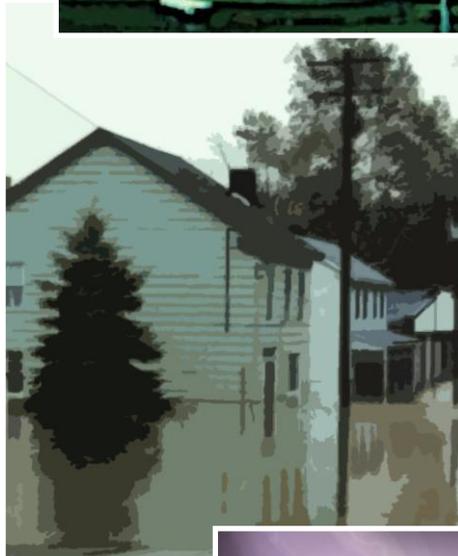
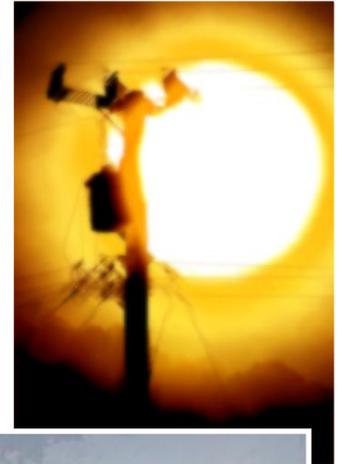




# NATURAL HAZARDS MITIGATION PLAN: 2013-2017

DRAFT 4 – FOR PRELIMINARY FEMA APPROVAL

JEFFERSON COUNTY, WISCONSIN



## FORWARD

The *Jefferson County Hazard Mitigation Plan: 2013-2017* consists of six chapters and a map series. The first chapter provides an overview of the project. The second chapter presents background information about Jefferson County including its setting, demographic and economic characteristics, climate, natural resources, land use, and development trends. Chapter 3 presents background information related to special needs populations and groups in the county. Chapter 4 contains a complete inventory of critical facilities in the county. Natural hazards are reviewed in chapter 5 along with estimated losses to buildings, infrastructure, and critical facilities. In chapter 6, goals, objectives, and policies are identified that will help to craft appropriate solutions to the identified problems. A range of activities are also presented to help foster hazard mitigation efforts. Various funding sources are reviewed with an eye towards identifying options for funding identified projects. Most of the maps in the plan are included in the final section of the plan.

Jefferson County adopted a multi-jurisdictional plan in 2008, which was approved by the Federal Emergency Management Agency (FEMA) on \_\_\_\_\_, 2008. As part of the required, this plan was prepared to cover all of the municipalities in the county. As part of the five-year update begun in 2012, this plan was substantially updated and revised to meet new state and federal guidelines. The plan as revised was approved by FEMA on \_\_\_\_\_, 2013.

This version is intended to guide mitigation planning efforts in Jefferson County during the five-year period from 2013 through 2017.

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# ACKNOWLEDGEMENTS

## County Board of Supervisors by District

- |                                       |                                |
|---------------------------------------|--------------------------------|
| 1. Richard C. Jones                   | 16. John Molinaro, Chairperson |
| 2. Vic Imrie, Jr.                     | 17. Mary Delany                |
| 3. Greg David, Secon Vice Chairperson | 18. Jennifer Hanneman          |
| 4. Augie Tietz                        | 19. Jim Schroeder              |
| 5. James B. Braughler                 | 20. Jan Rooou                  |
| 6. Ron Buchanan                       | 21. Craig Peterson             |
| 7. Dwayne C. Morris                   | 22. Blane Poulson              |
| 8. Rick L. Kuhlman                    | 23. George Jaeckel             |
| 9. Amy Rinard                         | 24. Gregory M. Torres          |
| 10. Lloyd Zastrow                     | 25. Walt Christensen           |
| 11. Donald Reese                      | 26. Carlton Zentner            |
| 12. Mike Burow                        | 27. Glen D. Borland            |
| 13. Ed Morse                          | 28. Dick Schultz               |
| 14. Pamela Rogers                     | 29. Paul G. Babcock            |
| 15. Steven J. Nass                    | 30. Jim Mode, Vice Chairperson |

## Law Enforcement/Emergency Management Committee

- |                   |                 |
|-------------------|-----------------|
| ◆ Paul G. Babcock | ◆ Dwayne Morris |
| ◆ Glen Borland    | ◆ Pamela Rogers |
| ◆ George Jaeckel  |                 |

## 2008 Plan Working Group

- ◆ Andy Erdman, Director – Land Information Office
- ◆ Paul Hable, Safety Director – Fort Health Care
- ◆ Donna Haugom, Emergency Management Director
- ◆ Bruce Haukom, Director – Zoning Department
- ◆ Rusty Kapela, National Weather Service, Meteorologist
- ◆ Bill Kern, Highway Department Commissioner
- ◆ Paul Milbrath, Jefferson County Sheriff
- ◆ Joe Nehmer, Director – Parks Department
- ◆ Gail M. Scott, Director – Health Department
- ◆ Mark Watkins, Director – Land & Water Conservation Department

## 2012 Plan Update Steering Group

- ◆ Andy Erdman, Director – Land Information Office
  - ◆ Paul Hable, Safety Director – Fort Health Care
  - ◆ Donna Haugom, Emergency Management Director
  - ◆ Bruce Haukom, Director – Zoning Department
  - ◆ Rusty Kapela, National Weather Service, Meteorologist
  - ◆ Bill Kern, Highway Department Commissioner
  - ◆ Paul Milbrath, Jefferson County Sheriff
  - ◆ Joe Nehmer, Director – Parks Department
  - ◆ Gail M. Scott, Director – Health Department
  - ◆ Mark Watkins, Director – Land & Water Conservation Department
  - ◆ Stewart E. Calkins, Town Chairman – Town of Palmyra
  - ◆ Mike Ciardo, Sergeant and E.G. Coordinator – City of Whitewater
  - ◆ Mike Drew, Captain – City of Jefferson
-

- ◆ Dale Falk, Town Supervisor – Town of Oakland
- ◆ James Frohmader, Supervisor – Town of Aztalan
- ◆ Matthew Foelker, Town Supervisor – Town of Hebron
- ◆ Larry Kreger, Fire Chief – Village of Palmyra
- ◆ Richard Gimler, Chairman – Town of Watertown
- ◆ Greg Michalek, Fire Chief – City of Watertown
- ◆ Todd Nieting, Supervisor – Town of Waterloo
- ◆ Hope Oostdik, Chair – Town of Lake Mills
- ◆ David F. Peterson, Fire Chief – Village of Johnson Creek
- ◆ Glendan Rewoldt, Deputy Clerk – Town of Sumner
- ◆ Timothy Thomas, Police Chief – City of Waterloo

**Project Supervision**

Donna Haugom, Emergency Management Director, served as project supervisor for Jefferson County.

**Funding**

Partial funding for the preparation of this plan was provided by Wisconsin Emergency Management through a grant from the Pre-Disaster Mitigation Program.

**Consultant**

- ◆ Civi Tek Consulting prepared this plan under the supervision of Tim Schwecke, AICP.
- ◆ Greg Rybarczyk with GeoEco Design prepared the maps.

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# INTRODUCTION

## 1. CHAPTER OVERVIEW

This chapter introduces the need for this plan by making the case that natural disasters have historically caused substantial damage to people and property in Jefferson County and that while it is not possible to prevent natural disasters from occurring, it is possible to better position a community to mitigate the effects of natural disasters. The purpose and scope of this plan are described so that it is clear what this document is intended to do and how it relates to other previous planning efforts and ongoing emergency management activities. The ways in which the general public and local units of government were involved in the preparation, review, and adoption of this plan are documented. A procedure for keeping this document current is described. In the final section, those governmental units adopting this plan are listed.

## 2. PURPOSE

It's fair to say that most people do not think about natural disasters until they are personally affected in some way. When a significant event does strike, the general public most often looks to government at all levels and non-governmental organizations, like the American Red Cross, for assistance. Likewise, local units of government look to state agencies and the federal government for financial help and assistance. Depending on the scale of the natural disaster, assistance can be short-term or on-going over an extended period of time.

Throughout the United States, government's response, and associated costs, has grown significantly. At the federal level, the average annual loss from natural disasters was \$3.3 billion between 1989 and 1993. Between 1994 and 1998, that figure rose to \$13 billion.

In an effort to curb rising costs, 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 devised 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.

Jefferson County and participating municipalities have prepared this plan to meet this new requirement, and in so doing, help its citizens mitigate the effects of natural disasters.



### Chapter Contents

1. Chapter Overview
2. Purpose
3. Scope
4. Relationship of Mitigation Planning to Other Emergency Management Activities
5. Relationship to Other Plans
6. Plan Preparation, Review, and Adoption
7. Interagency Coordination
8. Plan Maintenance and Amendment
9. Incorporating this Plan into Other Planning Efforts
10. Governmental Units Adopting this Plan

### 3. SCOPE

The scope of this plan is limited to natural hazards. It does not address threats of terrorism or man-made hazards. Hazardous materials (HAZMAT) are addressed in this plan when the production and storage are vulnerable to natural hazards such as flooding. Plans and programs are in place at the county and state levels to address HAZMAT incidents and accidents.

### 4. RELATIONSHIP OF MITIGATION PLANNING TO OTHER EMERGENCY MANAGEMENT ACTIVITIES

Mitigation planning is one prong of a multi-faceted approach to emergency management (Exhibit 1-1). Each of these are briefly described to help provide context for this plan.

#### MITIGATION

Mitigation is any activity that is proactively done to reduce a community’s vulnerability of damage from future disasters. Mitigation is the focus of this plan.

#### PREPAREDNESS

Emergency preparedness focuses exclusively on creating effective strategies and procedures to respond to an emergency. It includes creating the institutional framework for response and protocol for decision making, conducting training of emergency response personnel, ensuring equipment is available and operational, and developing and maintaining an appropriate communications network.

Jefferson County has a well-established and tested emergency operations plan. It identifies a decision making structure and areas of responsibility depending on the nature of the emergency.

#### RESPONSE

Response includes any action taken immediately before, during, and after an event to save lives and minimize property damage.

#### RECOVERY

Although the extent and type of recovery efforts will vary with the nature and extent of the event, they focus on restoring support services and infrastructure and helping those affected to regain a sense of normalcy.

It is important to recognize that each of these areas focuses on different aspects of emergency management, but that the effectiveness of each depends on an integrated systems approach.

#### Key Terms in This Chapter

**Disaster Mitigation Act of 2000 (DMA 2000)** – A federal law (P.L. 106-390) amending the Robert T. Stafford Disaster Relief and Emergency Act. The act authorizes the president to establish (1) a program of technical and financial assistance to the states and local governments to assist in the implementation of pre-disaster hazard mitigation measures; (2) the National Predisaster Mitigation Fund; and (3) an interagency task force. It requires state, local, or tribal governments to develop predisaster hazard mitigation plans as a precondition of receiving certain federal funds and controls and streamlines the cost of disaster assistance.

**Federal Emergency Management Agency (FEMA)** – A federal agency created in 1979 with a mission to reduce loss of life and property and protect our nation’s critical infrastructure from all types of hazards through a comprehensive, risk-based emergency management program of mitigation, preparedness, response, and recovery. In March 2003, it was placed under the Department of Homeland Security.

**Hazard mitigation plan** – A plan prepared at the state or local level that systematically evaluates policies, actions, and tools, and sets goals for implementation over the long term that will result in a reduction in risk and minimize future losses in a community.

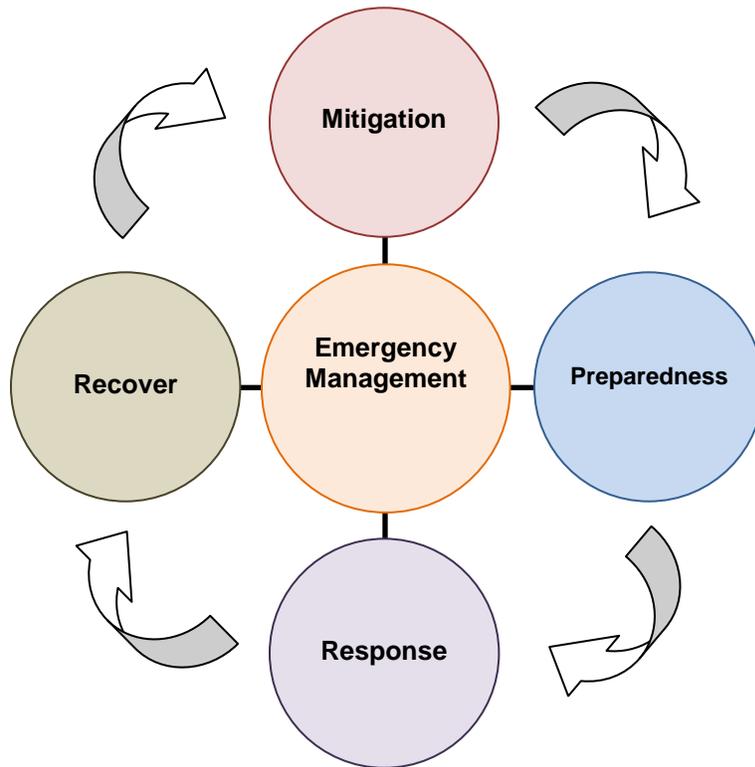
**Hazard Mitigation Grant Program (HMGP)** – A federal program administered by the Federal Emergency Management Agency intended to prevent future losses of lives and property due to disasters; to implement state or local hazard mitigation plans; to enable mitigation measures to be implemented during immediate recovery from a disaster; and to provide funding for previously identified mitigation measures to benefit the disaster area. It was authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

**Wisconsin Emergency Management (WEM)** – A state agency that specializes in hazard mitigation, warning and communications, emergency police services, disaster response and recovery, hazardous materials & EPCRA, radiological emergency preparedness, and exercise and training.

