



# Winnebago County Natural Hazards Mitigation Plan: 2009-2013

## Executive Summary – Final Draft

### 1. GENERAL OVERVIEW

In an effort to curb rising costs associated with natural disasters, the federal government adopted the Disaster Mitigation Act of 2000 (DMA 2000). It amended the Robert T. Stafford Disaster Relief and Emergency Act, which is the primary law at the federal level dealing with disaster planning, mitigation, response, and recovery.

DMA 2000 reinforced the importance of hazard mitigation planning to proactively devise strategies intended to avoid and reduce the negative effects of natural disasters. If a community wants to apply for grant funding from the Pre-Disaster Mitigation (PDM) Program or the Hazard Mitigation Grant Program (HMGP), it must have an approved hazard mitigation plan. If a disaster strikes a community that does not have an approved plan, it can only receive funding through HMGP if it agrees to prepare a plan within one year.

Winnebago County and participating municipalities prepared a plan to meet this new requirement in 2005, and in so doing, helped its citizens mitigate the effects of natural disasters. Consistent with federal law, the county is undertaking a comprehensive five-year update of the 2005 plan. Although a plan must meet minimum requirements, this plan is an expression of local needs and priorities.

### 2. PLAN CONTENTS

The plan consists of five chapters, a map series, and a number of appendices. The first chapter provides an overview of the project. The second chapter reviews background information about Winnebago County including its setting, demographic and economic characteristics, climate, natural resources, architectural and historic resources, land use, and development trends. Chapter 3 contains a complete inventory of critical facilities in the county. Natural hazards are identified and reviewed in Chapter 4 along with estimated losses to buildings, infrastructure, and critical facilities. In Chapter 5, mitigation strategies are reviewed and goals, objectives, and policies are identified that will help to craft appropriate solutions to the identified problems. A range of activities are presented to help foster hazard mitigation efforts. Various funding sources are also reviewed with an eye towards identifying options for funding identified projects. All of the maps in the plan are included in the final section of the plan.

The plan focuses on 11 types of natural hazards:

- ◆ dam failure
- ◆ flooding
- ◆ ice shoves
- ◆ fog
- ◆ tornado and high winds
- ◆ hailstorms
- ◆ thunderstorms
- ◆ winter storms
- ◆ extreme heat and cold
- ◆ drought
- ◆ wildland fire

As part of the inventory phase, 639 critical facilities in the county were identified including:

- ◆ bridges
- ◆ dams
- ◆ public-use airports
- ◆ telecommunication towers
- ◆ telephone facilities
- ◆ electric facilities
- ◆ natural gas facilities
- ◆ petroleum pipeline facilities
- ◆ public water facilities
- ◆ wastewater facilities
- ◆ fire and police services
- ◆ National Guard facilities
- ◆ government facilities
- ◆ schools (public and private)
- ◆ special care facilities-residential
- ◆ special care facilities-nonresidential
- ◆ health care facilities
- ◆ vulnerable housing, such as manufactured/mobile home parks and campgrounds

### 3. KEY FINDINGS

- ◆ All of the cities and villages in Winnebago County participated in the development of the 2005 plan and in this five-year update.
- ◆ There are a number of groups that are disproportionately affected by natural disasters, including the elderly, people with disabilities, homeless individuals, people living in manufactured and mobile homes, people in campgrounds, and populations with language barriers.
- ◆ Of all the natural hazards, flooding typically causes the most damage. In 2003, there were 2,684 buildings within the 100-year floodplain. It is estimated that an area-wide 100-year flood would result in damage of more than \$53.3 million. More than two thirds of all structures are located along Lake Butte de Morts, Lake Poygan, Lake Winnebago, and Lake Winneconne.
- ◆ Even though there were 2,684 buildings within the 100-year floodplain, only 719 properties had flood insurance through the National Flood Insurance Program.
- ◆ There are 12 wastewater treatment facilities located in the 100-year floodplain, along with one water facility and one public works building.
- ◆ Federal disaster declarations are issued in less than 50 percent of the flooding incidents.
- ◆ It is estimated that a moderate tornado (F2) could cause about \$2 million in damage to buildings and other structures.
- ◆ A range of strategies are needed to mitigate against natural hazards, including:
  - ◆ prevention
  - ◆ property protection
  - ◆ public education and awareness
  - ◆ natural resource protection
  - ◆ emergency services
  - ◆ structural projects
- ◆ As of yet, Winnebago County has not applied for federal funding for mitigation projects. The City of Oshkosh has received funding for the acquisition and removal of two buildings that have been repeatedly flooded.

