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Resource Guide to All Hazards Mitigation Planning in Wisconsin

A Guide and Model for Preparing a Local Government and Tribal Organization All Hazards Mitigation Plan

Prepared By the Association of Wisconsin Regional Planning Commissions through funding provided by the State of Wisconsin Department of Military Affairs, Wisconsin Emergency Management and the Federal Emergency Management Agency

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- What Hazards Face Wisconsin ?
- What are Critical Facilities?
- What Federal and State Grants are Available?
- What are Repetitive Loss Structures?
- What Wisconsin Hazard Has Claimed the Most Lives?
- What Wisconsin Hazard Has Claimed the Greatest Loss to Property?
- What are the Components of an All Hazards Mitigation Plan?

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Resource Guide Purpose

This Resource Guide was developed in response to the passage of the Disaster Mitigation Act of 2000 (DMA2K). This Act put a National priority on hazard mitigation by requiring the preparation of state, local and tribal organization All Hazards Mitigation Plans in order to be eligible for Federal Emergency Management Agency (FEMA) mitigation grant programs. This Guide's purpose is to promote All Hazards Mitigation Planning in Wisconsin by providing resource and guidance information to assist local governments and tribal organizations to prepare All Hazards Mitigation Plans and to access the funding programs available.

All Hazards Mitigation Planning

Almost weekly we hear and read news reports about the destruction and turmoil caused by tornadoes, flooding, wildfires, and severe thunderstorms. These, and many other forms of hazard events, coupled with increasing population growth and development activity, have caused public and private expenditures on hazard recovery activity to increase substantially. From 1993 through 2000 the Federal Emergency Management Agency has spent more than \$20 billion in over 5,000 counties on disaster recovery. Growing costs are due in large part to the fact that more development stands in harm's way than ever before.

Hazard mitigation planning is the process of developing a set of actions designed to reduce or eliminate long-term risk to people and property from hazards and their effects.

The rising costs associated with hazard recovery activity have led to placing a much greater emphasis on dealing with hazards before they occur

through hazard mitigation planning. Hazard mitigation planning is the process of developing a set of actions designed to reduce or eliminate long-term risk to people and property from hazards and their effects. This definition distinguishes actions that have a long-term impact from those that are more closely associated with immediate preparedness, response, and recovery activities.

Breaking the Cycle. Hazard mitigation planning is the only phase of emergency management planning specifically dedicated to breaking the cycle of damage, reconstruction, and repeated damage. Hazard mitigation planning focuses on resources and actions that produce successive benefits over time by undertaking planned mitigation actions today to reduce human suffering and the demand for even more money after future disasters. Ideally hazard mitigation planning and projects should occur before disasters occur. The awarding of post disaster financial assistance, however is often what makes it possible to undertake major hazard mitigation projects.



Devastation from the Siren tornado that hit during the summer of 2001 is shown above. Over \$777 million (not adjusted for inflation) in state and federal assistance has been expended in Wisconsin to assist in the recovery from natural hazards since 1971. During the 1990's hazard related expenses increased 150% over the previous two decades.

The Disaster Mitigation Act of 2000 requires that natural hazards such as tornadoes, flooding, wildfires and severe thunderstorms, etc. be addressed in local government and tribal organizations All Hazards Mitigation Plans. Addressing manmade hazards such as hazardous material spills, civil disturbances, terrorism, transportation and nuclear power plant hazards, etc. is encouraged but is not required at this time.



Eighty-one car train derailment and propane gas fire in Weyauwega, 1996.

The Disaster Mitigation Act of 2000 – DMA2K

In an attempt to stem the losses from disasters, reduce future public and private expenditures and to speed up response and recovery from disasters the U.S. Congress passed the Disaster Mitigation Act of 2000 (DMA2K). This Act (Public Law 106-390) signed into law on October 30, 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The following is a summary of the parts of DMA2K that pertain to local governments and tribal organizations.

1. The Act establishes a new requirement for local governments and tribal organizations to prepare an All Hazards Mitigation Plan to be eligible for funding from FEMA through the Pre-Disaster Mitigation Grant Program, Flood Mitigation Assistance Program and the Hazard Mitigation Grant Program.
2. The Act establishes a requirement that natural hazards such as tornadoes, floods, wild fires, and severe thunderstorms need to be addressed in the risk assessment and vulnerability analysis parts of the All Hazards Mitigation Plan. Addressing manmade hazards such as hazardous material spills, civil disturbances, terrorism, transportation and nuclear power plant hazards is encouraged to be included, but is not required to be part of the All Hazards Mitigation Plan.
3. The Act authorizes up to seven percent of Hazard Mitigation Grant Program funds available to a state after a federal disaster to be used for development of state, local and tribal organization All Hazards Mitigation Plans.
4. The Act has a provision for states to receive a five percent increase in Hazard Mitigation Grant Program funds if at the time of the declaration of a major disaster the state has an enhanced state mitigation plan that meets the requirements of DMA2K.
5. The Act establishes November 1, 2004 as the date by which local governments and tribal organizations are to prepare and adopt their respective plans in order to be eligible for the FEMA Hazard Mitigation Grant Program and November 1, 2003 Pre-Disaster Mitigation Program.
6. If a plan is not prepared by November 1, 2004, and a major disaster is declared, in order for a local government or tribal organization to be eligible to receive funding through the Hazard Mitigation Grant Program they must agree to prepare an All Hazards Mitigation Plan within one year.
7. In addition, by not having an All Hazards Mitigation Plan local governments and tribal organizations cannot utilize funding through the Pre-Disaster Mitigation Grant Program.

The Benefits of All Hazards Mitigation Planning

All hazards mitigation planning provides many benefits to local governments and tribal organizations. Some of the more notable benefits a community will receive by undertaking all hazards mitigation planning include the following.

1. Protecting the health and safety of residents from the impacts of hazards. Hazard mitigation planning may save lives and prevent injury.
2. Planning grant funds are available to local governments and tribal organizations to help cover the costs in preparing All Hazards Mitigation Plans.
3. By having an approved All Hazards Mitigation Plan in place the Hazard Mitigation Grant Program (HMGP) can be more quickly accessed for funding a community hazard mitigation project identified in the plan if the project is consistent with state priorities and if funds are available.
4. Become eligible for FEMA 's Pre-Disaster Mitigation Grant (PDM) Program. By being eligible for this program a community can apply annually for hazard mitigation project grants.
5. Become eligible for FEMA 's Flood Mitigation Assistance (FMA) Program. By being eligible for this program a community can apply annually for flood related mitigation projects grants.
6. Retaining and attracting businesses to a community that is vulnerable to certain hazards will be more successful if a community can show it has a long range All Hazards Mitigation Plan designed to eliminate or reduce business losses from future hazards.
7. Improve a community's capacity to undertake large scale community development projects. Through the various FEMA grant programs mentioned above and other federal, state and local resources, communities have the ability to undertake major projects such as relocating a business district or residential area out of the floodplain and develop quality park, recreation, and

open space areas in its place. Constructing underground utilities is another example of a project that can occur after a severe wind storm or tornado.

8. Save taxpayer dollars. Hazard mitigation planning involves pursuing actions that are cost-effective and eliminate or reduce public expenditures on cyclical hazard related damages. From 1993 through 2000 FEMA has spent more than \$20 billion in over 5,000 counties on disaster recovery. Over \$777 million (not adjusted for inflation) in state and federal assistance has been expended in Wisconsin to assist in the recovery from natural hazards since 1971. During the 1990's hazard related expenses in Wisconsin increased 150% over the previous two decades. Undertaking hazard mitigation actions before disasters occur will reduce this outflow of public recovery dollars and save taxpayer dollars.

Coordinating All Hazards Mitigation Planning with Wisconsin's New Comprehensive Planning Law and Smart Growth Policies

Significant land use planning legislation was adopted in the 1999-2001 Wisconsin Biennial Budget and subsequent legislative amendments were made in May 2000 to this legislation. These laws mark the first major change to Wisconsin's land use laws in over 25 years. One of the key features of this legislation states that "Beginning on January 1, 2010 any program or action of a local governmental unit that affects land use shall be consistent with the local governmental unit's comprehensive plan...". The new law lists programs and actions that affect land use that need to be consistent with a comprehensive plan including such activities as incorporation, annexation, subdivision regulation, zoning ordinances, construction site erosion control ordinances, storm water management zoning, and agricultural preservation plans.

This law includes a list of 14 Smart Growth policies or actions for communities to include in their comprehensive plans. These 14 Smart Growth actions are listed on the side bar on the right. These policies will not only assist in providing for compatible and efficient land use but will also assist in mitigating losses from hazards.

Wisconsin's Nine Comprehensive Plan Elements and Concepts for Coordinating and Integrating with All Hazard Mitigation Planning. An All Hazards Mitigation Plan can be a stand alone plan or it can be incorporated into other plans, such as a commu-

nity's comprehensive plan, as long as all of the criteria are met. Wisconsin's new planning law includes a detailed description of nine elements that are to be included in a comprehensive plan. A list of the nine elements and some ideas on how to integrate All Hazard Mitigation Planning concepts into them are described below. These concepts are in addition to the required subject matter called for in State Statutes to address these elements. In addition, where to integrate the elements of a completed comprehensive plan into one of the five parts of an All Hazards Mitigation Plan as described on pages 5, 6, 7, and 8 are also provided below. Information that is collected for the comprehensive planning process can also be valuable in developing an All Hazards Mitigation Plan. For further information on Wisconsin's new comprehensive planning law and planning grants go to: www.doa.state.wi.us/olis.

1. **Issues and Opportunities Element.** Concepts for integrating All Hazards Mitigation Planning into this element: Include a summary of the major hazards the local government is most vulnerable to, and what it is proposing to do to mitigate future losses from the hazards.

Where concepts developed for this element may be integrated into an All Hazards Mitigation Plan: Part (1)(d), Part (2)(a), (2)(b), and (2)(c).
2. **Housing Element.** Concepts for integrating All Hazards Mitigation Planning into this element: Include an inventory and map of properties in the floodplain including repetitive loss structures. Include on the map any surveyed elevation points in residential areas to assist in preparing flood damage assessments. Map the location of mobile home courts due to their vulnerability to high winds. Determine the percentage of low and moderate income residences that are subject to flooding or other hazards. Make recommendations on residential design measures that can be undertaken to reduce hazard risks. Determine short term housing-shelter opportunities for hazard victims. Determine through a survey the percentage of floodplain (or other hazard area) homeowners that may be interested in a voluntary buyout and relocation program.

Where concepts developed for this element may be integrated into an All Hazards Mitigation Plan: Part (1)(d), Part (2)(b), (2)(c), Part (3)(c)(1)-(3)(c)(8), Part (4)(a)-(4)(e).

Wisconsin's Smart Growth Policies or Actions

The State has developed the following smart growth policies and actions they would like communities to include in their comprehensive plans. The State also provides incentives through grants, and has proposed a dividend aid program in the future for communities that do appropriately address these policies or actions in their plans.

1. Promotion of the redevelopment of lands with existing infrastructure and public services, and the maintenance and rehabilitation of existing residential, commercial, and industrial structures.
2. Encouragement of neighborhood designs that support a range of transportation choices.
3. Protection of natural areas, including wetlands, wildlife habitats, lakes, woodlands, open spaces, and groundwater resources.
4. Protection of economically productive areas, including farmland and forests.
5. Encouragement of land uses, densities and regulations that promote efficient development patterns, and relatively low municipal, state governmental, and utility costs.
6. Preservation of cultural, historic, and archaeological sites.
7. Encouragement of coordination and cooperation among nearby units of government.
8. Building of community identity by revitalizing main streets and enforcing design standards.
9. Providing an adequate supply of affordable housing for individuals of all income levels throughout each community.
10. Providing adequate infrastructure and public services, and an adequate supply of developable land to meet existing and future market demand for residential, commercial, and industrial uses.
11. Promoting the expansion or stabilization of the current economic base, and the creation of a range of employment opportunities at the state, regional, and local levels.
12. Balancing individual property rights with community interests and goals.
13. Planning and development of land uses that create or preserve varied and unique and urban and rural communities.
14. Providing an integrated, efficient and economical transportation system that affords mobility, convenience and safety and that meets the needs of all citizens, including transit-dependent and disabled citizens.

