



Racine County Hazard Mitigation Plan Update: Progress to Date

August 25, 2016

Agenda for Meeting

- Discuss purpose of plan
- Review the work completed to date
- Answer any questions on the plan and process
- Seek information
 - Problem areas related to hazards
 - Potential mitigation measures and projects
- Take comments on plan

What is Hazard Mitigation?

- “Mitigation is any sustained action taken to eliminate or reduce the long-term risk to human life and property from natural and technological hazards” —FEMA
- Actions to reduce the damages that result when disasters occur



What is Hazard Mitigation?

- Mitigation is not:
 - Emergency response
 - Crisis management
 - Disaster recovery
- Mitigation focuses on reducing the impacts from hazard events before they occur



Why Do We Mitigate Hazards?



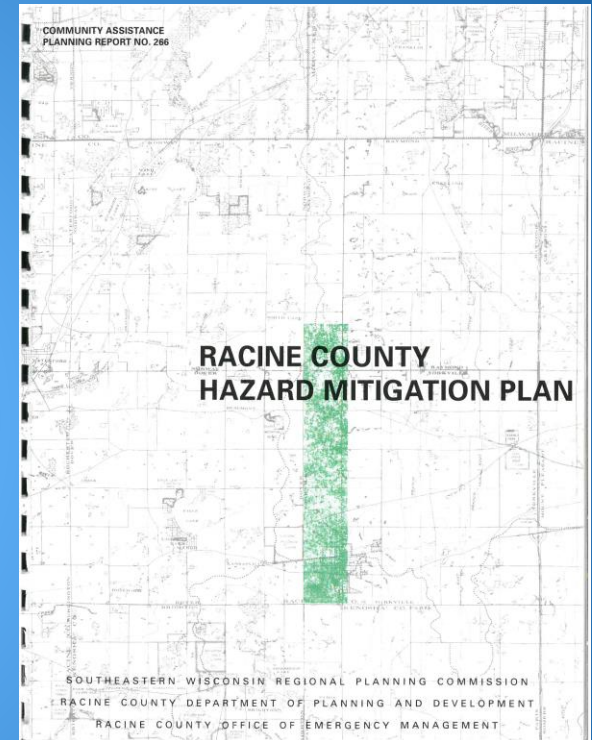
- Disasters are costly
- State and Federal assistance are insufficient
- We can prevent future damages
- Lesser impacts mean a quicker response and recovery process
- Can do this locally

Racine County Hazard Mitigation Plan

- Includes all of the municipalities in the County
- Sets forth strategies for mitigating impacts of several natural and technological hazards
- Establishes eligibility for hazard mitigation funding from the Federal Emergency Management Agency (FEMA)
 - FEMA requires that local hazard mitigation plans be updated and revised every five years

Racine County Hazard Mitigation Plan

- Initial plan developed 2003-2004
 - Report published 2004
- First update conducted 2009-2010
 - Coordinated with development of the County comprehensive plan
 - Report published 2010
- Current update conducted 2015-2016
 - Anticipate that the report will be published early 2017



Racine County Hazard Mitigation Plan

- Plan development and updating is overseen by a Local Planning Team
 - Team includes elected officials, appointed officials, department and agency representatives, business representatives, knowledgeable citizens
 - Law enforcement, fire, and EMS departments; public works and engineering departments, planning departments, conservation departments, health department, private sector firms, nonprofit agencies, and educational institutions
- Staff include Racine County Office of Emergency Management, Racine County Public Works and Development Services, and SEWRPC

Plan Components to Review and Revise

- Review implementation activities
- Update inventories of natural and built features
- Review and reevaluate identification of hazards posing risks to the County
- Update and reevaluate risk and vulnerability analysis
- Review and revise hazard mitigation goals
- Review and revise hazard mitigation strategies
- Update plan adoption, implementation, and maintenance strategies
 - Update inventory of potential funding sources

Natural Hazards Profiled in the Plan

(Required by FEMA)