### 4. GOALS, OBJECTIVES, POLICIES, AND ACTIVITIES

The most important part of the plan is Chapter 5, which presents a unified plan of action to mitigate the effects of natural hazards on property, people, and assets. It lists goals, objectives, and policies that should guide decision-makers and other officials. Goals are intended to describe an end state, usually in general terms. In contrast, objectives describe an end state in measurable and specific terms. Policies give clear direction on what will be done to help achieve a goal and objective.

Following the listing of goals, objectives, and policies, a chart lists specific action items along with estimated implementation costs. Responsible entities are listed for each so that implementation is well defined.

The activity charts are a work in progress. As items are completed they should be deleted and as new opportunities or issues arise items will be added. Further, depending on available resources, including funding and staff time, priorities may change.

Activities are prioritized as low, medium, or high. Cost estimates are provided to help formulate funding priorities. When a project is to be undertaken, a more detailed budget should be prepared to assess a project's cost. At that time a benefit cost analysis should be completed to show how the benefits of the project compare to anticipated costs. Federal funding for mitigation activities can only be obtained when benefits clearly outweigh the costs.

**Goal 1. Flooding**

Protect the public health, safety, and welfare of county residents and public and private property during flood events.

**Objectives**

1. Minimize the impact of flooding on structures.
2. Decrease the number of structures currently located in the 100-year floodplain that are not properly flood-proofed.
3. Minimize the amount of impervious surface in future development projects to allow more infiltration of stormwater into the ground.
4. Decrease the number of repetitive loss sites.
5. Increase public awareness of flooding.
6. Improve communication between the county and local units of government when floods occur or are likely to occur.
7. Increase the number of municipalities that pursue becoming part of the Community Rating System (CRS). **(New 2009)**
8. Maintain compliance with the National Flood Insurance Program (NFIP). **(New 2009, NFIP Compliance)**

**Policies**

1. Continue to enforce floodplain regulations to ensure that future development in the 100-year floodplain is consistent with state minimum objectives. **(NFIP Compliance)**
2. Support the identification and conservation of land with high flood mitigation value (e.g., wetlands, upland storage, and infiltration areas).
3. Support land acquisition and other management strategies to preserve open space for flood mitigation purposes.
4. Ensure that governmental officials and employees, county residents, and real estate agents are aware of floodplain regulations. **(NFIP Compliance)**
5. Ensure that people owning property in the 100-year floodplain, and their agents, notify buyers when selling their property. **(NFIP Compliance)**
6. Adopt standards to control the proportion of a site that can be covered with impervious surfaces.
7. Design all public infrastructure that is located in the 100-year floodplain to be floodproofed or otherwise protected from flood water.
8. Design and properly size all new bridges to accommodate the 100-year flood without creating a significant upstream back-water effect.
9. Continue to enforce stormwater management regulations.
10. Install flood barriers and devise flood proofing measures where necessary.
11. Use data records in on-going assessment of flood problems and effectiveness or response programs.
12. Formalize communications links and establish procedures.
13. Update flood insurance rate maps (FIRMs) when it can be shown that they are substantially inaccurate. **(NFIP Compliance)**
14. Support the continued operation of the National Weather Service monitoring station in the Town of Wolf River and City of Omro.
15. Ensure that all large dams in the county have emergency action plans as required.
16. Implement "no-wake" rules during periods of high water. **(New 2009)**
17. Refer to stormwater plans and analysis to ensure that mitigation projects identified in them are completed. **(New 2009)**
18. Undertake such activities as may be required to remain compliant with the requirements of the National Flood Insurance Program (NFIP). **(New 2009, NFIP Compliance)**

Implementation Actions / Strategies	Cost Estimate (2009)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2009 to 2013	2014 to 2018	
1. Analyze repetitive flood properties and identify feasible mitigation options for each.	Staff time	Departmental budget	Medium	X		City of Oshkosh
2. Apply for funding through the federal Hazard Mitigation Grant program, Flood Mitigation Assistance Program, and the Pre-Disaster Mitigation Program as well as any other resources that may be available to help flood proof repetitive loss sites or remove them through acquisition followed by demolition or relocation.	Staff time	Departmental budget	Medium	X		Winnebago County Emergency Management, local jurisdictions [1]
3. Design and budget for stormwater management facilities consistent with adopted stormwater management plans than have been or will be prepared / amended.	Unknown	Departmental budget	Medium	X	X	Winnebago County Emergency Management; local jurisdictions
4. Develop a computerized database containing information on culverts under public roadways in the county.	Staff time	Departmental budget	Low	X		Winnebago County Planning, Zoning & GIS Department, local jurisdictions [1]

