends; and on projections from the Wisconsin Department of Workforce Development (DWD) and the Wisconsin Department of Revenue (DOR). The technical report contains low, intermediate, and high projections for total employment created at a regional scale for VISION 2050, the land use and transportation plan for the Southeastern Wisconsin Region.*

Labor force projections, available at the County scale, indicate that there will be about 229,000 Waukesha County residents in the labor force in 2050.

Employment Projections

Prepared to support systems-level regional planning, regional employment projections do not align precisely with City boundaries. Thus, projected data have been approximated to the City. The projection chosen as the best estimate of job growth for the purposes of this plan do not reflect significant job losses in 2020 due to the COVID-19 pandemic.

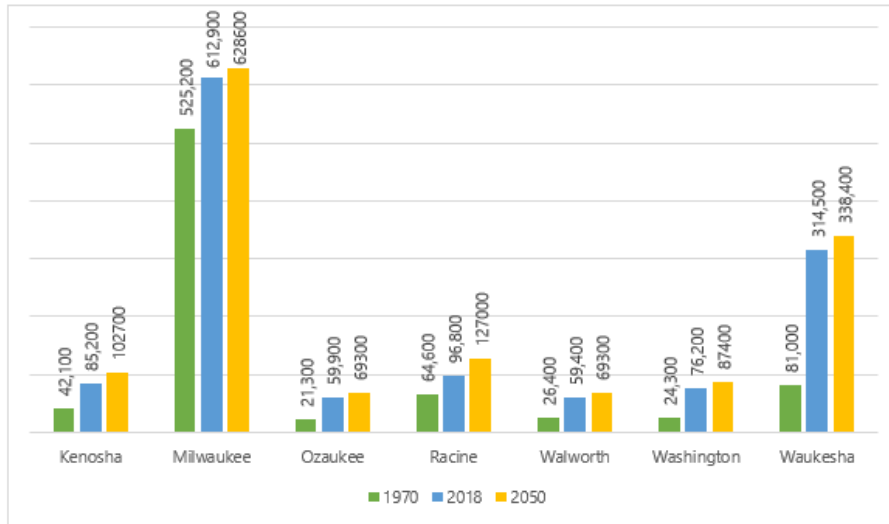
The City is projected to have a total of 60,480 jobs in 2050. This gain of 16,400 jobs amounts to a 37 percent increase in total employment for the City since 2019. Thus, while the number of jobs in the City accounted for approximately 4.3 percent of the Region's total employment in 2019, the total jobs in the City in 2050 will account for approximately 4.4 percent of the Region's total employment in 2050. Projections also show a continuing decline in manufacturing jobs over the next 30 years.

Meanwhile, total employment is projected to increase approximately 58 percent for the County and 35 percent for the Region. As result, total employment in the County in proportion to the Region will increase from 21 percent to 24 percent.

► Recommendation: Secure High-Value Jobs

In accordance with regional economic development plans, this plan recommends that the City pursue projects that add high-value jobs by expanding existing businesses and attracting new businesses, with a focus on specific industry clusters that offer competitive advantages in the global economy. A concerted effort must be made to ensure an equitable approach to economic growth and that no group suffers disparate impacts from growth-focused initiatives.

Figure 4.3: Employment by County



Source: U.S. Bureau of Economic Analysis (1970), U.S. Census Bureau American Community Survey (2018), and SEWRPC

As job growth in the City is projected to increase at a faster rate than population growth, declines in the proportion of the City's prime workforce population will need to be supplemented by in-migration in order to fill additional, new jobs. This means that the Region must compete with other parts of the nation and beyond to attract new residents and grow the economy. It is projected that a net in-migration of about 90,000 new residents will be needed to fill new jobs in the Region between 2020 and 2050.

ECONOMIC DEVELOPMENT EFFORTS

The City of Waukesha Community Development Department is responsible for the City's economic development efforts. The department conducts activities related to planning, including the creation of long-range development plans like this comprehensive plan update, which identify preferred development types and locations to meet the City's vision, goals, and objectives. The department also manages the implementation of such plans by conducting activities related to zoning. In addition, the department is involved in building relationships between and among neighborhoods and businesses, which is key to the formation and implementation of City plans.

Key economic development efforts undertaken by the City since adopting the 2009 comprehensive plan include preparing and adopting plans and studies relating to the central city (downtown), Sunset Drive and West Avenue, the St. Paul Avenue Corridor, and housing affordability. These efforts have supported the City's efforts to promote the development of strong and diverse residential, commercial, and industrial areas. Information from these efforts has been incorporated into this update. As this plan is implemented, the City

will continue efforts to support its workforce with adequate amounts of affordable, quality housing while attracting employers and expanding the tax base.

Call Out: Attendees of the comprehensive plan update kickoff indicated a need for increasing/maximizing the City's tax base.

Numerous other agencies and programs in the County, Region, and State provide tools that can be used to promote economic development within the City. While changes in funding can affect the availability of economic development programs, economic development agencies that connect residents and businesses with such programs tend to have a capacity for greater longevity. The following economic development agencies serve the City:

- The City's Chamber of Commerce is a Waukesha-focused business organization with the goal of its members growing their businesses through a series of networking and engagement activities.
- The Waukesha County Business Alliance is a private agency that provides advocacy, development, networking, and promotional services for member businesses
- The Waukesha County Center for Growth offers businesses a range of services, including assistance related to local and State regulations, access to financial programs, site selection, and workforce training
- The Waukesha-Ozaukee-Washington (WOW) Workforce Development System provides training and support services for job seekers and supports businesses by matching employers with skilled workers.
- The Milwaukee 7 Regional Economic Partnership (M7) provides a regional, cooperative economic development platform for the seven counties in the Southeastern Wisconsin Region
- The Wisconsin Economic Development Corporation (WEDC) collaborates with economic development organizations throughout the State that work at the local, regional and statewide level

- The Wisconsin Housing and Economic Development Agency (WHEDA) works with lenders, developers, local governments, non-profit organizations, community groups and others to provide low-cost financing programs for affordable housing and small businesses
- The Wisconsin Women’s Business Initiative Cooperation (WWBIC) provides educational and financial resources to enable a targeted population, primarily women, people of color, and low-income individuals, to overcome obstacles while starting or growing their business.

Brownfield Redevelopment

Section 66.1001 of the *Wisconsin Statutes* requires that a comprehensive plan economic development element promote redeveloping environmentally contaminated sites for commercial and industrial use. The Wisconsin Department of Natural Resources (WDNR) Bureau for Remediation and Redevelopment identifies and monitors environmentally contaminated, or brownfield, sites in the State.¹⁰ Contaminated sites include leaking underground storage tank (LUST) sites and environmental repair (ERP) sites. A LUST site has soil and/or groundwater contaminated with petroleum, which includes toxic and cancer-causing substances. Over time, petroleum contamination naturally breaks down in the environment through biodegradation. This may result in some LUST sites emitting potentially explosive vapors. An ERP site is a site other than a LUST site that has contaminated soil and/or groundwater. Examples include industrial spills (or dumping) that require long-term investigation, buried containers of hazardous substances, and closed landfills that have caused contamination. ERP sites also include areas with petroleum contamination from above-ground (but not from underground) storage tanks.

► Recommendation: Brownfield Redevelopment Program

The City should evaluate the creation of a brownfield redevelopment program to assist property owners in accessing the resources available to support remediation and reuse of brownfield sites in Waukesha.

The City contained 419 environmentally contaminated sites as of 2023, including 5 LUST and 35 ERP sites that had not been remediated. Federal and State resources are available to support communities undertaking the remediation and reuse of brownfield sites, including the Environmental Protection Agency (EPA) Brownfields Program, which offers grants for site assessment, planning efforts, and clean-up. Additional financial resources are identified by the WDNR’s Remediation and Redevelopment Program, which manages efforts to clean and redevelop contaminated sites.

¹⁰ *Brownfields are defined as abandoned, idle, or underused industrial or commercial properties where redevelopment is hindered by known or suspected environmental contamination.*

Call Out: Economic development-related public input gathered during the plan update process called for encouraging more intensive development in appropriate areas, maximizing tax density in each development/redevelopment, and minimizing single story commercial development.

Business Owner Survey

Feedback from the City's online survey of business owners conducted during this plan update process may also be a useful economic development tool. Survey questions related to business spaces and locations, inviting business owners to identify important factors in their choice to locate within the City, to indicate their satisfaction with their space/location, and to share information regarding their tenure and potential future plans. Additional survey questions related to other considerations and challenges facing businesses. Respondents were invited to identify desirable complimentary businesses, indicate their interest in sustainable business practices, rate factors relating to workforce recruitment/retention, and share information regarding impacts their business experienced as result of the COVID-19 pandemic.

Overall, notable takeaways follow:¹¹

- More than three-quarters of all respondents indicated that they would recommend the City to another business owner for relocation.
- In regard to choosing to locate within the City, more respondents identified proximity to customer base as an extremely important factor.
- The majority of respondents indicated that City staff have been readily available and supportive when their business needs assistance and that they are satisfied with services that the City provides their business.
- Fewer than half of the survey respondents indicated that the City's efforts to retain existing businesses are appropriate/sufficient.

¹¹ *A large proportion of respondents owned businesses downtown, or within the City's central business district, and classified their business as retail/service, office/professional, or manufacturing. As survey responses likely reflects the values of the various types of businesses, survey results may be analyzed as a whole and to isolate responses from downtown business owners.*

► **Recommendation: Broadband Accessibility**

Economic development efforts to attract remote workers may include providing excellent broadband, addressing broadband speed, availability, access, affordability, and reliability.

ECONOMIC RESILIENCE

The impacts of the COVID-19 pandemic upon global, national, and local economies has exemplified the importance of economic resilience, which can enable an economy to prevent, withstand, recover from, and adapt after major disruptions to its economic base. Such disruptions could include general downturns that impact demand for locally produced goods and consumer spending; downturns in particular industries critical to the Region’s economic activity; and/or other external shocks such as a natural or man-made disaster, exit of a major employer, or other significant impacts. Impacts experienced as result of the COVID-19 pandemic offer an opportunity to evaluate and improve the City’s economic resilience. While having a resilience plan is not guaranteed to grow the economy, economic resilience is important as the City, County, and Region address the challenges of facilitating economic recovery and adapting to an altered economic environment.

Call Out: COVID-19 pandemic-related impacts, including restrictions on public contact, have been particularly harmful to certain businesses and industries. Other businesses and industries have drastically changed others as telecommuting, remote learning, online shopping and home delivery, and other virtual methods of communication and commerce have increasingly become part of everyday life. Addressing the impacts of the pandemic and ensuring that businesses are connected to local, State, and Federal assistance programs has been a top economic development priority in the Region and will likely continue to be so over a portion of this planning period.

Sustainability Considerations

Economic development efforts that incorporate sustainability considerations allow a local government to manage changes to its economic health and to initiate sustainable urban development and redevelopment that foster business growth and reliance on local assets. Sustainability considerations related to economic development are multi-faceted and may include the following:

- Recognizing the commercial/industrial land supply and the community’s economic growth capacity
- Retaining and supporting existing and local businesses

- Promoting growth in competitive and living-wage jobs
- Attracting green businesses
- Promoting innovation and entrepreneurship
- Supporting the redevelopment of environmentally contaminated sites for commercial uses, industrial uses, and, in some cases, residential uses
- Promoting workplace diversity
- Ensuring access to jobs
- Encouraging educational partnerships and community-based economic development.

Additional considerations to incorporate sustainability into a comprehensive plan include promoting development proposals that account for, integrate with, and support plans of adjacent municipalities and the surrounding Region. A local government may account for such considerations by recognizing regional plans, coordinating with regional land use, open space, and mobility programs, integrating local economic development initiatives with those of the County and Region, acknowledging population and economic development projections, and by considering the potential to share fiscal resources.

Equity

Equitable access to economic opportunity is essential to a prosperous, resilient regional economy. Over many years, the Southeastern Wisconsin Region and communities within the Region have had persistent racial and economic segregation. The Region has performed poorly when compared to other major metro areas to the point that people of color in the Region, particularly African American and Hispanic populations, experience the greatest economic disparities in the Nation. Thus, the need to address racial disparities and discrimination, which have been caused by both unintended consequences and deliberate actions and policies, is as urgent as ever.¹²

¹² *Long-standing disparities faced by people of color have been exacerbated by a multitude of factors that have been intensified by the COVID-19 pandemic.*

Disparities in portions of the Milwaukee metropolitan area, which includes the City, are far more pronounced than in almost all other metro areas in the country. These disparities include educational attainment, income levels, and poverty rates between whites and people of color. From an economic development standpoint, income disparity for people of color creates a workforce poorly equipped for the modern economy, dampens regional job growth, decreases worker productivity, and diminishes the local and State tax base. Regional economic development efforts acknowledge the importance and urgency of confronting regional equity issues and recognize that, for the Region to succeed, the socioeconomic inequities faced by people of color must be addressed.

Call Out: People of color in the Milwaukee metropolitan area, including the City of Waukesha, on average earn less than half as much as whites; are four times more likely to be living in poverty; and tend to experience poorer health outcomes, lower levels of home and business ownership, and higher rates of crime and incarceration.

GOALS AND POLICIES

The primary focus of economic development is to strengthen the community by creating and retaining jobs that improve the standard of living for residents, visitors, and workers. The goals and policies presented in this chapter are intended to provide a framework to guide future economic development in the City. This framework should be used by the City to create and evaluate objectives and standards, ensuring that specific programs and projects are consistent with this comprehensive plan.

GOAL 4.1

Continue to grow employment and the tax base while maintaining and enhancing the City's position as a top location in southeastern Wisconsin for manufacturing and complementary business services.

Policy 4.1.1

Identify market niche or business clusters where Waukesha's manufacturers can support each other, for example in terms of completing a supply chain or developing a workforce with specialized training and skills.

Policy 4.1.2

Encourage build out and infill in Waukesha's existing business parks, including revisions to the zoning code if necessary to increase lot coverage and reduce the level of underutilized land.

Policy 4.1.3

Ensure that Waukesha retains a supply of land planned and zoned for manufacturing and business park development, including through repositioning of unused and/or underutilized properties and vacant buildings.

Policy 4.1.4

Retain appropriately sized tracts of land and potential redevelopment sites that would be attractive for manufacturing and/or business park development to ensure future tax base and job growth. Ensure that such areas have multimodal connections to adjacent development and corridors and to the City's larger multimodal transportation network to ensure workers can safely and easily access amenities using a variety of modes of transportation.

Policy 4.1.5

Work with agency partners and seek grants or other funds to address brownfield sites, clean and remediate contaminated soils, and market sites for appropriate new uses.

Policy 4.1.6

Given the City's water service area, carefully consider value-per-acre ramifications when developing or redeveloping properties.

GOAL 4.2

Continue to promote downtown Waukesha and support downtown business development.

Policy 4.2.1

Support new residential development downtown for people of all ages and income levels to increase the housing supply, address housing needs, and to increase the customer base for downtown businesses. Seek funding sources to convert upper floors to residential or vacant and underutilized buildings to residential uses.

Policy 4.2.2

Seek to increase tax density when approving infill development downtown and seek to increase the value of new and existing development by encouraging high-quality, multiple-story buildings and by limiting the amount of land devoted to surface parking lots.

Policy 4.2.3

Re-establish a downtown business improvement district, Main Street program, or other method to coordinate private and public improvements and to recruit and retain businesses.

Policy 4.2.4

Promote downtown anchors and cultural institutions, such as the Waukesha Civic Theater and the Waukesha County Historical Museum, when recruiting new businesses or promoting residential development.

Policy 4.2.5

Sustain year-round event programming and promotional efforts to bring people downtown as an economic development tool.

Policy 4.2.6

Continue to make grants to businesses for façade, sign, and awning improvements.

GOAL 4.3

Continue to improve and enhance the City's commercial districts, corridors, and nodes.

Policy 4.3.1

Encourage the formation of place-based business groups for commercial districts, corridors, and nodes that offer mutual support for small businesses and coordinated placemaking efforts.

Policy 4.3.2

Identify redevelopment opportunities within commercial districts, corridors, and nodes and consider ways to assist with the redevelopment and re-use of older, underutilized properties.

Policy 4.3.3

Develop sub-area plans for commercial districts, corridors, and nodes that include redevelopment concepts, mixed-use considerations, multimodal connectivity, and streetscape and wayfinding enhancements. Consider establishing overlay zoning for these areas.

Policy 4.3.4

Utilize and promote the Mindiola Park soccer and recreation complex as a catalyst for redevelopment of the area in the vicinity of Sunset Drive and West Avenue and seek out complimentary uses, including hospitality-oriented uses.

GOAL 4.4

Collaborate with local educational institutions, business groups, and economic development organizations, including the Waukesha County Center for Growth, Waukesha County Business Alliance, City of Waukesha Chamber of Commerce, Waukesha County Technical College, and UW-Extension, to enhance the position of the City as an economic engine and a major employment center in the County as well as a great place to do business.

Policy 4.4.1

Collaborate with Milwaukee 7 (M7), the Waukesha County Center for Growth, Waukesha County Business Alliance, City of Waukesha Chamber of Commerce, Waukesha County Technical College, and UW-Extension to conduct a labor market analysis for the City, County, and Region that assesses the existing and anticipated supply and demand for labor as well as employer and employee training needs.

Call Out: Educational attainment is an important economic development consideration as employers require access to qualified workers. A community may recruit employers that are a good match for the skills of the workforce and may consider establishing programs and partnerships to promote the upward mobility of their workforce.

► Recommendation: Establish and Foster Economic Development Partnerships

This plan recommends Establishing partnerships with other communities and various agencies to bolster economic development efforts that foster favorable growth and development for the benefit of each individual community and the larger region.

Policy 4.4.2

Promote entrepreneurial programs to encourage residents to become entrepreneurs, provide basic training for business startups, and foster seed capital. Explore the feasibility of creating a local incubator to assist with the launch of new business endeavors.

Policy 4.4.3

Support initiatives to increase development of the bioscience manufacturing industry, especially in medical equipment, to enhance higher paying jobs.

Call Out: Economic development efforts should promote business growth and the availability of optimum paying jobs because the occupations of members of the workforce affect their ability to afford housing,

transportation, and other essentials. Economic development efforts should therefore consider the types of jobs provided by existing businesses alongside the types of jobs potentially provided by new businesses in determining what types of businesses to recruit. Having diversified businesses can help to ensure that the workforce can access jobs that utilize their skills and offer opportunities for advancement.

Policy 4.4.4

Foster industry collaborations and technology transfer.

GOAL 4.5

Advertise the City's land use policy to businesses and developers with a goal of encouraging economic development by adding to the City's livability and enhancing an employer's ability to attract a workforce.

Call Out: The City's land use plan is designed to meet the City's existing and anticipated future needs, accounting for employment levels and business growth, which directly influence the demand for land to meet existing and future land uses. It is important to consider how commercial, industrial, and other employment-supporting land uses are distributed in relation to residential areas to ensure that residents can access employment opportunities and other commercial establishments that meet their needs. It is also important for economic development efforts to correspondingly consider how to accommodate existing, expanding, and new businesses within the City's available land.

Policy 4.65.1

Use and promote the use of this report to guide businesses and developers regarding planning and zoning.

Policy 4.5.2

Promote the production of an adequate supply of new workforce housing of sufficient quantity, quality, size, and density to serve the existing and anticipated workforce within reasonable proximity and multimodal access to new and existing employment centers.

Policy 4.5.3

Utilize Affordable Housing extensions for Tax Incremental Finance (TIF) in accordance with *Wisconsin Statutes* to improve the supply of workforce housing and improve the quality of existing housing stock.

Policy 4.5.4

Work with major employers to create and maintain employer-assisted housing programs where employees can access downpayment assistance, renovation funds, or other incentives to establish residency near their place of employment while also revitalizing existing neighborhoods.

Policy 4.5.5

Identify sites for multiple-unit housing that may be eligible for Low Income Housing Tax Credits (LIHTC) and support applications that utilize this funding source to create additional housing units for the workforce.

GOAL 4.6

Provide incentives and assistance through City programs for business retention and development and to bridge financial gaps or make land ready for redevelopment.

Policy 4.6.1

Use the City's Central City Storefront Revolving Loan Program to incentivize reinvestment in commercial properties located downtown and in the surrounding neighborhoods.

Policy 4.6.2

Utilize Community Development Block Grant (CDBG) funding as an economic development tool in the City's low-to-moderate income Census Block Groups.

Policy 4.6.3

Explore the feasibility of creating a comprehensive brownfields program to plan for and provide financial assistance with redeveloping brownfield sites within the City as they become available.

Policy 4.6.4

Explore all grants and other funding opportunities to grow the City's tax base, redevelop blighted properties, and expand employment.

GOAL 4.7

Utilize the City's TIF powers to encourage the conservation and renewal of viable urban areas.

Policy 4.7.1

Carefully consider the use of TIF to redevelop properties or areas that are blighted or otherwise in need of rehabilitation.

Policy 4.7.2

Utilize mixed-use Tax Incremental Districts (TID) to incentivize redevelopment projects that include the addition of housing units.

Policy 4.7.3

Monitor existing TIDs to identify additional redevelopment and infrastructure improvements that could be undertaken during the statutory expenditure period.

Policy 4.7.4

Carefully consider utilizing the Wisconsin's one-year affordable housing extensions when approaching the termination date of successful TIDs.

Policy 4.7.5

Review and update the City's TIF policies as needed.

GOAL 4.8

Create a comprehensive business retention program that can identify expansion and relocation opportunities within the City.

Policy 4.8.1

Continue downtown business visits to identify any expansion or relocation plans early in the planning stages.

Policy 4.8.2

Consider creating a City-wide business retention program, with a strong focus on the City's industrial and business park tenants. Gather information on exiting or closing businesses to ascertain if and how areas may not be meeting businesses' needs.

Policy 4.8.3

Evaluate and consider updating or amending zoning regulations for business and manufacturing districts to reduce barriers to on-site expansion opportunities as long as the properties comply with the City's land use policy map and remain compatible with surrounding uses, development patterns, and design intentions.

GOAL 4.9

Monitor and adapt to trends in business practices.

Policy 4.9.1

Amend home occupation and home industry zoning regulations to accommodate remote work and uses that are compatible with residential uses while eliminating any non-compatible uses.

Policy 4.9.2

Regularly monitor new and emerging land uses and amend the zoning code accordingly.

Policy 4.9.3

Identify more opportunities for live-work development.

Photo of Brook Street Artisan Village: Brook Street Artisan Village is a downtown redevelopment project comprised of nine live-work condominium units, each with first-floor commercial space and upper-story residential space.

NOTE: Charts, figures, and tables in this preliminary draft may differ from those in subsequent drafts. These variations, intended to facilitate effective visual communication, are solely graphic in nature and do not indicate changes in the data used to prepare this report.

PRELIMINARY DRAFT

SEWRPC Community Assistance Planning Report No. __

CITY OF WAUKESHA COMPREHENSIVE PLAN

Chapter 5

TRANSPORTATION AND MOBILITY

This chapter describes the transportation and mobility system serving the City of Waukesha and presents related goals and policies in accordance with the transportation element required by State law.¹ Accordingly, this chapter contains data on the City's roadway network, bicycle and pedestrian facilities, and transit system. Regional and interregional transportation facilities, including air, rail, and freight transportation are also included. Additionally, information on system capacity, safety, strategies for reducing demand and emissions, and data on ancillary facilities that support the transportation system are provided.

The transportation element of this report has several notable differences from the City's 2009 comprehensive plan. Like the previous plan, which addresses roadway infrastructure and the many programs available to fund infrastructure improvements, this plan update highlights considerations for the long-term management and sustainability of the City's transportation system. Differences between this update and the City's previous plan include this report's concentration on multimodal mobility. This report also emphasizes the relationship between the transportation network and the City's land use pattern, overall form, and livability.

¹ Requirements for the transportation element of a comprehensive plan are set forth in Section 66.1001(2)(c) of the Wisconsin Statutes.

LAND USE PATTERN

The City's transportation network and land use pattern are intricately linked, with each influencing and shaping the other. Efficient and well-planned transportation systems, including roads, public transit, and bicycle- and pedestrian-friendly infrastructure, can encourage more dense development, mixed land uses, and more organized, resilient urban growth. Automobile-dependent land use patterns and transportation systems can lead to sprawling, low-density development, which can exacerbate traffic congestion, increase energy consumption, and contribute to poor health outcomes. The interaction between transportation and land use planning plays a vital role in shaping the overall character and sustainability of the City and ensuring a high quality of life for residents.

Much of the City's historical urban development pre-1940 was within a dense urban core in the City's downtown area. Development after 1940 is characteristic of a suburban environment in both the land use pattern and transportation network. The predominance of separated land uses at lower densities contributes to an inherently automobile-dependent area served primarily by streets and highways. This later land use pattern contains a mix of relatively low- to moderate-density residential neighborhoods and lower intensity commercial and industrial areas concentrated along major roadways, establishing a decentralized land use pattern that necessitates a reliance on personal vehicles.

STREETS AND HIGHWAYS

Regional Roadway Network

Interstate Highways

The City of Waukesha is served by two interstate highways which provide important regional connections. Interstate 94 (I-94), a major east-west interstate highway, passes through the northern edge of Waukesha and connects the City to Milwaukee to the east and Madison and points westward. Although it does not pass through city limits, Interstate 43 (I-43) crosses through Waukesha County a few miles southeast of the City and provides connections to Milwaukee to the east and many Wisconsin communities to the south.

U.S. Routes

U.S. Route 18 (USH 18), an east-west route, and U.S. Route 164 (USH 164), a north-south route, pass through the City.

State Highways

Wisconsin State Highway 59 (WI-59) and Wisconsin State Highway 164 (WI-164) are state highways that intersect within the city, providing additional transportation routes.

County Roads

Waukesha County maintains 11 County highways within the City, which serve as important arterials and connectors to adjacent communities:

- County D
- County F
- County FT
- County I
- County J
- County JJ
- County T
- County TT
- County U
- County X
- County Y

Map: Highway and major arterial network serving Waukesha [to be prepared by Commission staff]

Call Out: The City is served by over 70 miles of arterial streets, most of which are under the City's jurisdiction.

Local Streets and Roads

Waukesha has an extensive network of nearly 300 miles of local streets and roads, including residential streets, commercial thoroughfares, and arterial roads. These streets vary in size and capacity to accommodate different levels of traffic. The City's earliest neighborhoods feature grid-like street layouts in many residential neighborhoods. Key elements of the local street network include residential streets, collector streets, and arterial roads.

Residential Streets

Residential streets are typically quieter, narrower streets primarily lined with homes. These streets are intended to provide access to neighborhoods rather than serve as thoroughfares and typically have lower speed limits to ensure safety for residents.

Collector Streets

Collector streets are larger capacity and are designed to collect traffic from residential streets and funnel it onto arterial roads. They often have slightly higher speed limits and can accommodate more traffic than residential streets.

Arterial Roads

Arterial roads are wider, higher-capacity streets that connect different parts of the city, including commercial areas, schools, and major destinations. They are designed to handle more traffic and typically have higher speed limits.

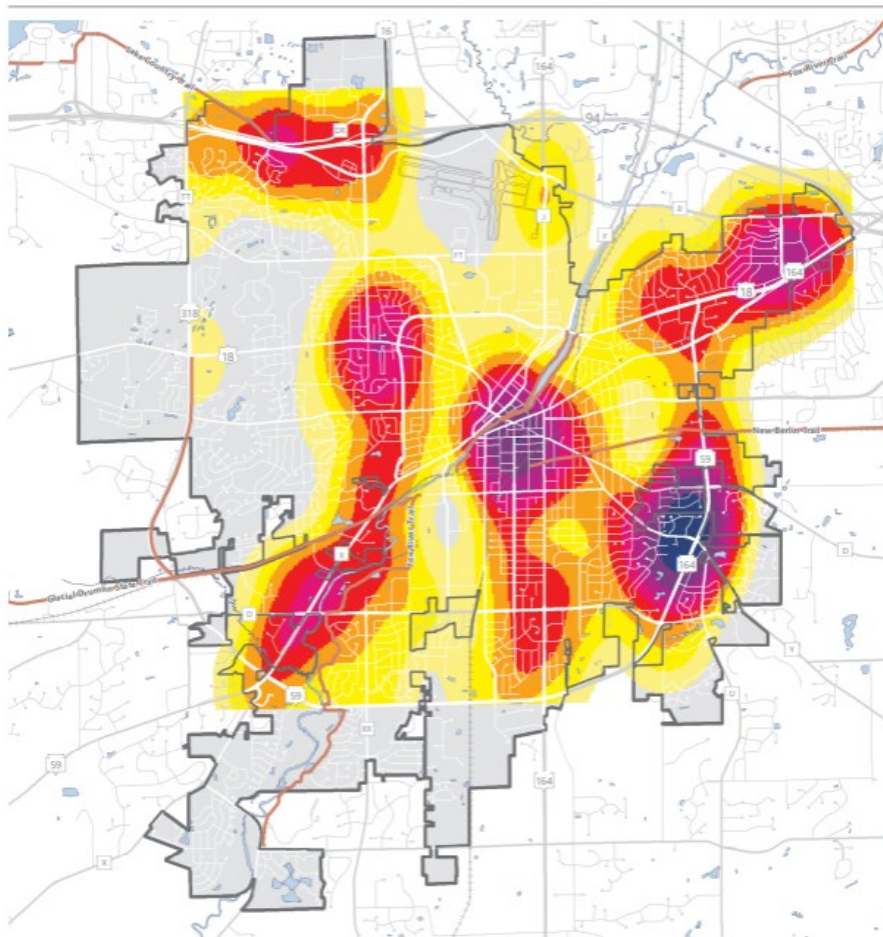
Commercial Streets

Within the City, there are streets that host commercial businesses, including shops, restaurants, and offices. Commercial streets may overlap with one of the other categories described above and vary in character depending on their location. In downtown and older areas of the City, these streets are usually designed to accommodate both vehicle and pedestrian traffic.

► Recommendation: Street Safety Audits

This plan recommends analyzing crash data to identify locations in the City’s transportation network that have high incidences of serious injuries or fatalities. The City should consider studying conditions along these corridors to identify specific characteristics that create hazardous conditions and implement appropriate safety enhancements to help mitigate those conditions.

Hotspots Severe and Fatal Injury Crashes in the City: 2018-2022



SOURCE: Wisconsin Traffic Operations and Safety Laboratory and SEWRPC

Map Caption: Serious and fatal traffic injuries in the City are concentrated along specific corridors. The City contains many arterials with high-posted speed limits and few traffic calming measures, which often lead to hazardous conditions for road users.

Bridges and Structures

Roadway bridges in the City serve a variety of purposes, traversing rivers, railroad tracks, and other roadways. These bridges may be under State, County, or City jurisdiction, corresponding with the road that they serve. Seven bridges in the City fall within the City's jurisdiction, the majority of which provide crossings over the Fox River. Bridges have a planned design lifespan and require regular maintenance to maintain safety. In addition, changes in traffic volume and intended roadway usage may necessitate improvement or replacement of bridges. WisDOT conducts periodic inspections of bridges, evaluating structural factors, geometry, and traffic, to establish a sufficiency rating for each bridge. More than 40% of the bridges under the City's jurisdiction have a sufficiency rating of less than 80, indicating that they require rehabilitation and may be eligible for State or Federal funding.

► Recommendation: Bridge Rehabilitation

This plan recommends that the City consider applying for State or Federal funding to rehabilitate or reconstruct eligible bridges with a low sufficiency rating. When possible, rehabilitation or reconstruction projects should be coordinated with work on adjacent streets and incorporate multimodal transportation elements.

BICYCLE AND PEDESTRIAN NETWORK

Complete Streets

A complete streets policy is a transportation planning and design framework a municipality may adopt to ensure that its streets are designed and managed to accommodate the diverse needs of all users, regardless of their mode of transportation, age, or ability. Benefits to a community adopting a complete streets policy include creating safer, more accessible, and balanced transportation networks that accommodate all road users, including pedestrians, cyclists, motorists, and public transit users. Complete streets policies can promote healthier, more sustainable transportation options, reduce traffic congestion, and enhance the overall quality of life for residents, making communities more vibrant and livable.

Complete streets policies require the inclusion of features like sidewalks, bike lanes, pedestrian crossings, public transit facilities, and traffic-calming measures in new and redeveloped streets—unless specific, previously defined conditions do not allow or justify such measures.

► **Recommendation: Complete Streets Policy**

This plan recommends that the City adopt a complete streets policy, the primary goal of which would be to enhance overall mobility, sustainability, and quality of life by addressing the needs of all transportation network users.

Sidewalks

The City has an extensive sidewalk network, with sidewalks on both sides of most streets. The downtown area, which features a dense land use pattern within a grid of reasonably narrow streets, is particularly walkable and has a relatively complete sidewalk network. Pedestrian safety treatments like curb extensions, pedestrian signal beacons, and median refuge islands have not been extensively implemented in the City. There is a high prevalence of slip lanes, intended to allow higher-speed right turns, which have been identified as hazardous to pedestrians and an impediment to walkability.²

Call Out: Focus Group attendees indicated a preference for downtown crosswalks to prioritize ease-of-use for pedestrians, citing a desire for traffic lights to automatically signal pedestrian crossings. Potential solutions could include enabling push buttons to activate a hot response or to allow pedestrians to request additional crossing time, which could provide additional protection for small children and the older population.

► **Recommendation: Bicycle and Pedestrian Planning**

This plan recommends that the City update and continue working to implement its bicycle and pedestrian facilities plan to account for current best practices and transportation network changes that have occurred since 2012.

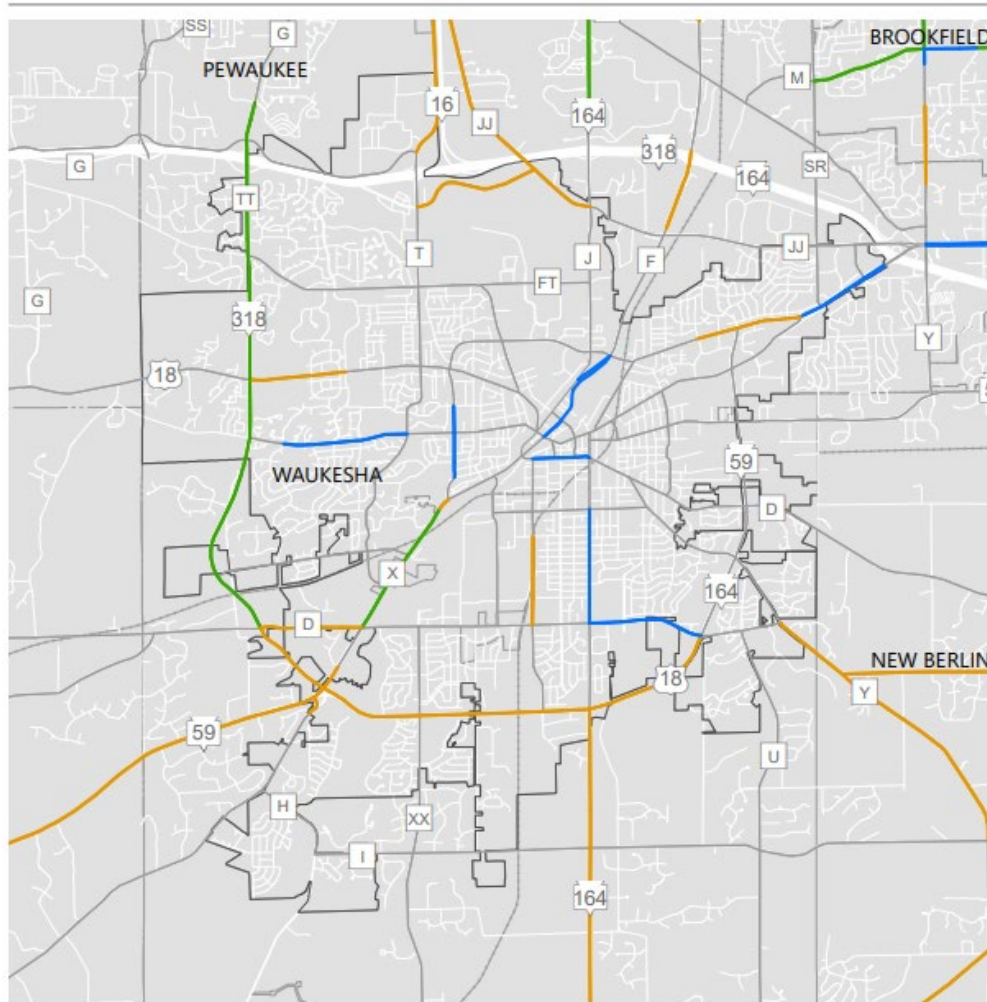
On-Street Bicycle Facilities

On-street bicycle facilities are designed to provide safe and designated spaces for cyclists to share the road with motorized vehicles. An on-street bicycle network is an important element of a comprehensive transportation network. These facilities enhance the safety and convenience of cycling as a mode of transportation, providing essential connections for commuters, errands, and recreation. Separated or

² City of Waukesha. Bicycle and Pedestrian Facilities Plan, 2012.

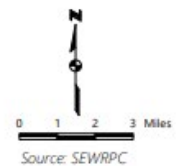
buffered bicycle lanes provide the highest level of safety and service, while standard marked bicycle lanes are easy to implement on existing pavement. Although they provide the least benefit to cyclists, shared roadway markings, or “sharrows,” remind motorists that cyclists may be present and can be considered a minimum effort to accommodate bicycle traffic. The City’s Bicycle and Pedestrian Facilities Plan was last updated in 2012 and noted that no on-street bicycle lanes existed anywhere within the City at that time. As this comprehensive plan was under preparation, the majority of streets in the City do not include on-street bicycle facilities.

Existing On-Street Bicycle Facilities in the City of Waukesha: 2023

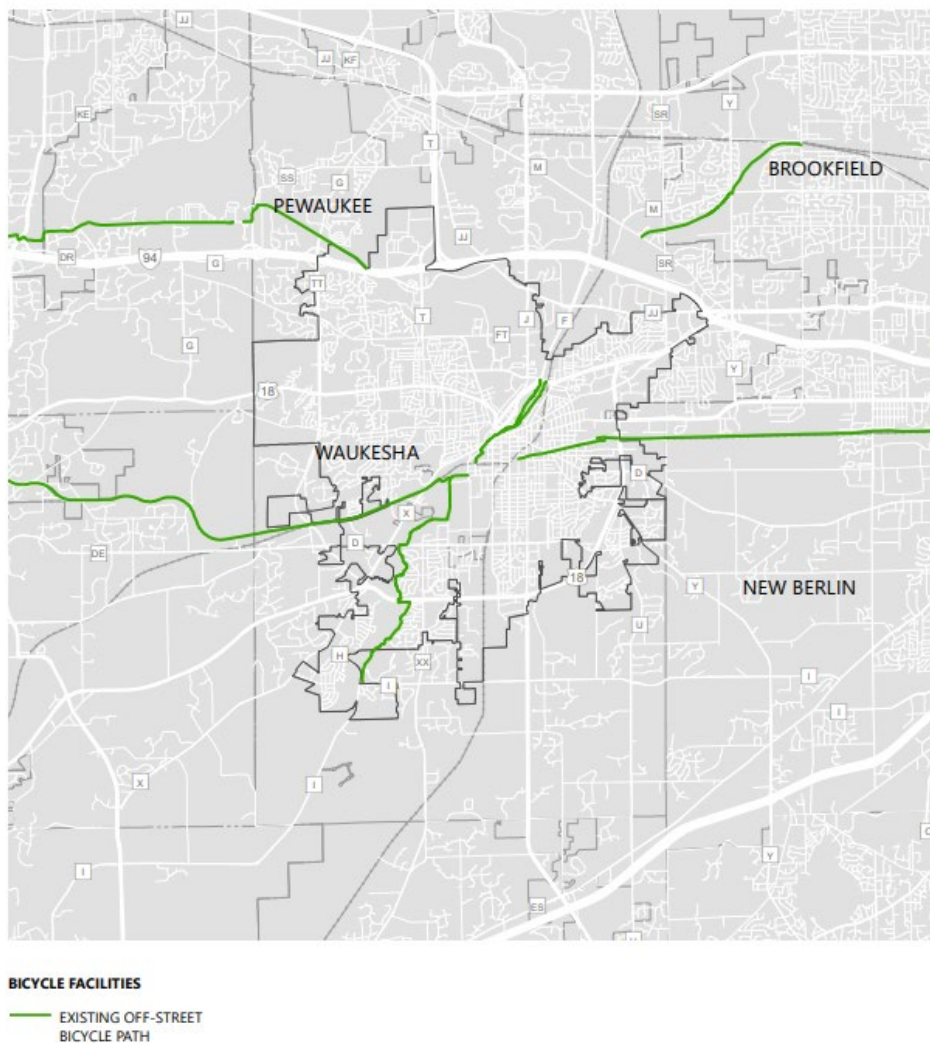


ON-STREET BICYCLE FACILITIES

- BICYCLE LANE
- SEPARATE PATH WITHIN ROAD RIGHT-OF-WAY
- WIDE PAVED SHOULDER
- ARTERIAL STREET OR HIGHWAY WITHOUT BICYCLE ACCOMMODATION



Existing Off-Street Paths in the City of Waukesha: 2023



Trails

The City has a network of off-street trails designed to provide residents and visitors with safe and comfortable pathways for walking, running, cycling, and other active and passive recreation. Off-street trails are important to the broader strategy of promoting alternative transportation options and establishing more links within the City's overall transportation network.

