

SEWRPC Community Assistance Planning Report No. 278 (4th Edition)

KENOSHA COUNTY HAZARD MITIGATION PLAN UPDATE: 2023-2028

Chapter 1

INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

In July 2021, the Southeastern Wisconsin Regional Planning Commission (SEWRPC) and the Kenosha County Division of Emergency Management agreed to cooperatively prepare an update to the all-hazards mitigation plan for Kenosha County. The plan is designed to be consistent with the guidelines of the Wisconsin Department of Military Affairs, Division of Emergency Management (DMA, DEM), and the Federal Emergency Management Agency (FEMA).¹ As such, the plan aligns with the requirements and procedures defined in the amended Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) of Title 44 Code of Federal Regulations (CFR) Section 201 “Mitigation Planning” and Section 201.6, “Local Mitigation Plans.”² These requirements call for local hazard mitigation plans to be reviewed; updated to reflect changes in development, progress in local mitigation efforts, and changes in priorities; and reapproved every five years for local jurisdictions to be able to receive hazard mitigation funding.

¹ *Federal Emergency Management Agency, State and Local Mitigation Planning How-to-Guide, “Understanding Your Risks: Identifying Hazards and Estimating Losses,” Publication No. FEMA 386-2, September 3, 2015; Federal Emergency Management Agency, Multi-jurisdictional Mitigation Planning, March 10, 2009; Federal Emergency Management Agency, Local Mitigation Planning Policy Guide, April 2022.*

² *On April 19, 2022, FEMA updated the State and Local Mitigation Planning Policy Guides (policies). The policies are the official interpretation of the requirements in the Stafford Act, as amended, specifically Title 44 CFR Section 201.*

Kenosha County, in cooperation with its 12 municipalities and SEWRPC, began preparation of this plan update (4th Edition) in July of 2021. The plan update focuses on natural hazard mitigation which the Wisconsin Division of Emergency Management (WEM) and FEMA recommend as an option to single hazard mitigation planning. Natural weather hazard conditions, which include flooding, severe weather conditions including windstorms, tornadoes, periods of extreme heat or cold, drought, and winter storms were specifically considered for the preparation of this hazard mitigation plan update. While the plan considered all potential hazards, it must be recognized that only limited mitigation actions were feasible for some of these hazards, since they are not site-specific or repetitive in nature.

1.2 OVERVIEW OF STUDY AREA

Kenosha County is located in Southeastern Wisconsin, and is bordered on the east by Lake Michigan, on the north by Racine County, on the west by Walworth County, and on the south by Lake and McHenry Counties in Illinois. The impacts of urbanization in the greater Milwaukee and Chicago metropolitan areas are increasingly affecting the County.

Kenosha County covers about 278 square miles and contains one city, all or parts of seven villages, and five towns as shown on Map 1.1. There are all or parts of five natural watersheds and a total of about 4,800 acres of inland surface waters within the County. The County has a diversified natural resource base, including the Lake Michigan nearshore area, several inland lakes, as well as major river systems.

The majority of the population resides in the eastern portion of Kenosha County, within the City of Kenosha and the Village of Pleasant Prairie. However, population centers are also found in the western communities in the vicinity of the major lakes, including the Villages of Paddock Lake, Salem Lakes, and Twin Lakes and in the partially urbanized town areas. Much of the land in the County remains in agriculture, but the dairy industry has steadily declined. The major industries within the County are generally located east of Interstate Highway (IH) 94, with smaller amounts of industrial development being located west of IH 94 and in the other urban centers.

1.3 RELATIONSHIP OF HAZARD MITIGATION PLANNING TO EMERGENCY OPERATIONS PLANNING AND COUNTY REGULATIONS

The focus of this planning effort is natural hazard mitigation measures. Such measures generally involve lasting, often permanent, measures designed to reduce the exposure to, probability of, or potential loss

from hazardous events. Such measures tend to focus on actions related to where and how to build structures, education to reduce losses or injury, and programs to improve the safety of identified hazard areas. A hazard mitigation plan outlines the strategy for mitigating the hazards potentially impacting a county or municipality.

