



CHAPTER 5 – MITIGATION STRATEGY

This section describes the mitigation strategy process and mitigation action plan for the Dane County Multi-Hazard Mitigation Plan. This section describes how the County accomplished Phase 3 of FEMA's 4-phase guidance – Develop the Mitigation Plan – and includes the following from the 10-step planning process:

- Planning Step 6: Set Goals
- Planning Step 7: Review Possible Activities
- Planning Step 8: Draft an Action Plan

The culmination of this planning effort is the implementation of the recommendations in this plan. The mitigation strategy recommendations are organized in four levels: underpinnings, goals, policies, and objectives. For the purpose of this plan the following definitions will be used:

- Underpinning – Philosophy that guides goals, policies and objectives.
 - Goal – The purpose or end that provides direction for community decisions.
 - o Policy – Rules that guide the actions of the community.
 - Objective – Specific, attainable, and measurable statements of the actions the community will take to carry out the plan.

5.1 Underpinnings

The underpinnings of this plan include pursuing sustainability and encouraging partnerships between County and local governments, businesses, and community service providers. These concepts permeate through out the plan and are integrated into the goals, policies, and objectives in the next section.

5.1.1 Sustainability

The nation's current expenditures to deal with hazards have been increasing for decades. A change in strategy is necessary to flatten the cost curve and bring a degree of stability to our hazard response system. Mitigation is one of many tools to do this. A broad goal of this plan is to work toward a sustainable future where loss of life, personal injury, and property damage are not exacerbated by short-term or unwise decision-making.

Sustainability is defined as "Meeting the needs of the present generation without compromising the ability of future generations to meet their own needs." This encompasses economic, social, and environmental systems. Put another way, sustainability is the pursuit of achieving equilibrium between these three systems for the long term. A sustainable system is resilient; it can be placed under pressure and, though it may bend, it will not collapse. It is enduring.

Natural disasters and their secondary effects (i.e. power outages) and crises such as domestic and international terrorism have revealed that the systems that we have come to

depend on are vulnerable to disturbances of all kinds. They are not resilient and can remain in disequilibrium for long periods of time. For example, power outages, due to ice storms or high winds in Dane County, have gone on as long as a week and have affected thousands of people. Alternative sources of energy from the sun and wind could provide local residents with a secure power source in times of emergency. This decentralized approach would make a widespread, prolonged power outage much less likely. A decentralized approach would also lessen the impacts on vulnerable populations if a systematic failure were to occur.

The increasing annual cost to property owners and governments resulting from flooding is another sign that human development is not responsive to hydrologic systems. Instead of altering hydrologic systems with dams and levies hoping to decrease flooding, it may be wiser to adjust human behavior to natural systems. Dam construction has been largely unsuccessful in decreasing flooding. A new approach is needed that brings hydrologic systems and human development patterns into equilibrium so neither is altered nor destroyed. This requires building outside existing floodplains and managing stormwater so as not to increase volumes or rates of runoff beyond what would normally occur.

Disruption of economic activity is prolonged when ecologic, and social systems are in disarray. When natural hazards occur, businesses suffer consequences in lost sales or even loss of business entirely. Businesses need support and business people need training in how to prepare for and cope with disasters. Sustainability means making smart policy choices about how to protect people and property that do not compromise the integrity of social, economic, or environmental systems.

Pursuing the goal of sustainability has never been more appropriate. In this nation and in the County, there is sense of insecurity about vulnerabilities to disasters of all kinds. Citizens are looking for answers that will offer greater protection. Working on sustainability provides a framework to address the core issues revolving around natural hazards.

5.1.2 Partnerships

Establishment of public-private partnerships is central to the County's hazard mitigation strategy. Governments, businesses, community service agencies, and residents all have a stake in reducing our vulnerability to natural hazards. This effort can be successful only if these groups work together toward this common goal.

There is a range of actions that could be taken to reduce the overall vulnerability in Dane County, and a successful mitigation program will be a sum of many individual steps. Most of the assets, properties, and critical and vulnerable infrastructure at risk in the County are not County-owned or regulated. As a result, individuals, businesses, and other levels of government must take many of the needed actions. Many of these projects are outside of the County's direct influence. Working partnerships with builders, architects, insurance companies, business organizations, community service groups, local governments, and others are necessary to ensure that mitigation programs are well-designed, broadly supported, and implemented.

5.2 Goals

Up to this point in the planning process, the Hazard Mitigation Planning Committee (HMPC) has organized resources, assessed natural hazards and risks, and documented mitigation capabilities. A profile of the County's vulnerability to natural hazards resulted from this effort, which is documented in the preceding chapter. The resulting goals, objectives, and mitigation actions were developed based on this profile. The HMPC developed this aspect of the plan based on a series of meetings and worksheets designed to achieve a collaborative mitigation planning effort as described further in this section.

Goals were defined for the purpose of this mitigation plan as broad-based statements that:

- Represent basic desires of the community;
- Encompass all aspects of the community, public and private;
- Are nonspecific, in that they refer to the quality (not the quantity) of the outcome;
- Are future-oriented, in that they are achievable in the future; and
- Are time-independent, in that they are not scheduled events.

Goals are stated without regard for implementation, meaning implementation cost, schedule, and means are not considered. Goals are defined before considering how to accomplish them so that the goals are not dependent on the means of achievement. Goal statements form the basis for objectives and actions that will be used as means to achieve the goals. Objectives define strategies to attain the goals and are more specific and measurable. In many hazard mitigation plans specific mitigation "actions" are developed to meet the objectives. In the 2004 plan the objectives are considered synonymous with actions, and for the sake of continuity between that plan and the 2009 version, this definition and use of objectives is carried forward.

A separate meeting of the HMPC was held in 2009 to develop updated goals for this plan. HMPC members were given a list of sample goals to consider, including the goals of 2004 version of this multi-hazard plan (MHP), the 2004 Dane County Flood Mitigation Plan (FMP), the Wisconsin State Hazard Mitigation Plan (SHMP), and the Dane County Comprehensive Plan (related goals and policies). It is also important to integrate this mitigation strategy with other existing goals to ensure consistency, efficiency, and effectiveness, which is also useful in identifying funding opportunities. This is one reason that the goals of the Wisconsin State Hazard Mitigation plan were provided for consideration. The HMPC was instructed that they could use, combine, or revise the statements they were provided or develop new ones on their own, keeping the risk assessment in mind. Team members were provided a poster with a table that listed the goals of the 2004 MHP and FMP. Next to each goal was a column to "keep," "revise," or "delete." A separate poster listed the SHMP goals, with a column to "Adapt to Dane County?" Each HMPC member was given the opportunity to vote accordingly on each goal. The outcome of this exercise was a recommendation to align the revised goals of this plan with those of the SHMP. Using those plan's goals as the basis, a discussion with the HMPC followed that ensured that the goals were comprehensive for Dane County. The public was also included during the revision of this plan's goals. The public was given an opportunity to vote, just as the HMPC did, at the four public workshops held around the County in April 2009. Appendix H captures the results of the 2009 goal

revision process, including how they relate to the 2004 HMP and MHP goals, and a summary of HMPC and public input.

The following five goals provide the direction for reducing future hazard-related losses within Dane County. They are listed below, with their related policy statements.