3. **Transportation Element.** Concepts for integrating All Hazards Mitigation Planning into this element: Identify any transportation routes or facilities that are more at risk during various hazard events such as winter storms, fog, high winds, flooding, hazardous material spills, etc. (make recommendations on how to mitigate risks on these routes and facilities); Identify transportation system improvements that can be made to accommodate disaster response; Describe and map any existing or proposed evacuation routes and signing needs.

Where concepts developed for this element may be integrated into an All Hazards Mitigation Plan: Part (1)(d), Part (2)(c), Part (3)(c)(1), (3)(c)(2), (3)(c)(3), (3)(c)(5), (3)(c)(6), (3)(c)(7), (3)(c)(8).

4. **Utilities and Community Facilities Element.** Concepts for integrating All Hazards Mitigation Planning into this element: Identify and map “critical facilities” such as shelters, schools, hospitals, police and fire stations, etc.; Identify any utilities—water, sewer, roads, storm sewer and community facilities that are more at risk during various hazard events such as winter storms, high winds, flooding, extreme temperatures, etc.; Make recommendation on how to mitigate these risks to utilities and facilities; Identify key contacts for critical facilities and services.

Where concepts developed for this element may be integrated into an All Hazards Mitigation Plan: Part (1)(d), Part (2)(c), Part (3)(c)(1), (3)(c)(2), (3)(c)(3), (3)(c)(5), (3)(c)(7), (3)(c)(8), Part (4)(a), (4)(b), (4)(c).

5. **Agricultural, Natural and Cultural Resource Element.** Concepts for integrating All Hazards Mitigation Planning into this element: Identify and map the floodway and flood fringe of the floodplain; Identify, and map if practical, any agricultural, natural, and cultural resource areas that are more at risk to various hazard events, such as winter storms, flooding, extreme temperatures, high winds, forest fires, etc.; Make recommendations on how to mitigate future losses to agricultural, natural, and cultural resources from these hazards.

Where concepts developed for this element may be integrated into an All Hazards Mitigation Plan: Part (1)(d), Part (2)(c), Part (3)(c)(1), (3)(c)(2), (3)(c)(3), (3)(c)(7), (3)(c)(8), Part (4)(a), (4)(b), (4)(c).

6. **Economic Development Element.** Concepts for integrating All Hazards Mitigation Planning into this element: Describe the impact past hazards have had on the planning areas economy, and what is being done to mitigate the effects of these hazards. Identify if any existing business or industry centers are subject to any hazards, and identify potential hazard mitigation measures to reduce their vulnerability. Make reference to flood hazard areas, or other hazard areas in the planning area that new or expanding businesses should steer away from, and identify locations in the planning area for new and expanding businesses to locate that are free from hazardous conditions. Make recommendations on how grant programs may be able to assist in the clean up and reuse of environmentally contaminated sites for commercial or industrial uses.

Where concepts developed for this element may be integrated into an All Hazards Mitigation Plan: Part (1)(d), Part (2)(b),(2)(c.), Part (3)(c)(7), (3)(c)(8), Part (4)(a), (4)(b), (4)(c).

7. **Intergovernmental Cooperation Element.** Concepts for integrating All Hazards Mitigation Planning into this element: Identify any intergovernmental police, fire, and rescue service sharing agreements that are in effect, or which may merit further investigation. Identify any intergovernmental hazard warning and communication system that is in effect or may merit further investigation. Point out that the detailed inventory research and mapping requirements in a countywide All Hazards Mitigation Plan provide good reference material to broker intergovernmental agreements on cost-sharing and resource pooling on government services and facilities.

Where concepts developed for this element may be integrated into an All Hazards Mitigation Plan: Part (1)(d), Part (3)(c)(9), Part (4)(c.), (4)(f), Part (5)(c).

8. **Land Use Element.** Concepts for integrating All Hazards Mitigation Planning into this element include: Describe how past hazards have impacted land use and what is being done or recommended to be done to mitigate nega-

tive land use impacts from hazards; Include as much elevation information on the land use and floodplain maps as practical to assist in flood damage assessments; Encourage the mapping and identification of all hazard areas, such as floodplains, hazardous material sites, steep slopes, and soils with limitations for building site development, and the identification of critical facilities and repetitive loss properties on one map and data sheet to facilitate hazard mitigation strategy development.

Where concepts developed for this element may be integrated into an All Hazards Mitigation Plan: Part (1)(d), Part (2)(a), (2)(b), Part (3)(c)(7), Part (4)(a), (4)(b), (4)(c.), (4)(d), (4)(e)

9. **Implementation Element.** Concepts for integrating All Hazards Mitigation Planning into this element include: Have any Hazard Mitigation programs, goals, and actions identified in elements 1-8 above included in with this element. If an All Hazards Mitigation Plan has been prepared prior to a comprehensive plan include the goals, projects, and actions included in the All Hazards Mitigation Plan “action plan” in this element.

Where concepts developed for this element may be integrated into an All Hazards Mitigation Plan: Part (1)(d), Part (4)(b), (4)(c).

*Floods,
Thunderstorms &
High Winds, and
Tornadoes cause the
greatest property
damage in
Wisconsin.*

The Five Parts of a Local All Hazards Mitigation Plan

Local units of government and tribal organizations should address the following five parts when preparing an All Hazards Mitigation Plan. These parts are designed to address all of FEMA's local mitigation plan requirements. The model outline on page 7 and 8 illustrates in detail how to organize an All Hazards Mitigation Plan to address the following five parts.

Part (1) Planning Process

- (a) Describe and document the planning process used to develop the plan including how it was prepared, who (committees, organizations, departments, staff, consultants, etc.) was involved in the process, the local governments and/or tribal organizations involved, how the public was involved, the time period in which the plan was prepared, and who to contact to answer questions and make recommendations for future amendments to the plan.
- (b) Describe how the planning process provided an opportunity for the public to comment on the plan during the drafting stage and prior to the plan approval.
- (c) Describe how the planning process allowed for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development as well as business, academia and other private and nonprofit interests to be involved in the planning process.
- (d) Describe how the planning process reviewed and incorporated, if appropriate, existing plans, studies, reports, and technical information. The information and recommendations in the State of Wisconsin's Hazard Mitigation Plan, each county's hazard analysis, and any local comprehensive plans will assist greatly in developing a local mitigation plan, and are to be reviewed and incorporated where appropriate.

Part (2) Planning Area

Political or geographical features are used to define planning areas. Political boundary lines would include those areas included within town, village, city and county boundaries. Indian tribes would include the area within their tribal government boundaries. Due to the high number of local governments in a county, a county planning area will be varied. In some cases a county planning area may include some of the towns. In other cases it may include all of the towns. A county planning area could also cover all

the towns, villages and cities in the county if they participate and adopt the plan. Individual towns, villages, cities and tribes could also go it alone or team up with surrounding local governments and design planning area boundaries accordingly. Counties could also team up with surrounding counties and define a regional planning area boundary. Political boundaries being used by special purpose districts like sanitary, sewer or water districts could also be used to define a planning area boundary. Physical geography such as watersheds may also be used to define a planning area as well as long as each local unit of government in the watershed has participated in and adopts the plan. Community comprehensive plans often define a planning area as that area that a community is expected to grow into over a 10 to 20 year time period. All Hazards Mitigation Planning areas could, and in many cases should, be consistent with a community's comprehensive planning boundary.

- (a) Describe the geographical location and size of the planning area and the names and the geographical size of each town, village, city and tribal organization that are within the planning area. Multi-jurisdictional plans are encouraged as long as each jurisdiction has participated in the planning process and officially adopts the plan.
- (b) Document the changes in population, households or housing units and employment in the planning area over the past two decennial censuses—1990 and 2000. If there are more current and detailed data available for your planning area than the last two censuses, this data may be used instead.
- (c) Based on the above and any current comprehensive plans or land use inventory information provide a general description of land uses and development trends in the planning area.

Part (3) Risk Assessment

Risk assessment involves: identifying hazards, evaluating each hazard in terms of frequency and probability, then assessing a planning areas' vulnerability to each hazard in terms of magnitude, severity, exposure and consequences.

- (a) Identify all the types of natural hazards that can affect the planning area. Table 1 provides a listing of many natural hazards

Public Involvement Examples

The following are examples on how to involve the public during the various stages of the all hazards mitigation planning process.

Discovery Stage—Information gathering, problems and opportunities identification, resource identification, and making a definite decision to plan are activities needing public involvement. Some suggested public involvement examples could include:

- public information meeting
- household surveys
- workshops

Goals and Objectives Setting Stage—Identify the goals and projects needed to reduce vulnerabilities to hazards, and identify objectives needed to be undertaken to achieve the goals. Some suggested public input examples could include:

- public information meeting
- workshops
- focus groups
- newsletter
- household surveys

Plan Preparation Stage—Draft of the Plan is written tying together Discovery Stage information with Goals and Objectives Setting Stage. Timing and responsibilities are also assigned. Public involvement examples during this stage could include:

- public information meeting
- mailings
- newsletters
- web page
- workshops

Plan Adoption Stage—Revisions are made and the plan is formally presented to the local government for adoption consideration. Public involvement examples could include:

- public hearing
- written comment period
- website—E-mail

Plan Maintenance Stage—This stage involves implementing, monitoring, evaluating and updating the plan after adoption. All hazards mitigation plans are required to be updated every five years. Public involvement examples for this stage could include:

- public information meetings
- press releases
- newsletters
- web page

The Five Parts of a Local All Hazards Mitigation Plan Continued

in Wisconsin. This list may be modified to meet your planning area's unique situation. Table 2 is also provided if you want to include manmade and technological hazards in your risk assessment.

- (b) For each hazard that can affect the planning area identified in 3a the plan shall include information on previous occurrences of each hazard event and the probability of future events for each hazard.
- (c) For each hazard that was analyzed in 3a describe the planning areas' vulnerability to each hazard. This description of vulnerability should be in terms of:
- (1) A summary of each hazard and its impact on the community, the types and numbers of existing and future buildings, infrastructure and critical facilities located in the identified hazard areas. Critical facilities are defined as facilities that are critical to the health and welfare of the population, and are especially important following hazard events. Examples include shelters, schools, hospitals, police and fire buildings, and structures, etc.
 - (2) An estimate of the potential dollar losses to vulnerable structures identified in (3)(c)(1) above, and a description of the methodology used to prepare this estimate. See Tables 3 and 4.
 - (3) For those planning areas subject to flood hazards the plan shall describe the extent of flood depth and damage potential. Include estimates of the types and numbers of structures at risk, and the fair market value of the structures, if available. Table 3 on Page 13 describes one process on how to determine the extent of flood damage; another example is described on Page 9.
 - (4) For those planning areas subject to flood hazards the plan shall include a map and description of the existing flood hazard, the location of properties including repetitive loss properties, the identification of the flood risk, and discussion of past floods (A repetitive loss property is a property for which two or more National Flood Insurance Program losses of at least \$1000 each have been paid since 1978). FEMA has a listing of all repetitive loss structures in the State. (See the Resource Directory for contact information on repetitive loss structures.) A confidential separate section of the plan should be prepared that deals with the location, address, and ownership of repetitive loss properties to meet privacy requirements of the law.
 - (5) For those planning areas subject to flood hazards the plan should describe the impact of flooding on: infrastructure (sewer, water, roads, bridges, electrical systems, etc.), public health (deaths, injuries, sickness, well contamination, septic tank failures, etc.) and safety (police and fire costs, debris removal, etc.).
 - (6) For those planning areas subject to flood hazards the plan should describe the need and procedures for warning and evacuating residents and visitors from flood prone areas.
 - (7) For those planning areas subject to flooding hazards the plan should include a description of development needs including a discussion of redevelopment in the floodplains, watersheds, and natural resource areas. Include in this description how development and redevelopment in the floodplains, watersheds, and natural resources are addressed and regulated. The plan should reference and describe the provisions of applicable floodplain, shoreland, zoning ordinances and comprehensive plans.
 - (8) For those planning areas subject to flood hazards the plan should include a summary of the impact of flooding on the planning area and its economy. Transportation route interruptions, business/industry disruptions, farming impacts, public service interruptions, and tourism impacts are examples of activities to consider in this description.
 - (9) For plans covering more than one local government or tribal organization the risk assessment must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.