Emergency Operations Planning

The mitigation plan should be distinguished from, but compatible with, an emergency operations plan. An emergency operations plan is defined as a plan which describes how people and property will be protected in disaster and disaster threat situations; details who is responsible for carrying out specific actions; identifies the personnel, equipment, facilities, supplies, and other resources available for use in the disaster; and outlines how all actions will be coordinated. Numerous such plans have been developed at the jurisdictional level, and often involve mutual assistance and cooperation agreements between local units of government in adjoining municipalities, both within and outside of Kenosha County. Plans for mitigating natural hazards are related to emergency operation activities involving short-term recovery decision-making, since such activities may highlight prospects for implementation of a mitigation strategy aimed at reducing long-term risk to human life and property.

Kenosha County Emergency Operations Planning

In January 2013, Kenosha County adopted a comprehensive emergency management plan. The County plan includes procedures and protocols to respond to disasters or large-scale emergencies. The purpose and goal of the County emergency operations plan is to assist government in protecting lives, property, and the environment from major emergencies through addressing the areas of mitigation, preparedness, response, and recovery. This basic plan is intended as the core of the Kenosha County emergency operations program. It provides policy for department and agency managers and emergency management professionals to use in planning and actual operations. In response to a disaster or large-scale emergency, all local government forces, including law enforcement, fire, medical, health, public works, and others, will be considered a part of the County's emergency management organization, and will be the first line responders to such an emergency. When the emergency or disaster exceeds the capability of the local governments and the County to respond, the County will request assistance from the State of Wisconsin on behalf of the County and the affected municipalities. The Federal government will provide assistance to the State of Wisconsin when all local and State resources have been exhausted.

In addition, many of the local units of government have developed emergency operations plans and/or programs which complement the County plan and which also set forth procedures and actions to deal with a range of situations and events.

Regulations And Programs Related to Hazard Mitigation

The current ordinances and programs which are most directly related to hazard mitigation and plan implementation include general zoning, floodland zoning, shoreland or shoreland-wetland zoning regulations, and emergency operations programs. Those ordinances and operations programs administered by Kenosha County and the local units of government in the County are summarized in Table 1.1.

General Zoning

Cities in Wisconsin are granted general, or comprehensive, zoning powers under Section 62.23 of the *Wisconsin Statutes*. The same powers are granted to villages under Section 61.35 of the *Wisconsin Statutes*. Counties are granted general zoning powers within their unincorporated areas under Section 59.69 of the *Wisconsin Statutes*. However, a county zoning ordinance becomes effective only in those towns that ratify the county ordinance. Towns that have not adopted a county zoning ordinance may adopt village powers and subsequently utilize the city and village zoning authority conferred in Section 62.23 of the *Wisconsin Statutes*. Town zoning, however, is subject to county board approval where a general county zoning ordinance exists. General zoning is in effect in the unincorporated areas of the County, including all towns in the County and is jointly administered by Kenosha County and the towns. General zoning in the City of Kenosha and all villages within the County is administered individually by the municipalities.

Floodplain Zoning

Section 87.30 of the *Wisconsin Statutes* requires that cities, villages, and counties, with respect to their unincorporated areas, adopt floodplain zoning to preserve floodplain areas and to prevent the location of new flood damage-prone development in flood hazard areas. The minimum standards that such ordinances must meet are set forth in Chapter NR 116, "Wisconsin's Floodplain Management Program" of the *Wisconsin Administrative Code*. The required regulations govern filling and development within a regulatory floodplain, which is defined as the area subject to inundation by the 1-percent-annual-probability (100-year recurrence interval) flood event. Under Chapter NR 116, local floodplain zoning regulations must prohibit nearly all forms of development within the floodway, which is that portion of the floodplain required to convey the 1-percent-annual-probability peak flood flow. Local regulations must also restrict filling and development within the flood fringe, which is that portion of the floodplain located outside of the floodway that would be covered by floodwater during the 1-percent-annual-probability flood. Allowing the filling

and development of the flood fringe area, however, reduces the floodwater storage capacity of the natural floodplain, and may thereby increase downstream flood flows and stages.