1) Minimize human, economic, and environmental disruption from natural hazards.

- Continue compliance with the National Flood Insurance Program
- Identify, conserve, restore, and utilize land of potential flood mitigation value. Lands of potential flood mitigation value are wetlands, floodplain corridors, upland storage, closed depressional basins, and areas of high infiltration potential.
- Facilitate programs to clear and maintain drainage channels to decrease flooding.
- Encourage local units of government within the County to employ hazard mitigation concepts when forming, reviewing, and updating local ordinances.
- Broaden existing partnerships with community support groups and service providers to better prepare for and respond to the needs of vulnerable populations in a disaster.

2) Educate and encourage property owners to take action to decrease their vulnerability to the impacts of natural hazards.

- Facilitate the use of existing tools and develop new educational tools to inform local officials, developers, property owners, and other stakeholders about preventing, mitigating, and responding to floods; taking advantage of flood events as an opportunity to get the word out.
- Provide an opportunity for homeowners to take advantage of state and federal flood mitigation funding to decrease their risk to flooding.
- Provide information on sources of funding and technical assistance to help individuals take actions to decrease their vulnerability to other hazards.
- Assist local businesses in planning for and responding to natural hazard events when they do occur.

3) Encourage hazard mitigation planning and incorporate that planning into other related plans.

- Engage in planning and data gathering efforts that make progress toward achieving sustainability while increasing efforts in hazard mitigation.
- Address flooding as a significant component of the County's comprehensive plan.
- Support a systematic update of FEMA's Flood Insurance Rate Maps (FIRM) for Dane County, including consideration of future conditions development and hydrology.

4) Facilitate and coordinate solutions to multi-jurisdictional issues that involve government, citizens, stakeholders, and policy-makers at all levels.

- Facilitate multi-jurisdictional, high priority flood project activities involving stakeholders, and incorporated and unincorporated units of government where they are consistent with the goals and policies of this plan.
- Manage the Yahara River and Chain of Lakes as an integrated system to minimize flood risk.
- Improve the flood-fighting response capabilities of Dane County and local units of government.

5) Improve the disaster resistance of existing buildings, structures, critical facilities, as well as infrastructure whether new construction, expansion, or renovation.

- Encourage local units of government to apply structural hazard mitigation and sustainability concepts when building or remodeling their facilities.
- Encourage critical facilities to employ hazard mitigation and sustainability concepts when building or remodeling their facilities.
- Employ hazard mitigation concepts and support on-going sustainability concepts when building, remodeling, or otherwise improving its facilities or infrastructure.
- Take steps to reduce flood damage to roadways and drainage structures and maintain emergency vehicle access to all residences.
- Facilitate the establishment of public/private partnerships with the local insurance industry, building industry, planners, architects, utilities, urban foresters, and their related associations to better inform and provide technical assistance to individuals about sustainable construction methods and hazard mitigation practices, and create incentives for action.
- Assist in establishing public/private partnerships with local power, water, and wastewater utilities to further fortify their systems and reduce power outages and related losses caused by natural hazards.
- Encourage local businesses to apply structural hazard mitigation and sustainability concepts when building or remodeling their facilities and when constructing residential and commercial buildings for others.

A note about Dane County's policy on Continued Compliance with the National Flood Insurance Program

Dane County recognizes the importance of the availability of flood insurance to citizens. The County will make every effort to remain in good standing with National Flood Insurance Program (NFIP). The County will continue to comply with the NFIP's standards for updating and adopting floodplain maps and maintaining the floodplain zoning ordinance. Proactive flood mitigation efforts already in effect support Dane County's continued compliance. The County will also continue to provide assistance to local units as needed to assure continued local compliance with NFIP standards. There are several objectives identified in this plan that address specifics related to NFIP continued compliance; the County's are in Appendix A, and the City and Villages are in their respective jurisdictional annexes.

5.3 Identification and Analysis of Mitigation Alternatives

The next step in the plan update process was identifying and analyzing mitigation alternatives that could become specific action items (i.e. objectives). This was a two stage process. The first stage was to evaluate the progress on the 2004 objectives to determine which objectives were complete, ongoing, in need of revision, or deletion from the plan. Each of the 13 jurisdictions that participated in the 2004 plan were provided a summary table listing the 2004 objectives, with columns to capture input from the planning team on:

- Was the objective completed? If so, what made it successful?
- Is the objective ongoing? Should it be changed or revised?

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- Is the objective not completed? Is the task still relevant and should it be included in the updated plan? If yes, how could it be improved?

The County and the 2004 participating jurisdictions held separate planning meetings to discuss the progress on the objectives and to fill out the progress table. The result of this process was an assessment of the current progress on the 2004 objectives, as a measure of plan implementation. As of mid-2009 Dane County has made progress on many of the objectives outlined in the 2004 plan. The progress on each objective is noted at the bottom of the objectives, which are described in detail in Appendix A.

A sample of the success stories noted by the HMPC between 2004 and 2009 includes:

- Incorporation by reference of the 2004 Flood Mitigation Plan into the 2007 Dane County Comprehensive Plan, with the recommendation to fully implement the plan.
- Dane County has distributed NOAA All-hazard radios to jurisdictions at cost. This program has been popular with the public as well.
- Dane County has established a pilot buyout program for repetitive flood loss properties.
- The Village of Oregon completed a buyout of 7 homes that had repetitive flooding, utilizing FEMA and CDGB funds.
- The City of Monona received FEMA grant to install a stormwater pumping system.
- The City of Monona received FEMA funding to do a detailed flood risk assessment of the Belle Isle area.
- Increased participation in the NFIP: Maple Bluff now has a floodplain zoning ordinance that meets NFIP standards, even though it has no Special Flood Hazard Area (SFHA), a change that became effective in January 2009. The Village of Blue Mounds has also recently joined the program in May 2009, even though it does not have a SFHA mapped. Shorewood Hills is working on entering this program.
- The County created a comprehensive website developed for the flood hazard and how to mitigate it.
- The County worked with the National Weather Service to install an automated gage at Black Earth Creek at Mazomanie.

In several cases there has been partial or little progress made on objectives. In general this is due to the following:

- Long-range activity;
- Lack of resources, including staff and funding; and
- Low priority or shift in priorities.

In some cases the objectives identified will be implemented as funding becomes available. Other challenges noted by the planning team in implementing the plan include: the complexities of the FEMA grant process; need for approval from a multitude of agencies on structural projects; and complexities of the benefit/cost analysis process.

In 2009, 27 new jurisdictions joined as participants in the Dane HMP and thus needed to develop new action strategies respective to them. The HMPC analyzed a set of viable mitigation alternatives that would support identified goals and objectives. Each HMPC member was provided with the following list of categories of mitigation measures, which originate from the NFIP's Community Rating System:

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- Prevention
 - Property Protection
 - Structural Projects
 - Natural Resource Protection
 - Emergency Services
 - Public Information

The HMPC members were also provided with a list of alternative multi-hazard mitigation actions for each of the above categories. In addition a FEMA Region V document titled "Mitigation Ideas" was provided for reference. This document lists alternative strategies by hazard. A facilitated discussion then took place to examine and analyze the alternatives. With an understanding of the alternatives, a brainstorming session was conducted to generate a list of preferred mitigation actions. HMPC members wrote project ideas on large sticky notes. These were posted on flip charts labeled with the goals. The result was a number of project ideas with the intent of meeting the identified goals. HMPC members were tasked to fill out a mitigation objective worksheet to capture the details needed to turn the brainstormed idea into an action item. Members of the HMPC completed these and returned them to the planning consultant. The results of this process for the County are captured in detail in Appendix A Mitigation Objectives, and in the mitigation strategy section of each respective jurisdictional annex. These objectives are summarized in the objective summary table (Table 5.1), where a quick glance allows the reader to see all of the objectives in the plan, the jurisdictions they pertain to, how they relate towards the plan goals, what hazards they are intended to mitigate, and their priority.

