



Kenosha County Hazard Mitigation Plan Update: Progress to Date May 23, 2016

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Agenda for Meeting

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

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 preparation and recovery
- Mitigation focuses on reducing the impacts from hazard events when they occur



Why Do We Mitigate Hazards?



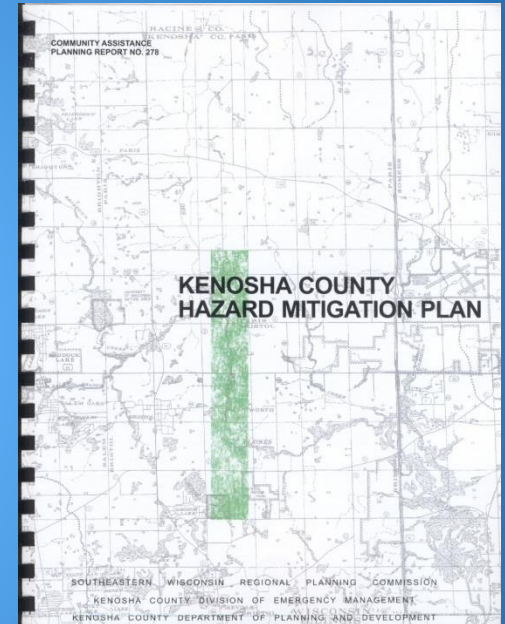
- Disasters are costly
- State and Federal assistance are insufficient
- We can prevent future damages
- Lesser impacts mean a quicker response and recovery process
- Can do this locally

Kenosha County Hazard Mitigation Plan

- Includes all of the municipalities in the County
- Sets forth strategies for mitigating impacts of several natural and technological hazards
- Maintains 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

Kenosha County Hazard Mitigation Plan

- Initial plan developed 2004-2005
 - Report published 2005
- 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 later this year



Kenosha 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, private sector firms, nonprofit agencies, and educational institutions
- Staff include Kenosha County Emergency Management Division, SEWRPC, Kenosha County Planning and Development Department

Plan Components to Review and Revise

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

Natural Hazards Profiled in the Plan

(Required by FEMA)



Drought



Flooding



Fog



Lake Michigan
Coastal Hazards



Extreme
Temperatures



Thunderstorms
High Wind/Hail/Lightning

Natural Hazards Profiled in the Plan

(Required by FEMA)



Tornado



Wild Fire



Winter Storms

Technological Hazards Profiled in the Plan

(Optional under FEMA rules)



