

SUMMARY NOTES OF THE APRIL 22, 2015 MEETING OF THE KENOSHA COUNTY HAZARD MITIGATION PLAN LOCAL PLANNING TEAM

INTRODUCTION

The April 22, 2015 meeting of the Kenosha County Hazard Mitigation Plan Local Planning Team was convened at the Kenosha County Center at 9:07 a.m. The meeting was called to order by Lieutenant Gil Benn, Director of the Kenosha County Division of Emergency Management. Attendance was taken by circulating a sign-in sheet.

In attendance at the meeting were the following individuals:

Local Planning Team Members

| | |
|------------------------------|---|
| Lt. Gil S. Benn, Chair | Director, Kenosha County Division of Emergency Management |
| Joseph E. Boxhorn, Secretary | Senior Planner, Southeastern Wisconsin Regional Planning Commission |
| Ray Arbet | Director, Kenosha County Department of Public Works |
| Megan Beauchaine | Research Analyst, Southeastern Wisconsin Regional Planning Commission |
| Bill Beth | Deputy Director, Kenosha County Division of Emergency Management, |
| Michael Blodgett | Assistant Communications Manager, Kenosha Joint Services |
| Andy M. Buehler | Director, Kenosha County Department of Planning and Development |
| Matt Fineour | Village Engineer, Village of Pleasant Prairie |
| William Glembocki | Chair, Town of Wheatland |
| Robert Grieshaber | Safety- Risk Manager, University of Wisconsin-Parkside |
| Benjamin Harbach | Chairman, Town of Somers |
| Jerry Helment | Planning Commissioner, Town of Brighton |
| William Hoare | Associate Vice President, Carthage College |
| Laura Kletti | Chief Environmental Engineer, Southeastern Wisconsin Regional Planning Commission |
| Dennis Linn | Captain, Twin Lakes Police Department |
| Doug McElmury | Fire Chief, Village of Pleasant Prairie |
| John Meland | Principal Specialist, Southeastern Wisconsin Regional Planning Commission |
| Mark Melotik | Director of Environmental Health, Kenosha County Department of Health |
| Darron Newton | Detentions Supervisor, Kenosha County Sheriff's Department |
| Aaron Owens | Planner, Southeastern Wisconsin Regional Planning Commission |
| Tim Popanda | Administrator, Village of Paddock Lake |
| Peter Parker | Fire Chief, Village of Bristol |
| Kyle Roeder | Disaster Program Manager, American Red Cross |
| Mike Schrandt | Facilities Manager, Kenosha County Division of Facilities |
| Ken Schroeder | Battalion Chief, City of Kenosha Fire Department |
| Tom Shircel | Assistant Village Administrator, Village of Pleasant Prairie |
| Dan Treloar | Conservationist, Kenosha County Department of Planning and Development |
| Capt. Ken Weyker | Commander of Field Operations, Kenosha County Sheriff's Department |
| Tedi Winnett | Director, University of Wisconsin-Extension, Kenosha County |

Lt. Benn welcomed all attendees to the meeting. He noted that the Kenosha County hazard mitigation plan is required to be updated every five years, and that this would be the second update to the original plan. Lt. Benn explained that the County applied for grant funding in 2014 to begin the updating process. He informed the

planning team that he anticipates that there will be four meetings of the team throughout the Plan updating process. At the request of Lt. Benn, the team members introduced themselves.

OVERVIEW OF HAZARD MITIGATION AND HAZARD MITIGATION PLAN UPDATING PROCESS

Lt. Benn introduced Joseph Boxhorn, Senior Planner, Southeastern Wisconsin Regional Planning Commission (SEWRPC). Mr. Boxhorn presented an overview of hazard mitigation and the hazard mitigation plan updating process.

[Secretary's Note: A copy of Mr. Boxhorn's presentation is attached herein as Exhibit A.]

