

SEWRPC Community Assistance Planning Report No. 266 (4th Edition)

RACINE COUNTY HAZARD MITIGATION PLAN UPDATE: 2023-2028

## Chapter 1

# INTRODUCTION AND BACKGROUND

### 1.1 INTRODUCTION

In February of 2022, the Southeastern Wisconsin Regional Planning Commission (SEWRPC), the Racine County Office of Emergency Management, and the Racine County Department of Planning and Development agreed to cooperatively prepare an update to the 2017 all-hazards mitigation plan for Racine County.<sup>1</sup> The plan update set forth herein 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).<sup>2</sup> As such, this new plan update is directed to a “natural hazards only” mitigation approach. Thus, consideration is given to only natural hazard conditions such as flooding, lakeshore bluff failure, windstorms, tornadoes, extreme heat or cold, and winter storms. While the plan considers all potential natural hazards, it recognizes that only limited mitigative actions were feasible for some of these hazards, since they are not site-specific or repetitive in nature.

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<sup>1</sup> *The 2017 All Hazards Mitigation Plan for Racine County, set forth in SEWRPC Community Assistance Planning Report No. 266 (3rd Edition), Racine County Hazard Mitigation Plan Update: 2017 – 2022, dated December 2017, was developed in accordance with FEMA’s Disaster Mitigation Act of 2000 under the Pre-Disaster Mitigation Plan (P-DM) grant program.*

<sup>2</sup> *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.*

This planning effort focuses upon activities that are most directly related to the Racine County Office of Emergency Management. However, because of the importance in developing a partnership approach to coordinate emergency mitigation programs, the plan also incorporates consideration of programs involving other agencies, units of government, and private interests both inside and outside of the boundaries of Racine County.

The first edition of the Racine County hazard mitigation plan was set forth in Community Assistance Planning Report No. 266, *Racine County Hazard Mitigation Plan*, dated August 2004, which was adopted by the County on August 2, 2004. It was subsequently adopted by the Cities and Villages within the County. The plan was prepared by the staffs of the Racine County Office of Emergency Management and Department of Planning and Development, and the Southeastern Wisconsin Regional Planning Commission. On April 27, 2010, Racine County in cooperation with its 17 municipalities and the Southeastern Wisconsin Regional Planning Commission, adopted an update of the initial plan, entitled Community Assistance Planning Report No. 266 (2nd Edition), *Racine County Hazard Mitigation Plan Update: 2010-2015*, dated July 2010. Similarly, on November 7, 2017, Racine County adopted, in cooperation with its 17 municipalities and the Southeastern Wisconsin Regional Planning Commission, a second update entitled Community Assistance Planning Report No. 266 (3rd Edition), *Racine County Hazard Mitigation Plan Update: 2017-2022*, dated December 2017.

In preparing the initial and updated plans, the County involved other 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 Racine County Hazard Mitigation Plan Task Force.<sup>3</sup> The mitigation planning requirements of 44 *Code of Federal Regulations*, Section 201.6 (d) (44 CFR 201.6(d)) 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. The Local Planning Team (LPT) for this 4th edition plan update includes all participating municipalities: the Cities of Burlington and Racine; the Villages of Caledonia, Elmwood Park, Mount Pleasant, North Bay, Raymond, Rochester, Sturtevant, Union Grove, Waterford, Wind Point, and Yorkville; and the Towns of Burlington, Dover, Norway, and Waterford. The participating municipalities and agencies of government are listed in Table 1.1

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<sup>3</sup> For the development of the initial plan and the 2009-2010 update, this group was called the Racine County Hazard Mitigation Plan Task Force. For the 2015-2017 and current plan update, the name of this group (Racine County Hazard Mitigation Plan Local Planning Team) has been changed to reflect the current terminology used by FEMA.

In assembling the Racine County Hazard Mitigation Plan Local Planning Team (LPT), the County Planning and Development Department and Office of Emergency Management sought representatives from a cross-section of community interests. Representatives from each municipality in the County were invited to participate. In addition, invitations to participate were sent by e-mail to other stakeholders such as elected and appointed officials and representatives of law enforcement agencies, fire departments, public health departments, public works departments, engineering departments, private sector firms, and nonprofit organizations. It should be noted that not all invitees chose to participate, and thus, Table 1.1 reflects only those that chose to participate from the list of representatives and stakeholders that were invited to participate.