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**Exhibit 1-1. Emergency Management**


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## 5. RELATIONSHIP TO OTHER PLANS

The following plans, studies, and reports were reviewed in preparing this plan:

- ◆ **Comprehensive Plans** Jefferson County and many of the cities and villages have adopted comprehensive plans consistent with state requirements. At a minimum, a comprehensive plan needs to address the following nine elements:
  - ◆ Issues and opportunities
  - ◆ Housing
  - ◆ Transportation
  - ◆ Utilities and Community Facilities
  - ◆ Agriculture, Natural and Cultural Resources
  - ◆ Economic Development
  - ◆ Intergovernmental Cooperation
  - ◆ Land Use
  - ◆ Plan Implementation

Land use policies established in a community's comprehensive plan have a significant relationship to this plan especially in the area of floodplain management. For example, what kind of development will a community allow in the floodplain? This is a significant public policy questions that should be addressed in a comprehensive plan.

- ◆ **Jefferson County Hazards Analysis** This document identifies those hazards that have or could occur in the county. It also describes each

hazard, its frequency of occurrence, and actions being taken to mitigate the hazard. It was last updated March 2012.

- ◆ **Jefferson County Flood Mitigation Plan** In 1999, Jefferson County adopted a flood mitigation plan for the unincorporated area of the county and updated it in 2001. The goal of the plan is to reduce the economic and personal costs of flood damages and is intended to:
  - ◆ Document the extent of existing flooding
  - ◆ Document the potential economic impacts of major flooding
  - ◆ Identify properties at greatest risk of damage
  - ◆ Document properties with repetitive flood damages
  - ◆ Identify feasible management alternatives to reduce flood risks
  - ◆ Identify potential funding sources for flood mitigation implementation
  - ◆ Develop a proactive implementation strategy to reduce flood risks
  - ◆ Identify strategies to ensure the community's preparedness in case of a flood disaster
  - ◆ Make Jefferson County and its residents eligible for federal financial assistance from the Flood Mitigation Assistance program administered by FEMA.
  
- ◆ **Jefferson County Hazardous Materials Response Plan** Jefferson County has a hazardous materials response plan which identifies the policies and procedures for responding to hazardous materials incidents/accidents. It was adopted in compliance with the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and state law codified in Section 166.20, Wis. Stats. It was last updated March, 2011.
  
- ◆ **Jefferson County Emergency Operations Plan** The Jefferson County Office of Emergency Management maintains an emergency operations plan that identifies the procedures for responding to emergency events in the county.
  
- ◆ **Jefferson County Land and Water Resources Management Plan** Jefferson County Land and Water Resources Management Plan 2006-2010 was developed by the Jefferson County Land and Water Conservation Department to guide land and water resource protection in the county. The plan addresses the protection of lakes, stream, wetlands, and soil. Like the county land use plan, this plan further protects environmentally sensitive areas and natural flood storage in the county. Implementation of the plan's recommendations will assist in the prevention of flood damage in Jefferson County.
  
- ◆ **State Hazard Mitigation Plan** This plan was prepared by Wisconsin Emergency Management (WEM) and complies with the requirements of the Disaster Mitigation Act of 2000 at the state level.
  
- ◆ **Emergency Action Plan Lower Watertown Dam** This plan was prepared by the Rock River Power and Light Corporation for the hydroelectric plant on the Rock River in the city of Watertown.
  
- ◆ **Emergency Action Plan Upper Watertown Dam** This plan was prepared by the Rock River Power and Light Corporation for the hydroelectric plant on the Rock River in the city of Watertown.

- ◆ **Jefferson County Business Flood Assessment** This report was prepared to assess the knowledge, experiences, and impact the flooding had on the business owners of Jefferson County, who own or operate businesses along the Rock and Crawfish Rivers in the communities of Fort Atkinson, Jefferson, Jonson Creek, Lake Mills, Palmyra, Waterloo, and Watertown, Wisconsin.
- ◆ **Flood of June 2008 in Southern Wisconsin** This report was prepared by the U.S. Geological Service (USGS) in cooperation with the Federal Emergency Management Agency (FEMA). Flood peak inundation maps and water surface profiles were generated for the communities of Reedsburg, Rock Springs, LaFarge, Gays Mills, Milford, Jefferson, Fort Atkinson, Janesville, and Beloit in a geographic information system by combining flood high-water marks with available 1-10 meter resolution digital-elevation-model data. The high-water marks used in the maps were a combination of those surveyed during the June 2008 flood by communities, counties, and federal agencies and hundreds of additional marks surveyed in August 2008 by the USGS. The flood maps and profiles outline the extent and depth of flooding through the communities and were used in flood response and recovery efforts by local, county, state and federal agencies. (Scientific investigations Report 2008-5235, U.S. Geological Survey)

When any of these local plans are updated, they should incorporate provisions, as may be appropriate, that support this plan.

## 6. PLAN PREPARATION, REVIEW, AND ADOPTION

### 2008 PLAN

The Jefferson County Board adopted a public participation plan on July 11, 2006 that describes the ways in which the public and local units of government would be involved in the preparation, review, and approval of the plan. Key elements include: a project website, publication of all meetings, submittal of press releases, and public presentations.

An ad hoc working group was established and given the responsibility of developing the first draft of the plan. It consisted of ten members, including staff from various county departments and a representative from Forth Health Care and from the National Weather Service. Work on this plan began with the first meeting on June 29, 2006. In all, the working group met four times to work on the plan and review various drafts.

Local jurisdictions were involved in a number of ways and were kept abreast of the plan's progress. Initially, letters were sent to each local unit of government inviting them to designate an individual who would serve as a point of contact and a liaison. The local contact was given a listing of critical facilities in his/her jurisdiction for review and comment. A member of the consulting team attended a meeting of the Jefferson County Towns Association and presented the project to the attendees and answered questions.

After the working group finished its work, it submitted a draft plan to the Jefferson County Law Enforcement/Emergency Management (LE/EM) Committee, a committee of the County Board. The LE/EM Committee reviewed the draft plan and made revisions. At this point, public presentations were held for local officials and the public at five locations throughout the county. Following

those meetings, the LE/EM Committee made revisions to the draft plan and on January 22, 2008 recommended the draft plan to the full County Board for its review and action.

On February 12, 2008 the County Board adopted this plan by resolution, which is included as Appendix B. A number of local jurisdictions also adopted this plan by resolution also included in Appendix B.

In a letter dated \_\_\_\_\_, 2008, Wisconsin Emergency Management and the Federal Emergency Management Agency certified that this plan meets federal requirements (Appendix C).

## **2012 5-YEAR PLAN UPDATE**

In 2011, the Jefferson County Emergency Management office applied for and received a grant to prepare a five-year update to the plan. The county contracted with Civi Tek Consulting for this project.

The Jefferson County Board of Supervisors adopted a public participation plan on April 17, 2012, that describes the ways in which the public and local units of government would be involved in the preparation, review, and approval of the plan update. A copy of the public participation plan is included as Appendix A. Key elements include: a project website, establishment of a steering committee, publication of all meetings, submittal of press releases, and numerous opportunities for submitting written comments and suggestions.

No comments were received from residents, property owners, or other interested parties during the process.

Municipalities in the county were involved in a number of ways and were kept abreast of the plan's progress. Initially, letters were sent to each municipality inviting them to approve a memorandum of understanding (MOU) and to designate an individual who would serve as a point of contact and a liaison. A sample of the MOU and of the appointment form is included in Appendix A. All of the municipalities approved the MOU. The local point of contact was given a listing of critical facilities in his/her jurisdiction for review and comment (Appendix A). Corrections were made to the list of critical facilities based on the input received.

A steering committee was established and given the responsibility of reviewing the draft of the plan update. Members are listed in the acknowledgements to this plan. The committee met on July 9, 2012 to review the proposed changes to the plan. The meeting was publicly noticed and the agenda from the meeting and a listing of those in attendance is included in Appendix A. Members of the public in attendance were given an opportunity to provide input (see agenda).

After the steering committee finished its work, another draft (2.0) was prepared, which was sent to Wisconsin Emergency Management (WEM) for tentative review. A third draft of the plan was prepared to address WEM's initial comments.

**Table 1-1. Summary of Village and City Involvement**

Municipality	Description
City of Fort Atkinson	Appointed a point of contact for the project; city representative on steering committee; provided information relating to critical facilities; returned review acknowledgement form and <b>approved as drafted</b>
City of Jefferson	Appointed a point of contact for the project; city representative on steering committee; provided information relating to critical facilities; returned review acknowledgement form and <b>approved as drafted</b>
City of Lake Mills	Appointed a point of contact for the project; provided information relating to critical facilities; returned review acknowledgement form and <b>requested revisions</b>
City of Waterloo	Appointed a point of contact for the project; provided information relating to critical facilities; returned review acknowledgement form and <b>requested revisions</b>
City of Watertown	Appointed a point of contact for the project; city representative on steering committee; provided information relating to critical facilities; returned review acknowledgement form and <b>requested revisions</b>
City of Whitewater	Appointed a point of contact for the project; city representative on steering committee; provided information relating to critical facilities; returned review acknowledgement form and <b>approved as drafted</b>
Village of Cambridge	Appointed a point of contact for the project; provided information relating to critical facilities; returned review acknowledgement form and <b>approved as drafted</b>
Village of Johnson Creek	Appointed a point of contact for the project; village representative on steering committee; provided information relating to critical facilities; returned review acknowledgement form and <b>approved as drafted</b>
Village of Lac La Belle	No involvement
Village of Palmyra	Appointed a point of contact for the project; village representative on steering committee; provided information relating to critical facilities; returned review acknowledgement form and <b>requested revisions</b>
Village of Sullivan	Appointed a point of contact for the project; provided information relating to critical facilities; returned review acknowledgement form and <b>requested revisions</b>

A copy of this draft was then sent to each of the cities and villages in the county, the adjoining counties, and the local chapter of the American Red Cross for review and comment.<sup>1</sup> An executive summary was sent to each of the towns for review and comment. A copy of these cover letters are included in Appendix A. All of the municipalities responded (Table 1-1). Revisions as requested were incorporated into the plan document.

A fourth draft of the plan was prepared based on the local government input that was received. It was then sent to the Federal Emergency Management Agency for preliminary approval. A letter dated \_\_\_\_\_, 2013, indicated such approval. The Law Enforcement/Emergency Management Committee of the County Board reviewed this draft on \_\_\_\_\_, 2013, and recommended the draft plan to the full County Board for its review and action.

On \_\_\_\_\_, 2013 the County Board of Supervisors adopted this plan. A copy of the agenda is included in Appendix A. The county adoption resolution and those of the cities and villages is included in Appendix B.

In a letter dated \_\_\_\_\_, 2013, Wisconsin Emergency Management and the Federal Emergency Management Agency certified that this plan update meets federal requirements (Appendix C).

<sup>1</sup> Note: Jefferson County is not located within the jurisdiction of a regional plan commission.

Every effort has been made to use the best available data for the update. Data from the 2010 census of population and housing was used to update the demographic information contained in this plan.

Table 1-2 summarizes the changes made to each section of the plan as part of the update.

**Table 1-2. Summary of Changes Made in the 2012 Plan Update**

Plan Section	Summary of Changes
Chapter 1	This chapter was reviewed and updated as needed. Specifically, a narrative describing the process used in developing the update was included. The procedure for plan maintenance was reviewed and updated. A section titled "Incorporating this Plan into Other Planning Efforts" was added.
Chapter 2	This chapter was updated using data the best available data.
Chapter 3	This chapter was updated including data from the 2010 Census of population and housing.
Chapter 4	This chapter was updated.
Chapter 5	Natural hazard profiles, occurrences, and probabilities were reviewed and updated as necessary. In addition, the risk assessments were updated.
Chapter 6	This chapter was updated. The steering committee focused in on the goals, objectives, policies, and activities. Revisions were made and new ones were added.
Map Series	All of the maps were updated.
Appendix A	Public participation documentation for the 2013-2017 plan is included.
Appendix B	Resolutions adopting the 2013-2017 plan update are included.
Appendix C	Certification letters from WEM and FEMA for the 2013-2017 plan are included.
Appendix D	This appendix was updated to list all of the municipalities adopting the plan.
Appendix E	The listing represents an up-to-date inventory of critical facilities in the county sorted by type of facility.
Appendix F	The listing represents an up-to-date inventory of critical facilities in the county sorted by jurisdiction.
Appendix G	The history of storm events was updated using data provided by the National Weather Service.
Appendix H	No change
Appendix I	No change

## 7. INTERAGENCY COORDINATION

A copy of the draft plan that the LE/EM Committee recommended to the County Board was sent to the American Red Cross and each of the adjoining counties for review and comment. A copy of the letter is included in Appendix A. No comments were received. Jefferson County is not served by a regional plan commission.