Dislocation of families from their homes is a common occurrence during flooding events. Dislocation costs are often times paid for by FEMA.

The Risk Assessment Process

The following are suggested steps to undertake a risk assessment process for a planning area and make use of Tables 1 and 2.

- Form an all hazards mitigation planning committee with broad representation within the planning area.
- Research and analyze past and potential hazard events.
- Based on this research have each committee member complete Table 1. Table 2 should be completed as well if the committee desires to conduct mitigation planning for manmade and technological hazards.
- Have the committee analyze the results of each member's table ratings.
- Reach a majority decision on hazards forming the highest risk in the planning area. To reach this decision other criteria may be added to Tables 1 and 2. The "Adjustment" column was inserted in these tables to facilitate this, but other criterion may also be added or subtracted to meet each planning areas unique characteristics.
- Hold a public information meeting on the committee's majority decision on which hazards they perceive as having the highest risks and why. This subject could be part of the planning process - "Discovery Stage", page 5, column 3. A public meeting notice indicating that a committee will be identifying a planning areas hazards that pose the highest risk will likely get citizen and media attention resulting in a good turnout.
- After the public meeting the committee may revise the hazard risk assessment priorities as they deem necessary
- Move on to Part 4, Mitigation Strategy, and develop goals and objectives that mitigate losses from the identified hazards.

Part (4) Mitigation Strategy

- (a) Develop mitigation goals for the planning area for each of the hazards identified in Part (3)(a) to reduce or avoid long-term vulnerabilities to these hazards. For those areas subject to flood hazards, this should include any local government's floodplain management goals.
- (b) Develop a comprehensive range of specific actions and projects that are consistent with the hazard mitigation goals identified in (4)(a) above. These actions and projects are to reduce the effects of each hazard with particular emphasis on buildings and infrastructure.
- (c) Develop an action plan on how the actions identified in (4)(b) above will be prioritized, implemented and administered by the local jurisdiction(s) in the planning area. Table 5 illustrates the details (what, who, costs, when) that need to be included in the action plan. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and associated costs.
- (d) For those planning areas subject to flood hazards include mitigation actions and projects that reduce flood risk and deal with repetitive loss structures.
- (e) For those planning areas subject to flood hazards include a goal and actions for maintaining compliance with the National Flood Insurance Program regulations.
- (f) For those planning areas covering more than one local government or tribal organization the actions and projects described in (4)(b) through (4)(e) above must be specific to the local government or tribal organization requesting WEM and FEMA approval or credit of the plan.

Part (5) Plan Maintenance Process and Adoption

- a) Describe the method and a schedule that will be used for monitoring, evaluating and updating the mitigation plan within a five-year cycle and how public participation will be sought in the plan maintenance process.
- b) Describe the process by which local government(s) and/or tribal organization(s) will incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.
- c) Provide documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the

plan (e.g., city council, village board, county board, town board, tribal council). For multi-jurisdictional plans each jurisdiction requesting approval of the plan must document that it has been formally adopted. Copies of a resolution or meeting minutes serve as sufficient adoption documentation, see Table 6 for example of a resolution.

All-Hazards Mitigation Plan Model Outline.

The following is an example of a model outline or Table of Contents that coincides with The Five Parts of a Local All-Hazards Mitigation Plan described earlier. The **bold** headings would comprise the captions used in the table of contents of the plan, and the *italics* text is a descriptive statement on some of the information to be included within that section of the plan.

1. INTRODUCTION**A. PURPOSE OF THE PLAN**

Provide a general description of the purpose of the plan and what is included in the plan.

B. PLANNING PROCESS

Description of the planning process including an identification of the counties and municipalities included in the plan, agency/organization/committee responsible for overseeing the development of the plan, public involvement and input process, and coordination with other plans.

2. PLANNING AREA**A. GENERAL GEOGRAPHY**

Describe the geographical location and size of the planning area, and the names and geographical size of each town, village and city within the planning area.

B. DEMOGRAPHIC & ECONOMIC PROFILE

Document the current demographic and economic characteristics of the planning area, including the change that has occurred during the last two decennial periods.

C. GENERAL DEVELOPMENT PATTERN

Describe the current land use and development pattern and general development trends.

3. RISK ASSESSMENT**A. HAZARD IDENTIFICATION**

Identify each of the hazards affecting the planning area that will be addressed in the plan.

B. RISK & VULNERABILITY ASSESSMENT

Complete the following risk and vulnerability assessment steps independently for each of the hazards identified in 3.A.

The following is a suggested outline for the Flood Risk and Vulnerability Assessment Section of the Table of Contents, Part 3. This is provided due to the more detailed analysis needed for floods.

Flood Risk and Vulnerability Assessment

- A. **Flood Hazard Characteristics.** *Describe the past history of flooding, impacts from flooding and probability of future floods.*
- B. **Flooding impact on health and public safety.** *Describe any deaths, injuries, sickness, well contamination, septic tank failures, sewer backups, etc. that may have occurred from flooding. Also describe flooding impacts on police, fire and rescue operations and debris removal issues, etc.*
- C. **Description and Map of Flood Hazard Areas and Location of Repetitive Loss Properties.** *The total number of repetitive loss structures and their total value is all that should be mentioned in the plan. A separate confidential section discussing a specific property's address, location, and value should be prepared to respect the privacy of property owners.*
- D. **Extent of Flood Depth and Damage Potential to Buildings, Infrastructure and Critical Facilities.**
- E. **Estimate of the Types and Numbers of Structures at Risk, and the Fair Market Value of the structures.** *See Flood Risk Assessment Process, Table 3 and Page 9.*
- F. **Flood Warning and Evacuation Procedures.** *Describe any flood warning and evacuation needs and procedures for warning and evacuating residents and visitors from flood prone areas.*
- G. **Impact of Flooding on the Economy.** *Provide a summary of flooding on the planning area and its economy. Transportation route interruptions, business/industry disruptions, farming impacts, public service interruptions and tourism impacts are examples of activities to consider.*

1. Risk Assessment

Document the history and impact of the hazard's occurrence in the planning area and probability of future occurrence.

2. Vulnerability Assessment

Assess the area's vulnerability to the hazard including the following steps:

- a. Identify, and map if possible, the type and number of buildings, infrastructure, and critical facilities at risk from the hazard.
- b. Estimate the potential dollar losses to the buildings, infrastructure, and critical facilities that are at risk from the hazard.
- c. The side bar on Page 7 illustrates a suggested way to organize the flood risk and vulnerability assessment section of the Table of Contents.

4. MITIGATION STRATEGY**A. MITIGATION GOALS**

For each hazard identified in 3.A. develop mitigation goals that reduce or avoid long-term vulnerabilities to the identified hazard.

B. MITIGATION ACTIONS AND PROJECTS

Develop a comprehensive range of actions and projects for each hazard that are consistent with the hazard mitigation goals in 4.A. above.

C. MITIGATION ACTION PLAN

Develop an action plan on how the mitigation actions identified in 4.B. above will be prioritized, implemented and administered by the local jurisdictions in the planning area. An action plan is to spell out in detail what the local government and/or tribal organization is going to do to mitigate future losses from each hazard. It identifies what is going to be done, and when its going to be done, and who is going to do it. Table 5 illustrates what an action plan should look like.

5. PLAN MAINTENANCE AND ADOPTION PROCESS**A. PLAN MAINTENANCE**

Describe the method and schedule that will be used to monitor, evaluate, review progress, make revisions and update the Mitigation Plan within a five year cycle and how public participation will be sought in this plan maintenance process.

B. PLAN COORDINATION

Describe the process by which local governments and/or tribal organizations will incorporate the requirements of the mitigation plan into other planning mechanisms.

C. PLAN APPROVAL PROCESS

Describe and document how the plan was formally adopted by the governing bodies within the planning area.

D. ADOPTION RESOLUTIONS

Include signed copies of resolutions adopting the plan.

Hazard Mitigation Goal Setting and Implementation

The Disaster Mitigation Act of 2000 calls specifically for All Hazards Mitigation Plans to include goals, actions, projects and an action plan. The following is a brief overview of how to develop, integrate and coordinate these aspects into the plan.

Setting Goals. All Hazards Mitigation Planning goals should describe a desired condition to be achieved or an end result to strive for. Some characteristics of goals are: *Specificity*, a goal should be understandable; *Measurable*, a goal should be stated in such a way that it is clearly understood when it is met; *Achievable*, a goal should be written with the capabilities of those that set it; *Compatible*, a goal should be compatible with other goals and with the organization that established it.

Actions and Projects. The words, actions and projects as used in the DMA2K federal regulations are interpreted to mean actions and projects local governments or tribal organizations desire to undertake to achieve their goals. These actions and projects should have the same characteristics as goals by being specific, measurable, achievable and compatible. In addition the actions and projects should be tactical. Actions and projects are tactical if they comprise the four characteristics mentioned above but also identify a responsible party to undertake it, a time table and the resources needed to accomplish the action or project. Putting goals, actions and projects into an action plan as shown in Table 5 illustrates how to achieve a tactical All Hazards Mitigation Plan.



In the summer of 1993, Wisconsin experienced some of the worst flooding in over 30 years. A Presidential Major Disaster Declaration was made for 47 counties in the state and the total associated damage exceeded \$740 million.



Mississippi River Flooding in Fountain City, 2001: Property damages of over \$315 million and crop damages of over \$227 million were incurred from flooding in Wisconsin from January of 1993 through June of 2000

Conducting a Flood Risk Assessment With Limited Elevation Information

Table 3 provides an explanation of how to conduct a flood risk assessment when elevation data in a floodplain is available. Many communities however do not have this elevation information and therefore cannot utilize FEMA's flood loss estimation tables that rely on first floor elevation data. In this situation, it is suggested you use what information that you do have to develop flood loss estimates. For example, you may have information on past flood events to help in determining what structures are most impacted by flooding. Collecting current assessed values on these structures can give you an approximation of what your potential flood losses may be. Inventorying the number and type of structures in your community's floodplain boundary can also be conducted if your community has a floodplain map. Applying assessed values to these structures is an additional step that can be taken to identify in your plan what your flood risks are. Many floodplains are relatively flat so if you know what elevation the regional flood is and what its impact was on one structure similar impacts can be assumed to occur to other similar structures in the area. The Disaster Mitigation Act of 2000 regulations state that a community's vulnerability to a given hazard "should" be in terms of the number and type of structures and dollar losses. The word "should" was obviously used due to the fact that this information is not available in all communities. The State of Wisconsin would like communities to determine the extent of their flood risk and other hazard risks based on information they have available to them when they are preparing their plan, which will vary from one community to the next.

Design Wind Speed for Community Shelters

The map on the right illustrates design wind speeds set forth by the American Society of Civil Engineering (ASCE) for building community shelters. If your community is located south of a line drawn approximately between St. Croix Falls and Green Bay you can see that you are located in Zone 4 which is associated with design winds speeds of 250 mph. There are two design wind speed zones north of this line with 200 and 160 mph structural standards for community shelters. Using hazard mitigation construction techniques such as structural bracing, anchoring manufactured homes and car ports, using laminated or impact resistant glass, constructing reinforced entry ways, and using interlocking roof shingles can reduce damages and public expenditures associated with high winds.



The leading cause of forest fires and wildfires is the burning of brush, debris, and other working fires. The drought of 1976 created the most severe fire conditions since the 1930's.



There are 15 counties in Wisconsin that are at risk to coastal hazards. Flooding is the most serious coastal hazard for Southern Kenosha County and the Western Shore of Green Bay to the Michigan State line.



Tornadoes are measured using the Fujita Severity Scale which ranges from F0 (40-72 mph) to F5, (261-318 mph) The Barnveld tornado of June 1984 was the costliest tornado to ever hit Wisconsin. Classified as an F5 tornado, it caused \$40 million in damage, killed nine people, and injured 200. Some of the damages from the F3 Siren tornado in 2001 are shown above.