The mitigation planning requirements identified in 44 CFR 201.6 call for all jurisdictions participating in a multi-jurisdictional hazard mitigation plan to actively take part in the planning process. Examples of participation include, but are not limited to, attending planning meetings, contributing research, data, or other information, and commenting on drafts of the plan. Tables 1.1 through 1.3 summarize municipal participation in the planning process, regulations and programs, and outreach activities, respectively, for the updated plan. Table 1.4 lists hazard mitigation activities undertaken by the municipalities in the County since the second plan update (3rd edition) was adopted in 2017.

For more complete details on the level of participation of local citizens and community groups in the Local Planning Team (LPT) for this update, the public involvement process, and summary notes for each LPT meeting, see Appendix A.

The procedures utilized in this plan update are based upon guidance provided by the Federal Emergency Management Agency and the Wisconsin Department of Military Affairs, Wisconsin Emergency Management.<sup>4</sup> As such, the plan is also consistent with the requirements and procedures defined in the Disaster Mitigation Act of 2000, which in part requires an analysis comprised of three components: 1) profile and analysis of hazard events, 2) inventory of vulnerability assessment of community assets, and 3) development of hazard mitigation strategies.

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<sup>4</sup> *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, August 2001; Federal Emergency Management Agency, Local Multi-Hazard Mitigation Planning Guidance, July 1, 2008. Federal Emergency Management Agency, Local Mitigation Planning Handbook, March 2013. See also Federal Emergency Management Agency, State and Local Plan Interim Criteria under the Disaster Mitigation Act of 2000, July 11, 2002.*

## **1.2 OVERVIEW OF STUDY AREA**

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

Racine County covers about 340 square miles and contains two cities, eleven villages, and four towns, as shown on Map 1.1. Table 1.2 details the total area and percent of the whole county area for each city, village, and town. It can also be noted that all or parts of five natural watersheds and a total of about 4,000 acres of inland surface waters are located within the County. The County has a diversified natural resource base, including the Lake Michigan nearshore area, several major inland lakes (Browns Lake, Eagle Lake, Tichigan Lake, and Wind Lake), two major river systems (the Fox River and the Root River), and numerous smaller lakes, rivers, and streams.

The majority of the population resides in the eastern portion of the County, within the City of Racine and the Villages of Caledonia, Mt. Pleasant, and Sturtevant. However, population centers are also found in the western communities, including the City of Burlington and the Villages of Rochester, Union Grove, and Waterford, and in the vicinity of the major lakes, including the Bohner Lake , Browns Lake, Eagle Lake, Tichigan Lake, and Wind Lake areas. Much of the land in the County remains in agriculture, but the dairy industry (which was once the primary agricultural use) has steadily declined. The major industries within the County are generally located along and east of Interstate Highway (IH) 94, with smaller amounts of industrial development located in the other urban centers.

## **1.3 RELATIONSHIP OF HAZARD MITIGATION PLANNING TO OTHER PLANNING MECHANISMS**

The focus of this planning effort is upon 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, and are intended to be in place well in advance of any 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 community.

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 and during disaster and disaster threat situations (such as rescuing those trapped in flooded homes, issuing evacuation orders, or providing shelter for those whose homes have been severely damaged; 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 Racine County.

Plans for mitigating natural hazards are also often 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. Short term recovery efforts may include the provision of redundancy or other enhancements or improvements to critical essential services such as power, communication, water, sewage, and transportation systems.

### **Emergency Operations Planning**

Racine County has developed a comprehensive emergency management plan<sup>5</sup> which sets forth an all-hazards action plan. 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 sets forth procedures and actions to deal with a range of situations and events. Racine County's comprehensive emergency management plan notes that the County is exposed to many hazards that have the potential for disrupting the community, causing damage, and creating casualties. In regard to natural hazards, in addition to flooding, the plan recognizes that the County is vulnerable to other natural hazards including tornadoes and severe weather. Other hazards related either directly or indirectly to natural hazard events may include technological hazards, accidents involving hazardous materials, terrorism and civil disorder, and utility hazards such as power failure and water shortages or contamination.