## 8. PLAN MAINTENANCE AND AMENDMENT

DMA 2000 requires that an adopted plan be reviewed and updated at least once every five years. However, to ensure that the plan remains a viable planning tool, it should be reviewed each year and following a natural disaster. The Federal Emergency Management Agency and Wisconsin Emergency Management will be notified of amendments to this plan.

### ANNUAL REVIEW

Each November, the Emergency Management Director should review and monitor this plan and suggest amendments to the LE/EM Committee. As part of this review, the Emergency Management Director should contact each of the participating jurisdictions to give them the opportunity to suggest changes. During this annual review, most of the focus should be on Chapter 6, which lists the goals, objectives, policies, and activities.

To determine whether amendments are needed, the following considerations should be reviewed:

- ◆ Review of general development trends
- ◆ Review of hazard risk
- ◆ Review of hazard mitigation goals and objectives
- ◆ Review of completed mitigation activities and their effectiveness
- ◆ Review of recommended strategies
- ◆ Review of available resources for future projects
- ◆ Public input
- ◆ Input from WEM and FEMA

### FOLLOWING A NATURAL DISASTER

In addition, to a yearly review cycle, this plan should be updated following a significant natural disaster. Ideally, the update would be completed within six months of the event.

The public will be formally notified of meetings scheduled for the purpose of plan review. Other mechanisms that will be used to maintain public involvement include making available a copy of the plan at local public libraries, issuance of periodic press releases to the media describing the status of plan implementation and the use of the county's website as a medium to keep residents informed of the plan's status and implementation activities.

### HISTORY OF ADOPTION AND AMENDMENT

A history of adoption and amendment is included in Appendix D. It lists when this plan was first adopted and the various amendments which have taken place since then.

## 9. INCORPORATING THIS PLAN INTO OTHER PLANNING EFFORTS

The state-mandated comprehensive plan and floodplain regulations will be the primary means of reducing the effects of hazards on people and property in Jefferson County. Mitigation strategies can be incorporated into these plans when they are updated. Each jurisdiction should incorporate goals, objectives, and policies into their comprehensive plans that are consistent with this plan. The Jefferson County Emergency Management Director should send a letter to the Plan Commission of each city and village in 2013 encouraging them to cross reference their plan revisions with this plan. Likewise, amendments to this plan

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***Without periodic review and assessment, this plan has the potential to lose its relevance as conditions change, specific projects are implemented, and new priorities emerge.***

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should be made consistent with comprehensive plans so long as such action would reduce the impact of hazards on people and property.

In addition to long-range planning, this plan will also be utilized when reviewing land development projects. It will be useful to consult this plan to determine where hazards are located, primarily 100-year floodplains. The plan will also be consulted as necessary when capital improvement plans are being prepared. Again, the intent of these cross-cutting planning efforts is to reduce the effects of hazards on people and property.

To underscore the importance of incorporating this plan into other planning efforts, Jefferson County Emergency Management sent a letter to the County Planning Director encouraging the use of this plan (Appendix A).

### 10. GOVERNMENTAL UNITS ADOPTING THIS PLAN

In addition to Jefferson County, 6 cities, and 4 villages have adopted this plan (Table 1-3). The cities of Watertown and Whitewater and the villages of Cambridge and Lac La Belle are situated in Jefferson County and an adjoining county. As such, these municipalities would need to adopt a hazard mitigation plan for their entire jurisdiction before they would be eligible to apply for mitigation grants from the federal government. Those jurisdictions that have not done so, can at any time in the future adopt this plan provided they involve the public in the adoption process.

**Table 1-3. Municipalities Adopting this Plan**

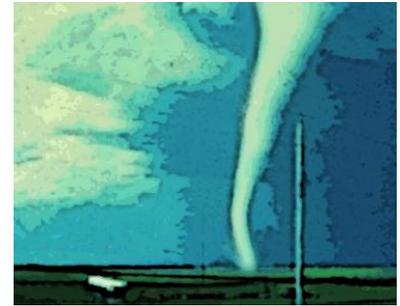
Cities	Villages
Fort Atkinson	Cambridge [1]
Jefferson	Johnson Creek
Lake Mills	Palmyra
Waterloo	Sullivan
Watertown [1]	
Whitewater [1]	

Notes: 1. Municipality located in Jefferson County and another county

# PLANNING AREA PROFILE

## 1. CHAPTER OVERVIEW

This chapter is intended to give an overview of Jefferson County to help describe the setting and provide the general context for mitigation planning.



## 2. REGIONAL CONTEXT

Jefferson County is located midway between the Milwaukee and Madison metropolitan areas. It is bordered by Waukesha County on the east, Dodge County on the north, Dane County on the west, and Walworth and Rock counties on the south (Exhibit 2-1). It encompasses 564 square miles and is located in the Eastern Ridges and Lowlands portion of southeastern Wisconsin which is densely populated with a high concentration of industry and farms.

The Rock River, which travels north to south in the central to western half of the Jefferson County, is a Mississippi River tributary that flows through northern Illinois. It drains most of Jefferson County. The major feeder streams are the Crawfish, Bark, Scuppernong, and Oconomowoc rivers and the Whitewater, Koshkonong, and Deer creeks. Lake Koshkonong is the largest lake, located in the southwest portion of the county. Other smaller lakes are Rock Lake, Lake Ripley, Hahn’s Lake, Red Cedar Lake, Goose Lake, Golden Lake, Mill Pond, Green Isle Lake, Upper and Lower Spring Lake, and Blue Spring Lake.

Land use percentages of assessed totals are estimated as 67 percent for agricultural with residential and commercial uses at 9 percent each. Approximately 5 percent of the county’s surface is covered with water (i.e., lakes, rivers, streams, etc.) and the remaining balance is non-assessed properties such as government, religious, non-profit, and other uses.

Industry is the largest employment sector at 46 percent. There are approximately 1,420 farms with the average size being 174 acres.

### Chapter Contents

1.	Chapter Overview
2.	Regional Context
3.	Units of Government
4.	Population
5.	Housing
6.	Transportation
7.	Land Use and Development Trends
8.	General Climate
9.	Soil
10.	Topography
11.	Surface Water Resources
12.	Wetlands

Exhibit 2-1. General Location



### 3. UNITS OF GOVERNMENT

Civil divisions in Jefferson County consist of 16 towns, 5 villages, and 6 cities (Table 2-1). The city of Watertown is located in Jefferson and Dodge counties. The village of Cambridge is located in Jefferson and Dane counties. The majority of Lac La Belle is located in Waukesha County. The city of Whitewater is located in Jefferson and Walworth counties. The city of Jefferson is the county seat.

**Table 2-1. Civil Divisions; Jefferson County**

Towns	Cities	Villages
Aztalan	Fort Atkinson	Cambridge [1]
Cold Spring	Jefferson	Johnson Creek
Concord	Lake Mills	Lac La Belle [1]
Farmington	Waterloo	Palmyra
Hebron	Watertown [1]	Sullivan
Ixonia	Whitewater [1]	
Jefferson		
Koshkonong		
Lake Mills		
Milford		
Oakland		
Palmyra		
Sullivan		
Sumner		
Waterloo		
Watertown		

Notes: 1. Municipality located in Jefferson County and another county

### 4. POPULATION

According to the U.S. Census Bureau there are currently 83,686 county residents (Table 2-2). With 4,385 residents, the town of Ixonia is the most populous of the 16 towns in the county. The village of Johnson Creek is the most populous village and Watertown is the most populous city. As seen in Table 2-2, the county has enjoyed steady growth since 1980.

At 6.1 percent, towns as a group posted the smallest change in population from 2000 to 2010 when compared to cities as a group (11.6%) and villages (28.5%) also as a group. With the exception of two towns, the population in towns posted modest population gains. The town of Ixonia experienced the highest rate of change (51.1%) and the largest numerical gain (1483 residents). With a change in population of 9.3 percent, the town of Waterloo posted the second highest rate of change, although it only added 77 residents.

Except for a small corner of the village, Lac La Belle is located in Waukesha County and has only 2 residents in Jefferson County. Of the villages, Johnson Creek experienced the largest change (73.2%) and also the largest numerical increase (1157 residents). Seven of the twenty-seven municipalities experienced a decrease in their populations.

That portion of the city of Watertown in Jefferson County has a current population of 15,402 residents. With 12,368 residents, Fort Atkinson is the second most populous city in the county. Between 2000 and 2010, each of the six cities saw their population increase from between 2.8 to 24.1 percent.

**Table 2-2. Population; Jefferson County and Civil Divisions: 1980, 1990, 2000, and 2010**

	1980	1990	2000	2010	Percent
	Census	Census	Census	Census	Change
					2000-10
<b>Town</b>					
Aztalan	1,752	1,476	1,447	1,457	0.7
Cold Spring	684	683	766	727	-5.1
Concord	1,805	1,884	2,023	2,072	2.4
Farmington	1,528	1,404	1,498	1,380	-7.9
Hebron	1,104	975	1,135	1,094	-3.6
Ixonia	2,905	2,789	2,902	4,385	51.1
Jefferson	2,891	2,687	2,457	2,178	-11.4
Koshkonong	2,979	2,984	3,395	3,692	8.7
Lake Mills	1,515	1,584	1,936	2,070	6.9
Milford	1,066	1,007	1,055	1,099	4.2
Oakland	2,240	2,526	3,135	3,100	-1.1
Palmyra	1,069	1,176	1,145	1,186	3.6
Sullivan	1,646	1,924	2,124	2,208	4.0
Sumner	973	822	904	832	-8.0
Waterloo	811	694	832	909	9.3
Watertown	1,921	1,840	1,876	1,975	5.3
Total	26,889	26,455	28,630	30,364	6.1
<b>Village</b>					
Cambridge [1]	59	80	87	109	25.3
Johnson Creek	1,136	1,259	1,581	2,738	73.2
Lac La Belle [1]	-	-	0	1	100
Palmyra	1,515	1,540	1,766	1,781	0.9
Sullivan	434	449	688	669	-2.8
Total	1,949	3,328	4,122	5,298	28.5
<b>City</b>					
Fort Atkinson	9,785	10,213	11,621	12,368	6.4
Jefferson	5,647	6,078	7,146	7,973	11.8
Lake Mills	3,670	4,143	4,843	5,708	17.9
Waterloo	2,393	2,712	3,259	3,333	2.8
Watertown [1]	12,202	12,388	13,535	15,402	13.8
Whitewater [1]	2,422	2,466	2,611	3,240	24.1
Total	36,119	38,000	43,015	48,024	11.6
<b>Jefferson County</b>	<b>66,152</b>	<b>67,783</b>	<b>75,767</b>	<b>83,686</b>	<b>10.5</b>

Source: US Census Bureau

Notes: 1. Municipality located in Jefferson County and another county

## 5. HOUSING

According to the 2010 census of population and housing, there were just over 34,000 dwelling units in the county (Table 2-3). About 70 percent were single family residences. Structures with 5 to 9 units represent the second most common housing type. Mobile homes are the third most common type of housing. Nearly one-third of the county’s housing stock was built more than 70 years ago (Table 2-4).

**Table 2-3. Housing Types; Jefferson County: 2010**

Units in Structure	Number	Percent
1-unit, detached	23,931	68.9
1-unit, attached	1,797	5.2
2 units	1,661	4.8
3 or 4 units	1,423	4.1
5 to 9 units	2,103	6.1
10 to 19 units	788	2.3
20 or more units	1,256	3.6
Mobile home	1,759	5.1
Boat, RV, van, etc.	0	0
Total	34,718	100

Source: US Census Bureau

## 6. TRANSPORTATION

### SURFACE TRANSPORTATION

The county contains approximately 1,374 miles of roadways (Table 2-5). Nearly two-thirds of which are classified as a local road. Interstate 94 travels east and west in the northern part of the county (Map 1). Interchanges are located at the city of Lake Mills (STH 89), the village of Johnson Creek (STH 26), and at Concord (CTH F).

**Table 2-4. Age of Housing Stock; Jefferson County: 2010**

Year Structure Built	Number	Percent
2005 or later	1365	3.9
2000 to 2004	3,157	9.1
1990 to 1999	5,617	16.2
1980 to 1989	2,218	6.4
1970 to 1979	5,477	15.8
1960 to 1969	2,884	8.3
1940 to 1959	4,260	12.3
1939 or earlier	9,740	28.1
Total	34,718	100

Source: US Census Bureau

The other key regional highways include STH 26, STH 12, STH 18, and STH 16. Each of these highways connects one or more of the incorporated municipalities in Jefferson to the Interstate highway system and provides access to nearby metropolitan areas. Extremely hazardous substances may be transported over any local, state, or federal highway, without restriction provided weight limits are met.