Excessive heat caused the greatest amount of hazard related deaths in Wisconsin from January of 1993 through June of 2000. During this period 97 deaths were reported. This number makes heat waves the most deadly hazard in Wisconsin. That is 4 times the number of deaths from the second most deadly hazard in Wisconsin, tornadoes.

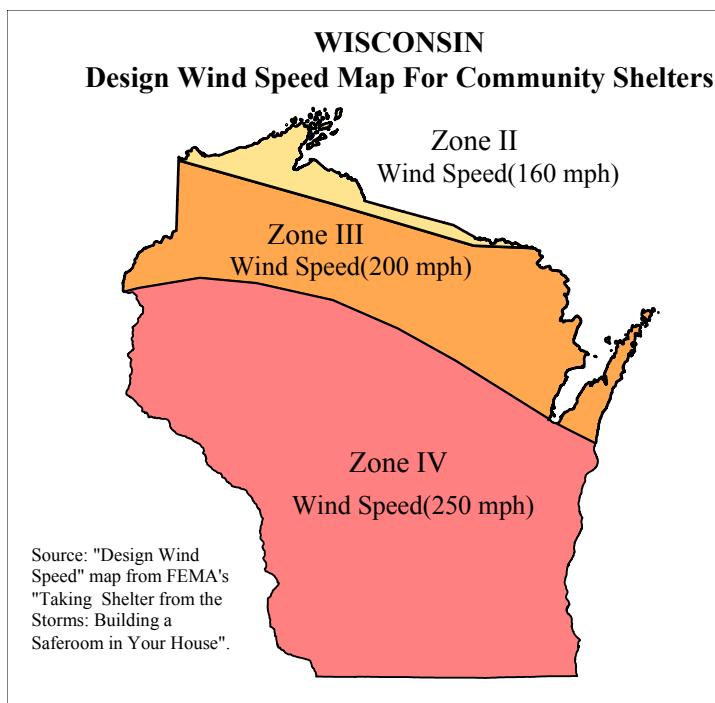


TABLE 2
Manmade and Technological Hazard Identification and Risk Assessment Matrix
 Name of Community or Planning Area _____

For each hazard your community or planning area is vulnerable to in column one, assign a risk rating of 1-low, 2-medium, or 3-high for each of the risk assessment criterion (columns two through ten). Totalling each hazard's row should give you an appreciation of what hazards form the highest risk. This table is provided as a tool to help local governments and tribal organizations analyze their risks and should not be construed as a precise way for determining these risks. See the directions on Page 12 for further assistance in completing this table.

1 Hazard Identification	2 Hazard Frequency Frequency of past hazard occurrences 1 2 3	3 Hazard Probability Probability of hazard occurring in the future 1 2 3	4 Health & Public Safety Degree of past hazard events causing injuries, sickness and/or deaths 1 2 3	5 Home Damage Degree of past hazard events causing critical or catastrophic damage to homes 1 2 3	6 Business Disruption Degree of past hazard events causing critical or catastrophic damage to business and/or interruption of business trade 1 2 3	7 Public Expenditures Amount of local, state, & federal funds expended on past hazard recovery activities 1 2 3	8 Magnitude of Population At Risk Amount of population still vulnerable to injury, sickness, and/or death from hazard 1 2 3	9 Magnitude of Homes At Risk Amount of homes still vulnerable to critical or catastrophic damage from hazard 1 2 3	10 Magnitude of Businesses At Risk Amount of businesses still vulnerable to critical or catastrophic damage or interruption of business trade 1 2 3	11 Adjustment	12 Risk Assessment Rating Total
MANMADE AND TECHNOLOGICAL HAZARDS											
Civil Disturbances											
Correction Center Incident											
Terrorism											
Workplace Violence											
School Violence											
HAZMAT Fixed Facility											
HAZMAT Railway											
HAZMAT Roadway											
HAZMAT Waterway											
HAZMAT Pipeline											
HAZMAT Aircraft											
Transportation Railway											
Transportation Roadway											
Transportation Waterway											
Transportation Airway											
Communicable Diseases											
Contaminants (anthrax etc)											
Structural Fire											
H ₂ O Supply Contamination											
Loss of Sewer System											
Loss of Electrical System											
Nuclear Power Plant											

HAZMAT = Hazardous Material

Directions for Using Tables 1 and 2.

Tables 1 and 2 are provided as an example of the types of hazards to plan for and the type of criteria that can be used to evaluate the risks of each hazard.

Columns 2-11 provide a sample of set of criteria that are designed to assist in determining which hazards pose the highest risks to local governments or tribal organizations. This set of criteria may be modified to meet a given planning area's circumstances. A low, medium or high numerical rating of 1,2, or 3 respectively is assigned to each criterion, and then each hazard row is totaled. The hazards with the highest rating in column 12 should be the hazards posing the highest risk to a planning area. Tables 1 and 2 should not be construed as a precise method for determining hazard risks; rather it should be used to assist in reaching a consensus on which hazards pose a higher risk. The requirements of a "Risk Assessment" are outlined on Pages 5 and 6. The right side bar on Page 6 outlines how to integrate "Risk Assessment" into the planning process.

The following describes how to complete Tables 1 and 2.

Column 1, Hazard Identification. Column 1 in Table 1 provides a listing of natural hazards that have occurred in Wisconsin. All Hazards Mitigation Plans are required to address natural hazards. Column 1 in Table 2 provides a listing of manmade and technological hazards that may occur. Manmade and technological hazards are optional and are not required to be part of a All Hazards Mitigation Plan but are encouraged to be part of it. Local governments and tribal organizations may modify this list of hazards in both Tables 1 and 2 to meet their own unique circumstances.

Column 2, Hazard Frequency. Assign a low, medium or high numerical rating to this hazard based on the frequency of past occurrences.

Column 3, Hazard Probability. Assign a low, medium or high numerical rating to this hazard based on the probability of this hazard occurring again.

Column 4, Health and Public Safety. Assign a low, medium or high numerical rating to this hazard based on the degree of past hazard events causing injuries, sickness and/or deaths.

Column 5, Home Damage. Assign a low, medium or high numerical rating to this hazard based on the degree of past hazard events causing damages to homes.

Column 6, Business Disruption. Assign a low, medium or high numerical rating to this hazard based on the degree of past hazard events causing damage to businesses and/or interrupting business trade.

Column 7, Public Expenditures. Assign a low, medium or high numerical rating to this hazard based on the amount of local, state and federal funds expended on past hazard recovery activities.

Column 8, Magnitude of Population at Risk. Assign a low, medium or high numerical rating to this hazard based on the amount of the planning area's population that are still vulnerable to injury, sickness and/or death from this hazard.

Column 9, Magnitude of Homes at Risk. Assign a low, medium or high numerical rating to this hazard based on the amount of homes still vulnerable to damages from this hazard.

Column 10, Magnitude of Businesses at Risk. Assign a low, medium or high numerical rating to this hazard based on the amount of businesses still vulnerable to damages or interruption of business trade.

Column 11, Adjustment. This column allows for using other criteria that a local government or tribal organization may want to be considered in evaluating the risk of a particular hazard. A hazard's impact on critical facilities could be included here. Public infrastructure damage is another example that could be added. This column can also be used to modify the results of a row total if for some reason the scoring process for a given hazard is unreasonable compared to others.

Column 12, Risk Assessment Rating Total. This Column provides the total rating of each hazard in Column 1 by adding the numerical rating for each of the criterion in Columns 2 through 11. The hazard row with the highest numbers should be the hazards that pose the highest risk to a local government or tribal organization.

TABLE 3
FLOOD RISK ASSESSMENT PROCESS

The following is a summary of how to conduct a flood risk assessment to meet the planning requirements of Part 3 of an All Hazards Mitigation Plan. This is a summary from a document titled: Procedures and Techniques for Flood Hazard Identification and Profiling, Vulnerability Assessment and Mitigation Strategy Development prepared by the Southeastern Wisconsin Regional Planning Commission.

Develop a Base Map With Geodetic Control. A base map will provide the medium for recording and presenting in graphic form the flood hazard area as well as inventory data and important physical features in the planning area. This same base map can also be used as a comparative frame of reference for other hazard profiling in addition to flooding. The base map should be available in digital and hard copy format and based upon a monumented system of horizontal and vertical survey control and permits the accurate correlation of topographic and real property boundary line data. Digital orthophotographs if available work well as a base map and are useful in establishing current inventory and current asset conditions. Any elevation information that is available in the planning area should be included on the base map or an overlay map. This elevation information may be obtained from various public works or building studies or special flood studies that have been done in the planning area. Any survey monuments or bench marks with elevations should be identified on the base map or an overlay map. This elevation information will assist in determining flood depth and damages in a flood hazard area.

Determine Flood Profile and Hazard Area. The National Insurance Study which includes National Flood Insurance Rate Maps and flood profile elevation in a graph format is the most common source for obtaining flood elevation and the geographical extent of flood hazard areas. These maps are in a digital or hard copy format The Resource Directory in this Guide has identified contacts for obtaining this information. To conduct a flood damage assessment the flood hazard area boundary line is to be overlaid on to the planning area's base map. The buildings and structures that lie within this boundary are the structures that are subject to flooding and require flood damage assessments based on their elevations.

Determine Extent of Flood Damage. The first floor elevation of the buildings and structures that lie within the flood hazard boundary which typically is the 100 year flood event, is the primary factor in determining the extent of flood damages. Therefore the more elevation information that is available within a floodplain or flood hazard area the more accurate flood damage assessments will become. To develop a good flood damage assessment for a planning area the following information should be obtained for each building in the flood hazard area: Tax parcel number, type of building, assessed value of building, first floor elevation, and base flood elevation extracted from the Flood Insurance Rate Maps or other reports. With this information available the table below can be used to determine the dollar damage to each structure. The dollar damages to each structure can then be totaled to provide the potential damage to a community for a given flood.

First Floor Flood Depth (Feet)	One Story No Basement (% Building Damaged)	Two Story No Basement (% Building Damaged)	One or Two Story With Basement (% Building Damaged)	Manufactured Home (% Building Damaged)
-2	0	0	4	0
-1	0	0	8	0
0	9	5	11	8
1	14	9	15	44
2	22	13	20	63
3	27	18	23	73
4	29	20	28	78
5	30	22	33	80
6	40	24	38	81
7	43	26	44	82
8	44	29	49	82
>8	45	33	51	82

This table estimates the extent of damage from various flood depths on different kinds of structures. This table is from the Federal Emergency Management Agency (FEMA) benefit-cost analysis module and has been compiled based on flood damage across the country. This table provides a rule of thumb and may need to be adjusted for extenuating circumstances. To utilize this table the approximate elevation of the water level during a regional flood is needed. From the regional flood elevation subtract the approximate first floor elevation of the building. Use this figure to determine the extent of damage to the type of building that was flooded. For example, if the regional-100 year flood elevation is approximately 848 feet above mean sea level and a one story home with a basement assessed at \$112,000 has a first floor elevation of 844 feet, it is estimated that this four feet of flooding would cause 28% or \$31,360 in damage.

**TABLE 4
HIGH WIND AND TORNADO RISK ASSESSMENT PROCESS**

Predicting the location and frequency where high winds and tornadoes will occur in Wisconsin is impractical so the risk assessment for these events places emphasis on determining an area's vulnerability to these hazards. The following outlines an approach that can be used to conduct a high wind and tornado risk assessment.

Inventory the Buildings and Facilities That are More Vulnerable to High Winds and Tornadoes. Analyze the planning area's buildings and facilities that are of particular importance from a public safety, historical, economic and environmental standpoint. Are any of these buildings, facilities or areas more vulnerable to high winds and tornadoes? When conducting this analysis consider both the current condition and history of the structures; some buildings and structures may be more prone to wind hazards due to their physical condition, age, or building material. Some older structures may have been constructed before design wind speed building codes were adopted. Buildings and structures that are often identified as more vulnerable to high winds are: mobile homes, outdoor storage areas and buildings and overhead public utility lines.