Flooding



Thunderstorms
High Wind/Hail/Lightning



Tornado



Lake Michigan Coastal Hazards



Extreme Temperatures



Drought



Winter Storms

Technological Hazards Profiled in the Plan

(Optional under FEMA rules)



Transportation
Accidents



Contamination/Loss
of Water Supply



Hazardous
Material Incidents



Public Health
Emergency



Terrorism



Long-term
Power Outages

Technological Hazards Profiled in the Plan

(Optional under FEMA rules)

NEWLY ADDED FOR THIS PLAN UPDATE:



Active Shooter
Incidents



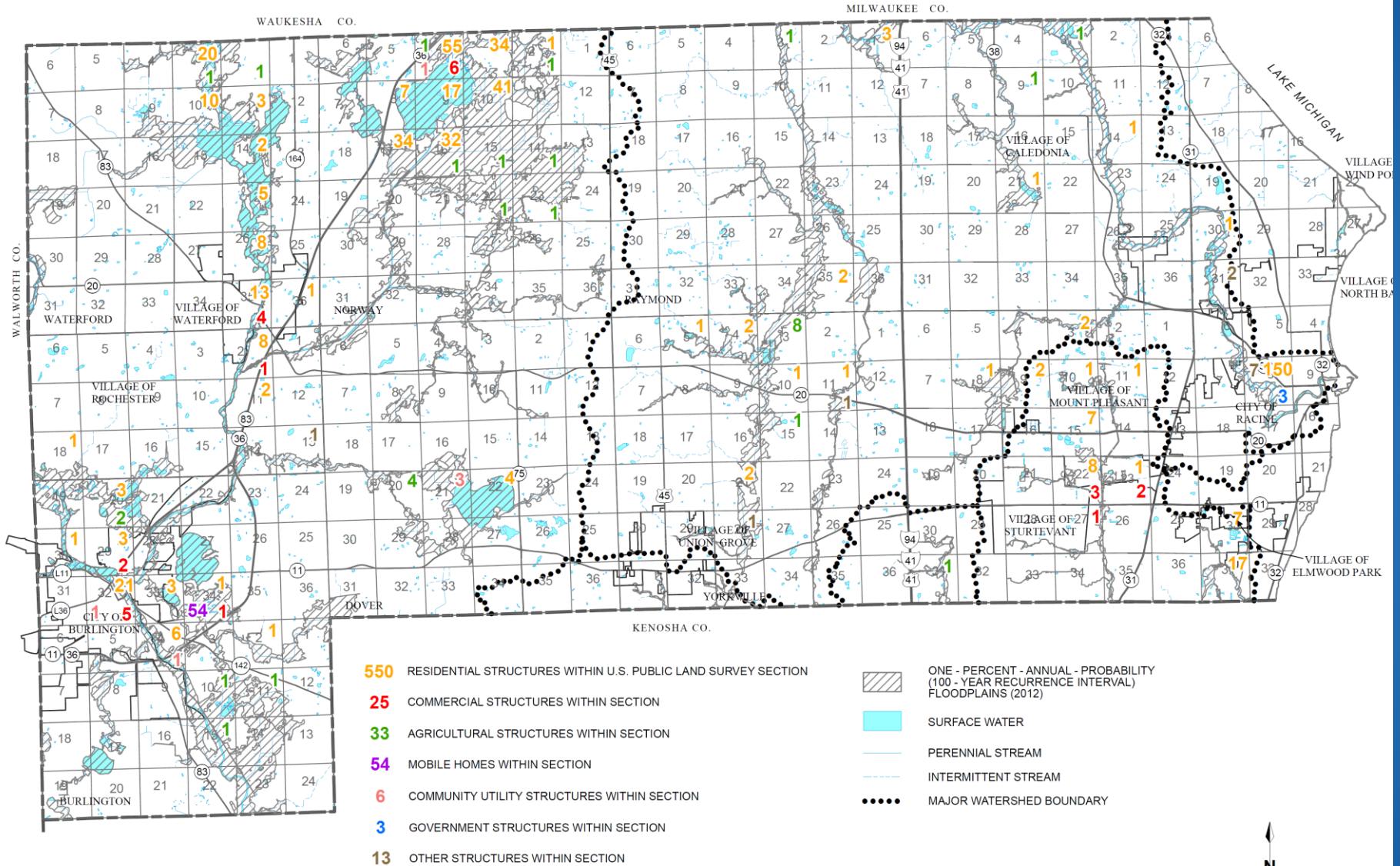
Cyber-attack on
Local Government

Risk Analysis—Hazard Profiles

- Most profiles follow a similar format
 - Definition and description of the hazard
 - Description of notable historical events that affected the County
 - Description of some notable recent events that affected the County
 - Mapped events such as thunderstorms, tornados, number of structures in the floodplain, vehicle crash rates, etc.