The County Shoreland and Floodplain Zoning Ordinance applies in all unincorporated areas in Kenosha County. All incorporated cities and villages where floodplains have been identified have adopted floodplain zoning ordinances.

Shoreland and Shoreland-Wetland Zoning

Under Section 59.692 of the *Wisconsin Statutes*, counties in Wisconsin are required to adopt zoning regulations within statutorily defined shoreland areas, or those lands that are within 1,000 feet of the ordinary high water mark (OHWM) of a navigable lake, pond, or flowage, or 300 feet of the OHWM of a navigable stream, or, to the landward side of the floodplain, whichever distance is greater, within their unincorporated areas. Standards for county shoreland zoning ordinances are set forth in Chapter NR 115, "Wisconsin's Shoreland Protection Program," of the *Wisconsin Administrative Code*.³ Chapter NR 115 sets forth requirements regarding lot sizes and building setbacks; restrictions on cutting of trees and shrubbery; and restrictions on filling, grading, lagooning, dredging, ditching, and excavating that must be incorporated into county shoreland zoning regulations. In addition, Chapter NR 115 requires that counties place all wetlands five acres or larger and within the statutory shoreland zoning jurisdiction area into a wetland conservancy zoning district to ensure their preservation after completion of appropriate wetland inventories by the WDNR.

Minimum standards for city and village shoreland-wetland zoning ordinances are set forth in Chapter NR 117, "Wisconsin's City and Village Shoreland-Wetland Protection Program" of the *Wisconsin Administrative Code*.

³The 2015-2017 State Budget (Act 55) changed State law relative to shoreland zoning. Under Act 55 a shoreland zoning ordinance may not regulate a matter more restrictively than it is regulated by a State shoreland-zoning standard unless the matter is not regulated by a standard in Chapter NR 115, "Wisconsin's Shoreland Protection Program," of the *Wisconsin Administrative Code*. (Examples of unregulated matters may involve wetland setbacks, bluff setbacks, development density, and stormwater standards.) In addition, under Act 55, a local shoreland zoning ordinance may not require establishment or expansion of a vegetative buffer on already developed land and may not establish standards for impervious surfaces unless those standards consider a surface to be pervious if its runoff is treated or is discharged to an internally drained pervious area.

County shoreland-wetland zoning ordinances are in effect in all unincorporated areas of Kenosha County. All incorporated municipalities within the County have adopted their own shoreland-wetland zoning ordinances.

An important element of the Kenosha County and City of Kenosha shoreland zoning ordinances relates to the Lake Michigan shoreline where shoreline erosion hazards exist. In the case of the County ordinance, provisions that are included relate to shoreline erosion protection, including defining pertinent terms, designating the lands to be regulated, specifying the necessary regulation of land use and facility location, specifying the regulation of certain land disturbance activities, designating setback distances, and describing procedures for modifying the extent of the designated setbacks.

The Lake Michigan shoreland protection ordinances have been based upon recommendations of a Lake Michigan coastal erosion management technical committee which guided the preparation of a Lake Michigan coastal erosion management study⁴ for Kenosha County. That study recommended, and the current ordinance reflects, different shoreline setbacks for areas designated for development and structural shoreline protection and for areas of limited development where no structural protection measures are envisioned.

1.4 SCOPE AND PURPOSE OF PLAN

This plan updates the 2017 Kenosha County hazard mitigation plan.⁵ The scope of this plan is countywide, and is intended to set forth the most appropriate, feasible, and effective hazard mitigation strategy for Kenosha County and the local units of government within the County. The plan complements and refines the *State Hazard Mitigation Plan of Wisconsin*⁶ and focuses on local conditions and natural weather hazards likely to occur or be experienced within Kenosha County and Southeastern Wisconsin. As such, the County and SEWRPC will evaluate, update, and revise existing mitigation strategies as well as develop new local mitigation strategies specific to a community's exposure and impacts from identified natural hazards.