**Table 2-5. Roadway by Type; Jefferson County; 2012**

Type of Roadway	Miles	Percent of Total
Interstate Highway	24.56	1.8
State Highway	151.74	11.0
County Highway	259.77	18.9
Local Roads	919.41	66.9
Other	18.58	1.4
Total	1374.06	100

Source: Jefferson County

### AIR TRANSPORTATION

Public-use airports are located in the city of Watertown, city of Fort Atkinson, and village of Palmyra.

- ◆ Watertown Municipal Airport is classified as transport/corporate based airport<sup>1</sup>. Forecasts prepared for the Wisconsin Bureau of Aeronautics indicate that use will increase to 56,900 operations by 2020, a 15 percent increase since 2000.
- ◆ Fort Atkinson Municipal Airport is classified as a general utility airport<sup>2</sup>. Over the next 20-year period, use will remain stable at 6,700 annual operations.
- ◆ Palmyra Municipal Airport is classified as a basic utility airport<sup>3</sup>. It is estimated that use will increase slowly to 26,200 operations by 2020.

In addition to these public-use airports, there are a number of private-use airports, including McDermott Airpark. Private-use airports are not considered critical infrastructure for the purposes of this plan.

### RAIL TRANSPORTATION

As shown on Map 6, there are three railroads that serve Jefferson County: Wisconsin Southern, Union Pacific, and Canadian Pacific.

<sup>1</sup> A transport/corporate airport is intended to serve corporate jets, small passenger and cargo jet aircraft used in regional service and small aircraft (piston and turboprop) used in commuter air service.

<sup>2</sup> A general utility airport is intended to serve virtually all small general aviation single and twin-engine aircraft, both piston and turboprop, with a maximum takeoff weight of 12,500 pounds or less.

<sup>3</sup> A basic utility airport is intended to serve all small single-engine piston aircraft and many smaller twin-engine aircraft with a maximum takeoff weight of 12,500 pounds or less.

## 7. LAND USE AND DEVELOPMENT TRENDS

The unincorporated area of Jefferson County is predominated by rural land uses, principally agriculture (Map 2). Table 2-6 summarizes the land uses in the unincorporated areas of the county in 1997 when the most current land use inventory was conducted. At that time, incorporated municipalities accounted for 18,129 acres, or 4.9 percent of the county, and the remaining 353,801 acres were unincorporated.

In the unincorporated area, agriculture and other open lands account for nearly three-quarters of the land area. With 15.6 percent of the land area, wetlands constitute the second largest land use type. Developed land, including transportation, residential, recreational, institutional, industrial, and commercial, accounts for nearly 13 percent of the land area.

As envisioned in the county’s recently adopted farmland preservation plan, most of the future growth is expected to take place in planned urban service areas located in or adjacent to the existing urban municipalities. Most rural areas of the county are zoned as agricultural preservation areas and environmental corridor, which limit urban development. Urban development is anticipated to increase proportional to the population growth, and will likely be limited to approximately 800 to 900 acres of new urban development in the unincorporated areas of the county.

**Table 2-6. Land Use: Unincorporated Jefferson County: 1997**

Land Use	Acres	Percent of Total
Agricultural/Open Land	254,072	71.8
Wetlands	55,097	15.6
Surface Waters	16,836	4.8
Transportation	12,620	3.6
Residential	12,513	3.6
Recreational	1,671	0.5
Institutional	374	0.1
Industrial	310	0.1
Commercial	308	0.1
Total	353,801	100

Source: *Jefferson County Agricultural Preservation and Land Use Plan, October 1999*

## 8. GENERAL CLIMATE

Wisconsin’s climate is typically classified as continental. About two-thirds of the annual precipitation falls during the growing season (freeze-free period). It is normally adequate for vegetation, although drought is occasionally reported. This climate is most favorable for dairy farming; the primary crops are corn, small grains, hay, and vegetables. The rapid succession of storms moving from west to east or southwest to northeast account for the stimulating climate.

Table 2-7 charts conditions in the city of Lake Mills which is representative of the entire county.

**Table 2-7. Climate; City of Lake Mills**

Climate Normals	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Ave Daily High (F°)	26.6	32	43.7	59	71.7	80	85	82.1	74.3	62	46.2	31.4
Ave Daily Low (F°)	7.9	11.9	23.6	36	46.5	56	61	58.5	50.8	41	28.8	14.7
Growing Degree Days	0	2	37	161	359	535	675	610	413	202	40	3
Heating Degree Days	1479	1207	970	525	227	38	0	18	103	431	825	1302
Cooling Degree Days	0	0	0	0	44	131	246	182	31	10	0	0
Ave Precipitation (")	1.29	1.13	2.3	3.1	3.17	3.5	3.9	4.05	3.89	2.4	2.28	1.87
Ave Snowfall (")	9.6	7	6.4	1.4	0.1	0	0	0	0	0.1	2.3	10.7

Source: National Weather Service

The lakes and rivers of Jefferson County often are ice covered from late December to late March. Snow covers the ground 50 to 75 percent of winter days. Flooding is most frequent and most serious during March and April, and sometimes in February, due to the melting of snow and spring rains. During this period, flood conditions are often aggravated by ice jams that clog flowing floodwaters. Excessive rains from thunderstorms sometimes produce tributary flooding or flash flooding along the smaller streams and creeks.

## 9. SOIL

The most common soil associations occurring in the upland areas of Jefferson County are the Fox, Kidder, Keowns, Mayville, Rotamer, and Sebwa silt loams. These soils are made up of loam and silt loam soils that have subsoils of silty clay loam over clay loam and underlain by calcareous loam glacial till. The soils of these associations are well drained and facilitate good infiltration of runoff. These soils fall mainly into the hydrologic soil group B<sup>4</sup>.

Adrian and Houghton muck soils dominate the lowlands in the county. Adrian and Houghton muck soils are very poorly drained organic soil that consists of decomposed residue from wetland plants such as reeds, sedges, and forbs. Houghton muck occurs in old glacial lakebeds and wetlands. The lowland soils fall into hydrologic soil groups A/D, B/D and D, indicating limited infiltration capacity.

## 10. TOPOGRAPHY

Jefferson County is located in a glaciated area, dominated by rolling hills and wide valleys. The topography of the area is the result of 4 major glacial advances, the last of which occurred about 12,000 years ago. Two lobes of the huge glacier sheet, known as the Green Bay and Lake Michigan lobes, interacted over southeast Wisconsin, including Jefferson County, with ice thicknesses ranging from 1/4 mile to 1 mile. As the glaciers advanced and retreated across the county, they deposited large amounts of rock debris known as drift. As the glaciers retreated, outpourings of sand and gravel were added to the drift. The two glacier lobes pushed up against each other over the southeast corner of Jefferson County, leaving behind rock debris that formed the Kettle Moraine ridge located in that part of the county.

The glacier left behind many ground moraines, which provide many hills located in the county. Among the moraines, large outwash plains formed as melt waters deposited fine sands and gravel. Most of the wide floodplain areas of the county are in these outwash plains. The large floodplains south of the city of Watertown, at Lake Koshkonong, and west of the city of Jefferson, are examples of large outwash plains.

## 11. SURFACE WATER RESOURCES

Jefferson County has a total of 40 lakes, 27 of these are named and 13 are unnamed (Table 2-8). Lake Koshkonong is the largest lake in the county followed by Rock Lake.

The Rock River and its tributaries drain Jefferson County. Upstream of the outlet of the Rock River at Lake Koshkonong, the river drains over 2,500 square miles and includes portions of Columbia, Dane, Dodge, Fond du Lac, Jefferson, Washington, and Waukesha counties.

The drainage basin of Rock River is divided into the Upper Rock River Basin and Lower Rock River Basin by the Wisconsin Department of Natural Resources for water quality planning purposes. Descriptions for each of the watersheds follow in the following sections.

**Table 2-8. Named Lakes; Jefferson County**

Lake (listed by size)	Acres
Lake Koshkonong [1]	10,460
Rock Lake	1,371
Rome Millpond	477
Lake Ripley	418
Red Cedar Lake	359
Golden Lake [2]	250
Goose Lake	144
Hope Lake	142
Blue Spring Lake	136
Mud Lake [3]	120
Lower Spring Lake	104
Mud Lake [3]	93
Watertown Millpond	84
Hahns Lake	82
Maunsha Flowage (Willow Pond)	81
Cushman Pond	48
Bean Lake	33
Mud Lake [3]	33
Slabtown Pond	32
Mud Lake [3]	30
Green Isle Lake (Hebron)	28
Upper Spring Lake	17
Firemen Park Pond	8
Rose Lake	8
Perch Lake	6
Round Lake	3
Kurtz Pond	1

**Notes:**

1. Located in Dane County and Jefferson County
2. Located in Jefferson County and Waukesha County
3. One of four lakes in the county with the same name

<sup>4</sup> Soils are classified into four HSGs (A, B, C, and D) according to their minimum infiltration rate. The soils range from Group A, which has high permeability in well-drained soil with less runoff [produced], to Group D which has low permeability and more anticipated runoff.

## UPPER ROCK RIVER BASIN

The northern and central portions of Jefferson County are drained by the Upper Rock River Basin. This basin includes all surface waters draining to the Rock River above the Bark River. More than 1,920 square miles are drained by the Upper Rock River, including all of Dodge County and parts of Columbia, Dane, Fond du Lac, Jefferson, Washington and Waukesha counties. The basin is divided into 13 watersheds. Seven of the 13 watersheds in the Upper Rock River Basin drain the northern and central parts of Jefferson County.

**Middle Rock River Watershed (UR 01)** The Middle Rock River watershed is approximately 132 square miles, including parts of Dodge and Jefferson counties. It extends from the north edge of Fort Atkinson upstream to the dam at Watertown. Totaling 55 stream miles, the major streams within the watershed are Deer Creek, Rock River, and nine unnamed creeks. Agriculture is the dominant land use in this watershed; however, urbanization is occurring on the north side of Fort Atkinson and on the southwest side of Watertown. There are three municipal wastewater treatment plant dischargers in this watershed (Watertown, Johnson Creek, and Jefferson) and four industrial dischargers.

**Lower Crawfish River Watershed (UR 02)** The Lower Crawfish River watershed is 178 square miles including parts of Dane, Dodge, and Jefferson counties. Totaling 90.4 stream miles, the major streams in the watershed are the Crawfish River, Mud Creek, Nolan Creek, Rock Creek, and 7 unnamed creeks. This watershed includes the Crawfish River and all its tributaries from the dam at Columbus downstream to its confluence with the Rock River at Jefferson. The land use in this watershed is primarily agricultural. There are two municipal wastewater treatment plants (Columbus and Lake Mills) and five industrial plants discharging into this watershed.

**Maunsha River Watershed (UR 05)** This watershed is 126 square miles and includes parts of Dane, Dodge, and Jefferson counties. Totaling 98 stream miles, the major streams in the watershed are Maunsha River, Schumacher Creek, Spring Creek, Stony Brook, Stransky Creek, and 19 unnamed streams. Agriculture is the predominant land use in this watershed. The watershed has two state wildlife areas. There are two municipal wastewater dischargers into the watershed (Marshall and Waterloo) and two industrial dischargers.

**Johnson Creek Watershed (UR 07)** The Johnson Creek watershed is 45 square miles in Jefferson County. Totaling 37.5 stream miles, the major streams in the watershed are Johnson Creek and seven unnamed creeks. The predominant land use in this small watershed is agriculture, although there has been increasing urbanization.

**Sinissippi Lake Watershed (UR 08)** The Sinissippi Lake watershed is 237 square miles including parts of Dodge and Jefferson counties. It includes the mainstream of the Rock River from the dam at Horicon downstream to the Watertown dam and all the streams which flow into the Rock River in this area. Totaling 160 stream miles, the major streams in the watershed are Baker Creek, Oyman Creek, Dead Creek, Lentz Creek, Neda Creek, Oliver Creek, Rock River, Silver Creek, Wildcat Creek, Woodland Creek, and 20 unnamed streams. The land use in this watershed is primarily agricultural. There are eight communities which have municipal wastewater facilities that discharge into this watershed.

**Oconomowoc River Watershed (UR 09)** The Oconomowoc River watershed is 129 square miles including parts of Jefferson, Washington, and Waukesha counties. Totaling 88.8 stream miles, the major streams in the watershed are

Battle Creek, Coney Creek, Flynn Creek, Little Oconomowoc River, Mason Creek, Oconomowoc River, Rosenow Creek, and 11 unnamed creeks. From its source, the Oconomowoc River flows in a southwesterly direction through six major lakes for approximately 49 miles before entering the Rock River in the Town of Ixonia. Urbanization is continuing, especially next to or near lakes. The City of Oconomowoc is the only municipality in the watershed with a wastewater discharge to surface water. There are approximately 1,100 acres of publicly-owned recreation lands and three large county-owned parks in this watershed.

