

**SUMMARY NOTES OF THE MARCH 30, 2011 MEETING
OF THE CITY OF MILWAUKEE ALL HAZARDS MITIGATION
PLAN STEERING COMMITTEE**

INTRODUCTION

The first meeting of the City of Milwaukee All Hazards Mitigation Steering Committee was convened at the Frank P. Zeidler Municipal Building, Room 501 at 1:35 p.m. The meeting was called to order by Steven Fronk, the City of Milwaukee Director of Emergency Management and Homeland Security. Attendance was taken by circulating a sign-in sheet.

In attendance at the meeting were the following individuals:

Steven Fronk, Co-Chairman	Director, City of Milwaukee Office of Emergency Management and Homeland Security
Ghassan Korban, Co-Chairman	Coordination Manager, City of Milwaukee Department of Public Works
Matthew H. Mortwedt, Co-Chairman	Security Operations Manager, City of Milwaukee Department of Public Works
Michael G. Hahn, Secretary	Chief Environmental Engineer, Southeastern Wisconsin Regional Planning Commission
Joseph E. Boxhorn	Senior Planner, Southeastern Wisconsin Regional Planning Commission
Steven Buck	Disaster Co-Chair, American Red Cross of Southeastern Wisconsin
Roxanne K. Gray	State Hazard Mitigation Officer, Wisconsin Division of Emergency Management
Steven Jacquart	Intergovernmental Coordinator, Milwaukee Metropolitan Sewerage District
Lynsey Kawski	Response and Recovery Planner, Wisconsin Division of Emergency Management
James H. Ley	Battalion Chief, Milwaukee Fire Department and Office of Homeland Security
Barry Mitchell	Emergency Coordinator, Milwaukee County Sheriff's Office Emergency Management
Aaron W. Owens	Research Analyst, Southeastern Wisconsin Regional Planning Commission
Kate Pillman	Executive Director, Southeastern Wisconsin Citizens and Organizations Active in Disaster
Edward A. Richardson	Principal Planner, Milwaukee Department of City Development
Julie Schneider	Transit Security Planning Coordinator, Milwaukee County Transit
Timothy J. Thur	Chief Sewer Design Manager, City of Milwaukee Department of Public Works

Mr. Fronk welcomed all those in attendance and thanked them for their interest and participation on this committee. He explained that the City's hazard mitigation plan will expire this year, and that this planning process will update the existing plan. He then asked those in attendance to introduce themselves.

OVERVIEW OF HAZARD MITIGATION PLAN UPDATING PROCESS

Mr. Fronk introduced Roxanne Gray of the Wisconsin Division of Emergency Management (WEM). At Mr. Fronk's request, Ms. Gray presented an overview of the hazard mitigation plan updating process.

[Secretary's Note: Ms. Gray's presentation is attached hereto as Exhibit A.]

Ms. Gray noted that there are 211 repetitive loss properties in the City of Milwaukee. She explained that the confidentiality of these sites are protected by the Privacy Act and cannot be specifically identified in hazard mitigation planning. She noted that repetitive loss properties could be mapped or listed in a way that does not specifically identify the property or the property owner.

Ms. Gray explained that the City's hazard mitigation plan expires on June 16, 2011. After that date, the City will not be eligible to receive funding through the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program or the Predisaster Mitigation Grant Program until FEMA approves an updated plan and the City adopts the plan. Lynsey Kawski of WEM added that FEMA will expedite the review of an updated plan, if there is a grant funding request awaiting approval. In the absence of such requests, FEMA will not expedite review of the updated plan.

Mr. Hahn noted that the Milwaukee Metropolitan Sewerage District (MMSD) has major involvement in the management of watercourses in the City, including management of floodlands. He asked whether the approval of the plan by the MMSD was essential to plan approval. Ms. Gray explained that while the MMSD's approval was not essential, she strongly recommends that the MMSD participate in planning process and formally indicate acceptance of the plan. She noted that the District did this for the City's initial hazard mitigation plan. She added that this would have the benefit of making District projects within the City eligible for funding under the hazard mitigation and predisaster mitigation grant programs.

[Secretary's Note: The membership of this Steering Committee includes a representative of the MMSD.]

Ms. Kawski emphasized that it is important for the City to take credit for hazard mitigation activities accomplished since the completion of the current plan. She explained that FEMA wants to see all mitigation efforts that have taken place. Ms. Kawski recommended looking to the City of Darlington's hazard mitigation plan as a good example of highlighting efforts in mitigation.

Mr. Fronk thanked Ms. Gray and Ms. Kawski, as well as the Southeastern Wisconsin Regional Planning Commission (SEWRPC) for their efforts and for reminding the City of the need to update the City's hazard mitigation plan.

BACKGROUND ON THE UPDATE TO THE CITY OF MILWAUKEE HAZARD MITIGATION PLAN

Mr. Fronk introduced Michael G. Hahn of the SEWRPC staff. At Mr. Fronk's request, Mr. Hahn presented background information on the initial hazard mitigation plan, the main plan components to be reviewed, and a schedule for the plan update.

Mr. Hahn stated that a flood mitigation plan was prepared for the City in 2001. The first all hazards mitigation plan for the City of Milwaukee was published in 2005. He explained that the current effort will update the 2005 plan. This will include updating the inventories, reviewing the hazards that plan will address, updating profiles of the hazards that the plan addresses, revising the risk and vulnerability analyses for these hazards, reviewing implementation of mitigation strategies presented in the initial plan, and revising the recommended mitigation strategies to reflect implementation efforts and changes in conditions.

Mr. Hahn indicated that as the update of the plan proceeds SEWRPC staff will present updated text to the Steering Committee and look for comments and additional information from the Committee. In addition, he continued, prior to the meetings, SEWRPC staff will post the chapters to be reviewed on the SEWRPC website where the Committee, as well as the public, will be able to review the material and submit questions and comments. He added that hard copies of the chapters will be provided at the Committee meetings. Mr. Hahn said

that he anticipated that the plan update process will require two or three more Steering Committee meetings. He also noted that there will be public informational meetings.

[Secretary's Note: The web address for the page on the SEWRPC website where the materials will be located is:

<http://www.sewrpc.org/SEWRPC/communityassistance/ProjectPlanningServices.htm>]

Mr. Korban asked whether it is essential that all Committee members attend each meeting. Ms. Kawski indicated that as long as Committee members review and comment on the material, it is not vital that each member attend all the meetings. Mr. Boxhorn reminded the Committee the SEWRPC website includes a screen where questions and comments on the plan can be submitted at any time by Committee members. He added that members of the Committee may also email questions and comments directly to him. Mr. Fronk asked whether the materials relating to the update of the hazard mitigation plan and the comment screen on the SEWRPC website can also be accessed by the public for their review and comment. Mr. Boxhorn replied that the public can access the website and submit questions and comments via comment screen.

Mr. Hahn noted that City staff and SEWRPC staff would conduct the public meetings.

Ms. Kawski noted that there was a significant delay in receiving funding for this plan updating effort from the Federal government. She explained that the City applied for funding in December of 2009 and the funding was not awarded until after the Federal budget passed in October of 2010.

REVIEW OF PRELIMINARY DRAFT CHAPTER I, "INTRODUCTION AND BACKGROUND", OF SEWRPC COMMUNITY ASSISTANCE PLANNING REPORT NO. 282 (CAPR NO. 282), 2ND EDITION, CITY OF MILWAUKEE ALL HAZARDS MITIGATION PLAN UPDATE: 2011-2015

Mr. Fronk introduced Joseph E. Boxhorn of the SEWRPC staff. At Mr. Fronk's request, Mr. Boxhorn reviewed the preliminary draft of Chapter I, "Introduction and Background."

[Secretary's Note: Mr. Boxhorn's presentation is attached hereto as Exhibit B.]

Mr. Boxhorn noted that the Commission staff used Chapter I from the initial report as a template for this draft of the updated chapter. He indicated that significant changes and additions to the text were highlighted in blue.