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Implementation Actions / Strategies	Cost Estimate (2009)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2009 to 2013	2014 to 2018	
5. Identify those culverts and bridges that are undersized or are otherwise unable to handle expected flood flows.	Staff time	Departmental budget	Medium	X		County Highway Department, local jurisdictions [1]
6. Prepare a strategy to prioritize efforts to ensure that existing culverts and bridges are retrofitted to handle expected flood flows.	Unknown	Departmental budget	Medium	X		County Highway Department, local jurisdictions [1]
7. Prepare a strategy to prioritize road improvements for public roadways that are susceptible to flooding.	Unknown	Departmental budget	Medium	X	X	County Highway Department, Winnebago County Planning, Zoning & GIS Department, local jurisdictions [1]
8. Identify specific areas with flood mitigation value and develop appropriate strategies for projection.	Staff time	Departmental budget	High	X		County Highway Department, Winnebago County Land and Water Conservation Department
9. Establish a framework to compile and coordinate surface water management plans and data throughout Winnebago County.	Staff time	Departmental budget	High	X	X	Winnebago County Land and Water Conservation Department
10. Post flood recovery plans and programs to help county residents rebuild and implement mitigation measures to protect against future floods.	Staff time	Departmental budget	High	X	X	Winnebago County Land and Water Conservation Department
11. Distribute National Flood Insurance Program information. <b>(NFIP Compliance)</b>	\$1,000	Departmental budget	Medium	X	X	Winnebago County Emergency Management
12. Explore options for improving the ability of local units of government to report flooding, receive information, and request assistance.	Staff time	Departmental budget	High	X		Winnebago County Planning, Zoning & GIS Department
13. Maintain the "Ellenbecker" program, a geographic database for natural disaster events that graphically displays damage areas and automatically calculates financial impact. <b>(Revision 2009)</b>	Staff time	Departmental budget	Medium	X		Winnebago County Emergency Management
14. Review the cost-effectiveness of working with the Federal Emergency Management Agency (FEMA) to review its community rating. The project should only proceed if it proves to be cost-effective.	Staff time	Departmental budget	Low	X		Winnebago County Planning, Zoning & GIS Department, Emergency Management
15. Evaluate the support for and the feasibility of becoming part of the Community Rating System to lower flood insurance premiums for property owners. <b>(NFIP Compliance)</b>	Staff time	Departmental budget	Medium	X		Winnebago County Planning, Zoning & GIS Department
16. Create a brochure containing information about various flood dangers that exist in Winnebago County.	Staff time	Departmental budget	Medium	X		Incorporated areas within the county
17. Provide information and offer education to make people aware of natural floodplain resources and functions and how they can protect them.	Staff time	Departmental budget	Medium	X		Winnebago County Emergency Management; local jurisdictions
18. Review and update the "Riverview Lane Emergency Action Plan" as adopted by the Board of County Supervisors on July 16, 1991.	Staff time	Departmental budget	High	X		Winnebago County Emergency Management, Winnebago County Planning, Zoning & GIS Department, local jurisdictions [1]
19. Work with DNR to prepare Emergency Action Plans for large dams in the County.	Staff time	Departmental budget	Medium	X		Winnebago County Planning, Zoning & GIS Department
20. Further study what the potential hazards are for the critical facilities that are located in the 100-year floodplain.	Staff time	Departmental budget	Medium	X		Winnebago County Planning, & Zoning
21. Put up "no-wake" signs for boaters on the lakes during times of high-water.	\$5,000	Departmental budget	Medium	X		Winnebago County Emergency Management, applicable local jurisdictions