⁴SEWRPC Community Assistance Planning Report No. 86, *op. cit.*

⁵ SEWRPC Community Assistance Planning Report No. 278, 3rd Edition, *Kenosha County Hazard Mitigation Plan: 2017-2022*, November 2017.

⁶ *Wisconsin Emergency Management, State Hazard Mitigation Plan of Wisconsin*, December 2021.

The plan is developed as a multi-jurisdictional plan, covering Kenosha County and all municipalities located within the County. The mitigation planning requirements identified in 44 CFR, Section 201.6 require all jurisdictions participating in a multi-jurisdictional hazard mitigation plan to participate in the planning process. Examples of participation include, but are not limited to, attending planning meetings, contributing research, data, or other information, and commenting and reviewing drafts of the plan. The municipalities that participated in the development of the Kenosha County hazard mitigation plan update include the City of Kenosha; the Villages of Bristol, Paddock Lake, Pleasant Prairie, Salem Lakes, Somers, and Twin Lakes; and the Towns of Brighton, Paris, Randall, Somers, and Wheatland. Table 1.2 summarizes municipal participation in the planning process. For more complete details on the level of participation of local citizens and community groups in the public involvement process, see Appendix A.

The plan was prepared by the staff of the Kenosha County Division of Emergency Management and SEWRPC. In preparing this plan update, the County involved all appropriate County departments as needed. In addition, the planning was coordinated with the related activities of other concerned units and agencies of government and was developed under the guidance of the Kenosha County Hazard Mitigation Plan Local Planning Team (LPT),⁷ which was created by the County specifically for plan development purposes. In assembling the Kenosha County Hazard Mitigation Plan LPT, the County Division of Emergency Management sought representatives from a cross-section of community interests. Representatives from each municipality in the County were invited to participate, including elected and appointed officials and representatives of law enforcement agencies, fire departments, public health departments, and public works departments. In addition, representatives from educational institutions, nonprofit agencies, and private sector firms were invited to participate. Summary notes for each LPT meeting are provided in Appendix A. While it is acknowledged that the County can be affected by hazardous incidents that occur outside of the County jurisdiction, the degree of impact—in terms of property damage, injury, loss of life, and ability of the County to respond—is significantly limited and frequently unquantifiable. Thus, while some hazards, such as weather-related events, can extend over a wide area, most affect Kenosha County only tangentially, and many result in site specific impacts. Those that are site-specific in their impact may be best addressed within local level hazard mitigation plans and through local action. Nevertheless, where appropriate, areas of cooperation between jurisdictions have been noted, especially with respect to hazards such as flooding, for example, which commonly affect entire river basins as well as the specific communities located within

⁷ For the development of the initial plan and the 2nd Edition, this group was called the Kenosha County All Hazards Mitigation Plan Task Force. For the 3rd Edition and current plan update (4th Edition), the name of this group has been changed to reflect the current terminology used by FEMA.

them. Generally, hazard mitigation as well as emergency response planning at the local and subregional levels is beyond the scope of this plan.

As previously stated, this plan update was developed under the guidance of the LPT with a collective effort of a number of agencies, organizations, and stakeholders. The membership, formation, and active participation of the LPT is documented in Appendix A. In addition to formation and active participation of the LPT, the plan update included the following steps:

- Collation and review of all pertinent reports relating to the hazard mitigation activities in Kenosha County since adoption of the initial plan
- Review of materials developed as a part of the multi-jurisdictional comprehensive planning process for Kenosha County
- Inventory mapping and analysis of hazards pertinent to Kenosha County
- Identification of the facilities and ongoing programs related to hazard mitigation
- Assessment of the vulnerability of the County assets to each hazard
- Review and updating of hazard and risk assessments
- Identification of and prioritization of needed facilities and programs
- Consideration of issues relating to neighboring municipalities and units of government likely to be affected or influenced by natural hazards within Kenosha County
- Development and evaluation of alternatives to address the identified needs
- The development of plan recommendations and an implementation plan
- Development of a public informational and educational program and program of public consultation to guide the plan development and implementation program, including a prioritization of the recommended plan elements

- Adoption of a strategy for monitoring and refining the plan

1.5 PLAN MAINTENANCE AND IMPLEMENTATION ACTIVITIES

Outreach Activities (ongoing)

Since the adoption of the initial hazard mitigation plan, the Kenosha County Division of Emergency Management and local municipalities in the County have conducted outreach activities to educate the public about emergency preparedness, including hazard mitigation. The most recent activities are summarized in Table 1.3. The most common methods include making information available on the County or municipality's website and mailing or emailing periodic newsletters to residents. As part of these activities, a number of campaigns have been conducted on hazard awareness, including programs related to winter storms, tornados and severe storms, heat awareness, and flood safety. In recent years, some of the local municipalities have also begun reaching the public through social media sites such as Facebook® and Twitter®.

Implementation Activities (ongoing)

Since the adoption of the 2017 (3rd Edition) to the hazard mitigation plan, Kenosha County and the local municipalities have conducted several projects intended to implement recommendations of the plan. These projects are summarized in Table 1.4.

1.6 REVIEW OF PLAN DEVELOPMENT EFFORTS, PROCESS, AND ADOPTION

The LPT met three times during the plan update preparation period to provide input on the types of hazards to be considered, the appropriate mitigation strategies, and to review the draft report chapters. Those chapters were then refined to reflect the comments and recommendations of the LPT (see Appendix A).

As draft chapters of plan were completed, copies were placed in downloadable form on the SEWRPC website, and a webpage was available on which members of the public could ask questions and submit comments on the draft plan update. Following completion of updates to the community profiles, the risk and vulnerability assessments sections of the plan, and review of drafts of the corresponding chapters by the LPT, a public informational meeting was held to review these sections of the plan with local officials, business and industry, and citizens and solicit their input.

After the plan was completed in draft form, an additional public informational meeting was held to review the draft plan with local officials, businesses and industry, and citizens. Copies of the draft plan were made available at the Kenosha County Division of Emergency Management and on the SEWRPC website.

Following a finding by FEMA that the plan was approvable after adoption, copies of the plan were sent to each of the local units of government requesting that they adopt the plan in order to retain future eligibility for mitigation funding for the FEMA Hazard Mitigation Grant, Flood Mitigation Assistance, and Building Resilient and Innovative Communities (BRIC) programs administered by WEM. Copies of the adopted resolutions approving the plan by the local units of government are included in Appendix B. In addition, County and SEWRPC staff were available to meet with communities on an individual basis to review the plan update and consider adoption and implementation steps.

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Chapter 1

INTRODUCTION AND BACKGROUND

TABLES

Table 1.1
Regulations and Programs Within Kenosha County Related to Hazard Mitigation

Community	General Zoning	Floodland Zoning	Stormwater Management Ordinance or Plan	Shoreland or Shoreland Wetland Zoning	Emergency Operations Plan
County					
Kenosha County	Adopted	Adopted ^a	Yes	Adopted	Yes
Cities					
Kenosha	Adopted	Adopted	Yes	Adopted	Yes
Villages					
Bristol	Adopted	Adopted	Yes	Adopted	Yes
Paddock Lake	Adopted	--	Yes	Adopted	Yes
Pleasant Prairie	Adopted	Adopted	Yes	Adopted	--
Salem Lakes	Adopted	Adopted	Yes	Adopted	--
Somers	Adopted	Adopted	Yes	Adopted	--
Twin Lakes	Adopted	Adopted	Yes	Adopted	Yes
Towns					
Brighton	County Ordinance	County Ordinance	--	County Ordinance	Yes
Paris	County Ordinance	County Ordinance	--	County Ordinance	--
Randall	County Ordinance	County Ordinance	--	County Ordinance	--
Somers	County Ordinance	County Ordinance	Yes	County Ordinance	--
Wheatland	County Ordinance	County Ordinance	--	County Ordinance	Yes

^a Chapter 17, "Stormwater Management, Erosion Control, and Illicit Discharge Ordinance," was adopted on February 26, 2010. This ordinance only applies to County property and to those towns that have not enacted their own ordinances.