Call Out: Trails provide important connections between areas and communities throughout the Region for both commuters and recreational users.

► **Recommendation: Bicycle and Pedestrian Facilities Plan**

In accordance with regional planning recommendations, this plan recommends that the City develop and maintain a well-connected bicycle and pedestrian network that improves access to activity centers, neighborhoods, and other destinations.

Trails within the City may be managed and maintained by the City, County, State, or a private entity. The City has been developing its own network of local off-street trails and paths, particularly in parks and green spaces. The City also recently constructed the New Berlin Connector trail, which links the New Berlin Trail to central city destinations including the Waukesha YMCA, Carroll University Campus, and Downtown. The ultimate goal for this new trail is to create a primarily off-road connection from the New Berlin Trail to the Glacial Drumlin Trail. The City also contains or is served by additional notable trails.

Fox River Trail

The Fox River Trail is a regional trail that offers opportunities for walking, biking, and inline skating, along the Fox River and connects to various parks and communities.

Glacial Drumlin State Trail

The Glacial Drumlin State Trail is a long-distance multi-use trail that passes just south of the City. Known for its picturesque landscapes, the trail supports biking, walking, and snowmobiling over more than 50 miles.

Waukesha County Recreational Trails

The County’s recreational trail system is an interconnected network with several trails passing through or near the City, which connect to other regional trails.

PUBLIC TRANSIT

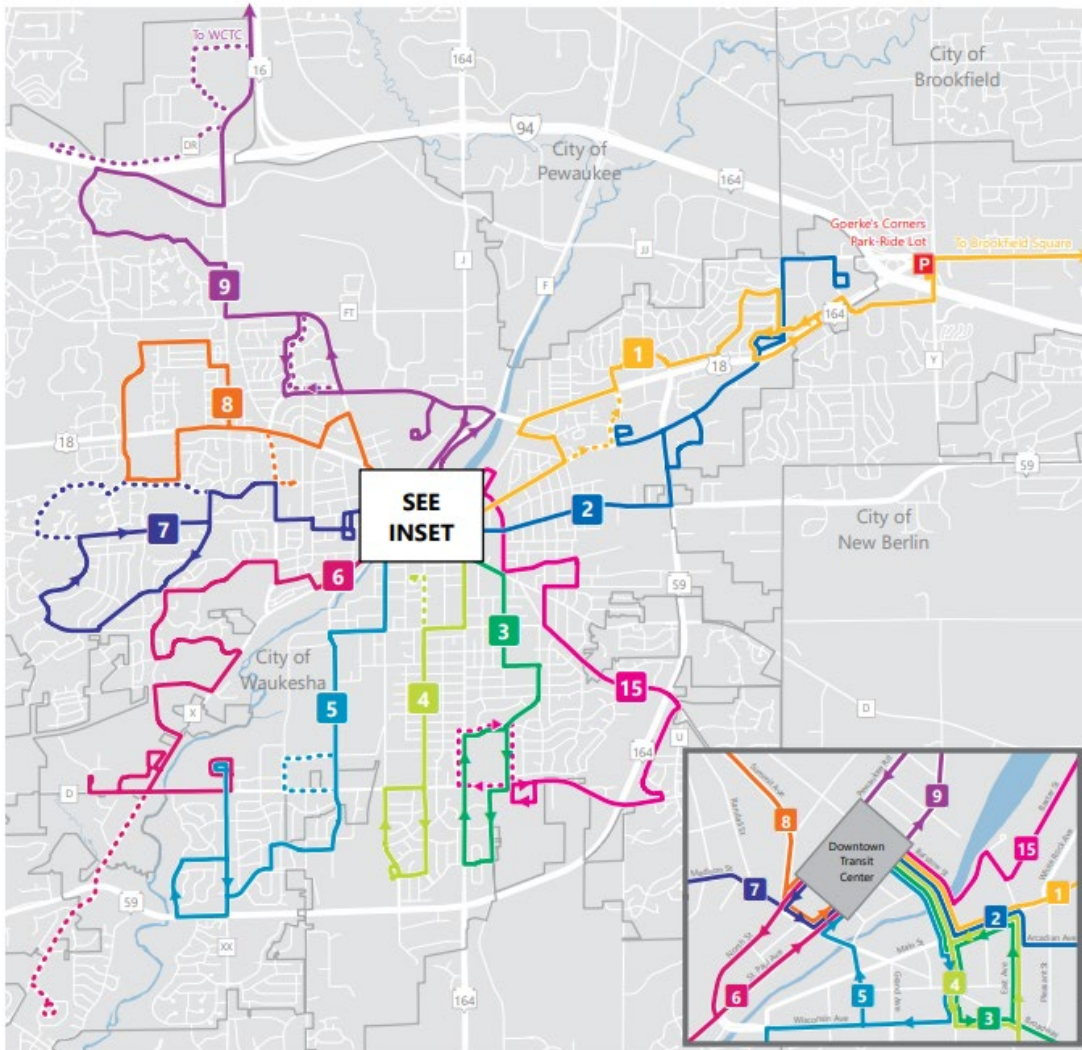
Call Out: Public transit provides an essential service for residents, and is important for connecting people with jobs, medical care, and social activities. Households in the City are more likely to lack access to a vehicle, or to have fewer vehicles, than those in the County.

Local Service

The City is served by a network of fixed bus routes operated by Waukesha Metro Transit. As of 2023, there are ten bus routes serving various neighborhoods, commercial areas, and key destinations within Waukesha. All local Waukesha Metro routes operate on a radial pattern, converging at the downtown Waukesha Metro Center. This system design is intended to facilitate a single point of transfer between routes to provide

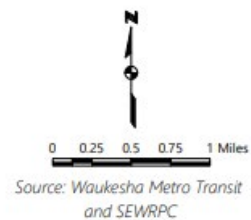
residents with reliable and scheduled transportation options for commuting, shopping, medical appointments, and other activities.

Waukesha Metro Transit Weekday Daytime Routes (6:00 a.m. - 8:00 p.m.)



WEEKDAY DAYTIME ROUTES

- | | | | |
|---|---------------------|----|---------------|
| — | REGULAR SERVICE | 5 | PRAIRIE |
| ⋯ | LIMITED SERVICE | 6 | ST. PAUL |
| 1 | WAUKESHA/BROOKFIELD | 7 | MADISON |
| 2 | ARCADIAN | 8 | SUMMIT |
| 3 | HARTWELL | 9 | NORTHVIEW |
| 4 | GRAND | 15 | RACINE AVENUE |



Map caption: The radial system design allows Waukesha Metro Transit users to transfer between routes at the Downtown Transit Center.

In addition to fixed route service, Waukesha Metro Transit offers paratransit services, Metrolift, to meet the transportation needs of people with disabilities who are unable to use the regular fixed-route bus services. Designed to ensure accessibility and inclusivity for all residents, Metrolift provides door-to-door transportation to accommodate passengers meeting specific eligibility criteria. Metrolift services must be scheduled and are available within the City or within three-quarters of a mile of a Waukesha Metro Transit route outside of City limits.

► **Recommendation: Waukesha Area Transit Development Plan**

This plan recommends that the City enhance transit service and maintain transit-oriented partnerships by implementing recommendations set forth in *Waukesha Area Transit Development Plan: 2023-2027*.

Interregional Transit

Intercity Bus Service

The City is served by two Waukesha County Transit routes, operated by Wisconsin Coach Lines and administered by Waukesha Metro Transit. These routes provide connections to Milwaukee to the east, and to Delafield and Oconomowoc to the west. As of 2023, Waukesha Metro Transit Route 1 has also been extended into Milwaukee County with an eastern terminus at Froedtert Hospital in Wauwatosa, providing connections to several key Milwaukee County Transit System (MCTS) routes.

Call Out: As this report was being prepared, Waukesha Metro Transit adopted the WisGo fare payment system, which provides fare capping while allowing riders to make more convenient switches between transit systems throughout the Region.³

Air Travel

Waukesha County Airport (KUES) is a public-use airport located in the northern part of the City. As a general aviation airport, it primarily serves private aircraft, corporate jets, and smaller planes. It is an important node within the regional aviation ecosystem, supporting local business and individual aviation needs, but does not typically handle commercial passenger airline operations.

The airport offers facilities such as runways, hangars, and fixed-base operators that provide a variety of aviation services including fueling and aircraft maintenance. It serves as a base for recreational flying, sightseeing, and aerial activities for local aviation enthusiasts. There are limited cargo and freight operations,

³ City of Waukesha, WisGo Powered by UMO. <https://www.waukesha-wi.gov/government/departments/wisgo.php>

typically involving smaller aircraft. Waukesha County Airport also hosts several flight training schools and organizations which provide facilities for student pilots and flight instructors.

Railway Passenger Service

The City was not served by railway passenger service at the time this plan was under preparation. The nearest passenger rail station is the Milwaukee Intermodal Station, which is served by Amtrak, and is accessible to City passengers via a combination of Waukesha Metro Transit and Milwaukee County Transit System bus transfers.

Plans for proposed future passenger rail service expansions within the Region recommend providing rail service to residents and visitors of the City. Regional plans recommend the construction of a commuter rail line with a station located in the City. A State rail plan proposes long-term Amtrak service extension to Waukesha County but does not make specific recommendations as to station locations.⁴ A plan prepared by Amtrak, proposes locating a station on a potential Milwaukee-Madison service extension in nearby Oconomowoc.⁵

Call Out: Although railroads played an important role in Waukesha's historic growth, the City has not been served by railway passenger service since 1957.

Water Travel

The Fox River has provided a historically important means of water travel to the City. Today, a portion of the Fox River, including its entire extent within the City, is designated as a National Water Trail by the National Park Service.⁶

⁴ Wisconsin Department of Transportation Bureau of Planning and Economic Development, Wisconsin Rail Plan 2050, 2023 (<https://www.wisdotplans.gov/plan/wrp2050>).

⁵ Amtrak Connects US, June 2021 (https://www.amtrakconnectsus.com/wp-content/uploads/2021/06/Amtrak-2021-Corridor-Vision_2021-06-01_web-HR-maps-2.pdf).

⁶ Information on the Fabulous Fox Water Trail is included in Chapter 7 of this plan.

Although the City is inland, significant additional water transportation facilities are available elsewhere in the Region. The Lake Express provides lake ferry passenger service to Muskegon, Michigan via a terminal in Port Milwaukee, approximately twenty miles east of the City.

FREIGHT TRANSPORTATION

The movement of goods and freight within the City primarily relies on road transportation. Its geographic location, access to the regional highway network, and significant manufacturing and warehousing industries have made the City a local and regional hub for road transportation.

Two railway mainlines, owned by the Canadian National Railroad and Wisconsin & Southern Railroad Co. pass through the City. The primary focus of these railroads is through train traffic rather than localized freight distribution within the city itself. In addition, several spurs from the Canadian National mainline serve the Sentry Drive industrial area. The freight railway network in the seven-county Region is well-developed and served by major freight railroads that play a role in transporting freight, including agricultural products, industrial materials, and consumer goods, to and from the City.

MANAGEMENT AND EMISSIONS

Transportation Systems Management (TSM)

Transportation systems management (TSM) involves managing and operating existing transportation facilities to maximize their capacity, building a safer and more efficient transportation system, and reducing the need for widening roadways or building new roadways to address congestion. These measures are intended to facilitate the movement of people and vehicles by improving traffic flow, enhancing system accessibility and safety, and optimizing the performance of existing systems. TSM strategies currently employed by the City include traffic signal coordination, intersection traffic engineering improvements, signal preemption, and curb-lane parking restrictions. Data collection, including traffic counts and speeds, allows for performance monitoring and adjustments to the system.

Call Out: Transportation Systems Management (TSM) and Travel Demand Management (TDM) are two complementary elements of an efficient transportation network. While TSM focuses on the physical infrastructure, TDM addresses traveler behavior to reduce demand during peak times.

Travel Demand Management (TDM)

Travel Demand Management (TDM) is a set of strategies and policies aimed at optimizing transportation systems and reducing traffic congestion, environmental impacts, and energy consumption while promoting sustainable and efficient travel options. TDM strategies encourage and incentivize people to consider alternatives to single-occupancy vehicle trips, including public transit, ridesharing, walking, biking, and working remotely. By integrating TDM measures with public transit, bicycle and pedestrian, and street improvements, an effective TDM strategy reduces traffic volumes, ensuring that roads have sufficient capacity and extending their useful life.

Traffic Volumes and Growth Rates

[Pending Commission-provided data]

Capacity

[Pending Commission-provided data]

► Recommendation: Roadway Capacity

Most of the City's roadways have sufficient capacity to accommodate both current traffic and substantial growth. This plan recommends that the City focus on improving the efficiency of its current streets and reducing demand for single-occupancy vehicle travel rather than expanding roadways.

Electric Vehicle Charging Stations

No City-managed public facilities were equipped with electric vehicle charging stations at the time this plan was under preparation. There are several privately operated electric vehicle chargers located within the City, primarily at automobile dealerships, gas stations, and retail locations. These privately operated chargers vary in their classification, cost, and accessibility to the general public.

PARKING AND ZONING

The City operates twelve municipal parking lots and one parking ramp, most of which are located in the downtown area. Additional public parking is available at many parks and City- and County-owned buildings, including the Downtown Transit Center. Many streets offer free street parking, with two-hour limits enforced in high-demand areas. Overnight parking on streets and in some municipal lots is available with purchase of a permit from the City.

The City has mandated off-street parking minimums for new development and redevelopment in all zoning districts. Exceptions are provided within the downtown parking district and conditionally by the City Plan Commission.

Call Out: Best practices have many municipalities reducing or eliminating parking minimums to encourage more affordable development.

► **Recommendation: Eliminate Parking Minimums**

This plan recommends that the City regularly review its parking ordinances and consider reducing or eliminating parking minimums.

GOALS AND POLICIES

The goals and policies presented in this chapter are intended to provide a framework to guide the future development of the City's transportation and mobility system. This framework should be used by the City to create and evaluate objectives and standards, ensuring that specific programs and projects are consistent with this comprehensive plan.

GOAL 5.1 – OVERALL

Establish, maintain, and enhance a fiscally sustainable, durable multimodal transportation system that promotes the City's livability and economy and is safe and efficient for all modes of travel, with a focus on vulnerable users.

Call Out: The transportation system provides residents, businesses, and visitors with access to a network of streets and trails that provide for the safe and efficient movement of people and goods into, out of, through, and within the City. The system is essential to the City's sound social, community, and economic development.

Policy 5.1.1

Adhere to the City's complete streets guidelines and review their effectiveness or consider adopting a complete streets policy to create an accessible, cohesive network of streets that prioritizes the needs of the City's most vulnerable users, including youth, the aging population, people with a disability, people using mobility aids, pedestrians and people using micromobility devices (like bicycles, electric scooters, roller skates, etc.).

Policy 5.1.2

Set priorities for key multimodal facilities with an emphasis on budgeting and grant opportunities for improvements to pedestrian and bicycle facilities and prioritizing high-injury locations.

Call Out: A strong complete streets policy adds new or updated criteria to the process by which a local government evaluates funding and constructing potential transportation projects to advance local goals like prioritizing active transportation options and improving the overall street network.

Policy 5.1.3

Evaluate opportunities for cost-savings while addressing aging infrastructure by promoting multimodal and complementary infrastructure within the existing transportation network, including bicycle and pedestrian, transit, and stormwater facilities and other infrastructure.

Call Out: Good maintenance, modernizing existing infrastructure, and incentivizing changes in infrastructure use can help slow the demand for new transportation infrastructure, resulting in long-term cost-savings, greater resiliency, and additional community benefits.

Policy 5.1.4

Identify and implement opportunities to reduce the number and width of lanes where traffic levels do not warrant the existing lane quantity or roadway width.

Call Out: Reducing excess roadway capacity can decrease roadway maintenance costs, reduce excess vehicular capacity, and decrease impermeable surfaces while improving multimodal efficiency and increasing comfort and safety along City streets.

Images of lane reduction projects in City (Delafield, Summit and Delafield, Barstow, Clinton, and St. Paul)

GOAL 5.2 - LAND USE PATTERN

Integrate land use and transportation planning to maximize the value of the City's transportation assets and promote safe, convenient, and efficient connections between a mix of uses.

Policy 5.2.1

Maintain and enhance the City's conventional, historic street grid to promote or improve the pedestrian connectivity and human scale of such areas.

Insert image showing City's conventional street grid.

Policy 5.2.2

Require new development to establish intentional and well-designed, multimodal connections with adjacent development, nearby neighborhoods, commercial and employment areas, parks, and to other destinations and the existing transportation network.

Call Out: Limiting the accessibility of development to adjacent areas can significantly inhibit connectivity and opportunities for active transportation and is at odds with multimodal transportation systems.

Insert image of cul-de-sacs with trail connections.

Policy 5.2.3

Explore opportunities to improve multimodal connectivity in the City's outlying areas.

Call Out: Policies that support multimodal transportation systems and prioritize walking, biking, and transit use can efficiently enable the movement of people and goods while providing additional social, economic and community health benefits.

Policy 5.2.4

Explore opportunities to increase residential density along transit routes to increase the number of City residents who have convenient access to transit and better support the transit system. This includes redevelopment of unused or underutilized commercial parking lots along these transit lines to multi-unit residential.

Policy 5.2.5

Promote the larger Downtown area and the Downtown Transit Center as the City's bus hub and as an amenity for new development on the west side of the Fox River.

Policy 5.2.6

Plan for walkable community nodes in accordance with the City's Land Use Policy Plan and ensure that development contains commercial ground-floor uses with storefront entrances accessible from intersecting sidewalks.

Policy 5.2.7

Promote walkable neighborhoods by providing active transportation facilities and allowing for a substantial mix of uses within walkable distances, including neighborhood retail, service, hospitality, and community gathering places.

Insert image of people walking in a neighborhood mixed-use area.

Policy 5.2.8

Explore opportunities to provide access to and improve connectivity between residential neighborhoods, commercial areas, and other uses, such as extending the bicycle and pedestrian trail network through homeowner association (HOA) common areas.

Policy 5.2.9

Consider steps to encourage new senior housing in walkable and transit-accessible locations to address the housing and mobility needs of the City's growing aging population.

Insert image of Avalon.

Policy 5.2.10

Plan for employment-supporting land uses in locations with good access to transit, the regional transportation network, and other amenities.

Policy 5.2.11

Limit the use of cul-de-sacs to areas where a connection to another internal street or adjacent street cannot be accomplished due to the presence of steep terrain, environmental corridors, wetlands, woodlands or other natural features that make connectivity unfeasible. Consider incorporating trails from cul-de-sacs to parks and other areas to support pedestrian and bicycle travel.

GOAL 5.3 – STREETS AND HIGHWAYS

Establish, maintain, and enhance a fiscally sustainable and durable multimodal transportation system that promotes the City’s livability and economy and is safe and efficient for all modes of travel, with a focus on vulnerable users.

Policy 5.3.1

Maintain City streets in a state of good repair, including pavement conditions and lane markings.

Policy 5.3.2

Prioritize maintaining, modernizing, and maximizing use of the City’s existing transportation system over potential expansions, which may incur greater monetary, environmental, and other costs.

Policy 5.3.3

Conduct road safety audits (RSAs) at major intersections, high-volume road segments, and locations with known conflict between vehicles, pedestrians, or bicyclists to identify opportunities for design and safety improvements for all road users.⁷

Call Out: Locations with high frequencies of crashes often have roadway design elements that lead to conflicts between road users and contribute to unsafe behaviors.

Policy 5.3.4

Utilize rapid implementation options such as paint, flexible posts, and other movable barriers to quickly and inexpensively explore potential street design improvements.

Policy 5.3.5

Coordinate with the County, the Commission, and WisDOT to ensure that State and County roadway redesign projects prioritize City goals for active transportation, including the safety of bicycle-users and pedestrians, particularly in regard to intersection design or roadway widening.

⁷ A road safety audit (RSA) is a formal safety performance examination conducted by an independent, multidisciplinary team. The Federal Highway Administration (FHA) recommends the inclusion of an RSA in new road and intersection development and encourages their use to evaluate existing infrastructure.

Policy 5.3.6

Use a multimodal approach to evaluate the potential social, environmental, and economic costs of undertaking or foregoing potential transportation system projects, including a cost-benefit analysis accounting for capital and operating costs and potential savings or revenues.

Policy 5.3.7

Consider closing underutilized street segments that do not provide connectivity and converting one-way streets to two-way traffic where feasible to improve the navigability of the City’s street network.

Insert image of North Avenue and St. Paul conversion to two-way with a description of the project with caption: In 2022, the City converted St. Paul Avenue and North Street, which had been functioning as a one-way pair, to a new two-way design. As the last of the remaining one-way streets in downtown, their conversion has resulted in congestion reductions, navigation improvements, and traffic-calming.

Policy 5.3.8

Utilize walk audits and other means to observe and document the safety of the City’s streets and sidewalks for all non-vehicle users and prioritize removal or remedy of any impediments to safe pedestrian travel.

GOAL 5.4 – PEDESTRIAN NETWORK

Promote walking as a healthy, sociable, non-polluting mode of active transportation within a City-wide, multimodal transportation network.

Call out: More than half of respondents to the National Community Survey ranked safe bicycle and pedestrian connections between their neighborhoods and other areas of the city as important for Waukesha to address over the next five years.

Policy 5.4.1

Extend and improve the City’s network of sidewalks by continuing to implement the city’s bicycle and pedestrian facilities plan.

Policy 5.4.2

Require all private development to connect to existing and planned public sidewalks.

Policy 5.4.3

Consider a policy that requires sidewalks on both sides of private streets in new residential developments or additions to existing residential developments.

Policy 5.4.4

Ensure access and safe routes for children walking to schools.

Policy 5.4.5

Research pedestrian facilities and best practices to plan for pedestrian-oriented improvements at designated Community Nodes and Mixed Residential Commercial areas on the City's land use policy map.

Policy 5.4.6

Install intersection pedestrian safety features such as curb bump outs, and enhanced crosswalk signing, with a priority on streets with higher pedestrian traffic.

Call Out: Enhanced pedestrian safety treatments should be implemented on streets planned for redevelopment, streets within areas planned for more dense development, and streets identified as potential safe routes to school.

Policy 5.4.7

Study and seek grants for grade-separated pedestrian and bicycle facilities where major roadways cross popular non-motorized routes.

Policy 5.4.8

Seek guidance from City residents, businesses, and neighborhood and community groups while building pedestrian connections from residential areas to commercial areas, schools, and parks to ensure that local interests and needs are understood and accommodated.

Call Out: Designing the transportation system to allow for walking and providing pedestrian-oriented facilities to improve pedestrian safety are important to ensuring that residents who cannot drive, including youth and the aging population, have autonomy to access destinations independently.

GOAL 5.5 - BICYCLE FACILITIES

Promote and plan for bicycle use as a mode of transport for daily access to a variety of destinations as well as for recreation.

Call out: Feedback from City residents indicates that they value bicycle transportation, but that busy roads and a lack of appropriate infrastructure make travelling by bicycle feel difficult and unsafe.

Policy 5.5.1

Update the City's bicycle and pedestrian facilities plan and create an implementation team or committee to advocate and implement the recommendations in the plan and IN subsequent updates TO THE PLAN.

Policy 5.5.2

Increase the provision of marked bicycle lanes and create a network of facilities on low-traffic streets.

Policy 5.5.3

Explore potential locations for protected bicycle lanes that are physically separated from vehicular traffic, particularly on gateway streets that lead to downtown or to other high activity areas.

Policy 5.5.4

Review the feasibility of using transmission line corridors owned by private utilities as potential bicycle trail corridors, starting with the WE Energies corridor north of Northview Road.

Policy 5.5.5

Continue work on connecting the New Berlin and Glacial Drumlin trails with marked or protected on-street facilities and uniform directional signage between Barstow Street and Prairie Avenue

Policy 5.5.6

Create and implement a City-wide bicycle signage plan.

GOAL 5.6 – PUBLIC TRANSIT

Sustain and evaluate the growth of transit service in the City and enhance connections to regional transit services.

Call out: Seven in 10 City residents rate bus and transit services positively—but only one in 10 have used the services.⁸

Policy 5.6.1

Promote and improve Waukesha Metro Transit, encouraging connectivity with other transit systems and services within the Region.

Policy 5.6.2

Continue to improve accessibility and amenities at bus stops with the addition of ADA-compliant facilities, sidewalks, safe pedestrian crossings, bus shelters, and similar facilities.

Policy 5.6.3

Implement the transit development plan adopted in December 2022.⁹

Policy 5.6.4

Continue collaborating with the County and the Commission to plan and implement transit enhancements for the Bluemound corridor and budget for planned improvements along Main Street.

Policy 5.6.5

Study and identify locations for new Waukesha Metro Transit system stops where ridership and economic development potential is greatest. Identify last-mile options to ensure residents and workers can get to their place of employment when closer transit stops are unfeasible.

Policy 5.6.6

Monitor and support regional planning for commuter rail and intercity passenger rail in the County and participate in planning so that the City has access to future rail service.

⁸ *The National Community Survey of Waukesha residents conducted in 2022 showed a 71% positive evaluation of bus or transit services while only 11% of respondents indicated they had used public transport in the last 12 months instead of driving.*

⁹ *SEWRPC Community Assistance Planning Report No. 336, Waukesha Area Transit Development Plan: 2023-2027.*

Policy 5.6.7

Study commuter inflow/outflow patterns and develop transit connections, both inside the City and with adjacent transit systems, to ensure that employment centers are well-served by transit and reduce commuter dependence on automobile transportation.

Insert image of Waukesha Metro Transit bus serving people.

GOAL 5.7 – MANAGEMENT AND EMISSIONS

Reduce carbon emissions and other pollutants from transportation sources.

Policy 5.7.1

Utilize a combination of Transportation Systems Management (TSM) and Travel Demand Management (TDM) strategies to optimize the efficiency of the City’s existing transportation system and reduce single-occupancy vehicle trips.

Policy 5.7.2

Encourage walking, biking, and the use of transit by ensuring that new and existing development is conveniently and safely accessible by these means of transportation.

Insert image of City resident walking to a destination.

Policy 5.7.3

Evaluate opportunities to support usage of electric bicycles, scooters, and other small, non- or lower-polluting personal transport.

Policy 5.7.4

Evaluate options for transitioning the City fleet to low- or no- emission vehicles as soon as possible, given due consideration of cost.

Policy 5.7.5

Consider planning for a network of electric charging stations and new building code requirements for electric charging in new construction to accommodate the transition of City residents, workers, and visitors to electric vehicles.

Call Out: As private electric vehicle ownership continues to increase, it is important for the City to plan for the inclusion of electric vehicle charging stations in public parking areas and new residential and commercial developments.

GOAL 5.8 – PARKING AND ZONING

Research zoning and permitting best practices and establish and implement policies and regulations for on- and off-street parking, street use, and parking requirements that minimize public and private costs and conflicts in relation to requiring/providing parking for vehicles.

Policy 5.8.1

Reduce off-street parking requirements to disincentivize driving, especially in mixed-use, high-density, transit-served areas.

Insert image of parking sign from Downtown Waukesha.

Policy 5.8.2

Update downtown parking regulations for on-street parking and for City-owned parking lots and garages to ensure adequate availability and maximize revenue. Consider going to a time-based payment system after the first two free hours to encourage more structure use.

Insert attractive image of City-owned parking garage.

Policy 5.3.3

Seek opportunities for parking agreements between the City and downtown residential and commercial property owners.

Policy 5.8.4

Utilize appropriate regulatory tools to address the parking needs of and to promote and accommodate new development in high-activity areas while limiting the provision of surface parking and maximizing the value and use of developable land.

Policy 5.8.5

Evaluate the cost of providing parking for new residential development and consider adjusting parking requirements when appropriate to the development.

Policy 5.8.6

Conduct a food truck study to examine overall usage, identify practical locations within the public right-of-way, and to establish potential regulations, including criteria regarding access to utilities, community facilities, and restrooms.

Insert image of food truck at event in City.

Policy 5.8.7

Monitor new and emerging technologies, such as autonomous vehicles and drone deliveries, and prepare to develop appropriate policy recommendations for the City.

Policy 5.8.8

Require both long-term and short-term bicycle parking for new multi-unit residential development or when major improvements are proposed to existing multi-unit residential properties. Develop public-private partnerships to add bicycle racks and repair stations in areas that tend to generate a higher level of bicycle trips.

NOTE: Charts, figures, and tables in this preliminary draft may differ from those in subsequent drafts. These variations, intended to facilitate effective visual communication, are solely graphic in nature and do not indicate changes in the data used to prepare this report.

PRELIMINARY DRAFT

SEWRPC Community Assistance Planning Report No. __

CITY OF WAUKESHA COMPREHENSIVE PLAN

Chapter 6

UTILITIES AND COMMUNITY FACILITIES

This chapter provides an inventory and descriptive analysis of the City of Waukesha's community facilities and utilities and presents related goals and policies in accordance with the utilities and community facilities element required by State law.¹ It describes water supply service, sanitary sewer service, and solid waste management in the City. It also presents data on electric and gas utilities and telecommunications infrastructure. In addition, information on the City and County administration, public safety, libraries, education, childcare, health care, and cemeteries is provided.

The inventory data in this chapter are similar to those in the utilities and community facilities element of the City's 2009 comprehensive plan. One significant difference pertains to the source of the City's water supply, which transitioned from groundwater to Lake Michigan water as this report was being prepared. This change addresses several key concerns identified by the prior plan, while creating some additional considerations which are discussed and analyzed in this report.

WATER SUPPLY SERVICE

The Waukesha Water Utility has provided water supply service for the City for over a century. Like many communities in the County, the City has historically relied on groundwater for its water supply. Groundwater

¹ Requirements for the transportation element of a comprehensive plan are set forth in Section 66.1001(2)(d) of the Wisconsin Statutes.

is present within three major aquifers underlying the City, including two shallow aquifers and a deeper sandstone aquifer.² Over time, increased development overlying these aquifers both within and outside of the City resulted in increased demand on the aquifers, which limited groundwater recharge and led to greater reliance on the deep aquifer for water supply. Over time, the water supply began to show higher concentrations of radium,³ which eventually exceeded levels deemed acceptable under Federally established safety standards. The water utility worked to address radium levels using expensive treatments and processes prior to pursuing the potential to secure Lake Michigan water as an alternate water supply source, the use of which as such is regulated by the Great Lakes Compact.

Adoption of the Great Lakes Compact (Wisconsin Act 227) in 2007 established new requirements for public water supply systems statewide.⁴ Under the law, the Wisconsin Department of Natural Resources (DNR) is required to administer the water supply planning process and regional planning commissions within the State are authorized to assist with preparing such plans. In accordance with the law, the Waukesha Water Utility solicited the Commission's assistance to prepare a water supply plan in 2008. The resulting plan set forth a water supply area that encompassed the City of Waukesha and surrounding lands within the Towns of Delafield, Genessee, and Waukesha, which were later excluded from the City's water service area.

The City's current water supply area is shown in Map 6.WSA [to be completed]. Area boundaries were established following approval of the City's application to source water from Lake Michigan by the Great Lakes-St. Lawrence River Basin Water Resources Council,⁵ or Compact Council, in June 2016 and subsequent

² Chapter 3 of this report contains information on groundwater and aquifers.

³ A naturally occurring element in bedrock throughout the Southeastern Wisconsin Region.

⁴ The law requires that a water supply plan be prepared by any public water supply systems that serve a population of 10,000 or more as well as by specified smaller systems needing approval for certain new or increased withdrawals from the Basin.

⁵ The Compact Council, comprised of the governors of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin, was established in December 2008 when the Great Lakes-St. Lawrence River Basin Water Resources Compact became State and Federal law. The Compact provides a framework for the States to enact programs and laws and details how the States will work together to manage and protect the Basin.

diversion approval from the DNR⁶ in June 2021. The water service boundary essentially halts annexations from adjacent towns unless an amendment is approved by the Compact Council.

The resulting Waukesha Great Lakes Water Supply Project involves construction of necessary infrastructure to obtain, store, and distribute the new water supply, which the City will purchase from Milwaukee Water Works.⁷ Underway as this report was being prepared and expected to be complete in 2023, The project also involved construction of a booster pumping station, water reservoirs, and a water tower on the City's east side as well as the necessary infrastructure to return used and treated water to Lake Michigan via the Root River. These facilities will enable the City to store 18 million gallons and distribute 8 to 10 million gallons of water for use per day. The City anticipates that this capacity will be sufficient to meet the City's needs as presented in this comprehensive plan update, including additional development and redevelopment at higher densities.

SANITARY SEWER SERVICE

State legislation adopted in the late 1970s in response to the Federal Clean Water Act effectively established requirements for areawide water quality management planning for specific urbanized areas within the State (including all of southeastern Wisconsin) and that such plans must include a sanitary sewer service area planning component. The sewer service area plans are required to define the outer boundary to which a municipality's sanitary sewers may be extended.⁸ As the State-designated areawide water quality planning agency for southeastern Wisconsin under Section 208 of the Federal Clean Water Act, the Southeastern Wisconsin Regional Planning Commission was responsible for developing plans to comply with the legislation. The Commission prepared a regional water quality management plan (RWQMP)⁹ establishing initial planned sewer service areas for numerous municipalities within the Region, including the City of Waukesha. Sewer service areas established by the RWQMP were designed using the general urban land use

⁶ *As required by the Compact Council.*

⁷ <https://city.milwaukee.gov/water/about>

⁸ *The plans also identify the extent of environmentally sensitive lands within each sewer service area, wherein sanitary sewer extensions will be approved only on a special exception basis.*

⁹ *SEWRPC Planning Report No. 30, A Regional Water Quality Management Plan for Southeastern Wisconsin: 2000, (September 1978), was endorsed by the Wisconsin Natural Resources Board in 1979.*

pattern set forth in the year 2000 regional land use plan and therefore did not reflect detailed local planning considerations. State legislation enables designated areawide water quality planning agencies such as the Commission to address local and areawide planning concerns by preparing a sewer service area plan amendment for adoption by the local community, the Commission, and for administrative approval by the Wisconsin Department of Natural Resources.¹⁰

First refined in an amendment to the RWQMP adopted by the City in March 1999,¹¹ the City's planned sewer service area has been refined via numerous subsequent amendments through 2007. The City's planned sewer service area as of 2023 is shown on Map 4.SSA [to be completed].¹² Sewer system maintenance in the City is the responsibility of the Public Works Department.

Insert Map 4.SSA

► **Recommendation: Sewer Service Area**

This plan recommends that the City consider an amendment of the City's sewer service area to match the water supply service area and any existing agreements that the City has entered into for the provision of sewer service.

STORMWATER MANAGEMENT FACILITIES

Urban development throughout the City generates stormwater runoff that is accommodated by the City's stormwater management system, which includes curbs and gutters, catch basins and inlets, manholes, culverts, storm sewers, swales, and open channels. The system also contains water retention and detention ponds which serve to attenuate peak runoff following rainstorms and to help improve the water quality of

¹⁰ *The Commission is also required to review and comment on each proposed sewer extension as to its relationship to the approved plan and sewer service areas.*

¹¹ *SEWRPC Community Assistance Planning Report No. 100, Sanitary Sewer Service Area for the City of Waukesha and Environs (March 1999).*

¹² *As noted in Chapter 2 of this report, the Town of Waukesha incorporated as a Village under Section 66.02162 of the Wisconsin Statutes on May 12, 2020, limiting the City's ability to annex and potentially provide sanitary sewer service to former adjacent township lands.*

the runoff. Some redevelopment sites have also utilized underground storage due to site constraints, which will likely continue with the City's water service boundary.

Chapter 32 of the City's Municipal Code, which dictates the City's stormwater management requirements, stipulates that runoff rates for new development shall not exceed pre-development discharge rates and new stormwater facilities must be covered by a stormwater maintenance agreement. The City is authorized to conduct periodic inspections of facilities to monitor performance and maintenance and to notify responsible parties of needed repairs or improvements in accordance with these stormwater maintenance agreements.

Green Infrastructure

The City contains some green infrastructure to promote water stewardship to supplement water conservation efforts promoted through a variety of programs and incentives. Green infrastructure in the City includes permeable pavements in rights-of-way, including alleys and medians. Ongoing pavement reduction efforts are designed to reduce impermeable surfaces by narrowing unnecessarily wide streets.¹³ In addition, the Waukesha Water Utility works with customers to disconnect and reroute downspouts to prevent rainwater from draining directly into City storm sewers. Disconnecting downspouts can help to prevent flooding and icing issues by directing water into rain barrels, permeable areas, or rain gardens, like the one at City Hall.

Call Out: Focus group attendees indicated some interest in green infrastructure to manage stormwater in the City and cited a desire to ensure proper maintenance of such facilities in the City's rights-of-way.

► Recommendation: Green Stormwater Infrastructure

This plan recommends that the City consider implementing green stormwater infrastructure guidelines into its zoning code and development standards. Green stormwater infrastructure uses sustainable nature-based solutions to control runoff and improve water quality, while also providing aesthetic benefits and reducing infrastructure costs.

SOLID WASTE MANAGEMENT

The DNR is responsible for issuing solid waste licenses and permits for landfills, solid waste transfer facilities, recycling facilities, composting facilities, and other solid waste management facilities and activities. In 1990,

¹³ *City streets constructed in the 1980's and 90's were designed wider than required under more modern standards.*

a State law related to solid waste reduction, recovery, and recycling banned the disposal of certain materials and delegated to local governments the responsibility for managing the proper disposal of those banned materials. Designated local governments, including the City, are required to accomplish this task, in part, by implementing municipal recycling programs.

As of 2023, the City was under contract with Waste Management to collect residential solid waste and recycling. Solid waste from the City is directed to two active landfills: the Parkview/Orchard Ridge Landfill in Menomonee Falls and the Emerald Park Landfill in Muskego.

Insert graphic: In 2021, the amount of solid waste landfilled from City of Waukesha residents was 14,255.24 tons and the amount collected for recycling was 4,933.42 tons.

The City also operates a drop off center that accepts limited solid waste from City or County residents. The center allows City and County residents to drop off recyclables ranging from cardboard, paper, bottles, and cans to scrap metal, used oil/antifreeze, and cooking oil. The center also allows City residents to drop off yard waste and limited solid waste for landfill disposal.¹⁴

In 2014, the City started a municipal compost operation, licensed by the Wisconsin Department of Natural Resources, through which residential yard waste and fall leaf collection materials are composted by the City. The composted material is used by the City and made available to City residents at no cost. The City also collects brush in the spring and after large storm events, which is turned into wood chips for use on City-owned property and made available to City residents at no cost.

Insert graphic text: Trends indicate that the per capita generation of solid waste is continually increasing.

Call Out: Trends also indicate a heightened public awareness of the need to process and dispose of solid waste in an environmentally sound and cost-effective manner.