In his review of the mitigation planning requirements on page 2, Mr. Boxhorn noted that neighboring communities should be informed that this plan is being updated and given an opportunity to comment on the plan during plan development. Mr. Fronk asked whether SEWRPC would send out letters notifying surrounding communities of the current planning process. Mr. Boxhorn recommended that the letters be sent by the City. He said he could provide examples of letters sent out for planning efforts in other communities. Ms. Kawski noted that notification of surrounding communities is a requirement from FEMA.

Mr. Boxhorn drew the Committee's attention to the text highlighted in yellow on pages 2 and 8. He indicated that these highlighted areas were reserved for a brief discussion of the composition of the Steering Committee and that these would be completed now that the Committee has been reconstituted.

[Secretary's Note: The following paragraph was added in the reserved space after the first paragraph on page 2:

"In assembling the City of Milwaukee All Hazard Steering Committee, the City Department of Public Works and the City Office of Emergency Management and

Homeland Security sought representatives of law enforcement; the City's fire, public works, and community development departments; the County emergency management office and transit system; the Milwaukee Metropolitan Sewerage District; interested nongovernmental organizations; and the health care community.”

The first full paragraph on page 8 was revised to read (The revised text and added text in this and all subsequent revisions in these summary notes is indicated in bold letters for clarification only. The report text will not be bold.):

“This hazard mitigation plan update was also prepared under the guidance of a City advisory Steering Committee comprised of local official representatives, including representatives of **City Departments**, such as **the police, fire, community development, and public works departments; County departments and agencies, including the County emergency management office and transit system;** the MMSD; **interested nongovernmental organizations; and the health care community.** The Steering Committee met three times during the plan 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 Steering Committee (see Appendix A).”]

After reviewing the section of the chapter regarding outreach and implementation activities, Mr. Boxhorn asked the Committee to provide information on any additional activities that were not discussed in the draft chapter. Mr. Hahn noted that there would be further discussion related to flood mitigation in later chapters. Mr. Jacquart suggested that the MMSD's private property inflow and infiltration reduction program, which aims to reduce basement backups, should be added to the discussion regarding implementation measures. Mr. Hahn agreed that discussion of this program should be added.

[Secretary's Note: The following paragraphs were added after the second full paragraph on page 7:

“Private Property Inflow and Infiltration Reduction Program

In 2010 and 2011, the MMSD drafted a policy to reduce I/I In an effort to further reduce sanitary sewer backups into basements and sanitary sewer overflows both caused primarily by infiltration and inflow (I/I) into the sanitary sewer system. Infiltration is stormwater and groundwater that may enter the sanitary sewer system through such sources as defective pipes, pipe joints, connections or leaking manholes. Clearwater inflow to the sanitary sewer is stormwater from foundation drains, connected downspouts, catch basins, and leaking manhole covers. With the assistance of the Technical Advisory Team comprised of public works, engineering, and/or administrative staff from the MMSD's 28 member communities, a program was developed to fund projects to reduce I/I from the privately owned components of sanitary sewerage systems. As of April 2011, it was proposed that the program provide \$151 million over a period of ten years for design, inspection and activities to remove I/I from private sources. Funding of the program is based on the equalized value of the municipality. Each member community, including the City of Milwaukee, would control how the funds are used (within the eligible cost guidelines) and municipal staff could be responsible for managing the work. The program would fund activities such as foundation drain disconnection; sewer lateral repair or replacement; and design, planning, and investigation costs.

This program will assist the City in addressing the existing deficiencies in the private portion of the sewerage system. The City's sewerage system would benefit

from this program by reducing flows within the system. City residents would benefit from the improvement of their laterals and increased protection from basement backups. The City is responsible for maintaining or reducing its flows to the MMSD. This will assist the flow reduction effort by becoming part of the City's long-term maintenance program.”]

Regarding discussion of a public informational meeting, Ms. Gray stated that there is a requirement of two public informational meetings. She explained that one meeting needs to be held before the plan goes to WEM for review. Ms. Kowski added that an option was to publicly notice the next two Steering Committee meetings. She suggested that the potential amount of public interest in flooding may mean that this is not a feasible option. Mr. Mitchell suggested that neighboring communities could give their input in conjunction with the public meeting. Mr. Korban asked if it would be acceptable to have two sessions at different locations on the same day. Ms. Kowski indicated that would be satisfactory.

Mr. Boxhorn told the Committee that meeting minutes, agendas, and any public comments would be included in the plan as Appendix A.

REVIEW OF PRELIMINARY DRAFT CHAPTER II, “BASIC STUDY AREA INVENTORY”, OF SEWRPC COMMUNITY ASSISTANCE PLANNING REPORT NO. 282 (CAPR NO. 282), 2ND EDITION, CITY OF MILWAUKEE ALL HAZARDS MITIGATION PLAN UPDATE: 2011-2015

At Mr. Korban's request, Mr. Boxhorn reviewed the preliminary draft Chapter II, “Basic Study Area Inventory.”

Mr. Boxhorn noted that the section regarding population and households will be updated to reflect the preliminary 2010 census data that was recently released.

[Secretary's Note: Population data from the 2010 census were added to Table II-1 and Figure II-1 and household data from the 2010 census were added to Table II-2. These are attached as Exhibit C. The last paragraph on page 1, continuing onto page 2, was revised to read as follows:

“The area that is now the City of Milwaukee was first included in the Federal census in 1850. Historical population levels in the City of Milwaukee are provided in Table II-1. Population growth in the City of Milwaukee from 1850 to 2010 is graphically summarized in Figure II-1. In 1850, the City of Milwaukee had a resident population of about 20,000. The City's population rose from 1850 through 1880, and then began to increase at a greater rate until 1930, when population growth rate slowed. The population growth continued to climb until 1960 when it reached a peak of just over 740,000. From that time, it has slowly declined. The City of Milwaukee is the most populous community in Milwaukee County, with 594,833 residents, or about 63 percent of the County's population, in 2010. The population distribution by census block in the year 2000, the most recent year for which this data are available, ranges up to more than 2,300 persons per census block, while most of the City of Milwaukee is dominated by densities of 50 to 300 persons, as shown on Map II-2.”

The first full paragraph on page 2 was revised to read as follows:

“Trends in the number of households in the City of Milwaukee are shown in Table II-2. The City experienced an increase in the number of new households between 1970 and 1980, with a slight decline from 1980 through 2010. For most of

that period, the rate of decrease in the number of households has been less than the rate of population decrease. Between 1980 and 2000, the number of households decreased by 4.0 percent, compared to a population decrease of 6.2 percent. **Between 2000 and 2010, the number of households in the City decreased by about 0.8 percent, which represents a slightly faster rate of decrease than the 0.4 percent decrease in the population. The differences between these rates suggest that** the number of persons per household decreased **between 1980 and 2000 and increased slightly between 2000 and 2010.”**

The following sentence referring to Table II-3, “Number of Jobs in Milwaukee County: 1970-2000,” was added after the first sentence in the second full paragraph on page 2:

“The data in the table are presented through the year 2000, which is the most recent year for which data are available.”]

Mr. Boxhorn indicated that Map II-2, “Population Distribution by Census Block for the City of Milwaukee: 2000,” will continue to be based on year 2000 data because 2010 census data is not yet available at the census block level. He also noted that SEWRPC staff is in the process of updating its land use inventories to reflect 2010 land use, but indicated that the updated data will not be completed in time to be included in this plan update. Ms. Kawski suggested adding a sentence in the land use section stating that the 2010 land use will be available for the next update of the plan.

[Secretary’s Note: The following sentences were added to the end of the fourth full paragraph on page 2:

“SEWRPC staff is currently updating the land use inventories in the Region to reflect 2010 land uses. This process will not be finished in time for 2010 data to be included in this plan update. Updated 2010 land use will be available for the next update of the plan.”