**Ashippun River Watershed (UR 10)** The Ashippun River watershed is 69 square miles including parts of Dodge, Washington, and Waukesha counties and a small part of Jefferson County. Totaling 63 stream miles, the major streams in the watershed are Ashippun River, Davey Creek, Dawson Creek, Mud Run Creek, and nine unnamed creeks. The predominant land use is agricultural. The only municipal wastewater discharger in the watershed is the Town of Ashippun.

## **LOWER ROCK RIVER BASIN**

The Lower Rock River Basin drains the southern, eastern, and western portions of Jefferson County. The Lower Rock River Basin drains an area of approximately 1,307 square miles including parts of Columbia, Dane, Jefferson, Rock, Walworth, and Waukesha counties. There are 15 watersheds in the Lower Rock River Basin, five of which drain the southern, eastern, and western portions of Jefferson County.

**Lower Koshkonong Creek Watershed (LR 11)** The Lower Koshkonong Creek watershed is approximately 219 square miles and includes parts of Dane, Jefferson, and Rock counties. Totaling 104 stream miles, the major streams in this watershed are Allen Creek, Koshkonong Creek, Otter Creek, Sounders Creek, and 15 unnamed streams. While the majority of wetlands in the watershed have been drained for agricultural purposes, many significant wetland areas remain. Agriculture is the predominant land use. There are significant soil losses in this watershed. Soil loss, coupled with wetland drainage and stream channel drainage, indicates significant sediment likely reaches the watershed's surface water, adversely affecting habitat, and water quality. Fort Atkinson, Cambridge, Rockdale, and Edgerton are each a municipal point discharger in the watershed.

**Upper Koshkonong Creek Watershed (LR 12)** The Upper Koshkonong Creek watershed is 107 square miles including parts of Dane and Jefferson counties. Totaling 73 miles, the major streams in the watershed are Koshkonong Creek, Mud Creek, and 35 unnamed streams. The land use is primarily agriculture. Large portions of the wetlands were drained for this purpose. This wetland loss, coupled with stream ditching and widespread use of field tiles, allows a significant amount of sediment and nutrients to reach surface waters in the watershed and, thus, downstream watersheds.

**Bark River Watershed (LR 13)** The Bark River watershed is approximately 189 square miles and includes parts of Jefferson, Waukesha, and Washington counties. Totaling 171.5 stream miles, the major streams in this watershed are the Bark River, Deer Creek, Duck Creek, Meadow Brook, Scuppernong Creek, Wales Creek, and 36 unnamed streams. Agriculture is the predominant land use in the Bark River Watershed. This watershed has many large lakes which continue to have development around them. Though some of the wetlands have been drained, significant amounts of wetlands remain in this watershed. There is significant development in the Waukesha County portion of the watershed. This is the greatest threat to increased flood flows in this basin.

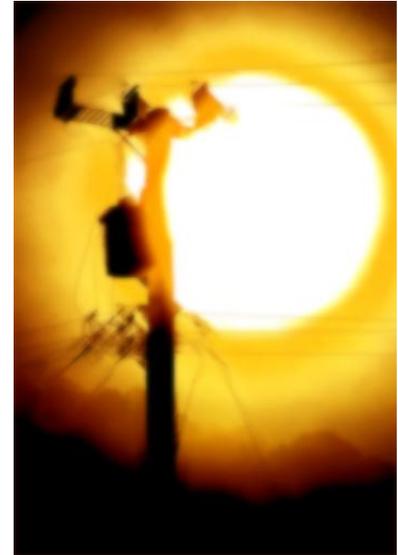
**Whitewater Creek Watershed (LR 14)** The Whitewater Creek watershed is 71 square miles including parts of Jefferson, Walworth, and Rock counties. Totaling 60 stream miles, the major streams in this watershed are Bluff Creek, Galloway Creek, Spring Brook, Whitewater Creek, and 17 unnamed streams. Land use in this watershed is predominantly agriculture. A portion of the Kettle Moraine State Forest runs along the southeast edge of the watershed. The Whitewater Municipal Treatment Plant discharges into this watershed.

**Scuppernong River Watershed (LR 15)** The Scuppernong River watershed is 86.5 square miles including parts of Jefferson, Walworth, and Waukesha counties. Totaling 835 stream miles, the major streams in the watershed are Funk Creek, Mud Creek, Paradise Springs Creek, Scuppernong River, Spring Creek, Steel Brook, and 28 unnamed streams. Agriculture is the predominant land use in this watershed. The Kettle Moraine State Forest and two state wildlife areas with large forested tracts and wetland areas are within this watershed. Other wetlands have been drained for agricultural purposes. The only urban area in this watershed is the Village of Palmyra.

## 12. WETLANDS

Within the unincorporated areas of Jefferson County, there are 55,097 acres of wetlands. These wetlands make up 15.5 percent of the land area. The majority of wetlands are associated with the floodplains of local rivers and creeks.

# SPECIAL NEEDS POPULATIONS AND GROUPS



## 1. CHAPTER OVERVIEW

During a natural disaster the potential exists for certain populations and groups of people to be disproportionately affected when compared to the general population. This section looks at those groups including the elderly, people with disabilities, homeless individuals, populations with language barriers, and people in mobile home parks, campgrounds, and group quarters. Strategies and actions are included in Chapter 5 in order to address the particular needs of the groups.

## 2. ELDERLY

As a group, the elderly are especially vulnerable to natural hazards. This is especially true when an elderly person lives by him or herself or with an elderly spouse and do not have family or friends to help them prepare for natural hazards or react to and recover from an event.

The aging of the population is occurring throughout the nation and is also evident in Jefferson County. As seen in Table 3-1, the number of people between the ages of 5 and 34 decreased between 1990 and 2010, while the number of people 45 and older increased. As the population continues to get proportionately older, it will become increasingly important to address the needs of the elderly with respect to natural hazards planning.

### Chapter Contents

1. Chapter Overview
2. Elderly
3. People with Disabilities
4. Homeless Individuals
5. Populations with Language Barriers
6. People Living in Manufactured and Mobile Homes
7. People in Campgrounds
8. Residents in Group Quarters

**Table 3-1. Age of Population; Jefferson County: 1990, 2000, and 2010**

Age Group	Percent of Total			Percent Change 1990-10
	1990	2000	2010	
Under 5 years	6.9	6.3	6.3	-8.7
5 to 9	7.5	6.8	6.7	-10.7
10 to 14	7.3	7.5	6.6	-9.6
15 to 19	8.9	7.3	7.9	-11.2
20 to 24	7.2	5.8	6.5	-9.7
25 to 34	15.8	13.6	12.0	-24.1
35 to 44	14.7	16.8	13.2	-10.2
45 to 54	14.5	14.1	15.3	5.5
55 to 64	4.2	9.1	12.4	195.2
65 to 74	7.2	6.4	7.3	1.4
75 to 84	4.5	4.5	4.1	-8.9
85 and older	1.3	1.7	1.8	38.5

Source: 2010 Census of Population and Housing, US Census Bureau

### 3. PEOPLE WITH DISABILITIES

Like the elderly, people with disabilities have increased exposure to some types of natural hazards. As indicated in Table 3-2, 8.7 percent of the population in Wisconsin self-reported a disability in 2010. This compares to 7.2 percent of the people in Jefferson County.

### 4. HOMELESS INDIVIDUALS

Homeless individuals are disproportionately affected by many types of natural disasters. Excessive heat and cold are especially hard on the elderly homeless. There is no accurate number of homeless individuals in Jefferson County. Local relief organizations provide assistance.

### 5. POPULATIONS WITH LANGUAGE BARRIERS

Most people in Jefferson County are able to communicate effectively in English. However, a small group of residents, most likely recent immigrants, have not learned to speak English or have not become proficient. Recognizing this fact is important in devising strategies to help residents prepare themselves for an impending disaster and recover from the aftermath of the event.

According to the 2010 census, three percent of Wisconsin residents described their use of English as less than proficient. The proportion of residents in Jefferson County was somewhat less. However, when compared to the statewide figure, the rates in the cities of Fort Atkinson, Jefferson, Watertown and Whitewater were slightly higher. Most notably, Fort Atkinson was more than a full point higher than the statewide figure.

Although the number of residents who do not speak proficient English is comparatively small, it is anticipated that the number will continue to rise barring a significant shift in public policy in immigration.

### 6. PEOPLE LIVING IN MANUFACTURED AND MOBILE HOMES

Manufactured housing and mobile homes are especially susceptible to damage from wind and other storms. As a result, people living in this type of housing are more vulnerable to injury and death when compared to those living in dwellings built with conventional framed construction.

In 2012, there were 16 mobile home parks in Jefferson County (Table 3-4). Most of these were located in a city or village. As a proportion of the total housing stock, the city of Lake Mills had the highest proportion of mobile homes when compared to other municipalities in Jefferson County.

None of the mobile parks have a storm shelter where people could go during wind-related storm events.

**Table 3-2. People with Disabilities: 2010**

Subject	Percent Estimate	
	Wisconsin	Jefferson County
Population 18 to 64 years	8.7	7.2
With a hearing difficulty	1.9	1.6
With a vision difficulty	1.2	0.5
With a cognitive difficulty	3.7	3.7
With an ambulatory difficulty	4.2	2.8
With a self-care difficulty	1.5	0.8
With an independent living difficulty	2.8	2.9

Source: 2010 Census of Population and Housing, US Census Bureau

**Table 3-3. People with Language Barriers: 2010**

Jurisdiction	Percent of Total
	Population
Wisconsin	3.0
Jefferson County	2.5
Jefferson, city	3.2
Johnson Creek, village	2.3
Fort Atkinson, city	4.1
Lake Mills, city	1.6
Palmyra, village	1.7
Sullivan, village	2.1
Waterloo, city	2.1
Watertown, city [1]	3.2
Whitewater, city [1]	3.4

Source: 2010 Census of Population and Housing, US Census Bureau

Notes: 1. Data is for the entire municipality

**Table 3-4. Mobile Home Parks: 2012**

Name	Jurisdiction	Address	Number of Sites	On-Site Shelter
Back Acres Mobile Home Park	Johnson Creek, village	105 Aztalan Street	45	No
Breezy Knoll	Oakland, town	CTH A	NK	No
East Lake Estates Mobile Home Park	Lake Mills, city	677 East Lake Street	35	No
Country Acres Mobile Home Park	Lake Mills, town	N6789 CTH A	NK	No
Hickory Hill Park	Watertown, town	3266 East Gate Drive	19	No
Lakeland Mobile Home Community	Lake Mills, city	855 E Lake Street	84	No
Maple Grove Mobile Home Park	Jefferson, city	Main Street	130	No
Oak Ridge Mobile Community	Fort Atkinson, city	N3525 Trieloff Road	136	No
Pal Park	Palmyra, village	Beach Street	NK	No
Sandy Beach Mobile Home Park	Lake Mills, city	Sandy Beach Road	100	No
Spacious Acres Mobile Home Community	Concord, town	W1211 Sunnyside Drive	182	No
Topel's Mobile Home Park	Lake Mills, city	Topel Street	NK	No
Tremain Mobile Home Park	Sullivan, town	N2639 CTH Z	NK	No
Twin Oaks Park	Whitewater, city	CTH N	NK	No
Village Terrace	Johnson Creek, village	STH 26 & CTH Y	120	No
Woodland Beach Resort	Lake Mills, city	Woodland Drive	NK	No

Source: Various sources including field verification

Notes: NK = not known

## 7. PEOPLE IN CAMPGROUNDS

People staying in campgrounds are even more vulnerable to wind storm events than those living in mobile home and manufactured homes. Although a significant number of campers stay in hard-sided campers or RVs, many stay in soft-sided tents. During a wind storm or tornado, they have little protection from flying debris and falling branches and trees.

In 2012, there were 11 campgrounds in Jefferson County (Table 3-5). With the exception of two campgrounds, they were all privately operated. In addition to the two traditional campgrounds, the Wisconsin Department of Natural Resources operates a number of primitive backpack camping sites along the Ice Age National Scenic Trail. One of these is located in Jefferson County. Backpack sites are remote sites, separate from other forest facilities and require a hike of 1/2 mile to 10 miles depending on the parking location selected by the camper. A roofed trail shelter, fire ring, and pit toilet are provided at each site. These sites are not accessible by vehicle, but most have parking areas within a mile of the site. All equipment must be backpacked to the site and all refuse must be packed out.

**Table 3-5. Campgrounds: 2012**

Name	Jurisdiction	Address	Number of Sites
Bark River Campground & Resort	Sullivan, town	W2340 Hanson Road	308
Circle K Campground	Palmyra, town	W1316 Island Road	80
Hebron Campground	Hebron, town	N2316 Museum Road	48
Hoard & Curtis Scout Camp	Oakland, town	N4189 Island Lane	NK
Horsedriver's Campground (Wis. DNR)	Palmyra, town	W830 Little Prairie Road	55
Jellystone Park Camping Resort	Koshkonong, town	N551 Wishing Well Lane	569
Natures Villa Inc	Sullivan, town	N2899 Roger Road	NK
Pilgrims Campground	Koshkonong, town	W7271 County Road C	89
River Bend RV Resort	Milford, town	W6940 Rubidell Road	NK
Rome Riverside Campground	Sullivan, town	N3780 Water Street	118
Sandhill Station State Campground (Wis. DNR)	Lake Mills, town	N5595 Mud Lake Road	NK

Source: Various sources including field verification

Notes: NK = not known

## 8. RESIDENTS IN GROUP QUARTERS

While the majority of people in Jefferson County live in a single-family dwelling or in a multifamily building, a sizable segment of the population live in what are referred to as group quarters. If residents live in a controlled environment, the group quarters are referred to as institutional and those living in a group setting are referred to as noninstitutional population. In 2010, there were more than 500 institutionalized residents and more than 3,100 non-institutionalized residents (Table 3-6).