ELECTRIC AND GAS UTILITIES

The electric system is comprised of three components: power generation facilities, transmission lines and distribution facilities. The City's electric power is generated by We Energies, a subsidiary of WEC Energy

¹⁴ A collaboration between the City and other local governments in the County that utilized composting to manage residential yard waste ended in 2013.

Group. We Energies, with power generation facilities utilizing coal, oil, and natural gas-based plants as well as wind, hydroelectric, and biomass-based, cogeneration facilities, generate electricity for Wisconsin and Michigan residences and businesses. The utility has increased production over the years preceding publication of this report to ensure customers can receive adequate service and offers a variety of services and programs to promote energy efficiency, conservation, and renewable energy usage.

Call Out: We Energies electric services and programs include Energy for Tomorrow, a voluntary renewable energy program through which We Energies produces or purchases renewable energy for participants. We Energies also allows customer-owned power generation systems, including wind turbines, solar photovoltaic systems, microturbines, or fuel cells owned by State residents and businesses, to interconnect with We Energies' distribution system. An EV charger pilot program aims to reduce potential cost barriers for We Energies customers wanting to install EV charging equipment at their place of residence or business.

The American Transmission Company (ATC), a privately owned, public utility headquartered in Pewaukee, provides electric transmission service to the City and other portions of Wisconsin and adjacent states. ATC extends 138-Kilovolt (kV) single and multiple circuit transmission lines through a substation in the City to deliver local and regional power. We Energies¹⁵ also provides natural gas service to the City.

Insert Image: ATC substation [To be provided by City].

An assessment completed in 2006 identified potential energy transmission issues in Southeastern Wisconsin, including transmission service limitations and facility overloads. The assessment also identified low voltages in an area around the City, which has been vulnerable to facility overloads. The low voltages may be attributed to low probability substation outages and may indicate that the existing network may be insufficient without significant reinforcements.

On average, electricity consumption increases by a rate of 2.5 to 3 percent per year due to population growth, business expansion, and higher usage among all customer segments. The Public Service Commission of Wisconsin projected in 2003 that Wisconsin would require an additional 7,000 megawatts of electricity in 2016 to keep pace with increasing demand.

¹⁵ The trade name for the Wisconsin Electric Power Company and Wisconsin Gas LLC.

Call Out: The Region and State have faced an emerging electricity shortage. Purchasing outside power is not a viable future option due to increasing demand in other areas and limitations of the transmission line grid. Because other areas of the country are facing the same supply situation, purchasing power is not a future option due to limited supplies and the need for an improved transmission line grid.

► **Recommendation: Renewable Energy Sources**

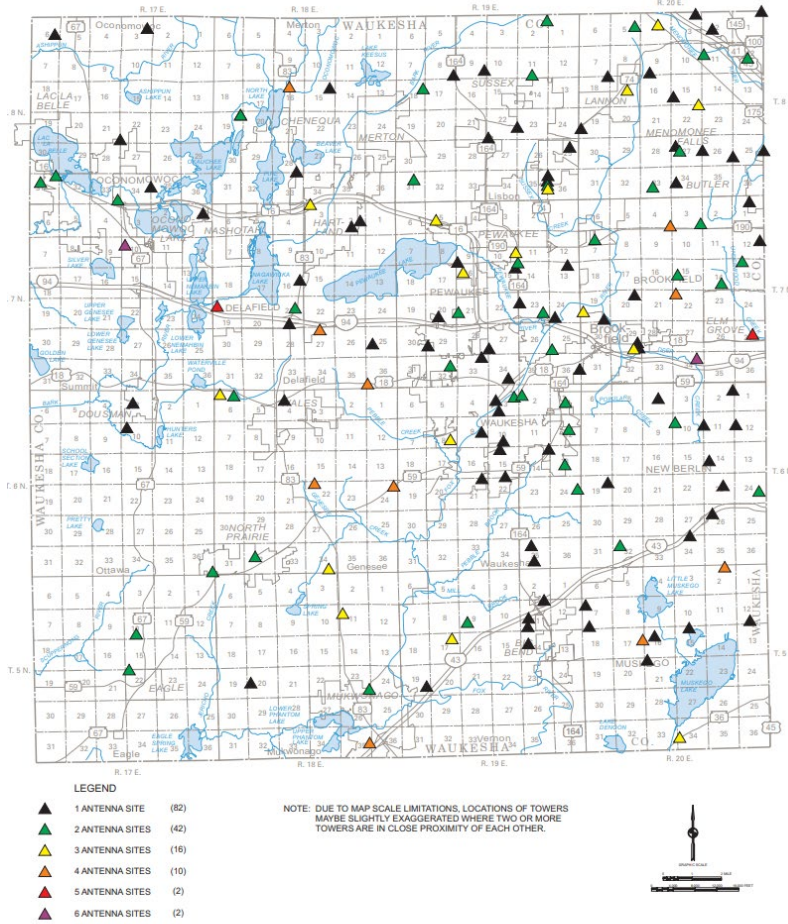
The City should consider installation of renewable energy sources, such as solar energy systems, at City-owned facilities. The use of sustainable energy sources has the potential to reduce the City's operating costs and carbon emissions over time.

TELECOMMUNICATIONS

Residents of the City have access to broadband internet, with service coming from Spectrum, or AT&T. Cellular tower antenna sites within the City were documented in a regional broadband telecommunications plan designed to develop a high level of telecommunications service within the Region that promotes economic competitiveness and helps meet growing needs in relation to public safety, emergency response, and home health care.¹⁶

¹⁶ SEWRPC Planning Report No. 51, A Wireless Antenna Siting and Related Infrastructure Plan for Southeastern Wisconsin, September 2006.

ANTENNA SITE LOCATIONS IN WAUKESHA COUNTY, WISCONSIN: 2005



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PUBLIC SAFETY

Public safety within the City is the primary responsibility of the Waukesha Police Department (WKPD), which works to prevent and detect criminal activity through three service divisions: Patrol, Special Services and Criminal Investigation. Each WKPD division has specialties designed to enhance community engagement and supplement traditional patrol units.

Call out: Specialties within divisions of the Waukesha Police Department (WKPD) include the Neighborhood Engagement Unit and the Public Safety Cadet Program. Another specialty, the Crisis Response Unit (CRU), is a collaborative effort with the Waukesha County Department of Health and Human Services (DHHS) that focuses on solutions-based outreach through response and prevention.

Public safety service provided by the City of Waukesha Fire Department includes emergency medical response, fire prevention and inspections, fire suppression, hazardous materials mitigation, technical rescue service, juvenile fire education, special rescue services, and other community programs. Fire Department

services are not limited to the City; the department provides technical rescue service to 16 communities overall and provides hazardous materials mitigation to all Waukesha County communities through an intergovernmental agreement.

Call out: State-licensed emergency medical technicians (EMTs) with the Fire Department provide emergency medical services and pre-hospital medical care including basic life support (BLS) and advanced life support (ALS).

WKPD and the Fire Department are also responsible for providing City weather and other emergency warnings and alerts, including testing and activating weather warning sirens and managing the emergency alert system to transmit verbal information via local cable television system overrides.

Insert map: Showing City and County administrative and operational facilities, public safety facilities, health care facilities, and cemeteries [To be completed by Commission staff].

CITY AND COUNTY ADMINISTRATION

The City's elected officials and staff are housed in City Hall, a new facility completed in 2021 on the same site as the previous facility. Located one half-mile northwest of the City's historic downtown, City Hall is directly connected to the City's Transit Center and parking garage. City Hall houses the Mayor's office, Council chambers, municipal court, emergency operations center, data center, various City departments, and a public service counter.

As the County seat, the City is also home to County administrative facilities. These facilities are clustered in a campus setting known as the Waukesha County Administration Center, which houses the County Executive office, courthouse, and numerous County departments that are essential to managing and providing State-mandated programs and services.

► Recommendation: Shared Services Agreements

This City should consider studying its municipal services in comparison to those provided by the County or neighboring communities and explore the possibility of entering into shared services agreements if appropriate. Shared services agreements can potentially provide operational cost savings and enhance the level of service for residents while fostering strong intergovernmental cooperation.

MUNICIPAL COURT

The Waukesha Municipal Court serves as the judicial body responsible for is responsible for non-criminal violations that occur within the City. The court conducts all municipal trials, maintains court records and collects payments of municipal fines and forfeitures. Its primary functions and responsibilities include presiding over legal matters such as traffic citations, parking violations, local ordinance infractions, and other municipal violations. The court is responsible for ensuring due process and fair hearings, while also assessing fines and penalties when necessary. The Municipal Court is an essential component of the local government's duty to uphold public safety and order by addressing these lower-level infractions, contributing to the overall administration of justice at the local level, and ensuring compliance with city regulations and ordinances.

PUBLIC WORKS

The City's Public Works Department is responsible for maintaining much of the City's infrastructure, including street surfaces, streetlights, traffic signals, sidewalks, and sanitary and storm sewer systems. The Department also conducts snow removal and garbage, recycling, and residential brush and leaf collection. Engineering and Geographic Information Systems (GIS) services are provided by the Department. The City's municipal parking facilities, transit system, and wastewater treatment plant are also managed by the Department, which is structured into six divisions: Clean Water Plant, Engineering, GIS, Municipal Parking, Streets, and Transit.

The Clean Water Plant (CWP) is the water treatment plant for the City. The CWP is capable of handling an average of 18.5 million gallons of wastewater per day and a peak flow of 23 million gallons per day. As this plan was under preparation, the CWP treats an average of 10 to 12 million gallons per day, removing impurities and pathogens so that water can be returned safely to the environment. The Engineering Division oversees the development and design of City systems, including the sanitary and storm sewer systems, City streets and sidewalks, traffic signals, streetlights, street signs, and garbage and recycling collection. The City's GIS division analyzes, manages, and stores geographic data and provides up-to-date information to the public and to City staff.

The Municipal Parking division manages on-street and off-street public parking services. The Streets Division, also home to the City Garage, provides preventative street maintenance and repair service, snow plowing and performs maintenance work on City vehicles, equipment, sanitary and storm sewers, traffic signals, streetlights and street signage. The Transit division is responsible for coordinating the City's public

transit services with Waukesha Metro Transit to provides safe, reliable, convenient and economical public transportation services.¹⁷

LIBRARY SYSTEM

Public libraries are hubs for community engagement and information that provide the general public with access to a variety of educational resources. Built in 1904, the Waukesha Public Library is centrally located in the City's downtown area at the south end of Cutler Park. The library is part of the Bridges Library System,¹⁸ which includes 15 public libraries in other Waukesha County communities and eight public libraries in communities within neighboring Jefferson County. The library provides additional service and support for all Bridges Library System staff and users, including technical support with digital library platforms and reference service and support as the system's primary resource library.

Insert graphic text: The library was staffed by a team of 46.5 full time equivalent (FTE) employees, was visited by approximately 208,000 patrons, and had a total circulation of over 745,000 items in 2021.

The library has undergone four major renovations and has provided new and updated services and programs to meet the community needs as societal shifts, innovative resources, and advanced technologies present public library systems nationwide with new demands and opportunities.¹⁹ The library's 2021 and 2022 renovations modernized the building's first floor and resulted in significant updates to the library's original Carnegie Room. The renovation also helped to expand library services and created more meeting space, including a commercial/demonstration kitchen and a new makerspace. Additional new and adapted

¹⁷ Additional information on the City's streets and transit services is provided in Chapter 5 of this comprehensive plan.

¹⁸ The Waukesha County Federated Library System was established by the Waukesha County Board of Supervisors under Chapter 43 of the Wisconsin Statutes in 1981 and was renamed in 2016 as the system transitioned to add service for Jefferson County, a change that earned Bridges an award for intergovernmental cooperation.

¹⁹ Bridges Library System 2018-2021 Strategic Plan.

services and programs include the Library Memory Project²⁰ and free access to virtual continuing education courses, WiFi hotspots, passes to local and regional institutions, and other specialty items.

Challenges attributable to the COVID-19 pandemic have emphasized the role of libraries in ensuring equitable public access to a variety of educational resources. Temporary pandemic-associated relief enables Libraries to provide increased public access to resources that are essential for learning, working, and daily life. Library systems in the State may, however, be inhibited from continuing to meet people's ever-changing needs, including the provision of services required under State law, due to long-term reductions in funding.²¹

Call Out: Appropriations for the Bridges Library System, and for other library systems in the State, were reduced by 10 percent in 2011 and had not been restored to previous funding levels prior to this plan's publication.

CHILDCARE

The Wisconsin Department of Children and Families (DCF) regulates childcare facilities in the State. Childcare providers can operate within two types of settings: family childcare and group childcare centers. Childcare providers in both settings are required to have completed training prior to providing service and must complete annual continuing education. Childcare providers in each setting are, however, subject to different limitations on the number of children they can care for based on the children's ages. Group childcare centers licensed under Chapter DCF 251 provide care for nine or more children while family childcare providers, which generally care for a smaller number of children within a provider's home, may be certified or licensed under Chapter DCF 250 of the *Wisconsin Administrative Code*.

Family and group childcare establishments can provide different benefits to meet guardians' diverse needs. Family care centers may be able to fill gaps in service by providing more personalized, culturally appropriate, conveniently located care in a home-like setting. Family care providers operating as home-based businesses may require minimal start-up and operating costs. However, the small size of family care centers may make

²⁰ *The Memory Project is a partnership between libraries in the Bridges Library System and additional public libraries within Racine and Washington Counties, which provides social and educational programs on memory loss and brain health to individuals directly and indirectly affected by memory loss, Alzheimer's disease, and other forms of dementia.*

²¹ *Library systems that provide services required under State Statutes receive funding calculated based on a formula involving population, geographic area, and local funding levels and appropriated by the Wisconsin Department of Public Instruction through the Division for Libraries and Technology.*

it difficult to ensure a substitute may be available when a primary care provider is not. Licensed group childcare centers, meanwhile, may provide standardized care for larger groups of similarly aged children. As they are subject to more stringent requirements and require greater investment, licensed group childcare centers may be more permanent fixtures within a community.

DCF maintains up-to-date data on group and family childcare centers throughout the State. This publicly accessible information can assist City residents and workers and guardians in nearby areas to locate childcare providers that meet their needs.

Insert Map: Showing library, schools and SDDW properties, and group childcare centers in the City as of 2023 [To be completed by Commission staff].

EDUCATION

Primary and Secondary

City of Waukesha residents are served by the School District of Waukesha (SDW), the seventh largest public school district in the State. SDW provides basic education services to students within six additional municipalities, including the Towns of Brookfield, Delafield, and Genesee, the Village of Waukesha, and the Cities of Brookfield and Pewaukee. Private schools offer additional opportunities for primary and secondary education within the City.

Call Out: According to the National Center for Education Statistics, about 12,340 students were enrolled in pre-kindergarten through 12th grade in SDW schools in 2021-2022.

Post-Secondary

Post-secondary educational facilities within the City include Carroll University, the University of Wisconsin-Milwaukee (UWM) at Waukesha, and Waukesha County Technical College (WCTC). These post-secondary facilities are shown on Map 6.X. Carroll University offers undergraduate programs, graduate programs, professional development resources and courses, and pre-college programs. UWM at Waukesha offers youth classes, bridge programs, two-year associate degrees, four-year bachelor's degrees, and continuing education for professional development or personal enrichment. Within its Waukesha campus and its nearby Pewaukee campus, WCTC offers associate degrees, technical diplomas, apprenticeships, and certificates in 176 programs as well as high school completion and dual enrollment options.

Insert Chart showing Carroll University 2022-2023 Enrollment (more are full-time undergraduates than part-time)

Graphic text: In 2022-2023, the University of Wisconsin-Milwaukee at Waukesha had 810 students enrolled within 29 areas of study.

HEALTH CARE

Health care facilities can provide a community with access to essential services including preventative and routine care as well as treatment to help address health issues. The adequacy of a community's access to health care may be determined by considering a variety of factors. The proximity of transportation network elements serving health care facilities can affect the ease by which residents can travel to and access care. The adequacy of health care may also depend on the type and affordability of services provided and the capacity of facilities providing those services in relation to the area's population and needs.

Health care for City residents is available through hospitals offering a full range of medical services as well as at clinics supporting non-specialized medical services,

► Recommendation: Efficient Development Pattern

This plan recommends that the City promote an efficient development pattern whereas various land uses are spatially distributed and connected to promote the efficient provision of services and utilities while also encouraging active transportation, which can proactively promote health and wellness and ease the burden of care on health care facilities.

Graphic text: As the proportion of City residents 65 years of age and older increases, so will the demand for health care and for access to land use patterns that support overall wellness/increase quality of life.

CEMETERIES

There are two cemeteries or mausoleums within the City. The smallest, Northview Cemetery, is less than 5 acres in size. The inactive, County-owned cemetery is located adjacent to the Waukesha County Airport, and features a memorial constructed in the early 2000s.²² Prairie Home Cemetery officially opened in 1849 and is now the City's largest, encompassing 62 acres in the south-central portion of the City. Prairie Home is a City-owned cemetery and is managed by the City of Waukesha Cemetery Commission.

²² The last burial in Northview Cemetery, which was often used to bury unidentified or unclaimed bodies, occurred in 1951.

GOALS AND POLICIES

Utilities and community facilities provide essential services which enhance the health, safety and general welfare of City residents and visitors. The goals and policies presented in this chapter are intended to provide a framework to guide the future development of the City's utilities and community facilities. This framework should be used by the City to create and evaluate objectives and standards, ensuring that specific programs and projects are consistent with this comprehensive plan.

The levels of service provided by existing community facilities and utilities are seen by the City as sufficient to serve the City's current and projected population at the time this plan was under preparation. It is anticipated that the City will continue to monitor the need for services and will consider any possible changes as may be appropriate in the future.

Goal 6.1

Communicate with City residents and businesses regarding the implications of Lake Michigan as the source of the City's water supply.

Call Out [Opportunity]: The City's water supply transition will establish a new relationship between the City and the Great Lakes and may provide health, economic, and other advantages for residents and businesses.

Policy 6.1.1

Continue to promote water stewardship and conservation, including maintaining and updating the City's water conservation plan.

Policy 6.1.2

Monitor health impacts of the new water supply.

Goal 6.2

Provide the highest quality potable drinking water to City residents and businesses.

Policy 6.2.1

Monitor changes to water mains and private pipes due to any changes in water chemistry and be proactive about addressing any issues that arise.

Policy 6.2.2

Explore creation of programs and incentives to promote replacement of lead pipes and fixtures on private property.

Policy 6.2.3

Prioritize water quality in City schools through regular testing and necessary action to ensure all potential contaminants are below the maximum acceptable level safety threshold.

Policy 6.2.4

Work with the State and County to cease any release of PFAS (per- and polyfluoroalkyl substances)²³ into surface waters and groundwaters, monitor PFAS levels, and work to remediate any PFAS contamination. Encourage Waukesha County Airport to use fire testing methods that do not require the release PFAS.

Policy 6.2.5

Meet the requirements and conditions of the City's Great Lakes Compact Diversion Application.

Goal 6.3

Provide cost-efficient and consistent sanitary sewer service to homes and businesses and return treated wastewater to Lake Michigan via the Root River per the City's agreement with the DNR.

Policy 6.3.1

Consider the implications of the City's sanitary sewer service area in relationship to the City's municipal boundaries and reallocate fiscal resources from horizontal expansion to increased capacity to serve higher density infill and redevelopment.

Call Out [Issue]: The cost of providing sewer service and other municipal services in relation to the taxable value of development is linked to development density among other factors. Big box stores, strip malls, and residential development on larger lots often bring the City less in tax revenue than downtown business areas and walkable residential areas for instance, which have a higher tax density per acre.

²³ PFAS are a group of over 5,000 chemicals used in industrial and consumer applications that are of concern due to their high persistence in the environment, accumulation in the tissue of organisms, and links to adverse health effects in humans and animals.

Call Out [Challenge identified by attendee of Mayor's Breakfast]: "Maintaining quality of services with limited ability to expand residential, commercial and industrial development."

Policy 6.3.2

Remove all areas of the Village of Waukesha not currently served by City sewer and water from the sewer service boundary.

Policy 6.3.3

Monitor and repair sewer lines to address any leaks and prevent inflow and infiltration.

Policy 6.3.4

Continue to consolidate and reduce the number of pump stations throughout the city to reduce energy usage and mechanical failures. Seek opportunities with the City of Pewaukee to consolidate pump stations to reduce duplication of services and costs.

Goal 6.4

Improve the City's stormwater management system and stormwater management policies in partnership with State and Federal agencies and guidelines.

Policy 6.4.1

Prepare for an increase in major storm events with heavy downpours that challenge the stormwater conveyance capacity.

Policy 6.4.2

Work with the DNR and Army Corps of Engineers (ACE) to prepare emergence response management procedures and update floodplain regulations due to climate change.

Policy 6.4.3

Update regulations on stormwater management for new and existing development to institute best practices to reduce runoff quantity and velocity.

Policy 6.4.4

Improve surface water quality by mitigating pollution sources, restoring stream banks, and retrofitting stormwater facilities in older parts of the City.

Policy 6.4.5

Minimize stormwater runoff impacts by constructing stormwater treatment facilities, including green infrastructure, as part of new development and redevelopment projects.

Policy 6.4.6

Enact policies and programs to reduce the amount of impervious, unused surface parking lots and improve existing parking lots with more green areas to reduce runoff and heat islands.

Policy 6.4.7

Seek opportunities to retrofit aging stormwater ponds to improve stormwater quality.

Policy 6.4.8

Continue to meet requirements of the Wisconsin Department of Natural Resources Municipal Separate Storm Sewer System (MS4) permit to reduce polluted stormwater runoff by implementing stormwater management programs with best management practices.

Policy 6.4.9

Promote and expand the use of residential rain barrels to conserve municipal water usage and reduce stormwater runoff and inflow and infiltration into the sewer system.

Policy 6.4.10

Ensure that the City's water, sewer, and stormwater enterprise funds are financially stable and able to meet long-term costs for maintaining City infrastructure. Explore cost-saving measures and intergovernmental partnerships whenever feasible.

Call Out [Challenge identified by attendee of Mayor's Breakfast]: "Replacement of aging infrastructure."

Goal 6.5

Provide an environmentally sound and integrated solid waste management program that promotes waste prevention and progressive goals for waste diversion and recycling.

Policy 6.5.1

Expand education and outreach initiatives and explore additional opportunities to encourage sustainable consumption, resourcefulness, recycling, and increase municipal and residential composting. Explore composting and compost collection opportunities, including promoting backyard and neighborhood

composting, offering low- to no-cost residential compost containers, establishing compost collection at the Drop Off Center, and exploring the feasibility of an at-the-curb collection of compost materials.

Policy 6.5.2

Monitor technological advancements in organic waste processing, including biodigesters that produce energy from methane gas, biodiesel, and sludge dryers that produce fertilizer instead of transporting sludge off site to a landfill.

Policy 6.5.3

Implement the City's 2011 facilities plan and all subsequent amendments.

Policy 6.5.4

Implement green building regulations that require construction and demolition waste management, promote building life-cycle impact reduction, and promote the use of reused and recycled materials. Consider non-monetary incentives, such as zoning ordinance flexibility, to encourage more green building practices.

Goal 6.6

Monitor electric and gas service and collaborate with utility providers to ensure City residents and businesses receive adequate service.

Call Out [Challenge identified by attendee of Mayor's Breakfast]: "The City's electric grid system needs upgrading as a simple rainstorm can cause large power outages."

Policy 6.6.1

Educate residents and businesses on techniques for promoting energy efficiency, conservation, and renewable energy usage.

Policy 6.6.2

Explore opportunities for the City to increase energy efficiency and energy conservation in its operations, including exploring the potential to utilize renewable energy sources.

Call Out [Issue]: While We Energies has increased energy production over the years preceding publication of this report to ensure customers can receive adequate service, equipment failure and other similar unforeseen circumstances have the potential to impact the City's energy supply.

Policy 6.6.3

Streamline the process for homeowners to install residential solar energy systems and other energy efficient upgrades or improvements.

Goal 6.7

Explore opportunities for the City to expand its telecommunications network.

Call Out [Issue]: The importance of telecommunications infrastructure became evident when the global, national, and local economies were disrupted by the emergence of the COVID-19 pandemic in 2020, which significantly changed telecommuting, remote learning, online shopping and home delivery, and other virtual methods of communication and commerce in everyday life.

Policy 6.7.1

Establish ordinances that give careful consideration regarding the siting of new infrastructure, including cellular tower antennas and 5G infrastructure while complying with the *Wisconsin Statutes*.

Policy 6.7.2

Expand fiber optic lines to serve City-owned parks and other City-owned facilities when doing road reconstruction projects.

Goal 6.8

Continue to support the Waukesha Police Department and City of Waukesha Fire Department by ensuring they are well equipped to handle any crime or crisis that may occur as they do the vital work of protecting individuals' safety and wellbeing within the City.

Call Out [Strength identified by attendee of Mayor's Breakfast]: "Good police and fire protection."

GOAL 6.9

Consider and implement strategies to make City operations greener and more sustainable.

Policy 6.9.1

Analyze the potential to transition the City's vehicle fleet to more efficient and lower emission technologies.

Policy 6.9.2

Encourage green purchasing, waste reduction, and recycling, including City facilities and events.

Policy 6.9.3

When updating or constructing new City buildings and facilities, explore the feasibility of adding solar panels or other energy efficient improvements.

Policy 6.9.4

Continue to retrofit less-efficient, City-owned lighting fixtures, including lighting in parks, City buildings and grounds, and streetlights, to LED technologies.

Policy 6.9.5

Explore feasibility of creating a City sustainability manager/coordinator position.

Goal 6.10

Support educational establishments within the City as they provide opportunities for students to develop reasoning, acquire knowledge, build skills, and prepare intellectually to enable individuals of all ages to achieve their fullest potential individually and become successful citizens of their community.

Call Out [Challenge identified by attendee of Mayor's Breakfast]: "Our schools must get better. It's okay, but these should be the best schools in the State."

NOTE: Charts, figures, and tables in this preliminary draft may differ from those in subsequent drafts. These variations, intended to facilitate effective visual communication, are solely graphic in nature and do not indicate changes in the data used to prepare this report.

PRELIMINARY DRAFT

SEWRPC Community Assistance Planning Report No. __

CITY OF WAUKESHA COMPREHENSIVE PLAN, 2ND EDITION

Chapter 7

PARKS, RECREATION, AND CULTURE

This chapter describes parks, recreational areas, and cultural resources in the City of Waukesha and presents related goals and policies as a component of the agricultural, natural, and cultural resources element required by State law.¹ It contains information on parks and open space sites managed by the City, and also discusses opportunities for outdoor recreation including trails in the area. Cultural resources, including historic sites in the City, are also presented.

Park, recreational, and cultural resources are of vital importance to a community's quality of life and their provision can be considered an essential community service. These amenities have a symbiotic relationship with components of the natural resource base. Natural resources establish a foundation for parks, recreation, and culture in the City; parks and recreational and cultural features offer opportunities to engage with nature; which in turn contributes to preserving the natural environment. In addition, various components of the natural resource base can directly and indirectly support opportunities to participate in active and passive recreational activities, like kayaking the Fox River or nature study at Glacial Cone Park, thereby supporting overall public health.

¹ Requirements for the agricultural, natural, and cultural resources element of a comprehensive plan are set forth in Section 66.1001(2)(e) of the Wisconsin Statutes.

Call Out + Graphic: Cultural resources are irreplaceable physical remains or places of past human activity that encapsulate important information about the City's rich history. These resources may include landscapes, buildings, archaeological sites, and other physical objects and areas.

Parks, recreational, and cultural features also provide economic value and promote social welfare by fostering an understanding of people's common experiences. Components of the natural resource base, including surface water and groundwater, varied topography, scenic landscapes, and geological features, have all been influential to the City's early settlement and subsequent growth. Providing park and open space sites that protect the natural resource base and accommodate outdoor recreational and cultural activities is therefore an important public policy objective.

Call Out: Bethesda Park signifies the location and importance of natural springs within the City.

Insert Image: Natural resources within park site, potentially kayaking the Fox River and or visiting Glacial Cone Park

PARK AND RECREATIONAL RESOURCES

The City contains many high quality natural resource amenities including a portion of the Fox River, a number of streams, attractive woodlands and wetlands, and areas of rugged terrain and scenic landscapes. Preserving and protecting these resource amenities and finding ways to accommodate outdoor recreational activities that frequently depend upon the natural resource base are important public policy objectives. Further information about the importance and value of preserving park, recreational, and cultural opportunities are provided later in this Chapter. Goals, objectives, policies, and recommendations related to these resources are also set forth in this Chapter.

► Recommendation: Additional Park and Open Space Sites

This report recommends that the City consider acquiring remaining undeveloped natural areas to preserve as open space sites or for parks that support outdoor recreation. In addition, it is recommended that the City consider strategically acquiring vacant parcels for use as neighborhood parks in areas with unmet park, recreation, or open space needs.

Park, Recreation, and Open Space Sites

The City's Parks, Recreation, and Forestry Department is responsible for managing 50 park and open space sites within the City, which are shown on Map 7.1 and listed in Table 7.1. These City-managed sites are given

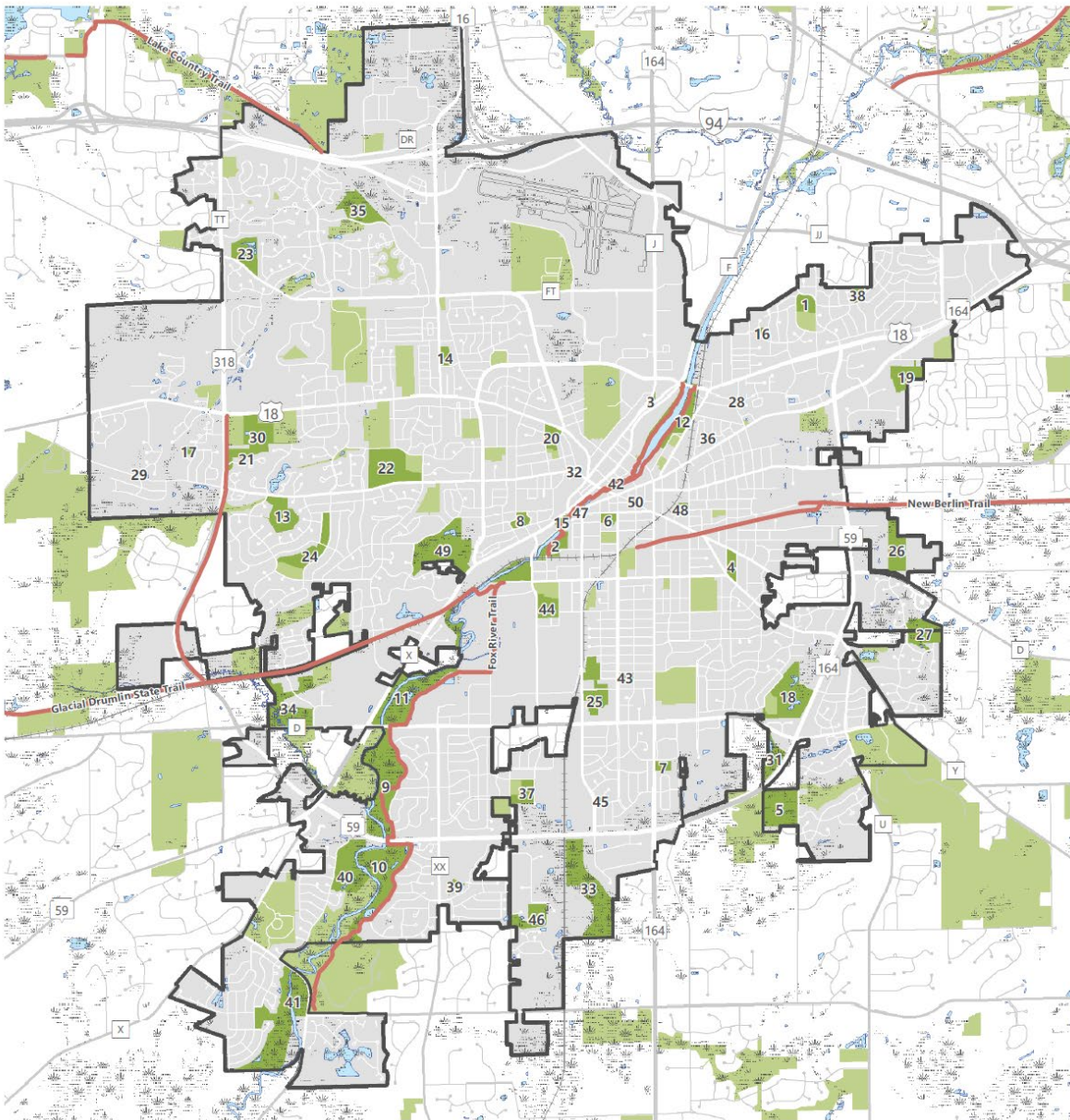
classifications to help City officials and staff, residents, and others to learn more and make informed decisions about recreational opportunities. Due to the multi-use nature of park and open space sites, sites may have more than one classification, definitions of which follow:

- Neighborhood Parks (N) serve as neighborhood social and recreational nodes, providing facilities for active and passive recreation, to create a more involved community
- Community Parks (C) meet community-based recreation needs and preserve unique landscapes and open spaces for public use
- School Parks (S) provide additional open space for recreation, especially for younger residents
- Mini-Parks (M) address limited and unique recreational needs
- Greenways (G) unify park and open space sites in the City into a cohesive, continuous park system
- Sports Complexes (SC) consolidate heavily programmed athletic fields and associated facilities to coordinate larger organized recreational activities
- Areas of Historical Significance (H) denote sites of historical and cultural importance
- Natural Resource Areas (NR) preserve natural resources, open space, and natural aesthetics and include remnant landscapes and visual and spatial buffers
- Undesignated or Under Development (U) sites are not otherwise categorized due to their special nature

As indicated in these park classifications, City park and open space sites provide a means for people to participate in a variety of active and passive recreational activities. Resource-oriented recreational activities depend upon high-quality features of the natural resource base.² Non-resource-oriented recreational activities, which are far less dependent upon natural resources, usually require the provision of man-made recreational facilities.

² Chapter 8 of this report contains information on the City's natural resource base and significant environmental areas.

Map 7.1
Park and Open Space Sites within the City of Waukesha: 2023



- 1 CITY-OWNED PARK AND OPEN SPACE SITE
- PARK AND OPEN SPACE UNDER OTHER OWNERSHIP
- WETLAND
- EXISTING OFF-STREET TRAIL
- SURFACE WATER

Note: City-owned site numbers correspond to Table 7.1. Sites under other ownership are identified in Appendix 7.

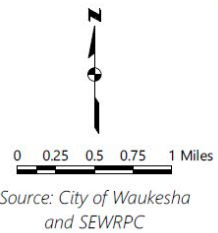


Table 7.1
City-Managed Park and Open Space Sites in the City of Waukesha: 2023

Map 7.1 ID	Name	Classification	Size (acres)	Map 7.1 ID	Name	Classification	Size (acres)
1	Banting Park	N, S	9.2	36	Phoenix Heights Park	M	0.5
2	Bethesda Park	H, N	21.8	37	Prairie Park	N, S	13.6
3	Brickson Park	--	1.8	38	Priedeman Park	N, S	4.9
4	Buchner Park	C, N	7.5	39	River Hills Park	N, S	5.0
5	Cardinal Ridge Park	--	40.0	40	River Valley Park	N, NR	34.3
6	Cutler Park	C, H, N	5.8	41	Rivers Crossing Park	N, NR	89.2
7	David's Park	N, S	4.9	42	Riverwalk Corridor	G	3.0
8	Dopp Park	N, S	6.7	43	Roberta Park	N, S	3.7
9	Fox River Parkway North	G, N	68.1	44	Saratoga Park	S, SC	14.5
10	Fox River Parkway South	G, N	62.9	45	Sentinel Park	M	0.5
11	Fox River Sanctuary	C, NR	95.5	46	Timber Ridge Park	NR	18.3
12	Frame Park	C, H, N	34.5	47	Veteran's Park	M	0.5
13	Glacier Cone Park	--	25.1	48	Waukesha Springs Park	H, N	5.0
14	Grandview Park	N, S	7.7	49	Woodfield Park	N, NR	59.4
15	Grede Park	M	3.3	50	Youmans Park	H, M	0.2
16	Greenway Terrace Park	N, S	1.2			Total	1,146.3
17	Heritage Hills Park	N, S	2.8	Note: Park classifications, defined in Chapter 7 text of the City's comprehensive plan, are as follows:			
18	Heyer Park	C, N, S, SC	49.6	C	Community Park		
19	Hillcrest Park	--	18.5	G	Greenway		
20	Horeb Springs Park	C, H, N	10.0	H	Area of Historical Significance		
21	Kisdon Hill Park	NR	13.0	M	Mini Park		
22	Lowell Park	C, N, S	50.9	N	Neighborhood Park		
23	Meadowview Park	C, N	22.0	NR	Natural Resource Area or Natural Resource Center		
24	Merrill Crest Park	N, S	25.2	S	School Site		
25	Minidiola Park	C, N	26.2	SC	Sports Complex		
26	Missile Park	--	45.6	Source: City of Waukesha and SEWRPC			
27	Moorewood Park	N, NR	22.4				
28	Niagara Park	--	0.4				
29	Oaks Park	--	0.6				
30	Oliver, William R. Youth Sports Complex	C, N, SC	24.8				
31	Pari Park	NR	16.4				
32	Parkview Park	--	0.2				
33	Pebble Brook Park	NR	68.1				
34	Pebble Creek Park	NR	62.7				
35	Pebble Valley Park	N, NR	38.6				

Call Out & Graphic: Resource-oriented activities like hiking and kayaking involve high-quality, natural resource features, like varied topography, woodlands, and surface waters. Non-resource-oriented activities like baseball, soccer, tennis, or basketball generally require development of fields or courts.

The City contains additional public and private park and open space sites and recreational facilities that are owned and managed by other entities such as school sites, County- and State-owned sites, etc. A map and list of these other park and open space sites are provided in Appendix I of this plan, and additional information on all of the park and open space sites and recreational facilities in the City is available in City and County park and open space plans.

Call Out: Waukesha County was in the process of updating its park and open space plan as this report was being prepared. The updated park plan, developed in collaboration with communities and stakeholders within the County, will be a key component of the County's comprehensive development plan and will guide land use decisions pertaining to County-owned parks and open space lands.

Trails

Trails are a common component of park systems and support a variety of recreational opportunities. Trails may serve as a recreational facility within an individual park or open space site, or may provide connections between local and regional, public and private, park and open space sites.

Trails can also serve as a component of the transportation system. By providing connections between a variety of land uses, including residential neighborhoods, commercial areas, community facilities, and other areas, trails provide opportunities for safe, convenient nonvehicular travel.

► Recommendation: Expand Trail Network

The City should explore opportunities to expand its network of off-street trails and create connections between trails, parks, and residential areas. An interconnected trail system provides valuable recreational and transportation access for residents to move throughout the City and connect to adjacent communities.

Water Trails

The portion of the Fox River within the City is designated as a National Water Trail by the National Park Service.³ The trail, known as the Fabulous Fox Water Trail, is part of a distinctive national network of cooperatively supported and sustained, exemplary water trails.

Call Out/Graphic text: The Fabulous Fox! Water Trail, one of seven National Water Trails in Wisconsin, has more than 70 access points over its 158 mile-course from its Waukesha County headwaters to the southern border of Kendall County, Illinois.

Bicycle and Pedestrian Trails

Major off-street bicycle and pedestrian trails within the City include the portions of the Fox River Trail/Riverwalk, the New Berlin Trail, and the Glacial Drumlin State Trail. These trails provide local connections between a variety of Downtown Waukesha destinations and traverse multiple communities within the County to connect with trails in adjacent counties.

Route of the Badger is a regional coalition plan to connect trails throughout southeastern Wisconsin, including those within Waukesha, to create a more complete regional trail network. The planned 700-mile trail network is intended to provide residents with new opportunities for physical activity, tourism, recreation, and stronger businesses along its route. In addition, the New Berlin Trail and Glacial Drumlin State Trail are part of U.S. Bicycle Route 30, a 269-mile east-west bicycle route across the state.