Each objective detailed in Appendix A and the jurisdictional annexes includes a title stating what the project or issue is, followed by specific action steps needed to meet, or implement, the objective. Each objective includes a description of lead and supporting agencies, sources of possible funding or technical assistance, an estimated timeframe for implementation, an estimate of costs associated with it, and the priority. Objectives previously identified in the 2004 plan include a 2009 progress report. This captures what progress has been made since the objectives were first developed in 2004. In many cases the County has made significant progress in implementing the objectives of the 2004 HMP and FMPs' and that progress is captured here. Even those objectives that have been completed are preserved in this plan as a record of progress made. The exceptions to this were several objectives in the 2004 plan that were related to the other phases of emergency management including preparedness, response, and recovery. These objectives were removed based on the HMPC's recommendation to focus the plan on mitigation, and because they were being addressed through the County's emergency management program. These include objectives 4.1.1-4.1.5 in the old plan.

The County did not develop many additional objectives during the 2009 update process. Alternately it chose to focus on moving forward on existing objectives, and consolidate some with similar intent. Those that were consolidated are noted in Appendix A.

Appendix B Mitigation Alternatives in Dane County captures an analysis and discussion of mitigation strategies commonly used in Dane County. It also explains the rationale for certain mitigation measures, and some of the issues with each. This appendix provides

reference and background information on mitigation strategies used, or that could be used, in Dane County.

5.3.1 Prioritization Methodology

The objectives recommended in 2004 were initially prioritized by the planning team and by County staff in accordance with input that has been received throughout the planning process. Hazard characteristics, the vulnerability analysis, the hazard ranking, and personal experience as well as several other criteria guided the prioritization of the objectives. These objectives were also presented, discussed, and independently prioritized during a public meeting held on August 23, 2004. The priorities assigned by the planning team were adjusted according to input received at this meeting. The 2004 prioritization criteria included the following:

- Objective requires no more technology or technical expertise than what is currently available.
- Objective requires no more staff or governmental resources than what is already available.
- Objective is expected to have wide political support.
- Objective can be legally implemented by the lead jurisdiction or agency.
- Objective is cost-effective. There is no other effective, cheaper alternative, and there is no other objective that pursues the same specific result.
- Objective makes progress toward sustainability in mitigating impacts of natural hazards.
- Objective makes significant progress toward mitigating natural hazards.
- Objective correlates with vulnerability analysis and problem statements.

During the 2009 update the HMPC utilized the STAPLEE approach recommended by FEMA, which is very similar to the 2004 criteria. STAPLEE is an acronym representing the following elements that should be considered when evaluating project feasibility:

- Social: Does the measure treat people fairly?
- Technical: Will it work? (Does it solve the problem? Is it feasible?)
- Administrative: Is there capacity to implement and manage the project?
- Political: Who are the stakeholders? Did they get to participate? Is there public support? Is political leadership willing to support the project?
- Legal: Does your organization have the authority to implement? Is it legal? Are there liability implications?
- Economic: Is it cost-beneficial? Is there funding? Does it contribute to the local economy or economic development? Does it reduce direct property losses or indirect economic losses?
- Environmental: Does it comply with environmental regulations or have adverse environmental impacts?

Other criteria considered by the HMPC to recommend what actions might be more important, more effective, or more likely to be implemented than another included:

- Does action protect lives?
- Does action address hazards or areas with the highest risk?

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- Does action protect critical facilities, infrastructure or community assets?
 - Does action meet multiple objectives (Multiple Objective Management)?

That being said, the plan does provide a framework, in the form of objectives, for implementing the various recommendations. In that sense, each of these recommendations is a point for further study and planning. This also is a function of the Countywide scale of plan.

In accordance with the DMA requirements, the HMPC was asked to place an emphasis on the importance of a benefit-cost analysis in determining project priority (the 'economic' factor of STAPLEE). The objective identification and prioritization process is the first step in laying-out, in broad terms, what needs to be done to minimize the occurrence and impact of natural hazards in the County. Costs identified with each objective are preliminary, or generalized, to give an indication if the objective can be accomplished with in-house resources, such as staff time, or will need outside funding sources and partners to implement. The detailed engineering studies, implementation costs, and benefit-cost analysis of specific projects will come at future points in the process. Additional discussion on this topic is included in Chapter 6 Plan Implementation.

During the 2009 update, the HMPC used an approach that analyzed and prioritized common mitigation strategies used in Wisconsin, as opposed to prioritizing individual actions as a group. This approach was utilized due to the large number of participating jurisdictions, and provided a method to allow the jurisdiction to prioritize objectives within their jurisdictional annexes. A matrix that listed the common strategies, and what counties have them as action items in their plans, was taken from the SHMP. This table showed what strategies were listed in the 2004 Dane County MHP, and what strategies are State priorities. A large poster-sized table was created with two columns by each typical strategy, one to indicate a 'for' vote, and one to indicate an 'against' vote. The HMPC members were given 6 sticky dots to use to vote on the strategies, based on the STAPLEE criteria. The votes indicated a general prioritization or preference by strategy (see Appendix I for the results of the voting process). The results were captured in a document that was later shared with the HMPC to serve as a guide to prioritizing the individual objectives developed for their jurisdiction. This also served a guideline as to which strategies should be included in the plan. For example, public education and warning strategies ranked highly by this process, thus it is important that these strategies are outlined in the plan. Each jurisdiction was given the latitude to prioritize those objectives respective to them. For example, while flood mitigation buyouts did not rank high through this process, these objectives may be given a high priority to a jurisdiction that has a higher flood risk. These projects remain a high priority to Dane County, in alignment with state and federal priorities.

5.4 Mitigation Action Plan

This section outlines the development of the final mitigation action plan. The action plan consists of the specific objectives designed to meet the plan's goals. Over time the implementation of these projects will be tracked as a measure of demonstrated progress on meeting the plan's goals.

Table 5.1 provides a summary of each objective and includes the primary goals addressed, the hazards mitigated, and the relative priority. Detail on each objective is in Appendix A for County objectives. Refer to the respective jurisdictional annexes for related objective detail. This table is Dane County's action plan for achieving the goals and recommendations of the HMP. This table represents a comprehensive range of specific mitigation objectives recommended to reduce the impacts of the hazards identified in this plan. There are objectives that address loss reduction to existing buildings and infrastructure (e.g. stormwater and drainage improvements) as well as reducing losses to new buildings and infrastructure (e.g. continued participation in the NFIP), per the requirements of the DMA.