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Implementation Actions / Strategies	Cost Estimate (2009)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2009 to 2013	2014 to 2018	
22. All projects identified in stormwater management plans that will lessen flooding should be accomplished when funding is available for them.	Specific to each individual project	Departmental budget	High	X	X	Winnebago County Emergency Management, Local Public Works Departments, applicable local jurisdictions
23. Determine the feasibility and cost effectiveness of various alternative to deal with recurrent flooding problems that are happening in the Sleepy Hollow subdivision in the City of Omro.	Unknown	Departmental budget	High	X		Winnebago County Emergency Management, FEMA, City of Omro Public Works Department
24. Analyze and review ways to retain and control water in Honey Creek and its tributaries to ensure that excessive volumes of rain will not flood the SW quarter of the Town of Algoma. The northern end of the town near Horse Shoe Road should also be looked at for ways to reduce flooding. Any mitigation project s resulting from this analysis would also allow safer water flows to Lake Butte des Morts.	Unknown	Departmental budget	High	X	X	Winnebago County Emergency Management, FEMA, Town of Algoma Town Board
25. Create a Storm Water Assessment for the Town of Algoma.	Unknown	Departmental budget	High	X		Winnebago County Emergency Management, FEMA, Town of Algoma
26. Develop a Manitowoc/Brighton Beach Roads Storm Water Project.	Unknown	Departmental budget	High	X		Winnebago County Emergency Management, FEMA, Town of Menasha Public Works Department
27. Refer to the City of Oshkosh Citywide Stormwater Management study (Mead & Hunt, 2000) for an itemized list of stormwater mitigation projects.	Cost will vary by project	Departmental budget	High	X		Winnebago County Emergency Management, FEMA, City of Oshkosh Public Works Department
28. County Road N road improvements to stop road flooding and shoulder and ditch washouts near the intersection of County Road I south of Oshkosh. The proposed actions would include replacing the existing #72 arch CMP under County Road I, just south of County Road N. The second part of the project would be to clean the flow line of the ditch upstream and downstream by excavating silt deposits that have been building up. The project would also help stop flooding of personal properties in the area. <b>(New 2009)</b>	\$37,000	Departmental budget	High	X		Winnebago County Highway Department
29. Implement the recommendations for a regional detention pond system along Honey Creek (to Lake Butte de Morts) listed in The Stormwater Management Plan (Strand, v. 7/99). <b>(New 2009)</b>	\$1,965,000	Capital budget	High	X		Town of Algoma
30. River gauge for the Town of Wolf River (Fremont) south of Fremont <b>(New 2009)</b>	Unknown	Departmental budget	High	X		Town of Wolf River
31. Campbell Creek Landmark to Tipler Storm Sewer <b>(New 2009)</b>	\$479,900	Capital budget	High	X		City of Oshkosh
32. River gauge for the Fox River in Omro <b>(New 2009)</b>	Unknown	Departmental budget	High	X		City of Omro
33. Campbell Creek Tipler Dry Detention Pond <b>(New 2009)</b>	\$2,251,600	Capital budget	High	X		City of Oshkosh
34. 825 North Westfield Street Acquisition/Demolition <b>(New 2009)</b>	\$1,435,000	Capital budget	High	X		City of Oshkosh

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Implementation Actions / Strategies	Cost Estimate (2009)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2009 to 2013	2014 to 2018	
35. 805 - 815 North Westfield Street Acquisition/Demolition <b>(New 2009)</b>	\$930,000	Capital budget	High	X		City of Oshkosh
36. Campbell Creek Armory Wet Detention Pond <b>(New 2009)</b>	\$2,495,400	Capital budget	High	X		City of Oshkosh
37. Libbey / Nicolet Detention Basin <b>(New 2009)</b>	\$3,750,000	Departmental budget	High	X		City of Oshkosh
38. 1725 Robin Avenue Acquisition/Demolition <b>(New 2009)</b>	\$1,435,000	Capital budget	Medium	X		City of Oshkosh
39. Other Acquisition/Demolition Projects <b>(New 2009)</b>	\$3,700,000	Capital budget	Medium	X		City of Oshkosh
40. Campbell Creek Westhaven East <b>(New 2009)</b>	\$11,382,800	Capital budget	High	X		City of Oshkosh
41. Sawyer Creek Westhaven West <b>(New 2009)</b>	\$7,562,500	Capital budget	High	X		City of Oshkosh
42. Glatz Creek Flood Study <b>(New 2009)</b>	\$60,000	Departmental budget	High	X		City of Oshkosh
43. Glatz Creek Detention <b>(New 2009)</b>	\$2,500,000	Capital budget	High	X		City of Oshkosh
44. Stringham Creek South Park Ponds <b>(New 2009)</b>	\$625,000	Capital budget	Medium	X		City of Oshkosh
45. Sawyer Creek James Road Area Detention <b>(New 2009)</b>	\$9,186,700	Capital budget	Medium	X		City of Oshkosh
46. Fernau Watershed Flood Study <b>(New 2009)</b>	\$60,000	Capital budget	Low	X		City of Oshkosh
47. Fernau Watershed Detention <b>(New 2009)</b>	\$2,750,000	Capital budget	High	X		City of Oshkosh
48. Gallups Creek Flood Study <b>(New 2009)</b>	\$60,000	Capital budget	High	X		City of Oshkosh
49. Gallups Creek Detention <b>(New 2009)</b>	\$2,500,000	Capital budget	High	X		City of Oshkosh
50. Johnson Creek Flood Study <b>(New 2009)</b>	\$50,000	Capital budget	High	X		City of Oshkosh
51. Johnson Creek Detention <b>(New 2009)</b>	\$2,500,000	Capital budget	Medium	X		City of Oshkosh
52. Sawyer Creek Oakwood Road Detention <b>(New 2009)</b>	\$625,000	Capital budget	Medium	X		City of Oshkosh
53. Stringham Creek 1100 West South Park Avenue Detention Ponds <b>(New 2009)</b>	2,181,250	Capital budget	Medium	X		City of Oshkosh
54. Stringham Creek USH 41 Detention Ponds <b>(New 2009)</b>	\$3,424,500	Capital budget	Low	X		City of Oshkosh
55. Replace the deteriorating 3 foot x 4 foot concrete box culvert under County Road I, just south of Black Wolf Avenue, with new #54 arch CMP. This would improve the flow of water through the culvert due to the fact that the concrete box culvert is breaking and has pieces blocking the flow line in it. <b>(New 2009)</b>	Unknown at this time	Capital budget	Medium	X		Winnebago County Highway Department
56. Replace the existing four 60-inch culverts with one 20-foot clear span box culvert or a bridge on County Road N, ¼ mile east of James Rd. <b>(New 2009)</b>	\$103,000	Capital budget	High	X		Winnebago County Highway Department
57. Revise existing floodplain regulations to ensure they comply with the most recent (2008) model floodplain regulations developed by the Wisconsin Department of Natural Resources. <b>(NFIP Compliance, New 2009)</b>	Staff time	Departmental budget	High	X		Winnebago County Planning Department, local jurisdictions [1]
58. West Murdock Avenue Watershed Upgrades <b>(New 2009)</b>	\$3,250,000	Capital budget	Low	X		City of Oshkosh
59. EB4 Thackery Dr. Detention Basin <b>(New 2009)</b>	\$315,000	Capital budget	High	X		Town of Algoma