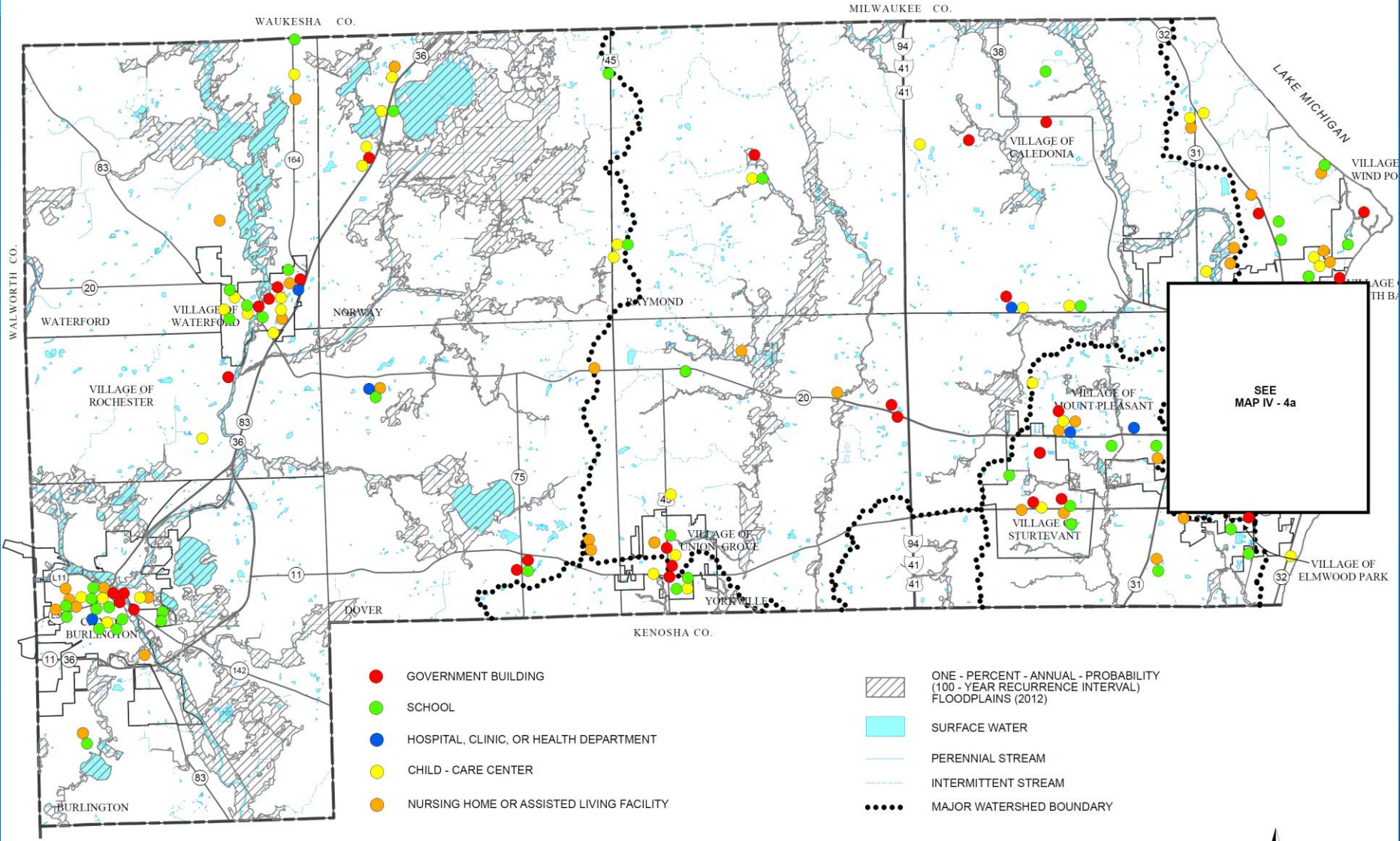
Map IV - 3

NUMBER OF STRUCTURES WITHIN FLOOD HAZARD AREAS BY U.S. PUBLIC LAND SURVEY SECTION IN RACINE COUNTY: 2015



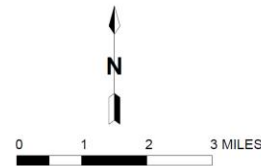