Source: Kenosha County Division of Emergency Management, Kenosha County Department of Planning and Development, and SEWRPC

Table 1.2
Participation in the Kenosha County Hazard Mitigation Plan Update Planning Process

Civil Division	Attendance at Local Planning Team Meetings			Provision of Data ^a	Review of Report
	March 28, 2022	February 22, 2023			
Cities					
Kenosha	X				
Villages					
Bristol	X				
Paddock Lake	--				
Pleasant Prairie	X				
Salem Lakes	X				
Somers	X				
Twin Lakes	X				
Towns					
Brighton	X				
Paris	X				
Randall	--				
Somers	X				
Wheatland	--				
County					
Kenosha County	X				
Other	--				

Note: X indicates participation by at least one representative of the municipality or organization.

^a Provision of data includes providing information on hazards experienced, projects undertaken, and outreach efforts as well as sharing of relevant plans, reports, and concerns.

Source: SEWRPC

Table 1.3
Outreach Activities by Local Communities in Kenosha County Related to Hazard Mitigation

Community	Activity
Kenosha County	County website Fox River Flood Mitigation Program webpages Division of Emergency Management webpages Division of Emergency Management Damage Hotline Ties to the Land newsletter Contract with Root-Pike WIN for stormwater education and outreach
City of Kenosha	City website Contract with Root-Pike WIN for stormwater education and outreach Production and distribution of brochures on stormwater for stormwater utility
Village of Bristol	Village newsletter Village website Contract with Root-Pike WIN for stormwater education and outreach
Village of Paddock Lake	Village newsletter Village website
Village of Pleasant Prairie	Monthly newsletter Village website Text messages and email notifications Contract with Root-Pike WIN for stormwater education and outreach
Village of Salem Lakes	Village website Email informational notices Contract with Root-Pike WIN for stormwater education and outreach
Village of Somers	Quarterly newsletter Village website Contract with Root-Pike WIN for stormwater education and outreach
Village of Twin Lakes	Village website
Town of Brighton	Public posting at three locations Town website
Town of Paris	Town website
Town of Randall	Town website
Town of Somers	Town website Contract with Root-Pike WIN for stormwater education and outreach
Town of Wheatland	Town website

Source: Community Websites, Kenosha County, and SEWRPC

Table 1.4
Hazard Mitigation Activities in Kenosha County: 2018-2023

Community	Project	Cost	Funding Source	Completion Date
Kenosha County	Fox River Flood Mitigation Program	--	FEMA, Wisconsin Division of Emergency Management, Federal Community Development Block Grant, WDNR, County	Ongoing
	Participation in National Flood Insurance Program Community Rating System (CRS)	--	Kenosha County	Ongoing
	List of Cooling Center Sites	--	Kenosha County Health Department	--
City of Kenosha	Stormwater Management Plan	--	City	Ongoing
	Sanitary Sewer Rehabilitation and Manhole Rehabilitation Programs	--	City	Ongoing
	Storm Sewer Manhole and Inlet Rehabilitation Program	--	City	Ongoing
	Storm Sewer Rehabilitation Program	--	City	Ongoing
Village of Pleasant Prairie	Beverly Wood and Chateau Eau Plaines Stormwater Projects	--	U.S. Department of Housing and Urban Development Community Development Block Grant	2023