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Implementation Actions / Strategies	Cost Estimate (2009)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2009 to 2013	2014 to 2018	
60. WB1 – WB4 Hy 21 & Leonards Point Rd Detention Basin <b>(New 2009)</b>	\$650,000	Capital budget	High	X		Town of Algoma
61. WB2-WB6 Horseshore Road Detention Basin <b>(New 2009)</b>	\$475,000	Capital budget	High	X		Town of Algoma
62. Leonards Point Lane Detention Basin <b>(New 2009)</b>	\$325,000	Capital budget	High	X		Town of Algoma
63. Oakwood Rd Box Culvert <b>(New 2009)</b>	\$200,000	Capital budget	High	X		Town of Algoma
64. East Reighmoore Rd Flood Prevention <b>(New 2009)</b>	\$300,000	Capital budget	High	X		Town of Omro
65. West Reighmoore Rd Flood Prevention <b>(New 2009)</b>	\$90,000	Capital budget	High	X		Town of Omro
66. Sammers Bay Culvert for Flood Prevention <b>(New 2009)</b>	\$25,000	Capital budget	High	X		Town of Omro
67. Sand Pit Road Culvert Replacement <b>(New 2009)</b>	\$150,000	Capital budget	High	X		Town of Omro
68. Youngs Channel Road Flood Proofing <b>(New 2009)</b>	\$225,000	Capital budget	High	X		Town of Omro
69. Create a Storm Water Assessment for the Town of Algoma <b>(New 2009)</b>	Unknown	Capital budget	High	X		Town of Algoma, Winnebago County Emergency Management, FEMA
70. Valley Road Storm Water project <b>(New 2009)</b>	Unknown	Capital budget	High	X		Town of Menasha, City of Menasha, Winnebago Co. Highway
71. Southwood Drive/Wilson Avenue Storm Water project <b>(New 2009)</b>	Unknown	Capital budget	High	X		Winnebago County Emergency Management, Town of Menasha Public Works
72. Stroebe Island causeway reconstruction/stabilization <b>(New 2009)</b>	Unknown	Capital budget	High	X		Winnebago County Emergency Management, Town of Menasha Public Works

## Notes:

1. Local jurisdictions include City of Appleton, City of Menasha, City of Neenah, City of Omro, City of Oshkosh, and Village of Winneconne.

**Goal 2. Tornadoes**

Lessen the impacts to Winnebago County residents from the effects of a tornado to the extent feasible and speed recovery following an event.