OVERVIEW OF THE ONGOING BUYOUTS OF FLOODPRONE BUILDINGS ALONG THE FOX RIVER IN KENOSHA COUNTY

Mr. Boxhorn introduced John Meland, SEWRPC Principal Specialist. At Mr. Boxhorn's request, Mr. Meland presented an overview of Kenosha County's ongoing Fox River buyout program for flood prone buildings. Mr. Meland stated that when the program began in 1995, there were 175 flood prone structures located in the floodplain along the Fox River between Wheatland and Silver Lake. He added that the buyout program has received 11 million dollars in grant funds and that 103 residential properties representing 160 tax parcels have been voluntarily sold to the County and demolished. Mr. Meland explained that funds are currently exhausted and no more funds will be available for buyouts unless there is a federally declared disaster in the County. He noted that 72 flood prone residential properties currently remain in the project area. He indicated that one repetitive loss property was also purchased on Camp Lake in January 2015 with funding from the FEMA Flood Mitigation Assistance Program.

Mr. Popanda asked who retains ownership of the properties after the buildings had been removed. Mr. Meland replied that Kenosha County now owns the parcels. Lt. Benn indicated that there are privately-owned parcels located in the project area that have no structures on them. He noted that despite the fact that these parcels are unbuildable the owners are unwilling to sell them. Lt. Benn suggested these parcels could become parkland. Mr. Meland replied that FEMA will not pay for the acquisition of vacant land and noted that the only way for the County to acquire those parcels is through donation to the County by the owners. Mr. Meland added that FEMA requires that parcels acquired using funding from FEMA grant programs remain in open space land uses. Mr. Treloar responded that his office has sent letters to the owners of all the vacant parcels in the project area explaining that they have the option to donate these properties to the County. Mr. Treloar added that the letters also explain that such a donation would free the owners of the property tax obligations associated with the properties. He noted that four property owners have expressed interest.

BACKGROUND ON THE SECOND UPDATE OF THE KENOSHA COUNTY HAZARD MITIGATION PLAN

Mr. Boxhorn presented background information on the initial hazard mitigation plan and the first update to the plan. He noted that the initial plan was completed in 2005 and the first plan update was completed in 2010. Mr. Boxhorn also outlined the main plan components to be reviewed and revised, presented a work schedule for the plan update, and explained the role of the Local Planning Team in the plan development process. He stated that a project webpage has been created on the SEWRPC website. He indicated that draft chapters of the plan report, meeting materials, and summary notes from planning team meetings will be available on this page. He added that a comment screen is also available on this webpage through which planning team members and members of the public may submit questions or comments on the draft plan.

Lt. Benn asked whether data can be uploaded onto the website. Mr. Boxhorn explained that the website comment screen was mainly for questions and comments and suggested that it would be best to email him any data pertaining to the plan.

[Secretary's Note: As previously noted, Mr. Boxhorn's presentation is attached herein as Exhibit A. A copy of the proposed work schedule for the plan update is attached herein as Exhibit B.]

REVIEW OF HAZARD MITIGATION GOALS FROM FIRST PLAN UPDATE

Mr. Boxhorn presented an overview of the goals that were established for the initial Kenosha County hazard mitigation planning program and revised during the first update of the plan. He asked the Team to review the goals and to begin to think about any changes and/or additions that may be necessary.

[Secretary's Note: A copy of the hazard mitigation goals is attached herein as Exhibit C.]

HAZARD AND VULNERABILITY ASSESSMENT EXERCISE

Mr. Boxhorn stated that as part of the hazard and vulnerability analysis for the plan, it will be necessary to decide which hazards will be addressed by the plan. He indicated that a hazard and vulnerability assessment tool and instructions for completing the tool were included with the agenda for this meeting. He explained that the tool is a modified version of a tool developed by Kaiser Permanente for assessing the risks faced by healthcare facilities.

[Secretary's Note: A copy of the hazard and vulnerability assessment tool and the instructions for completing the tool are attached herein as Exhibit D.]