Since there are no standard loss estimation models and tables for high winds and tornadoes a more subjective risk assessment process occurs when dealing with these hazards as shown below.

Mobile Home Parks:	<ul style="list-style-type: none"> Determine the location and number of mobile home parks in the planning area. For each mobile home park identified determine the assessed value for each park and then the average value for each mobile home. Total the assessed values of each mobile home park in the planning area. The total value of all the mobile home parks would give you an approximation of the worst case damage scenario to mobile home parks in the planning area from a wind storm or a tornado. Additional losses based on percentage of each mobile home parks' assessed value could be subjectively applied to account for the loss of contents in the mobile homes.
Municipal Buildings and Facilities	<ul style="list-style-type: none"> Determine the number and location of any municipal buildings or facilities in the planning area that may be more vulnerable to high winds or tornadoes due to their structural material or location. Determine the approximate value of the above buildings or facilities and their contents by analyzing municipal property insurance records or the Governmental Accounting Standards Board Statement 34 which provides costs for replacing all capital assets such as buildings, equipment, vehicles and infrastructure. Totaling the values of the vulnerable assets identified above would provide worst case damage scenario to municipal buildings and facilities.
Other Vulnerable Buildings and Facilities	<ul style="list-style-type: none"> Determine if there are other buildings and facilities in the planning area that are vulnerable to high winds and tornadoes. Blighted areas or areas where buildings were constructed prior to wind speed design codes are examples of areas where other vulnerable buildings or facilities could be. Use assessor records to determine the value of these buildings and facilities individually. Based on an amount per building or facility or a given percent of the buildings or facilities value, approximate the loss of contents in these buildings or facilities. Determine a worst case damage scenario from high winds and tornadoes by adding the values of all these buildings and facilities collectively along with their content losses.

An example of how to tabulate the results of a high wind and tornado risk assessment is shown below.

**BADGER COUNTY
HIGH WIND AND TORNADO RISK ASSESSMENT
VULNERABLE BUILDINGS AND FACILITIES**

Type of Vulnerable Building or Facility	Number of Buildings or Facilities	Total Assessed or Appraised Value of Buildings or Facilities	Estimated Value of Building or Facilities Contents	Total Estimated Dollar Loss	Map Number
Mobile Homes	108	\$4,320,000	\$345,600	\$4,665,600	2.2
Municipal Buildings or Facilities	5	\$298,000	\$75,000	\$373,000	2.2
Other Buildings and Facilities	12	\$1,584,000	\$127,000	\$1,711,000	2.2
TOTALS	125	\$6,202,000	\$547,600	\$6,749,600	-

**TABLE 5
Badger County All Hazards Mitigation Action Plan**

Hazard Type	Mitigation Measures	Estimated Cost in Today's Dollars (thousands)	Responsible Management Agency	Project Timetable	Comments
Flooding and Related Stormwater Drainage Problems	<ul style="list-style-type: none"> Survey floodplain property owners on interest in voluntary buyout and relocation project 	Covered in department's annual budget	County Planning and Zoning Department	2003	FEMA's PDM & FMA Grants are potential funding sources for buyout
	<ul style="list-style-type: none"> Clam River Watershed <ul style="list-style-type: none"> Channel clearing and maintenance on the Clam River Canal Structure floodproofing or acquisition relocation Construct Multipurpose reservoir Restoration of Sawyer Dam 	\$420	County and Land Conservation Department	2004-2005	FEMA and DNR Rivers Protection Grant potential funding source
	<ul style="list-style-type: none"> Wood River Watershed <ul style="list-style-type: none"> Provide onsite detention storage facilities for planned new development Restore prairie conditions Restore wetland conditions Floodproof two residential structures 	\$1,410	County Planning and Zoning Department	2005-2006	50-50 cost share with developer on detention pond Local conservation group will contribute \$
	Floodplain Management and Public Information and Educational Activity	\$2	County Planning and Zoning Department and Emergency Management Director	2003-2008	Utilize FEMA and DNR P.R. literature
	Maintenance and potential expansion of early warning and communication siren systems, including periodic testing	Covered in annual operating budgets	County Emergency Management Director and Municipal Police and Fire Departments	2003-2008	
	Educational and informational programming, especially related to the early warning network, and to individual actions to protect citizens, property and businesses	Covered in annual operating budgets	County Emergency Management Director and Municipal Police and Fire Departments	2003-2008	Utilize FEMA and WEM P.R. literature
	Ongoing review and enforcement of building code ordinance and requirements	Covered in annual operating budgets	County and Municipal Zoning Department	2003-2008	
	Continued coordination of emergency operation and response plans among governmental units and first responders	Covered in annual operating budgets	County and Municipal Emergency Management Agencies	2003-2008	
	Research existing public buildings, major industrial sites, and other large businesses or complexes such as shopping malls, fairgrounds, and other vulnerable public areas for adequate shelter alternatives	\$10	County Emergency Management Director	2003-2008	FEMA PDM grant potential source of funding for this research
	Educational and informational programming, especially related to the early warning network, and to individual actions to protect citizens, property and businesses	Covered in annual operating budgets	County Emergency Management Director and Municipal Police and Fire Departments	2003-2008	Utilize FEMA and WEM P.R. literature
Tornadoes and High Winds	Ongoing review enforcement of building code ordinances requirements	Covered in annual operating budgets	County and Municipal Zoning Departments	2003-2008	
	Continued coordination of emergency operation and response plans among governmental units	Covered in annual operating budgets	County Emergency Management Director and Municipal Police and Fire Departments	2003-2008	
	Develop well organized neighborhood outreach groups who look after vulnerable groups and individuals	\$20	County Health and Human Services Department	2005	
	Develop operating procedures on how to provide special arrangements for payment of heating or cooling bills	\$10	County Health and Human Services Department	2005	
Extreme Temperature Events	Educational and informational programming	Covered in annual operating budgets	County Health and Human Services Department	2003-2006	



From January of 1993 through June of 2000, two hundred ninety-eight tornadoes were reported to have caused damage in Wisconsin. Tornadoes have been the cause of 331 deaths in the State since 1865. In June of 1984 Wisconsin's costliest tornado hit Barneveld causing 9

All Hazards Mitigation Plan Review and Approval Process

Federal rules regarding plan approval and criteria for review are contained in 44 CFR part 206.6. The criteria used to review the plans corresponds to the planning requirements listed in the rule. Following the five parts of the local all hazards mitigation plan, pages 5 through 7, and the all hazards mitigation plan checklist, pages 23 and 27, will help ensure that a local plan meets federal criteria.

Wisconsin Emergency Management (WEM) and the Federal Emergency Management Agency (FEMA) each have a role in reviewing local all hazards mitigation plans. WEM receives local plans, does a pre-review and forwards them to the FEMA Regional Office for formal review and approval. This section will explain the all hazards mitigation plan review and approval process.

FEMA's approach to the planning requirements or criteria is a "performance standard" rather than "prescriptive" approach. In other words, the criteria are designed to identify, generally, what should be done in the process and documented in the plan, rather than specify exactly how it should be done. This approach recognizes the differences in individual communities with respect to resources, capabilities, and type of hazards faced.

FEMA scores each criteria based on the following system:

- U** Unsatisfactory: The plan does not address the criteria.
- N** Needs Improvement: The plan addresses the criteria, but needs significant improvement. The reviewer's comments will be provided.
- S** Satisfactory: The plan meets the minimum criteria.
- O** Outstanding: The plan exceeds the minimum criteria.

A final review will provide the community with a score for each requirement, reviewer comments on areas needing improvement, and a determination of the plan approval by FEMA. A plan must receive a score of at least "satisfactory" for each criterion for the plan to be approved.

When the plan meets with FEMA's approval, it must be officially adopted by the governing body of the jurisdiction requesting approval (i.e., town or county board, city or tribal council, etc.). The plan must include a copy of the resolution adopting the plan, see sample resolution, Table 5. In the case of a multi-jurisdictional plan, each jurisdiction that is included in the plan must have its governing body formally adopt the plan before it is submitted for final approval. In addition, a multi-jurisdictional plan must document how each jurisdiction participated in the planning process.

The draft plan should be submitted to WEM for a pre-review prior to submitting the plan for formal

approval to the local government(s) involved in the plan process. By following this procedure the local government(s) will have a greater degree of certainty whether their plan will be officially approved by Wisconsin Emergency Management and FEMA and will reduce the likelihood of sending the plan before the local governing body more than once due to deficiencies found in the plan.

Local mitigation plans must be reviewed, updated and reapproved by FEMA at least every five years to remain eligible for mitigation project funding.

Submit completed plans for pre-review and final review to:

**State Hazard Mitigation Officer
Wisconsin Emergency Management
2400 Wright Street
P.O. Box 7865
Madison, WI 53707**



Earthquakes in Wisconsin? There have been 24 recorded earthquakes in Wisconsin since the turn of the century. Earthquakes are measured using the Richter Scale, which ranges from one to seven with seven being the strongest. The strongest earthquake recorded in the Midwest took place on November 9, 1968 in South Central Illinois, and was measured at 5.3 on the Richter Scale. The effects of this earthquake were felt the strongest in Jefferson and Kenosha, Wisconsin but were also felt in the Southern half of the state from Milwaukee to La Crosse. The nearest major active fault is the New Madrid Fault which stretches along the central Mississippi River Valley in Missouri.



Federal disaster assistance was granted for two Wisconsin forest fire events. The Peshtigo fire of 1871 caused 800 deaths.

All Hazards Mitigation Plan Review and Approval Process Summary

1. Complete Plan
2. Submit draft plan to WEM for pre-review
3. Submit final plan to WEM for Review
4. WEM Forwards to FEMA for final plan Review
5. FEMA Completes final plan Review within 45 Days Whenever Possible
6. Final Plan Review Sent to WEM and Local Government(s)
7. Adoption of plan by Local Government(s) if review was satisfactory
8. WEM forwards adoption to FEMA for final plan approval.
9. Update and Resubmit Plan for review at least every five years.

Questions and Answers

GENERAL PLANNING QUESTIONS AND ANSWERS

- WHAT IS DMA2K?** DMA2K is the Disaster Mitigation Act of 2000 which amended the Stafford Disaster Relief and Emergency Assistance Act to establish a new national pre-disaster mitigation program. Specifically, Section 203 creates a pre-disaster mitigation program to provide funding for cost-effective hazard mitigation measures to states and local governments. Further, Section 322 of the Act placed new emphasis on mitigation planning specifically requiring states, local and tribal governments to develop and submit mitigation plans that meet certain planning criteria.
- WHAT ARE NATURAL HAZARDS?** Naturally occurring events such as droughts, earthquakes, floods, hail, landslides, mudslides, storms, temperature extremes, tornadoes, wildfires, and winter storms that have the potential to harm people or property.
- WHAT ARE MANMADE OR TECHNOLOGICAL HAZARDS?** Advancements in technology have resulted in a range of biological, chemical or radiological agents that pose a potential toxic or explosion threat if released accidentally or intentionally. Terrorism, hazardous materials incidents or nuclear power plant incidents are the obvious examples. Other examples of this type of hazard include such things as air transportation accidents or dam failure.
- ARE LOCAL GOVERNMENTS AND TRIBAL ORGANIZATIONS REQUIRED TO PREPARE AN ALL HAZARDS MITIGATION PLAN?** No, but the local government and tribal organization will not be eligible for FEMA's Hazard Mitigation Grant programs that can assist greatly in disaster recovery activity.
- DO ALL HAZARDS HAVE TO BE COVERED IN THE ALL HAZARDS MITIGATION PLAN TO BE ELIGIBLE FOR FEDERAL AND STATE FUNDING?** All natural hazards that impact your community must be included.
- WHAT IS THE DIFFERENCE BETWEEN AN ALL HAZARDS MITIGATION PLAN AND A FLOOD HAZARD MITIGATION PLAN?** An All Hazards Mitigation Plan deals with all hazards including floods. A Flood Hazard Mitigation Plan is a plan that deals with floods only. With the passage of DMA2K emphasis is on All Hazards Mitigation Planning for FEMA grants.
- WHAT IS THE COMMUNITY RATING SYSTEM (CRS)?** The CRS is an optional but encouraged part of the National Flood Insurance Reform Act of 1994 (NFIRA). Communities exceeding the standards set by the National Flood Insurance

Program, are eligible to apply to become part of the CRS. In a CRS community the cost of flood insurance premiums are reduced based on the number of flood mitigation activities it undertakes, and the CRS points it receives for those activities. Discounts on flood insurance premiums can range from 5% to 45%.