**Objectives**

1. Increase public education and awareness of the potential severity of tornadoes.
2. Minimize the amount of time that businesses damaged by a tornado are not operational.
3. Minimize the amount of time it takes to rebuild or restore dwellings damaged by a tornado.
4. Prevent injuries and death from tornadoes.

**Policies**

1. Bury overhead power and utility lines where feasible as a way to reduce power outages during all types of storm events.
2. Require that mobile homes and manufactured housing are securely anchored in place.
3. Ensure that adequate tornado shelters are available to county residents especially those living in mobile home parks.
4. Include redevelopment objectives in smart growth comprehensive plans to support post-disaster development activities.
5. Continue to support the efforts of weather spotters.
6. Keep the current siren system functioning and in good repair.
7. Encourage residents to obtain NOAA weather radios especially in those areas of the county that are not covered by a siren.

Implementation Actions / Strategies	Cost Estimate (2009)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2009 to 2013	2014 to 2018	
1. Annually, update the contact telephone number for each of the shelters. <b>(Revision 2009)</b>	Staff time	Departmental budget	Low	X	X	Winnebago County Emergency Management, American Red Cross
2. Conduct a facility survey every three years of each shelter in the county and update records accordingly. <b>(New 2009)</b>	Staff time	Departmental budget	Low	X	X	American Red Cross
3. Apply for mitigation funding to purchase NOAA weather radios for county residents.	Staff time	Departmental budget	Low	X	X	Winnebago County Emergency Management; local jurisdictions [1]
4. Study the feasibility of and support for adopting a local regulation which would require new mobile home parks and future expansions of existing parks to provide for a tornado shelter.	Staff time	Departmental budget	High	X		Winnebago County Planning, Zoning & GIS Department; local jurisdictions [1]
5. Develop and implement strategies for debris management.	Staff time	Departmental budget	Medium	X		Winnebago County Emergency Management; Winnebago County Highway Department; local jurisdictions [1]
6. Construct a tornado shelter in the City of Omro to provide a safe haven for mobile home residents.	\$100,000	Capital budget, federal matching grants	High	X		City of Omro and others as appropriate
7. Construct a tornado shelter in the Town of Menasha (x2) to provide a safe haven for mobile home residents <b>(New 2009)</b>	Unknown	Capital budget	High		X	Winnebago County Emergency Management, Town of Menasha
8. Maintain the "Ellenbecker" program, a geographic database for natural disaster events that graphically displays damage areas and automatically calculates financial impact. <b>(Revision 2009)</b>	\$1,000	Departmental budget	High		X	Winnebago County Planning, Zoning & GIS Department, Emergency Management

**Notes:**

1. Local jurisdictions include City of Appleton, City of Menasha, City of Neenah, City of Omro, City of Oshkosh, and Village of Winneconne.

**Goal 3. Extreme Temperatures (Cold and Heat)**

Protect the health of Winnebago County residents from extreme temperature.

**Objectives**

1. Prevent deaths from extreme temperature.

**Policies**

1. Encourage volunteers to look after vulnerable individuals, especially the elderly, during times of extreme temperature.
2. Open county and other public facilities with air conditioning as appropriate for public access during periods of extreme heat.
3. Ensure that county residents are aware that there are different forms of assistance to help qualified individuals pay their winter heating costs.

Implementation Actions / Strategies	Cost Estimate (2009)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2009 to 2013	2014 to 2018	
1. Develop a directory of public buildings that would be open to the public during heat waves.	Staff time	Departmental budget	Medium	X		Winnebago County Emergency Management, County and local health departments
2. Call a meeting of public and nonprofit organizations that may be able to mobilize a volunteer corps of individuals willing to assist vulnerable people during periods of extreme temperature.	Staff time	Departmental budget	High	X		Winnebago County Emergency Management, Winnebago County Human Services, ADVOCAP, local jurisdictions [1], American Red Cross; County and local health departments
3. Publicise available programs that help residents pay for their utility expenses.	\$1,000	Departmental budget	Medium	X		Winnebago County Emergency Management, Winnebago County Human Services, ADVOCAP, local jurisdictions [1], American Red Cross
4. Maintain the "Ellenbecker" program, a geographic database for natural disaster events that graphically displays damage areas and automatically calculates financial impact. <b>(Revision 2009)</b>	\$1,000	Departmental budget	High	X		Winnebago County Planning, Zoning & GIS Department, Emergency Management

**Notes:**

1. Local jurisdictions include City of Appleton, City of Menasha, City of Neenah, City of Omro, City of Oshkosh, and Village of Winneconne.

**Goal 4. Severe Storms, Hail, & High Winds**

Protect and prepare Winnebago County residents from the dangers of extreme weather events.