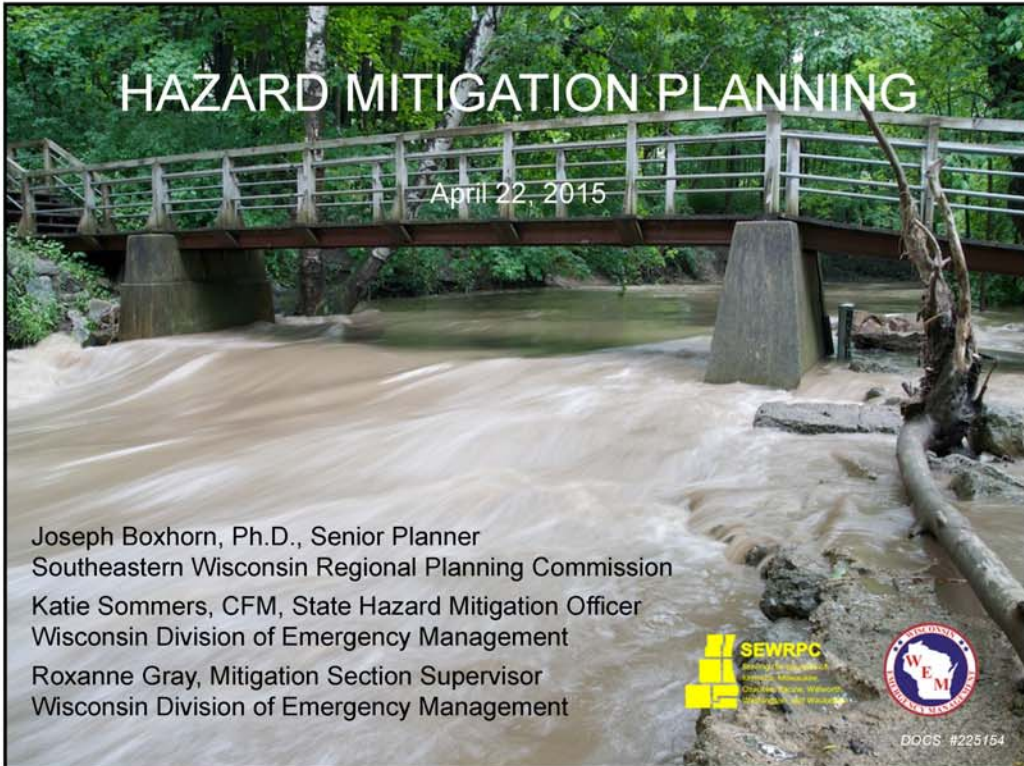
Mr. Boxhorn asked the members of the Local Planning Team to complete the hazard and vulnerability assessment tool. He explained that the results of this exercise would be used to help determine which hazards are addressed by the hazard mitigation plan update.

Mr. Arbet asked whether the assessment tool should be completed utilizing their experience in their own communities or through their perception of the entire County. Mr. Boxhorn replied that their assessment should be applicable to the entire County. Mr. Popanda, suggested that each team member should complete the assessment based upon the areas that they know and represent, noting that to do otherwise could cause the results to be skewed. Mr. Boxhorn noted that the assessment results will not be the only information used to identify the hazards faced by the County. Lt. Benn suggested that people fill out the survey based on the community they represent and record the name of the community on the worksheet. Mr. Boxhorn agreed.

ADJOURNMENT

There being no further business, the meeting was adjourned by unanimous consent at 10:20 a.m.

Exhibit A





HAZARD MITIGATION PLANNING

April 22, 2015

Joseph Boxhorn, Ph.D., Senior Planner
Southeastern Wisconsin Regional Planning Commission

Katie Sommers, CFM, State Hazard Mitigation Officer
Wisconsin Division of Emergency Management

Roxanne Gray, Mitigation Section Supervisor
Wisconsin Division of Emergency Management



DOCS #225154

What is 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 definition
- Constructive actions to reduce damages prior to the next disaster



What is Mitigation?

- Mitigation is not
 - Emergency response
 - Crisis management
 - Disaster preparation and recovery
- Mitigation focuses on reducing the impacts of disasters when they occur



Mitigation Breaks the Disaster Cycle



Why Do We Mitigate?



- Disasters cost society too much
- State and federal aid insufficient
- Can prevent future damages
- Less impact and speed response and recovery process
- Mitigation happens at the local level

Why Do We Mitigate?

Nationwide Trends

- \$80 Billion 2004-2011 (GAO) responding to disasters
- \$6 Billion per year in flood damages
- Costs continue to rise
- People continue to build and live in high-risk areas



Why Do We Mitigate?



In Wisconsin

- \$3 billion in disaster-related damages last 3 decades
- 12 Federal Disaster Declarations in the 90's compared to 6 in the 80's
- 2000, 2001, two in 2002, 2004, 2007, 2008, two in 2010, 2011, 2012, 2013
- 2 snow emergencies (2000 and 2008)

Value of Mitigation



In 2005, the National Institute of Building Sciences found that for every \$1 spent on mitigation, \$4 are saved in avoided future damages

Examples of Mitigation Measures (mostly related to flooding)



Acquisition/Demolition



Communities acquire land, demolish structures, and keep the land in open space.