Map IV - 4

LOCATIONS OF CRITICAL COMMUNITY FACILITIES IN RELATION TO FLOODPLAINS IN RACINE COUNTY: 2015



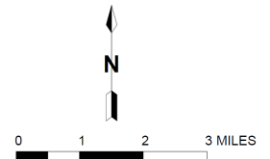
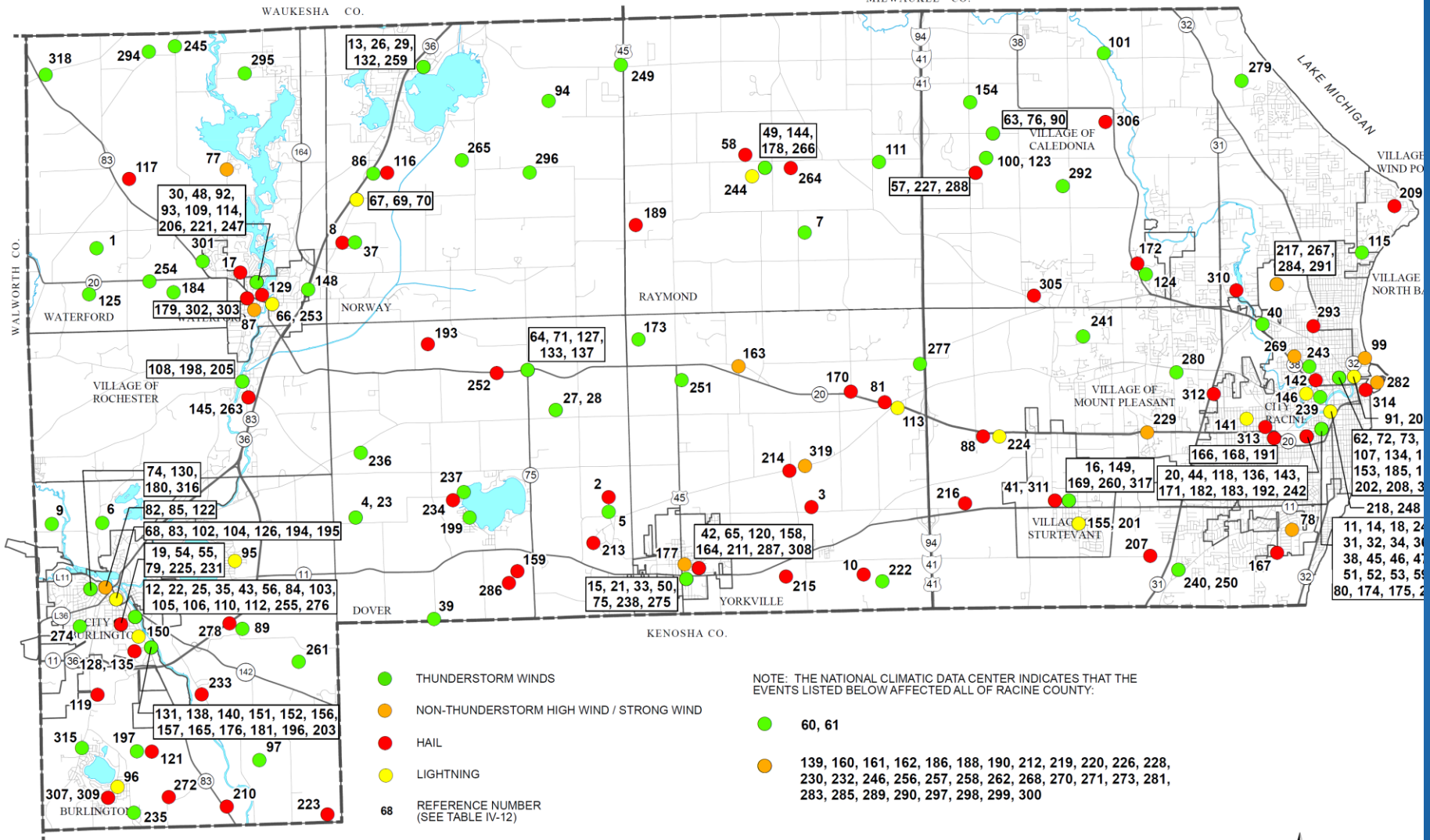
SEE
MAP IV - 4a