Ms. Schneider indicated that the contractors for the Milwaukee County Transit System’s paratransit service change regularly based on annual awarding of contracts. Mr. Boxhorn indicated a footnote would be added to that reflect that.

[Secretary’s Note: The following footnote was added after the last sentence of the third full paragraph on page 5:

“The contractors providing paratransit service change regularly based on annual awarding of contracts.”]

Mr. Boxhorn stated that the critical community facilities are shown on Table II-8 and inventoried in Tables B-1 through B-4. He explained that Appendix B also contains tables of schools and historical sites.

Mr. Fronk suggested adding the Milwaukee County Transit facilities and the Intermodal Station to the critical facilities listed in Table B-1 and shown on Map II-8. Ms. Schneider added that a Milwaukee County Transit garage received stormwater damage during the July 2010 floods. Ms. Schneider indicated that she would provide addresses of these sites. Mr. Boxhorn confirmed that these sites will be added to Map II-8.

[Secretary’s Note: The Milwaukee Intermodal Station as well as five MCTS Facilities were added to Map II-8 and Table B-1. The updated map and table are attached herein as Exhibit D.]

Mr. Buck asked whether pipelines should be mapped in addition to the critical facilities. Mr. Hahn stated that due to terrorism concerns, there may be some restrictions on mapping these. Ms. Gray indicated that it would be prudent to discuss pipelines in the text, but discouraged mapping them.

[Secretary's Note: The following paragraph was added after the fourth full paragraph on page 7:

“Several natural gas transmission pipelines run near or along the City's boundaries, in northwestern, southeastern, southwestern, and west-central portions of the City. In addition, natural gas transmission pipelines run through northwestern and southeastern sections of the City. Petroleum pipelines run near or along the City's boundaries in northwestern and southeastern portions of the City.”]

Ms. Schneider suggested adding major attractions such as Miller Park, the Bradley Center, and the art museum to the list of critical facilities. She asked whether the updated plan will include planning for acts of terrorism on such attractions. Ms. Gray explained that the requirement for this sort of plan is to address all natural hazards. She noted that the plan may address technological and human-induced hazards at the discretion of the City. After considerable discussion, the Committee came to consensus that these sites would be more appropriately included in an emergency response plan than in a hazard mitigation plan. The Committee decided that these sites will not be included as critical facilities.

Ms. Pillman asked Mr. Buck whether there are any mass care facilities in the City that may be considered in this plan. Mr. Buck indicated that he did not believe it to be necessary to include these since the sites can always be moved. It was agreed by consensus not to include these among the critical facilities.

Mr. Jacquart questioned the accuracy of telephone phone numbers listed for some of the critical facilities in Table B-1. Ms. Gray explained that telephone numbers and fax numbers are not necessary for the plan. The Committee agreed that telephone and fax numbers should be removed from the tables in Appendix B.

[Secretary's Note: Telephone numbers, fax numbers, and website addresses were removed from Tables B-1, B-3, B-4, and B-5.]

Concerning the discussion on floodplain zoning ordinances, stormwater management regulations, and other related regulations and programs, Mr. Boxhorn asked the Committee to review and advise of any necessary additions. He again mentioned comments could be submitted at any time either via the comments page on the SEWRPC website or by emailing him directly.

Ms. Schneider suggested the plan discuss the Local Emergency Planning Committee in regards to hazardous materials storage. Mr. Boxhorn indicated this would be discussed in a subsequent chapter

REVIEW OF HAZARD AND VULNERABILITY ASSESSMENT EXERCISE

Mr. Boxhorn passed out the Hazard and Vulnerability Assessment Tool. He explained that the results from this tool would be used, along with recent hazard data, to reassess the hazard identification for the plan update. He noted that this form contained the list of hazards considered in the development of previous hazard mitigation plans. Mr. Boxhorn explained to the Committee how to complete the Hazard and Vulnerability Assessment Tool and asked them to complete the tool. He indicated that the results from the assessment tool would be distributed with the summary notes for this meeting.

[Secretary's Note: A summary of the results from the Hazard and Vulnerability Assessment Tool is attached hereto as Exhibit E.]

OTHER BUSINESS

Mr. Boxhorn noted that in the initial hazard mitigation plan, Chapter III discussed hazard mitigation goals and objectives, while Chapter IV discussed the analysis of hazard conditions. He suggested that the order of the two chapters be switched. Chapter III would become “Analysis of Hazard Conditions” and Chapter IV would become “Hazard Mitigation Goals and Objectives.” He explained that this would more closely follow the plan development logic recommended by FEMA. The Committee agreed, and the order will be switched.

COMMENTS ON CHAPTERS I AND II, “OF SEWRPC COMMUNITY ASSISTANCE PLANNING REPORT NO. 282, 2ND EDITION, AS PROVIDED BY MR. STEVEN JACQUART, MILWAUKEE METROPOLITAN SEWERAGE DISTRICT FOLLOWING THE COMMITTEE MEETING

Following the meeting, Mr. Jacquart provided SEWRPC staff with corrections and comments from MMSD staff.

Mr. Jacquart indicated that four road bridges are to be replaced between 6th Street and 27th Street as part of the floodland management measures in the Kinnickinnic River Watershed.

[Secretary’s Note: The third sentence in the fourth paragraph on page 6 of Chapter I was revised to read as follows:

“This project involves removal of 12,000 linear feet of concrete channel; replacement of **four** road bridges and four pedestrian bridges; widening and lowering of the floodplain overbank; restoration of the channel; and acquisition and deconstruction of 82 residences and one commercial building that are currently within the floodplain.”]

Mr. Jacquart indicated that the MMSD is currently verifying their estimate of 320 structures being in the floodplain in the project area for their Kinnickinnic River concrete removal project.

[Secretary’s Note: The following sentence was added after the third sentence in the fourth paragraph on page 6:

“MMSD is currently verifying their estimate that approximately 320 structures are located within the one-percent-probability floodplain in this project reach.”]

Mr. Jacquart indicated that the MMSD has developed an emergency action plan under the State dam safety program for the Milwaukee County Grounds Floodwater Management Facility.

[Secretary’s Note: The following paragraph was added after the last paragraph on page 14 of Chapter II:

“The MMSD has prepared an emergency action plan for the Milwaukee County Grounds Floodwater Management Facility, which is located near Underwood Creek in the Menomonee River watershed.. This plan describes notifications to be made and actions to be taken in the event an unexpected failure of the facility’s embankment during an extreme flooding event when the Facility is full and structures along the Menomonee River are already experiencing flooding.”]

COMMENTS ON CHAPTER II, “OF SEWRPC COMMUNITY ASSISTANCE PLANNING REPORT NO. 282, 2ND EDITION, AS PROVIDED BY MR. JAMES H. LEY, CITY OF MILWAUKEE FIRE DEPARTMENT FOLLOWING THE COMMITTEE MEETING

Following the meeting, Mr. Ley provided SEWRPC staff with several corrections and suggested edits to the subsection on fire suppression and rescue services.

[Secretary’s Note: The second paragraph on page 8 was revised to read as follows:

“The City of Milwaukee maintains 36 fire houses which are divided geographically into **five** battalions. Within the fire houses are **36** engine companies, **15** ladder companies, and **12** emergency medical services paramedic units. The Milwaukee Fire Department Special Teams exercise expertise in **three** major disciplines: **Marine Operations** (DIVE **and Fireboat**), Hazardous Materials (HAZMAT), **and** Heavy Urban Rescue Team (HURT). HURT members are trained in specialized rescue procedures **in the disciplines of confined space rescue, collapse rescue, and trench rescue.**”

The fourth paragraph on page 8 was broken into three paragraphs and revised to read as follows:

“**Since 1991**, the Milwaukee Fire Department has a service contract with the Village of West Milwaukee to provide full fire and **emergency medical** service **within the Village.**

Since 2006, the Milwaukee Fire Department has participated in **the Mutual Aid Box Alarm System (MABAS). MABAS was originally formed in Illinois in the late 1960s and adopted for use in Wisconsin, MABAS enables each member department to render assistance to, and receive assistance from, other member fire departments without charge when incidents overwhelm local resources.** This agreement enables individual departments to significantly supplement their own personnel, apparatus, and equipment **when needed.** Importantly, the agreement allows individual departments to access equipment, such as **water tenders**, aerial trucks, and **specialized** equipment, which they themselves do not possess and which they may only need infrequently.