The City also contains shorter bicycle and pedestrian trails that provide more limited connections, like the Fox River Park boardwalk and small trails serving separate, private areas, like the Lodge Apartments. Additional information on bicycle and pedestrian facilities as components of the transportation network is set forth in Chapter 5 of this report.⁴

Call Out: Focus groups attendees identified the lack of safety and connectivity of bicycle and pedestrian trails within the City as an issue.

³ The National Park Service identifies National Water Trails through the National Recreation Trails Program with intention of protecting, restoring, and providing recreational access to navigable surface waters.

⁴ The City's bicycle and pedestrian plan also contains information on the City's trails network.

CULTURAL RESOURCES

Cultural resources are important, irreplaceable physical remains or places of past human activity. These resources may include landscapes, buildings, archaeological sites, and other physical objects and areas.⁵

Historic Places

Historic places can be of significant educational, cultural, recreational, environmental, and economic value. Historic places include individual historic buildings or structures and historic districts comprised of numerous historic buildings or structures. Historic places also include significant archeological features, such as indigenous settlements, effigy mounds, and older cemeteries.

Insert Image: Historic place [To be provided by City].

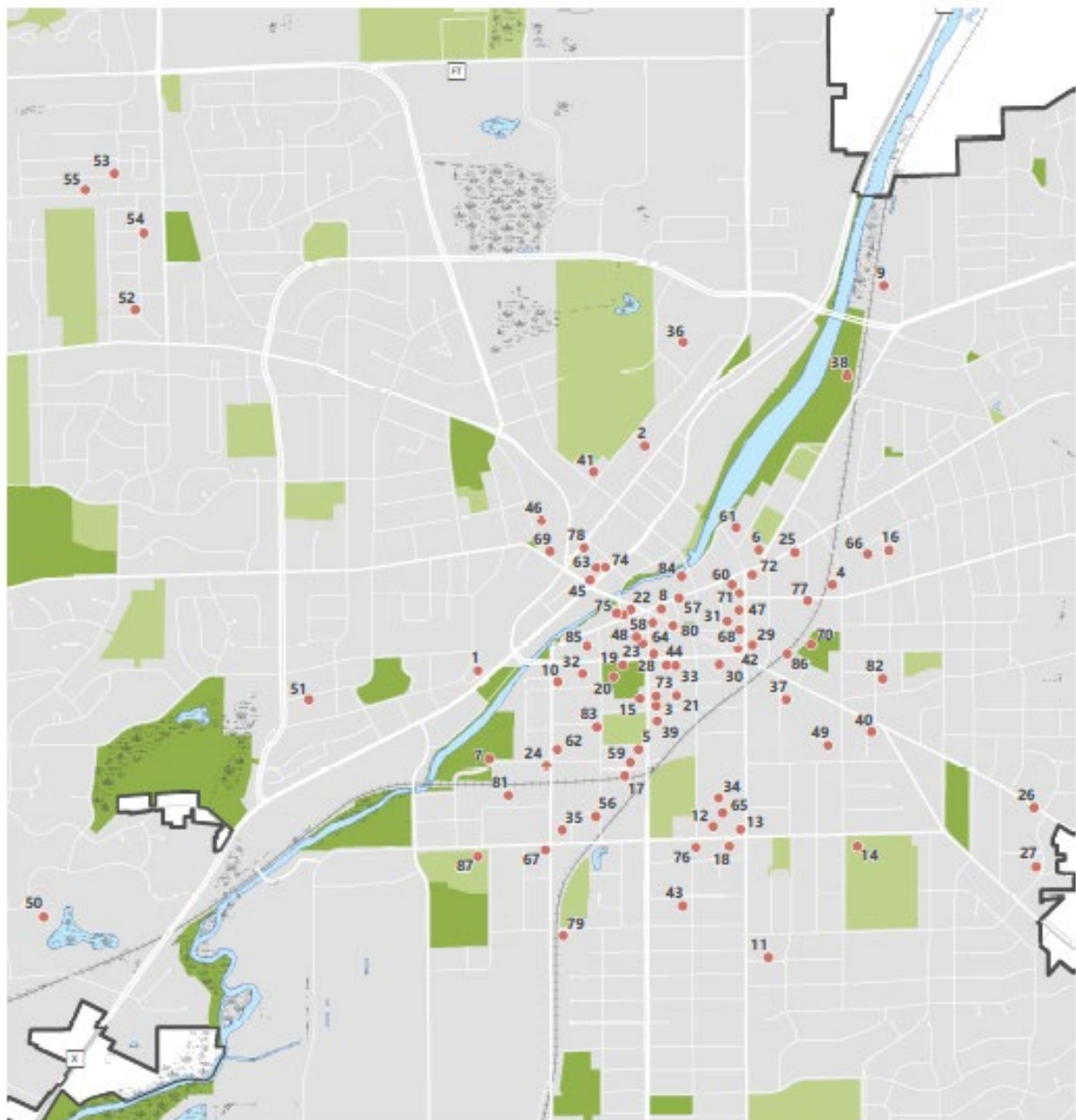
The Wisconsin Historical Society (WHS), the State's federally designated State Historic Preservation Office, partners with communities, organizations, and individuals to identify and preserve Wisconsin's historic places. WHS also administers the State's Certified Local Government program on behalf of the National Park Service and has designated the City as a Certified Local Government. As such, the City is responsible for the following:

- Establishing by ordinance a qualified historic preservation commission
- Enforcing appropriate legislation for designating and protecting historic places
- Maintaining a system for surveying and inventorying local historic resources
- Providing opportunities for the public to participate in the local historic preservation program

In accordance with these responsibilities, the City established a seven-member Landmarks Commission to identify and designate local landmarks, historic districts, and landmark sites within the City. The Commission reviews proposals for renovation, restoration, and repair on historically designated sites and assists property owners to ensure they maintain the historic identity and integrity of their properties.

⁵ *Information on museums, libraries, and other such facilities that house cultural resources is documented alongside community facilities in Chapter 6 of this report.*

Map 7.2
Historic Places Within the City of Waukesha: 2023



	HISTORIC PLACE		WETLAND
	CITY-OWNED PARK AND OPEN SPACE SITE		SURFACE WATER
	PARK AND OPEN SPACE UNDER OTHER OWNERSHIP		

Note: Site numbers correspond to Table 7.2.


 0 0.095 0.19 0.285 0.38 Miles
 Source: City of Waukesha and SEWRPC

Historic Places Within the City of Waukesha: 2023

Map 7.2 ID	Name	Site or District	NRHP Designation ^a
1	Acme/Carleton Spring	S	--
2	Alexander Cook House	S	1983
3	Andrew Frame House	S	1982
4	Arcadian Bottling Works	S	1983
5	Arlington Apartments	S	1987
6	Becker and Schafer Store Building	S	1995
7	Bethesda Spring	S	--
8	Block C Downtown Historic District	D	1995
9	C.A. Welch House	S	1982
10	Camillia Smith House	S	1983
11	Caples Park Historic District	D	1998
12	Carroll College Main Academic Buildings	S	1982
13	Carroll College	S	1982
14	Caspar M. Sanger House	S	1983
15	Charles E. Nelson House	S	1990
16	Charles Merten Building	S	1995
17	Chicago and Northwestern Railroad/ Milwaukee & Madison Passenger Depot	S	1995
18	College Avenue Historic District	D	1982
19	Cutler Homestead Site	S	1988
20	Cutler Mound Group/Church St. Mounds	S	1988
21	David J. Hemlock House	S	1983
22	Downtown/Five Points Historic District	D	1995
23	Dr. David Roberts House	S	1983
24	Dr. F.C. Elliot House	S	1982
25	Dr. Volney L. Moore House	S	1982
26	East Broadway Historic District	D	1982
27	Everett P. Barrett House	S	1995
28	First Baptist Church	S	1983
29	First Congregational Church	S	1992
30	First Methodist Church	S	1983
31	First Presbyterian Church	S	--
32	First Reformed German Church	S	1991
33	Frank H. Putney House	S	1983
34	Ganfield Gymnasium	S	1982
35	George Dwinell House	S	1983
36	Grand View Health Resort/Moor Mud Baths	S	1983
37	Hannah Pratt House	S	1983
38	Hobo Spring	S	--
39	John Howitt House	S	1983
40	John P. Buchner House	S	--

Table continued on following page.

Map 7.2 ID	Name	Site or District	NRHP Designation^a
41	Joseph Fabacker House	S	1995
42	Joseph H. Hadfield House	S	1983
43	Lafin Avenue Historic District	D	1982
44	Lain-Estberg House	S	1974
45	Louis Yanke House/Saloon	S	1982
46	Madison Street Historic District	D	1990
47	Martin Brown House/St. Joseph's Church Convent	S	1983
48	Masonic Temple	S	1983
49	McCall Street Historic District	D	1993
50	Minniska Spring	S	--
51	Moreland Blvd. Pumphouse and Reservoir	S	1996
52	Morey-Andrews House	S	1995
53	Morey-Lewis House	S	1995
54	Morey-Markham House	S	1995
55	Morey-Seidens House	S	1995
56	Morris Cutler House	S	1982
57	National Hotel	S	1982
58	Nickell Building	S	1982
59	Northwestern Hotel	S	1990
60	Old Waukesha County Courthouse	S	1982
61	Patrick J. Buckley House	S	1991
62	Perry Grace House	S	1983
63	Pokrandt Blacksmith Shop	S	1983
64	Putney Block	S	1982
65	Rankin Hall Old Main House	S	1982
66	Resthaven Hotel	S	1982
67	Robert O. Jones House	S	1982
68	Samuel D. James House	S	1996
69	Senator William Blair House	S	1983
70	Silurian Mineral Springhouse - Monument & Spring	S	1982
71	St. Joseph's Church Complex	S	1982
72	St. Matthias Episcopal Church	S	1983
73	Totten-Butterfield House	S	1984
74	W.T. Lyle's Building	S	1982
75	W.T. Lyle's Building	S	1983
76	Walter S. Chandler House	S	1982
77	Waukesha Asbestos Company	S	--
78	Waukesha Mfg. Co./Waukesha Motor Co.	S	--
79	Waukesha Newhall Avenue Pump House and Reservoir	S	1999
80	Waukesha Post Office	S	1983

Table continued on following page.

Map 7.2 ID	Name	Site or District	NRHP Designation^a
81	Waukesha Pure Food Company	S	1983
82	William A. Nickell House	S	1982
83	William G. Mann House	S	1983
84	William P. Sloan House	S	1982
85	Wisconsin Avenue Historic District	D	1982
86	Wisconsin Central, Ltd. Depot	S	--
87	Wisconsin Industrial School for Boys	S	1987

^a Historic places with no year are locally designated landmarks not listed on the National Registry of Historic Places (NRHP).

Source: City of Waukesha, Wisconsin Historical Society, and SEWRPC.

Call Out: There are 78 historic sites and nine historic districts in the City, many of which are concentrated around Downtown Waukesha.

GOALS AND POLICIES

Parks, recreational areas, and cultural resources serve many important functions in the community, including enhancing quality of life, boosting economic value, and promoting social welfare. The goals and policies presented in this chapter are intended to provide a framework to guide the future development of the City's parks, recreational facilities, and cultural resources. This framework should be used by the City to create and evaluate objectives and standards, ensuring that specific programs and projects are consistent with this comprehensive plan.

GOAL 7.1

Protect the City's natural resource base and cultural amenities within park and open space sites.

Call Out: Many of the City's high-quality natural resource amenities are located within park and open space sites.

Policy 7.1.1

Preserve, maintain, and promote the City's historic resources, including local landmarks and National Register of Historic Places resources, within public or private park, recreational, cultural, or open space sites.

Policy 7.1.2

Continue to provide cultural and arts programming within the City, including the Les Paul Performance Center at Cutler Park.

Policy 7.1.3

Preserve, maintain, and identify opportunities to add public art to the City’s parks and municipally owned properties.

Policy 7.1.4

Focus on strategic acquisition of property near existing or proposed parks and other properties that will protect additional natural resources.

Call Out + Graphic: Components of the natural resource base offer unique opportunities for active and passive outdoor recreation and support soccer, hiking, kayaking, and nature study, as well as the Riverwalk and formal gardens.

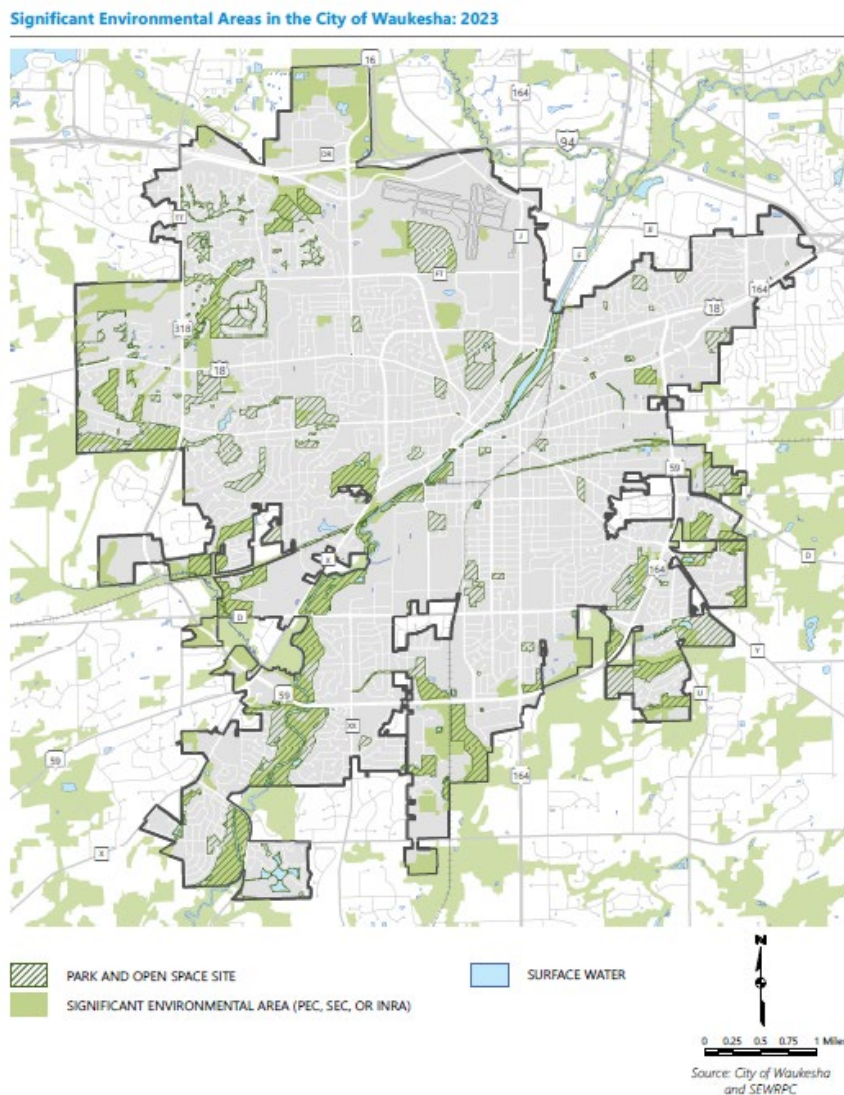


Figure 1 Park and open space sites from land use policy map

GOAL 7.2

Continue to provide, and expand where and when possible, park and open space sites that support recreational opportunities and opportunities to connect with nature while respecting each sites' environmental values.

Call Out: Keeping to its commitment to create a sustainable and inviting urban landscape, the City of Waukesha hosts numerous parks and open spaces.

GOAL 7.3

Provide park and open space sites sufficient to meet all residents' needs.

Policy 7.3.1

Ensure that new, expanded, or renovated park facilities are ADA-compliant⁶ and seek opportunities to provide comparable and like experiences for people of all abilities. Seek to improve ADA accessibility for existing facilities whenever possible.

Policy 7.3.2

Monitor current park and recreation trends in park and recreational facilities to meet the needs of people of all ages and abilities.

Policy 7.3.3

Identify opportunities for expanding aquatic facilities and amenities throughout the park system, including centrally located splash pads, therapeutic pools, and other aquatic amenities for people of all ages and abilities.

Policy 7.3.4

Develop the Riverwalk Plaza park along Bank Street, including a small performance space for music and other community events. Develop programming for this park to make the space active throughout the year.

Policy 7.3.5

Expand infrastructure across the entire park system, including fiber optic cable to accommodate the broadband internet requirements needed to host community events at all neighborhood parks.

⁶ ADA-compliant sites and facilities satisfy requirements set forth by the 1990 Americans with Disabilities Act.

Images: ADA-compliant recreational facilities; Riverwalk

Policy 7.3.6

Promote urban fishing in Woodfield and Heyer Park ponds and the Fox River. Explore additional opportunities to enhance urban fishing throughout the park system.

Policy 7.3.7

Explore opportunities for an outdoor multi-generational outdoor fitness court, prioritizing a location that is easily accessible for bicyclists and pedestrians.

Policy 7.3.8

Seek a City park site for a designated archery range.

GOAL 7.4

Design the City's park system to build upon and complement public and private park and open space sites owned by other groups or agencies.

Policy 7.4.1

Work with the School District of Waukesha to ensure that District-owned parks and recreational facilities are available to City residents outside of school hours.

Policy 7.4.2

Explore opportunities to partner with other institutions, including the Waukesha YMCA, Carroll University, and UW-Milwaukee at Waukesha, to expand recreational opportunities through use agreements.

GOAL 7.5

Establish an interconnected City-wide system of bicycle and pedestrian trails.

Policy 7.5.1

Prioritize the creation of off-street trails and utilize on-street routes to complete connections as necessary.

Policy 7.5.2

Improve connections between neighborhoods and parks, commercial destinations, schools, and other neighborhoods while aiming to have all residents within a 10-minute walk to a City park without barriers.

Policy 7.5.3

Continue creating links with trails located outside of the City and expand City segments of larger trail systems, including the Rails-to-Trails Conservancy Route of the Badger trail system and U.S. Bicycle Route 30 (USBR 30).

Policy 7.5.4

Continue implementing the City's bicycle and pedestrian plan. Create a bicycle and pedestrian advisory committee to guide and prioritize implementation of and to take the lead on preparing an update to the 2012 *Bicycle and Pedestrian Facilities Plan*.

Image: Bike trail

Call Out: Trails within and between greenways and other park sites support residents' mobility for recreation and for accessing essential daily needs.

Policy 7.5.5

Expand the system of off-street bicycle and pedestrian trails in the City by using existing abandoned or underutilized utility easements and rights-of-way, prioritizing the Wisconsin Electric Power Company (We Energies) right-of-way that runs from Silvernail Road east of University Drive to Summit Avenue at Moreland Boulevard.

Policy 7.5.6

Expand bicycle route signage to enhance the user experience on both on- and off-street bicycle routes. Signage should provide guidance on how to navigate the routes and connections but also provide directions and distance to popular destinations including Downtown Waukesha, Carroll University, UWM at Waukesha, and to other parks and cultural amenities within the City.

Policy 7.5.7

Regularly update the City's bicycle route map and provide both print and digital versions of the maps.

GOAL 7.6

Create a strategy for using the City's park and open space sites, recreational facilities, and cultural amenities to enhance economic development opportunities.

Policy 7.6.1

Continue developing the multi-field sports and recreation complex at Mindiola Park, which will draw visitors and spending from outside of the City.

Policy 7.6.2

Explore other opportunities for facilities and events that draw participants and spectators from outside of the City.

Policy 7.6.3

Use the City's and County's parks and open space amenities as a marketing tool to attract new businesses and residents.

Policy 7.6.4

Take advantage of the City's location along the Glacial Drumlin and New Berlin trail systems by promoting bicycle tourism. Consider establishing additional wayfinding signs from these trails to the City's historic downtown and to other local commercial areas.

Call Out: The City recognizes that parks and cultural resources can be of significant educational, historical, recreational, environmental, and economic value.

Policy 7.6.5

Continue to place public art in City parks, considering designation of an individual sculpture park or utilizing public art/sculptures to activate parks throughout the City.

Policy 7.6.6

Continue to pursue sponsorships, public-private partnerships, and other alternative revenue sources to support parks, recreational facilities, and trails within the City.

GOAL 7.7

Create opportunities for community engagement in parks through programming and special events.

Call Out: City residents would like community events and other such programming to activate park and open space sites throughout the City.

Policy 7.7.1

Activate parks throughout the City through community events and programming. As technology infrastructure is extended to parks, seek to hold more community events in parks in all areas of the City.

Policy 7.7.2

Support event programming and settings that best meet the needs of young children, the aging population, and people with special needs.

Call Out: Some park and open space sites and community events are not designed with consideration for people of all ages and abilities.

Policy 7.7.3

Establish a community beer garden that operates through the warmer months. Seek opportunities to rotate the smaller neighborhood beer gardens into parks throughout the City as infrastructure is updated to support them.

Call Out: Park and open space sites provide facilities to support active and passive recreation and are important to creating a more cohesive and engaged community. Programming in neighborhood parks that can promote community engagement and cohesion include gatherings centered around markets, music, arts, food, and other services or entertainment.

GOAL 7.8

Promote development of the Fabulous Fox! Water Trail as part of the National Park Service's National Water Trails System.

Policy 7.8.1

Collaborate with local partners and communities to promote recreation-oriented development along the Fabulous Fox! Water Trail.

Image: Fox River within the City

Policy 7.8.2

Add signage to the Fabulous Fox! Water Trail showing portage locations and destinations.

Policy 7.8.3

Provide additional parking at launch sites along the Fox River and expand opportunities for ADA-accessible launch sites.

GOAL 7.9

Use the City's park and recreation system plans to establish the City's vision for park and open space sites and recreational facilities.

Policy 7.9.1

Regularly update the City's park and recreation system plans.

Call Out: Historic places include individual historic structures or sites, districts comprised of numerous historic structures or sites, and significant archeological features.

GOAL 7.10

Establish policies and programs, and utilize the City's Landmarks Commission, to protect and maintain historic places, including local landmarks, historic districts, and properties listed on the National Register of Historic Places, to foster the City's unique aesthetic and character.

Policy 7.10.1

Develop programs to support the preservation of historic sites and districts within the City.

Policy 7.10.2

Update inventories and surveys of historical sites and districts within the City in conjunction with the Wisconsin Historical Society as necessary.

Policy 7.10.3

Continue to maintain and seek to develop and fund additional programs to support the preservation of historic sites and districts within the City.

Policy 7.10.4

Continue to seek opportunities to nominate eligible sites and districts for inclusion on the National Register of Historic Places or to designate them as local landmarks.

Policy 7.10.5

Maintain the City’s designation as a Certified Local Government by the State of Wisconsin Historical Society.

Policy 7.10.6

Preserve, maintain, and promote historic resources within the City’s parks, including Hillcrest, Cutler, and Bethesda Parks.

Policy 7.10.7

Create and adopt design guidelines for downtown Waukesha, including best practices for maintaining and respecting the character of downtown’s historic resources.

Policy 7.10.10

Use new and emerging technology, such as e-books, interactive maps, and dedicated apps, to educate the public on the City’s historic resources.

Policy 7.10.9

Encourage and strive for new development to feature long-lasting, well-designed architecture that will stand the test of time.

Image: Historic place marker

Call Out: Cultural resources, including historic places, are important for their value in preserving an area’s heritage and identity, promoting civic pride, contributing to quality of life, and for hosting heritage tourism.

GOAL 7.11

Establish policies that recognize historic preservation as an economic development tool that promotes heritage tourism.

Call Out: Properly preserving cultural resources can promote sound development and maintain community identity.

NOTE: Charts, figures, and tables in this preliminary draft may differ from those in subsequent drafts. These variations, intended to facilitate effective visual communication, are solely graphic in nature and do not indicate changes in the data used to prepare this report.

PRELIMINARY DRAFT

SEWRPC Community Assistance Planning Report No. __

CITY OF WAUKESHA COMPREHENSIVE PLAN, 2ND EDITION

Chapter 8

NATURAL RESOURCES

This chapter describes natural resources in the City of Waukesha and presents related goals and policies as a component of the agricultural, natural, and cultural resources element required by State law.¹ It contains an inventory and descriptive analysis of natural resources in the City, including information pertaining to climate and air quality. Natural resources are defined under State law to include groundwater, woodlands, environmentally sensitive areas, threatened and endangered species, stream corridors, surface water, floodplains, and metallic and nonmetallic mineral resources.

Inventory data in this chapter has been collected through regional land use and natural area planning activities conducted by the Southeastern Wisconsin Regional Planning Commission. Additional inventory data has been collected from and by the City, Waukesha County, and by State and Federal agencies, including the Wisconsin Department of Natural Resources (WDNR); the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP); the State Historical Society of Wisconsin; and the U.S. Department of Agriculture (USDA).

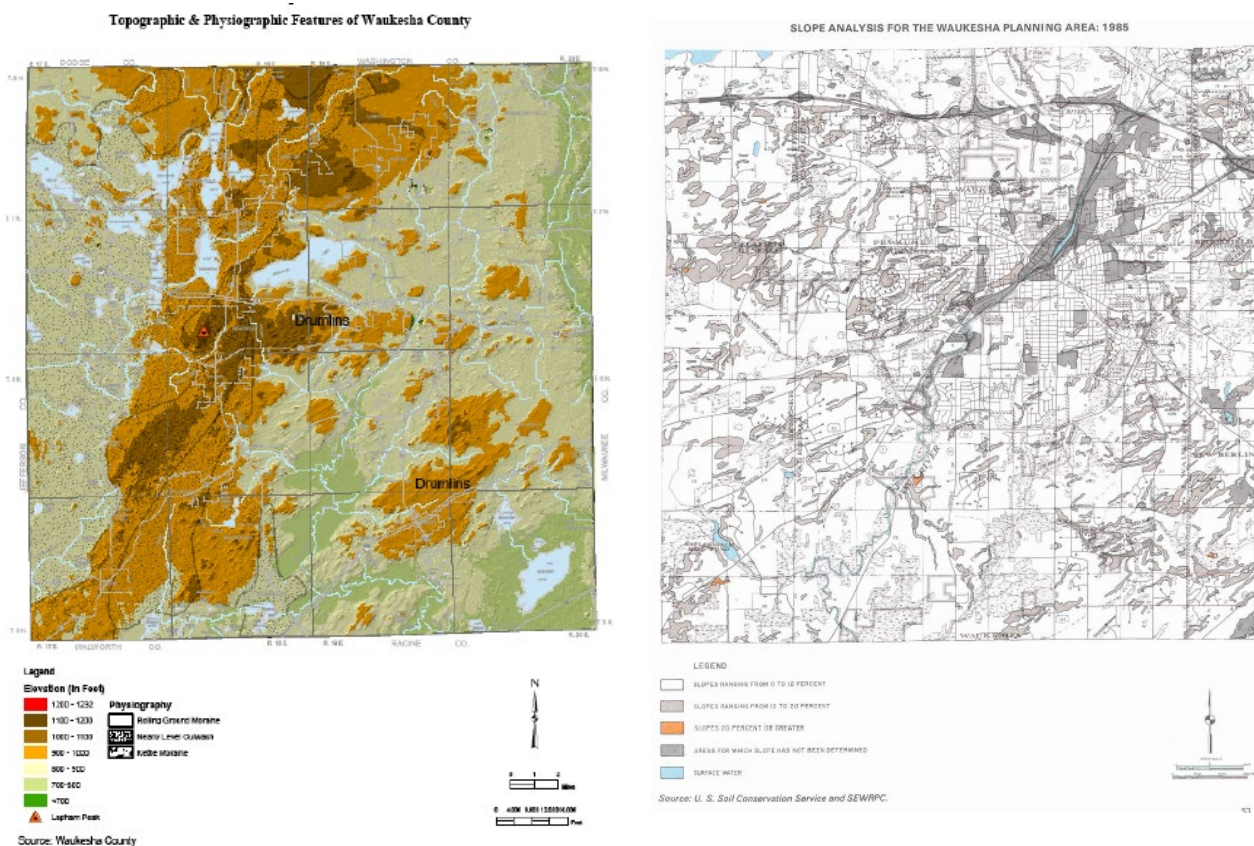
Call Out: Despite being one of Wisconsin's more urbanized areas, the City contains a variety of high-quality natural resource amenities.

¹ Requirements for the agricultural, natural, and cultural resources element of a comprehensive plan are set forth in Section 66.1001(2)(e) of the Wisconsin Statutes.

PHYSIOGRAPHY, GEOLOGY, AND SOILS

Southeastern Wisconsin's physiographic features, or surface landforms, were determined largely by repeated stages of glaciation, the last of which ended about 10,000 years ago. The resulting topography of the City includes landforms like recessional moraines and drumlins. Glaciation also contributed to the City's geology. Geologic properties can influence how land is used as geologic conditions, including the depth to bedrock, may impact the cost and feasibility of building site development and provision of public facilities and infrastructure.

Update topography map for planning area.



The City is in proximity to one of the State's most dominant physiographic and topographic features: the Kettle Moraine. Extending through Washington, Waukesha, and Walworth Counties, the Kettle Moraine, or Interlobate Moraine, is a complex system of kames (crudely stratified conical hills), kettle holes (depressions), and eskers (long, narrow ridges of drift) that formed between the Green Bay and Lake Michigan Lobes of the continental glacier, which moved across southeastern Wisconsin in a general northeast-southwest direction from its origin in Canada.

Geologic features of the City include several layers of bedrock formations. Silurian dolomite (primarily Niagara dolomite) is a pervious layer located near the ground surface and under shallow, unconsolidated glacial deposits. Ordovician dolomite, sandstone, and shale can be found beneath the Silurian dolomite. This layer can include a relatively impervious layer of Maquoketa shale. Below these layers are Cambrian sandstone and, continuing downward, Precambrian crystalline rocks.

In portions of the City, bedrock is situated within 100 feet of the ground surface. Areas with such a shallow depth to bedrock may pose physical or economic limitations for most types of development. However, locations with high bedrock may also have potential for the extraction of nonmetallic minerals. Other portions of the City contain unconsolidated glacial deposits, alluvium, and marsh deposits, which have a combined thickness exceeding 100 feet in much of the County,

Nonmetallic Mineral Resources

The geologic attributes of an area can be of specific importance in the case of nonmetallic minerals, limited and irreplaceable resources that are of significant economic value to urban development. In Southeastern Wisconsin, marketable nonmetallic minerals include sand, gravel, and crushed limestone or dolomite, which are used for structural concrete and road building; peat for gardening and horticulture; and dimension stone uses in buildings, landscaping, and monuments. The locations of mineral resource deposits within the Region were determined primarily by glacial geology.

According to the U.S. Geological Survey, development in the United States requires an annual per person average of 9.5 tons of construction aggregate, including sand, gravel, crushed stone, and recycled crushed concrete. One ton of aggregate, which is expensive to transport due to its weight and bulk, can more than double in cost when hauled 25 miles or more. There are no active extraction sites within the City as this report was being developed and the City has no plans to preserve potential sources of crushed or building stone.

Call Out: Wise management of nonmetallic mineral resources is important to ensure an adequate supply of such resources at a reasonable cost for new development and for future maintenance of existing development.

Significant Geological Sites

The City contains one significant geological site as identified by a survey of scientifically and historically important geological sites.² The site, Carroll College Quarry, was the first quarry opened in the County and was visited by many prominent 19th-century geologists. Carroll College Quarry is classified as being of statewide or greater significance and is the source of large fossil collections, including those of major museums across the Nation. Waukesha Dolomite is the type of section³ of the site, which features covered rock exposures.

Map: Significant Geological Sites to be completed by Commission staff

Soils

Soils have varying physical, chemical, and biological properties. These properties, attributable to the interaction of glacial deposits and topography, climate, plants, animals, and time, exhibit wide spatial variations. Detailed soil surveys map the geographic locations of various types of soils based on their physical, chemical and biological properties. As soil properties can exert a strong influence on how people use land, soil surveys can be extremely useful for to support regional planning, engineering, agricultural, and resource conservation efforts in determining how certain soils may be best used or managed.⁴ A soil survey containing information relative to the City⁵ shows a large variety of different soil types in the Southeastern Wisconsin Region.

² *Dr. Joanne Klussendorf, of the University of Illinois-Champaign-Urbana, and Dr. Donald G. Mikulic, of the Illinois State Geological Survey, conducted a survey of bedrock sites using published literature, library archives of manuscripts, letters and unpublished reports, and field notes and maps of earlier geologists and new field examinations to compile a list of significant geological sites known to have existed over the last 150 years. The survey identifies 30 significant geological sites located in Waukesha County, including nine sites of statewide or greater significance (GA-1), eight sites of countywide or regional significance (GA-2), and 13 sites of local significance (GA-3).*

³ *A geologic type section defines a unit stratotype, a reference section of a geologic area that presents the most complete, representative profile of that geologic area's characteristics.*

⁴ *The Soil Conservation Service completed a soil survey of the Southeastern Wisconsin Region under contract to the Regional Planning Commission, the results of which are in SEWRPC Planning Report No. 8, Soils of Southeastern Wisconsin, and in five reports published by the Soil Conservation Service.*

⁵ *A Soil Survey of Milwaukee and Waukesha Counties, published by the U. S. Department of Agriculture, Soil Conservation Service in 1971.*

Call Out: The properties of soils affect their capabilities. Some soil types better support urban development than others whose properties may affect the feasibility and cost of building site development or the provision of public facilities. Soils not suitable for urban development include hydric soils, which are significant for their ability to support water management, as in areas with wetlands.⁶

There are four soil associations within the City of Waukesha.⁷ Two of the four soil associations, which make up about 86 percent of the City's total land area, feature good to well-drained soils and can support urban development.⁸ The other two associations, which account for the remaining 14 percent of the City's total area, feature hydric soils, i.e., soils that are saturated with water or have a water table at or near the surface. Such very poorly drained soils are generally unsuitable for development unless they are drained⁹ or are best undeveloped and left in open space, where they serve as important locations for wetland restoration, as wildlife habitat, and for stormwater detention.¹⁰

WATER RESOURCES

Water resources sustain communities, serving as a resource for direct consumption and supporting the plants, animals, ecosystems, and economies upon which communities rely.

⁶ *Other soils not ideal for development are soils that are well-suited for producing certain crops, including highly productive soils as determined by a classification system established by the Natural Resources Conservation Service (NRCS).*

⁷ *A soil association is a landscape with a distinctive proportional pattern containing one or more major soil types and at least one minor soil type, as classified by the NRCS. Each association is named after the landscape's major soils.*

⁸ *About 80 percent of the City's land area consists of the Hockheim-Theresa Association, silty clay loam and clay loam that hosts a mix of native prairie grasses and woodlots. About 6 percent of the City is relatively flat to slightly sloping topography featuring the Warsaw-Lorenzo Association, which also supports native prairie grasses and a few scattered oaks.*

⁹ *About 3 percent of the City consists of marshy depressions along the Fox River and Pebble Creek that host native reeds and sedge and feature the Houghton-Palms-Adrian Association.*

¹⁰ *Approximately 11 percent of City land in proximity to the Fox River features the Montgomery-Martinton-Hebron-Saylesville Association, which contains soils that are often wet and host water-tolerant grasses and trees.*

Groundwater

Groundwater, an extremely important component of the natural resource base, is present in reservoirs or aquifers within stratum¹¹ of varying depths. Three major aquifers underlie the City. From the land's surface downward, the first of these major aquifers is composed of sand and gravel deposits in glacial drift. The second is the shallow dolomite strata in the underlying bedrock. Due to their proximity to the land's surface and to their hydraulic connection, these two aquifers are commonly referred to as the shallow aquifer. The third aquifer from the land's surface downward is the Cambrian and Ordovician strata, which is composed of deeper sandstone, dolomite, and shale. This third aquifer is referred to as the deep aquifer. The shallow and deep aquifers are separated by a relatively impermeable layer of shale in the Maquoketa Formation.

Groundwater in any stratum is subject to a continuous process of natural and artificial forces. Groundwater in the shallow aquifer system generally moves from beneath topographic high areas, or higher elevations, to lower elevations, including nearby lakes and streams. Groundwater therefore sustains lake levels and wetlands and provides the perennial base flow of the streams. The primary means by which groundwater is naturally recharged is by precipitation that escapes evapotranspiration or runoff and percolates into the ground. Shallow aquifers are generally replenished by precipitation relatively easily.¹² The infiltration of precipitation to the deep aquifer, however, is impeded by the relatively impermeable Maquoketa Formation. Thus, the deep aquifer is recharged primarily by the slow downward leakage of water from the overlying, shallow aquifers through the Maquoketa Formation or by infiltration of precipitation in western portions of the County where the Maquoketa Formation does not separate the aquifers.

The primary artificial force affecting groundwater relates to the use of groundwater as a water supply source. Man-made wells make groundwater accessible for residential, industrial, and municipal development. when, Withdrawals from wells create drawdown and reduce groundwater levels when more

¹¹ *Stratum are comprised of a layer or a series of layers of sediment or rock.*

¹²*Much of the groundwater in shallow aquifers originates from precipitation that has fallen and infiltrated the ground within a radius of 20 or more miles from where it is found. Approximately 80 percent of that precipitation is estimated to be lost to evapotranspiration and a small proportion flows into streams as stormwater runoff; the remainder infiltrates the ground and replenishes groundwater. Estimates approximate that an average of 10 to 15 percent of annual precipitation contributes to recharging groundwater in shallow aquifers.*

groundwater is extracted from aquifers than is replenished. As noted in the previous reports,¹³ groundwater levels in aquifers underlying the City and County have declined due to artificial uses.¹⁴ Artificial groundwater withdrawals also divert groundwater from surface waters, reducing baseflows. In the past, high-capacity wells that withdraw groundwater from the deep sandstone aquifer have allowed for the diversion of groundwater from surface waters to be more widely distributed. Wells that access groundwater from shallow aquifers can increase groundwater diversion from surface waters as shallow wells are more localized than deep aquifer wells.

Call Out: The City was in the process of transitioning its water supply source away from groundwater to water from Lake Michigan as this report was being completed. This shift is anticipated to have a positive effect on recharge of aquifers underlying the City by significantly reducing groundwater withdrawals.

In addition to groundwater loss, natural and artificial forces can contribute to groundwater degradation. Artificial causes of groundwater degradation from human activities can lead to contamination from bacteria, nitrate, pesticides, and volatile organic compounds (VOCs). While human activities could be adjusted to reduce or eliminate such artificial causes, groundwater degradation caused by natural factors may be more difficult or impossible to control. An example of one such water quality factor is water hardness. Water hardness is an effective, initial indicator of water quality.¹⁵ While there are no national or state standards to quantify acceptable levels for water hardness, groundwater beneath the City is considered very hard.¹⁶ It is worth noting that such hard water requires softening for most purposes and

¹³ Including SEWRPC Technical Report No. 47, Groundwater Recharge in Southeastern Wisconsin Estimated by a GIS-Based Water-Balance Model, (2008) and the City's 2009 comprehensive plan.

¹⁴ Groundwater levels are also susceptible to natural forces, including draughts.

¹⁵ Dissolved-solids concentration is also an effective initial indicator of water quality. According to SEWRPC Technical Report No. 37, Groundwater Resources of Southeastern Wisconsin (June 2002), the dissolved-solids concentration of groundwater underlying the City did not exceed the recommended maximum dissolved-solids concentration for certain uses.

¹⁶ Water hardness, reported in terms of equivalent concentration of calcium carbonate in milligrams per liter (mg/l), under 100 mg/l is generally considered suitable for domestic uses. Groundwater within aquifers underlying the City has a concentration exceeding 180 mg/l.

that water softening devices discharge into the environment chlorides and sodium, which are extremely difficult and expensive to remove.¹⁷

Another indicator of groundwater quality is the concentration of minerals and other elements in groundwater. These naturally occurring elements dissolve from bedrock into groundwater as water moves through the aquifer. Measures of one such element, radium, in the aquifer underlying a portion of the Region, including the City, have trended upwards over years preceding publication of this report. In some instances, measures have exceeded federally accepted limits for certain groundwater uses.¹⁸ As noted in a 2013 report, the deep aquifer underlying the City has had significant water quality issues and severe groundwater level drawdown. The shallow aquifer underlying the City, which feeds sensitive surface water resources, was also found to have had water quality issues.¹⁹

The transition to Lake Michigan water as the City's water source is anticipated to significantly reduce water softener usage in the City, which will be a permanent benefit of the City's new water supply. While studies have found that many people object to water hardness of more than 9 grains per gallon, the City's groundwater supply has had an average hardness of approximately 21 grains per gallon. Water from Lake Michigan, however, has a hardness of 8 grains per gallon and should be comfortable for most people without the use of a water softener.