**Table 3-6. Residents in Group Quarters; Wisconsin, Jefferson County, and Selected Municipalities: 2010**

	Wisconsin	Jefferson County	Fort Atkinson	Jefferson	Lake Mills	Waterloo	Watertown [1]
Group quarters population	150,214	3,678	254	378	85	19	1,251
Institutionalized population	74,295	539	80	259	79	0	368
Correctional facilities for adults	38,102	149	0	149	0	0	0
Juvenile facilities	1,743	0	0	0	0	0	0
Nursing facilities/Skilled-nursing facilities	33,808	390	80	110	79	0	368
Other institutional facilities	642	0	0	0	0	0	0
Noninstitutionalized population	75,919	3,139	174	119	6	19	883
College/University student housing	56,773	2,338	0	0	0	0	502
Military quarters	132	0	0	0	0	0	0
Other noninstitutional facilities	19,014	801	174	119	6	19	381

Source: 2010 Census of Population and Housing, US Census Bureau

Notes:

1. Data is for the entire municipality

# CRITICAL FACILITIES

## 1. CHAPTER OVERVIEW

This chapter focuses on those critical facilities in Jefferson County that need to be evaluated in terms of natural hazards mitigation planning. For the purpose of this plan, critical facilities are categorized into the following classification scheme:

- ◆ Type I A facility that provides a public service, which if damaged would significantly impair a local governmental response
- ◆ Type II A facility that provides a public service, but which if damaged would not significantly impair a local governmental response
- ◆ Type III A facility that can cause greater damage to the surrounding area if damaged by a natural hazard
- ◆ Type IV A facility that primarily housing special populations such as the infirm, children, elderly, or people with development disabilities

In all, there were 615 critical facilities in the county (Table 4-1). There were 173 Type I facilities, 134 Type II, 65 Type III, and 243 Type IV facilities. Appendix E lists all of the critical facilities sorted by type and Appendix F provides a list sorted by jurisdiction.

As part of this project, the consultant created an Access™ data base to manage basic information for critical facilities identified in this plan. Each facility is assigned to one or more parcels using the county PIN number to facilitate use in the county’s geographic information system.

## 2. BRIDGES

The road network in the county consists of local, county, state, and federal roads. There are 51 locations where a federal, state, or county roadway crosses a waterbody. These range in size from a single culvert to a multi-span bridge. These locations have been identified because flooding may overtop the roadway or backup floodwaters. The locations are shown on Map 5. Bridges that cross another roadway or railroad tracks are not considered a critical facility from the perspective of natural hazards.



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5. Communication Towers
6. Telephone Facilities
7. Electric Facilities
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9. Petroleum Pipeline Facilities
10. Public Water Facilities
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14. Government Facilities
15. Schools
16. Special Care Facilities-Residential
17. Special Care Facilities-Nonresidential
18. Health Care Facilities
19. Facilities with Hazardous Materials
20. Vulnerable Housing
21. American Red Cross Shelters

***In 2012, there were 613 critical facilities in Jefferson County.***

**Table 4-1. Critical Facilities by Type: 2012**

Facility Type	Type I	Type II	Type III	Type IV
Facility with Hazardous Materials	-	-	37	-
Infrastructure				
Bridge	-	51	-	-
Dam (large & small)	-	-	24	-
Communication Tower	-	54	-	-
Electric Facility – Power Plant	4	-	-	-
Electric Facility – Substation	18	-	-	-
Natural Gas Facility	-	-	2	-
Natural Gas Pipeline	-	-	1	-
Petroleum Pipeline	-	-	1	-
Public-Use Airport	-	4	-	-
Telephone Facility	4	-	-	-
Utility Offices/Yard	6	-	-	-
Water Facility [1]	37	-	-	-
Wastewater Facility	11	-	-	-
Government Facility				
Community Center	-	5	-	-
Library	-	7	-	-
Municipal Garage	20	-	-	-
Municipal Office and Other	29	-	-	-
Post Office	-	10	-	-
Senior Center	-	3	-	-
Health Care Facility				
Health Care Clinic	15	-	-	-
Hospital	1	-	-	-
Public Safety Facility				
EMS Facility	5	-	-	-
Fire Station	11	-	-	-
National Guard Facility	2	-	-	-
Police Station	10	-	-	-
School				
K-12	-	-	-	50
Secondary	-	-	-	3
Special Care Facility - Residential				
Adult Family Home	-	-	-	69
Community Based Residential Facility	-	-	-	53
Nursing Home	-	-	-	5
Residential Care Apartment Complex	-	-	-	2
Special Care Facility - Nonresidential				
Adult Day Care	-	-	-	6
Group Day Care	-	-	-	28
Vulnerable Housing				
Mobile Home Park	-	-	-	16
Campground	-	-	-	11
<b>Total</b>	<b>173</b>	<b>134</b>	<b>65</b>	<b>243</b>

Notes: 1. Types of facilities included in this category include wells, towers, and treatment plants.

**Key Terms in This Chapter**

**Adult day care** – A place where adults receive care for less than 24 hours.

**Adult family home (AFH)** – A place where three or four adults who are not related to the operator reside and receive care, treatment, or services that are above the level of room and board and that may include up to seven hours per week of nursing care per resident.

**Community based residential facility (CBRF)** – A place where five or more adults reside who are not related to the operator, who do not require care above intermediate level nursing care, and who receive care, treatment, or services that are above the level of room and board, but includes no more than three hours of nursing care per week per resident.

**Group day care** – A place where a person for less than 24 hours a day provides care and supervision for 9 or more children who are not related to the provider.

**Nursing home** – A place where unrelated individuals live, who because of their mental or physical condition, are given 24-hour personal care and nursing care, but who do not require hospitalization.

**Large dam** – A dam that either (1) has a structural height of over 6 feet and impounds 50 acre-feet or more, or (2) has a height of 25 feet or more and impounds more than 15 acre-feet.

**Power plant** – A facility containing prime movers, electric generators, and auxiliary equipment for converting mechanical, chemical, and/or fission energy into electric energy.

**Public-use airport** – An airport open for public use without prior permission, and without restrictions within the physical capacities of available facilities. A public-use airport may or may not be publicly owned.

**Residential care apartment complex (RACA)** – A multi-family building where five or more adults reside in independent dwelling units and also receive not more than 28 hours per week of supportive services, personal assistance, and nursing assistance.

**Small dam** – A dam not classified as a large dam.

**Substation** – An auxiliary power station where electrical current is converted, as from DC to AC, or where voltage is stepped up or down.

### 3. DAMS

According to a statewide inventory maintained by the DNR, there are 24 regulated dams in the county. Over the years, seven dams have been decommissioned (Table 4-2). The Rock River and its tributaries has the highest number of dams followed by the Scuppernong River and its tributaries (Table 4-3). Map 5 shows the location of dams (large and small) within the county.

For the purposes of this plan, dams are classified as a Type III critical facility in that a dam failure would cause additional impacts primarily to downstream properties.

Dam in the City of Watertown



### 4. PUBLIC-USE AIRPORTS

There are four airports open for public use. The locations of the four public-use airports are shown on Map 6.

### 5. COMMUNICATION TOWERS

Map 7 shows the location of 54 communication towers located in the county.

### 6. TELEPHONE FACILITIES

Four telephone facilities are maintained by telephone service providers (Map 7). They are located in the cities of Jefferson, Lake Mills, and Watertown and the village of Palmyra.

### 7. ELECTRIC FACILITIES

There are four electric power plants in the county (Map 8). One is located southeast of the city of Watertown in the town of Watertown. The other is located in the city of Whitewater. Two hydroelectric power plants are located in the city of Watertown. Eighteen substations are located throughout the county primarily in or near urban areas (Map 8).

### 8. NATURAL GAS FACILITIES

Guardian Pipeline operates a high-pressure natural gas pipeline in the eastern part of the county (Map 8). There are two above-ground metering stations associated with the pipeline in the town of Ixonia.

### 9. PETROLEUM PIPELINE FACILITIES

Enbridge Energy operates a pipeline for transporting petroleum crude oil through the county. It is located to the south and west of the cities of Lake Mills and Fort Atkinson (Map 8). It carries oil from Superior to Chicago where it is processed. Gate valves are located along the pipeline in three locations. Because of concerns about security, the exact location of the pipeline and gate valves are not mapped in this plan.

Table 4-2. Abandoned Dams: 2012

Name	Jurisdiction
Ball Park Dam (2004)	Waterloo, city
Golden Dam	Concord, town
Hebron (1996)	Hebron, town
Hoopers Dam	Milford, town
Slabtown (1992)	Hebron, town
Oakland (1991)	Oakland, town
Upper Waterloo (1995)	Waterloo, city

Source: Wisconsin Department of Natural Resources

Table 4-3. Regulated Dams by Waterbody: 2012

Waterbody	Number
Ashipun River	0
Bark River	2
Crawfish River	0
Maunsha River	0
Rock River	7
Scuppernong River	4
Other	11
<b>Total</b>	<b>24</b>

Substation in the Town of Ixonia



## 10. PUBLIC WATER FACILITIES

Public water facilities inventoried for this plan include water wells, towers, reservoirs, and treatment plants. A total of 37 facilities have been identified and are shown on Map 9.

## 11. WASTEWATER FACILITIES

Wastewater treatment plants are located in each of the urban areas and in the more developed areas of the towns of Ixonia and Sullivan (Map 9).

## 12. FIRE AND POLICE FACILITIES

Within Jefferson County, there are 15 fire districts as depicted on Map 10. There are 10 police stations and 11 fire stations. Generally, EMS services are housed with a fire station or police station. In two instances though, EMS services are housed in a stand-alone building.

## 13. NATIONAL GUARD FACILITIES

There are two National Guard facilities. One is in the city of Fort Atkinson and the other is in the city of Watertown (Map 10).

## 14. GOVERNMENT FACILITIES

Government facilities included in the inventory of critical facilities include a wide array of facilities including community centers, public libraries, municipal garages, municipal offices, post offices, and senior centers. Map 11 shows the location of the 74 government facilities.

Communication Tower in the Town of Waterloo



Water Tower in the City of Jefferson



**Table 4-4. Government Facilities: 2012**

	Community Center	Public Library	Municipal Garage	Municipal Office and Other	Post Office	Senior Center
<b>Town</b>						
Aztalan	-	-	1	1	-	-
Cold Spring	-	-	-	1	-	-
Concord	1	-	2	1	-	-
Farmington	-	-	1	1	-	-
Hebron	-	-	-	1	-	-
Ixonia	-	-	2	1	1	-
Jefferson	-	-	-	1	1	-
Koshkonong	-	-	-	2	-	-
Lake Mills	-	-	-	-	-	-
Milford	-	-	1	1	-	-
Oakland	-	-	1	1	-	-
Palmyra	-	-	-	1	-	-
Sullivan	-	-	1	1	-	-
Sumner	-	-	-	1	-	-
Waterloo	-	-	-	-	-	-
Watertown	-	-	-	1	-	-
<b>Village</b>						
Cambridge [1]	-	-	-	-	-	-
Johnson Creek	1	1	2	1	1	-
Lac La Belle [1]	-	-	-	-	-	-
Palmyra	1	1	1	1	1	-
Sullivan	-	-	-	1	1	-
<b>City</b>						
Fort Atkinson	-	1	1	1	1	1
Jefferson	-	1	3	4	1	1
Lake Mills	1	1	1	2	1	-
Waterloo	1	1	2	1	1	-
Watertown [1]	-	1	1	2	1	1
Whitewater [1]	-	-	-	-	-	-
<b>Jefferson County</b>	<b>5</b>	<b>7</b>	<b>20</b>	<b>29</b>	<b>10</b>	<b>3</b>

Notes: 1. Municipality located in Jefferson County and another county

## 15. SCHOOLS

Within Jefferson County, there is a total of 50 schools serving kindergarten through high school. There are three colleges. Maranatha Baptist Bible College is located in the city of Watertown, Madison Area Technical College–Fort Atkinson is in the city of Fort Atkinson, and UW–Whitewater is in Whitewater. School locations are shown on Map 12.

Fort Atkinson High School



## 16. SPECIAL CARE FACILITIES - RESIDENTIAL

The term special care facility is a broad term for a type of housing arrangement where residents receive care or supervision from trained personnel. Special care facilities include nursing homes, residential care apartment complexes (RCACs), community based residential facilities (CBRFs), and adult family homes (AFHs) (Map 13).