The Milwaukee Fire Department also participates in Milwaukee County’s Emergency Medical System (EMS). Milwaukee County provides training and medical oversight. The system allows paramedics from any participating fire department within the County to respond to medical emergencies in neighboring municipalities when needed. For example, MFD Med No. 15 routinely responds to emergencies in St. Francis as their paramedic unit and Wauwatosa’s Med 81 responds to emergencies in the “finger” area on the west side of the City of Milwaukee.”]

TIME AND DATE OF NEXT MEETING

Mr. Hahn proposed that the second meeting of the Steering Committee be held towards the end of April. He indicated that a notice, agenda, materials to review, and minutes would be sent out about a week ahead of the meeting. After discussion the Committee agreed to meet on April 26, 2011 at 1:30 p.m. in Room 501 of the Frank P. Zeidler Municipal Building.

ADJOURNMENT

There being no further business, the meeting was adjourned by unanimous consent at 3:36 p.m.

Respectfully Submitted,

Michael G. Hahn
Secretary

Attachments

#156669 V1 - CAPR-282-2ED SUMMARY NOTES 03/30/11
330-3027
MGH/JEB/AWO/pk
04/19/11

**ALL HAZARDS
MITIGATION PLANNING**

Roxanne Gray
Wisconsin Emergency Management
608-242-3211
Roxanne.gray@wisconsin.gov

What is Mitigation?

- Mitigation is any action taken to eliminate or reduce the long-term risk to human life and property from natural and technological hazards



Break the Cycle

- Mitigation is one of the phases of emergency management (preparedness, response and recovery)
- Can occur in any phase
- Only phase that breaks the cycle
 - Damage, repair, damage



Mitigation Examples

- Structural (dams, retention ponds, levees)
- Land-use planning
- Stronger building codes
- Removing persons out of harms way



More Examples

- Raise appliances and utilities
- Install back-flow valves
- Proper landscaping
- Retrofit for wind resistance
- Construct a safe room
- Community Storm Shelter
- Mobile Home Tie-Downs
- NOAA Weather Radios
- Education and Public Awareness
- INSURANCE (flood and sewer)

Why Mitigation?

- \$140 Billion in the last 25 years in responding to disasters
- \$6 Billion per year in flood damages
- Costs continue to rise
- People continue to build and live in high-risk areas



Here 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 plus 2 snow emergencies
- Two in 2010 and one pending in 2011

2008 Floods

- 31 counties declared
- \$763,618,860 + in damages
- Over 40,000 applied for Individual Assistance with over \$56 million disbursed
- Nearly 2,000 SBA low-interest disaster loans for over \$48 million

2010 July Flood

- 2 counties declared
- Over 33,000 applied for Individual Assistance with over \$53 million disbursed
- 679 SBA low-interest disaster loans for nearly \$12 million

Public Assistance

2008 Flood

- Estimated \$78 million in eligible damages to public infrastructure and emergency response costs
- 844 applicants (local and state governments and PNPs) for assistance

2010 July Flood

- Estimated \$37 million in damages to public infrastructure and emergency response costs
- 87 applicants (local and state governments and PNPs)

Hazard Mitigation

- 2008 Flood:
 - \$30.9 million
 - Acquisition and demolition of 218 properties
 - Hazard Mitigation Plans
- 2010 July Flood
 - \$21.3 million



For every dollar spent on mitigation, \$4 is saved in future damages.

(Per the National Institute of Building Sciences -2005)



MITIGATION - WEM

- **\$90 million** in last 21 years through HMGP/FMA/PDM
- 360 properties acquired (200 + in process)
- 59 properties floodproofed (2 in process)
- 2 structures relocated
- Wind Retrofit
- Storm Shelters
- Education
- Structural (detention ponds, stormwater management, etc.)
- All Hazard Mitigation Plans

Hazard Mitigation Assistance City of Milwaukee

- Hazard Mitigation Grant Program (HMGP)
 - 1997: \$1,545,412 (acquisition of 19 structures and floodproofing 35 structures)
 - 1998: \$91,630 (acquisition of 2 structures)
- Flood Mitigation Assistance Program (FMA)
 - 1999: \$5,000 (Flood Mitigation Plan)
- Pre-Disaster Mitigation Program (PDM)
 - 2002: \$23,000 (All Hazard Mitigation Plan)
 - 2010: \$40,000 (Update of All Hazard Mitigation Plan)

Repetitive Loss Properties

- NFIP insured property
- 2 or more losses of \$1,000 each within a 10-year period
- 211 RLP properties identified in the City of Milwaukee
- 8 RLP mitigated

Reasons to Plan

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



DMA2K

- Disaster Mitigation Act of 2000
- PL 106-390 signed into law 10/30/00
- Establish a national disaster hazard mitigation program
 - Section 203 – Pre-Disaster Mitigation Program
 - Section 322 – Mitigation Planning Requirement

Vision

- To reduce disaster losses thru pre-disaster mitigation planning by pre-identifying, cost-effective mitigation.
- Mitigation planning would then streamline and speed up the recovery process

State Hazard Mitigation Goals

- To minimize human, economic and environmental disruption from natural hazards;
- To enhance public education about disaster preparedness and resistance, and expand public awareness of natural hazards;
- To encourage hazard mitigation planning;

- Support intergovernmental coordination and cooperation among federal, state and local authorities regarding hazard mitigation activities; and
- Improve the disaster resistance of buildings, structures, and infrastructure whether new construction, expansion or renovation.

Local Mitigation Plan Criteria

- Local Planning – 44 CFR Part 201.6
- Components
 - Planning Process
 - Risk Assessment
 - Mitigation Strategy
 - Plan Maintenance Process
 - Plan Adoption
 - Plan Review

Planning Deadlines

- Must have an approved All Hazards Mitigation Plan to receive certain FEMA assistance
- Local Plans have to be reviewed, updated, and re-approved every 5 years
- Milwaukee’s plan will expire June 16th

5-Year Plan Update Requirements

- Review recommended revisions from the review of the approved plan
- Follow Plan Maintenance Section of the approved plan; if different document the new process
- Evaluate, review, analyze and update each section of the plan

- Follow federal and state guidance
- Address any data deficiencies identified in the first plan
- Formally adopted by participating jurisdictions
- Approved by the State and FEMA

Things to Consider

- Goals and objectives still current
- Update data in the risk assessment
- Are there new floodplain maps?
- Include data on disasters that may have occurred since the initial plan
- Have hazards change? Any new hazards
- Have conditions changed
- Have priorities changed

- Have data deficiencies been addressed or do they still exist
- Do mitigation recommendations need to be revised or new ones added based on changed conditions
- Document progress on mitigation actions taken since last update
- Are there changes in levels of funding
- Implementation problems