Lakes and Streams

Surface water resources, including lakes and streams and their associated wetlands, floodplains, and shorelands, and groundwater resources are interrelated components of a single hydrologic system. Like groundwater, surface waters are susceptible to degradation through improper land use development and management. Pollutant loads, including nutrient loads, which enter from malfunctioning and improperly located onsite waste treatment systems, from sanitary sewer overflows, from construction and other urban runoff, and from careless agricultural practices can degrade surface water quality. The water quality of lakes and streams may also be adversely affected by the excessive development of riparian areas and by

¹⁷ A Commission study of the environmental impacts of the use of chloride on the surface water and groundwater resources of the Region was underway as this report was being prepared.

¹⁸ Additional information is presented in Chapter 4 (Utilities and Community Facilities) of this report.

¹⁹ CH2M HILL, City of Waukesha Water Supply Service Area Plan (October 2013).

the filling of peripheral wetlands, which remove valuable nutrient and sediment traps while adding nutrient and sediment sources.

The Wisconsin Department of Natural Resources (DNR) is responsible for assessing the quality of the State's water resources under the Clean Water Act. This process includes identifying water resources by type, identifying specific, selected uses for each water resource, and establishing water quality benchmarks. This process also includes monitoring the State's surface waters and comparing monitoring data to benchmarks. The DNR then uses this data to ascertain whether a water resource is healthy, impaired, or restored in accordance with requirements set forth by the Environmental Protection Agency (EPA).

Call Out: The DNR monitors three major streams within the City, including the Fox (Illinois) River, Frame Park Creek, and Pebble Creek.²⁰

Fox River

The Fox River may be the City's most historically significant natural resource feature. The river supported the small game and fish upon which Native Americans, the area's first inhabitants, relied. In the mid-1800s, the City's earliest European-American development initiated along the river in what is now the City's historic downtown, the central core from which the City expanded. The Fox River runs a total of 202 miles from its headwaters in southern Washington County and northern Waukesha County to its confluence with the Illinois River in Ottawa, Illinois. Through the City, one of the river's most urban extents, the river hosts urban riverwalk trails and plazas and access to natural resource areas via a water trail, boardwalk, and other recreational trails.

► Recommendation: Fox River Development

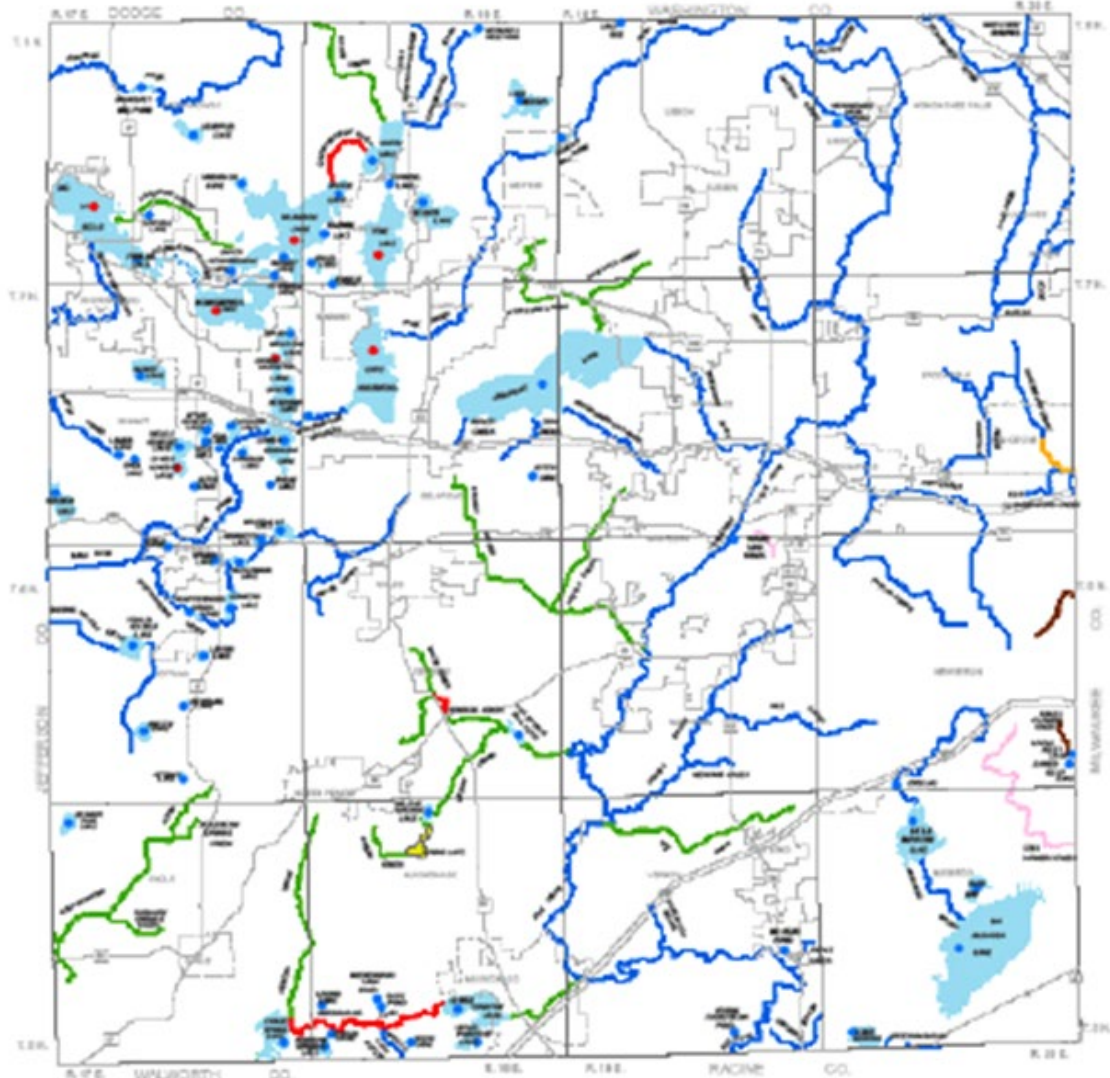
In recognition of the Fox River as a valuable natural resource with significant cultural, historical, natural, and recreational value, this plan recommends that carefully designed urban development leverage the Fox River as a focal point while also protecting the river's water quality and its importance to the natural environment and native species.

The DNR recognizes the Fox River as an aquatic area of countywide or regional significance and has designated the river as a Rare Species Habitat (RSH), an aquatic area that supports endangered,

²⁰ For planning purposes, these surface waters are classified as major streams. Major streams are perennial streams that maintain, at a minimum, a small, contiguous flow throughout the year, except under unusual drought conditions.

threatened, or special concern species. The river is identified as a Warm Water Sport Fish Community and is expected to support aquatic life. The river is also considered appropriate for recreational activities like canoeing, kayaking, and fishing.

**Map III-6
Surface Water Resources of Waukesha County**



WATER RESOURCE CLASSIFICATION CODES

- Outstanding Resource Water (ORW)
- Exceptional Resource Water (ERW)
- Lake Supports Fish and Aquatic Life (FAL)
- Lake Supports Cold Water Species (Cold)
- Cold Water Streams (Cold)
- Fish and Aquatic Life (FAL)
- Special Variance Waters
- Limited Forage Fish (LFF)
- Limited Aquatic Life (LAL)

Source: WDNR, SEWRPC & Waukesha County



At the same time, the Fox River has had a specific restricted fish consumption advisory in effect for polychlorinated biphenyls (PCBs) since 1998. The statewide general fish consumption advisory applies to all (non-Great Lakes) waters of the State based on the statewide distribution of mercury in fish and species differences in mercury concentrations. The Fox River is also listed on the DNR's inventory of impaired waters, as is Frame Park Creek. This recognition is due to the water bodies having low dissolved oxygen, high levels of total phosphorous, and turbidity caused by higher levels of sediment in the water column.

Frame Park Creek

Frame Park Creek is a spring fed-stream one mile in length that is supported by surrounding wetlands. Located northeast of downtown adjacent to primarily industrial uses, a portion of the stream is underground. The stream is daylighted in Frame Park prior to draining into the Fox River. The DNR has designated the stream as a Limited Forage Fishery as it is capable of supporting a limited community of forage fish.

Pebble Creek

Pebble Creek is classified as a Class 2 trout stream, which recognizes the stream's limited ability to support natural reproduction and the substantial survival of trout from one year to the next. Stocking is often used to maintain a Class 2 trout stream for desirable sport fishery. Brandy Brook which is a tributary to Pebble Creek which flows directly into the Fox River; both tributaries have the potential to support a cold-water community.

Watersheds

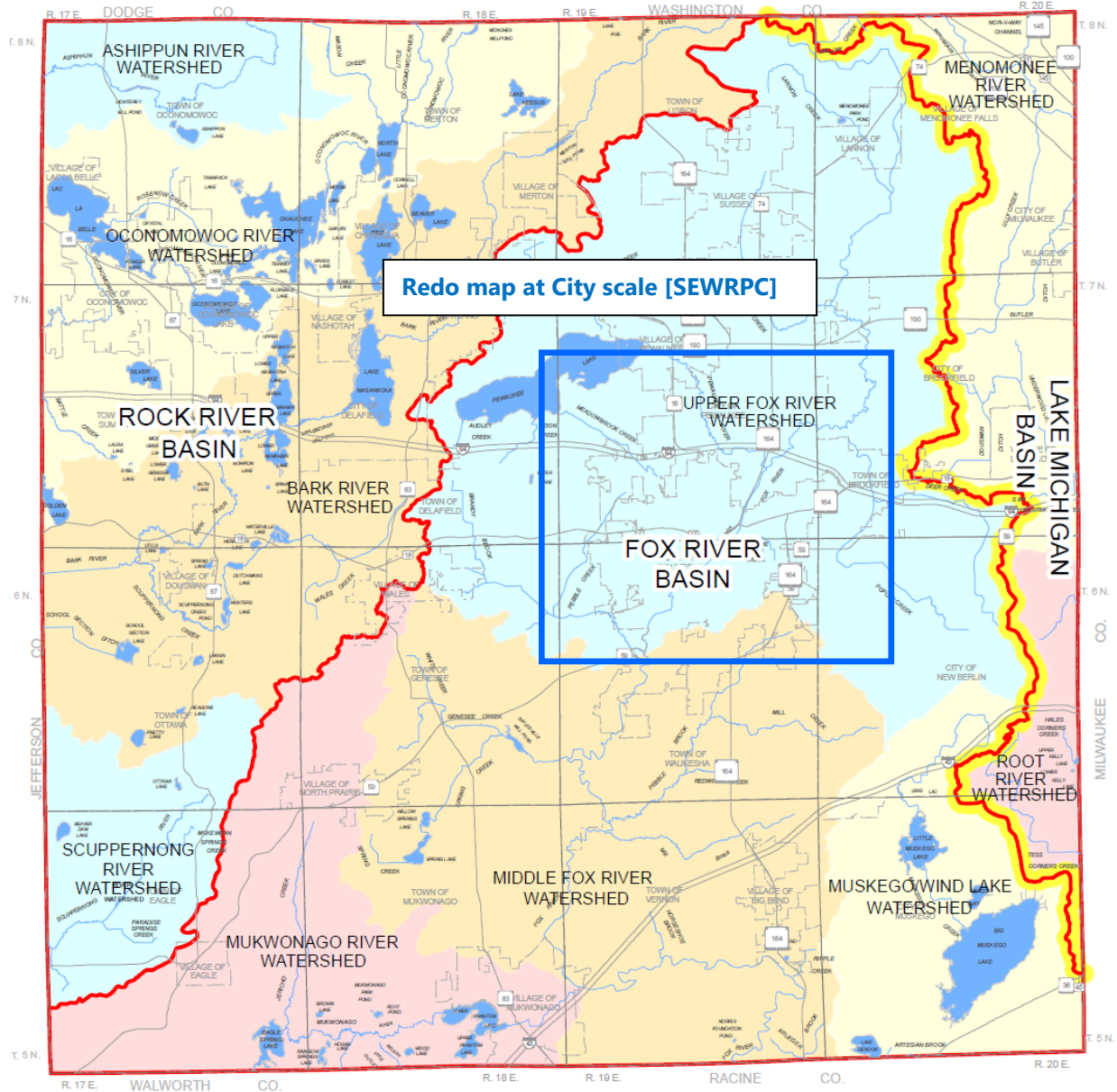
The City is located within the Fox (Illinois) River watershed, which is located west of southeastern Wisconsin's subcontinental divide and drains into the Mississippi River basin.²¹ The Fox River watershed encompasses approximately 2,640 square miles: 920 square miles in Wisconsin, including the entire City, and 1,720 miles in northern Illinois. The watershed contains several sizeable lakes, including Pewaukee, Big Muskego, and Geneva Lakes in Waukesha and Walworth Counties.

The Fox River has several major tributaries, including the Mukwonago River, Sugar Creek, Honey Creek, and the White River. Some of these tributaries are used to subdivide the watershed for planning purposes. From upstream to downstream, the five major subwatersheds in the Fox River basin include the Upper Fox

²¹ *The subcontinental divide is the north-south boundary separating the Mississippi River and the Great Lakes - St. Lawrence River surface water drainage systems.*

River, Mukwonago River, Middle Fox River, White River, and Lower Fox River subwatersheds. The City is located within the Middle and Upper Fox River subwatersheds.

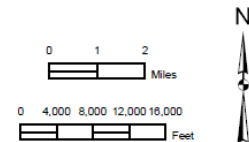
Map III-7
Watersheds of Waukesha County



Legend

- ▭ River Basin Boundaries
- ▭ Subcontinental Divide

Source: SEWRPC, DNR & Waukesha County



Floodplains

Floodplains are the wide, gently sloping areas contiguous to, and usually lying on both sides of, a surface water body, such as a stream or river channel. Floodplain areas often contain important natural resources, such as high-value riparian woodlands, wetlands, and refuges for wildlife. Given their significant environmental value, floodplains may often be compatible with passive, nature-based recreational uses, such as hiking, bird watching, and nature study.²²

For planning and regulatory purposes, floodplains are normally defined as the areas adjacent to rivers, streams, and lakes that are subject to inundation during the 1-percent-annual-probability (100-year recurrence interval) flood event. While perennial rivers and streams typically occupy their channels, even minor flood events can cause stream discharges to exceed a stream channel's capacity.

► Recommendation: Floodplains and Wetlands

This plan recommends that development adjacent to wetlands, in floodplains, or elsewhere with soils that are poorly suited to many urban uses, should be limited to protect both natural resources and the built environment.

Wetlands

Wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support—and that under normal circumstances do support—a prevalence of vegetation typically adapted for life in saturated soil conditions.²³ 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. Wetlands may, however, under certain conditions, occur on slopes and even on hilltops.

Though generally unsuited or poorly suited for most urban uses, wetlands have important ecological and recreational value. Wetlands reduce stormwater runoff, contribute to flood control, protect shorelines

²² *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.*

²³ *This definition of wetlands is that of the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, and the Southeastern Wisconsin Regional Planning Commission. This definition differs somewhat from the definition used by the Wisconsin Department of Natural Resources (WDNR), which defines wetlands as areas where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions. Application of either definition has been found to produce relatively consistent wetland identification and delineations in most situations in Southeastern Wisconsin.*

from erosion, and promote water quality enhancement by providing areas for floodwater impoundment and temporary storage for excess runoff, thereby tending to reduce peak flows and to trap sediments, nutrients, and other water pollutants. Wetlands support groundwater recharge, promote water quality by filtering pollutants and storing sediments and contribute to stabilizing lake levels and the base flow of streams.

Additional natural functions that make wetlands particularly valuable include their ability to support a wide variety of desirable, and sometimes unique, plant and animal life forms provision of breeding, nesting, resting, and feeding grounds and predator escape cover for many forms of wildlife. Overall, wetlands are a significant component of an ecologically sound landscape that can support limited active and passive recreational activities, like kayaking and nature study,

Call Out: Given their importance as a natural resource, continued efforts should be made to protect wetland areas by discouraging wetland draining, filling, and urbanization, which can be monetarily and environmentally costly.

Wetlands change over time, in part due to their role as an integral component of the hydrologic system and as result of changes in land uses. The DNR maintains an inventory of wetlands, the Wisconsin Wetland Inventory (WWI), which is updated every ten years. Given that wetland boundaries may be expected to change further over time, in less than ten-years intervals, it is best to conduct a field inspection to survey and verify wetland boundaries before proceeding with any site-specific planning and development.

Insert wetlands map.

Call Out: Wetlands in the City cover about __ acres, or about __ percent of the City.²⁴

²⁴ Tamarack swamps and other lowland wooded areas are classified as wetlands, rather than woodlands, because the water table is located at, near, or above the land surface and such areas are generally characterized by hydric soils that support hydrophytic (water-loving) trees and shrubs.

WOODLANDS

Woodlands are a significant component of the natural and urban environment. For planning purposes, woodlands are defined as upland areas one acre or more in size with minimum number of deciduous trees of a certain size per acre with 50 percent or more tree canopy coverage.²⁵

Woodlands contribute to sustaining a diversity of plant and animal life by providing flora and fauna habitat. Woodlands also provide immeasurable scenic beauty and can host a variety of recreational opportunities, including hiking, cross-country skiing, and nature study. Under good management, woodlands can provide a variety of economic and environmental benefits, including reducing heat islands and improving air and water quality.

Woodlands may require a century or more to develop—and can be destroyed through mismanagement within a comparatively short time. Their destruction can cause extensive environmental damage and have significant economic repercussions. The deforestation of hillsides contributes to the destruction of wildlife habitat as well as to rapid stormwater runoff and the siltation of lakes and streams.

Insert woodlands map.

Insert image of woodlands within City [To be provided by City].

GRASSLANDS AND SHRUBLANDS

Grasslands and shrublands are open, treeless, or generally treeless areas dominated by native grasses that have important ecological and scientific value. There are four basic types of grasslands and shrublands: low prairie; mesic or moderately moist prairie; dry prairie; and oak openings, or savannahs.²⁶

²⁵ Woodlands contain a minimum of 17 deciduous trees per acre each measuring at least four inches in diameter at breast height with 50 percent or more tree canopy coverage. Regional planning efforts also classify coniferous tree plantations and reforestation projects as woodlands while lowland wooded areas, such as tamarack swamps, are classified as wetlands.

²⁶ Low prairie typically occupies ancient glacial lake beds. Mesic/moderately moist prairie tends to occur on glacial outwash plains, the glacial till of recessional moraines, and the loessial, windblown depositional soils that cover dolomitic bedrock. Dry prairie occurs on well-drained soils, usually on steep hillsides. Oak openings or savannahs are dominated by dry prairie grasses, with one to 17 oak trees—usually bur oaks—per acre.

Grasslands and shrublands once covered large portions of the City. The near total loss of grasslands and shrublands in the City and County can be attributed to agricultural practices, urbanization, and the suppression of wildfires, which had served to restrain the advancing shrubs and trees that shade out prairie plants.

There are eight small remnant grassland and shrubland sites along the Glacial Drumlin State Trail,²⁷ a 52-mile trail extending from the southwestern portion of the City to Cottage Grove, much of which is within a relatively undisturbed former railroad right-of-way. Though these remnant grasslands and shrublands are located outside of the City, these sites are important to ensuring City residents can enjoy the aesthetic, cultural, historic, educational, ecological, and scientific value of grasslands and shrublands.

Call Out: Regional plans recommend protecting the eight small remnant grassland and shrubland sites along the Glacial Drumlin State Trail in Waukesha County.

NATURAL AREAS AND CRITICAL SPECIES HABITAT SITES

Natural Areas

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 flora and fauna communities believed to be representative of the landscape prior to European-American settlement.

Natural areas are classified using a three-tiered system developed by the DNR. Classification is based upon several considerations, including the diversity of plant and animal species and community types present; and the structure and integrity of the native flora and fauna community. Additional natural resource considerations involve the commonness of the plant and animal community and the existence of any unique natural features. The extent to which natural resources have been disturbed by human activity is also considered as is the size and potential educational value of a site.

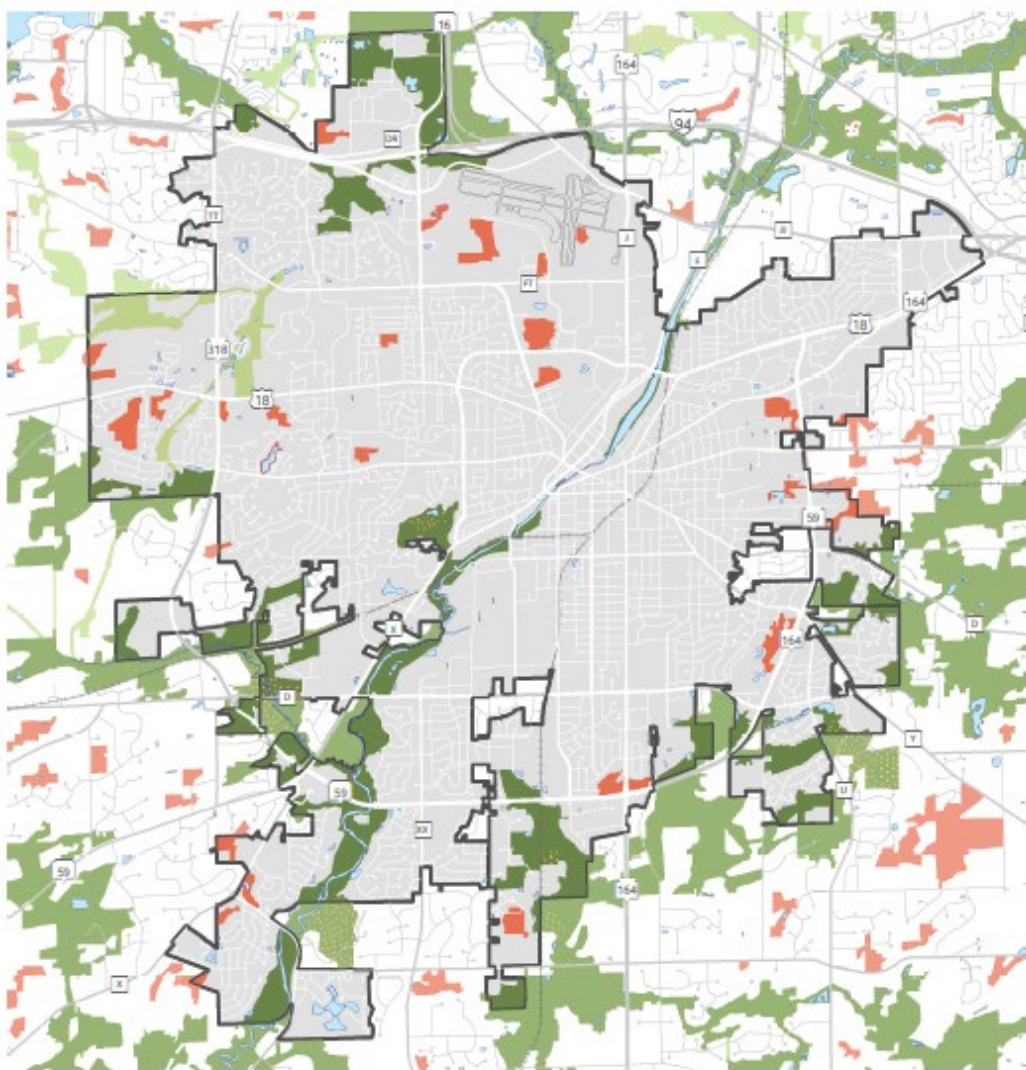
Natural area classifications follow:

- NA-1 – natural areas of Statewide or greater significance contain nearly complete and relatively undisturbed plant and animal communities believed to resemble closely those that existed prior to European-American settlement

²⁷ Remnant grassland and shrubland sites are less than 5 acres each in size.

- NA-2 – natural areas of countywide or regional significance contain native biotic communities judged to be of lower than NA-1 significance, either because of evidence of a limited amount of human disturbance or because of limited size
- NA-3 – natural areas of local significance have been substantially altered by human activities, but provide refuge for native plant and animal species that no longer exist in the surrounding area because of land uses and associated activities

ECs and INRAs, Natural Areas, and Significant Geological Sites



0 0.25 0.5 0.75 1 Miles
 Source: City of Waukesha and SEWRPC

Five natural areas of local significance (NA-3) are located in part or entirely within the City:

- Fosters Woods – an 88-acre site, partially owned by the County and only partially located within the City
- Fruits Pond Fen – A 16-acre, City-owned site featuring a moderate-quality wetland complex disturbed by past filling and dumping that contains two State-designated special concern species
- Pebble Creek Wetlands – A 75-acre site consisting of moderate-quality wetlands bordering Pebble Creek within the City and Village of Waukesha
- Pebble Creek-North – A 9-acre, privately owned site
- Minooka Park Woods – An 89-acre, County-owned woodland site, which shows signs of previous grazing, within the City and Village of Waukesha

Critical Species Habitat Sites

Critical species habitats are tracts of land or water that contain the necessary features for the long-term support of rare, threatened, and/or endangered plant or animal species as defined by State or Federal agencies. There are no critical species habitat sites located in part or entirely within the City.

ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS

Environmental corridors (ECs) and isolated natural resource areas (INRAs) contain concentrations of the best remaining elements of the natural resource base and are delineated based on several criteria. Significant natural resource elements within ECs and INRAs include rivers, streams, and lakes and associated riparian buffers and floodplains; wetlands; and wet, poorly drained, and organic soils. Woodlands, grasslands and shrublands, wildlife habitat areas, and rugged terrain and high relief topography are additional significant natural resource elements within ECs and INRAs. Cultural, recreational, and natural resource-related features, including park and open space sites, natural areas, historic sites, and scenic viewpoints, are also considered in identifying and delineating ECs and INRAs.

Map: One of the most important tasks under the regional planning program is identifying and delineating areas in which concentrations of the best remaining elements of the natural resource base occur. [Insert map of ECs and INRAs to be completed by SEWRPC staff]

Call Out: Environmental corridors and isolated natural resource areas—and the resources that they contain—are of great importance both to the Region’s environmental quality and to the Region’s quality of life.

Environmental corridors and isolated natural resource areas serve many beneficial purposes. ECs and INRAs provide wildlife habitat; protect plant and animal diversity, including rare and endangered species; and provide dispersal corridors for the movement of wildlife and for the movement and dispersal of seeds for a variety of plant species. These areas can also promote water quality as they reduce soil erosion, filter runoff before it enters surface waters, attenuate flood flows and stages by storing flood waters away from developed areas, help maintain base flows of streams and watercourses, and facilitate the recharge and discharge of groundwater. ECs and INRAs also abate air and noise pollution; provide outdoor settings that support opportunities for resource-oriented recreational, educational, and scientific pursuits; and maintain the Region’s scenic beauty and natural heritage.

► **Recommendation: Protect Natural Resources**

This plan recommends that the City consider protection of every element of the natural resource base to the greatest extent practical when considering the potential for development or otherwise regulating land or providing service. Due to the interrelationships between living organisms and their environment, the destruction or deterioration of any one element of the natural resource base may lead to a chain reaction of negative impacts to other elements. Although the effects of any single environmental change may not be overwhelming, the combined effects will eventually create serious environmental and developmental problems.

Given that they can contain wet, poorly drained soils, rugged terrain, and high relief topography, environmental corridors and isolated natural resource areas are generally poorly suited for urban development. Regional plans, however, recognize that certain types of compatible development, in compliance with established guidelines, may be accommodated within ECs and INRAs while maintaining the overall integrity of the existing resources.²⁸

Primary Environmental Corridors

Primary environmental corridors (PECs) are defined as areas containing concentrations of important, high-value natural resource elements within a linear pattern of relatively narrow, elongated areas that are at

²⁸ *While the guidelines established in regional plans indicate which areas should be preserved, the guidelines do not indicate what measures may be used to assure preservation, examples of which could include public interest ownership, conservation easements, or land use regulations.*

least 400 acres in size, two miles in length, and 200 feet in width. As they contain a composite of some of Southeastern Wisconsin's best remaining woodlands, wetlands, and wildlife habitat areas, PECs have immeasurable environmental and recreational value.

► **Recommendation: Protect Natural Resources**

This plan recommends that the City preserve primary environmental corridors (PECs) in accordance with regional plans.

Graphic text: Within the City, PECs encompass about 1,690 acres, SECs encompass about 200 acres, and INRAs encompass about 370 acres.

PECs in the City are generally located along major or perennial streams, including the Fox River, Mill Creek, Pebble Creek, and Pebble Brook. The City's PECs include large wetland complexes associated with these and other, smaller, streams. Preservation of these PECs in an essentially open, natural state, including park and open space uses, will serve to maintain a high level of environmental quality, protect the City's natural beauty, and provide valuable recreational opportunities.

Secondary Environmental Corridors and Isolated Natural Resource Areas

Secondary environmental corridors (SECs) are concentrations of significant natural resources at least 100 acres in area and at least one mile in length. SECs generally connect with PECs and contain a variety of resource elements, often including remnant resources from PECs that were developed for intensive urban or agricultural purposes. SECs 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.

Call Out: Regional plans recommend preserving secondary environmental corridors in essentially open, natural uses as urban development proceeds within the City, particularly when the opportunity is presented to incorporate such corridors into urban stormwater detention areas, associated drainageways, and neighborhood parks and open space.

The City also contains other important areas with smaller concentrations of natural resource base elements, such as pockets of wetlands, woodlands, surface water, or wildlife habitat. Separated from the environmental corridor network by urban development or agricultural uses and measuring at least five acres in size, these areas are defined as isolated natural resource areas (INRAs).

INRAs have significant value; they may provide the only available wildlife habitat in an area, offer good locations for local parks and nature areas, and lend aesthetic character and natural diversity to an area. Important INRAs within the City include a geographically well-distributed variety of wetlands, woodlands, and wildlife habitat.

Call Out: Regional plans recommend that isolated natural resource areas (INRAs) be protected and preserved in a natural state whenever possible.

CLIMATE

Climate refers to the long-term pattern of an area's observed weather conditions, characterized by averaging the specific states of the atmosphere, hydrosphere, and land, including temperature, humidity, and precipitation.²⁹ Climate plays a significant role in an area's overall quality of life, affecting the natural resource base, recreational opportunities, and economy.

► Recommendation: Climate and Sustainability

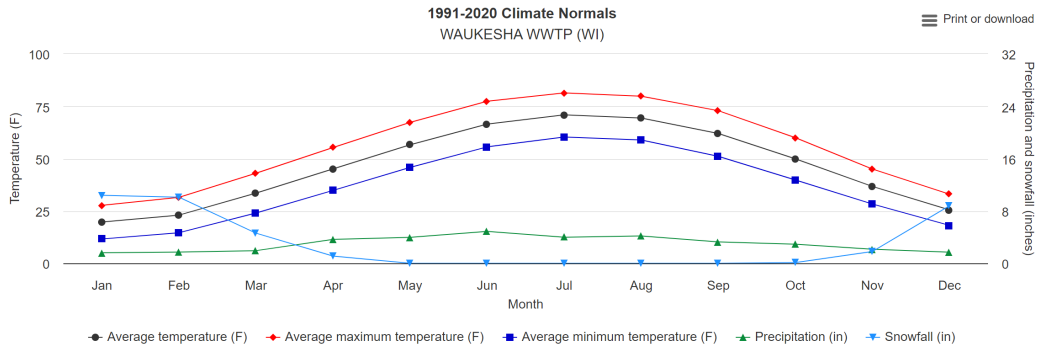
This plan recommends expanding sustainability efforts and conducting research on how projected changes in the climate may impact the City. Understanding long-term patterns in the City's climate and anticipating future developments can help the City to become more resilient to natural hazards and reduce long-term costs.

Climate data for the State is collected, analyzed, and made available by the Wisconsin State Climatology Office (SCO)³⁰ for the purpose of helping the public to access, understand, and use reliable weather and climate information. The SCO maintains historic climate data that can be used to describe climate normals, which are 30-year averages for factors like temperature and precipitation.

²⁹ As defined by the U.S. Department of Commerce National Oceanic and Atmospheric Administration (NOAA).

³⁰ The SCO is housed within the University of Wisconsin-Madison's Nelson Institute Center for Climatic Research and Department of Atmospheric and Oceanic Sciences.

Figure 8.1: 1991-2020 Climate Normals



The City’s climate generally features warm summers with an average daily high temperature of about 83 degrees Fahrenheit (°F) in July and cold, snowy winters with an average daily high temperature of about 24°F. Additional climate normals for the City follow:

- An average annual temperature of about 56°F overall and about 190 sunny days per year
- A yearly average rainfall of about 35 inches, two-thirds of which occurs during the growing season
- The growing season averages 145 days per year and the freeze-free season is about 180 days
- The first autumn freeze typically occurs in mid-October and the last spring freeze typically occurs in early May
- The first snowfall of one or more inches typically occurs in early December
- The average annual snowfall is about 43 inches, and the average annual duration of snow cover is about 85 days

Weather patterns can vary during seasonal shifts and otherwise over relatively short periods of time. Examples of such include a month of below-average snowfall or a week of more-than-average rainfall. Longer-term variations, known as climate variability, include phenomena like El Niño and La Niña. Extended variations lasting decades or longer that reflect a statistically significant variation from climate normals is referred to as climate change. To address how climate change might affect Wisconsin, the DNR and the University of Wisconsin-Madison’s Nelson Institute for Environmental Studies collaborated to establish the Wisconsin Initiative on Climate Change Impacts (WICCI) in 2007. Decades of data analyzed

by WICCI and published in a 2021 Assessment Report show warming temperatures, increased rainfall and snowfall, and more frequent extreme rainfall events, trends that are expected to continue.

Call Out: Planning for resilience, the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions, can help communities withstand longer-term changes in climate and shorter-term climate variability that can have wide ranging consequences for the natural and built environment.

AIR QUALITY

Air is essential to human life and air quality, like water quality, is strongly associated with the health and well-being of communities and the ecosystems upon which they rely. As a variety of human and natural causes can negatively impact air quality, hundreds of air pollutants are regulated within the U.S. and a series of Federal standards—national ambient air quality standards (NAAQS)—have been established for six air pollutants considered to be harmful to public health and the environment.³¹

Poor air quality can have numerous deleterious effects on humans, the environment, and the built environment. Human health problems associated with poor air quality include short-term impacts like coughing, wheezing, asthma attacks, and breathing difficulty and significant long-term cardiovascular impacts including increased susceptibility to infection, lung damage, reduced lung function, and increased susceptibility to and aggravation of lung diseases as well as heart disease, heart attacks, and strokes. Environmental damage associated with poor air quality includes eutrophication and acidification of ecosystems.

The built environment is also susceptible to damage caused by poor air quality. Structures are susceptible to degradation as air pollutants interact with elements that comprise building materials. This interaction can cause changes to the physical and chemical properties of building materials, especially ferrous metals and calcareous building stones, including limestone. These changes can affect a building's aesthetic and structural integrity and may trigger additional interior physical, chemical and biological reactions that subject building occupants to unhealthy conditions.

³¹ Established by the U.S. Environmental Protection Agency (EPA) in accordance with the Federal Clean Air Act which was last amended in 1990.

NAAQS are applied to air quality control regions that encompass a geographic area that has established pollution problems, common pollution sources, and characteristic weather. Individual states are responsible for overseeing the NAAQS compliance of the air quality regions within their jurisdiction.³² NAAQS set maximum thresholds for atmospheric concentrations of six air pollutants, or criteria pollutants, including carbon monoxide, lead, nitrogen dioxide, particulate matter, ozone, and sulfur oxides. The most common criteria pollutants negatively impacting air quality in the United States are particle and ozone pollution.

Particle pollution, or particulate matter (PM), is a chemical mixture of airborne, microscopic solids and liquids that are classified by size for air quality monitoring. Fine particles (PM_{2.5}) can be carried significant distances by wind, with peak concentrations typically occurring in winter. Larger, inhalable coarse particles (PM₁₀) are not typically transported significant distances.³³ Fine particles are created as direct result of fires and indirectly as result of chemical reactions between precursor pollutants that can be attributed to stationary and mobile applications powered by internal combustion engines, such as power plants, industrial processes, cars, and trucks.³⁴ Inhalable coarse particles are usually created as result of mechanical action like crushing or grinding, or from wind-blown dust. Ozone is a highly reactive compound formed by reactions between chemical components in the atmosphere. Ozone occurs in the upper atmosphere and at ground level, where it is a major component of smog. Concentrations of ozone and particulate pollution, and other aspects of air quality, are affected by different aspects of weather, including sunshine, rain, temperatures, and wind speed.

Geographic areas that do not meet NAAQS for one or more of the six criteria pollutants are designated by the U.S. Environmental Protection Agency (EPA) as nonattainment areas. Former nonattainment areas that later achieve compliance with NAAQS are termed maintenance areas. Nonattainment areas and maintenance areas are monitored to measure and demonstrate compliance with the NAAQS. States are required to prepare implementation plans (State Implementation Plan, or SIP) to identify how the nonattainment area will ultimately meet the NAAQS; in Wisconsin, this is the responsibility of the DNR.

³² *States may establish more stringent standards than NAAQS.*

³³ *Fine particles (PM_{2.5}) have an aerodynamic diameter of 2.5 microns or less while inhalable coarse particles (PM₁₀) have an aerodynamic diameter between 2.5 and 10 microns.*

³⁴ *Precursor pollutants include including nitrogen oxides (NO_x), sulfur dioxides (SO₂), organic carbon, and ammonia.*

The DNR also continually monitors air quality, including PM and ozone levels, and uses weather forecast models to inform the public when air pollution has reached or may reach unhealthy levels. To do so, the DNR uses the air quality index (AQI) established by the U.S. Environmental Protection Agency (EPA). Daily AQI values range from 0 to 500, with lower values indicating good air quality and higher values indicating air quality that is unhealthy or hazardous.

Figure 8.2: AQI Basics for Ozone and Particle Pollution

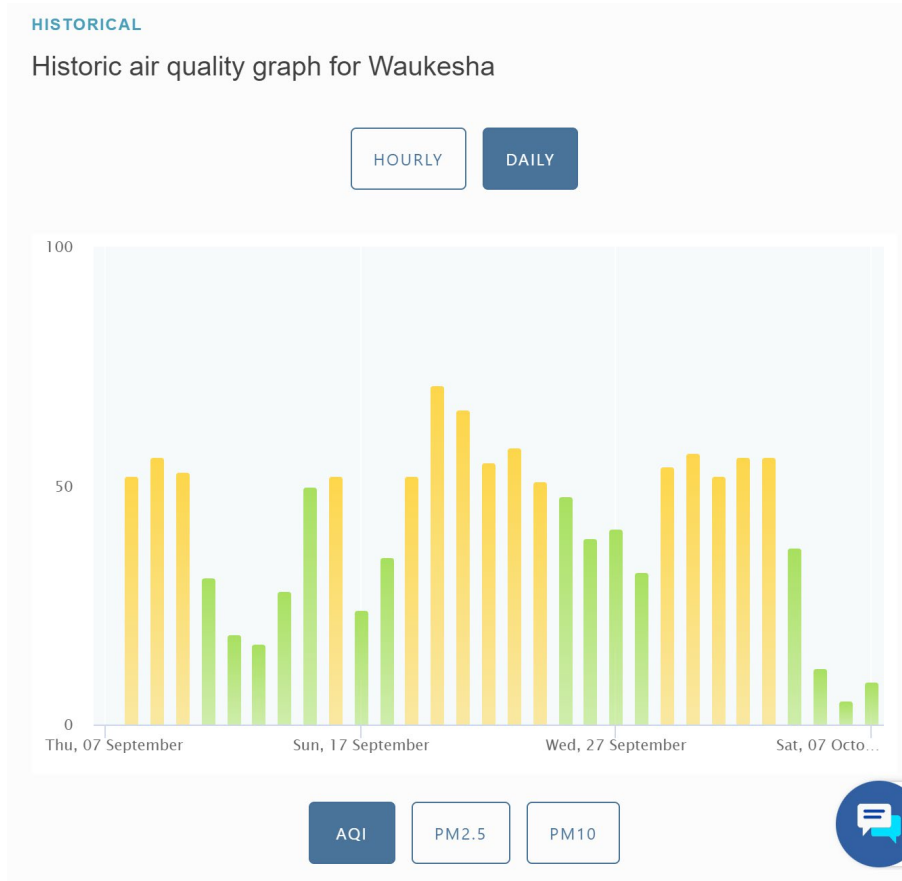
AQI Basics for Ozone and Particle Pollution			
Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

Call Out: Communities throughout the Nation have established programs and action plans to protect residents' health when AQI levels are unhealthy or hazardous.