RISK ASSESSMENT QUESTIONS AND ANSWERS

- WHAT IS A REPETITIVE LOSS STRUCTURE?** A property that has incurred two or more National Flood Insurance Program losses of at least \$1,000 each and have been paid since 1978.
- WHAT ARE CRITICAL FACILITIES?** Facilities that are critical to the health and welfare of the population and that are especially important following hazard events. Critical facilities include, but are not limited to, shelters, schools, police and fire stations, and hospitals.

FUNDING QUESTIONS AND ANSWERS

- HOW MUCH WILL IT COST TO PREPARE AN ALL HAZARDS MITIGATION PLAN?** Costs will increase with the number of local governments and/or tribal organizations involved with the plan. The larger the geographic area to be covered in the plan, more time and material will be expended on data collection, coordination and meetings.
- APPROXIMATELY HOW MUCH FLOOD MITIGATION ASSISTANCE (FMA) GRANT FUNDS DOES WISCONSIN GET A YEAR FROM FEMA AND IN GENERAL HOW ARE THESE FUNDS ALLOCATED TO THE STATES?** In 2002, Wisconsin received a total of \$186,667 in flood mitigation assistance funding with \$18,000 for mitigation planning and \$168,667 for project grants to implement mitigation activities identified in approved plans. Each year FEMA transfers \$20 million into the FMA for distribution to the states. Each state receives an allocation based on the number of flood insurance policies in force and the number of repetitive loss structures in the state. The minimum amount any state receives is \$10,000 for planning and \$100,000 for projects.
- APPROXIMATELY HOW MUCH PRE-DISASTER MITIGATION (PDM) GRANT FUNDS DOES WISCONSIN GET A YEAR FROM FEMA AND IN GENERAL HOW ARE THESE FUNDS ALLOCATED TO THE STATES?** Wisconsin received an allocation of \$376,883 in PDM program funds for 2002. A new program created by the DMA2K, \$25 million was appropriated to the PDM program for fiscal year 2002. The funding for each state is initially based on one percent of the total PDM appropriation with the remaining balance of funding based on each state's percentage of total U.S. population from the 2000 Census.



There were 253 snow and ice storm events in Wisconsin from January 1993 through June of 2000 causing two deaths, 47 injuries and reported property damages of over \$770,000.



Coastal hazards consist of bluff and bank erosion, coastal flooding and damage to structures from storm waves.



Coastal hazards along the Great Lakes pose a threat to both homes and public infrastructure.

Questions and Answers (continued)

- HOW ARE HAZARD MITIGATION GRANT PROGRAM (HMGP) FUNDS AWARDED TO WISCONSIN AFTER A PRESIDENTIAL DISASTER DECLARATION?** The amount of HMGP funds allocated is based on 7.5% of the federal share of the Individual and Public Assistance funds approved for the declaration. States that meet higher mitigation planning criteria may qualify for 20% under the DMA2K. FEMA can fund up to 75% of the eligible costs of each project. In Wisconsin, the state contributes 12.5% of the required 25% local match. The local match can be fashioned from a combination of cash and in-kind sources. Funding from other Federal sources cannot be used for the 12.5% share.
 - IF A COMMUNITY DOES NOT HAVE AN ALL HAZARDS MITIGATION PLAN AND EXPERIENCES A PRESIDENTIAL DISASTER DECLARATION, WHAT AID IS THE COMMUNITY ELIGIBLE FOR?** A community would still be able to receive aid from a variety of emergency disaster relief programs including Individual and Public Assistance. However, they would not be eligible for HMGP unless they agreed to develop and adopt an All Hazards Mitigation Plan within 12 months of the grant award.
- PUBLIC INVOLVEMENT, PLAN APPROVAL, AND UPDATING QUESTIONS AND ANSWERS**
- IF THERE ARE MORE THAN ONE LOCAL UNIT OF GOVERNMENT INVOLVED IN THE PLAN HOW SHOULD THEY GO ABOUT PARTICIPATING AND ADOPTING THE PLAN?** Every local government that participates in the plan should have a representative on the planning committee or subcommittee that is charged with developing the plan. It is this person's responsibility to ensure the planning process is inclusive of the local government they represent and that their local government and the community knows about opportunities to provide input into the planning process. In order for any local unit of government to be eligible for Hazard Mitigation Assistance grants they must participate in the planning process and have specific projects listed in the plan. If the local government does not adopt the plan they are not eligible for Hazard Mitigation grants.
 - HOW DO WE GET AND KEEP THE PUBLIC INVOLVED IN THE PLANNING PROCESS?** (1) Make sure the committee or subcommittee of the community that is assigned to oversee the development of the plan has an interest and time to undertake this task. Forming an ad hoc planning committee that reports to a

standing committee may be the way to go. (2) Hold a kickoff meeting focusing on citizen opinions of what hazards pose the greatest threat to the community and why. (3) Follow the first public meeting up with a second public meeting focusing on citizens' opinions pertaining to actions and projects that can be undertaken to reduce future losses from the identified hazards. (4) Send personal letters to mayors, village presidents, town chairs, police chiefs, fire chiefs and any other key local elected or appointed officials and ask them to attend or appoint representatives to attend. (5) Send one page press releases announcing the purpose of each meeting to all TV, radio and newspapers covering the planning area. The press releases should be mailed 10 days before the public meeting. (6) Send individual letters of invitation to business and civic organizations requesting them to participate in the public meetings and planning process. (7) In all public relation literature stress the fact that All Hazard Mitigation Planning is about breaking the cycle of damage, reconstruction and repeated damage and that it can save taxpayers dollars and lives!

- DO WE HAVE TO FOLLOW THE MODEL OUTLINE?** No, but the plan must meet the planning requirements of DMA2K. The model outline was prepared to assist in meeting the requirements of DMA2K. Communities are encouraged to use the outline and other resource information to ensure the plan conforms to DMA2K. Following the outline will also assist in a more efficient review by WEM and FEMA.
- HOW OFTEN MUST AN ALL HAZARDS MITIGATION PLAN BE UPDATED?** Every 5 years a local government and/or tribal organization plan must be updated and submitted to WEM and FEMA for review. Local governments are encouraged to review their plan annually and after each disaster.
- MUST AN ALL HAZARDS MITIGATION PLAN BE REVISED AFTER A COMMUNITY WITH A PLAN EXPERIENCES A PRESIDENTIAL DISASTER DECLARATION?** It is not required that a mitigation plan be revised after a disaster declaration. However, FEMA recommends that communities consider revising their plan if a disaster or other circumstances significantly affect their mitigation priorities.

TABLE 6	
Sample All Hazards Mitigation Plan Adoption Resolution	
RESOLUTION # _____	
ADOPTING THE <u>(name of county or community)</u> ALL HAZARDS MITIGATION PLAN	
WHEREAS, <u>(name of county or community)</u> recognizes the threat that natural hazards pose to people and property; and	
WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and	
WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects; and	
WHEREAS, <u>(name of county or community)</u> participated jointly in the planning process with the other local units of government within the County to prepare an All Hazards Mitigation Plan;	
NOW, THEREFORE, BE IT RESOLVED, that the <u>(name of board or council)</u> , hereby adopts the <u>(name of county or community)</u> All Hazards Mitigation Plan as an official plan; and	
BE IT FURTHER RESOLVED, that the <u>(name of county)</u> County Emergency Management Department will submit on behalf of the participating municipalities the adopted All Hazards Mitigation Plan to Wisconsin Emergency Management and Federal Emergency Management Agency officials for final review and approval.	
PASSED: _____ (date)	
_____ Certifying Official	

Federal and State Grants

Table 7

The following is a list of Federal and State Grants that may assist in implementing local All Hazard Mitigation Plans. This information is subject to change at anytime, contact the federal or state agency for current grant status.

Federal or State Agency and Grant Program Name	Address and Telephone Contact Information	Eligible Activities	Federal, State and Local Cost Share Requirements	Other Program Characteristics	Grant Application Due Date
Federal Emergency Management Agency, Hazard Mitigation Grant Program (HGMP)	Wisconsin Emergency Management, 2400 Wright Street, Madison, WI 53707-7865 608-242-3232	Flood proofing, acquisition and relocation of flood prone properties, elevation of flood prone properties, wind resistant or retrofit, stormwater improvements, education and awareness, All Hazards Mitigation Planning	Federal—75% State—12.5% Local—12.5%	Local government must be in compliance with the National Flood Insurance Program to be eligible. Projects must be cost-effective, environmentally sound and solve a problem.	After a Presidential Disaster Declaration
Federal Emergency Management Agency, Pre-disaster Mitigation (PDM) Program	Wisconsin Emergency Management, 2400 Wright Street, Madison, WI 53707-7865 608-242-3232	Grants can be used for management costs, information dissemination, planning, technical assistance and mitigation projects	Federal—75% Local—25%	Local government must be in compliance with the National Flood Insurance Program to be eligible. Projects must be environmentally sound and cost effective.	To Be Determined
Federal Emergency Management Agency, Flood Mitigation Assistance (FMA) Program	Wisconsin Emergency Management, 2400 Wright Street, Madison, WI 53707-7865 608-242-3232	Acquisition, relocation, elevation and flood-proofing of flood-prone insured properties, flood mitigation planning	Federal—75% Local—25%	Local government must be in compliance with the National Flood Insurance Program to be eligible. Repetitive loss properties are a high priority	1/15/03 Planning 4/15/03 Project
Federal Emergency Management Agency, Public Assistance (PA) Program	Wisconsin Emergency Management, 2400 Wright Street, Madison, WI 53707-7865 608-242-3232	Repair of infrastructure damaged during a flood that results in a Presidential disaster declaration. Cost effective mitigation measures may be eligible during the repair of damaged facilities	Federal—75% State—12.5% Local—12.5%		After Presidential Disaster Declaration
Economic Development Administration, Economic Adjustment Program	United States Department of Commerce, Economic Development Administration, 111 North Canal Street, Suite 855, Chicago, IL, 60606-7204 312-353-7148	Improvements and reconstruction of public facilities after a disaster or industry closing. Research studies designed to facilitate economic development.	Federal—50%-70% Local—30%-50%	Documenting economic distress, job impact and proposing a project that is consistent with a Comprehensive Economic Development Strategy are important funding selection criteria.	Anytime
Economic Development Administration, Public Works and Development Facilities	United States Department of Commerce, Economic Development Administration, 111 North Canal Street, Suite 855, Chicago, IL, 60606-7204 312-353-7148	Water and sewer, industrial access roads, rail spurs, port improvements technological and related infrastructure.	Federal-50%-70% Local-30%-50%	Documenting economic distress, job impact and projects consistency with a Comprehensive Economic Development Strategy are important funding selection criteria.	Anytime
Wisconsin Department of Commerce, Community Development Block Grant, Public Facilities Emergency Program	Wisconsin Department of Commerce, 201 West Washington Avenue, P.O. Box 7970, Madison, WI, 53707-7970 608-266-8934	Repair of water, sewer, street, curb and gutter, police and fire stations	Federal-75% Local-25%	Available after a state and/or Presidential Disaster declaration. These funds can be used towards the local match to receive FEMA public assistance and HMGP funds.	After a Disaster event
Wisconsin Department of Commerce, Community Development Block Grant, Public Facilities Program	Wisconsin Department of Commerce, 201 West Washington Avenue, P.O. Box 7970, Madison, WI, 53707-7970 608-266-8934	Water, sewer, street curb and gutter, libraries, fire stations and community centers	To receive maximum points \$1.5 of local match to every \$1 of state Community Development Block Grant	A community's economic distress score influences funding determination. These funds can be used as a local match to receive FEMA Public Assistance and HMGP funds.	Anytime
Wisconsin Department of Transportation (DOT), Flood Damage Aid	Wisconsin Department of Transportation, 4802 Sheboygan Ave., Madison, WI, 53707 608-267-5254	Replacement and improvement costs for major flood damage to a road or road structure under local jurisdiction. To help defray costs of repairing major flood damage to any public street, alley, or bridge not located on the State Trunk Highway system.	State-75% of replacement costs and 50% of improvement costs, reimbursed by local	Repairs or replacements can include redesign to prevent or reduce future flood damage. If Federal Disaster Aid is received, community is ineligible for State Federal Disaster Aid.	Applicant must submit final costs within 2 years following flood damage.
Wisconsin Department of Transportation (DOT), Transportation Enhancement Funds	Wisconsin Department of Transportation, 4802 Sheboygan Ave., Madison, WI, 53707 608-267-5250	Activities that "enhance" the surface transportation infrastructure "above and beyond" basic highway projects, can include: landscaping and scenic beautification, acquisition of scenic easements, and scenic or historic sites.	Federal-80% Local-20%	Can provide scenic vista and runoff areas, parking, and landscaping along flood-prone riverways. Can acquire flood-prone areas along roads for green corridors. Flood damage reduction potential is not the primary purpose of the program.	Even-numbered years. Application forms available in January. Must be submitted by April. Funds granted competitively, judged by a 10 person committee.
Wisconsin Department of Administration, Division of Housing and Intergovernmental Relations, Emergency Housing Grant Program	Wisconsin Department of Administration and Intergovernmental Relations, 101 East Wilson, Madison, WI, 53708-8944 608-266-0288	Acquisition, Rehabilitation, demolition	Federal-100%	Must benefit low and moderate income individuals. These funds can be used as a local match to receive FEMA mitigation funds.	After a disaster event