Source: Wisconsin Department of Children and Families, Wisconsin Department of Public Instruction, Racine County, and SEWRPC.



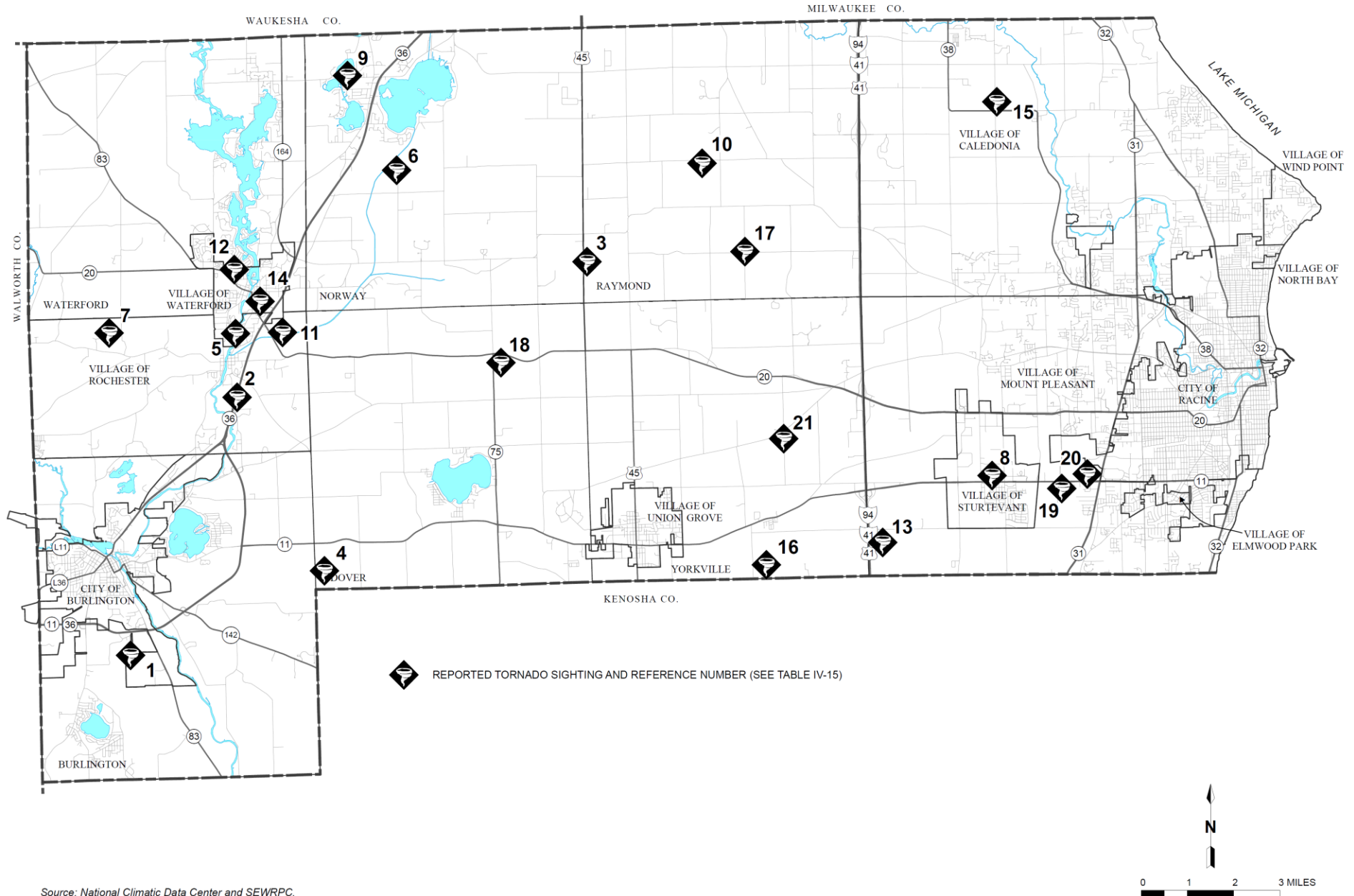
Map IV - 6

THUNDERSTORM WIND, NON-THUNDERSTORM HIGH-WIND, HAIL, AND LIGHTNING EVENTS REPORTED WITHIN RACINE COUNTY: SEPTEMBER 1961 - DECEMBER 2014



Map IV - 7

TORNADO EVENTS IN RACINE COUNTY: APRIL 1957 THROUGH DECEMBER 2014



Risk Analysis—Hazard Profiles

Continued...

- Assessment of vulnerabilities to the hazard and community impacts from the hazard
- Description of potential future changes in impacts
 - Climate Change
- Discussion of any differences among communities in risks

Average Annual Damages

Hazard	Years	Incidents per Year	Annual Property Damages (\$)	Annual Crop Damages (\$)	Total Annual Damages (\$)
Automobile Accidents	15	3,878	60,648,428	0	60,648,428
Flood	34	1.6	296,302	726,686	1,022,988
Tornadoes	51	0.4	583,970	284	583,970
Railway Accidents	40	4.7	193,649	0	193,649
Thunderstorm wind/ Hail/ Lightning	56	4.8	140,173	20,576	160,749
Drought	35	0.5	0	150,811	150,811
Non-Thunderstorm High-Wind	56	1.0	23,629	1,945	25,574
Transportation Hazmat	44	3.3	5,172	0	5,172
Temperature Extremes	33	1.6	154	3,371	3,525
Pipeline Hazmat	46	0.2	2,715	0	2,715

Note: All damages are expressed in 2014 dollars.