Images from Darlington, WI

Elevation



Elevation raises a structure out of the floodplain. Wisconsin has specific regulations to follow with elevation projects. See DNR for more information.

Images from Soldiers Grove, WI

Floodwall



Floodwalls can prevent water from inundating structures that cannot be elevated, relocated, or demolished.

Image from Darlington, WI

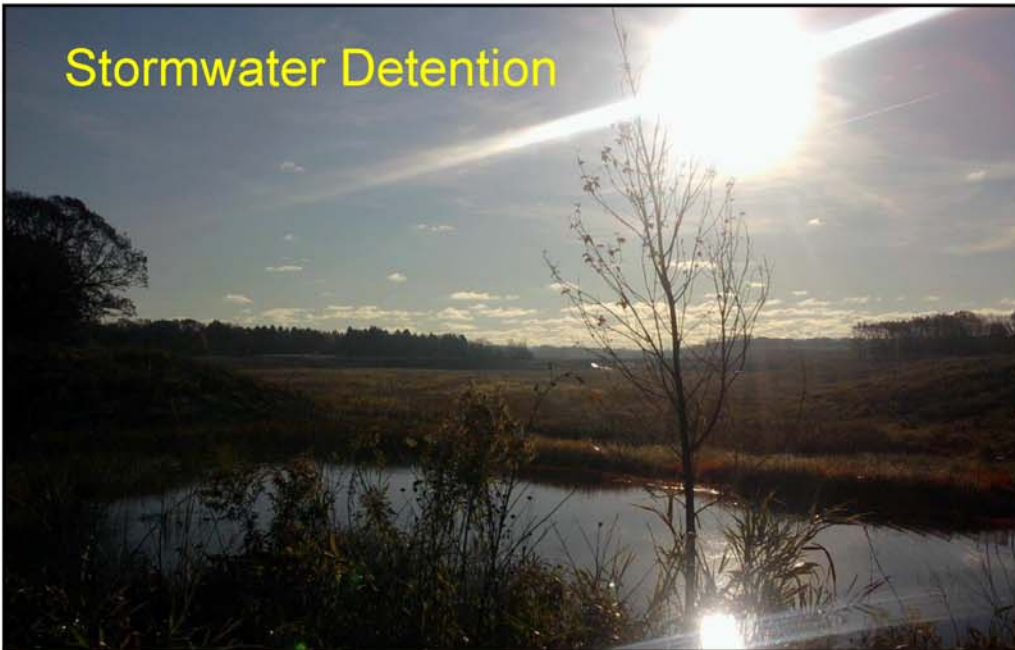
Community Safe Room



Community safe rooms built to FEMA-361 standards can withstand winds up to 250 MPH.

Image from Town of Dunn, WI

Stormwater Detention



Detention ponds can store stormwater runoff, decreasing flash flooding in urban areas.

Image from MMSD Stormwater Detention Project (Wauwatosa, WI)

Stormwater Management



Stream restoration allows watersheds to better manage flooding.

Image from Thiensville, WI

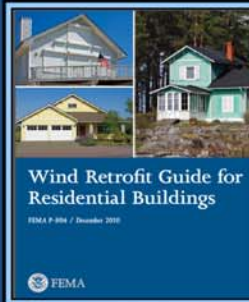
River Warning Systems



River warning systems installed on conservation dams to warn county officials about expected dam breaching.

Images from Vernon County

Other Projects



- Raise appliances and utilities
- Install back-flow valves
- Retrofit for wind resistance
- Education and public awareness
- Insurance (flood and sewer backup)
- Land use planning

Benefits of Mitigation

- Enhance recreation and tourism
 - Parks
 - Trails
- Increase community pride and quality of live
- Save tax dollars



Hazard Mitigation Planning



Disaster Mitigation Act of 2000

- Established a national disaster mitigation program
- Communities must have an approved hazard mitigation plan to be eligible to receive Federal funds through:
 - Hazard Mitigation Grant Program (HMGP)
 - Pre-disaster Mitigation Program (PDM)
 - Flood Mitigation Assistance Program (FMA)
- Plans must be reviewed and updated every five years