Contamination/Loss
of Water Supply



Hazardous Material
Incidents



Long-term
Power Outages



Railway
Accidents



Roadway
Accidents



Terrorism

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

Average Annual Damages

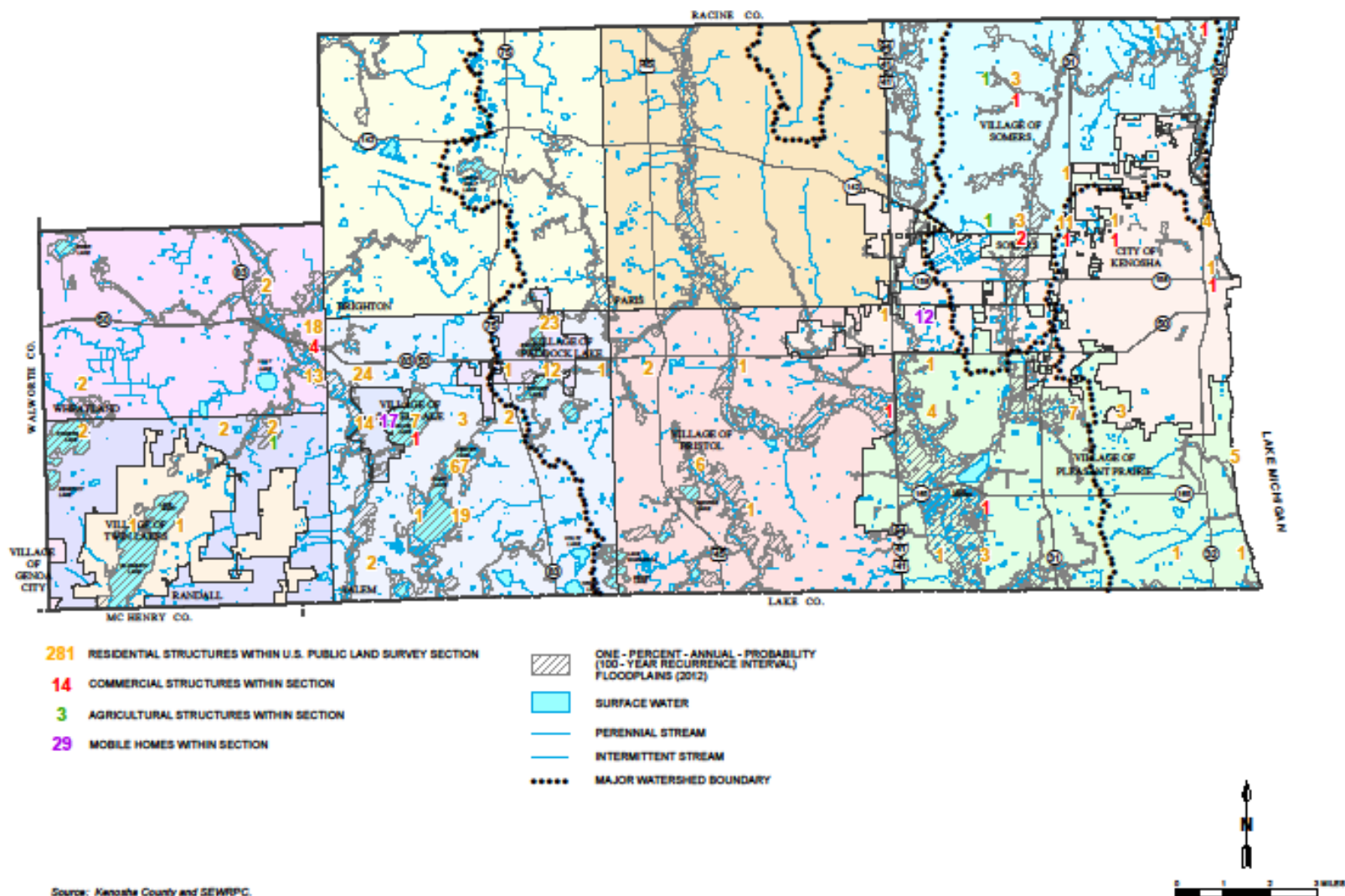
Hazard	Years	Incidents per Year	Annual Property Damages	Annual Crop Damages	Total Annual Damages
Automobile Accidents	15	3,549.40	59,925,327	0	59,925,327
Flood	52	0.96	591,882	608,359	1,200,241
Thunderstorms/Wind/ Hail/Lightning	51	4.90	901,748	99,670	1,001,418
Tornadoes	51	0.25	497,780	0	497,780
Drought	25	0.68	0	150,280	150,280
Lake Michigan Coastal	27	0.11	125,315	0	125,315
Railway Accidents	40	5.30	119,516	0	119,516
Pipeline Hazmat	39	0.13	77,403	0	77,403
Temperature Extremes	21	2.43	770	3,874	4,644
Winter Storms	21	5.00	2,036	0	2,036
Transportation Hazmat	44	1.34	650	0	650

Average Annual Fatalities and Injuries

Hazard	Years	Incidents per Year	Fatalities per Year	Injuries per year	Annual Total
Automobile Accidents	15	3,549.40	21.27	1,937.87	1,959.14
Railway Accidents	40	5.30	0.38	1.23	1.61
Thunderstorm/Wind/Hail/ Lightning	51	4.90	0.14	0.67	0.81
Temperature Extremes	21	2.43	0.19	0.52	0.71
Tornadoes	52	0.25	0.00	0.29	0.29
Pipeline Hazmat Accidents	39	0.13	0.08	0.10	0.18
Winter Storms	21	5.00	0.00	0.05	0.05
Transportation Hazmat Accidents	44	1.34	0.00	0.02	0.02