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Exhibit B

CITY OF MILWAUKEE ALL HAZARD MITIGATION TASK FORCE

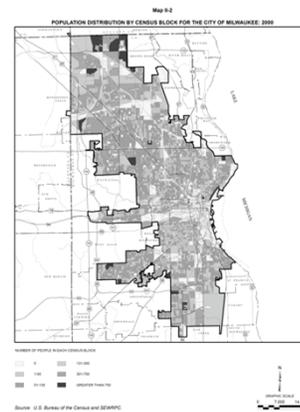
MARCH 30, 2011

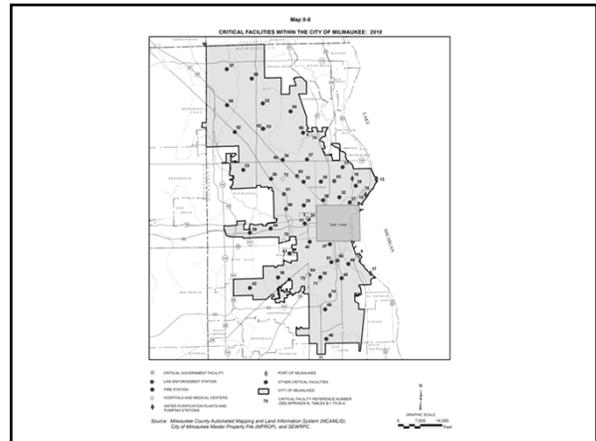
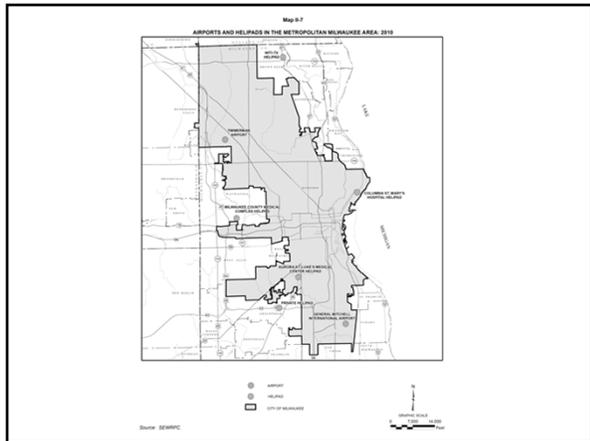
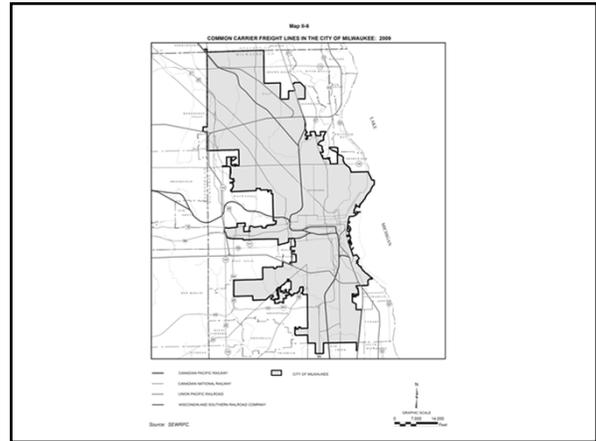
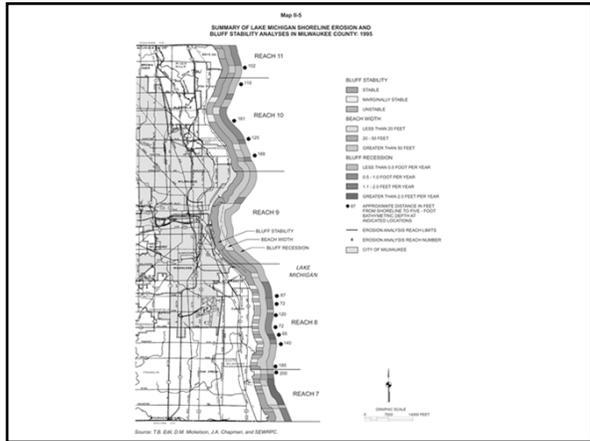
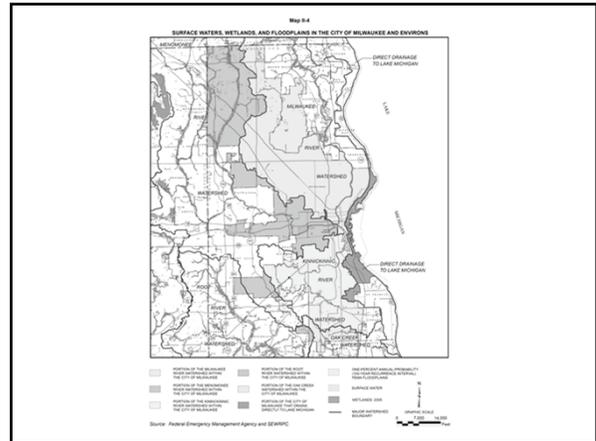
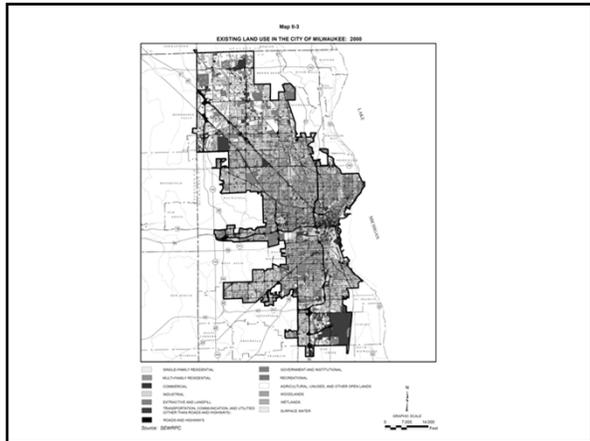


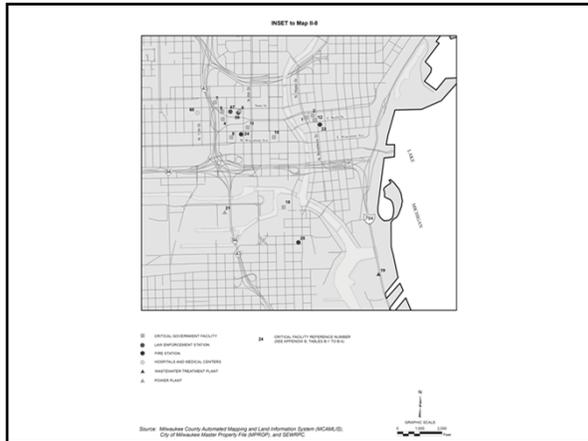
CHAPTER 1: INTRODUCTION AND BACKGROUND



CHAPTER 2: BASIC STUDY AREA INVENTORY







SUBMITTING COMMENTS OR DATA ON THE PLAN CHAPTERS:

SEWRPC website:
<http://www.sewrpc.org/SEWRPC/communityassistance/ProjectPlanningServices.htm>

or

Email: jboxhorn@sewrpc.org

City of Milwaukee 2010-2015 Mitigation Plan Update

Administrative Draft Comments:

COMMENTS AND REVISIONS
 COMMENTS AND REVISIONS
 COMMENTS AND REVISIONS

Working Drafts:

DRAFT
 DRAFT

Comments:

COMMENTS AND REVISIONS
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Final Draft Information:

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Exhibit C

Table II-1

HISTORICAL RESIDENT POPULATION LEVELS IN THE CITY OF MILWAUKEE: 1850-2000

Year	Population	Change from Preceding Census	
		Absolute	Percent
1850	20,061	--	--
1860	45,246	25,185	55.66
1870	71,440	26,194	36.67
1880	115,587	44,147	38.19
1890	204,468	88,881	43.47
1900	285,315	80,847	28.34
1910	373,857	88,542	23.68
1920	457,147	83,290	18.22
1930	578,249	121,102	20.94
1940	587,472	9,223	1.57
1950	637,392	49,920	7.83
1960	741,324	103,932	14.02
1970	717,099	-24,225	-3.38
1980	636,212	-80,887	-12.71
1990	628,088	-8,124	-1.29
2000	596,974	-31,114	-5.21
2010	594,833	-2,141	-0.36

Source: U.S. Bureau of the Census and SEWRPC.