Disaster Mitigation Act of 2000

Vision of the Disaster Mitigation Act of 2000

- Communities will have all hazards mitigation plans that identify and prioritize cost-effective mitigation measures that can be implemented prior to a disaster or quickly after a disaster
- Having a plan would speed up the recovery process

Plan Components

1. Documentation of the planning process
2. Description of study area
3. Analysis of hazard conditions
4. Hazard mitigation goals and objectives
5. Hazard mitigation strategies
6. Plan adoption, implementation, and maintenance

Plan Components

1. Documentation of the Planning Process

- Chapter 1 and Appendix A
- Incorporated municipalities must participate in plan development and adopt the plan in order to be covered
 - County adoption covers the towns
- Public and adjacent communities must be given an opportunity to comment during the drafting stage

Plan Components

2. Description of Study Area – Chapter 2

- Demographic
- Surface waters
- Transportation
- Public facilities
 - Police facilities
 - Fire facilities
 - EMS facilities
- Related regulations and programs
- Land use
- Flood hazard areas
- Utility systems
- Critical community facilities
- Hazardous material use and storage
- Emergency operation planning

Plan Components

3. Analysis of Hazard Conditions-Chapter 3

- Vulnerability and risk analysis for each covered hazard
 - Historical and recent incidents
 - Vulnerabilities and community impacts
 - Human lives, property damages, crop damages
 - Potential for future changes in hazard conditions
 - Multijurisdictional aspects

Plan Components

4. Hazard Mitigation Goals-Chapter 4

- Express what the plan is trying to achieve
- Ties the plan to other active plans
 - *e.g.* The County comprehensive plan
- Fairly general

Plan Components

5. Hazard Mitigation Strategies-Chapter 5

- Develop a range of actions and projects to reduce the impacts of each hazard
 - Structural, nonstructural, educational
- Prioritize actions for implementation
- Identify responsible parties
- Examine costs and benefits
- Consider multi-jurisdictional aspects

Plan Components

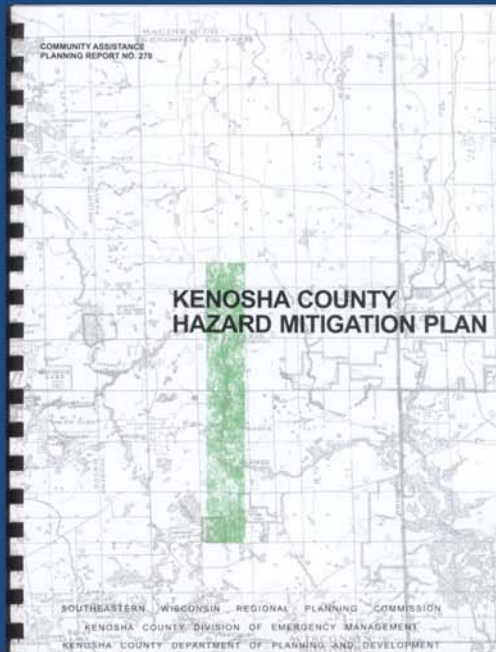
6. Plan Adoption, Implementation, and Maintenance-Chapter 6

- County and incorporated municipalities must formally adopt the plan
 - Towns are covered by County adoption
- Detail available funding and technical assistance
- Monitoring of plan implementation
- Incorporation of the plan into existing planning mechanisms



Initial Kenosha County HMP

- Study conducted 2004-2005
- Report published 2005



Initial Kenosha County HMP

Local government partners:

- City of Kenosha
- Village of Genoa City
- Village of Paddock Lake
- Village of Pleasant Prairie
- Village of Silver Lake
- Village of Twin Lakes
- Town of Brighton
- Town of Bristol
- Town of Paris
- Town of Randall
- Town of Salem
- Town of Somers
- Town of Wheatland

Initial Kenosha County HMP

Additional Partners

- Kenosha County Executive's Office
- Kenosha County Board
- Kenosha County Departments
- State Representative Kerkman, 66th District
- Sherriff's, Police, and Fire Departments
- Public Works Departments
- UW-Parkside, Carthage College, and UW-Extension
- Kenosha Area Business Alliance
- Kenosha Area Chamber of Commerce
- Wisconsin Division of Emergency Management
- American Red Cross
- We Energies
- ChemReport, Inc.