Federal and State Grants Continued

Table 7

The following is a list of Federal and State Grants that may assist in implementing local All Hazard Mitigation Plans. This information is subject to change at anytime, contact the federal or state agency for current grant status.

Federal or State Agency and Grant Program Name	Address and Telephone Contact Information	Eligible Activities	Federal, State and Local Cost Share Requirements	Other Program Characteristics	Grant Application Due Date
Wisconsin Department of Administration, Division of Housing and Intergovernmental Relations, Housing Grant Program	Wisconsin Department of Administration and Intergovernmental Relations, 101 East Wilson, Madison, WI, 53708-8944 608-266-0288	Home buyer opportunities, Rehabilitation	Federal-100%	Must benefit low and moderate income individuals	August-September
Wisconsin Department of Natural Resources, River Planning Grant	Wisconsin Department of Natural Resources, 101 S. Webster Street, Box 7921, Madison, WI, 53707-7921 608-266-7555	River organization development, Education, special river study needs	State-75% Maximum Local-25%	\$10,000 maximum grant	May 1
Wisconsin Department of Natural Resources, River Protection Grant	Wisconsin Department of Natural Resources, 101 S. Webster Street, Box 7921, Madison, WI, 53707-7921 608-266-7555	Purchase of land or easements, Restoration of in-stream or shoreland habitat	State-75% Maximum Local-25%	\$50,000 Maximum Grant, Adoption of outdoor recreation plan required	May 1
Wisconsin Department of Natural Resources, Lake Planning Grant	Wisconsin Department of Natural Resources, 101 S. Webster Street, Box 7921, Madison, WI, 53707-7921 608-266-7555	Water quality studies, land use analysis, ordinance analysis, planning recommendations	State-75% Maximum Local-25%	\$10,000 maximum per grant but can receive up to \$50,000 in total grants	February 1 and August 1
Wisconsin Department of Natural Resources, Lake Protection Grant	Wisconsin Department of Natural Resources, 101 S. Webster Street, Box 7921, Madison, WI, 53707-7921 608-266-7555	Projects to protect and improve water quality and their ecosystems	State-75% Maximum, not to exceed \$200,000 Local-25%	Acquisition of land and easements also eligible	May 1
Wisconsin Department of Natural Resources, Urban Rivers Grant Program	Wisconsin Department of Natural Resources, 101 S. Webster Street, Box 7921, Madison, WI, 53707-7921 608-266-7555	Land acquisition and revitalization of urban water fronts	State-50% Local-50%	Project must be part of adopted outdoor recreation plan	May 1
Wisconsin Department of Natural Resources, Aids for the Acquisition and Development of Local Parks (ADLP)	Wisconsin Department of Natural Resources, 101 S. Webster Street, Box 7921, Madison, WI, 53707-7921 608-266-7555	Acquisition and development of public outdoor recreation areas	State-50% Local-50%		May 1
Wisconsin Department of Natural Resources, Acquisition of Urban Green Space	Wisconsin Department of Natural Resources, 101 S. Webster Street, Box 7921, Madison, WI, 53707-7921 608-266-7555	Funding the protection of natural spaces in proximity to urban development	State-50% Local-50%	Protect land with scenic, ecological or natural values in urban areas from development	May 1
Wisconsin Department of Natural Resources, Land and Water Conservation Fund-Federal Program Administered by State DNR	Wisconsin Department of Natural Resources, 101 S. Webster Street, Box 7921, Madison, WI, 53707-7921 608-266-7555	Acquisition and development of outdoor parks and non-commercial recreation facilities.	Federal-50% Local-50%	Funding comes from United States Department of Interior, project must be part of an adopted Outdoor Recreation Plan.	May 1
Wisconsin Department of Natural Resources Municipal Flood Control Grant	Wisconsin Department of Natural Resources, 101 S. Webster Street, Box 7921, Madison, WI, 53707-7921 608-267-7152	Acquisition, flood proofing, wetland-floodplain restoration, storm-water projects, flood insurance studies, and floodplain mapping.	State-70% Local-30%	Maximum grant cannot exceed 20% of funding available. Cities, villages, towns and metropolitan sewer districts are eligible.	April 15th
Wisconsin Department of Administration, Office of Land Information Services (OLIS)	Office of Land Information Services PO Box 1645 Madison, WI 53701-1645 608-267-2707	Cost sharing in preparation of a community comprehensive plan	State: From less than 50% of the plan cost to 75% of the plan cost Local: From as little as 25% of the plan cost to more than 50% of the cost. The community's Sbase level is population dependent, and plan cost is bid determined.	The grant amount and its percentage of the total cost is based on the community's population and whether the community joins with other communities to prepare a joint plan, and also upon the total cost of the plan. Two or more communities preparing a joint plan have a much better chance of being selected to receive a grant.	November 1

All Hazard Mitigation Planning Resource Directory

The following are some key resources that can assist in developing an All Hazards Mitigation Plan.

Mitigation Resources for Success: This FEMA CD has a lot of valuable information for communities or organizations involved in hazard mitigation planning. This CD was developed by the Federal Insurance and Mitigation Administration Department of FEMA. It includes examples of financing strategies, technical resources, and points of contact. It contains a section that explains how to use the software and what each section of the CD can be used for. The CD includes eighteen very detailed case studies. The case studies include the story of the problem that was occurring in that city or town and how the members of the community did something to change the problem and prevent future losses. The majority of the case studies are about flooding, however there are examples of all other natural disasters as well. For more information about the CD you can find it on the internet at <http://www.fema.gov>.

Hazus 99: This is a FEMA software program developed by a team of earthquake and software engineers to estimate potential losses from earthquakes. This program is used in conjunction with either Arcview or Mapinfo GIS programs. The program is designed to estimate losses for various earthquake scenarios, which the user can control. While the program is designed to estimate earthquake losses it does come with databases of information that are geocoded, and are useful for other hazards as well. Some of the databases already have the information collected while others only have the databases set up and the user must enter the information.

The databases are divided into 3 categories, these are: (1) Buildings and Facilities, (2) Transportation Systems, and (3) Utility Systems. The Buildings and Facilities category is further divided into, Square footage of buildings by census tracts, Essential Facilities (Medical Care Facilities, Emergency Response Facilities, and Schools), and High Potential Loss Facilities (Dams, Nuclear Power Plants, and Hazardous Materials Sites). The Transportation System category is divided into Highway Systems (Bridges, Roads, and Tunnels), Railway Systems (Bridges, Tracks, Railway Tunnels, and Facilities), Light Rail Systems (Bridges, Tracks, Tunnels, and Facilities), Port Systems, Ferry Systems, and Airport Systems. The Utility System is divided into 3 areas, Potable Water Supply Systems (Pipelines, Facilities, and Distribution Pipelines), Wastewater System (Transmission Sewers, Facilities, and Distribution Sewers) and Oil System.

A supplemental disk specifically for the State of Wisconsin is also available. This disk contains Digital Elevation Models, Land Use/Land Cover (based on USGS data), and Streets for each county in the State, in addition a statewide layer of Shelters, and some county FIRM maps (16 FIRMs) are also on the disk. The program can be used initially to identify and map critical facilities. This data in some situations may be dated but it gives you a good starting point and can be easily updated. The data not only gives location but also contact information and some but not all repair or replacement costs. In addition to mapping critical facilities the program can also be useful for the flood hazard-mapping portion of the plan. The program does have a flood hazard scenario but additional information (i.e. first floor elevation of all structures) is required before the hazard analysis can be run. To order this CD call FEMA at: 1-800-480-2520.

Wisconsin Emergency Management Web Site - badger.state.wi.us/agencies/dma/wem/mitigation_home.htm

Information on Wisconsin's Hazard Mitigation Programs is provided. This includes grant programs, mitigation success stories and planning. You can view the State Hazards Mitigation Plan Hazard Analysis for the State of Wisconsin, and the State Repetitive Loss Report.

National Climatic Data Center Web Site— www.ncdc.noaa.gov.

This website is affiliated with the National Oceanic and Atmospheric Administration and provides access to over 150 years of weather data and 99% of NOAA data. It also provides historical perspectives on climate changes. One section contains a record of weather events, such as tornadoes and severe storms, over the past 50 years. These records would assist in preparing the Risk Assessment part of an All Hazards Mitigation Plan.

Wisconsin DNR Floodplain Web Site- www.dnr.state.wi.us/floodplain/.

This website is full of information about floodplain management. This includes a section on grants available, what they can be used for, and who can receive them. There is also information on the National Flood Insurance Program, reasons to protect flood plains, a list of floodplain contacts, and a list of other websites related to floodplain management.

GASB 34 - Governmental Accounting Standards Board

GASB 34 stands for Governmental Accounting Standards Board, Statement 34. This statement was put into practice in June of 1999 to improve the accountability of governments by providing better, more accessible information about conditions and costs of state and local capital assets. GASB 34 applies to general-purpose governments, public school districts, public benefit corporations, public utilities, public hospitals, and public colleges or universities. This statement requires that fixed asset records be maintained in a complete, detailed format and governments should report all capital assets with consideration of depreciation. This includes infrastructure assets and "historical treasures". Capital assets are defined as assets that have a useful life beyond a single reporting period, for example, land and easements, buildings, equipment, vehicles, and infrastructure.

The part of this new law that would be most helpful to those involved in Hazards Mitigation Planning would be the infrastructure and depreciation reporting. The financial statement should report all capital and infrastructure assets like roads, bridges, storm sewers, etc. This section should discuss long-term assets and include a charge for depreciation or an explanation about a maintenance program that prevents the deterioration of the infrastructure. This would be helpful in hazard mitigation since it would give a detailed explanation of the costs for replacing or repairing parts of the infrastructure if they were damaged by a natural disaster. These same figures could help in forecasting potential damages from hazards as well.

All Hazard Mitigation Planning Resource Directory (continued)

The following are additional resources to assist in preparing an All Hazards Mitigation Plans.