The City is located within a three-county PM2.5 maintenance area that encompasses Milwaukee, Racine, and Waukesha Counties. Despite improvements to air quality within Southeastern Wisconsin as result of local controls, national vehicle emissions control requirements, and offsets implemented within and outside the maintenance area and projections that indicate continued air quality improvements, the City and other areas throughout the Region and State remain susceptible to factors that can impact air quality.

Call Out: Air quality levels, which can change quickly as result of shifting weather patterns, may be impacted by factors hundreds of miles away. In June 2023, air quality levels in the City, County, Region, and State were among the worst in the world due to smoke caused by a record-setting number of wildfires in Canada, leading to issues of caution advisories and the cancellation of outdoor events by local governments.

Figure 8.3: Historic Air Quality Graph for Waukesha



GOALS AND POLICIES

Natural resources are vital to a community's economy, environment, health, and overall quality of life. The goals and policies presented in this chapter are intended to provide a framework to support the land use principles in this report while guiding development efforts to avoid and minimize impacts on natural resources. Intended for the future protection and utilization of the City's natural resources, this framework should be used by the City to create and evaluate objectives and standards, ensuring that specific programs and projects are consistent with this comprehensive plan.

GOAL 8.1

Incorporate natural resources as a primary consideration in all planning efforts.

Call Out: Natural resources have significant environmental, educational, economic, recreational, and aesthetic value. Finite as they are, natural resources can be susceptible to irreversible damage and are very difficult or impossible to replace if damaged or destroyed. and are highly vulnerable to misuse and

destruction due to high resource demand, urban expansion, rapidly changing technology, and other aspects of contemporary civilization.

GOAL 8.2

Protect and enhance the City's natural resources, including surface waters, floodlands, wetlands, woodlands, and wildlife habitat areas, and provide access to these areas from adjacent residential, commercial, industrial, and recreational uses.

Call Out: Components of the natural resource base lay the foundation that make the City a practical and attractive place to live and do business and have a limited capacity to support urban development. It is necessary to understand the character and importance of the various elements of the natural resource base to avoid neglecting the City's heritage, causing significant environmental degradation, and incurring excessive monetary costs.

GOAL 8.3

Consider how geologic resources within the City can be best used and managed in planning processes and whenever land is being considered for development.

Call Out: The depth to bedrock may impact the cost and feasibility of building site development and the provision of public facilities and infrastructure.

Policy 8.3.1

Consider opportunities to protect areas containing viable amounts of marketable nonmetallic mineral deposits, including areas in which existing nonmetallic mineral extraction sites have potential to expand.

Policy 8.3.2

Protect Carroll College Quarry, a scientifically and historically important geological site that is classified as being of statewide or greater significance.

GOAL 8.4

Utilize information from soil surveys, which support regional planning, engineering, and resource conservation efforts, to determine how certain soils may be best used or managed.

Policy 8.4.1

Protect soils in the City that may be significant for their ability to support water management, including areas with wetlands.

Policy 8.4.2

Consider the soil types present when reviewing development proposals to ensure that soil resources are protected, and the proposed development is compatible with the City's conservation goals.

Call Out: Hydric soils are very poorly drained soils that are saturated with water or have a water table at or near the surface. Hydric soils are generally unsuitable for development³⁵ or are best undeveloped and left in open space, where they serve as important locations for wetland restoration, wildlife habitat, and stormwater detention.

Graphic: Hydric soils make up 14 percent of the City's total land area.

GOAL 8.5

Protect groundwater beneath the City, which is subject to a continuous process of natural and artificial forces.

Call Out: Groundwater is an extremely important component of the natural resource base.

Graphic: Groundwater in the shallow aquifer system generally moves from beneath topographic high areas (higher elevations) to lower elevations, thereby sustaining lake levels and wetlands and providing the perennial base flow of streams.

Policy 8.5.1

Promote the recharge of groundwater within shallow and deep aquifers underlying the City by ensuring the infiltration of precipitation within the City.

Graphic: The primary, natural process of groundwater recharge is by precipitation that escapes evapotranspiration or runoff and percolates into the ground. Shallow aquifers are generally replenished by precipitation relatively easily. Recharge of the deep aquifer, however, is impeded by the Maquoketa

³⁵ Unless they are drained.

Formation, a relatively impermeable geologic feature underlying the City. The deep aquifer is recharged primarily by the slow, downward leakage of water from overlying, shallow aquifers through the Maquoketa Formation or by the infiltration of precipitation in areas outside the City where the Maquoketa Formation does not separate the shallow and deep aquifers.

Call Out: A 2013 report indicates that the deep aquifer underlying the City has had severe groundwater level drawdown and significant water quality issues. The shallow aquifer underlying the City, which feeds sensitive surface water resources, was also found to have water quality issues.

Policy 8.5.2

Research best practices to establish policies to reduce or eliminate groundwater degradation caused by human activities, such as contamination from bacteria, nitrate, pesticides, and volatile organic compounds (VOCs).

Policy 8.5.3

Establish policies to manage stormwater runoff and other sources of pollution affecting the City's springs to protect the springs and maintain their water quality.

GOAL 8.6

Protect and enhance surface water resources and groundwater resources, which are interrelated components of a single hydrologic system.

Call Out: Surface water resources, including lakes and streams and their associated wetlands, floodplains, and shorelands, and groundwater resources, have significant aesthetic, environmental, recreational, and economic value.

Photo: Lakes and streams are a focal point of water-related recreational activities and provide an attractive setting for properly planned development, including river front properties, which generally have high-assessed valuations, also serve to enhance the property tax base of the City.

Photo: Surface waters also provide substantial economic benefits. Expenditures by recreational users of surface waters benefit the owners of restaurants, grocery and convenience stores, service stations, and sporting goods stores.

Photo: When viewed in the context of open space areas, surface waters greatly enhance the aesthetic and scenic characteristics of the natural environment.

Policy 8.6.1

Carefully manage urban land uses while maintaining surface water and groundwater quality.

Policy 8.6.2

Conduct watershed protection planning, recognizing that water within the City is returned to two separate basins.

Call Out: The Pebble Creek Watershed Protection Plan is a planning effort aimed at protecting a cold-water stream in an area experiencing significant development pressures,

Policy 8.6.3

Enhance the recreational and aesthetic values of surface water resources, especially the Fox River, which hosts urban riverwalk trails and plazas and access to natural resource areas via a water trail, boardwalk, and other recreational trails.

Policy 8.6.4

Recognize Lake Michigan as a surface water resource whose quality and environmental and economic value is reciprocally related to that of the City.

GOAL 8.7

Integrate floodplain considerations into planning and development efforts, especially planning to protect areas adjacent to surface waters that are subject to inundation during the 1-percent-annual-probability (100-year recurrence interval) flood event.

Call Out: Minor flood events can cause discharges from perennial rivers and streams that typically occupy their channels to exceed a stream channel's capacity.

Policy 8.7.1

Consider potential changes that may occur to floodplains as rainfall levels vary due to changes in climate and in relation to efforts to promote water quality.

Call Out: Floodplains are the wide, gently sloping areas contiguous to, and usually lying on both sides of, a surface water body, often contain important natural resources, such as high-value riparian woodlands, wetlands, and refuges for wildlife.

Policy 8.7.2

Preserve and promote awareness of the importance of floodplains by establishing passive, nature-based recreational uses, such as hiking, bird watching, and nature study, in floodplain areas.

Call Out: 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.

GOAL 8.8

Preserve and protect wetlands, which have important recreational and ecological values.

Policy 8.8.1

Consider how wetland preservation can help to reduce peak flows, mitigate stormwater runoff, and prevent flooding by providing areas for floodwater impoundment to naturally and temporarily store excess runoff.

Policy 8.8.2

Plan and promote development site design to enable wetlands to filter pollutants and store sediments and contribute to stabilizing the base flow of rivers and streams in the City.

Policy 8.8.3

Promote the use of wetland areas as breeding, nesting, resting, and feeding grounds and predator escape cover for many forms of wildlife.

Policy 8.8.4

Discourage wetland draining, filling, and urbanization, which can be costly in both monetary and environmental terms.

GOAL 8.9

Preserve and enhance woodland areas within the City.

Call Out: Woodlands provide immeasurable scenic beauty; can host a variety of recreational opportunities; and contribute to sustaining a diversity of plant and animal life by providing flora and fauna habitat.

Policy 8.9.1

Establish best practices to protect woodlands and other tree cover throughout the City to improve air and water quality.

Policy 8.9.2

Plan to enhance and increase woodlands and other tree cover to reduce heat islands.

GOAL 8.10

Support regional planning recommendations to protect grassland and shrubland sites to ensure City residents can continue to enjoy the aesthetic, cultural, historic, educational, ecological, and scientific value of such sites.

Policy 8.10.1

Work with the Wisconsin Department of Natural Resources (DNR) to protect and educate City residents about grasslands and shrublands, including the eight small remnant sites along the Glacial Drumlin State Trail.³⁶

Call Out: Grasslands and shrublands are open, treeless, or generally treeless areas dominated by native grasses. once covered large portions of the City.

GOAL 8.11

Protect natural areas and critical species habitat areas.

Policy 8.11.1

Proactively seek opportunities for the City to acquire natural areas and critical species habitat areas and preserve the areas as open space.

Policy 8.11.2

Encourage private property owners to utilize conservation easements to protect natural areas and critical species habitat areas when City acquisition of such sites is not feasible.

³⁶ Remnant grassland and shrubland sites are less than 5 acres each in size.

Policy 8.11.3

Seek opportunities to create and protect urban habitat for wild bird species.

Policy 8.11.4

Establish design guidelines incorporating bird-safe building design elements for new construction, redevelopment sites, and building additions for the Plan Commission to enforce.

GOAL 8.12

Protect environmental corridors and isolated natural resource areas.

Policy 8.12.1

Preserve the City's primary environmental corridors, including those along the Fox River, Mill Creek, Pebble Creek, and Pebble Brook, in an essentially open, natural state, including park and open space uses, to help maintain a high level of environmental quality, protect the City's natural beauty, and provide valuable recreational opportunities.

Call Out: Preserving primary environmental corridors can help prevent the creation of serious and costly environmental and developmental problems, such as flood damage, poor drainage, wet basements, failing pavements and structures, excessive infiltration of clear waters into sanitary sewers, and water pollution.

Policy 8.12.2

Preserve secondary environmental corridors in essentially open, natural uses as urban development proceeds within the City, particularly when the opportunity is presented to incorporate such corridors into urban stormwater detention areas, associated drainageways, and neighbor-hood parks and open space.

Policy 8.12.3

Preserve in a natural state and protect isolated natural resource areas, which may provide the only available wildlife habitat in an area, offer good locations for local parks and nature areas, and lend aesthetic character and natural diversity to the City.

Policy 8.12.4

Maintain the overall integrity of existing resources by restricting development to be accommodated within environmental corridors and isolated natural resource areas to those established under regional planning recommendations.³⁷

GOAL 8.13

Reduce light pollution in the City to protect wildlife, including animals and insects; preserve natural resources; to conserve energy and promote energy savings; protect human health; and to facilitate stargazing within the City.

Policy 8.13.1

Establish a program to educate residents, business owners, and property owners about the negative impacts of light pollution and provide guidance on strategies for reducing light pollution.

Call Out: Streetlights, buildings, billboards, car dealerships, and parking lots are some potentially significant sources of light pollution.

Policy 8.13.2

Develop design standards and policies to use light wisely by providing useful light while reducing unnecessary light and minimizing light pollution at City parks and other facilities.

GOAL 8.14

Promote urban forestry throughout the City.

Call Out: The City's Community Roots Program enables community members to honor a family member, friend, or work associate with a tree planted in a City park on their behalf. Forestry staff assist with selecting an appropriate site and tree, suitable for the occasion and individual to be honored.

Policy 8.14.1

Expand the City's Street Tree Planting Program and consider utilizing public-private partnerships and/or development agreements for installing, maintaining, and replacing street trees in commercial, industrial, mixed-use, and other privately developed areas.

³⁷ As set forth in Table K.1, Appendix K, of VISION 2050, the regional land use and transportation plan (SEWRPC Planning Report No. 55, Volume 3, 2nd Edition, 2020).

Policy 8.14.2

Codify landscape requirements for development to increase tree cover for the benefits of reducing heat islands, providing screening, expanding wildlife habitat, and enhancing the overall appearance of the City.

Policy 8.14.3

Develop guidelines for tree-species diversity and the inclusion of native tree species in City-managed areas to encourage resilient and ecologically sound urban forests.

NOTE: Charts, figures, and tables in this preliminary draft may differ from those in subsequent drafts. These variations, intended to facilitate effective visual communication, are solely graphic in nature and do not indicate changes in the data used to prepare this report.

PRELIMINARY DRAFT

SEWRPC Community Assistance Planning Report No. __

CITY OF WAUKESHA COMPREHENSIVE PLAN: 2050

Chapter 9

INTERGOVERNMENTAL COOPERATION AND IMPLEMENTATION

INTERGOVERNMENTAL COOPERATION

The City of Waukesha has a strong history of intergovernmental cooperation with overlapping and adjacent jurisdictions. Such cooperation is essential to implementing many of the goals and policies in this plan. The City maintains communications and dialogue with staff and elected officials from all adjacent and overlapping jurisdictions as needed.

Adjacent Towns, Villages, and Cities

The City shares its borders with six other jurisdictions:

- Town of Brookfield
- Town of Delafield
- Town of Genesee
- Village of Waukesha
- City of New Berlin
- City of Pewaukee

Existing land uses within and alongside the City's municipal boundaries are an important planning consideration in promoting cohesive development. City-adjacent land uses within the Towns of Delafield

and Genesee are predominantly agricultural and open lands. Residential and park uses comprise the City of New Berlin-Waukesha border, including Minooka County Park. A mix of residential and commercial uses exist Areas adjacent to the City in the Town of Brookfield, Village of Waukesha, , and City of Pewaukee, which also has industrial and extractive uses.

► **Recommendation: Cooperative Land Use Planning**

This plan recommends cooperative planning between neighboring communities to ensure future land use changes and urban growth occur in a cohesive form and promote the efficient provision of urban services within both communities.

There are two primary factors that have implications for intergovernmental cooperation and the City's relations with adjacent communities. The first relates to the approval of the City's application to source water from Lake Michigan by the Compact Council in June 2016, which established a water supply service area that effectively fixed the City's municipal boundary.¹ As result, the City's ability to annex adjacent unincorporated lands is significantly limited.² In addition, opportunities for the City to enter into intergovernmental agreements to provide water or sanitary sewer services are limited. A second factor relates to the 2020 incorporation of the Village of Waukesha under Section 66.02162 of the *Wisconsin Statutes*. The former Town of Waukesha's incorporation created non-contiguous areas of the Village of Waukesha within the City's municipal boundaries. These Village areas create both opportunities and challenges for future intergovernmental cooperation and service provision.

Overlapping Jurisdictions

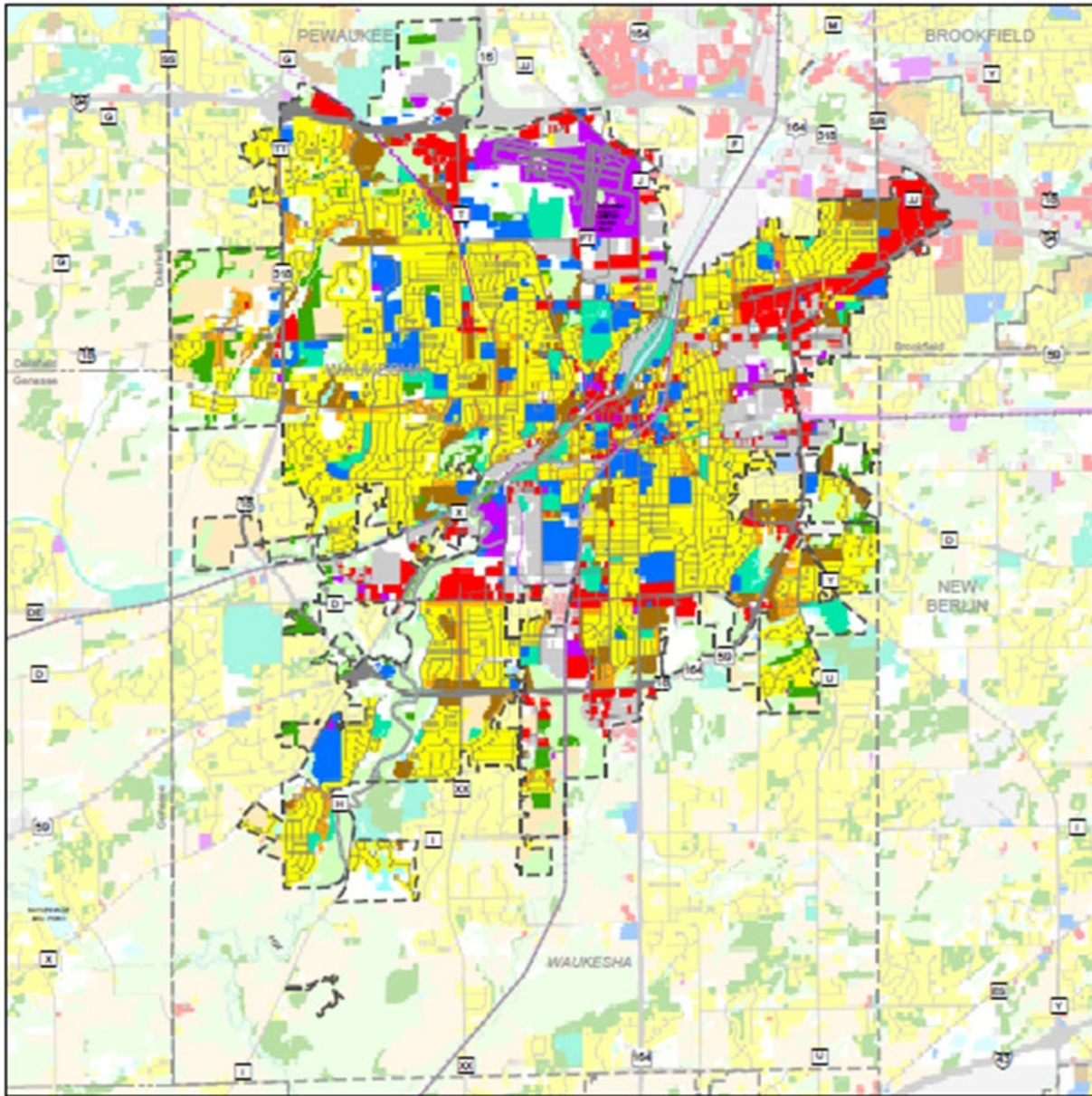
Waukesha County

The City is located within Waukesha County and, as the county seat, is home to the County's governmental offices and courthouse. Waukesha County's governmental offices are located in the City, as are several County-owned amenities and parks, including Fox River County Park, Minooka Park, Moor Downs Golf Course, and the Waukesha County Fairgrounds. Additional County facilities located within the City are the Waukesha County Airport (Crites Field), Waukesha County Huber Facility, Waukesha County Highway Operations, and the Waukesha County Department of Public Works.

¹ *Additional information on the City's water supply service area and the Great Lakes water diversion are provided in Chapter 6 of this comprehensive plan.*

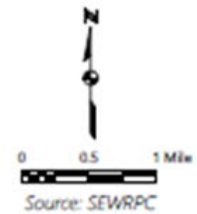
² *The water service boundary essentially halts annexations from adjacent towns unless an amendment is approved by the Compact Council.*

Generalized Land Uses Within the City of Waukesha: 2020



- | | |
|--|--|
|  SINGLE-FAMILY RESIDENTIAL |  AGRICULTURAL LANDS |
|  TWO-FAMILY RESIDENTIAL |  UNUSED URBAN LANDS |
|  MULTIFAMILY RESIDENTIAL |  EXTRACTIVE |
|  COMMERCIAL |  WETLANDS |
|  INDUSTRIAL |  WOODLANDS |
|  GOVERNMENTAL AND INSTITUTIONAL |  SURFACE WATER |
|  RECREATIONAL |  CITY OF WAUKESHA (MARCH 2022) |
|  STREETS AND HIGHWAYS |  OTHER CITY/VILLAGE BOUNDARY (MARCH 2022) |
|  OTHER TRANSPORTATION, COMMUNICATION, AND UTILITIES | |

Note: Colors outside the City of Waukesha are reduced in intensity to show the adjacent extent and distribution of each legend category.



State of Wisconsin

Many State agencies, are located in downtown Waukesha within the Lee Sherman Dreyfus State Office Building, including the WisDOT Southeast Region Office, which contains offices for five state agencies: the Departments of Health Services, Children and Families, Natural Resources, Safety & Professional Services, and Transportation.

The City works closely with several State agencies, including the Departments of Natural Resources, Revenue, and Transportation, as well as with the Wisconsin Economic Development Corporation, on a variety of plans and projects. Strong cooperation between the City and State will be required for successful implementation of many of the goals and policies presented in this plan.

Other Agencies and Organizations

In addition to the units of government outlined in this chapter, the City also coordinates efforts with several other agencies and organizations. Maintaining and leveraging cooperative partnerships with the following agencies will be essential to implementing the goals and policies set forth in this plan:

- School District of Waukesha
- Southeastern Wisconsin Regional Planning Commission (SEWRPC)
- Southeastern Wisconsin Fox River Commission (SEWFRC)
- Waukesha County Technical College
- City of Waukesha Chamber of Commerce
- Waukesha County Center for Growth
- Waukesha County Business Alliance
- Waukesha-Pewaukee Convention & Visitor's Bureau

IMPLEMENTATION RECOMMENDATIONS OVERVIEW

One of the most significant parts of the comprehensive planning process is implementation. For this comprehensive plan update to be effective, the goals and policies in this report need to be implemented

as actionable policies, programs, and initiatives. This chapter presents a guide for use in implementing this report's goals and policies and outlines actions to be taken by various agencies and units of government in efforts to implement this plan.

PLAN ADOPTION

Section 66.1001 of the *Wisconsin Statutes* requires that comprehensive plans be completed and adopted by local governing bodies in order for a county, city, village, or town to enforce its zoning, subdivision, or official mapping ordinances. It is the intent of this comprehensive plan update to satisfy the comprehensive planning requirements set forth in the *Statutes*.

CONSISTENCY AMONG PLAN ELEMENTS

State law requires that the implementation element describe how each element of the comprehensive plan will be integrated and made consistent with the other elements of the plan. All elements of this comprehensive plan were prepared and reviewed to ensure internal consistency among the various elements and each element was reviewed by the City of Waukesha Plan Commission.

In addition, the goals and policies presented in this report are intended to be complementary, with the achievement of one goal supporting the others. Due to the intersectional nature of comprehensive planning, goals and policies described in this report may overlap or directly relate to multiple elements. Should a recommended goal or policy conflict with another, reconciliation through consensus building or compromise may be required to maintain consistency.

MONITORING AND UPDATING THE PLAN

Annual Plan Review

This comprehensive plan update will be reviewed on an annual basis. City staff will recommend changes and updates to the Plan Commission for their review and subsequent recommendation for action by the City Council to formally amend this plan. At the time this plan was being prepared, two potential changes were anticipated. One such change may occur following the City's planned update to the 2019 Housing Study and Needs Assessment, which may impact contents of the housing element of this report once completed. Additionally, as sites near the central city that require remediation become available for redevelopment, the report may require revision to ensure that allowable uses are reflected on the land use policy map.

Each proposed amendment will be scheduled for a public hearing and advertised according to statutory procedures. Property owners within a minimum of 300 feet of any property subject to the plan amendment shall be notified in writing by US mail.

Land Development Plan Monitoring

Planning Division staff of the City of Waukesha Community Development Department will evaluate plan amendment requests for consistency with goals and policies presented throughout this plan on an annual basis. Staff recommendations to the Plan Commission and City Council will be consistent with these goals, policies, and planning standards. On an ongoing basis, staff will evaluate rezoning requests for their consistency with the plan. For rezoning requests inconsistent with the land use policy but deemed by staff to benefit the community and support the overall objectives of the comprehensive plan, the applicant will be advised of the inconsistency and recommended to request a plan amendment. Plan amendments and data associated with the comprehensive plan will be made available through the City's website.

Local and Regional Refinements

Detailed planning initiatives related to specific elements within this report may be undertaken separate from the comprehensive planning process. Thus, it is anticipated that various City, County, and Regional plans will be updated or completed to further the goals and policies of each comprehensive plan element following the adoption of this plan. This includes updates to the City's park and recreation facilities plan, housing study and needs assessment, bicycle and pedestrian plan, and central city plan. The outcomes of such planning efforts will be evaluated for consistency with this report and appropriate amendments to this plan will be proposed as needed.

Comprehensive Plan Update

State law requires that the City update its comprehensive plan no less than once every ten years.³ . In anticipation of the City's continued development and redevelopment, a comprehensive reevaluation, update, and revision of this plan should be conducted, as appropriate, after data from the 2030 Census becomes available. Reviewing the comprehensive plan using 2030 Census data will allow the City to evaluate planning projections and update the plan to reflect the evolving needs of City residents, business owners, and other stakeholders.

³ Requirements for comprehensive planning are set forth in Section 66.1001 of the Statutes.

PROGRAMS AND OBJECTIVES

Successful implementation of this plan will be is predicated on the success of new and existing City programs and objectives. Among others, the existing and potential programs described in this section can facilitate the successful implementation of the goals and policies related to each element of this comprehensive plan.

Housing

Housing Study and Needs Analysis Update

The City should seek funding for and undertake an update to the housing study and needs assessment. Significant events that have occurred since this study was completed in 2019 have reshaped the local housing market and it is essential that updated data and trends are considered so that the City can create and enact policies and programs that improve the availability of quality, accessible housing.

Affordable Housing Programs

The City has three major programs aimed at improving the quantity of affordable housing units and the quality of existing affordable units in the housing stock. The City should work to ensure the Affordable Housing Development Fund, Affordable Housing Homeowner Rehab Program, and Rental Rehab Programs remain funded through loan repayments, utilization of State tax increment financing (TIF) Affordable Housing extension statutes, and through other funding sources as they become available.

Community Development Block Grants

The City should continue to use program income from older Community Development Block Grants (CDBG) housing programs to fund new homeowner rehabilitation loans and continue the popular Landmarks Commission Paint and Repair Grant program, which offers small scale grants to homeowners and landlords in historic properties within the City's low-to-moderate income census block groups.

Economic Development

Central City Storefront Activation Loans

In 2022, the City created a Central City Storefront Activation Loan program with the goal of incentivizing reinvestment in central city commercial properties, particularly downtown. These low-interest loans can be used for a wide variety of tenant space improvements, including the addition of commercial kitchens, sprinkler systems, and ADA-compliant upgrades. The program was funded with Federal funds from the American Rescue Plan Act (ARPA). A revolving loan fund, whereby any principal and interest paid back to the City are used to further fund the program, should be established to continue the program when ARPA funding is no longer available.

Tax Incremental Financing

Waukesha has long used TIF as a major economic development tool. The City should review and evaluate TIF guidelines on a regular basis and continue to leverage TIF as appropriate to redevelop blighted areas and expand the tax base.

Brownfields Program

The City should consider creating a formal brownfields program to facilitate planning for the cleanup and redevelopment of vacant or obsolete industrial properties. Creating such a program can remove barriers to redevelopment and better define the City's objectives and priorities, putting the City and property owners in a stronger position when applying for grants from the DNR, EPA, and other funding opportunities.

Business Retention Visits

Create a program with regular visits to local businesses to better understand and tailor programs to address their needs. Potential partners for such a program could include staff from the Waukesha County Center for Growth and the Waukesha County Business Alliance.

Transportation

Bicycle and Pedestrian Facilities Plan

Create a new bike-ped committee to update and implement recommendations from the City's bicycle and pedestrian facilities plan.

Parks and Open Space

Park Activation

Work with the Waukesha Parks Foundation or form another citizen-led group to explore ways to activate parks throughout the City.

Land Use

Community Node Plans and Corridor Plans

Develop detailed plans for Community Nodes identified on the land use policy map.⁴ Develop corridor plans that balance new land uses and multimodal transportation needs, particularly those of pedestrians.

⁴ Community Nodes and land use are described in detail in Chapter 2 of this comprehensive plan.

GOALS AND POLICIES

GOAL 9.1

Review and update City ordinances and policies to support implementation of the comprehensive plan.

Policy 9.1.1

Conduct a comprehensive review and overhaul of the City's zoning ordinance⁵ to implement the goals and policies contained within this plan and reflect the City's fixed borders, redevelopment opportunities, and housing affordability challenges. The City has participated in two recent housing affordability studies by the Congress for New Urbanism (CNU) and the Wisconsin Policy Forum, each of which identifies a list of Zoning Ordinance amendments that could support the development of and assist in reducing the cost of needed housing units in the City.

Policy 9.1.2

Update the subdivision and platting ordinance and the signs and outdoor advertising ordinance to reflect any sections that are impacted by the new comprehensive plan and zoning ordinance updates.

GOAL 9.2

Maintain existing relationships and explore opportunities to partner with adjacent and overlapping jurisdictions.

Policy 9.2.1

Work with the School District of Waukesha on agreements that allow for expanded District use of City parks and City use of District playgrounds and other recreation amenities.

Policy 9.2.2

Collaborate with the School District of Waukesha to identify opportunities to use vacant, underutilized, or undeveloped property for development or redevelopment in accordance with the land use policy.

Policy 9.2.3

Work with the County to identify redevelopment opportunities on County-owned lands, focusing on the land northeast of Grandview Boulevard and Northview Road as identified in the *Waukesha County Northview, Expo, Highway, and Airport Grounds Master Plan* and the City's adopted land use policy.

⁵ The Zoning Ordinance is set forth in Chapter 22 of the City's Municipal Code.

Policy 9.2.3

Encourage the County to preserve the Moor Downs Golf Course as a public amenity for future generations.

Policy 9.2.4

Explore ways to partner with other agencies and organizations, including the County, on additional recreational opportunities in Minooka County Park and Fox River County Park.

Policy 9.2.5

Work to collaborate with the Village of Waukesha on corridor plans, redevelopment, placemaking, infrastructure and streetscape enhancements where isolated Village areas exist within the City, particularly along Sunset Drive.

Policy 9.2.6

Cooperate with the County and nearby municipalities to advance regional economic development.

Policy 9.2.7

Support the Southeastern Wisconsin Regional Planning Commission with local, county, and regional planning efforts.

Policy 9.2.8

Continue to be involved in regional initiatives to improve transportation, housing, and economic development opportunities.

Policy 9.2.9

Explore additional intergovernmental cooperation opportunities to reduce duplication of services and amenities.

Policy 9.2.10

Coordinate with the Wisconsin Department of Transportation on studies, plans, and improvements to State Highways located in the City.

**Common Council
of the
City of Waukesha, Wisconsin**

Resolution No. 2022-16

**Resolution Adopting Public Participation Procedures for Updating the
Comprehensive Plan for the City of Waukesha**

WHEREAS, pursuant to Section 66.1001 of the *Wisconsin Statutes*, all units of government which enact or amend zoning, subdivision, or official mapping ordinances on or after January 1, 2010, must adopt a comprehensive plan; and

WHEREAS, the City of Waukesha adopted a comprehensive plan under the authority of and procedures established by Section 66.1001 of the *Wisconsin Statutes* on September 11, 2009; and

WHEREAS, Section 66.1001(4)(a) of the *Wisconsin Statutes* requires that the Common Council adopt written procedures designed to foster public participation during the preparation or amendment of a comprehensive plan; and

WHEREAS, public participation procedures have been developed to foster public participation in the comprehensive plan amendment process.

NOW, THEREFORE, BE IT RESOLVED that the Common Council of the City of Waukesha hereby adopts the Public Participation Procedures for Amending the Comprehensive Plan attached hereto as Exhibit A to fulfill the requirements of Section 66.1001(4)(a) of the *Wisconsin Statutes*.

Shawn N. Reilly, Mayor

Gina L. Kozlik, City Clerk-Treasurer

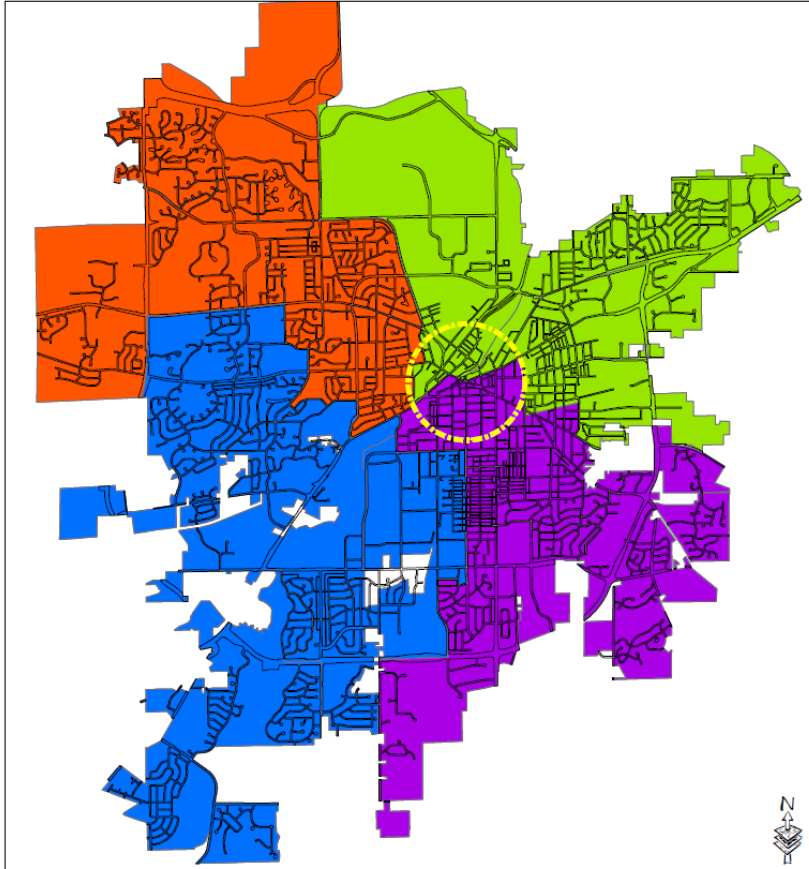
Exhibit A
2022 Comprehensive Plan
Public Participation Plan

To foster public participation in the 2022 update of the City of Waukesha Comprehensive Plan, the city will use a multi-faceted approach to maximize public input.

1. City staff added comprehensive plan related questions to the 2022 National Community Survey. The survey was distributed to participants in both Spanish and English. The survey results will be used to guide discussions and in the creation of goals, objectives, and recommendations in the Comprehensive Plan.
2. The city will hold a series of five (5) in-person focus group meetings. The focus groups are for specific areas of the city and were created using aldermanic district groups and are shown in Exhibit B. They are as follows:
 - a. Southeast Focus Group: Aldermanic Districts 8, 9, 10, 11
 - b. Northwest Focus Group: Aldermanic Districts 4, 5, 14, 15
 - c. West & Southwest Focus Group: Aldermanic Districts 6, 7, 12, 13
 - d. Northeast Focus Group: Aldermanic Districts 1, 2, 3
 - e. Downtown Focus Group: Aldermanic Districts 2, 3, 11
3. The city will hold one (1) online/virtual citywide focus group for all residents who cannot make the in-person group meetings or prefer to participate virtually.
4. The city will use all available communication and promotion methods to inform the public about the focus group meetings including the city website, newsletters, social media accounts, emails, and press releases.
5. There will be a Comprehensive Plan Update page on the city's website, which will have ways for residents to submit ideas, suggestions, and questions to staff. This page will also allow residents to review draft chapters and the final draft of the comprehensive plan update prior to adoption.
6. Any discussion and/or action on the comprehensive plan update at the Plan Commission will allow for public input and comments.
7. A Class 1 Public Hearing Notice on the plan adoption will be published in the official paper of record at least 30 days prior to the public hearing in front of the Common Council.
8. For future amendments, a Class 1 Public Hearing Notice on the amendment will be published at least 30 days prior to the public hearing in front of the Common Council.

Exhibit B
2022 Comprehensive Plan
Focus Group Area Map

Comprehensive Plan Update Focus Group Areas



Legend

- Southeast Focus Group
- Northeast Focus Group
- West and Southwest Focus Group
- Northwest Focus Group
- Downtown Focus Group

Southeast Focus Group:

Districts 8, 9, 10, 11

Northwest Focus Group Districts

4, 5, 14, 15

West & Southwest Focus Group

Districts 6, 7, 12, 13

Northeast Focus Group Districts

1, 2, 3

Downtown Focus Group

Districts 2, 3, 11

** NOTE: This table is currently incomplete and will be completed with a comprehensive list of data sources used in the preparation of this plan prior to final publication. The entries presented in this draft are a small sample of the data resources to be included. **

Additional Data Resources by Topic

Populations and People^a	
Subject	Table No.
Language Spoken at Home	S1601
Disability Characteristics	S1810
Selected Characteristics of Health Insurance Coverage	S2701

Demographics	
Subject	Table No.

Housing^b	
Subject	Table No.
Children Characteristics	S0901
Households and Families	S1101
Occupancy Characteristics	S2501
Demographic Characteristics for Occupied Housing Units	S2502

Income and Poverty	
Subject	Table No.
Poverty Status in the Past 12 Months	S1701
Poverty Status in the Past 12 Months of Families	S1702
Food Stamps/Supplemental Nutrition Assistance Program (SNAP)	S2201

Employment	
Subject	Table No.
Means of Transportation to Work by Selected Characteristics	S0802
Means of Transportation to Work for Workplace Geography	S0804

Employment Status

S2301

NOTE: Data is from the five-year 2016-2020 American Community Survey (ACSCP5Y2020).

^a *Includes Health.*

^b *Includes Families and Living Arrangements.*

Source: U.S. Census Bureau and SEWRPC

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SEWRPC Community Assistance Planning Report No. __

CITY OF WAUKESHA COMPREHENSIVE PLAN

Appendix C

ANNOTATED BIBLIOGRAPHY

Source	Author	Date	Description	Geography	Topics
City					
A Land Use Plan for the City of Waukesha Planning Area: 2010	Southeastern Wisconsin Regional Planning Commission (SEWRPC) and City of Waukesha	July 1993	The first comprehensive land use plan developed for the City, in conjunction with neighboring municipalities. Intended to promote orderly growth and development of the City and surrounding environs.	City of Waukesha	Land Use
Bus Rapid Transit Concept Plan for the Bluemound Road Corridor	Southeastern Wisconsin Regional Planning Commission (SEWRPC)	January 2022	An overview of potential transit enhancements from downtown Waukesha to the Milwaukee Regional Medical Center, prepared at the request of the Cities of Waukesha and Brookfield. Details the extent of improvements, potential benefits of such improvements, funding sources, and next steps for enhancing transit or implementing bus rapid transit (BRT) along the Bluemound Road Corridor.	Cities of Waukesha, Brookfield, and Milwaukee	Transportation, Transit, Land Use
Central City Plan	GRAEF	October 2012	Outlines the City's vision for regenerating the downtown area by building on previous downtown redevelopment plans, which include a 1974 downtown development plan, a 1990 riverfront plan, and a 1998 downtown/central city plan. Encompassing a larger geographic area than previous plans, the plan is designed to guide policy decisions and redevelopment efforts related to the historic downtown and adjacent neighborhoods to the east, south, and northwest. The plan contains goals and recommendations related to complete streets, residential uses and neighborhood rehabilitation, economic vitality, and gateway linkages.	City of Waukesha	Economic Development, Housing, Land Use, Transportation
City of Waukesha Central City Master Plan	GRAEF	October 2012	Proposes ideas and specific actions for regenerating and transforming Waukesha's Downtown and surrounding neighborhoods by attracting more businesses, residents, and visitors to the Central City. Intended to serve as the primary guiding document for redevelopment and policy decisions for Downtown and the adjacent neighborhoods.	City of Waukesha	Comprehensive
City of Waukesha Housing Study and Needs Assessment	Vierbicher	February 2019	Contains contextual data on housing and housing needs and establishes goals and objectives for addressing those needs. Created with the support of a Steering Committee, the study incorporates information from City residents and other stakeholders, including builders/developers, non-profits, realtors, and landlords, obtained through surveys, focus groups, and public meetings.	City of Waukesha	Housing

Table continued on next page.