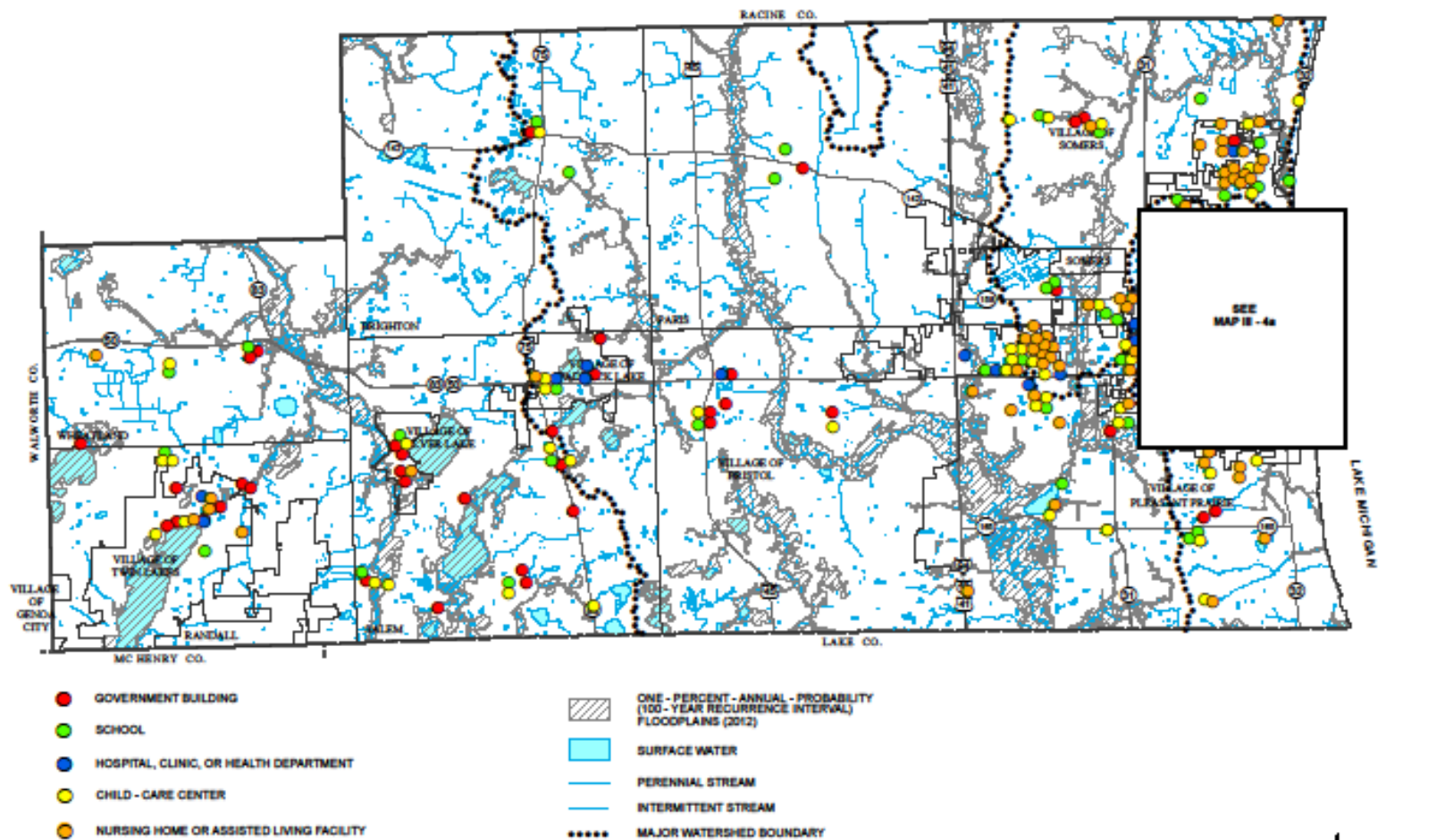
Map III - 2

NUMBER OF STRUCTURES WITHIN FLOOD HAZARD AREAS BY CIVIL DIVISION IN KENOSHA COUNTY: 2015

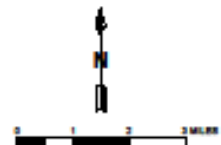


Map III - 4

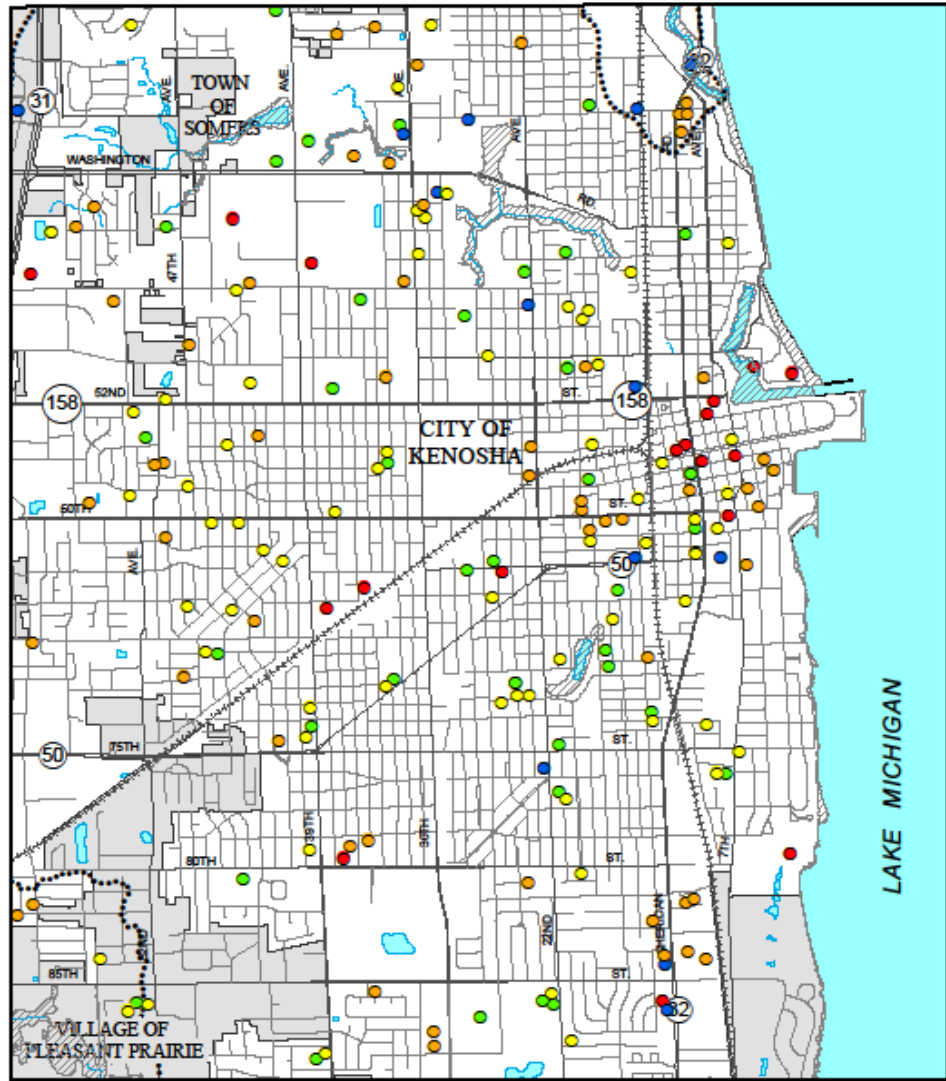
LOCATIONS OF CRITICAL FACILITIES IN RELATION TO FLOODLANDS IN KENOSHA COUNTY: 2015



Source: Wisconsin Department of Children and Families, Wisconsin Department of Public Instruction, Kenosha County, and GEWRPC.