A note on the general timeline rules the County has applied to the mitigation objectives: high priority objectives are to be accomplished within one to two years; moderate priority objectives are to be accomplished within three to four years; and low priority objectives are to be accomplished within five to seven years.

Table 5.1 Mitigation Action Plan Summary ** Indicates new 2009 Hazard Mitigation Plan Objective

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Compile and disseminate mitigation information to help citizens decrease their vulnerability.	Dane County	High	1	All
Assist eligible manufactured home owners, not within mobile home parks, by applying for federal hazard mitigation grant funds to retrofit homes with a safe room.	Dane County	High	1,2,3	Tornado, Windstorm
Work with partners to develop and publicize an information clearinghouse on sustainable and disaster resistant construction methods and local resources and use it in a public outreach campaign to encourage property owners to consider hazard mitigation and sustainability when building or remodeling.	Dane County	Moderate	5	Drought, Flood, Hailstorm, Lightning Severe Winter Weather, Severe Cold, Tornado, Windstorm
Work with partners to provide technical assistance to private property owners for planting, pruning, maintaining, removing, and replacing trees. Also include information on tree care, debris clean up, and recognizing and dealing with hazardous trees.	Dane County	Moderate	1,2	Lightning, Severe Winter Weather, Severe Heat, Tornado, Windstorm
Work with partners to develop plans to deploy back-up power sources at critical wastewater lift stations.	Dane County	Low	1,5	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Work with partners to develop plans to deploy back-up power sources at critical potable water pumping stations.	Dane County	Moderate	1,5	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Facilitate the provision of technical assistance and incentives if available for business owners to provide adequate tornado shelter for employees, customers, and members of the public who may be present at their facilities.	Dane County	Moderate	1	Tornado

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Encourage agricultural producers, and dairies to plan for power outages and install back-up power supplies. This should include an assessment of the applicability of renewable energy sources as a potential power supply.	Dane County	Low	1	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Support the bulk purchase of weather alert radios for at-cost redistribution to local residents.	Dane County	Moderate	1	Flood, Hailstorm, Lightning Severe Winter Weather, Severe Cold, Tornado, Windstorm
Assist local governments in developing hazard mitigation plans that will meet the DMA2000 requirements, address specific local needs, and are consistent with County goals.	Dane County	High	3	All
Assist local units of government in developing plans (possibly through a model ordinance) for managing trees, before, during, and before and after natural hazard events including flooding, tornadoes, drought, wildfires, and ice storms.	Dane County	Low	3, 4	Flood, Hailstorm, Lightning Severe Winter Weather, Severe Cold, Tornado, Windstorm.
Encourage local governments to require an interior “safe room” in homes and businesses without basements in their building codes.	Dane County	Low	1,4	Tornado
Encourage local governments to review local building codes to determine if revisions are needed to improve the ability of structures to withstand greater wind velocities, snow weight, wildfire, and hail impact and establish the means to enforce the requirements.	Dane County	Low	4,5	Hailstorm, Lightning Severe Winter Weather, Wildfire, Severe Cold, Tornado, Windstorm.
If not already in place, encourage local governments to require tie-downs on all manufactured homes and establish the means to enforce the requirements.	Dane County	Moderate	1,4	Flood, Tornado, Windstorm
If not already in place, encourage local governments to require that mobile home parks have storm shelters with enough capacity to adequately protect all residents of the development.	Dane County	High	1,4	Severe Cold, Severe Heat, Severe Winter Storm, Tornado

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Encourage local governments to provide adequate tornado shelters for employees and constituents who may be present at their facilities.	Dane County	Moderate	1,4	Tornado
Assist local governments in applying for pre-disaster mitigation funds to construct storm shelters in public facilities such as parks, fairgrounds, or other vulnerable public areas.	Dane County	High	1,4	Severe Cold, Severe Heat, Severe Winter Storm, Tornado
Assist local governments in applying for pre-disaster mitigation funds to construct tornado shelters in mobile home parks.	Dane County	High	1,4	Tornado
Review the County's Green Building Policy (Adopted by resolution 299, 1999-2000) and consider revisions to include hazard mitigation and sustainability features of new building and remodeling projects.	Dane County	Low	5	Flood, Hailstorm, Lightning Severe Winter Weather, Severe Cold, Tornado, Windstorm
Where feasible, retrofit existing or install new structures in County-owned buildings to ensure adequate shelter from tornadoes.	Dane County	Low	1	Tornado
Decrease the vulnerability of County park users to natural hazards through education and better shelter design.	Dane County	Moderate	2	Severe Cold, Severe Heat, Severe Winter Storm, Tornado
Install natural barriers beside highways and other roads, and re-grade roadsides to decrease snow on roads focusing on residential developments with limited road access.	Dane County	Low	1	Severe Winter Weather
Develop a County drought plan that takes into consideration meteorological, hydrological, agricultural, and socioeconomic drought.	Dane County	Low	3	Drought
Implement a voluntary program of property acquisition and relocation for high-risk residences. Assign a high priority to properties with paid flood insurance claims, with special attention given to repetitive loss properties.	Dane County	High	1	Flood

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Implement a voluntary program of flood protection for high-risk residences. Assign a high priority to properties with paid flood insurance claims, with special attention given to repetitive loss properties	Dane County	High	1	Flood
Determine the feasibility of reducing the flow of floodwaters over roads by evaluating road elevation and culvert sizing standards for construction and upgrade for all County roads, especially for roads in low-lying or flood-prone areas.	Dane County	Low/ Moderate	1	Flood
Develop road shoulder, ditch, and bridge maintenance and upgrade standards to prevent floodwater and stormwater from damaging or washing-out roads and making them impassible.	Dane County	Low/ Moderate	1	Flood
Formalize a process for considering water flow along and under roadways as one component of the overall water conveyance system.	Dane County	Moderate	1	Flood
Assist local units of government in developing local flood response action plans.	Dane County	High	3	Flood
Improve the flood warning system for areas of the County where floodwaters rise rapidly or impact large numbers of people.	Dane County	High	1	Flood
Improve the communication system between the County and local units of government when floods occur or are likely to occur.	Dane County	Moderate	4	Flood
Develop comprehensive water management policies for Dane County, considering the connections between land-use, urban growth, and surface water, and ground water issues.	Dane County	High	4	Flood
Discuss formation of a policy that guides or further restricts development around flood-prone areas and areas of high flood mitigation value; support policy consistencies between the comprehensive plan and the flood mitigation plan.	Dane County	High	3	Flood

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Discuss urban development around small closed depressional basins that addresses special flooding and stormwater related issues that are unique to these areas.	Dane County	Moderate	3	Flood
Assist in the development of watershed-scale stormwater management plans that make possible coordinated management of locally-derived runoff.	Dane County	High	4	Flood
Evaluate the County's and other units of governments' erosion control and stormwater management, floodplain zoning, shoreland zoning ordinances, and NFIP status to determine regulatory deficiencies, necessary improvements, and enforcement shortcomings in order to bring governments into compliance and to strengthen and maximize the benefits of current regulations.	Dane County	High	1	Flood
Identify and map areas in the County that have potential flood mitigation value.	Dane County	High	3	Flood
Establish flood mitigation as a criterion for land acquisition and environmental restoration where it would aid in the achievement of flood-reduction goals and conserve and restore land that meets the criteria.	Dane County	High	3	Flood
Ensure that the Department of Natural Resources affords flood risk as high priority when evaluating the public interest in the lake level orders for the Yahara chain of lakes.	Dane County	Moderate	4	Flood
Maintain the levels of the Yahara lakes at the lower limit of the DNR's set operating range as part of a comprehensive strategy that addresses flood risk and the needs of fisheries, recreational interests, agricultural interests, and lakeshore property owners.	Dane County	Moderate	4	Flood