Source	Author	Date	Description	Geography	Topics
City of Waukesha Strategic Plan	Mejorando Group and City of Waukesha	September 2018	Presents strategies and policies to advance the City's economic strength and diversity by retaining and expanding existing businesses, attracting new businesses and high-quality jobs, and promoting quality redevelopment. Also proposes that the City promote attractive and clean neighborhoods with a sense of identity and promote redevelopment while preserving historical assets.	City of Waukesha	Comprehensive
City of Waukesha, Wisconsin Comprehensive Plan	City of Waukesha and Waukesha County University of Wisconsin-Extension	November 2009	A decision-making tool with a framework for establishing and administering sound land use regulations, including an official statement of land use policies and information needed to support and validate those policies, such as planning element inventories and analyses to help identify local needs.	City of Waukesha	Comprehensive
Downtown Waukesha Market Analysis	University of Wisconsin-Madison Extension - Waukesha County	February 2016	A community-led research effort that examined business retention, expansion and recruitment opportunities in downtown Waukesha, WI. It explored economic development initiatives that could be pursued in the downtown study area. In addition, specific business attraction priorities by category were identified. Intended as a resource for existing and prospective entrepreneurs, site selectors, and others seeking a comprehensive analysis to guide downtown economic development.	City of Waukesha	Economic Development, Housing
Haertel Field Neighborhood Revitalization Strategy Area: 2022-2026 Strategic Plan	University of Wisconsin-Madison Extension - Waukesha County and Waukesha County	--	Strategic plan for the Haertel Fields Neighborhood Revitalization Strategy Area (NRSA) to identify and prioritize changes and develop strategies that improve housing, businesses, and resident quality of life. Provides direction for CDBG decision making for federal investments in alignment with HUD guidelines.	City of Waukesha	Housing
Historical and Architectural Resources Survey: 2013-2014	Heritage Research, Ltd.	July 2014	Presents an updated survey of the architectural and historical resources located within the City of Waukesha. Identifies buildings, structures, sited and historic districts that meet the criteria for listing in the National Register of Historic Places.	City of Waukesha	Parks and Natural and Cultural Resources

Table continued on next page.

Source	Author	Date	Description	Geography	Topics
Housing Affordability Reports	City of Waukesha	2021, 2022	<p>An annual report that sets forth the City's approach to providing an adequate housing supply to meet existing and forecasted housing demand and promoting development of a range of housing choices suitable for people of all income levels, age groups, and needs. In compliance with State legislation enacted in 2018, the report identifies undeveloped parcels suitable/zoned for residential development, including vacant sites and potential redevelopment sites; data on development activity; an analysis of how regulations impact the cost of developing new housing; and methods for modifying regulations, processes, and fees to promote available housing.</p> <p>The report relates to implementing the comprehensive plan's housing element as described by Section 66.10013 of the <i>Wisconsin Statutes</i>.</p>	City of Waukesha	Housing
Sunset and West Redevelopment Plan	Cory Clark, Valerie Davis, Adam Kuhn, and Makenzee Loft (University of Wisconsin-Milwaukee School of Architecture and Urban Planning)	May 2020	Presents short- and long-term strategies and recommendations to guide decision-making efforts regarding infrastructure, land use, redevelopment, and transportation improvements. Provide businesses, property owners, and residents with expectations regarding future plans for equitable and desirable improvements to the area.	City of Waukesha	Economic Development, Housing, Land Use, Transportation
Waukesha Area Transit Development Plan: 2023-2027	Southeastern Wisconsin Regional Planning Commission (SEWRPC)	June 2023	This short-range transit development plan (TDP) evaluates the performance of existing Waukesha Metro Transit and Waukesha County Transit systems and recommends transit service policies and improvement proposals to be implemented over a 5-year window.	City of Waukesha and Waukesha County	Transportation - Public Transit
Waukesha Redevelopment Master Plan & Recommendations	Cory Clark, Valerie Davis, Adam Kuhn, and Makenzee Loft	May 2020	Prepared in conjunction with the University of Wisconsin-Milwaukee to guide decision-making efforts regarding infrastructure, land use, redevelopment, and transportation improvements in the Sunset Drive and West Avenue sub-area. Intended to guide businesses, property owner, and resident investments.	City of Waukesha	Economic Development; Housing
West Side Neighborhood Revitalization Strategy Area: 2023-2027 Strategic Plan	University of Wisconsin-Madison Extension - Waukesha County and Waukesha County	--	Strategic plan for the West Side Neighborhood Revitalization Strategy Area (NRSA) to identify and prioritize changes and develop strategies that improve housing, businesses, and resident quality of life. Provides direction for CDBG decision making for federal investments in alignment with HUD guidelines.	City of Waukesha	Housing

Table continued on next page.

Source	Author	Date	Description	Geography	Topics
County					
A Comprehensive Development Plan for Waukesha County	Waukesha County Department of Parks and Land Use, University of Wisconsin-Madison Extension - Waukesha County, Waukesha County Municipalities	February 2009	A multi-jurisdictional comprehensive plan drafted in coordination with 37 municipalities to address countywide issues and local concerns, to improve intergovernmental cooperation, and to utilize resources efficiently	Waukesha County	Comprehensive
Waukesha County Sustainability Plan	Waukesha County	September 2018	A plan for furthering the sustainability of the County's internal operations and facilities, which updates the County's 2010-2014 sustainability plan.	Waukesha County	Natural Resources
Waukesha County Jurisdictional Highway System Plan: 2010	SEWRPC	December 1995	Provides a review and reevaluation, and recommendations as to which level and agency of government should have jurisdictional responsibilities for each segment of arterial street and highway in the County with a design year of 2035. Refines and amends the functional improvements (new arterial facilities and widening of existing facilities) recommended under the 2035 regional transportation plan.	Waukesha County	Transportation - Highways
Building Blocks	Wisconsin Policy Forum	July 2023	Understanding and responding to Waukesha County's housing affordability challenges	County	Housing
Regional					
Regional Water Quality Management Plan	Southeastern Wisconsin Regional Planning Commission (SEWRPC)	--	Establishes recommendations for the control of water pollution from both point and nonpoint sources. Provides the basis for a local government's eligibility for Federal and State resources for developing and redeveloping their sanitary sewer system; for issuance of waste discharge permits by the DNR; State review and approval of locally proposed sanitary sewer extensions.	Southeastern Wisconsin Region	Parks and Natural and Cultural Resources
Southeastern Wisconsin Comprehensive Economic Development Strategy: 2021-2025	Milwaukee 7 Regional Economic Development Partnership and SEWRPC	September 2021	Presents a strategy-driven plan for regional economic development created with input from private and public sector stakeholders. Promotes regional collaboration and innovation as a competitive advantage for Southeastern Wisconsin communities.	Southeastern Wisconsin Region	Economic Development
VISION 2050	Southeastern Wisconsin Regional Planning Commission	December 2016	Public Transit; Bicycle & Pedestrian: Transportation Systems Management (TSM) and Travel Demand Management (TDM); Arterial Streets and Highways; Freight Transportation	Southeastern Wisconsin Region	Land Use and Transportation

Table continued on next page.

Source	Author	Date	Description	Geography	Topics
Regional Natural Areas Plan, Planning Report No. 42	Southeastern Wisconsin Regional Planning Commission	Under Development	An element of the regional comprehensive plan that supplements regional land use and park and open space plan recommendations relative to promoting biodiversity and preserving open space. Contains a comprehensive inventory of the Region's most significant remaining natural, geological, and other resources, originally conducted in 1994 and updated in 2009. The plan identifies the Region's remaining high-quality natural, geological, and other resource areas of significance, which are vital to supporting endangered, threatened, and rare plant and animal species in the Region.	Southeastern Wisconsin Region	Natural Resources
A Regional Broadband Telecommunications Plan for Southeastern Wisconsin (Telecommunications – 1)	SEWRPC Memorandum Report No. 164	September 2005	The first report described the importance and potential application for high capacity telecommunication services in meeting growing needs in such areas as public safety emergency response, freeway traffic management, home health care, and environmental monitoring.	Southeastern Wisconsin Region	Utilities - Communications
A Regional Broadband Telecommunications Plan for Southeastern Wisconsin (Telecommunications – 2)	SEWRPC Planning Report No. 51	September 2006	The second report set forth recommendations concerning the development of high capacity wireless telecommunications services within the Region. It recognized that, like transportation planning, telecommunications planning relates to infrastructure networks. Such planning differs, however, from public infrastructure system planning in two important respects: one, the rapid pace of technological change in telecommunications; and two, the role of private carriers in plan implementation.	Southeastern Wisconsin Region	Utilities - Communications

Table continued on next page.

Source	Author	Date	Description	Geography	Topics
A Regional Broadband Telecommunications Plan for Southeastern Wisconsin (Telecommunications - 3)	SEWRPC Planning Report No. 53	October 2007	The third report integrated the wireless service plan set forth in SEWRPC Planning Report No. 51 with a wireline services plan. The report presents background information about the Regional Planning Commission, the regional planning concept in Southeastern Wisconsin, and about the seven-county planning Region. It sets forth the basic principles and concepts underlying the regional telecommunications planning process; and describes that process, and the technologies involved in both wireless and wireline telecommunications networks. Importantly, this report sets forth a set of eight objectives that should be met by the telecommunications system of the Region together with supporting principles and standards. These objectives relate to system performance, as measured by data transmission rates, availability, quality of voice transmission, error rate and packet loss; universality of service; redundancy; antenna site number optimization; applications to be served; cost minimization; antenna site aesthetics and safety; and potential for coordination with the development and use of public safety telecommunication networks. The report presents information on the geographic coverage areas and telecommunications service offerings of both wireline and wireless service providers within the Region	Southeastern Wisconsin Region	Utilities - Communications
Comprehensive Economic Development Strategy (CEDS) Report	Southeastern Wisconsin Regional Planning Commission	September 2021	The purpose of the Comprehensive Economic Development Strategy (CEDS) is to bring together members of the public and private sectors to develop a strategy-driven plan for regional economic development. A new CEDS should be prepared at least every five years for communities and organizations within their respective region to qualify for funding through the U.S. Economic Development Administration's (EDA) Public Works and Economic Adjustment assistance programs. Led by M7 with assistance from SEWRPC, development of the 2021-2025 CEDS for Southeastern Wisconsin was underway as this report was being prepared.	Region	Economic Development

Table continued on next page.

Source	Author	Date	Description	Geography	Topics
State					
A Regional Housing Plan for Southeastern Wisconsin: 2035	Southeastern Wisconsin Regional Planning Commission (SEWRPC)	March 2013	<p>Contains recommendations to support public and private sector efforts to address housing-related issues in the Region. Intended to guide public policy for providing sufficient, suitable housing. Considerations relate to housing development practices; creating cost-appropriate housing for households of all income levels; overcoming housing discrimination and the concentration of minority and low-income populations in certain areas; establishing a jobs-housing balance; ADA-accessible housing; and the need for subsidized and tax-credit housing.</p> <p>Units of government and agencies within the Region are recommended to endorse the plan and integrate plan findings and recommendations into their community-, housing- and land use-related planning, regulations, and other efforts</p>	Southeastern Wisconsin Region	Housing
Wisconsin Rail Plan 2050	Wisconsin Department of Transportation	July 2023	This statewide plan identifies the vision, goals, objectives, policies, and actions to guide future rail-related investments in Wisconsin. Includes freight rail, state-owned passenger rail, intercity passenger rail, and commuter rail through 2050.	Wisconsin	Transportation - Railways
Wisconsin State Freight Plan 2023	Wisconsin Department of Transportation	July 2023	Statewide long-range multimodal freight plan linking freight transportation needs to department policy and programming, informs future transportation investment, and provides an implementation plan to advance the safe and efficient movement of freight.	Wisconsin	Transportation - Freight
Wisconsin Active Transportation Plan 2050	Wisconsin Department of Transportation	Under Development	A statewide long-range plan focused on human-powered modes of transportation, such as bicycling and walking. This plan will evaluate active transportation opportunities and needs, resulting in policies and actions that will align with and further Connect 2050.	Wisconsin	Transportation - Bicycle, Pedestrian, and other active travel modes
WisDOT Connect 2050 Statewide Long-Range Multimodal Transportation Plan	Wisconsin Department of Transportation	May 2022	Connect 2050 is Wisconsin's statewide, multimodal, long-range plan, intended to facilitate decision-making for improvements to and investments in all types of transportation throughout the state through 2050.	Wisconsin	Transportation - Multimodal
Federal					
Amtrak Connects US: Amtrak's Vision For Improving Transportation Across America	National Railway Passenger Corporation (Amtrak)	June 2021	A national comprehensive plan to develop and expand passenger railway infrastructure. Proposes federal investment of \$75 billion over fifteen years for expansion of service to new communities and routes.	National	Transportation - Railways

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PRELIMINARY DRAFT

SEWRPC Community Assistance Planning Report No. __

CITY OF WAUKESHA COMPREHENSIVE PLAN

Appendix D

INTRODUCTION AND BACKGROUND DATA

Historic and Projected Population Levels in the City, County, and Region: 1920-2020

Year	City of Waukesha			Waukesha County			Southeastern Wisconsin Region		
	Population	Change from Preceding Census		Population	Change from Preceding Census		Population	Change from Preceding Census	
		Number	Percent		Number	Percent		Number	Percent
1920	12,558	3,818	43.7	42,612	5,512	14.9	783,691	152,530	24.2
1930	17,176	4,618	36.8	52,358	9,746	22.9	1,006,118	222,427	28.4
1940	19,242	2,066	12.0	62,744	10,386	19.8	1,067,699	61,581	6.1
1950	21,233	1,991	10.3	85,901	23,157	36.9	1,240,618	172,919	16.2
1960	30,004	8,771	41.3	158,249	72,348	84.2	1,573,614	332,996	26.8
1970	40,271	10,267	34.2	231,335	73,086	46.2	1,756,083	182,469	11.6
1980	50,365	10,094	25.1	280,203	48,868	21.1	1,764,796	8,713	0.5
1990	56,894	6,529	13.0	304,715	24,512	8.7	1,810,364	45,568	2.6
2000	64,825	7,931	13.9	360,767	56,052	18.4	1,931,165	120,801	6.7
2010	70,718	5,893	9.1	389,891	29,124	8.1	2,019,970	88,805	4.6
2020	71,158	440	0.6	406,978	17,087	4.4	2,048,087	28,117	1.4

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

**Projected Population Levels in the City,
County, and Region: 2020-2050**

	Population			
	2020	2050	Projected Change 2020-2050	
			Number	Percent
City	71,158	96,290	25,132	35.3
County	406,978	481,400	74,422	18.3
Region	2,048,087	2,421,600	373,513	18.2

Source: U.S. Census Bureau and SEWRPC

Population Distribution by Age in the City, County, and Region: 2020

Age	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Population	Percent of Total	Population	Percent of Total	Population	Percent of Total
Under 5 Years	3,811	5.3	20,670	5.1	124,055	6.1
5 to 9 Years	3,657	5.0	23,327	5.8	127,954	6.3
10 to 14 Years	4,123	5.7	25,626	6.4	101,861	5.0
15 to 19 Years	5,403	7.5	26,182	6.5	135,380	6.7
20 to 24 Years	6,593	9.1	22,083	5.5	131,985	6.5
25 to 29 Years	5,860	8.1	19,894	4.9	140,668	6.9
30 to 34 Years	5,215	7.2	22,312	5.5	136,331	6.7
35 to 39 Years	4,667	6.4	25,070	6.2	133,207	6.5
40 to 44 Years	4,719	6.5	24,702	6.1	120,973	5.9
45 to 49 Years	4,065	5.6	26,059	6.5	125,203	6.1
50 to 54 Years	4,508	6.2	29,296	7.3	135,244	6.6
55 to 59 Years	5,271	7.3	33,397	8.3	147,885	7.2
60 to 64 Years	4,183	5.8	29,090	7.2	130,584	6.4
65 to 69 Years	3,566	4.9	25,455	6.3	108,558	5.3
70 to 74 Years	2,027	2.8	17,634	4.4	78,188	3.8
75 to 79 Years	1,638	2.3	11,613	2.9	50,004	2.4
80 to 84 Years	1,832	2.5	9,660	2.4	37,557	1.8
85 Years and Over	1,281	1.8	10,567	2.6	46,295	2.3
Total	72,419	100.0	402,637	100.0	2,044,773	100.0

Source: U.S. Census Bureau and SEWRPC

Population Distribution by Sex in the City, County, and Region: 2020

Sex	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Population	Percent of Total	Population	Percent of Total	Population	Percent of Total
Female	37,036	51.1	204,475	50.8	1,043,773	51.0
Male	35,383	48.9	198,162	49.2	1,001,000	49.0
Total	72,419	100.0	402,637	100.0	2,044,773	100.0

Source: U.S. Census Bureau and SEWRPC

City of Waukesha Resident Population by Age and Sex: 2020

Age	Female		Male		Total	
	Population	Percent of Total	Population	Percent of Total	Population	Percent of Total
Under 5 Years	1,896	2.6	1,915	2.6	3,811	5.3
5 to 9 Years	1,843	2.5	1,814	2.5	3,657	5.0
10 to 14 Years	2,158	3.0	1,965	2.7	4,123	5.7
15 to 19 Years	3,118	4.3	2,285	3.2	5,403	7.5
20 to 24 Years	3,273	4.5	3,320	4.6	6,593	9.1
25 to 34 Years	5,411	7.5	5,664	7.8	11,075	15.3
35 to 44 Years	4,648	6.4	4,738	6.5	9,386	13.0
45 to 54 Years	4,380	6.0	4,193	5.8	8,573	11.8
55 to 64 Years	4,634	6.4	4,820	6.7	9,454	13.1
65 to 74 Years	3,001	4.1	2,592	3.6	5,593	7.7
75 to 84 Years	1,786	2.5	1,684	2.3	3,470	4.8
85 Years and Over	888	1.2	393	0.5	1,281	1.8
Total	37,036	51.1	35,383	48.9	72,419	100.0

Source: U.S. Census Bureau and SEWRPC

Population by Race/Ethnicity in the City, County, and Region: 2020

	Not Hispanic							Hispanic or Latino	Total
	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race Alone	Two or More Races		
City	53,409	2,395	177	2,382	40	205	2,571	9,979	71,158
County	347,922	6,648	807	15,616	121	1,138	12,891	21,835	406,978
Region	1,355,080	285,396	6,262	71,887	549	7,703	73,426	247,784	2,048,087

Source: U.S. Census Bureau and SEWRPC

Changes in Population by Race/Ethnicity in the City of Waukesha: 2010 and 2020

Race/Ethnicity	2010		2020	
	Number	Percent	Number	Percent
Not Hispanic or Latino				
White Alone	56,807	81.2	56,913	78.6
Black or African American	1,558	2.2	2,324	3.2
American Indian and Alaska Native Alone	149	0.2	81	0.1
Asian Alone	2,315	3.3	2,275	3.1
Native Hawaiian and Other Pacific Islander Alone	0	0	38	0.1
Some Other Race Alone	57	0.1	744	1.0
Two or More Races	999	1.4	1,266	1.7
Hispanic or Latino	8,061	11.5	8,778	12.1
Total Population	69,946	100.0	72,419	100.0

Source: U.S. Census Bureau American Community Survey 5-year Estimates and SEWRPC

Residents with a Disability by Type of Disability in the City, County, and Region: 2020

Disability Type	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number	Percent	Number	Percent	Number	Percent
Hearing Difficulty	1,896	2.6	13,064	3.3	61,579	3.0
Vision Difficulty	1,064	1.5	5,255	1.3	38,890	1.9
Cognitive Difficulty	2,998	4.4	12,301	3.2	90,177	4.5
Ambulatory Difficulty	4,530	6.7	18,726	4.9	115,962	5.7
Self-Care Difficulty	1,474	2.2	6,402	1.7	49,908	2.5
Independent Living Difficulty	2,574	4.5	12,259	3.9	86,670	4.3
Total ^a	8,414	11.8	38,409	9.6	235,335	11.6

^a Total civilian noninstitutionalized population with a disability. One person may have identified themselves as experiencing more than one disability.

Source: U.S. Census Bureau American Community Survey 5-year Estimates and SEWRPC

Residents with a Disability by Race/Ethnicity in the City, County, and Region: 2020

Race/Ethnicity	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number	Percent	Number	Percent	Number	Percent
Not Hispanic or Latino						
White Alone	6,089	10.8	33,413	9.5	161,905	11.7
Black or African American	184	8.3	423	7.2	40,823	14.2
American Indian and Alaska Native Alone	39	24.8	116	13.8	1,352	16.3
Asian Alone	259	11.3	736	4.9	4,452	6.6
Native Hawaiian and Other Pacific Islander Alone	0	0.0	17	14.5	129	16.5
Some Other Race Alone	932	48.2	1,633	31.0	7,908	9.9
Two or More Races	228	9.9	657	6.9	8,363	9.9
Hispanic or Latino	934	10.7	1,891	9.7	20,677	8.9

Source: U.S. Census Bureau American Community Survey 5-year Estimates and SEWRPC

Residents with a Disability by Age in the City, County, and Region: 2020

Age	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number	Percent	Number	Percent	Number	Percent
Under 5 Years	0	0.0	114	0.6	978	0.8
5 to 17 Years	595	5.6	2,614	4.0	18,644	5.4
18 to 34 Years	961	4.9	3,562	4.9	28,666	6.3
35 to 64 Years	3,040	11.2	11,423	6.8	87,698	11.1
65 to 74 Years	1,251	22.6	7,573	17.7	41,155	22.2
75 Years and Over	2,567	55.8	13,123	42.6	58,194	45.5

Source: U.S. Census Bureau American Community Survey 5-year Estimates and SEWRPC

Health Insurance Coverage of Residents in the City, County, and Region: 2020

	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number	Percent	Number	Percent	Number	Percent
Insured	67,237	93.9	386,999	96.7	1,909,460	94.3
Uninsured	4,365	6.1	13,019	3.3	115,135	5.7
Total ^a	71,602	100.0	400,018	100.0	2,024,595	100.0

^a The data provided in this table reflects the civilian noninstitutionalized population.

Source: U.S. Census Bureau American Community Survey 5-year Estimates and SEWRPC

Health Insurance Coverage of Residents by Race/Ethnicity in the City, County, and Region: 2020

	City of Waukesha				Waukesha County				Southeastern Wisconsin Region			
	Insured	Percent Insured	Uninsured	Percent Uninsured	Insured	Percent Insured	Uninsured	Percent Uninsured	Insured	Percent Insured	Uninsured	Percent Uninsured
Not Hispanic or Latino												
White Alone	54,110	96.0	2,255	4.0	340,746	97.3	9,440	2.7	1,329,439	96.5	48,797	3.5
Black or African American	2,028	91.6	186	8.4	5,527	93.4	388	6.6	267,004	92.8	20,693	7.2
American Indian and Alaska Native Alone	125	79.6	32	20.4	738	87.8	103	12.2	7,318	88.5	952	11.5
Asian Alone	2,259	98.3	39	1.7	14,744	97.4	397	2.6	62,367	93.0	4,699	7.0
Native Hawaiian and Other Pacific Islander Alone	38	100.0	0	0.0	110	94.0	7	6.0	690	88.3	91	11.7
Some Other Race Alone	1,325	68.5	610	31.5	4,302	81.7	966	18.3	64,067	80.2	15,830	19.8
Two or More Races	1,863	80.7	446	19.3	8,830	93.3	636	6.7	77,497	92.0	6,781	8.0
Hispanic or Latino	6,849	78.8	1,843	21.2	16,890	86.8	2,570	13.2	194,784	83.7	38,022	16.3

Source: U.S. Census Bureau American Community Survey 5-year Estimates and SEWRPC

Educational Attainment for Residents in the City, County, and Region: 2020

Level of Educational Attainment	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number	Percent	Number	Percent	Number	Percent
No High School Diploma	3,717	7.7	10,637	3.8	121,385	8.8
High School Graduate	11,336	23.5	63,919	22.7	381,209	27.6
Some College or Associates Degree	14,855	30.8	82,126	29.1	417,443	30.2
Bachelor's Degree	12,413	25.7	82,156	29.1	299,548	21.7
Master's Degree or Higher	5,967	12.4	43,301	15.3	163,829	11.8
Total	48,288	100.0	282,139	100.0	1,383,414	100.0

Source: U.S. Census Bureau and SEWRPC

Educational Attainment by Race/Ethnicity in the City of Waukesha: 2020

Level of Educational Attainment	Not Hispanic					Hispanic or Latino
	White Alone	Black or African American Alone	Asian Alone	Some Other Race Alone	Two or More Races	
No High School Diploma	2,822	299	73	677	147	1,678
High School Graduate	9,736	273	155	675	159	1,089
Some College or Associates Degree	13,838	381	204	2,049	362	1,257
Bachelor's Degree or Higher	17,084	198	1,116	1,035	447	763
Total	43,480	1,151	1,548	4,436	1,115	4,787

Source: U.S. Census Bureau American Community Survey 5-year Estimates and SEWRPC

Labor Force Participation by Age in the City, County, and Region: 2020

Age	City of Waukesha			Waukesha County			Southeastern Wisconsin Region		
	In Labor Force		Not in Labor Force	In Labor Force		Not in Labor Force	In Labor Force		Not in Labor Force
	Employed	Unemployed		Employed	Unemployed		Employed	Unemployed	
16 to 19 Years	2,516	120	1,950	11,136	1083	8,798	47,373	6,065	55,132
20 to 21 Years	1,957	226	300	6,662	515	1,346	36,877	3,366	14,023
22 to 24 Years	3,337	67	706	10,943	597	1,959	58,886	4,505	14,158
25 to 29 Years	4,875	169	791	16,872	696	2,253	112,943	6,348	21,108
30 to 34 Years	4,451	72	692	19,731	414	2,167	112,319	4,875	19,018
35 to 44 Years	8,101	330	931	43,540	1,093	5,096	210,503	7,755	35,648
45 to 54 Years	7,373	149	1,051	47,917	1,016	6,381	211,973	6,746	41,641
55 to 59 Years	4,264	102	905	26,651	688	6,058	109,009	3,418	35,458
60 and 61 Years	1,318	41	587	9,021	222	3,598	36,866	1,136	18,123
62 to 64 Years	1,426	19	792	9,852	202	6,195	39,914	1,200	33,345
65 to 69 Years	1,184	0	2,382	8,670	101	16,684	32,951	761	74,846
70 to 74 Years	387	11	1,629	2,774	85	14,775	12,116	380	65,692
75 Years and Over	243	0	4,508	1,984	19	29,837	8,270	171	125,415
Total	41,432	1,306	17,224	215,753	6,731	105,147	1,030,000	46,726	553,607

Note: For the purposes of this table, labor force includes the civilian labor force and does not include the those employed by the Armed Forces.

Source: U.S. Census Bureau and SEWRPC

Historic Household Levels in the City, County, and Region: 1960-2020

Year	City of Waukesha			Waukesha County			Southeastern Wisconsin Region		
	Households	Change from Preceding Census		Households	Change from Preceding Census		Households	Change from Preceding Census	
		Number	Percent		Number	Percent		Number	Percent
1960	8,572	--	--	42,394	--	--	465,913	--	--
1970	11,748	3,176	37.1	61,935	19,541	46.1	536,486	70,573	15.1
1980	17,644	5,896	50.2	88,552	26,617	43	627,955	91,469	17.0
1990	21,235	3,591	20.4	105,990	17,438	19.7	676,107	48,152	7.7
2000	25,663	4,428	20.9	135,229	29,239	27.6	749,039	72,932	10.8
2010	28,295	2,632	10.3	152,663	17,434	12.9	800,087	51,048	6.8
2020	29,704	1,409	5.0	172,177	19,514	12.8	903,852	103,765	13.0

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

Projected Household Levels in the City, County, and Region: 2020-2050

	Households			
	2020	2050	Projected Change 2020-2050	
			Number	Percent
City	29,704	39,450	9,746	32.8
County	172,177	195,900	23,723	13.8
Region	903,852	1,001,200	97,348	10.8

Source: U.S. Census Bureau and SEWRPC

Household Composition Trends in the City, County, and Region: 2010, 2015, and 2019

Household Composition	City of Waukesha			Waukesha County			Southeastern Wisconsin Region		
	2010	2015	2019	2010	2015	2019	2010	2015	2019
Family Households									
2-Person	7,586	7,640	7,970	49,145	51,782	54,237	220,993	227,003	233,303
3-Person	4,313	4,314	4,114	22,824	22,522	22,028	114,322	113,172	110,320
4-Person	3,627	3,380	3,539	23,983	22,219	21,719	103,716	98,281	97,833
5-Person	1,720	1,407	1,464	9,811	8,743	8,919	45,205	43,661	43,325
6-Person	374	421	389	2,337	2,215	2,643	15,941	15,318	15,091
7-or-More Person	183	159	216	1,050	1,025	877	8,554	8,615	8,051
Family Household Subtotal	17,803	17,321	17,692	109,150	108,506	110,423	508,731	506,050	507,923
Nonfamily Households									
1-Person	8,844	8,653	9,376	35,416	38,900	40,086	232,607	240,958	247,885
2-Person	1,644	1,755	1,972	5,849	6,407	7,395	43,099	45,499	48,506
3-Person	228	407	321	594	875	704	6,081	6,389	5,846
4-Person	29	132	25	112	211	144	1,657	1,685	2,005
5-Person	14	0	20	40	21	50	323	511	547
6-Person	0	63	0	0	71	6	182	195	192
7-or-More Person	0	0	0	0	0	0	21	20	147
Nonfamily Household Subtotal	10,759	11,010	11,714	42,011	46,485	48,385	283,970	295,257	305,128
Total	28,562	28,331	29,406	151,161	154,991	158,808	792,701	801,307	813,051

Source: U.S. Census Bureau American Community Survey 5-year Estimates and SEWRPC

Household Size in the City of Waukesha: 2010, 2015, and 2019

Household Size	2010		2015		2019	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
1-Person	8,844	31.9	8,653	30.5	9,376	31.0
2-Person	9,230	33.8	9,395	33.2	9,942	32.3
3- and 4-Person	8,197	27.2	8,233	29.1	7,999	28.7
5 or More Person	2,291	7.1	2,050	7.2	2,089	8.0
Total	28,562	100.0	28,331	100.0	29,406	100.0

Source: U.S. Census Bureau American Community Survey 5-year Estimates and SEWRPC

Household Income in the City, County, and Region: 2019

Income	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Households	Percent of Total	Households	Percent of Total	Households	Percent of Total
Less than \$10,000	1,784	5.9	4,247	2.7	43,402	5.3
\$10,000 to \$14,999	951	3.1	3,175	2.0	31,620	3.9
\$15,000 to \$19,999	963	3.2	3,918	2.4	36,063	4.4
\$20,000 to \$24,999	1,349	4.4	5,642	3.5	37,932	4.6
\$25,000 to \$29,999	598	2.0	4,049	2.5	31,588	3.8
\$30,000 to \$34,999	904	3.0	4,231	2.6	34,505	4.2
\$35,000 to \$39,999	1,359	4.5	4,348	2.7	33,664	4.1
\$40,000 to \$44,999	1,253	4.1	5,272	3.3	36,138	4.4
\$45,000 to \$49,999	1,129	3.7	4,585	2.9	34,423	4.2
\$50,000 to \$59,999	1,611	5.3	9,265	5.8	57,857	7.0
\$60,000 to \$74,999	4,222	13.9	16,170	10.1	84,981	10.4
\$75,000 to \$99,999	4,198	13.8	22,860	14.2	109,449	13.3
\$100,000 to \$124,999	3,409	11.2	20,049	12.5	84,510	10.3
\$125,000 to \$149,999	2,792	9.2	14,202	8.8	54,451	6.6
\$150,000 to \$199,999	2,246	7.4	19,462	12.1	59,082	7.2
\$200,000 or More	1,596	5.3	19,160	11.9	51,577	6.3
Total	30,364	100.0	160,635	100.0	821,242	100.0

Source: U.S. Census Bureau American Community Survey 5-year Estimates and SEWRPC

Median Household Income Levels Over Time in the City, County, and the State: 2010, 2015, and 2019

Year	City of Waukesha			Waukesha County			Southeastern Wisconsin Region		
	Median Household Income (\$)	Change		Median Household Income (\$)	Change		Median Household Income (\$)	Change	
		Number	Percent		Number	Percent		Number	Percent
2010	56,248	--	--	75,064	--	--	51,914	--	--
2015	59,547	3,299	5.9	76,545	1,481	2.0	53,889	1,975	3.8
2019	65,260	5,713	9.6	87,277	10,732	14.0	62,843	8,954	16.6

Source: U.S. Census Bureau American Community Survey 5-year Estimates and SEWRPC

Poverty Status in the Past Year for Households in the City, County, and Region: 2020

Poverty Status	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number of Households	Percent	Number of Households	Percent	Number of Households	Percent
Below Poverty Level	2,908	9.8%	8,237	5.2%	100054	12.2%
At or Above Poverty Level	26,796	90.2%	151,543	94.8%	718039	87.8%

Source: U.S. Census Bureau American Community Survey 5-year Estimates and SEWRPC

Households Experiencing Poverty in the City, County, and Region by Race/Ethnicity: 2020

Race/Ethnicity	City of Waukesha				Waukesha County				Southeastern Wisconsin Region			
	Number	Percent	Households Receiving SNAP Benefits	Percent	Number of Households	Percent	Households Receiving SNAP Benefits	Percent	Number of Households	Percent	Households Receiving SNAP Benefits	Percent
Not Hispanic or Latino												
White Alone	24,426	82.2	1,606	62.7	145,419	91.0	5,133	80.0	605,592	74.0	40,590	56.1
Black or African American	622	2.1	320	12.5	1,808	1.1	390	6.1	110,740	13.5	43,065	47.9
American Indian and Alaska Native Alone	59	0.2	1	0.0	241	0.2	25	0.4	3,390	0.4	700	0.7
Asian Alone	907	3.1	54	2.1	5,024	3.1	170	2.6	20,430	2.5	2,627	2.7
Native Hawaiian and Other Pacific Islander Alone	38	0.1	0	0.0	82	0.1	0	0.0	212	0.0	58	0.1
Some Other Race Alone	1,079	3.6	12	0.5	1,593	1.0	23	0.4	24,583	3.0	5,878	6.0
Two or More Races	635	2.1	75	2.9	2,080	1.3	107	1.7	19,521	2.4	4,223	4.0
Hispanic or Latino	2,660	9.0	507	19.8	5,109	3.2	615	9.6	65,448	8.0	15,914	15.1

Source: U.S. Census Bureau and SEWRPC

Household Vehicle Availability in the City and County: 2020

Vehicles Available	City of Waukesha		Waukesha County	
	Number	Percent	Number	Percent
Occupied Housing Units	29,704	--	159,780	--
No Vehicles	1,598	5.4	5,547	3.5
1 Vehicle	11,003	37.0	43,444	27.2
2 Vehicles	12,124	40.8	72,686	45.5
3 or More Vehicles	4,979	16.8	38,103	23.8

Source: U.S. Census Bureau American Community Survey 5-year Estimates and SEWRPC

Geographic Mobility in the City, County, and Region: 2020

	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number	Percent	Number	Percent	Number	Percent
Place of Residence One Year Ago ^a						
Same House	59,931	83.7	353,910	88.8	1,744,703	86.3
Different House (in the US or Abroad)	11,641	16.3	44,621	11.2	277,381	13.7
Different House in the US	11,200	15.6	43,521	10.9	270,389	13.4
Same County	5,844	8.2	20,799	5.2	174,854	8.6
Different County	5,356	7.5	22,722	5.7	95,535	4.7
Same State	3,497	4.9	17,029	4.3	59,224	2.9
Different State	1,859	2.6	5,693	1.4	36,311	1.8
Abroad	441	0.6	1,100	0.3	6,992	0.3
Place of Birth						
Native	66,931	92.4	381,258	94.7	1,899,444	92.9
Born in United States	66,274	91.5	378,085	93.9	1,871,445	91.5
State of Residence	51,993	71.8	301,910	75.0	1,420,638	69.5
Different State	14,281	19.7	76,175	18.9	450,807	22.0
Born in Puerto Rico, U.S. Island Areas, or Born Abroad to American Parent(s)	657	0.9	3,173	0.8	27,999	1.4
Foreign Born	5,488	7.6	21,379	5.3	145,329	7.1
Total Population	72,419	100.0	402,637	100.0	2,044,773	100.0

^a For population one year and over.

Source: U.S. Census Bureau American Community Survey 5-year Estimates and SEWRPC

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11/06/2023

PRELIMINARY DRAFT

SEWRPC Community Assistance Planning Report No. __

CITY OF WAUKESHA COMPREHENSIVE PLAN

Appendix E

LAND USE DATA

Land Use in the City of Waukesha: 1963-2020

Land Use Category	Acres						
	1963	1970	1980	1990	2000	2010	2020
Developed Land							
Residential							
Single-Family Residential	1,535	1,859	2,704	3,040	3,593	4,093	4,196
Two-Family Residential	96	152	284	322	320	421	474
Multifamily Residential	70	107	308	442	610	690	710
Residential Subtotal	1,701	2,118	3,296	3,804	4,523	5,204	5,380
Commercial	144	198	364	555	770	948	1,053
Industrial	217	338	536	719	921	960	950
Transportation, Communication, and Utilities							
Streets and Highways	654	858	1,339	1,528	2,146	2,481	2,533
Other Transportation, Communication, and Utilities	113	156	248	262	587	645	664
Transportation, Communication, and Utilities Subtotal	767	1,014	1,587	1,790	2,733	3,126	3,197
Governmental and Institutional	319	434	522	551	756	853	882
Recreational	155	196	339	379	466	583	575
Extractive or Landfill	1	41	3	1	2	2	3
Unused Urban Land ^a	473	979	1,229	1,539	1,715	1,564	1,593
Developed Land Subtotal	3,777	5,318	7,876	9,338	11,886	13,240	13,633
Undeveloped Land							
Natural Resource Areas							
Wetlands	137	188	669	791	1,160	1,445	1,557
Woodlands	63	74	105	110	161	354	464
Surface Water	44	61	86	99	122	179	178
Natural Resource Areas Subtotal	244	323	860	1,000	1,443	1,978	2,198
Agricultural and Other Open Land ^b	572	363	609	605	561	861	636
Undeveloped Land Subtotal	816	686	1,469	1,605	2,004	2,839	2,835
Total	4,593	6,004	9,345	10,943	13,890	16,079	16,468

Note: Techniques by which land uses were delineated changed for the year 2000 regional land use inventory. This change involved referencing real property boundary information, which was not available for previous inventories, to delineate land uses to align with actual street and highway rights-of-way (in place of narrower estimated rights-of-way used in prior inventories). Therefore, in comparison to previous regional land use inventories, the year 2000 inventory classified more acreage in transportation, communication, and utilities use and less acreage in land uses adjacent to and traversed by those streets and highways. While the more precise inventories are of greater use to public agencies and private interests throughout the Region, year 2000 and subsequent inventories are not strictly comparable with year 1990 and prior inventories.

^a Unused urban lands include lands not utilized for an identifiable use that do not encompass important natural resource base elements.

^b Agricultural and other open lands include areas utilized for the cultivation of crops; areas currently or formerly utilized as or cultivated for pasture for livestock; and areas with farm buildings whose primary use is associated with animal husbandry or agriculture-related equipment storage.