Table II-2

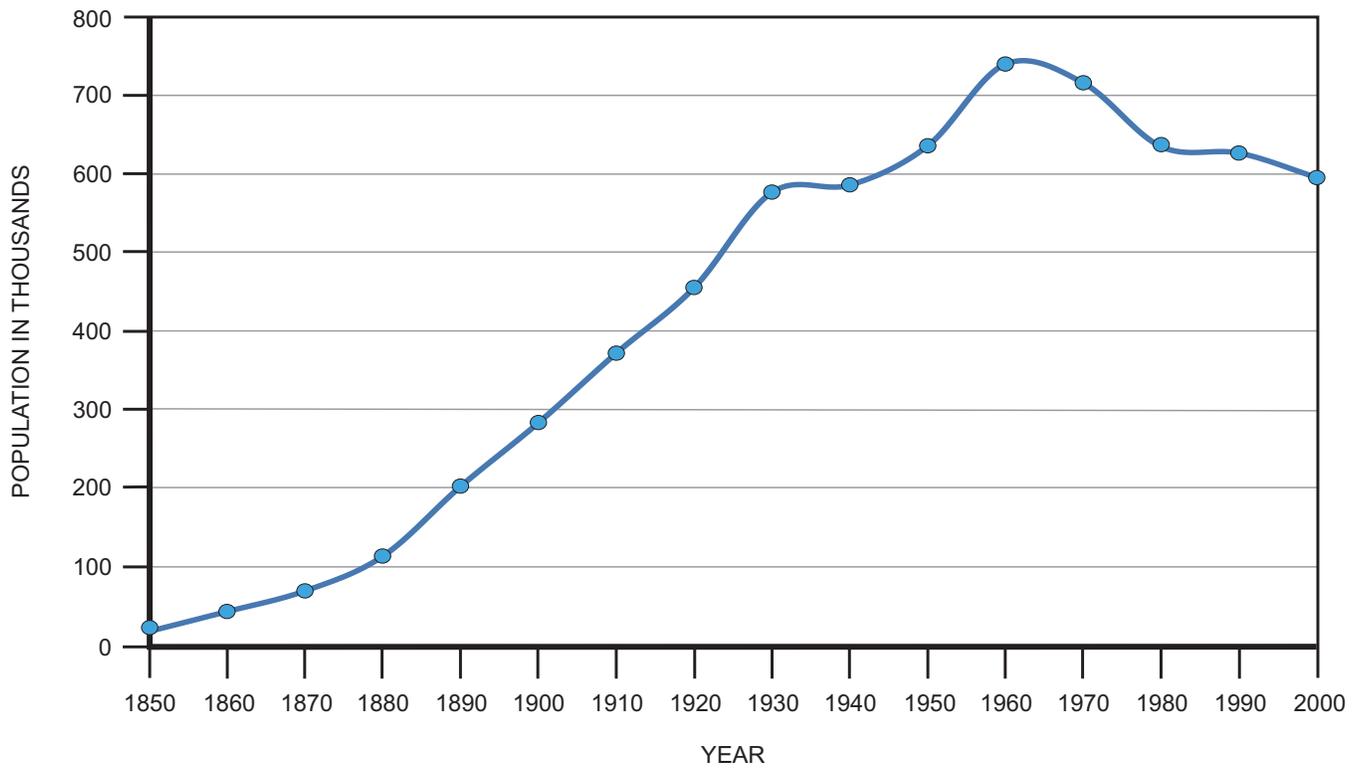
NUMBER OF HOUSEHOLDS IN THE CITY OF MILWAUKEE: 1970-2000

Year	Number of Households in the City of Milwaukee	Change from Preceding Census	
		Number	Percent
1970	236,981	--	--
1980	241,818	4,837	2.0
1990	240,540	-1,278	-0.5
2000	232,188	-8,352	-3.6
2010	230,221	-1,967	-0.8

Source: U.S. Bureau of the Census and SEWRPC.

Figure II-1

HISTORIC POPULATION LEVELS IN THE CITY OF MILWAUKEE: 1850-2000



Source: U.S. Bureau of the Census and SEWRPC.

Exhibit D

Table B-1

CRITICAL COMMUNITY FACILITIES FOR THE CITY OF MILWAUKEE: 2010

Number on Map II-8	Facility Name	Address	Municipality	2010 Assessed Value ^a
1	City Hall and the Office of the Mayor	200 E. Wells Street	Milwaukee	\$ 9,424,200
2	City Department of Public Works Municipal Building	841 N. Broadway Street Room 501	Milwaukee	22,647,600
2	City of Milwaukee Health Department City Municipal Building	841 North Broadway Street 3rd Floor	Milwaukee	22,647,600
3	Milwaukee County Department of Transportation and Public Works	2711 W. Wells Street 3rd Floor	Milwaukee	592,100
4	Milwaukee County Courthouse Office of the County Executive	901 N. 9th Street	Milwaukee	33,500,000
5	Milwaukee County Jail	949 N. 9th Street	Milwaukee	33,500,000
6	City of Milwaukee Municipal Court	951 N. James Lovell Street	Milwaukee	33,500,000
7	Milwaukee Secure Detention Facility- Wisconsin Department of Corrections	1015 N. 10th Street	Milwaukee	--
--	Milwaukee County Juvenile Detention Center	10201 Watertown Plank Road	Wauwatosa	--
8	Milwaukee Public Library-Central	814 W. Wisconsin Avenue	Milwaukee	10,840,000
9	Port of Milwaukee	2323 S. Lincoln Memorial Drive	Milwaukee	38,500,000
10	Henry S. Reuss Federal Plaza	310 W. Wisconsin Avenue	Milwaukee	24,877,800
11	Wisconsin State Office Building	819 N. 6th Street	Milwaukee	8,960,000
12	Milwaukee Water Works City Municipal Building	809 N. Broadway Room 406	Milwaukee	7,921,800
13	Linwood Avenue Station Water Purification Plant	3000 N. Lincoln Memorial Drive	Milwaukee	20,000,000
14	Howard Avenue Water Purification Plant	725 W. Howard Avenue	Milwaukee	31,519,000
15	North Point Pumping Station	2275 N. Lincoln Memorial Drive	Milwaukee	3,733,000
16	Riverside Pumping Station	1311 E. Chambers Street	Milwaukee	3,440,000
17	Texas Pumping Station	2900 E. Texas Avenue	Milwaukee	--
18	Milwaukee Metropolitan Sewerage District	260 W. Seeboth Street	Milwaukee	200,000
19	Jones Island Water Reclamation Facility-Veolia Water North America	700 E. Jones Street	Milwaukee	5,250,400
--	South Shore Wastewater Treatment Plant	8500 S. 5th Street	Oak Creek	--
20	American Red Cross	2600 W Wisconsin Avenue	Milwaukee	994,200
--	Milwaukee County Power Plant (We Energies)	9250 W. Watertown Plank Road	Wauwatosa	--
--	Oak Creek Power Plant (We Energies)	4801 E. Elm Road	Oak Creek	--
21	Valley Power Plant (We Energies)	1035 W. Canal Street	Milwaukee	32,732,000
--	Falk Landfill	13th Avenue North of Rawson	South Milwaukee	--
--	Veolia ES Emerald Park Landfill	W124 S10629 124th Street	Muskego	--
--	Waste Management-Metro Recycling & Disposal	10712 S. 124th Street	Franklin	--
--	Waste Management-Orchard Ridge Recycling & Disposal	W124 N9355 Boundary Road	Menomonee Falls	--
22	Waste Management Transfer Station	6710 N. Industrial Road	Milwaukee	--
75	Milwaukee Intermodal Station	433 W. Saint Paul Avenue	Milwaukee	
76	MCTS Hillside Administration Facility	1942 N. 17th Street	Milwaukee	
77	MCTS Hillside Fleet Maintenance Facility	1525 W. Vine Street	Milwaukee	
78	MCTS Fond du Lac Bus Garage	3343 W. Fond du Lac Avenue	Milwaukee	
79	MCTS Fiebrantz Bus Garage	1900 W. Fiebrantz Avenue	Milwaukee	
80	MCTS Kinnickinnic Bus Garage	1710 S. Kinnickinnic Avenue	Milwaukee	
81	MCTS Downtown Transit Center	909 E. Michigan Avenue	Milwaukee	

^aCurrent assessment value of improvements based on [2010 Milwaukee Properties Master file \(MPROP\)](#).