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Develop a coordinated management strategy and a unified plan of operation and maintenance for all control structures on the Yahara River from Tenney Dam to the Stebbinsville Dam. Assure that the responsible agency has the technical expertise and resources to operate and maintain the control structures within the parameters of the plan.	Dane County	Moderate	4	Flood
Improve monitoring and modeling of the Yahara River and chain of lakes to develop a better understanding of how the system can be more effectively managed. Include a study of the likelihood and potential impact of a significant weather event to cause Lake Mendota to rise over the top of Tenney Dam.	Dane County	Moderate	4	Flood
Evaluate methods such as modification of bridge constrictions, aquatic plant removal, dredging, and channel modifications to increase flow conveyance, while respecting in-stream natural and cultural resources.	Dane County	Moderate	3	Flood
Identify hot spots or high priority projects involving multiple jurisdictions where watershed level solutions could be applied.	Dane County	High	4	Flood
Coordinate funding opportunities to carry out the objectives of the flood mitigation plan including, but not limited to mitigation, land acquisition, regional projects, and flood response activities.	Dane County	High	4	Flood
Launch and update when necessary an educational program to provide local units of government with important flood-fighting information.	Dane County	Moderate	4	Flood
Improve citizen and local elected officials understanding of floodplain maps, floodplain regulations, floodproofing options, development and stormwater management considerations, and other information to assist in good decision-making.	Dane County	Moderate	2	Flood

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Develop and use a flood risk map based on hydric soils, wetlands, and areas of past damage. Consider incorporating a buffer area of 1 foot in elevation above the mapped 100-year floodplain on FIRM maps as an advisory tool. Use the map as an educational tool, and also share with real estate agents and local units of government.	Dane County	Moderate	3	Flood
Pursue Storm Ready Certification from the National Weather Service.**	Dane County	High	1	Flood, Fog, Hail Storm, Lightning, Tornado, Severe Cold, Severe Heat, Severe Winter Storm, Windstorm
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	Dane County	High	1	Flood
Further refine the County's flood risk assessment to include an analysis of cost savings from implementation of floodplain management**	Dane County	Moderate	1	Flood
Encourage the WIDNR to complete the hazard classification of dams in the County**	Dane County	Moderate	1	Dam Failure
Cities				
Provide wetland education**	City of Edgerton	Moderate	5	Flood
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	City of Edgerton	High	1	Flood

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Tornado/ storm shelter for trailer park 2151 CTH MM**	City of Fitchburg	Moderate	1	Tornado
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	City of Fitchburg	High	1	Flood
Purchase anti-icing equipment to fit on existing vehicles to mitigate the effects of ice storms and snow storms.**	City of Madison	Moderate	1,5	Severe Winter Storm
Eliminate residential basement backups attributable to overloaded sanitary sewers during rain events.**	City of Madison	High	1,2	Flood
Reduce inflow and infiltration into sanitary sewer collection system.**	City of Madison	High	1	Flood
Provide emergency back-up power generators to critical municipal facilities.**	City of Madison	High	5	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Create a hydrologic and hydrodynamic model of the Yahara Chain of lakes.**	City of Madison	High	3	Flood
Reduce flooding of the Midvale/University Ave. intersection and associated areas along the University Ave. corridor.**	City of Madison	Moderate	1	Flood
The goal of the EMERGENCY WARNING SIREN PROGRAM is to provide advanced warning through overlapping coverage of all City of Madison residential, parks, and open spaces.**	City of Madison	Moderate	3	All
Purchase and install chlorine gas monitoring/alarm equipment at all of the water utility facilities that store and use chlorine gas (23 well sites.)**	City of Madison	High	3	?

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Procure a Cell On Wheels – a complete trailerable base station site for emergency radio coverage. This system includes a crank up tower, generator, and housing for base stations.	City of Madison	High	2	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Procure a 35 kilowatt, single phase, trailer mounted generator with emergency connection outlet at each of six tower sites.	City of Madison	Moderate	2	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Procure two 25 kilowatt, single phase standby generators and transfer switches. These will be used at the Spaanem tower and Holiday Heights tower, which currently have no emergency backup power.**	City of Madison	Moderate	2	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Procure an 85 kilowatt, three phase generator to replace old generator at the U.W. shared tower. Present generator is unrepairable should it malfunction.**	City of Madison	Moderate	2	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Procure 40 portable radios to be held in reserve in a secure location for volunteers and emergency aid workers after a disaster.**	City of Madison	High	2	All
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	City of Madison	High	1	Flood
Improve the City's Emergency Operations Center.**	City of Middleton	Moderate	4	All
Train a contingent of volunteers to assist public safety and public works/public lands in the event of a major incident.**	City of Middleton	Moderate	2	All
Complete the migration of all city departments to the new County-wide radio communications network.**	City of Middleton	High	4	All

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	City of Middleton	High	1	Flood
The City will decrease localized flooding on private property and roads through a coordinated approach, which improves roads, and storm sewers and sanitary sewer infrastructure, and minimizes flooding on private property.	City of Monona	High	1	Flood
The City will work with agencies to explore opportunities to efficiently move water through the Lake through a program of dredging at specific points: 1) the outlet channel to Lake Monona; and 2) the channel from Squaw Bay on Lake Monona to the inlet to Lake Waubesa under the railroad bridge.	City of Monona	High	4	Flood
The City will seek to minimize sanitary sewer backups during periods of high water.	City of Monona	Moderate	1,2	Flood
The City will coordinate efforts with local residents to get electrical equipment, such as furnaces, water pumps, and electrical mains, out of basements and above the 100-year floodplain elevation.	City of Monona	Moderate	2	Flood
The City will coordinate and work with the WDNR to update the 100-year floodplain elevation for Lake Monona based on current land uses.	City of Monona	High	4	Flood
The City will encourage Dane County to conduct a dam-break analysis as part of the planned safety improvements of the Tenney Park Dam.	City of Monona	Moderate	1	Dam Failure

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
The City will conduct an inventory of all public space trees. This inventory will categorize the trees that are at risk to damaging power lines or public buildings because of their age, health, or location.	City of Monona	Moderate	3	Severe Winter Weather, Tornado, Windstorm,
The City will seek to minimize flooding damages caused by high lake levels within the five flooded areas by working to lower the lakes through a modification of Lake Mendota and Monona lake level orders, while balancing navigational and habitat interests.	City of Monona	High	1	Flood
The City will seek to have the existing storm sewers in the Belle Isle area fully functional under all lake water level conditions with the installation of two storm sewer lift stations.**	City of Monona	High	3	Flood
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	City of Monona	High	1	Flood
Establish and foster an informal neighborhood-scale communication system that aims to look after special populations, including the elderly, who are most susceptible to extreme cold and heat events.	City of Stoughton	Moderate	3	Severe Cold, Severe Heat, Severe Winter Storm, Tornado
Analyze radio/scanner communication difficulties between police, fire, EMS, and Dane County to determine a strategy to facilitate problem free communication during emergencies between all parties.	City of Stoughton	High	4	All
Establish a functioning Continuity of Operations Plans (COOP) at all critical facilities.	City of Stoughton	High	3	All