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,

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<sup>5</sup> *Racine County, Wisconsin, Comprehensive Emergency Management Plan (CEMP), [Racine County, Racine Wisconsin], 2022.*

preparedness, response, and recovery. This basic plan is the core of the Racine 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 government and the County to respond, assistance will be requested from the State of Wisconsin. The Federal government will aid the State of Wisconsin when it is determined that the severity, magnitude, and damages exceed local and state resources. The County plan includes elements on direction and control, warning and communications, and management of resources during emergency situations.

### **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 Racine County and the local units of government in the County are summarized in Table 1.3.

#### **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*. General zoning is in effect in all communities in Racine County. The four towns of Burlington, Dover, Norway, and Waterford are under the jurisdiction of the County zoning ordinance, which is administered jointly by Racine County and the towns.

#### **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*. Under Chapter NR 116, local floodplain zoning regulations must prohibit nearly all forms of development within the floodway. Local regulations must also restrict filling and development within the flood fringe. The County Shoreland and Floodplain Zoning Ordinance applies in all of the unincorporated areas of the towns in Racine County. All incorporated cities and villages, where

floodplains have been identified, have adopted floodplain zoning ordinances. The two municipalities without floodplain ordinances, the Villages of Elmwood Park and North Bay have no identified flood hazard areas within their boundaries.

### ***Shoreland and Shoreland-Wetland Zoning***

Under Section 59.692 of the *Wisconsin Statutes*, counties in Wisconsin are required to adopt zoning regulations within their unincorporated areas—depending upon whichever distance is greater—that are either:

1. Within statutorily defined shoreland areas
2. Or lands that are within 1,000 feet of the ordinary high-water mark (OHWM) of a navigable lake, pond, or flowage
3. Or 300 feet of the OHWM of a navigable stream
4. Or to the landward side of the floodplain

Standards for county shoreland zoning ordinances are set forth in Chapter NR 115, “Wisconsin’s Shoreland Protection Program”, of the *Wisconsin Administrative Code*.<sup>6</sup> 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.

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<sup>6</sup> *The 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 Racine County. The incorporated Cities of Burlington and Racine, Villages of Caledonia, Mt. Pleasant, Rochester, Sturtevant, Waterford, and Wind Point, have adopted their own shoreland-wetland zoning ordinances pursuant to Sections 62.231 and 61.351, respectively, of the *Wisconsin Statutes*, and Chapter NR 117 of the *Wisconsin Administrative Code*. The remaining five Villages of Elmwood Park, North Bay, Raymond, Union Grove and Yorkville, did not contain shoreland wetlands and were thus not required to adopt such ordinances.

#### **1.4 SCOPE AND PURPOSE OF PLAN**

The scope of this plan is countywide, and is intended to set forth the most appropriate, feasible, and effective hazard mitigation strategy for Racine County and the local units of government within the County. The plan complements, refines, and focuses the *State Hazard Mitigation Plan of Wisconsin*<sup>7</sup> on local conditions and hazards likely to occur or be experienced within Racine County and Southeastern Wisconsin. The plan development process is intended to encourage innovative programming and leadership, and to build constructive partnerships with local units of government, business, and other stakeholders with a shared interest and obligation in protecting the safety and economic stability of Racine County, and to provide information and guidance to neighboring communities as they develop jurisdictional hazard mitigation plans at the local and subregional levels.

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 can extend over a wide area, most affect Racine 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 them. Generally, hazard mitigation as well as emergency response planning at the local and subregional levels is beyond the scope of this plan.

This plan was developed through a collective effort of a number of municipalities, agencies, organizations, and business representatives. These efforts were conducted under the guidance of the Racine County Local

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<sup>7</sup> *Wisconsin Emergency Management, State Hazard Mitigation Plan of Wisconsin, December 2021.*



Planning Team (LPT). The membership, formation, and active participation of the LPT is documented in Appendix A of this report. In addition to formation and active participation of the LPT, the development of this plan included the following steps:

- Collation and review of all pertinent reports relating to the hazard mitigation activities in Racine County since adoption of the current plan
- Review of materials developed as a part of the multi-jurisdictional comprehensive planning process for Racine County<sup>8</sup>
- Review and update of inventories developed for the current plan
- Review and update of hazard and risk assessments
- Review of implementation activities
- Review and update of plan recommendations and the initial implementation plan

## **1.5 PLAN MAINTENANCE AND IMPLEMENTATION ACTIVITIES**

### **Outreach Activities**

Since the adoption of the current hazard mitigation plan, the Racine County Office of Emergency Management and local municipalities in the County have conducted a number of outreach activities to educate the public about emergency preparedness, including hazard mitigation. These outreach activities are summarized in Table 1.4. The most common methods used by the communities include making information available through posting on the municipality's website and mailing or emailing periodic newsletters to residents of the municipality. As part of these activities, a number of campaigns have been conducted on hazard awareness, including campaigns related to winter weather awareness, tornado awareness, hazardous materials awareness, heat awareness, pandemic influenza, and family preparedness. Specific activities include print media publications, presentations to schools and community groups, safety and preparedness seminars, broadcast media interviews, and display presentations at community events.

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<sup>8</sup> SEWRPC *Community Assistance Planning Report No. 301, A Multi-Jurisdictional Comprehensive Plan for Racine County: 2035, November 2009.*

## **Implementation Activities**

Since the adoption of the current hazard mitigation plan, Racine County and the local municipalities have conducted several projects intended to implement recommendations of the plan. These projects are summarized in Table 1.5. One implementation activity the County recently participated in was distributing NOAA weather radios to schools to help increase awareness and preparedness for severe weather hazards. Another implementation activity occurred in 2018 and 2019, when SEWRPC staff evaluated the flooding impact of the proposed Village of Mount Pleasant Electronic & Information Technology Manufacturing (EITM) Zone, which included the Foxconn campus and possible future supporting businesses. Flooding impacts were evaluated for the Kilbourn Road Ditch (KRD), Unnamed Tributary (UT) No. 15 to KRD, and UT No. 18 to KRD in the Des Plaines River watershed and the Pike River, South Branch Pike River, Waxdale Creek, Chicory Creek, Lamparek Creek, and School Tributary in the Pike River watershed. SEWRPC staff evaluated if stormwater ponds sized using the existing Village ordinances would be sufficient to not increase flood flows on the impacted streams. This evaluation was done using hydrologic and hydraulic models developed for FEMA. The modeling effort confirmed that stormwater ponds in the EITM Zone sized per ordinance requirements would not alter the regulatory floodplains for the listed streams.

## **1.6 REVIEW OF PLAN DEVELOPMENT EFFORTS, PROCESS, AND ADOPTION**

As previously noted, this update of the Racine County Natural Hazards Mitigation Plan was prepared under the guidance of a Local Planning Team (LPT) comprised of representatives of all of the incorporated communities within the County including elected officials, law enforcement and fire personnel, engineering and public works departments, and planning departments. In addition, the planning process included stakeholders such as representatives from utilities, the business community, nonprofit organizations, school districts, and churches. 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 Local Planning Team (see Appendix A).

As draft chapters of this update of the 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 Local Planning Team, a public informational meeting was held to review these sections of the plan with local officials, business and industry, and citizens, to solicit their input.

After the update of 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 Racine County Office of Emergency Management and on the SEWRPC website.

Following a finding by FEMA that the plan was approvable after adoption, the plan was brought to the Racine County Board for adoption (a copy of the adopted resolution approving the plan is included in Appendix F). Copies of the plan were also 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 Pre-Disaster Mitigation programs administered by the Wisconsin DMA, DEM. In addition, County and SEWRPC staffs 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**  
**Participation in the Racine County Hazard Mitigation Plan Update Planning Process: April 2022<sup>a</sup>**

Community	Attendance at Local Planning Team Meetings				Provision of Data <sup>b</sup>	Review of Report
	April 13, 2022					
County						
Racine County	X				X	
Cities						
Burlington	X				X	
Racine	X				X	
Villages						
Caledonia	X				X	
Elmwood Park	--				X	
Mount Pleasant	X				X	
North Bay	--				X	
Raymond	X				X	
Rochester	--				X	
Sturtevant	X				X	
Union Grove	X				X	
Waterford	X				X	
Wind Point	--				--	
Yorkville	--				X	
Towns						
Burlington	X				X	
Dover	X				X	
Norway	--				--	
Waterford	X				--	
Other Stakeholders						
State of Wisconsin	--				X	
SEWRPC	X				X	
Racine County Public Health Division	X				X	
Mount Pleasant Aurora Health Network	X				--	
Racine Unified School District	X				--	

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

<sup>a</sup> This table will be continually updated throughout entire plan update process as meetings are held.