There are five nursing homes in the county with a capacity of 299 beds (Table 4-5).

Countryside Nursing Home in City of Jefferson



In a RACA, people live in independent dwelling units complete with a kitchen, a bathroom, and sleeping and living areas. The management team provides supportive services such as general housekeeping and transportation to access community services and recreational activities. Personal services are also provided and may include help with daily activities such as dressing, eating, bathing, and grooming. Finally nursing services are available to help with health monitoring, medication administration, and medication management. There are two RACAs in Jefferson County. One is in the city of Watertown and the other in the city of Waterloo.

CBRFs and AFHs are similar in terms of the level of care provided. One significant difference between them is the number of residents served in the facility. An AFH can serve up to four adults. A CBRF serves five or more adults. There are 69 AFHs in the county and 41 CBRFs (Table 4-5).

## 17. SPECIAL CARE FACILITIES – NONRESIDENTIAL

Nonresidential special care facilities include group day care centers and adult day care centers (Map 14). Group day care centers provide child care for nine or more children. Adult day care centers provide care to older adults who may live at home but need care during the day because the spouse or other primary care giver is not able to provide care. There are 28 group day care centers located throughout the county primarily in more urban areas and 6 adult day care center (Table 4-5).

**Table 4-5. Special Care Facilities: 2012**

	Nursing Home	Residential Care Apartment Complex (RACA)	Community Based Residential Facility (CBRF)	Adult Family Home (AFH)	Group Day Care	Adult Day Care
<b>Town</b>						
Aztalan	-	-	-	-	-	-
Cold Spring	-	-	1	2	-	-
Concord	-	-	-	2	-	-
Farmington	-	-	1	-	-	-
Hebron	-	-	2	0	1	1
Ixonia	-	-	1	2	-	-
Jefferson	-	-	2	3	-	1
Koshkonong	-	-	2	7	-	-
Lake Mills	-	-	2	-	-	-
Milford	-	-	-	-	-	-
Oakland	-	-	1	1	-	-
Palmyra	-	-	-	-	1	-
Sullivan	-	-	-	-	-	-
Sumner	-	-	-	1	-	-
Waterloo	-	-	-	-	-	-
Watertown	-	-	1	-	-	-
<b>Village</b>						
Cambridge [1]	-	-	-	-	-	-
Johnson Creek	-	-	3	2	-	-
Lac La Belle [1]	-	-	-	-	-	--
Palmyra	-	-	-	-	1	-
Sullivan	-	-	-	-	1	-
<b>City</b>						
Fort Atkinson	2	-	15	34	7	2
Jefferson	1	-	15	8	6	1
Lake Mills	1	-	1	1	3	-
Waterloo	-	1	2	-	2	-
Watertown [1]	1	1	4	6	6	1
Whitewater [1]	-	-	-	-	-	-
<b>Jefferson County</b>	<b>5</b>	<b>2</b>	<b>53</b>	<b>69</b>	<b>28</b>	<b>6</b>

Source: Wisconsin Department of Health and Family Services

Notes: 1. Municipality located in Jefferson County and another county

## 18. HEALTH CARE FACILITIES

For the purpose of this plan, health care facilities are divided into two types: hospitals and health care centers. Health care centers provide subacute medical and include ambulatory surgery centers and health care clinics operated by a number of medical practitioners.

Fort Memorial Hospital in the city of Fort Atkinson is the only hospital in Jefferson County. Watertown Memorial Hospital is in the city of Watertown, but is located in Dodge County. It serves an area with 60,000 residents. In Jefferson County, it operates health care clinics in the city of Lake Mills and village of Johnson Creek.

Fort Memorial Hospital



A total of 15 health care centers were identified as part of this plan. Map 15 shows the location of health care facilities along with the service areas for the 12 emergency medical service providers serving Jefferson County.

## 19. FACILITIES WITH HAZARDOUS MATERIALS

There are 37 locations in the county where hazardous materials are stored, used, or manufactured. These are shown on Map 16. For the purposes of this plan, a facility with hazardous materials is classified as a Type III critical facility because there could be damage to surrounding properties if a natural hazard damaged a facility with hazardous materials.

## 20. VULNERABLE HOUSING

Vulnerable housing, including campgrounds and mobile home parks, is described in Chapter 3.

## 21. AMERICAN RED CROSS SHELTERS

Jefferson County is served by the Greater Milwaukee Chapter, South Central Wisconsin Chapter, and Badger Chapter. Table 4-6 lists designated shelters available during an emergency. With the exception of the Jefferson County Fair Park, all are considered critical facilities.

Table 4-6. American Red Cross Shelters: 2012

Facility Name	Address	Jurisdiction	Sleeping Capacity	Meal Preparation Capacity	Meal Serving Capacity	Back-up Generator
Ixonia Elementary School	N8425 North Street	Ixonia, town	70	0	160	No
Jefferson County Fair Park	503 North Jackson	Jefferson, city	120	350	300	No
Johnson Creek Elementary School	111 South Street	Johnson Creek, village	80	280	80	No
Johnson Creek High School	111 South Street	Johnson Creek, village	100	500	80	No
St. John's Lutheran School	413 E Madison Street	Waterloo, city	80	400	400	No
Waterloo Middle/High School	865 N Monroe Street	Waterloo, city	150	600	600	Yes
Watertown High School	825 Endeavor Drive	Watertown, city	480	500	680	Yes

Source: Jefferson County Emergency Management

# NATURAL HAZARDS ASSESSMENT

## 1. CHAPTER OVERVIEW

This chapter evaluates the natural hazards that have or could occur in the county. Initially, 15 hazards were identified. They were prioritized and two of the hazards were dropped from future consideration. The remaining 13 hazards are described in detail. After describing the nature of the hazard, the frequency of occurrence is documented along with its effect on critical facilities, various population groups, and economic sectors. Estimates of economic loss are included when there is enough empirical data to do so.



## 2. HAZARD IDENTIFICATION

As part of an initial screening process, the working group used the methodology developed by Wisconsin Emergency Management<sup>1</sup> to evaluate natural hazards in Jefferson County to determine which warrant the most attention. For each hazard, the members used a group consensus process to assign a numeric value to the 10 factors listed in Table 5-1.

**Table 5-1. Natural Hazard Assessment Criteria**

Factor	Description
Historical Hazard Frequency	Frequency of past occurrences
Anticipated Hazard Probability	Probability of the hazard occurring again
Historical Health and Public Safety	Degree of past hazard events causing injuries, sickness, and/or deaths
Residential Damage	Degree of past hazard events causing damages to homes
Business Damage	Degree of past hazard events causing damages to businesses
Public Costs	Amount of local, state, and federal funds expended on past hazard recovery activities
Magnitude of Population at Risk	Amount of the area's population still vulnerable to injury, sickness, and/or death
Magnitude of Homes at Risk	Amount of homes still vulnerable to damage
Magnitude of Businesses at Risk	Amount of businesses still vulnerable to damage or interruption of business trade
Magnitude of Public Infrastructure at Risk	Amount of infrastructure that is susceptible to damages

Source: *Resource Guide to All Hazards Mitigation Planning In Wisconsin*, 2003. Wisconsin Emergency Management

Table 5-2 shows the results of that exercise. The three highest ranked natural hazards are riverine flooding, tornadoes, and thunderstorms. Given the distance to a known fault line, earthquakes were judged to be of little concern. In addition, given the topography and soils in the county, land failures, including subsidence and mass movement, were judged to be of little concern. Both of these were removed from further consideration in this plan.

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12. Winter Storms
13. Extreme Temperature
14. Drought
15. Wildland Fire
16. Summary of Risk by Jurisdiction
17. Summary of Damage Estimates

<sup>1</sup> *Resource Guide to All Hazards Mitigation Planning In Wisconsin*, 2003. Wisconsin Emergency Management

**Table 5-2. Comparative Analysis of Natural Hazards; Jefferson County: 2012**

	1	2	3	4	5	6	7	8	9	10	11
			Historical				Magnitude	Magnitude	Magnitude	Magnitude	
	Historical	Anticipated	Health and	Residential	Business	Public	Of	Of	Of	Of Public	
	Hazard	Hazard	Public	Damage	Damage	Costs	Population	Homes	Businesses	Infrastructure	
	Frequency	Probability	Safety				At Risk	At Risk	At Risk	AT RISK	RATING
Natural Hazard	(1,2,3)	(1,2,3)	(1,2,3)	(1,2,3)	(1,2,3)	(1,2,3)	(1,2,3)	(1,2,3)	(1,2,3)	(1,2,3)	Total
Flooding – riverine	3	3	3	3	2	3	1	2	2	2	24
Tornado / high winds	2	2	2	2	2	2	2	2	2	2	20
Storms - thunderstorm	3	3	1	1	2	2	1	2	2	1	18
Storms – snow **	2	2	1	1	1	2	1	1	2	1	14
Drought	1	1	1	1	2	1	1	1	2	1	12
Wildland fire	1	1	1	1	1	2	1	1	1	2	12
Extreme temperature **	1	1	1	1	1	1	2	2	1	1	12
Ice shoves	2	1	1	1	1	1	1	1	1	1	11
Storms – hail **	1	1	1	1	2	1	1	1	1	1	11
Dam failure	1	1	1	1	1	1	1	1	1	1	10
Flooding – storm water	1	1	1	1	1	1	1	1	1	1	10
Land failure	1	1	1	1	1	1	1	1	1	1	10
Earthquake**	1	1	1	1	1	1	1	1	1	1	10
Fog	1	1	1	1	1	1	1	1	1	1	10

Notes: This matrix is based on a qualitative assessment and is intended to identify those hazards posing the greatest concern.

A low, medium, or high numerical rating of 1, 2, or 3, respectively, is assigned to each criterion and then the ratings for each hazard are totaled.

\*\* The ratings for these hazards are based on occurrences in the surrounding subregion.

Column 1 refers to the frequency of past occurrences.

Column 2 refers to the probability of the hazard occurring again.

Column 3 refers to the degree of past hazard events causing injuries, sickness, and/or deaths.

Column 4 refers to the degree of past hazard events causing damages to homes.

Column 5 refers to the degree of past hazard events causing damages to businesses.

Column 6 refers to the amount of local, state, and federal funds expended on past hazard recovery activities.

Column 7 refers to the amount of the area's population still vulnerable to injury, sickness, and/or death.

Column 8 refers to the amount of homes still vulnerable to damage.

Column 9 refers to the amount of businesses still vulnerable to damage or interruption of business trade.

Column 10 refers to the amount of infrastructure that is susceptible to damages.

Column 11 is the raw score for the hazard.

In reviewing these natural hazards, it became evident that they are quite variable (Table 5-3). Some of the hazards are characteristically localized occurrences, while others could potentially cover all of Jefferson County and the surrounding region. Further, some hazards occur with little advance warning and others can be forecasted with some degree of accuracy. Some hazards have the potential to occur often, while others occur infrequently.

**Table 5-3. Nature of Natural Hazards; Jefferson County**

<b>Natural Hazard</b>	<b>Extent</b>	<b>Amount of Advance Warning</b>	<b>Recurrence Interval</b>
Dam Failure	Localized	None to weeks	[1]
Flooding – Riverine	Localized	One day	100 [2]
Flooding – Stormwater	Localized	One day	100 [2]
Ice Shoves	Localized	One day	5
Fog	Localized to countywide	One day	0.5
Tornado/High Wind	Localized	Hours	1
Hail Storms	Localized	Hours	1
Thunderstorm	Localized	One day	0.5
Snow Storms	Countywide	Several days	1
Extreme Temperature - heat	Countywide	Several days	10
Extreme Temperature – cold	Countywide	Several days	3
Drought - short-lived	Countywide	Several months	10
Drought - long-lived	Countywide	Year	75
Wildland fire - 25 acres or more	Localized	None	100
Wildland fire - less than 25 acres	Localized	None	10

Notes: 1. It is not possible to define a recurrence interval for this type of hazard  
2. Based on a 100-year flood

Table 5-4 lists each of the hazards and identifies whether they will have an impact on the critical facilities identified in this plan, noncritical buildings and structures, special populations, the general population, and broadly defined economic sectors.