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Work with the County to establish conditions in which the dam in Stoughton can be brought under County ownership in order to better control water flows in the Yahara River and increase the safety of the dam, which is in disrepair.	City of Stoughton	High	4	Dam failure
Establish a community communication system with the primary purpose of educating, informing, and warning residents about public health, safety, and welfare concerns affecting Stoughton residents.	City of Stoughton	High	1, 2	All
Establish cooling and heating centers, and additional storm shelters as needed that will function during natural hazards and power outages.	City of Stoughton	High	1	Severe Cold, Severe Heat, Severe Winter Storm, Tornado
Analyze the availability of gasoline during power outages and natural hazards for police, fire and EMS vehicles, and determine a method of providing a dependable, reasonably priced gasoline source for use by first responders during these events.	City of Stoughton	High	1	All
Develop a system to prevent flooding at the Virgin Lake area retention pond. When there is heavy rain the retention pond floods threatening area homes.**	City of Stoughton	High	1	Flood
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	City of Stoughton	High	1	Flood
Assess the need to replace and add weather warning sirens throughout the City. As the City population has grown and the geographical jurisdiction has increased, there are areas that the current sirens do not cover.**	City of Verona	High	1	All

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	City of Verona	High	1	Flood
Villages				
Supply NOAA All Hazards Radios to Village residents.**	Village of Blue Mounds	Moderate	3	Flood, Hailstorm, Lightning Severe Winter Weather, Severe Cold, Tornado, Windstorm
Establish and foster a village communications/warning and immediate assistance system, especially directed to most at risk community residents.**	Village of Blue Mounds	Moderate	3	All
Identify locations of the nearest secure natural hazard or general emergency shelters for various types of emergency events and inform residents about them.**	Village of Blue Mounds	High	5	Severe Cold, Severe Heat, Severe Winter Storm, Tornado, Windstorm, Flood
Determine need for modification of an existing building or construction of a new building to serve as an emergency shelter during tornado, high wind, power outage, and extreme heat or cold events.**	Village of Blue Mounds	High	2	Tornado, Windstorm, Lightning, Severe Heat, Severe Cold
Assess need for back-up electrical power generators for government buildings, sewer system, and water system.**	Village of Blue Mounds	Moderate	3	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Establish a Village tie-down ordinance for all mobile/manufactured homes and bring all mobile/manufactured homes in the Village in compliance with tie-down provisions.**	Village of Blue Mounds	High	4	Tornado, Windstorm

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	Village of Blue Mounds	High	1	Flood
Brooklyn Emergency Response Plan.**	Village of Brooklyn	Moderate	4	Flood, Hailstorm, Lightning Severe Winter Weather, Severe Cold, Tornado, Windstorm
Minimize the threat to properties from storm water and flooding.**	Village of Brooklyn	Moderate	2	Flood
Create a public storm shelter within 8 years.**	Village of Cambridge	High	2	Severe Cold, Severe Heat, Severe Winter Storm, Tornado, Windstorm, Flood
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	Village of Cambridge	High	1	Flood
Identify potential flooding issues along the Cottage Grove Creek.**	Village of Cottage Grove	High	3	Flood
Prepare for power outages by purchasing a source of power/generator.**	Village of Cottage Grove	High	3	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Identify and catalogue all publicly owned trees within the boulevards, park lands, and other public properties for defect or disease.**	Village of Cottage Grove	Moderate	3	Tornado, Windstorm

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Provide adequate shelter for the public in the largest park in Cottage Grove known as Fireman's Park.**	Village of Cottage Grove	Moderate/ High	2	Severe Cold, Severe Heat, Severe Winter Storm, Tornado
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	Village of Cottage Grove	High	1	Flood
Replace and/or eliminate existing sanitary sewer lines that are in poor condition that allow inflow and infiltration of groundwater into the sanitary sewer collection system. This causes overloading of the collection system and the wastewater treatment plant, causing sewage backups into residences and businesses.**	Village of Cross Plains	High	3	Flood
Replace/update and complement existing two-way radio communication devices in the Village of Cross Plains Emergency Management Department and Emergency Warning Sirens to become compatible with new Dane County Radio Communication System.**	Village of Cross Plains	High	4	All
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	Village of Cross Plains	High	1	Flood
Storm water control in central village.**	Village of Dane	Low	3	Flood
Eliminate flooding from storm sewer surcharges between W. Lexington Parkway and Acker Parkway.	Village of DeForest	High	3	Flood

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Construct a detention basin east of State Highway 51 across from the High School that will detain storm water runoff and release it at a rate within the capabilities of existing channels and culverts, while accommodating Highway 51 expansion projects. See DeForest Area Schools Flood Hazard Mitigation Project for details.	Village of DeForest	High	1	Flood
Provide emergency back-up power to the Public Services Facility.	Village of DeForest	High	2	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Supply additional portable radios to be used by other departments.	Village of DeForest	High	4	All
Complete the revision of the Emergency Preparedness Plan for 2009.**	Village of Deforest	High	4	All
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	Village of Deforest	High	1	Flood
Assess the need and feasibility of increasing the durability of the beachhouse structure to withstand tornado impacts as well as providing shelter during extreme heat events.	Village of Maple Bluff	Moderate	2	Tornado, Windstorm, Severe Heat
Educate homeowners and builders about home repair and construction cautions necessary to prevent damage to homes from extreme cold temperatures and protect occupants.	Village of Maple Bluff	Low	5	Severe Cold, Severe Winter Storm
Inform property owners along the lakeshore about reasons for lake levels changes through Village website.	Village of Maple Bluff	Moderate	5	Flood

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Modify or create a sandbagging plan in order to ensure available supplies and organized and effective placement of bags during emergencies.	Village of Maple Bluff	Moderate	4	Flood
Supply NOAA weather radios to area residents.	Village of Maple Bluff	Moderate	3	Flood, Hailstorm, Lightning Severe Winter Weather, Severe Cold, Tornado, Windstorm
Locate and assess needs of special populations and their ability to prepare and respond to natural hazards.	Village of Maple Bluff	Moderate	3	All
Establish control over City of Madison Storm Water that is routed through the Villa.**	Village of Maple Bluff	High	4	Flood
Develop a stormwater wet retention pond near village and country club tennis court.**	Village of Maple Bluff	High	3	Flood
Control/Eliminate Flooding in Fireman's Park.**	Village of Maple Bluff	High	3	Flood
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	Village of Maple Bluff	High	1	Flood
The Village will encourage the Blaschka Family, Dane County, Wis. Em. Mngt, and Wis. DNR to conduct a dam-break analysis as part of the planned safety improvements of the privately-owned Blaschka Dam.**	Village of Marshall	High	4	Dam Failure
Establish cooling and heating centers, and severe weather/tornado shelters as needed that will function during natural hazards and power outages.**	Village of Marshall	High	2	Severe Heat, Severe Cold, Windstorm, Lightning, Tornado, Windstorm