<sup>b</sup> 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 1.2**  
**Areal Extent of Civil Divisions in Racine County: 2021**

Community	Area		Percent of County Area
	Acres	Square Miles	
<b>Cities</b>			
Burlington	4,909	7.7	2.3
Racine	10,050	15.7	4.6
<b>Villages</b>			
Caledonia	29,175	45.6	13.4
Elmwood Park	98	0.2	<0.1
Mount Pleasant	21,752	33.9	10.0
North Bay	68	0.1	<0.1
Raymond	22,878	35.7	10.5
Rochester	11,312	17.7	5.2
Sturtevant	2,636	4.1	1.2
Union Grove	1,661	2.6	0.8
Waterford	1,620	2.5	0.7
Wind Point	827	1.3	0.4
Yorkville	21,535	33.6	9.9
<b>Towns</b>			
Burlington	21,918	34.2	10.1
Dover	23,146	36.2	10.6
Norway	22,837	35.7	10.5
Waterford	21,541	33.7	9.9
<b>Total</b>	<b>217,963</b>	<b>340.5</b>	<b>100.0</b>

Source: SEWRPC



**Table 1.3**  
**Regulations and Programs Within Racine County Related to Hazard Mitigation**

<b>Community</b>	<b>General Zoning</b>	<b>Floodplain Zoning</b>	<b>Stormwater Management Ordinance or Plan</b>	<b>Shoreland or Shoreland Wetland Zoning</b>	<b>Emergency Operations Ordinance or Plan</b>
County Racine County	Adopted	Adopted	Yes	Adopted	Yes
Cities Burlington Racine	Adopted Adopted	Adopted Adopted	Yes Yes	Adopted Adopted	Yes Yes
Villages Caledonia Elmwood Park Mount Pleasant North Bay Raymond Rochester Sturtevant Union Grove Waterford Wind Point Yorkville	Adopted Adopted Adopted Adopted County Ordinance Adopted Adopted Adopted Adopted Adopted Adopted Adopted	Adopted -- Adopted -- County Ordinance Adopted Adopted Adopted Adopted Adopted Adopted Adopted	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes	Adopted -- Adopted -- County Ordinance Adopted Adopted -- Adopted Adopted Adopted Adopted	Yes Yes Yes -- -- Yes Yes Yes -- Yes Yes Yes --
Towns Burlington Dover Norway Waterford	County Ordinance County Ordinance County Ordinance County Ordinance	County Ordinance County Ordinance County Ordinance County Ordinance	Yes <sup>a</sup> Yes <sup>a</sup> Yes <sup>a</sup> Yes <sup>a</sup>	County Ordinance County Ordinance County Ordinance County Ordinance	Yes -- -- Yes

<sup>a</sup> The Towns have adopted stormwater management ordinances or regulations. The Towns are also regulated under the County. In the event of conflicting regulations between the Town and County ordinances, the more restrictive regulation applies.

Source: Racine County Office of Emergency Management and Department of Planning and Development, Racine County Municipalities, and SEWRPC