Source: City of Waukesha and SEWRPC

Proportional Land Use in the City of Waukesha: 1963-2020

Land Use Category	Percent of Lands Within the City						
	1963	1970	1980	1990	2000	2010	2020
Developed Land							
Residential							
Single-Family Residential	33.4	31.0	28.9	27.8	25.9	25.5	25.5
Two-Family Residential	2.1	2.5	3.0	2.9	2.3	2.6	2.9
Multifamily Residential	1.5	1.8	3.3	4.0	4.4	4.3	4.3
Residential Subtotal	37.0	35.3	35.3	34.8	32.6	32.4	32.7
Commercial	3.1	3.3	3.9	5.1	5.5	5.9	6.4
Industrial	4.7	5.6	5.7	6.6	6.6	6.0	5.8
Transportation, Communication, and Utilities							
Streets and Highways	14.2	14.3	14.3	14.0	15.4	15.4	15.4
Other Transportation, Communication, and Utilities	2.5	2.6	2.7	2.4	4.2	4.0	4.0
Transportation, Communication, and Utilities Subtotal	16.7	16.9	17.0	16.4	19.7	19.4	19.4
Governmental and Institutional	6.9	7.2	5.6	5.0	5.4	5.3	5.4
Recreational	3.4	3.3	3.6	3.5	3.4	3.6	3.5
Extractive or Landfill	0.0	0.7	0.0	0.0	0.0	0.0	0.0
Unused Urban Land ^a	10.3	16.3	13.2	14.1	12.4	9.7	9.7
Developed Land Subtotal	82.2	88.6	84.2	85.3	85.6	82.3	82.8
Undeveloped Land							
Natural Resource Areas							
Wetlands	3.0	3.1	7.2	7.2	8.4	9.0	9.5
Woodlands	1.4	1.2	1.1	1.0	1.2	2.2	2.8
Surface Water	1.0	1.0	0.9	0.9	0.9	1.1	1.1
Natural Resource Areas Subtotal	5.3	5.4	9.2	9.1	10.4	12.3	13.3
Agricultural and Other Open Land ^b	12.5	6.0	6.5	5.5	4.0	5.4	3.9
Undeveloped Land Subtotal	17.8	11.4	15.7	14.7	14.4	17.7	17.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: To address that the size of the City of Waukesha has grown over the years and that direct comparisons of the number of acres of each land use presented in the previous table is only approximate, this table presents the percentage of each land use in relation to that inventory year.

^a Unused urban lands include lands not utilized for an identifiable use that do not encompass important natural resource base elements.

^b Agricultural and other open lands include areas utilized for the cultivation of crops; areas currently or formerly utilized as or cultivated for pasture for livestock; and areas with farm buildings whose primary use is associated with animal husbandry or agriculture-related equipment storage.

Source: City of Waukesha and SEWRPC

Historic and Projected Population and Household Levels in City of Waukesha: 1960-2050

Year	Population			Households			Median Household Size
	Total	Change		Total	Change		
		Number	Percent		Number	Percent	
1960	30,004	--	--	8,572	--	--	3.5
1970	40,271	10,267	34.2	11,748	3,176	37.1	3.4
1980	50,365	10,094	25.1	17,644	5,896	50.2	2.9
1990	56,894	6,529	13.0	21,235	3,591	20.4	2.7
2000	64,825	7,931	13.9	25,663	4,428	20.9	2.5
2010	70,718	5,893	9.1	28,295	2,632	10.3	2.5
2020	71,758	440	0.6	29,704	1,409	5.0	2.4
2050	96,290	25,132	35.3	38,450	9,746	32.8	2.5

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

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SEWRPC Community Assistance Planning Report No. __

CITY OF WAUKESHA COMPREHENSIVE PLAN

Appendix F

HOUSING DATA

Population and Households in the City of Waukesha: 1950-2020

Year	Population		Households		Household Size	
	Number	Percent Change	Number	Percent Change	Number	Percent Change
1950	21,233	--	5,782	--	3.42	--
1960	30,004	41.3	8,572	48.3	3.33	-2.6
1970	40,258	34.2	11,748	37.1	3.29	-1.2
1980	50,319	25.0	17,644	50.2	2.76	-16.1
1990	56,958	13.2	21,235	20.4	2.59	-6.2
2000	64,825	13.8	25,663	20.9	2.43	-6.2
2010	70,718	9.1	28,295	10.3	2.40	-1.2
2020	71,158	0.6	30,097	6.4	2.31	-3.7

Source: U.S. Census Bureau and SEWRPC

Number of Housing Units by Tenure in the City, County, and Region: 2020

Area	Owner-Occupied		Renter-Occupied		Vacant		Total	
	Housing Units	Percent of Total	Housing Units	Percent of Total	Housing Units	Vacancy Rate	Housing Units	Percent of Total
City of Waukesha	16,888	56.9	12,816	43.1	1,214	4.1	29,704	100.0
Waukesha County	121,773	76.2	38,007	23.8	6,923	4.3	159,780	100.0
Southeastern Wisconsin Region	503,926	58.0	314,167	42.0	69,125	8.5	887,218	100.0

Note: Data are based on the 2016-2020 American Community Survey (ACS).

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

Vacant Housing Units by Tenure in the City, County, and Region: 2020

Tenure of Housing Units	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number of Housing Units	Percent of Vacant Units	Number of Housing Units	Percent of Vacant Units	Number of Housing Units	Percent of Vacant Units
Year-Round Vacant ^a						
For Rent	563	46.4	1,495	21.6	17,503	25.3
Rented, Not Occupied	46	3.8	294	4.2	2,597	3.8
For Sale Only	48	4.0	915	13.2	5,296	7.7
Sold, Not Occupied	92	7.6	475	6.9	2,401	3.5
For Seasonal, Recreational, or Occasional Use	85	7.0	2,169	31.3	17,224	24.9
For Migrant Workers	--	--	--	--	25	--
Subtotal	834	68.7	5,348	77.2	45,046	65.2
Other Vacant ^b	380	31.3	1,575	22.8	24,079	34.8
Total	1,214	100.0	6,923	100.0	69,125	100.0

Note: Data are based on the 2016-2020 American Community Survey (ACS).

^a Year-round vacant housing units are units for rent, for sale, rented or sold but not yet occupied, occasional use, or temporarily occupied by persons with a usual residence elsewhere.

^b A housing unit is classified as other vacant when it does not fit into any other year-round vacant category. Common reasons a housing unit is labeled other vacant is that no one lives in the unit and the owner either does not want to rent or sell, is using the unit for storage, or is elderly and living in a nursing home with family members. Additional reasons may be that the unit is being held for settlement of an estate or is being repaired or renovated. Other vacant units may also be under foreclosure, though foreclosures may appear in any of the vacant or occupied categories.

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

Housing Units by Structure Type for the City, County, and Region: 2020

Residential Structure Type	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number	Percent	Number	Percent	Number	Percent
Detached Single-Unit Structure	15,521	50.2	116,181	69.7	512,913	57.8
Attached Two-Unit Structure/ Townhome	4,150	13.4	14,430	8.7	138,535	15.6
Attached Multiple-Unit Building						
3 or 4 Units	2,071	6.7	5,291	3.2	42,239	4.8
5 to 9 Units	1,770	5.7	9,071	5.4	53,177	6.0
10 to 19 Units	1,788	5.8	4,956	3.0	32,691	3.7
20 to 49 Units	3,443	11.1	8,772	5.3	47,008	5.3
50 or More Units	2,074	6.7	7,099	4.3	51,579	5.8
Subtotal Multiple-Unit Building	11,146	36.1	35,189	21.1	226,694	25.6
Mobile Home or Other Structure	101	0.3	903	0.5	9,076	1.0
Total Housing Units	30,918	100.0	166,703	100.0	887,218	100.0

Note: Data are based on the 2016-2020 American Community Survey (ACS).

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

Housing in the City, County, and Region and Median National Cost of Rent by Year Built: 2020

Year Built	City of Waukesha		Waukesha County		Southeastern Wisconsin Region		Median Rent (\$)ª
	Number	Percent	Number	Percent	Number	Percent	
2014 or later	566	1.8	5,146	3.1	16,318	1.8	1,450
2010 to 2013	457	1.5	3,669	2.2	12,929	1.5	1,280
2000 to 2009	4,189	13.5	22,290	13.4	82,201	9.3	1,263
1990 to 1999	5,728	18.5	33,733	20.2	104,051	11.7	1,122
1980 to 1989	3,687	11.9	20,157	12.1	71,370	8.0	1,073
1970 to 1979	5,739	18.6	27,374	16.4	115,148	13.0	1,005
1960 to 1969	3,097	10.0	18,468	11.1	100,830	11.4	1,038
1950 to 1959	2,818	9.1	18,237	10.9	135,553	15.3	1,051
1940 to 1949	836	2.7	4,869	2.9	58,388	6.6	1,014
1939 or earlier	3,801	12.3	12,760	7.7	190,430	21.5	1,057
Total/Overall	30,918	100.0	166,703	100.0	887,218	100.0	1,096

Note: All data are based on the 2016-2020 American Community Survey (ACS). Data for housing units by year built are for all housing units regardless of tenure, i.e., both owner-occupied and rental housing units. Median rent data by year built are for renter-occupied housing units nationwide for which cash rent is paid.

ª In 2020 U.S. dollars.

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

Conditions of Residential Structures: YEAR [to be provided by City]

Residential Building Type	Building Condition							Total
	Excellent	Very Good	Good	Average	Fair	Poor	Very Poor	
Single-Unit Structure	-	153	3,082	14,261	789	36	11	18,332
Two-Unit Structure	-	1	56	803	43	3	-	906
Apartment Structure								
Two- to Three-Unit	-	2	63	357	115	11	2	550
Four or more units	-	-	149	328	47	8	2	534
Manufactured Home	-	-	19	46	16	3	8	92
Total	-	156	3,369	15,795	1,010	61	23	20,414

Source: City of Waukesha and SEWRPC.

Monthly Gross Contract Rent Costs for Renter-Occupied Housing Units in the City, County, and Region: 2020

Monthly Gross Rent	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number	Percent	Number	Percent	Number	Percent
With Cash Rent						
Less than \$300	393	3.1	931	2.4	14,275	4.5
\$300 to \$499	691	5.4	1,379	3.6	19,745	6.3
\$500 to \$749	2,654	20.7	6,166	16.2	102,800	32.7
\$750 to \$999	5,457	42.6	12,437	32.7	94,004	29.9
\$1,000 to \$1,499	3,163	24.7	11,957	31.5	57,957	18.4
\$1,500 or More	305	2.4	4,283	11.3	17,229	5.5
With Cash Rent Subtotal	12,663	98.8	37,153	97.8	306,010	97.4
No Cash Rent	153	1.2	854	2.2	8157	2.6
Total	12,816	100.0	38,007	100.0	314,167	100.0

Note: Data are based on the 2016-2020 American Community Survey (ACS).

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

Monthly Owner Costs for Specified Housing Units with a Mortgage in the City, County, and Region: 2020

Monthly Mortgage Cost	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number	Percent	Number	Percent	Number	Percent
Under \$700	165	1.3	1,272	1.5	9,127	2.2
\$700 to \$799	153	1.2	1,005	1.2	9,082	2.2
\$800 to \$899	282	2.3	1,418	1.7	12,675	3.0
\$1,000 to \$1,249	1,785	14.5	7,488	9.1	57,276	13.7
\$1,250 to \$1,499	2,191	17.8	10,697	13.0	67,181	16.1
\$1,500 to \$1,999	4,159	33.7	24,331	29.5	117,693	28.2
\$2,000 to \$2,499	2,110	17.1	16,531	20.1	64,767	15.5
\$2,500 or more	1,066	8.7	17,644	21.4	62,415	15.0
Total	12,323	100.00	82,365	100.00	416,634	100.00

Note: Data are based on the 2016-2020 American Community Survey (ACS).

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

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CITY OF WAUKESHA COMPREHENSIVE PLAN

Appendix G

ECONOMIC DEVELOPMENT DATA

**Employment Status of the Civilian Labor Force of the
City, County, and Region: 2010, 2015, and 2020**

City of Waukesha						
Employment Status	2010		2015		2020	
	Number of People	Percent of Total	Number of People	Percent of Total	Number of People	Percent of Total
In Civilian Labor Force	40,567	73.7	40,902	72.0	42,738	71.3
Employed	38,403	69.8	38,812	68.3	41,432	69.1
Unemployed	2,164	3.9	2,090	3.7	1,306	2.2
Unemployment Rate	5.3	--	5.1	--	3.1	--
Not in Labor Force	14,475	26.3	15,870	28.0	17,224	28.7
Total	55,042	100.0	56,772	100.0	59,962	100.0

Waukesha County						
Employment Status	2010		2015		2020	
	Number of People	Percent of Total	Number of People	Percent of Total	Number of People	Percent of Total
In Civilian Labor Force	216,029	71.1	218,670	69.2	222,484	67.9
Employed	205,653	67.7	209,461	66.3	215,753	65.8
Unemployed	10,376	3.4	9,209	2.9	6,731	2.1
Unemployment Rate	4.8	--	4.2	--	3.0	--
Not in Labor Force	87,935	28.9	97,132	30.8	105,147	32.1
Total	303,964	100.0	315,802	100.0	327,631	100.0

Southeastern Wisconsin Region						
Employment Status	2010		2015		2020	
	Number of People	Percent of Total	Number of People	Percent of Total	Number of People	Percent of Total
In Civilian Labor Force	1,070,576	68.6	1,077,607	67.2	1,076,726	66.0
Employed	989,383	63.4	996,119	62.1	1,030,000	63.2
Unemployed	81,193	5.2	81,488	5.1	46,726	2.8
Unemployment Rate	7.58	--	7.56	--	4.3	--
Not in Labor Force	490,126	31.4	526,804	32.8	553,607	34.0
Total	1,560,702	100.0	1,604,411	100.0	1,630,333	100.0

Note: Labor force data in this table includes area residents 25 years of age and older who are either employed or are unemployed and actively seeking employment. Data are based on the 2006-2010, 2011-2015, and 2016-2020 American Community Survey.

Source: U.S. Census Bureau and SEWRPC

Occupation of Residents of the City, County, and Region: 2020

Occupation	City of Waukesha		Waukesha County		Southeastern Wisconsin Region	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Management, Business, and Financial	6,368	15.4	44,318	20.5	162,474	15.8
Computer, Engineering, and Science	3,407	8.2	17,374	8.1	62,865	6.1
Education, Legal, Community Service, Arts, and Media	4,428	10.7	23,017	10.7	108,443	10.5
Healthcare Practitioners and Technical	2,664	6.4	17,879	8.3	67,672	6.6
Healthcare Support	1,351	3.3	4,874	2.3	40,913	4.0
Protective Service	535	1.3	2,775	1.3	18,033	1.8
Food Preparation and Serving Related	2,720	6.6	10,153	4.7	56,003	5.4
Building and Grounds Cleaning and Maintenance	1,287	3.1	4,724	2.2	32,760	3.2
Personal Care and Service	997	2.4	4,489	2.1	25,308	2.5
Sales and Office	9,554	23.1	49,086	22.8	219,393	21.3
Farming, Fishing, and Forestry	69	0.2	301	0.1	3,099	0.3
Construction and Extraction	1,230	3.0	7,589	3.5	39,468	3.8
Installation, Maintenance, and Repair	1,204	2.9	5,356	2.5	27,341	2.7
Production, Transportation, and Material Moving	5,618	13.6	23,818	11.0	166,228	16.1
Total	41,432	100.0	215,753	100.0	1,030,000	100.0

Note: Data are based on the 2016-2020 American Community Survey (ACS).

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

**Per Capita Personal Income for Counties Within the Southeastern Wisconsin Region
and for the State and Nation: 2018-2020**

Geography	Per Capita Personal Income (dollars)			Rank in State
	2018	2019	2020	2020
Kenosha	46,964	48,550	51,229	30
Milwaukee	46,792	48,107	51,002	31
Ozaukee	82,753	85,526	87,395	1
Racine	49,191	50,729	53,094	25
Walworth	49,623	51,156	53,546	21
Washington	58,412	59,878	62,506	5
Waukesha	71,918	73,883	75,958	2
Wisconsin	51,250	52,918	55,593	--
United States	54,098	56,047	59,510	--

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

Total Jobs Within the City and Region: 2010, 2015, and 2019

Geographic Area	2010		2015		2019	
	Total Jobs	Percent of Jobs in Region	Total Jobs	Percent of Jobs in Region	Total Jobs	Percent of Jobs in Region
Kenosha County	77,060	7.5	82,773	8.2	86,204	8.9
Milwaukee County	429,808	42.1	448,993	44.4	445,487	46.2
Ozaukee County	44,157	4.3	46,393	4.6	47,492	4.9
Racine County	90,325	8.8	93,644	9.3	94,146	9.8
Walworth County	51,392	5.0	54,266	5.4	55,686	5.8
Washington County	69,648	6.8	73,109	7.2	74,867	7.8
Waukesha County	202,455	19.8	212,689	21.0	217,978	22.6
City of Waukesha	37,937	3.7	39,903	3.9	40,299	4.2
Southeastern Wisconsin Region	1,021,860	100.0	1,011,867	100.0	964,845	100.0

Source: Wisconsin Department of Workforce Development and SEWRPC.

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CITY OF WAUKESHA COMPREHENSIVE PLAN

Appendix H

TRANSPORTATION AND MOBILITY

Roadway Mileage by Functional Classification and Jurisdiction in the City of Waukesha

Functional Classification	Roadway Mileage			Total Miles
	Local Jurisdiction	County Jurisdiction	State Jurisdiction	
Arterial	43.54	14.32	13.03	70.89
Collector	18.7	0	0	18.7
Local	189.57	0.12	0	189.69
Total	251.81	14.44	13.03	279.28

Source: SEWRPC

Bridges in the City of Waukesha

Bridge Location and Crossing	Characteristics					
	Owner	Year Built	Average Daily Traffic (ADT)	ADT Year	Sufficiency Rating ^a	Rating Date
Barstow St Over Fox River	City	1963	10700	2018	79.4	1/10/2020
Madison St Over Fox River	City	1968	8200	2018	64	8/27/2021
Prairie Ave Over Fox River	City	1974	9800	2018	87.5	9/1/2020
Wisconsin Ave Over Fox River	City	1982	9200	2018	97.6	7/18/2019
Moreland Blvd Eastbound Over Fox River	City	1982	20100	2018	65.5	10/12/2009
Moreland Blvd Westbound Over Fox River	City	1996	20100	2018	92.3	10/12/2009
Madison St Over Pebble Creek	City	2016	700	2009	100	4/26/2016
CTH H (River Road) Over Fox River	County	1966	3500	2018	80.1	1/12/2010
CTH X (Genesee Road) Over Wisconsin & Southern Railroad	County	1970	16850	2018	95.8	2/8/2010
CTH X (Genesee Road) Over Pebble Creek	County	2019	8550	2018	97.6	6/23/2017
CTH X (Genesee Road) Over Pebble Creek	County	2019	8650	2018	97.6	6/23/2017
STH 59 Eastbound Over Fox River	State	1974	9300	2018	96.2	11/5/2004
STH 59 Westbound Over Fox River	State	1996	9300	2018	96.1	7/29/2019
CTH T Over IH 94	State	1995	18900	2019	91.2	6/27/2013
STH 59 Eastbound Over Canadian National Railroad	State	1999	11800	2018	99.4	7/16/1997
STH 59 Westbound Over Canadian National Railroad	State	1999	11600	2018	99.5	7/16/1997
STH 318 Over IH 94	State	2000	9400	2019	98.7	6/27/2013
USH 18 Westbound Over Wetlands	State	2019	6100	2020	99.7	11/1/2017
USH 18 Eastbound Over Wetlands	State	2019	7200	2020	99.7	11/1/2017
USH 18 Westbound Over Wetlands	State	2019	6100	2020	99.7	11/1/2017

^a Under WisDOT's Local Bridge Improvement Assistance program, municipalities are eligible for rehabilitation funding on bridges with sufficiency ratings less than 80, and replacement funding on bridges with sufficiency ratings less than 50.

Source: Wisconsin Department of Transportation and SEWRPC

Existing On-Street Bicycle Facilities in the City of Waukesha

Facility Type	Street Name	From	To	Length
Bicycle Lane	Moreland Blvd	Main St	IH 94/City Limits	0.89
	Moreland Blvd	Michigan Ave	Motor Ave	0.64
	North St	Pewaukee Rd	Moreland Blvd	0.32
	St. Paul Ave	Madison St	Moreland Blvd	0.95
	Madison St	Comanche Ln	Grandview Blvd	1.10
	Wisconsin Ave	West Ave	East Ave	0.50
	East Ave	College Ave	Sunset Dr	1.01
	Sunset Dr	East Ave	Les Paul Parkway (USH 18)	0.90
Separate Path within	Meadowbrook Rd (STH 318)	IH 94/City Limits	Summit Ave/USH 18	1.96
Road Right-of-Way	Les Paul Parkway (USH 18)	Summit Ave/USH 18	Sunset Dr	2.43
	St. Paul Ave	Sunset Dr	Harris Highland Dr	1.26
Wide Paved Shoulders	Grandview Blvd	Golf Rd	Fatima Dr/City Limits	0.76
	Silvernail Rd	Grandview Blvd	Bluemound Rd	1.16
	Bluemound Rd	IH 94/City Limits	Pewaukee Rd (CTH J)	0.73
	Summit Ave	Les Paul Parkway (USH 18)	University Dr	0.84
	Moreland Blvd	Manhattan Dr	Main St	0.91
	St. Paul Ave	Harris Highland Dr	Moreland Blvd	0.11
	Sunset Dr	Les Paul Parkway (USH 18)	St. Paul Ave	0.88
	West Ave	Newhall Ave	Sunset Dr	0.78
	Les Paul Parkway (USH 18)	Sunset Dr (west side)	Sunset Dr (east side)	4.46
	Genesee Rd	Ridge Rd	City Limits	0.47
	Saylesville Rd	Genesee Rd (STH 59)	Elkhart Dr	0.17
	STH 164	Les Paul Parkway (USH 18)	City Limits	0.27
	Racine Ave (CTH Y)	Sunset Dr	City Limits	0.98
			Total	24.48

Source: SEWRPC

Existing Off-Street Paths in the City of Waukesha

Off-Street Path	From	To	Length
Fox River Trail	Barstow St (both sides of river)	Moreland Blvd	1.51
	Dunbar Ave (near RR crossing)	Barstow St	0.89
	College Ave/Prairie Ave intersection	City Limits	4.44
New Berlin Trail	Lincoln Ave (end of trail)	City Limits	0.34
New Berlin Connector	Barstow St	New Berlin Trail	1.33
Glacial Drumlin State Trail	City Limits	Fox River Trail (at Sentry Dr)	1.79
Total			10.30

Source: SEWRPC

Waukesha Metro Transit Route Operating and Service Characteristics: 2019

		Service Availability							
Bus Route Number	Bus Route	Round Trip Route Length (miles)	Weekdays		Saturdays		Sundays		
			Start Time First Trip	Start Time Last Trip	Start Time First Trip	Start Time Last Trip	Start Time First Trip	Start Time Last Trip	
1	Waukesha/Brookfield	18.6 (Limited service adds 0.7 miles)	5:35 a.m. (Main Street and Manhattan Drive)	9:15 p.m.	8:20 a.m.	8:50 p.m.	9:20 a.m.	5:50 p.m.	
2	Arcadian	13.0	5:55 a.m.	8:15 p.m.	8:50 a.m.	7:50 p.m.	9:50 a.m.	5:50 p.m.	
3	Hartwell	7.0	6:09 a.m. (Big Bend and Sunset Drive) also extends as Route 7	6:45 p.m.	8:50 a.m. (Route 15 combined)	6:50 p.m.	No service	No service	
4	Grand	6.6 (Limited service adds 0.3 miles)	5:55 a.m. (extends as Route 8)	9:15 p.m.	8:50 a.m. (Trips after 7 p.m. extend as Route 7/8)	8:50 p.m.	9:50 a.m. (Trip extends as Route 7/8)	6:50 p.m.	
5	Prairie	11.8 (Limited service adds 0.5 miles)	6:30 a.m.	6:15 p.m.	8:50 a.m. (Runs as Route 5/6)	7:50 p.m.	9:50 a.m. (Runs as Route 5/6)	4:50 p.m.	
6	St. Paul	17.4 (Limited service adds 2.2 miles)	6:30 a.m.	9:15 p.m.	8:50 a.m. (Runs as Route 5/6)	7:50 p.m.	9:50 a.m. (Runs as Route 5/6)	4:50 p.m.	
7	Madison	6.5 (Limited service adds 1.8 miles)	6:30 a.m. (Waukesha Memorial Main Entrance until 12:50 p.m.)	8:45 p.m. (Runs as Rt 7/8 after 6:45 p.m.)	8:20 a.m. (Runs as Route 7/8 and extends on Route 4)	6:20 p.m.	9:20 a.m. (Runs as Route 7/8 and extends on Route 4)	6:20 p.m.	
8	Summit	7.5 (Limited service adds 0.5 miles)	5:55 a.m. (Route extends as Route 4)	6:15 p.m. (Runs as Rt 7/8 after 6:45 p.m.)	8:20 a.m. (Runs as Route 7/8 and extends on Route 4)	6:20 p.m.	9:20 a.m. (Runs as Route 7/8 and extends on Route 4)	6:20 p.m.	
9	Northview	21.1 (Limited service adds 3.2 miles)	5:55 a.m.	8:15 p.m.	8:50 a.m.	5:50 p.m.	No Service	No Service	
15	Racine Avenue	12.7 (Limited service adds 1.3 miles)	6:30 a.m.	6:15 p.m.	8:50 a.m. (Route 3 combined)	6:50 p.m.	No Service	No Service	

		Service Frequency (Minutes)						
Bus Route Number	Bus Route	Weekdays				Saturday		Sunday
		A.M. Peak (6:00 a.m. - 9:00 a.m.)	Midday (9:00 a.m. - 3:00 p.m.)	P.M. Peak (3:00 p.m. - 6:00 p.m.)	Evening	Daytime (8:00 a.m. - 6:00 p.m.)	Evening (6:00 p.m. - 11:00 p.m.)	All Day
1	Waukesha/Brookfield	30-35	30	30-35	30	30	30	30
2	Arcadian	60-70	60	60-70	60	60	60	60
3	Hartwell	35-70	60	35-70		60	(Runs as 3/15) 60	
4	Grand	30-35	30-35	30-35	60	60	60	60
5	Prairie	60-70	60	60-70		(Runs as 5/6) 60	(Runs as 5/6) 60	(Runs as 5/6) 60
6	St. Paul	60-70	60	60-70		(Runs as 5/6) 60	(Runs as 5/6) 60	(Runs as 5/6) 60
7	Madison	60-70	60	60-70	60	60	(Runs as 7/8) 60	(Runs as 7/8) 60
8	Summit	30-35	30-35	30-35	60	60	(Runs as 7/8) 60	(Runs as 7/8) 60
9	Northview	35-60	30-60	35-60	60	60	60	
15	Racine Avenue	60-70	60	60-70		60	(Runs as 3/15) 60	

Source: Waukesha Metro Transit and SEWRPC

City-Owned Parking Facilities

Parking Facility	Parking Facility Features		
	Spaces	Restrictions	Address
Surface Lots			
River Lot #1	89 Spaces	-- ^b	On Riverfront Street between Barstow St. & Broadway/Bank St. Intersection
Barstow-Corrina Lot #2	11 Spaces	-- ^a	Near 919 N Barstow St., on the corner of N. Barstow St. and Corrina Blvd.
Clock Tower Lot #3	87 Spaces	-- ^a	Entrances to lot near 916 Clinton St. or 404 W Main St.
Clinton Street Lot #4	114 Spaces	-- ^b	Near 732 Clinton St.
Barstow-Main Lot #5	42 Spaces	-- ^a	On SW Corner of Barstow St. and Main St. near 200 W Main St.
Brook Street Lot #6	18 Spaces	-- ^b	Near 234 Brook St.
Wisconsin Avenue Lot #7	29 Spaces	-- ^c	704 N Grand Ave.
Carroll-Cutler Lot #8	163 Spaces	-- ^b	Near 231 Carroll St.
Gaspar Street Lot #9	19 Spaces	-- ^b	Across from 235 W Broadway, on the corner of Gaspar St. and South St.
Carroll-Maple Lot #11	86 Spaces	-- ^a	Near 321 Wisconsin Ave.
Union Street Lot #12	31 Spaces	-- ^c	Near 101 Union St.
Madison Street Lot #13	26 Spaces	-- ^a	Behind 200 Madison St.
Parking Ramps			
South Street Municipal Parking Ramp	450 Spaces		Near the Rotunda at 241 South St
Transit Center Parking Ramp	482 Spaces		Near City Hall at 212 E. St. Paul Ave.

^a Overnight parking available by permit

^b Overnight parking available by permit, but restricted to designated spaces

^c No overnight parking

Source: City of Waukesha

WD# 270646
110-1252
MLP/BMW
11/06/2023

PRELIMINARY DRAFT

SEWRPC Community Assistance Planning Report No. __

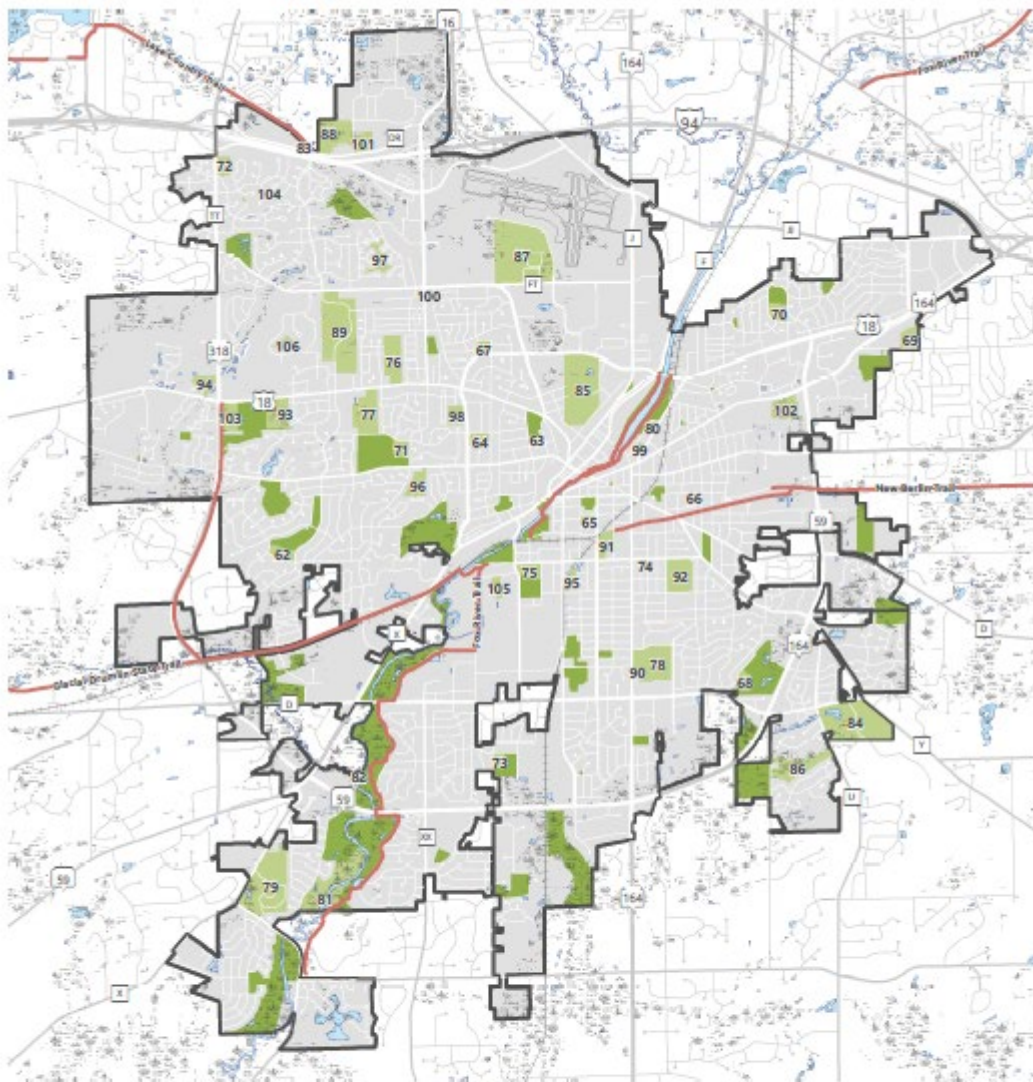
CITY OF WAUKESHA COMPREHENSIVE PLAN

Appendix I

PARKS, RECREATION, AND CULTURE

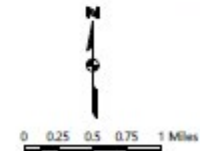
Park and Open Space Sites within the City of Waukesha: 2023

Non City-Owned Park and Open Space Sites in the City of Waukesha



- CITY-OWNED PARK AND OPEN SPACE SITE
- 1 PARK AND OPEN SPACE UNDER OTHER OWNERSHIP
- WETLAND
- EXISTING OFF-STREET TRAIL
- SURFACE WATER

Note: Non City-owned site numbers correspond to the accompanying table in Appendix 7.



Source: City of Waukesha and SEWRPC

Other Public and Private Park and Open Space Sites in the City of Waukesha by Ownership: 2023

Map 7.1 ID	Site Name	Size (acres)
School District of Waukesha		
51	Bethesda School	9.7
52	Blair School	2.3
53	Butler Middle School	8.6
54	Central Middle School	5.6
55	Hadfield School	3.1
56	Hawthorne School	6.5
57	Heyer School	7.1
58	Hillcrest School	12.5
59	Horning Middle and Banting Schools	10.1
60	Lowell School	8.6
61	Meadow Brook School	9.1
62	Prairie School	4.6
63	Randall School	2.8
64	Saratoga School	10.6
65	Summit View School	27.9
66	Waukesha North High School	33.5
67	Waukesha South High School and Whittier School	41.1
68	Waukesha West High School	79.1
69	White Rock School	3.4
Subtotal: 19 Sites		286.2
County-Owned		
70	Fox River Park	61.9
71	Fox River Parkway	1.3
72	Lake Country Recreational Trail	0.9
73	Minooka Park	78.6
74	Moor Downs Golf Course	75.0
75	Pebble Brook Greenway	29.5
76	Waukesha County Expo Center	115.3
Subtotal: 7 Sites		362.5
State-Owned		
77	DNR-Statewide Wetland Mitigation Program ^a	32.9
78	University of Wisconsin-Waukesha	84.6
Subtotal: 2 Sites		117.5

Table continued on following page.

Under Ownership of a Private Organization

Map 7.1 ID	Site Name	Size (acres)
79	Beautiful Savior Church and School	3.4
80	Carroll College Athletic Fields	12.6
81	Catholic Memorial High School	28.6
82	Christ the Life Lutheran Church	28.7
83	Faith Baptist Church	7.2
84	Haertel Field	5.7
85	Mount Calvary Lutheran School	14.5
86	Pebble Valley Subdivision Park	11.0
87	St. Williams School	10.7
88	Trinity Lutheran School	2.9
89	West Suburban Christian Academy	3.0
Subtotal: 11 Sites		128.3
Commercially Owned		
90	Bright Days Childcare	11.1
91	Swing Time Golf and Baseball	18.0
Subtotal: 2 Sites		29.1
Under Other Private Ownership		
92	Good Times Summer Day Camp	15.1
93	Pebble Valley Subdivision Park	1.3
94	Sullivan's Ball Diamonds	6.9
95	Tallgrass Subdivision Park	6.1
Subtotal: 4 Sites		29.4
Total: 95 Sites		953.0

^a Site features an easement.

Source: City of Waukesha and SEWRPC

Historic Places Within the City of Waukesha: 2023

Map 7.2 ID	Name	Site or District	NRHP Designation ^a
1	Acme/Carleton Spring	S	--
2	Alexander Cook House	S	1983
3	Andrew Frame House	S	1982
4	Arcadian Bottling Works	S	1983
5	Arlington Apartments	S	1987
6	Becker and Schafer Store Building	S	1995
7	Bethesda Spring	S	--
8	Block C Downtown Historic District	D	1995
9	C.A. Welch House	S	1982
10	Camillia Smith House	S	1983
11	Caples Park Historic District	D	1998
12	Carroll College Main Academic Buildings	S	1982
13	Carroll College	S	1982
14	Caspar M. Sanger House	S	1983
15	Charles E. Nelson House	S	1990
16	Charles Merten Building	S	1995
17	Chicago and Northwestern Railroad/ Milwaukee & Madison Passenger Depot	S	1995
18	College Avenue Historic District	D	1982
19	Cutler Homestead Site	S	1988
20	Cutler Mound Group/Church St. Mounds	S	1988
21	David J. Hemlock House	S	1983
22	Downtown/Five Points Historic District	D	1995
23	Dr. David Roberts House	S	1983
24	Dr. F.C. Elliot House	S	1982
25	Dr. Volney L. Moore House	S	1982
26	East Broadway Historic District	D	1982
27	Everett P. Barrett House	S	1995
28	First Baptist Church	S	1983
29	First Congregational Church	S	1992
30	First Methodist Church	S	1983
31	First Presbyterian Church	S	--
32	First Reformed German Church	S	1991
33	Frank H. Putney House	S	1983
34	Ganfield Gymnasium	S	1982
35	George Dwinnel House	S	1983
36	Grand View Health Resort/Moor Mud Baths	S	1983
37	Hannah Pratt House	S	1983
38	Hobo Spring	S	--
39	John Howitt House	S	1983
40	John P. Buchner House	S	--

Table continued on following page.

41	Joseph Fabacker House	S	1995
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Map 7.2 ID	Name	Site or District	NRHP Designation ^a
42	Joseph H. Hadfield House	S	1983
43	Lafin Avenue Historic District	D	1982
44	Lain-Estberg House	S	1974
45	Louis Yanke House/Saloon	S	1982
46	Madison Street Historic District	D	1990
47	Martin Brown House/St. Joseph's Church Convent	S	1983
48	Masonic Temple	S	1983
49	McCall Street Historic District	D	1993
50	Minniska Spring	S	--
51	Moreland Blvd. Pumphouse and Reservoir	S	1996
52	Morey-Andrews House	S	1995
53	Morey-Lewis House	S	1995
54	Morey-Markham House	S	1995
55	Morey-Seidens House	S	1995
56	Morris Cutler House	S	1982
57	National Hotel	S	1982
58	Nickell Building	S	1982
59	Northwestern Hotel	S	1990
60	Old Waukesha County Courthouse	S	1982
61	Patrick J. Buckley House	S	1991
62	Perry Grace House	S	1983
63	Pokrandt Blacksmith Shop	S	1983
64	Putney Block	S	1982
65	Rankin Hall Old Main House	S	1982
66	Resthaven Hotel	S	1982
67	Robert O. Jones House	S	1982
68	Samuel D. James House	S	1996
69	Senator William Blair House	S	1983
70	Silurian Mineral Springhouse - Monument & Spring	S	1982
71	St. Joseph's Church Complex	S	1982
72	St. Matthias Episcopal Church	S	1983
73	Totten-Butterfield House	S	1984
74	W.T. Lyle's Building	S	1982
75	W.T. Lyle's Building	S	1983
76	Walter S. Chandler House	S	1982
77	Waukesha Asbestos Company	S	--
78	Waukesha Mfg. Co./Waukesha Motor Co.	S	--
79	Waukesha Newhall Avenue Pump House and Reservoir	S	1999
80	Waukesha Post Office	S	1983

Table continued on following page.

81	Waukesha Pure Food Company	S	1983
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Map 7.2 ID	Name	Site or District	NRHP Designation^a
82	William A. Nickell House	S	1982
83	William G. Mann House	S	1983
84	William P. Sloan House	S	1982
85	Wisconsin Avenue Historic District	D	1982
86	Wisconsin Central, Ltd. Depot	S	--
87	Wisconsin Industrial School for Boys	S	1987

^a Historic places with no year are locally designated landmarks not listed on the National Registry of Historic Places (NRHP).

Source: City of Waukesha, Wisconsin Historical Society, and SEWRPC.