^bUnknown Web addresses.

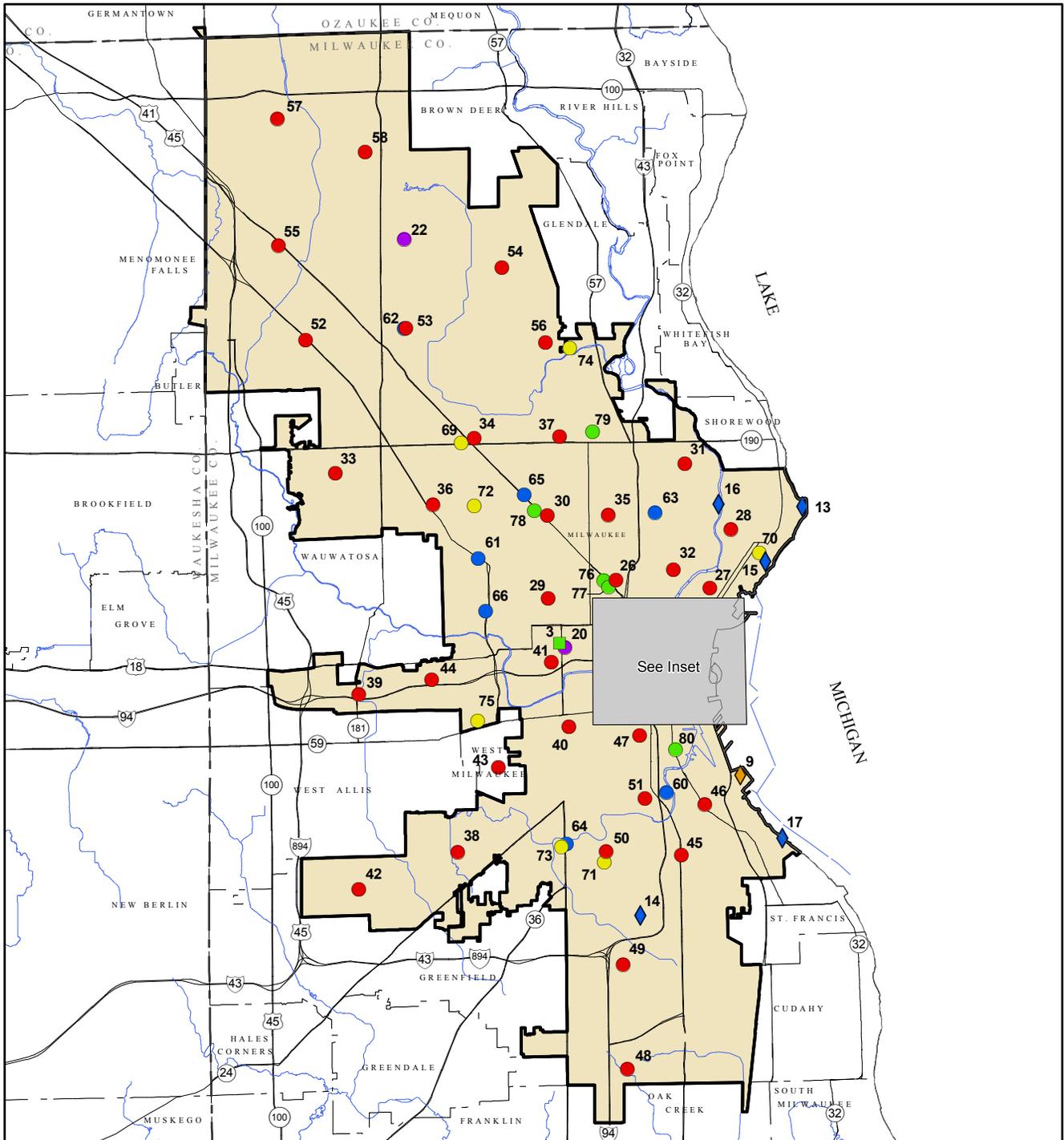
Source: City of Milwaukee, Milwaukee County, Milwaukee Green Map, and SEWRPC.

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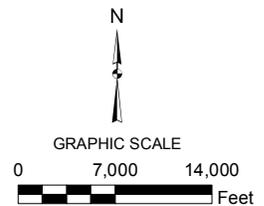
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Map II-8

CRITICAL FACILITIES WITHIN THE CITY OF MILWAUKEE: 2010

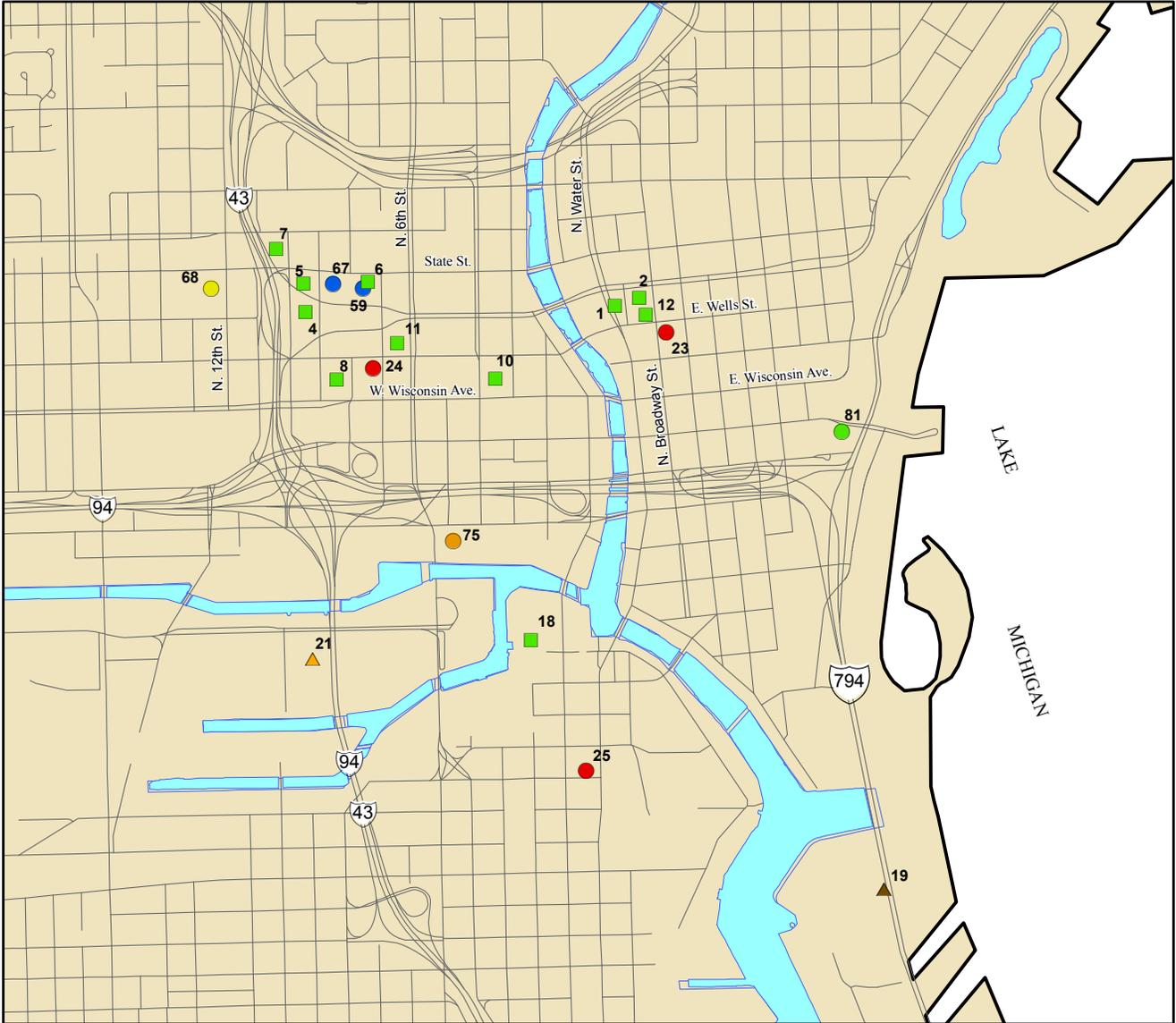


- CRITICAL GOVERNMENT FACILITY
- LAW ENFORCEMENT STATION
- FIRE STATION
- HOSPITALS AND MEDICAL CENTERS
- MILWAUKEE COUNTY TRANSIT SYSTEM FACILITY
- ◆ WATER PURIFICATION PLANTS AND PUMPING STATIONS
- OTHER CRITICAL FACILITIES
- CITY OF MILWAUKEE
- 75 CRITICAL FACILITY REFERENCE NUMBER (SEE APPENDIX B, TABLES B-1 TO B-4)



Source: Milwaukee County Automated Mapping and Land Information System (MCAM LIS), City of Milwaukee Master Property File (MPROP), and SEWRPC.