**Table 1.4**  
**Outreach Activities by Local Communities in Racine County Related to Hazard Mitigation**

<b>Community</b>	<b>Activity</b>
Racine County	County website Office of Emergency Management webpages Ready Racine County Facebook page Ready Racine quarterly newsletter Contract with Root-Pike WIN for stormwater education and outreach Annual outreach on preparedness efforts CERT Certification classes for youth
City of Burlington	City website Quarterly newsletter Email and text message information notices (Notify Me) City Facebook page City Twitter account City Fire Department Facebook page City Police Department Facebook page Press Releases Contract with Racine County Public Health Division for public health services and outreach City Police Department hosts annual 2-week Safety Town Program for youth
City of Racine	City website Email newsletter City Twitter account City Police Department Twitter account Health Department Facebook and Twitter page Contract with Nixle to send out geographically specific emergency alerts to wireless devices Contract with Root-Pike WIN for stormwater education and outreach
Village of Caledonia	Village website Village Police Department Facebook page Village Fire Department Facebook page Village Fire Department open house Village Fire Department yearly fire safety school program Village Police and Fire Department Safety Day Contract with Root-Pike WIN for stormwater education and outreach Contract with Racine County Public Health Division for public health services and outreach
Village of Elmwood Park	Village website Quarterly newsletter Village Facebook page Village Email Informational Notices
Village of Mount Pleasant	Village website Village Facebook page Village Twitter account Village Police Department Facebook page Contract with Root-Pike WIN for stormwater education and outreach Contract with Racine County Public Health Division for public health services and outreach Village staff meet with residents on regular basis to address concerns
Village of North Bay	Village website Quarterly Newsletter Village Email Informational Notices Contract with Racine County Public Health Division for public health services and outreach
Village of Raymond	Town website Yearly newsletter Various public education events Contract with Racine County Public Health Division for public health services and outreach

**Table continued on next page.**

**Table 1.4 (Continued)**

<b>Community</b>	<b>Activity</b>
Village of Rochester	Quarterly newsletter Compiling list of special needs residents who would need special assistance in the event of a disaster Visits by public works staff to homes at risk of flooding in the event of upstream dam failure to inform and advise residents Email and text message information notices Village Facebook page Contract with Racine County Public Health Division for public health services and outreach
Village of Sturtevant	Village website Quarterly newsletter Village Police Department Facebook page Contract with Root-Pike WIN for stormwater education and outreach Member of the Racine County Local Emergency Planning Committee (LEPC) Work closely with Racine County Public Health Division for public health services and outreach
Village of Union Grove	Village website Quarterly newsletter Village Facebook page Contract with Racine County Public Health Division for public health services and outreach
Village of Waterford	Village website Quarterly newsletter Press releases Contract with Racine County Public Health Division for public health services and outreach
Village of Wind Point	Village website Monthly E-newsletter Village Facebook page Village Twitter account Contract with Root-Pike WIN for stormwater education and outreach
Village of Yorkville	Village website Quarterly newsletter Village Facebook page Public health services and outreach provided by Racine County Public Health Division
Town of Burlington	Town website Fire department Facebook page Contract with Racine County Public Health Division for public health services and outreach
Town of Dover	Town website Yearly newsletter Kansasville Fire and Rescue website Town of Dover Water Patrol Facebook page Fire department safety school program Contract with Racine County Public Health Division for public health services and outreach
Town of Norway	Town website Quarterly newsletter Town Facebook page Wind Lake Fire Department website Contract with Racine County Public Health Division for public health services and outreach
Town of Waterford	Town website Town Police Department Facebook page Contract with Racine County Public Health Division for public health services and outreach

Source: Racine County Office of Emergency Management, Local Municipalities, and SEWRPC