First Plan Update

- Study conducted 2009/2010
- Coordinated with development of the County comprehensive plan
- Reviewed and revised
 - Goals
 - Vulnerability and risk analysis
 - Mitigation strategies
- Report published 2010

First Update: Participating Jurisdictions

- Kenosha County
- City of Kenosha
- Village of Bristol
- Village of Paddock Lake
- Village of Pleasant Prairie
- Village of Silver Lake
- Village of Twin Lakes
- Town of Brighton
- Town of Paris
- Town of Randall
- Town of Salem
- Town of Somers
- Town of Wheatland

First Plan Update

Additional Partners

- Kenosha County Board
- Kenosha County Departments
- Sherriff's, Police, and Fire Departments
- Public Works Departments
- UW-Parkside, Carthage College, and UW-Extension
- Kenosha Unified School District
- Wisconsin Division of Emergency Management
- American Red Cross
- We Energies
- ChemReport, Inc.

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 implementation and maintenance
 - Update potential funding sources

Tentative Schedule

| Task | Estimated Completion Date |
|--|--------------------------------|
| Update Planning Team Membership | April 1, 2015 |
| Survey Designated Management Agencies Regarding Status of Implementation of Original Plan | June 30, 2015 |
| Kickoff Planning Team Meeting | Late April 2015 |
| Public Participation | January 2015 through July 2016 |
| Develop Updated Community Profiles | June 15, 2015 |
| Planning Team Meeting (Review Chapters 1 and 2) | Early August 2015 |
| Identify and Describe Hazards | August 31, 2015 |
| Review of Established Goals and Objectives | September 30, 2015 |
| Update Risk and Vulnerability Assessments | October 30, 2015 |
| Planning Team Meeting (Review Chapters 3 and 4) | Late January 2016 |
| First Public Meeting | Mid February 2016 |
| Development of Updated Mitigation Actions | April 30, 2016 |
| Development of Updated Plan Maintenance Process | May 31, 2016 |
| Apply to Wisconsin Emergency Management for Extension of Grant Deadline (Original Period of Performance Deadline is September 1, 2016) | June 15, 2016 |
| Planning Team Meeting (Review Chapters 5 and 6) | Early June 2016 |
| Second Public Meeting | Mid July 2016 |
| Submit Draft Plan Update to Wisconsin Division of Emergency Management for Review | August 31, 2016 |
| Revise Plan Based on State Review | October 31, 2016 |
| Submit Final Plan Update to the Federal Emergency Management Agency for Approval Pending Adoption | November 15, 2016 |
| Formal Adoption | February 15, 2017 |

Key Dates *(all tentative)*

- Local Planning Team Meetings
 - August 2015, January 2016, June 2016
- Public Meetings
 - February 2016, July 2016
- Submit for Review
 - August 2016
- County Adoption
 - February 2017

Local Planning Team Role

- Weigh in on hazard identification
- Review the plan chapters
- Help us get needed information
 - Recent and historical problems with hazards → Location, occurrence, damages
 - Recent projects, planned and contemplated projects, recent hazard-related outreach
 - Inventory data

Project Web Site

<http://www.sewrpc.org/SEWRPC/communityassistance/Hazard-Mitigation-Planning.htm>

- Copy of the 2010 plan update
- Agendas and other meeting materials
- Summary notes from meetings
- Presentations
- Draft chapters as they are completed
- Comment screen
- Other ways to send a comment



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 systems, and public facility systems.
2. A spatial distribution of the various land uses that maintains biodiversity and which 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, wildlife, 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 floodland management system which reduces the exposure of people to drainage- and flooding-related inconvenience and to health and safety hazards and which 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 amongst 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.

Exhibit B

Attachment 1

PROPOSED WORK SCHEDULE FOR UPDATING THE KENOSHA COUNTY HAZARD MITIGATION PLAN

| Task | Estimated Completion Date |
|--|----------------------------------|
| Update Planning Team Membership | April 1, 2015 |
| Survey Designated Management Agencies Regarding Status of Implementation of Original Plan | June 30, 2015 |
| Kickoff Planning Team Meeting | Late April 2015 |
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| Submit Final Plan Update to the Federal Emergency Management Agency for Approval Pending Adoption | November 15, 2016 |
| Formal Adoption | February 15, 2017 |
| Anticipated Period of Performance Deadline | March 1, 2017 |

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Exhibit C

Attachment 2

HAZARD MITIGATION GOALS AND OBJECTIVES FOR KENOSHA COUNTY HAZARD MITIGATION PLAN

The following goals were established for the initial Kenosha County hazard mitigation planning program,¹ based, in part, upon goals previously established in watershed, park and open space, and land use planning programs.