Source: Kenosha County and SEWRPC

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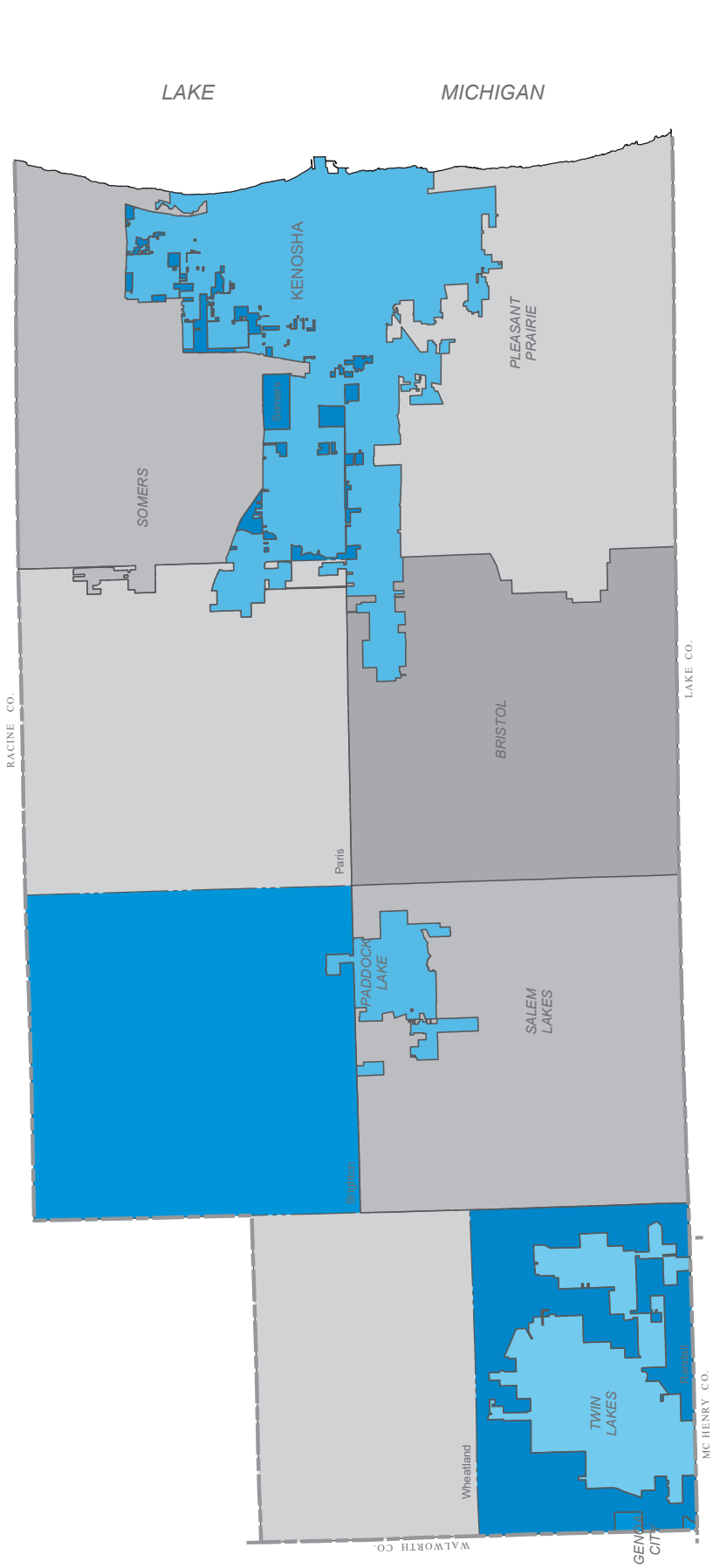
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Chapter 1

INTRODUCTION AND BACKGROUND

MAPS

**Map 1.1
Civil Division Boundaries in Kenosha County: 2022**



LOCAL GOVERNMENT TYPE

- CITY: KENOSHA
- VILLAGE: BRISTOL
- TOWN: Paris