**Table 1.5  
 Hazard Mitigation Activities by Local Communities in Racine County: 2017-2022**

<b>Community</b>	<b>Project</b>	<b>Cost (\$)</b>	<b>Funding Source</b>	<b>Completion Date</b>
Racine County	Zoning ordinances in floodplain areas	--	Levy	2021
	Emergency Action Plans for downstream areas near dams	50,000	Grants/DNR	Ongoing
	Road building modifications to further elevate certain flood-prone segments of roads	--	--	--
	Annual public outreach and education efforts related to citizen preparedness and emergency readiness	--	--	Ongoing
	Numerous trainings for responders on the Incident Command System and National Incident Management System principles.	--	Grants	Ongoing
	The formation of a Racine County Incident Management Team	--	--	Ongoing
	Multiple preparedness exercises to increase agency and community readiness.	--	--	Ongoing
	NOAA weather radio distribution to schools in 2022	--	Preparedness Grant	2022
	Brine for snowstorms	--	Levy/GTA	Ongoing
	Dam inspections	25,000	Levy	Ongoing
	Tree trimming in the right-of-way	--	Levy/GTA	Ongoing
	Shoreline stabilization	--	--	--
	Updates to volunteer sites to register to volunteer – new database to be implemented in 2023 on the Volunteers Center website	--	United Way	--
City of Burlington	Dam compliance initiatives	--	General Fund/Grants/Bonding	Ongoing
	Stormwater utility analysis	44,000	General Fund	2021
	Incident Action Plans for weather-related events	--	--	Ongoing
	EOP approved by Common Council in 2022	--	--	2022
	MABAS approved agreement	--	--	Ongoing
	ARA with neighboring communities	--	--	Ongoing
	Racine County CEMP	--	--	Ongoing
	FEMA floodplain map revisions	--	--	2019
	In process of updating City-wide Comprehensive Plan	45,000	General Fund	2022
	Fire department swift water rescue team in place	--	--	Ongoing
	Updated Ms4 Plans	--	--	2022
	Stormwater Agreement with McHenry St properties	100,000	General Fund	2022
	Wastewater Adaptive Management Plan	30,000	General Fund	2018
	Tornado Siren analysis	--	--	2020
	Water System Risk & Resiliency Assessment/EAP	21,000	General Fund	2021
	Hydrant Flow Testing	--	--	Ongoing
	Congress Street restroom raised out of floodplain	275,000	Bonding	2018
	Railroad crossing signal interoperability	40,000	General Fund	2018
	Installed generators at PD	65,000	Bonding	2017
	Installed generator at Origen well house	176,000	Bonding	2021
	All newly hired officers since 2017 have been trained in Incident Command Systems classes 100/200/700/800	--	--	Ongoing
	Police Supervisors training in ICS 300	--	--	Ongoing
	Police Partnership in a Racine County Incident Management Team	--	--	Ongoing

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**Table 1.5 (Continued)**

<b>Community</b>	<b>Project</b>	<b>Cost (\$)</b>	<b>Funding Source</b>	<b>Completion Date</b>
City of Racine	Shoreline damage mitigation <ul style="list-style-type: none"> <li>Restoration of Shoop Park to Carre-Hogle Park</li> <li>Habitat &amp; dune encouragement at North Beach/Zoo Beach</li> </ul>	Funded by FEMA	FEMA/City	Ongoing
	Beach resiliency assessments	700,000	City	Ongoing
	Flood Response Plan	Staff Operations	City	2021
	Snow & Ice Operations Manual	Staff Operations	City	2021
	Update of Comprehensive Plan	145,000	City	2022
	Conversion of downtown Streets <ul style="list-style-type: none"> <li>Rerouting of Highway 32</li> <li>Conversion of one-way streets to two-way</li> </ul>	470,000	City	Ongoing
Village of Caledonia	Turtle Creek Restoration Project – Preliminary Plans to increase stormwater storage, mitigate flooding and improve water quality	--	Various Grants through Root Pike WIN	Ongoing
	Highway 32 Channel Stream Bank Restoration Project – to increase storm water storage and mitigate flooding	530,000	Utility District	2019-2022
	Lake Michigan Bluff stabilization – Water Edge/Erie Street	--	Private Parties	2021-2022
	Westview Village Stormwater Improvements Projects – to increase storm sewer capacity and mitigate flooding	210,000	Utility District	2020-2022
	Hoods Creek Brushing Project – Remove fallen trees and obstructions from Hoods Creek to mitigate flooding	28,600	Utility District	Ongoing
	Husher Creek Brushing Project – Remove fallen trees and obstructions from Husher Creek to mitigate flooding	23,100	Utility District	Ongoing
	Hoods Creek Attenuation Basin – Expansion of existing Storage Basin for controlling Sanitary Sewer Flow in Extreme rain events from I & I to prevent basement backups and SSO's to surface waters.	12,000,000	Utility District	2020-2023
	Central Lift Station Attenuation Basin – Facility Plan for the Construction of a Storage Basin for controlling Sanitary Sewer Flow in extreme rain events from I & I to prevent basement backups and SSO's to surface waters.	250,000	Utility District	2020-2022
	Riverbend Lift Station – Facility Plan for improvements to the Sanitary Sewer system from extreme rain events from I & I to prevent basement backups and SSO's to surface waters.	310,000	Utility District	2020-2022
	Utility District Newsletter – Public Outreach for Utility District issues, Sanitary Sewer, Water & Storm Water	--	Utility District	Ongoing
Village of Mount Pleasant	Stabilization of Lake Michigan bluff	1.2 Million	VMP	2018
	Additional stabilization of Lake Michigan bluff	Funded by FEMA	FEMA	Ongoing
	Restoration of Pike River to increase stormwater storage & mitigate flooding	21 Million	VMP, Grants	2016
	Brine application before snowstorms	--	VMP	Ongoing
	Tree trimming within right-of-way	--	VMP	Ongoing
	Clearing of utility easements for easy access	--	VMP	Ongoing
	Flood impact study of the proposed Village of Mount Pleasant Electronic & Information Technology Manufacturing (EITM) Zone	--	--	2018-2019
Village of North Bay	Lighthouse Drive stormwater flow restoration and improvement project	1,930	Village	2020
	North Bay Beach shoreline repairs and erosion control project	2,600	Village	2020
Village of Raymond	Updated community DPW & emergency response equipment/vehicles	2.5 million	State Loans/ Operating Budget	2022
	Stormwater management & maintenance of the Root River Canal	--	Stormwater Operating Budget	Ongoing