Average Annual Fatalities and Injuries

Hazard	Years	Incidents per Year	Fatalities per Year	Injuries per year	Annual Total
Automobile Accidents	15	3,878	17.3	2,090.5	2,107.8
Communicable Diseases	9	1,552	0.0	1,552	1,552
Sexually-transmitted Diseases	9	1,232	0.0	1,232	1,232
Railway Accidents	40	4.6	0.4	1.5	1.9
Thunderstorm wind/ Hail/Lightning	56	4.8	0.01	0.3	0.31
Transportation Hazmat Accidents	44	3.3	0.02	0.2	0.22
Non-Thunderstorm High-Wind	56	1.0	0.01	0.2	0.21
Tornadoes	51	0.4	0.0	0.2	0.2
Temperature Extremes	33	1.6	0.1	0.1	0.2
Pipeline Hazmat Accidents	46	0.2	0.0	0.04	0.04

Hazard Mitigation Goals

1. A spatial distribution of the various **land uses** that **minimizes hazards and dangers to health, welfare, and safety** as well as further enhancing the economic base of the County, and will result in a compatible arrangement of land uses properly related to the existing and proposed **supporting transportation, utility, public safety, and public facility systems**.
2. A spatial distribution of the **various land uses** that **maintains biodiversity and will result in the protection and wise use of the natural resources of the County**, including its soils, inland lakes and streams, groundwater, wetlands, woodlands, and natural areas and critical species habitats.