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Ensure natural hazard warnings by providing at cost, programmable NOAA weather radios.**	Village of Marshall	Moderate	3	Flood, Hailstorm, Lightning Severe Winter Weather, Severe Cold, Tornado, Windstorm
Emergency response personnel need to be trained and plan for various contingencies and response activities, such as evacuation, traffic control, search and rescue.**	Village of Marshall	Moderate	5	All
Update and expand Emergency Operation Plan.**	Village of Marshall	High	4	All
Obtain back-up power through the procurement of a generator for the Public Safety Building which houses the EMS and Fire Department to be used during emergencies to ensure full operational capacity of station.**	Village of Marshall	Moderate	2	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Implement a system of tornado sirens that will alert residents to the impending hazards that may cause significant damage to the area.**	Village of Marshall	Moderate	3	Tornado
Establish and foster an informal communication system that aims to look after special populations, including the elderly, who are most susceptible to extreme cold and heat events.**	Village of Marshall	Moderate	3	All
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.	Village of Marshall	High	1	Flood
Reduce localized road flooding during periods of heavy rain.**	Village of McFarland	Low	3	Flood

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	Village of McFarland	High	1	Flood
Educate residents in the Village of Shorewood Hills on the benefits of participation in the National Flood Insurance Program (NFIP) and ensure participation in the NFIP by the Village.**	Village of Shorewood Hills	High	5	Flood
Clearance of possible obstructions on 6 Mile Creek that can lead to flooding.**	Village of Waunakee	High	3	Flood
Continue to implement sound floodplain management practices through continued compliance with the National Flood Insurance Program, to include floodplain ordinance enforcement and periodic review, promoting the benefits of flood insurance, and continued staff training and development in floodplain management.**	Village of Waunakee	High	1	Flood
Towns				
Develop an Emergency Operations Plan with Dane County Emergency Management to assist all residents before, during, and after a natural hazard event. Create a sandbagging plan to ensure available supplies and organized and effective placement of bags during emergencies.**	Town of Albion	High	3	All
Locate a storm shelter location on town site which would be suitable and add standby electrical power	Town of Berry	High	1	Severe Cold, Severe Heat, Severe Winter Storm, Tornado
Assess potential locations and effectiveness of check dams on hillsides as a flood mitigation measure.	Town of Berry	Moderate	1	Flood
Ensure the anchoring of all manufactured homes in the Township by passing a tie down ordinance for manufactured homes.	Town of Berry	Moderate	4	Tornado, WIndstorm

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Join Dane County in a purchasing contract for periodic end loader service, especially during heavy snow events, in order to keep driveways and roadways clear and homes and businesses accessible.	Town of Berry	Moderate	4	Severe Winter Storm
Develop an Emergency Operations Plan with Dane County Emergency Management in order to better develop communications with the elderly during severe heat and cold events, integrate projects contained in this document, and provide a comprehensive and strategic plan to manage natural and other disasters.	Town of Berry	High	4	Severe Heat, Severe Cold
Protect the elderly or other special populations who are adversely affected by extreme cold by winterizing homes where desired and needed.	Town of Berry	Moderate	3	Severe Cold
Minimize fog related traffic accidents by center-striping town "thru" roads.**	Town of Cottage Grove	Moderate	1	Fog
Ensure Town stormwater drainage systems are maintained and/or upgraded to move water to intended areas.**	Town of Cottage Grove	High	3	Flooding
Encourage residents to prepare themselves by stocking up with necessary items and planning for how family members should respond if any of a number of possible emergency or disaster events strike.**	Town of Cottage Grove	High	5	All
Adopt a tree ordinance to lessen the damages done to trees and property caused by natural hazards while maintaining or improving the quality and quantity of trees in the Township.	Town of Dunn	Moderate	4	Tornado, Windstorm
Relocate roadside electric utility transformers that are susceptible to automobile traffic damage.	Town of Dunn	Moderate	3	Fog
Bring all manufactured homes in Town in compliance with Town tie-down provision.	Town of Dunn	High	4	Tornado, Windstorm

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Construct a tornado shelter at Bay View Heights manufactured home site.	Town of Dunn	High	3	Tornado
Acquire dry hydrants	Town of Dunn	High	3	Wildfire
Ensure natural hazard warnings in rural areas by providing at cost, programmable NOAA weather radios	Town of Dunn	Moderate	3	Flood, Hailstorm, Lightning Severe Winter Weather, Severe Cold, Tornado, Windstorm
Maintain access to Goodland Park Road and Alma Road during winter months by using one or both of the following methods: 1) erect natural barriers along roads to prevent snow drift; 2) contract with local resident to plow snow; and 3) have the County re-grade roads.	Town of Dunn	Moderate	3	Severe Winter Storm
Determine the possibility of property buyouts on Waucheeta and Nora Lanes and buy out willing properties that have been flooded.	Town of Dunn	Moderate	1	Flood
Restore wetland along Lake Kegonsa as part of a second phase of wetland restoration with pond and drainage to the lake.	Town of Dunn	High	3	Flood
Complete and adopt Emergency Operation Plan.	Town of Dunn	High	4	All
Protect and restore lakes, river, and streams; including shorelines, wetlands, high infiltration areas, and associated vegetative buffers to maintain high water quality and manage water quantity; and require bioinfiltration structures (i.e. raingardens) for new structures to reduce stormwater runoff and, in turn, flooding.**	Town of Dunn	High	4	Flood
The Town will seek to minimize flooding damages within the Lake Forest Subdivision.	Town of Madison	High	3	Flood
The Town will seek to minimize flooding damages at 2802 Kingston Drive	Town of Madison	High	3	Flood
The Town will seek to minimize equipment failure caused by power outages at critical public facilities during lightning storms.	Town of Madison	Moderate	3	Lightning

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
The Town will seek to minimize property damages caused by high winds, tornadoes and hailstorms.	Town of Madison	Moderate	3	Windstorm, Tornado, Hailstorm
The Town will seek to minimize vehicular accidents caused by poor visibility due to fog.	Town of Madison	Low	3	Fog
Implement a program to assist residents and businesses to maintain power during tornadoes, high winds, hail, ice storms, and lightning strikes.**	Town of Middleton	Moderate/ High	2	Tornado, Windstorm, Hailstorm, Severe Winter Storm, Lightning
Replace culvert to avoid additional flooding.**	Town of Montrose	High	3	Flood
Range Trail culvert.**	Town of Montrose	High	3	Flood
Remy Road culvert caving in. Replace to alleviate flooding.**	Town of Montrose	High	3	Flood
Flynn Creek Bridge and approaches.**	Town of Montrose	High	3	Flood
Lessen the damage to Viney Road from flooding**	Town of Montrose	High	3	Flood
Educate and encourage property owners to take action to decrease vulnerability to impact hazards.**	Town of Oregon	Moderate	5	All
Undertake public information activities to advise property owners, renters, businesses, and vulnerable populations about hazards and recommended courses of action to minimize damage and to protect people from harm.	Town of Pleasant Springs	Moderate	3	All
Repair and enlarge culvert to prevent water from flowing over roads and to dig up culverts and fill base with gravel and black dirt to prevent culvert from sinking.**	Town of Primrose	High	3	Flood