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**Table 1.5 (Continued)**

<b>Community</b>	<b>Project</b>	<b>Cost (\$)</b>	<b>Funding Source</b>	<b>Completion Date</b>
Village of Rochester	Collected real time data regarding inundating flood water during 2017 flood as it effected sewer system.	1,000.00	Village of Rochester	2017
	Replace Eagle Creek culvert after flood damage to N. River Rd. with an improved design that increased capacity of culvert.	92,814.00	--	2017
	Created CMOM Doc for our sewer system to use for measuring progress toward short- and long-term goals. The village has updated once in 2019	1,200.00	Village of Rochester	2016
	Developed a catastrophic event plan with emphasis on non-governmental resources and assets.	900.00	Village of Rochester	2019
	Conduct drainage review on new development and impacts to existing properties	--	State of WI 90% Rochester 10%	2019
	Manage stormwater issues by prioritizing capital improvement list in our storm water utility.	2,00.00/year	Storm water Utility	Ongoing
Village of Sturtevant	Added Law Enforcement members to the Racine County Incident Management Team	--	--	2021
Village of Union Grove	Stormwater ditch, retention, & pipe modifications throughout village	250,000	Village	2020
	Berm revision at School Yard Park to reduce flooding issues	5,000	Village	2020
	Repaired detention pond berm at Perk Circle	3,000	Village	2020
	Installation of larger storm sewer & curb replacement	400,000	DOT Grant	2021
	Flood study to determine solution for 7th and Hwy 45	8,000	Village	2022
Village of Waterford	Acquisition of properties within the floodplain along Fox River	1.6 million	TID/Tax Funds	2019
Village of Yorkville	Update to Village-wide Comprehensive Plan	--	Village	2020
	Public outreach and education efforts related to citizen preparedness and emergency readiness	--	Village	Ongoing
	Tree trimming in the right-of-way	--	Village	Ongoing
	Zoning ordinances in floodplain areas	--	Village	2019
Town of Burlington	Browns Lake Sanitary District stormwater drainage improvement project	--	--	2022
	Bohners Lake Sanitary District plans to stabilize Spring Creek shoreline	--	--	Ongoing
	New fire engine and command vehicle	842,000	General Fund	2021
	New emergency generators for Town Hall and Highway Department facility	38,370	General Fund	2020
	New emergency radios for Town	226,842	General Fund	2020
Town of Dover	Established Stormwater Utility Commission	--	--	2018
	Tree-trimmed rights-of-way	--	Tax Funds	Ongoing
	MABAS approved agreement	--	--	Ongoing
	Joined voluntary Compact of Intergovernmental Cooperation Council	--	--	2022

Source: Racine County Office of Emergency Management, Local Municipalities, and SEWRPC

SEWRPC Community Assistance Planning Report No. 266 (4th Edition)

RACINE COUNTY HAZARD MITIGATION PLAN UPDATE: 2023-2028

## **Chapter 1**

# **INTRODUCTION AND BACKGROUND**

### **MAPS**





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