INSET to Map II-8



- CRITICAL GOVERNMENT FACILITY
- LAW ENFORCEMENT STATION
- FIRE STATION
- HOSPITALS AND MEDICAL CENTERS
- MILWAUKEE INTERMODAL STATION
- MILWAUKEE COUNTY TRANSIT SYSTEM FACILITY
- ▲ WASTEWATER TREATMENT PLANT
- ▲ POWER PLANT

24 CRITICAL FACILITY REFERENCE NUMBER
(SEE APPENDIX B, TABLES B-1 TO B-4)



GRAPHIC SCALE



Source: Milwaukee County Automated Mapping and Land Information System (MCAMLIS),
City of Milwaukee Master Property File (MPROP), and SEWRPC.

Exhibit E

Summary of Hazard and Vulnerability Assessment Tool Results

Methods

The assessment tools were completed at the March 30, 2011 meeting of the City of Milwaukee Hazard Mitigation Steering Committee, with 11 surveys being returned and analyzed. For each hazard in each survey, a risk was computed using the formula:

$$\text{Risk(in \%)} = [(\text{Probability}/3) \times (\text{Human impact} + \text{Property impact} + \text{Business impact} + \text{Preparedness})/(4*3)] * 100$$

Where Probability (likelihood that an event would occur), Human impact (possibility of death or injury), Property impact (physical losses and damages), Business impact (interruption of services), and Preparedness (preplanning) were each assigned a number from 0 to 3, with 0 indicating “not applicable”, 1 indicating low, 2 indicating moderate, and 3 indicating high.

The interpretation of the result returned by this formula is that the perceived threat increases with increasing percentage risk.

For each hazard, an average risk was calculated using the results of all the returned surveys. The hazards were then ranked by average risk, with a rank of 1 indicating the highest perceived risk. For each hazard, minimum and maximum risks were calculated. The results from the assessment tool were analyzed for 39 hazards.

In order to assess the degree of agreement among Steering Committee members in the assessment of average risk, the interquartile range was calculated for each hazard. This quantity indicates the range of the half of the responses that are in middle. A smaller interquartile range indicates greater agreement among Task Force members as to the level of risk, while a larger interquartile range indicates less agreement.

Results

The results from the assessment tool are summarized in Table 1. The average level of risk for hazards ranged from 12.1 percent for the lowest ranked hazard (earthquake) to 67.2 percent for the highest ranked hazard (stormwater flooding). The seven highest average risks belonged to natural hazards related to meteorological causes, mostly causes associated with either winter weather or severe storms. The remaining three of the 10 highest average risks belong to technological or human-induced hazards. The interquartile ranges for the 10 hazards with the highest average risks tended to be relatively large, indicating a diversity of opinion among Steering Committee members as to the level of risk posed by each of these hazards. In some instances, such as the hazards posed by stormwater flooding, riverine flooding, and ice storms there was general agreement among Steering Committee members that the risk was relatively high, but disagreement as to just how high.

The 10 lowest average risks belonged to hazards related to a variety of causes, including technological or human-induced hazards related to land use, natural hazards related to geological events, natural hazards related to meteorological events, and hazards related to human behavior. The interquartile ranges for the 10 hazards with the lowest average risks tended to be low, indicating strong agreement among Steering Committee members as to the level of risk posed by each of these hazards.

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MGH/JEB/pk
04/19/11

Table 1

PERCEIVED RISKS OF HAZARDS AS DETERMINED BY HAZARD AND VULNERABILITY ASSESSMENT TOOL: 2011

Event	Minimum (percent) ^a	Maximum (percent) ^a	Average (percent) ^a	Interquartile Range (percent) ^b	Rank
A1. Riverine flooding	13.9	75.0	42.9	35.4	6.5
A2. Stormwater flooding	33.3	91.7	67.2	14.3	1
A3. Tornado or high straight-line wind event	25.0	91.7	45.5	26.4	4
A4. Earthquake	0.0	33.3	12.1	20.8	39
A5. Lake Michigan coastal erosion	8.3	50.0	21.7	16.7	34.5
A6. Snow storm	33.3	58.3	42.9	16.7	6.5
A7. Blizzard or extreme snowfall	33.3	75.0	47.7	27.8	2
A8. Ice storm	33.3	83.3	46.2	19.5	3
A9. Extreme heat	11.1	50.0	28.0	25.0	23
A10. Extreme cold	13.9	34.6	23.6	21.5	28
A11. Lightning	13.9	83.3	34.9	22.9	14
A12. Thunderstorm	27.8	83.3	43.4	15.6	5
A13. Hail	5.6	44.4	31.6	21.5	19
A14. Fog	0.0	50.0	33.1	28.5	16
A15. Drought	0.0	50.0	21.7	23.6	34.5
A16. Dust storm	0.0	41.7	14.7	18.8	38
B1. Contamination or loss of water supply	13.9	44.4	23.5	4.9	29
B2. Loss of sewerage system	0.0	44.4	20.7	5.6	36
B3. Loss of telecommunication	13.9	44.4	27.8	22.2	24.5
B4. Electrical system outage	13.9	66.7	38.1	40.2	11
B5. Computer system incident/cyber attack	0.0	66.7	30.3	33.3	20
C1. Hazardous materials railroad incident	13.9	61.1	30.1	23.6	21
C2. Hazardous materials roadway incident	13.9	91.7	36.6	25.0	13
C3. Hazardous materials pipeline incident	0.0	61.1	22.2	7.6	32
C4. Hazardous materials fixed facility incident	16.7	55.6	32.1	27.1	18
D1. Aircraft transportation accidents	16.7	50.0	27.8	10.4	24.5
D2. Roadway transportation accidents	13.9	66.7	38.8	12.2	10
D3. Railway transportation accidents	11.1	66.7	28.3	19.4	22
E1. Correctional center incident	0.0	33.3	18.2	10.4	37
E2. Civil unrest	0.0	30.6	23.0	5.6	30
E3. Terrorism incident	19.4	50.0	27.5	4.9	26
E4. Biological contaminants (anthrax, smallpox, etc.)	13.9	25.0	22.0	4.9	33
E5. Workplace violence	13.9	75.0	28.9	37.5	9
E6. School violence	13.9	66.7	36.9	22.2	12
F1. Communicable disease outbreak or epidemic	13.9	75.0	32.3	25.7	17
G1. Major fire	16.7	66.7	41.2	31.9	8
G2. Explosion	11.1	50.0	34.6	26.4	15
G3. Mass casualty incident	13.9	50.0	24.2	7.6	27
G4. Building collapse or cave-in	11.1	44.4	22.5	14.6	31

^aPerceived threat increases with percentage.

^bInterquartile range acts as a measure of agreement upon the perceived level of threat with a smaller interquartile range indicating stronger agreement and a larger interquartile range indicating weaker agreement.

Source: SEWRPC.