LOCATIONS OF CRITICAL FACILITIES IN RELATION TO FLOODLANDS IN THE CITY OF KENOSHA: 2015

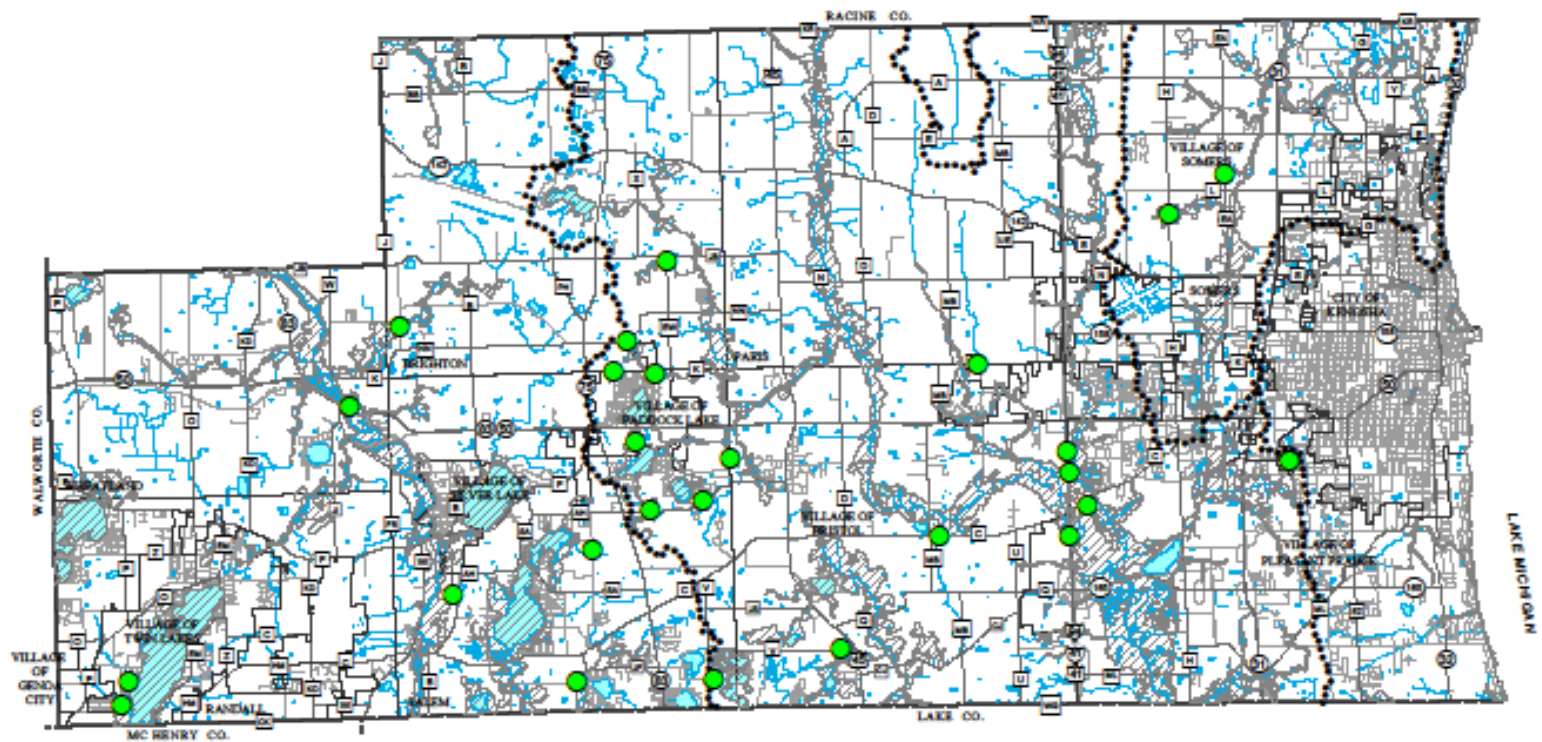








● GOVERNMENT BUILDING	▨ ONE - PERCENT - ANNUAL - PROBABILITY (100 - YEAR RECURRENCE INTERVAL) FLOODPLAINS (2012)
● SCHOOL	■ SURFACE WATER
● HOSPITAL, CLINIC, OR HEALTH DEPARTMENT	— PERENNIAL STREAM
● CHILD - CARE CENTER	— INTERMITTENT STREAM
● NURSING HOME OR ASSISTED LIVING FACILITY	*** MAJOR WATERSHED BOUNDARY

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

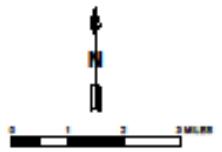
Map III - 6

ROADWAYS WITH REPORTED FLOODING IN KENOSHA COUNTY: 2015



-  REPORTED SITE OF ROAD FLOODING
-  ONE - PERCENT - ANNUAL - PROBABILITY (100 - YEAR RECURRENCE INTERVAL) FLOODPLAINS (2012)
-  SURFACE WATER
-  PERENNIAL STREAM
-  INTERMITTENT STREAM
-  MAJOR WATERSHED BOUNDARY

Source: SEWRPC.



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 management program that reduces the exposure of people and real and personal property to shoreline erosion and bluff recession.

Hazard Mitigation Goals

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.
8. Communications interoperability throughout the County among all First Responders, so as to be able to quickly and effectively respond to any incident to prevent the loss of life and to save property.

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 and recommended strategies
- Identify additional alternative strategies
 - Nonstructural, structural, public information and 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 318 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, HAZCollect

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:
 - Kenosha 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 jboxhorn@sewrpc.org