- *State of Wisconsin Hazard Mitigation Plan*, Contact: Wisconsin Emergency Management, P.O. Box 7865, 2400 Wright Street, Madison WI 54707-7865, Phone: 608-242-3232, Web Site: Badger.state.wi.us/agencies/dma/wem/index.htm
- State and local mitigation planning - How-To-Guides available through the Federal Emergency Management Agency. Below are the first three in a series of How-To-Guides on state and local mitigation planning. They are also available on a CD.
 - * *Understanding Your Risks, Identifying Hazards and Estimating Losses*, available through the Federal Emergency Management Agency (FEMA 386-2, August 2001). This is the first in a series of at least six how-to-guides on state and local mitigation planning.
 - * *Getting Started, Building Support for Mitigation Planning*, available through the Federal Emergency Management Agency (FEMA 386-1, September 2002). This is the second in a series of How-To-Guides on state and local mitigation planning.
 - * *Integrating Human-Caused Hazards Into Mitigation Planning*, available through the Federal Emergency Management Agency (FEMA 386-1, September 2002). This is a third in a series of How-To-Guides on state and local mitigation planning.
- *Community Flood Mitigation Planning Guide*, November 1995, available through the State Department of Natural Resources (608-266-3093) or Wisconsin Emergency Management (608-242-3211)
- *Mitigation Revitalizes a Floodplain Community-The Darlington Story*, video available through Wisconsin Emergency Management (608-242-3211) or the State Department of Natural Resources (608-266-3093)
- *Addressing Your Communities Flood Problems, A Guide for Elected Officials*, available through the Federal Emergency Management Agency (9-1199-FEMA 309/Sept. 1997)
- *Using Multi-Objective Management to Reduce Flood Losses in the Watershed*, available through the Association of State Flood Plain Managers Executive Office, 608-274-0123
- *Protecting Floodplain Resources, A Guidebook for Communities*, available through the Federal Emergency Management Agency (3-0036-FEMA 168/Sept. 95)
- *Post-Disaster Hazard Mitigation Planning Guidance for State and Local Governments*, available through the Federal Management Agency (8-0569-DAP 12/Sept. 1990)
- *Multi-Hazard Identification and Risk / Assessment*, available from the Federal Emergency Management Agency (9-1132-FEMA 300/July 1997)
- *Subdivision Design in Flood Hazard Areas*, available through the Federal Emergency Management Agency (9-12222-PSA Report 473) or through the American Planning Association (Planning Advisory Service Report Number 473), 122 S. Michigan Avenue, Suite 1600, Chicago, IL 60603, email: pasreports@planning.org
- *Planning for Post-Disaster Recovery and Reconstruction*, available through the American Planning Association (Planning Advisory Service Report Number 483-484), 122 S. Michigan Avenue, Suite 1600, Chicago IL 60603, email: pasreports@planning.org
- *Project Impact-Building A Disaster Resistant Community Guidebook*, available through the Federal Emergency Management Agency (9-5552/Sept. 1997)
- *National Flood Insurance Program, Community Rating System, Example Plans*, available through the National Flood Insurance Program Community Rating System Technical Coordinator, 317-848-2898
- <http://www.fema.gov> (A host of FEMA resources, including floodplain maps. Many of the latest publications can be downloaded from this source.)
- <http://www.fema.gov/nfip/crs.htm> (National Flood Insurance Program's Community Rating System.)
- <http://www.floods.org> (Home page for the Association of State Floodplain Managers.)
- <http://www.colorado.edu/hazards> (University of Colorado's Natural Hazards Research and Applications Information Center, a national clearinghouse of research and public policy on floods and other natural hazards)
- <http://www.planning.org> (American Planning Association)
- FEMA CD-ROM, "Mitigation Resources for Success", available through FEMA Distribution Center, P.O. Box 2012, Jessup, Maryland, 20794-2012, Phone #: 1-800-480-2520, OR <http://www.fema.gov> See a description of this CD on the following page.
- Wisconsin's Comprehensive Planning Law and Planning Grants: Office of Land Information Services, P.O. Box 1645, Madison, WI, 53701-1645, (608) 267-2707, <http://www.doa.state.wi.us/olis>
- FEMA CD-ROM "HAZUS 99", available through FEMA Distribution Center, P.O. Box 2019, Maryland, 20794-2012, Phone #: 1-800-480-2520 or <http://www.fema.gov> See description of this CD on following page.
- [Http://www.ncdc.noaa.gov](http://www.ncdc.noaa.gov) (National Climatic Data Center) See description on following page.
- [Http://www.dnr.state.wi.us/floodplain/](http://www.dnr.state.wi.us/floodplain/) (Wisconsin Department of Natural Resources Floodplain Management page) See description on following page.

To order FEMA Publications contact the FEMA Distribution Center, P.O. Box 2012, Jessup, MD 20794-2012, or call 1-800-480-2520 or fax 301-363-5335

All Hazards Mitigation Plan Checklist

Preparing an All Hazards Mitigation Plan that meets the requirements of the Disaster Mitigation Act of 2002 (DMA2K) not only makes a community eligible for FEMA Hazard Mitigation grants but also can address the planning requirements of FEMA's Flood Mitigation Assistance (FMA) grant program and some of the requirements needed for a community to receive a Community Rating System (CRS) designation. With CRS, having a FEMA-approved plan adds to a community's points, which can result in reduced flood insurance premiums within a community. The following checklist is provided to assist communities in determining if their All Hazards Mitigation Plan meets these federal requirements. Columns referencing the codes and regulations of these federal programs are also provided.

PLAN COMPONENTS	No	YES	Page No.	DMA2K	FMA	CRS
(1)(a) Does the plan describe who was involved in preparing the plan, the time period in which the plan was prepared and who to contact to answer questions and make recommendations for future amendments to the plan? Comments: <hr/> <hr/> <hr/>				201.6(c) (1)	78.5(a)	Step 1
(1)(b) Did the planning process provide an opportunity for the public to comment on the plan during the drafting stage and prior to plan approval? Comments: <hr/> <hr/> <hr/>				201.6(b)	FEMA's guidance using the planning process outlined for NFIP Community Rating System (CRS).	Step 2
(1)(c) Did the planning process allow for neighboring communities, local and regional agencies, business academia and other private and nonprofit interests to be involved? Comments: <hr/> <hr/> <hr/>				201.6(b)	FEMA's guidance using the planning process outlined for NFIP Community Rating System (CRS).	Step 2
(1)(d) Did the planning process review and incorporate, if appropriate, any existing plans, studies, reports and technical information? Comments: <hr/> <hr/> <hr/>				201.6(b)	FEMA's guidance using the planning process outlined for NFIP Community Rating System (CRS).	Step 2
(2)(a) Does the plan describe the geographical location and size of the planning area and each town, village, city and tribal organization within the planning area? Comments: <hr/> <hr/> <hr/>				201.6(c) (ii) (c)	Not addressed in the regulation. See CRS process.	Step 5

All Hazards Mitigation Plan Checklist Continued

PLAN COMPONENTS	No	YES	Page No.	DMA2K	FMA	CRS
(2)(b) Does the plan document changes in population, households and employment in the planning area over the past two decennial censuses? Comments: <hr/> <hr/> <hr/>				201.6(c) (ii) (c)	Not addressed in the regulation. See CRS process.	Step 5
(2)(c) Does the plan provide a general description of land uses and development trends in the planning area? Comments: <hr/> <hr/> <hr/>				201.6(c) (ii) (c)	Not addressed in the regulation. See CRS process.	Step 5
(3)(a) Does the plan identify all the types of natural hazards that can affect the planning area? Comments: <hr/> <hr/> <hr/>				201.6(c) (2) (i)	78.5(b)	Step 4
(3)(b) Does the plan include information on previous occurrences of each hazard event that was identified and the probability of future events for each hazard? Comments: <hr/> <hr/> <hr/>				201.6(c) (2) (i)	78.5(b)	Step 4
(3)(c).(1) Does the description of vulnerability in the plan include a summary of each hazard and its impact on the community, the types and numbers of existing and future buildings, infrastructure and critical facilities located in the identified hazard areas? Comments: <hr/> <hr/> <hr/>				201.6(c) (2) and 201.6(c) (2) (ii) (A)	78.5(b)	Step 5
(3)(c).(2) Does the description of vulnerability in the plan give an estimate of the potential dollar losses to vulnerable structures and a description of the methodology used to prepare this estimate? Comments: <hr/> <hr/> <hr/>				201.6(c) (2) (ii) (B)	Not addressed in the regulation. See CRS process.	Step 5

All Hazards Mitigation Plan Checklist Continued

PLAN COMPONENTS	No	YES	Page No.	DMA2K	FMA	CRS
<p>(3)(c).(3) Does the description of vulnerability in the plan describe the extent of flood depth and damage potential for those planning areas that are subject to flood?</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (2) (i)	78.5(b)	Step 4
<p>(3)(c).(4) Does the description of vulnerability include a map and description of the existing flood hazard, the location of repetitive loss properties, the identification of the flood risk, and discussion of past floods?</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (2) (i)	78.5(b)	Step 4
<p>(3)(c).(5) Does the plan describe the impact of flooding on: infrastructure, public health, and safety for those planning areas subject to flood?</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (2) (ii) and 201.6(c) (2) (A)	78.5(b) 78.5(b)	Step 5
<p>(3)(c).(6) Does the plan describe the need and procedures for warning and evacuating residents and visitors from flood prone areas?</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (3) (i)	78.5(c)	Step 6
<p>(3)(c).(7) Does the plan include a description of development needs including a discussion of redevelopment in the floodplains, watersheds, and natural resource areas and how these areas are addressed and regulated?</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (3) (i)	78.5(c)	Step 6
<p>(3)(c).(8) Does the plan include a summary of the impact of flooding on the planning area and its economy for those areas subject to flood hazards?</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (ii) (B)	Not addressed in this regulation. See CRS process.	Step 5

All Hazards Mitigation Plan Checklist Continued

PLAN COMPONENTS	No	YES	Page No.	DMA2K	FMA	CRS
<p>(3)(c.)(9) Does the plan assess each jurisdiction’s risks where they vary from the risks facing the entire planning area for plans covering more than one local government or tribal organization?</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (2) (iii)	Not addressed directly within the regulation. Implied by 78.5(f) and guidance recommendation to use the CRS process.	When a multi-jurisdictional plan is prepared the critical facilities, building counts, and similar data must be presented for each community seeking CRS credit.
<p>(4)(a) Does the plan develop mitigation goals for the planning area for each of the hazards identified in (3)(a) to reduce or avoid any long-term vulnerabilities to these hazards? (This should include floodplain management goals if applicable.)</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (2) (ii) (c)	Not addressed in the regulation. See CRS process.	Step 5
<p>(4)(b) Does the plan develop a comprehensive range of specific actions and projects that are consistent with the hazard mitigation goals in (4)</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (3) (ii)	78.5(d)	Step 7
<p>(4)(c) Does the plan develop an action plan on how the actions and projects will be prioritized, implemented, and administered by the local jurisdictions in the planning area?</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (3) (iv)	N/A	N/A
<p>(4)(d) For those planning areas subject to flood hazards does the plan include mitigation actions and projects that reduce flood risk and deal with repetitive loss structures?</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (3) (ii)	78.5(d) And 78.5(e)	Step 7

All Hazards Mitigation Plan Checklist Continued

PLAN ELEMENT	No	YES	Page No.	DMA2K	FMA	CRS
<p>(4)(e) For those planning areas subject to flood hazards does the plan include a goal and actions for maintaining compliance with the National Flood insurance Program regulations?</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (3) (i)	78.5(c)	Step 6
<p>(4)(f) For planning areas covering more than one local government or tribal organization are the actions and projects described in (4)(b) through (4)(e) specific to the local government or tribal organization requesting WEM and FEMA approval or credit of the plan?</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (3) (iv)	-	-
<p>(5)(a) Does the plan describe the method and a schedule that will be used for monitoring, evaluating and updating the mitigation plan within a five-year cycle and how public participation will be sought in the plan maintenance process?</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (4) (i)	78.5(e)	Step 10
<p>(5)(b) Does the plan describe the process by which local government(s) and/or tribal organization(s) will incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate?</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (4) (ii)	Not required	Not required
<p>(5)(c) Does the plan provide documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., city council, village board, county board, town board, tribal council)? For multi-jurisdictional plans did each jurisdiction requesting approval of the plan document that it has been formally adopted? Are certified copies of a resolution or meeting minutes included? See Table 5 for an example of a resolution.</p> <p>Comments:</p> <hr/> <hr/> <hr/>				201.6(c) (5)	78.5(f)	Step 9

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