Hazard Mitigation Goals

3. An **integrated transportation system** that, through its location, capacity, and design, will safely, economically, and **effectively serve** the existing and proposed land use pattern and promote the implementation of the land use plan, meeting the current and anticipated travel demand and **minimizing the potential for accidents and the associated toll on life and property damage.**
4. The provision of facilities necessary to maintain a **high quality of fire and police protection and emergency medical services** throughout the County.

Hazard Mitigation Goals

5. The development of a stormwater and floodplain management system that reduces the exposure of people to drainage- and flooding-related inconvenience and to health and safety hazards and that reduces the exposure of real and personal property to damage through inundation resulting from flooding and inadequate stormwater drainage.
6. The identification of high erosion risk Lake Michigan shoreline areas and the development of a coastal erosion control program which reduces the exposure of people and real property to shoreline erosion and bluff recession.
7. The identification and development of programs that complement County and local emergency operations plans to mitigate the potential exposure to health and safety and the exposure of real and personal property resulting from a broad range of hazards that are unpredictable and not geographically specific in nature.

Remaining Work

- Review and update recommended hazard mitigation measures
- Review and update plan adoption, implementation, and maintenance measures

Development of Hazard Mitigation Strategies

- Review existing alternative hazard mitigation strategies
- Identify additional alternative strategies
 - Structural—*e.g.* safe rooms, flood proofing
 - Nonstructural—*e.g.* ordinances, floodplain preservation
 - Public education
- Review current programs
 - Federal and State, local
- Evaluate existing and newly identified alternatives
- Examine multi-jurisdictional considerations
- Select a revised set of priority mitigation measures



Current Plan's Flood Mitigation Strategies

Floodland and wetland zoning and zoning review

Preservation of open space and sensitive areas

Purchase, demolition, and removal or flood proofing of up to 436 structures

Channel cleaning, maintenance, or rehabilitation for selected streams

Stormwater management planning and regulation

Stormwater management facility maintenance

Restoration of prairies and wetlands

Survey of buildings near flood hazard areas



National Flood Insurance Program map updating

Current Plan's Mitigation Strategies for Weather-related Hazards



Maintain early warning systems

NOAA Weather Radio, EAS broadcasting

Public information and education

Identify and advertise shelters

Review and enforcement of building code requirements

Continued coordination of local government emergency operations and response plan

Current Plan's Mitigation Strategies for Human-induced Hazards

Public information and education

Driver safety, hazardous materials, public health, power outages

Continued coordination of emergency response

Governmental units, emergency responders

Continued support of training, equipping, planning, and preparedness for emergency responders



Implementation Strategies

- Update estimates of mitigation measure costs
- Summarize benefits of implementing mitigation measures
- Designate lead management agencies
- Update current implementation status
- Identify potential sources of funding and technical assistance



Approval and Adoption

- When a draft plan is complete
 - Host a second public meeting → Incorporate comments
 - Review by Wisconsin Division of Emergency Management → Incorporate comments
 - Review and approval by FEMA → Incorporate comments
 - The plan will need to be adopted by:
 - Racine County Board
 - Governing bodies of the Cities and Villages in the County

Project Web Site

- <http://www.sewrpc.org/SEWRPC/communityassistance/Hazard-Mitigation-Planning.htm>
 - Agendas and other meeting materials
 - Summary notes from meetings
 - Presentations
 - Draft chapters as they are completed
 - Comment screen
 - Other ways to send a comment
- Email to aowens@sewrpc.org