1. **Land Use:** 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 systems, and public facility systems.
2. **Natural Resources:** A spatial distribution of the various land uses which 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, wildlife, and natural areas and critical species habitats.
3. **Transportation:** 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. **Fire, Police, and Emergency Medical Services:** The provision of facilities necessary to maintain a high quality of fire and police protection and emergency medical services throughout the County.
5. **Stormwater and Floodland Management:** The development of a stormwater and floodland 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. **Lake Michigan Coastal Erosion:** The identification of high erosion risk Lake Michigan shoreline areas and the development of a coastal erosion control program that reduces the exposure of people and real and personal property to shoreline erosion and bluff recession.
7. **Unpredictable Hazards:** 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 which are unpredictable and not geographically specific in nature.
8. **Communications:** Communications interoperability throughout the County amongst 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.

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¹SEWRPC Community Assistance Planning Report No. 278, Kenosha County Hazard Mitigation Plan Update: 2011-2015 (2nd Edition), June 2010.

Exhibit D

INSTRUCTIONS FOR COMPLETING HAZARD VULNERABILITY AND ASSESSMENT TOOL

The purpose of this Hazard Vulnerability and Assessment Tool is to evaluate the potential that specific hazards may occur, the likely severity of impacts resulting from these hazards, and the extent to which these impacts may be mitigated by current levels of preparedness. The tool uses estimates of probability of occurrence, likely severity of impacts, and level of preparedness to estimate the risk posed by each hazard.

Please address all of the potential threats that are listed. Instructions for completing entries in each column are given below.

Probability

For each of the listed hazards, please indicate the likelihood that it will occur, with 1 indicating a low probability of occurrence, 2 indicating a moderate probability of occurrence, and 3 indicating a high probability of occurrence. Issues to consider for probability include, but are not limited to:

- Known risk,
- Historical data and experience, and
- Local government or agency experience.

Human Impacts

For each of the listed hazards, please indicate what you consider to be the likely level of impacts to human life if the hazard occurs, with 1 indicating a low level of impacts, 2 indicating a moderate level of impacts, and 3 indicating a high level of impacts. Issues to consider for human impacts include, but are not limited to:

- Potential of the hazard to cause death, and
- Potential of the hazard to cause injury requiring medical treatment.

Property Impacts

For each of the listed hazards, please indicate the likely level of physical losses and damages to property if the hazard occurs, with 1 indicating a low level of losses and damages, 2 indicating a moderate level of losses and damages, and 3 indicating a high level of losses and damages. Issues to consider for property impacts include, but are not limited to:

- The potential of the hazard to cause damage to property or crops,
- The cost to replace damaged property,
- The cost to set up a temporary replacement for damaged property,
- The cost to repair damaged property, and
- The time to recover from the property damage.

Business and Government Agency Impacts

For each of the listed hazards, please indicate what the likely level of impacts to the operations of businesses and government agencies is if the hazard occurs, with 1 indicating a low level of impacts, 2 indicating a moderate level of impacts, and 3 indicating a high level of impacts. Issues to consider for business impacts include, but are not limited to:

- Business or agency interruption,
- Employees unable to report to work,
- Customers or clients unable to reach facility,
- Company or agency in violation of contractual agreements,
- Imposition of fines and penalties or legal costs,
- Interruption of access to critical supplies,

- Interruption of product or service distribution,
- Financial impact or burden, and
- Interruption of critical care and emergency services.

Preparedness

For each of the listed hazards, please indicate the current level of preparedness for dealing with the hazard and its impacts, with 1 indicating a high level of preparedness, 2 indicating a moderate level of preparedness, and three indicating a low level of preparedness or no preparedness. Issues to consider for preparedness include, but are not limited to:

- The status of current plans that address the hazard,
- The frequency of drills that address the hazard,
- The status of training related to the hazard and its impacts,
- Insurance,
- The availability of back-up systems, and
- The availability of community resources.