**Objectives**

1. Increase public education and awareness of the potential dangers of thunderstorms, snow storms, hail, and windstorms.

**Policies**

1. Bury overhead power and utility lines where feasible as a way to reduce power outages during all types of storm events.
2. Provide citizens with early storm warnings.
3. Encourage the use of surge protectors on critical electronic equipment in governmental and critical facilities.
4. Work with utility companies to assess and to improve, when necessary, electric service reliability.
5. Work with utility companies to ensure that trees are properly trimmed near utility lines.

Implementation Actions / Strategies	Cost Estimate (2009)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2009 to 2013	2014 to 2018	
1. Continue to update and/or monitor the County's public early warning system and network.	Staff time	Departmental budget	High	X		Winnebago County Emergency Management, Winnebago County Sheriff Department
2. Produce and distribute emergency preparedness information related to thunderstorms, snow storms, hailstorms, and windstorm hazards.	\$4,000	Departmental budget	Medium	X		Winnebago County Emergency Management, American Red Cross, local jurisdictions [1]
3. Identify and pursue funding opportunities to develop and implement local and county mitigation activities.	Staff time	Departmental budget	Medium	X	X	Winnebago County Emergency Management, local jurisdictions [1]
4. Install lightning grade surge protection devices for critical electronic components used by government, public service, and public safety facilities, such as warning systems, control systems, communications, and computers.	\$2,500	Departmental budget	Medium	X	X	Winnebago County Information Systems, local jurisdictions [1]
5. Provide the public with information about proven lightning safety guidelines to reduce the risk of lightning hazards.	\$2,000	Departmental budget	Medium	X	X	Winnebago County Emergency Management, American Red Cross, local jurisdictions [1], National Weather Service
6. Develop and implement strategies for debris management.	Staff time	Departmental budget	Medium	X		Winnebago County Emergency Management, Winnebago County Highway Department, local jurisdictions [1]
7. Apply for mitigation funding to purchase NOAA weather radios for county residents.	\$25 to \$50 per radio	Capital budget, federal grants	Low	X	X	Winnebago County Information Systems, local jurisdictions [1]
8. Maintain the "Ellenbecker" program, a geographic database for natural disaster events that graphically displays damage areas and automatically calculates financial impact. <b>(Revision 2009)</b>	\$1,000	Departmental budget	High	X		Winnebago County Planning, Zoning & GIS Department, Emergency Management
9. Install a backup generator or a prewired hook-up at critical facilities related to public safety	\$3,000 to \$8,000 per site	Capital budget	Medium	X		Local jurisdictions [1]

**Notes:**

1. Local jurisdictions include City of Appleton, City of Menasha, City of Neenah, City of Omro, City of Oshkosh, and Village of Winneconne.

**Goal 5. Drought**

Protect the public health, safety, and welfare of Winnebago County residents during periods of drought.

**Objectives**

1. Decrease water use during periods of drought.
2. Minimize the economic impacts of drought on the local economy.

**Policies**

1. Encourage water conservation during periods of drought.
2. Impose watering restrictions during periods of extreme drought.
3. Work with multiple agencies to conserve water, provide drought prediction, and provide stream and groundwater monitoring.
4. Work with agencies that can assist with and promote soil health, preserve soil moisture and help to minimize the loss of the crops and topsoil in the event of a drought.
5. Continue to monitor groundwater levels to identify the status of groundwater resources and trends.
6. Work cooperatively with state agencies and other levels of government in developing appropriate strategies on a regional basis.
7. Provide water for livestock when the needs of humans have been or are being met.

Implementation Actions / Strategies	Cost Estimate (2009)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2009 to 2013	2014 to 2018	
1. Create an ordinance to prioritize or control water use during drought conditions.	Staff time	Departmental budget	High	X		County Board, local jurisdictions [1]
2. Provide public education about the potential severity of drought events.	\$2,000	Departmental budget	Low	X		Winnebago County Emergency Management, Winnebago Public Health Department, UW-Extension, Wisconsin Department of Natural Resources, Winnebago County and local public health departments
3. Develop a set of procedures for water distribution during drought to those in need.	\$2,500	Departmental budget	Low	X		Winnebago County Emergency Management, Winnebago County Planning, Zoning & GIS Department, UW-Extension
4. Maintain the "Ellenbecker" program, a geographic database for natural disaster events that graphically displays damage areas and automatically calculates financial impact. <b>(Revision 2009)</b>	\$1,000	Departmental budget	High	X		Winnebago County Planning, Zoning & GIS Department, Emergency Management

**Notes:**

1. Local jurisdictions include City of Appleton, City of Menasha, City of Neenah, City of Omro, City of Oshkosh, and Village of Winneconne.