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Start a program to develop emergency response procedures in case of power outages, road closures, etc. due to extreme cold or heavy snow.**	Town of Primrose	High	4	Severe Winter Storm
Flood mitigation to private property and town road infrastructure.**	Town of Roxbury	High	1	Flood
Implement a program to identify and monitor Springdale residents, primarily the elderly, at most risk to the effects of extreme heat and cold.	Town of Springdale	High	3	Severe Heat, Severe Cold
Implement a program to assist residents, home-based business, and farmers, in particular, to maintain power during tornadoes, high winds, hail, and ice storms.	Town of Springdale	High	3	Tornado, Windstorm, Hailstorm, Severe Winter Storm
Implement a program to improve road safety for all traffic on Town-wide roads. Determine the feasibility of reducing the flow of floodwaters over roads by evaluating road elevation, road shoulder, ditching, and culvert sizing standards for construction and upgrade for all roads in the Town of Springdale, but especially for roads in low-lying or flood-prone areas.	Town of Springdale	High	3	Fog, Flood, Severe Winter Storm
Mitigation of hazardous road conditions during slippery foggy weather at a sharp curve on northern section of Town Hall Road in Section 5.	Town of Springdale	High	1	Fog
Assess the feasibility of anchoring of all manufactured homes in the Township.	Town of Springfield	High	1	Tornado, Windstorm
Implement a culvert and ditch cleaning program to ensure the timely flow of water through the area.	Town of Springfield	High	1	Flood
Ensure access to water, heating and cooling during power outages by increasing the reliability of electrical service.	Town of Springfield	High	3	Flood, Lightning, Severe Winter Storm, Tornado, Windstorm

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Enhance communication before, during, and after a natural hazard event between the public and local government and between the local government and the County.	Town of Springfield	High	4	All
Decrease crop and property damage in towns and villages in the Koshkonong Creek Watershed due to the flooding of Koshkonong Creek and its tributaries through a multi-jurisdictional effort.	Town of Sun Prairie	High	4	Flood
Outfit the Town generator with equipment necessary for its use at the Town Hall.	Town of Sun Prairie	High	5	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Ensure natural hazard warnings in rural areas by providing at cost, programmable NOAA weather radios.	Town of Sun Prairie	Moderate	1,2	Flood, Hailstorm, Lightning Severe Winter Weather, Severe Cold, Tornado, Windstorm
Addition to salt shed to allow for prolonged winter weather without salt/sand resupply.**	Town of Vermont	High	1	Severe Winter Storm
Provision for the integration of emergency generator power into the Town garage and town hall electrical power supply.**	Town of Vermont	Moderate	1	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Determine whether flow capacity of Bergum Road box culvert is adequate, replace to required flow and traffic design standard.	Town of Vermont	Moderate	3	Flood
Determine whether flow capacity of Vermont Church Road box culvert is adequate, replace to required flow and traffic design standard.	Town of Vermont	Moderate	3	Flood
Reduce vulnerability of water control facilities to flood damage. Determine adequacy of presently installed culverts and replace as necessary. Reshape and add reinforcement to various road shoulders and ditches to increase resistance to erosion and increase flow capacity.	Town of Vermont	Moderate	3	Flood

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Set up emergency management coordination center in town hall; add interoperable communications equipment to town hall and town vehicles.	Town of Vermont	Low	4	Flood, Hailstorm, Lightning Severe Winter Weather, Severe Cold, Tornado, Windstorm
Develop and implement a plan to prevent flood damage to residents on the Upper Sugar River and those farm lands that are low elevations. The Town will adopt a schedule for clearing drainage ways, clearing debris from culverts and maintaining proper drainage elevations that may restrict the flow of stormwater in the affected areas.**	Town of Verona	High	1	Flood
Establish and foster an informal neighborhood/area scale communications and immediate assistance system directed to special population, single member household, and most at risk community residents, including, but not limited to, the elderly.	Town of Vienna	Moderate	1	All
Inform and educate town residents on the locations of the nearest secure natural hazard or general emergency shelter for various types of possible future emergency events.	Town of Vienna	Moderate	1, 2	Severe Cold, Severe Heat, Severe Winter Storm, Tornado, Windstorm, Flood
Eliminate and/or mitigate the heavy rainfall event short-term flooding/deposit of field debris and mud on some sections for local town roads through the ongoing town road improvement and drainage program.	Town of Vienna	Moderate	1	Flood, Erosion
Secure and have available adequate back-up electrical power generation for town government buildings in the event of a prolonged electrical power outage due to natural disasters or other possible general causes.	Town of Vienna	Moderate	3	Flood, Lightning, Tornado, Severe Winter Storm, Windstorm
Improvements and/or mitigation of the high ground water table in and surrounding the Hamlet of Morrisonville (Town of Windsor).	Town of Vienna	High	1	Flood

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Complete a more detailed “Vulnerability to Flood” analysis..**	Town of Vienna	High	3	Flood
Stormwater/Flood relief channel.**	Town of Vienna	High	3	Flood
Long term flood relief mitigation plan for portions of Town of Vienna sections 15, 16, 21, 22, 23, & 26.**	Town of Vienna	High	1	Flood
Relieve or provide planned storage for storm water for private properties adjacent to Interstate Highway I90/ 94 & 39 in Town of Vienna sections 3, 11, & 14 which are flooded due to additional lanes being constructed for the Interstate Highway, without additional storm water storage capacity planning.**	Town of Vienna	Medium to High	1	Flood
Study, develop and implement a plan to prevent flood damage to residents on the north shore of Lake Mendota along Reynolds Avenue and Kupfer Road, including protection of the Reynolds Avenue sanitary sewer lift station owned and operated by the Town of Westport Sewer Utility District.	Town of Westport	High	3	Flood
Study, develop, and implement a plan to provide for shore stabilization on the north shore of Lake Mendota from the Kupfer Road neighborhood to the Yahara River.	Town of Westport	Low	3	Landslide, Erosion
Study, develop, and implement a plan to provide for stormwater detention at the Mary Lake pond located east of Woodland Drive as it crosses Six Mile Creek, whether by refurbishing the pond or by recreating or creating increased wetlands, in order to increase water quality and decrease water quantity into Lake Mendota from Six Mile Creek.	Town of Westport	Moderate	3	Flood

Mitigation Objective Title	Jurisdiction	Priority	Goals	Hazards
Study, develop, design, and implement improvements for the Woodland Drive bridge over Six Mile Creek, and for the roadway near the bridge, that will enhance the water quality of the Creek, assist in holding area wide stormwater from the Creek and Lake Mendota, and to aid in protecting the roadway and bridge from being damaged by floodwaters that often overflow the bridge and road.	Town of Westport	High	3	Flood
Work with Dane County to study, develop, and implement standard stormwater runoff and erosion control ordinances and policies more strict than required by Dane County in an effort to provide for zero runoff in 100-year storms for each jurisdiction.	Town of Westport	High	4	Flood
Mitigate Morrisonville flooding by improving drainage along the Yahara River.**	Town of Windsor	High	1	Flood
Mitigate sanitary sewer backups in Morrisonville.**	Town of Windsor	Moderate	1	Flood
Mitigate resident injuries and property damage from natural disasters.**	Town of Windsor	Low	1	All

** Indicates new 2009 Hazard Mitigation Plan Objective