This survey will be compiled and the results will be reported during the hazard identification phase of developing or updating the hazard mitigation plan.

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Exhibit D (continued)

Attachment 3

HAZARD AND VULNERABILITY ASSESSMENT TOOL
KENOSHA COUNTY HAZARD MITIGATION PLAN UPDATE

| EVENT | PROBABILITY | SEVERITY = (MAGNITUDE - MITIGATION) | | | | RISK |
|---|--|--|--|--|--|-----------|
| | | HUMAN IMPACT | PROPERTY IMPACT | BUSINESS AND AGENCY IMPACT | PREPAREDNESS | |
| | | <i>Likelihood This Will Occur</i> | <i>Possibility of Death or Injury</i> | <i>Physical Losses and Damages</i> | <i>Interruption of Services</i> | |
| SCORE | 0 = N/A 1 = Low 2 = Moderate 3 = High | 0 = N/A 1 = Low 2 = Moderate 3 = High | 0 = N/A 1 = Low 2 = Moderate 3 = High | 0 = N/A 1 = Low 2 = Moderate 3 = High | 0 = N/A 1 = High 2 = Moderate 3 = Low or none | 0 - 100% |
| A1. Riverine flooding | | | | | | 0% |
| A2. Stormwater flooding | | | | | | 0% |
| A3. Lake flooding | | | | | | 0% |
| A4. Tornado | | | | | | 0% |
| A5. Earthquake | | | | | | 0% |
| A6. Thunderstorm | | | | | | 0% |
| A7. High straight-line wind | | | | | | 0% |
| A8. Lightning | | | | | | 0% |
| A9. Hail | | | | | | 0% |
| A10. Heavy snow storm | | | | | | 0% |
| A11. Blizzard | | | | | | 0% |
| A12. Ice storm | | | | | | 0% |
| A13. Extreme cold | | | | | | 0% |
| A14. Extreme heat | | | | | | 0% |
| A15. Drought | | | | | | 0% |
| A16. Fog | | | | | | 0% |
| A17. Dust storm | | | | | | 0% |
| A18. Lake Michigan Erosion | | | | | | 0% |
| B1. Contamination or loss of water supply system | | | | | | 0% |
| B2. Loss of sewerage system | | | | | | 0% |
| B3. Loss of telecommunication | | | | | | 0% |
| B4. Electrical system outage | | | | | | 0% |
| B5. Computer system incident/cyber attack | | | | | | 0% |
| C1. Hazardous materials railroad incidents | | | | | | 0% |
| C2. Hazardous materials roadway incidents | | | | | | 0% |
| C3. Hazardous materials pipeline incidents | | | | | | 0% |
| C4. Hazardous materials fixed facility incidents (industries, bulk fuel storage sites, grain elevators, agricultural chemical storage, and explosives, including fireworks storage) | | | | | | 0% |
| D1. Railroad transportation accidents | | | | | | 0% |
| D2. Roadway transportation accidents | | | | | | 0% |
| D3. Aviation accidents | | | | | | 0% |
| E1. Correctional center incidents | | | | | | 0% |
| E2. Civil unrest | | | | | | 0% |
| E3. Terrorism incidents (bomb threats, hostage situations, biological incidents) | | | | | | 0% |
| E4. Workplace violence | | | | | | 0% |
| E5. School violence | | | | | | 0% |
| F1. Communicable disease outbreak or epidemic | | | | | | 0% |
| F2. Large-scale food contamination | | | | | | 0% |
| G1. Wildfire | | | | | | 0% |
| G2. Large structure fires | | | | | | 0% |
| G3. Explosions | | | | | | 0% |
| G4. Mass casualty incidents | | | | | | 0% |
| G5. Building collapse or cave-in | | | | | | 0% |
| H1. Dam failure | | | | | | 0% |
| H2. Landslide | | | | | | 0% |
| H3. Land subsidence | | | | | | 0% |
| AVERAGE SCORE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0% |

*Threat increases with percentage.

Source: Kaiser Permanente and SEWRPC.

| | | |
|--------------------------------------|------|------|
| RISK = PROBABILITY * SEVERITY | | |
| 0.00 | 0.00 | 0.00 |

Shaded hazards are profiled in the current Kenosha County hazard mitigation plan.