**Goal 6. Wildland Fire**

Protect structures and residents in Winnebago County from the hazard of uncontrolled wildfire.

**Objectives**

1. Decrease the number of wildland fires occurring in the county.
2. Decrease the number of acres burned from wildland fires.
3. Increase public education.

**Policies**

1. Support the use of controlled burns as a way of reducing the threat of dangerous wildland fires.
2. Enhance emergency services to increase the efficiency of wildfire response and recovery activities.
3. Keep track of wildfire events in the County to better document the extent and location of these events.

Implementation Actions / Strategies	Cost Estimate (2009)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2009 to 2013	2014 to 2018	
1. Apply for federal and state grants to enhance the capability of local fire departments	Staff time	Departmental budget	High	X	X	Local fire departments
2. Provide education to county and municipality personnel about federal cost-share and grant programs, Fire Protection Agreements, and other related federal programs so the full array of assistance available to local agencies is understood.	Staff time	Departmental budget	Medium	X		Winnebago County Emergency Management, Winnebago County Planning, Zoning & GIS Department
3. Study the feasibility of and support for adopting a local burning permit program at the Town level.	Staff time	Departmental budget	Low	X		Towns without a burning permit program.
4. Develop a database to keep track of wildfire events in the County.	\$500	Departmental budget	Medium	X		Winnebago County Emergency Management, local jurisdictions [1]
5. Maintain the "Ellenbecker" program, a geographic database for natural disaster events that graphically displays damage areas and automatically calculates financial impact. <b>(Revision 2009)</b>	\$1,000	Departmental budget	High			Winnebago County Planning, Zoning & GIS Department, Emergency Management

## Notes:

1. Local jurisdictions include City of Appleton, City of Menasha, City of Neenah, City of Omro, City of Oshkosh, and Village of Winneconne.

**Goal 7. Public Education**

Provide the public with the education to adequately respond to natural hazards including dam failure, flooding, ice shoves, dense fog, tornadoes, hailstorms, winter storms, extreme temperature, drought, and wildland fire. **(Revision 2009)**

**Objectives**

1. Provide the necessary facilities and equipment to maintain a high quality of fire and police protection and emergency medical services throughout Winnebago County.
2. Strengthen emergency service preparedness and response by enhancing public education throughout the County.

**Policies**

1. Work with nongovernmental organizations (youth, service, professional, religious) to promote mitigation education and awareness.
2. Look for multiple and varied opportunities to disseminate educational information to county residents.

Implementation Actions / Strategies	Cost Estimate (2009)	Potential Funding Source	Priority	Schedule		Responsible Entity
				2009 to 2013	2014 to 2018	
1. Continue providing community disaster education presentations to citizens, public agencies, private property owners, businesses, and schools. <b>(Revision 2009)</b>	Staff time	Departmental budget	Medium	X	X	Winnebago County Emergency Management, American Red Cross
2. Create displays for use at public events (health fair, public awareness day, county fair, school events, and community events).	Staff time, supplies (\$250)	Departmental budget	Low	X		Winnebago County Emergency Management, local jurisdictions [1]
3. Keep the County's website up-to-date and continue to provide hazard related information that is easily accessible.	Staff time	Departmental budget	Medium	X		Winnebago County Emergency Management and Information Systems
4. Work with the schools within the County to promote hazard mitigation education and awareness and discuss ways to better integrate mitigation into the curriculum.	Staff time	Departmental budget	Medium	X	X	Winnebago County Emergency Management, American Red Cross
5. Identify, improve, and sustain collaborative programs focusing on the real estate and insurance industries, public and private sector organizations, and individuals to avoid activity that increases risk to natural hazards.	Staff time	Departmental budget	Medium	X		Winnebago County Emergency Management, American Red Cross, local jurisdictions [1]
6. Continue to work with the Winnebago County Public-Private Partnership, Inc. to provide educational resources. <b>(New 2009)</b>	Staff time	Departmental budget	Medium	X	X	Winnebago County Emergency Management
7. Maintain the "Ellenbecker" program, a geographic database for natural disaster events that graphically displays damage areas and automatically calculates financial impact. <b>(Revision 2009)</b>	\$1,000	Departmental budget	Medium	X		Winnebago County Planning, Zoning & GIS Department, Emergency Management

**Notes:**

1. Local jurisdictions include City of Appleton, City of Menasha, City of Neenah, City of Omro, City of Oshkosh, and Village of Winneconne.