**Table 5-4. General Effects of Natural Hazards on Facilities, Population Groups, and Economic Sectors; Jefferson County: 2012**

Critical Facility	Dam Failure	Flooding - Riverine	Flooding - Stormwater	Ice Shoves	Fog	Tornado/ High Wind	Hail Storms	Thunderstorm	Snow Storms	Extreme Temperature	Drought	Wildland Fire
Facility with Hazardous Materials	-	D	-	-	-	D	-	-	-	-	-	-
Infrastructure												
Bridge	D	D	-	-	-	-	-	-	-	-	-	-
Dam	D	D	-	-	-	-	-	-	-	-	-	-
Communication Tower	-	-	-	-	-	D	-	-	-	-	-	-
Electric Facility – Power Plant	-	-	-	-	-	D	-	-	-	-	-	-
Electric Facility – Substation	-	-	-	-	-	D	-	-	-	-	-	-
Natural Gas Facility	-	-	-	-	-	D	-	-	-	-	-	-
Petroleum Pipeline	-	-	-	-	-	-	-	-	-	-	-	-
Public-Use Airport	-	-	-	-	I	D	I	I	I	-	-	-
Telephone Facility	-	-	-	-	-	D	-	-	-	-	-	-
Utility Offices/Yard	-	-	-	-	-	D	-	-	-	-	-	-
Water Facility [1]	-	-	-	-	-	D	-	-	-	-	I	-
Wastewater Facility	-	-	-	-	-	D	-	-	-	-	-	-
Government Facility												
Community Center	-	-	-	-	-	D	D	-	-	-	-	-
Library	-	-	-	-	-	D	D	-	-	-	-	-
Municipal Garage	-	-	-	-	-	D	D	-	-	-	-	-
Municipal Office and Other	-	-	-	-	-	D	D	-	-	-	-	-
Post Office	-	-	-	-	-	D	D	-	-	-	-	-
Senior Center	-	-	-	-	-	D	D	-	-	-	-	-
Health Care Facility												
Health Care Clinic	-	-	-	-	-	D	D	-	-	-	-	-
Hospital	-	-	-	-	-	D	D	-	-	-	-	-
Public Safety Facility												
EMS Facility	-	-	-	-	-	D	D	-	-	-	-	-
Fire Station	-	-	-	-	-	D	D	-	-	-	-	-
National Guard Facility	-	-	-	-	-	D	D	-	-	-	-	-
Police Station	-	-	-	-	-	D	D	-	-	-	-	-
School												
K-12	-	-	-	-	-	D	D	-	-	-	-	-
Secondary	-	-	-	-	-	D	D	-	-	-	-	-
Special Care Facility - Residential												
Adult Family Home	-	-	-	-	-	D	D	-	-	-	-	-
Community Based Residential Facility	-	-	-	-	-	D	D	-	-	-	-	-
Nursing Home	-	-	-	-	-	D	D	-	-	-	-	-
Residential Care Apartment Complex	-	-	-	-	-	D	D	-	-	-	-	-
Special Care Facility - Nonresidential												
Adult Day Care	-	-	-	-	-	D	D	-	-	-	-	-
Group Day Care	-	-	-	-	-	D	D	-	-	-	-	-
Vulnerable Housing												
Mobile Home Park	-	-	-	-	-	D	D	-	-	-	-	-
Campground	-	-	-	-	-	D	D	-	-	-	-	-
<b>Noncritical Buildings/Structures</b>	-	-	-	-	-	D	D	-	-	-	-	-
<b>Population Groups</b>												
General Public	-	-	-	-	-	I	-	-	-	I	I	-
Elderly and People with Disabilities	-	-	-	-	-	-	-	-	-	I	-	-
Homeless	-	-	-	-	-	-	-	D	D	D	-	-
<b>Economic Sector</b>												
Agriculture	-	D	D	-	-	-	D	I	-	I	D	-
Commercial	-	-	-	-	-	-	-	-	-	-	I	-
Industrial	-	-	-	-	-	-	-	-	-	-	-	-
Transportation	-	-	-	I	-	-	-	-	-	-	-	-

Notes: 1. Types of facilities included in this category include wells, towers, and treatment plants

Key: - No or minimal effect; I – Indirect Effect; D – Direct Effect

### 3. HISTORY OF WEATHER-RELATED EVENTS

Table 5-5 presents a summary of documented weather-related events that have affected Jefferson County since 1950 (See Appendix G for a list of all events). Strong winds associated with a thunderstorm occur with the highest frequency—on average 3.6 times a year. At about 1.8 times a year, hail is the second most common weather-related event. Winter storms are the third most common weather-related event. Flooding has a recurrence interval of 0.5 per year.

Out of all of the weather-related events, extreme cold has caused the highest number of deaths and injuries. Lightning caused nine injuries. Wind caused three injuries. Tornadoes did not cause any deaths or injuries.

Flooding over the years has caused by far the most damage to property and crops (\$159.47 million). At \$10.24 million, tornadoes caused the second highest amount of economic impact.

**Table 5-5. Summary of Weather-Related Events Affecting Jefferson County: 1950–2011**

Type of Event	Number Of Events	Direct Deaths	Direct Injuries	Property Damage (\$ millions)	Crop Damage (\$ millions)
Drought	12	0	0	0	0.30
Excessive Heat	22	0	0	0	0
Extreme Cold	19	2	10	0.20	0
Flood	31	0	1	113.15	46.32
Fog	61	0	0	0.01	0
Funnel Cloud	15	0	0	0	0
Hail	113	0	0	4.82	0.10
Heavy Rain	9	0	0	0.03	0
High Wind	10	0	2	5.82	0.20
Lightning	25	1	9	0.83	0
Strong Wind	27	0	0	0.77	0
Thunderstorm Winds	224	0	1	8.03	0.30
Tornado	34	0	0	10.22	0.02
Winter Storms	95	0	0	0.08	0
<b>Total</b>	<b>697</b>	<b>3</b>	<b>23</b>	<b>143.96</b>	<b>47.24</b>

Source: National Climatic Data Center database initially accessed on February 21, 2007. <http://www4.ncdc.noaa.gov/cgi-win/wwcqi.dll?wwevent-storms> Data updated on May 30, 2012.

### 4. PRESIDENTIAL DECLARATIONS

Since 1965, there have been 38 major disaster declarations issued for Wisconsin, 6 emergency declarations, and one fire management assistance declaration. Jefferson County was included in seven disaster declarations and three emergency declarations.

**Major Disaster Declaration** A major disaster declaration was issued for Jefferson County in 1973, 1976, 1991, 1993, 2004, 2007, 2008 (Table 5-6).

Most recently, Jefferson County was one of 30 counties under a disaster declaration (FEMA-1768-DR) for severe storms, tornadoes, and flooding. In that instance, both individual assistance and public assistance grants were made to help local communities respond to severe storms and flooding. Disaster declarations were issued in 2004 and 2007 for severe storms and flooding. In 1993, Jefferson County received \$1,453,507 in state and federal aid. However, the total flood damage suffered is believed to exceed several million dollars.

**Emergency Declaration** There have been three emergency declarations. In 2008, Jefferson County was one of 11 counties affected by a significant snow event. In 2005, an emergency declaration was issued for all 72 counties in the state as part of the nationwide response to Hurricane Katrina. In 1976, Jefferson County was one of 66 counties covered by an emergency declaration for drought.

**Fire Management Assistance Declaration** No fire management assistance declarations have been issued for Jefferson County (and it is unlikely that one would be issued given the nature of that category of declaration).

**Table 5-6. Presidential Disaster Declarations, Jefferson County: 1965–2012**

Major Disaster	Year	Description	Number of Counties	
			By Type of Assistance	
			Public	Individual
FEMA-376-DR	1973	Severe storms, flooding	35	35
FEMA-496-DR	1976	Severe storms, icing, wind, flooding	22	22
FEMA-912-DR	1991	Hail, severe storms	5	0
FEMA-994-DR	1993	Flooding, severe storm, tornado	40	47
FEMA-1526-DR	2004	Severe storms and flooding	12	12
FEMA-1719-DR	2007	Severe storms and flooding	-	14
FEMA-1768-DR	2008	Severe storms, tornadoes, and flooding	30	30
<b>Emergency</b>				
FEMA-3014-EM	1976	Drought	66	66
FEMA-3249-EM	2005	Hurricane Katrina evacuation	72	0
FEMA-3285-EM	2008	Snow	11	0
<b>Fire Management Assistance</b>				
None	-	-	-	-

Source: Federal Emergency Management Agency ([http://www.fema.gov/news/disasters\\_state.feam?id=55](http://www.fema.gov/news/disasters_state.feam?id=55)) and Wisconsin Emergency Management

**Denied Applications for Presidential Disaster Declaration** On three occasions, the county’s application for a presidential disaster declaration has been denied (Table 5-7).

**Table 5-7. Denied Applications for Presidential Disaster Declarations, Jefferson County: 1965–2012**

Year	Number of	
	Counties Included	Description
1977	6	Tornado
1996	15	Flooding
1998	16	High winds, severe storms
2000	11	Snow

Source: Wisconsin Emergency Management and Jefferson County Emergency Management

## 5. DAM FAILURE

### PROFILE

A dam failure involves the uncontrolled release of impounded water when the structure fails. A dam can fail because of excessive rainfall or melting snow, poor construction or maintenance, flood damage, earthquake activity, weakening caused by burrowing animals, vegetation, surface erosion, vandalism, or a combination of factors. When a dam does fail, the impounded water flows unimpeded and, depending on what development is located downstream, can potentially cause significant property damage and loss of life.

### HISTORY OF PAST OCCURRENCES

According to the Wisconsin Department of Natural Resources, there are about 3,700 dams in the state. Between 1990 and 1995, 75 dam failures were documented, many of which resulting from the flooding that occurred statewide in 1993. In Jefferson County, there are no documented dam failures.

### VULNERABILITY ASSESSMENT

There are 26 dams in the county. According to the Department of Natural Resources (DNR), 14 are classified as small and 12 as large. A failure of a small dam would likely not cause damage. Given the amount of water impounded behind a large dam, dam failure is a concern in varying degrees.

Dams are also classified based on the threat to downstream property if a dam failed. A dam rated as a high hazard indicates that a failure would most probably result in the loss of life. A significant hazard indicates that a dam failure could result in appreciable property damage. A low hazard rating is assigned to dams where a dam failure would result in only minimal property damage and where loss of life is unlikely. Of the 12 large dams, 2 are classified as significant and 3 are high (Table 5-8). The remaining dams are either unclassified or classified as low.

Section NR 335.07 of the Wisconsin Administrative Code mandates that owners of a large dam or a dam that poses a threat to life or property must prepare an emergency action plan (EAP). An EAP is a document that identifies potential emergency conditions at a dam and procedures to be followed to eliminate the loss of life and minimize downstream property damage. When drafting an EAP, the dam operator must consult with the local units of government that lie downstream of the dam as well as the county emergency management department. According to the DNR inventory, an EAP has not been prepared for 10 of the 12 large dams (Table 4-3).

Based on historical data and the lack of multiple large, high-risk dams in the county, it is unlikely that a catastrophic dam failure, resulting in the loss of life and property, will occur in Jefferson County in the future.

**Table 5-8. Large Dams: 2012**

Large Dams	Jurisdiction	Ownership	Stream Name	Date of Last Inspection	Hazard Rating Code [1]	Status of Emergency Action Plan
Blue Springs Lake	Palmyra, town	Lake District	Spring Creek	Nov 2001	Significant	Not done
Carlin Dam	Palmyra, town	Private	Scuppernong River	June 1980	Low	Not done
Cushman Dam	Hebron, town	Private	Bark River	March 2003	Low	Not done
Jefferson Dam	Jefferson, city	Private	Rock River	Dec 1989	Low	Not done
Jefferson Marsh WRP – North	Hebron, town	DNR	Unknown	Unknown	Unknown	Not done
Lake Mills Dam	Lake Mills, city	Private	Rock Creek	April 1986	High	Done, date unknown
Princes Point WLA Dam No. 1	Hebron, town	DNR	Trib. of Scuppernong River	May 1994	Low	Not done
Princes Point WLA Dam No. 2	Hebron, town	DNR	Trib. of Scuppernong River	May 1994	Low	Not done
Rome Dam	Sullivan, town	Municipality	Bark River	October 1996	High	Not done
Spring Lake Dam	Palmyra, village	Municipality	Scuppernong River	Sept 2007	Significant	Not done
Watertown Dam, Lower	Watertown, city	Private	Rock River	Feb 1995	High	June 2006
Watertown Dam, Upper	Watertown, city	Private	Rock River	July 2001	Low	June 2006

Source: Wisconsin Department of Natural Resources  
 Key: 1. High - loss of life likely should dam fail; Significant - significant property damage is likely; Low - neither loss of life or property will occur

**Effects on Facilities** – Because a dam break analysis has not been conducted on any of the dams in Jefferson County, it is not possible to determine what effects would occur. It is believed that much of the released waters would be contained within the 100-year floodplain below the dam failure. Except for wastewater facilities, there are no critical facilities in the 100-year floodplain.

**Effects on Population Groups** – A dam failure would not disproportionately affect the elderly, people with disabilities, or the homeless.

**Effects on Economic Sectors** – Although a dam failure could damage individual structures, it likely would not affect the overall economy of the area or any particular economic sector.

## 6. FLOODING

### PROFILE

Riverine flooding occurs when a stream, lake, or other body of water overflows its banks onto normally dry land. Stormwater flooding occurs when stormwater pools in normally dry depressions in the land. Flooding can develop slowly over a period of days, but can also occur within a few hours in some watersheds with narrow stream channels.

### HISTORY OF PAST OCCURRENCES

Jefferson County has experienced several major floods in the last century. Documentation of historic flooding is available from the following sources:

- ◆ presidential disaster declarations

**Aerial view of flooding in 2004**



- ◆ insurance claim records from the Federal Flood Insurance Program
- ◆ records from U. S. Geological Survey stream gage stations
- ◆ damage assessment for 2004 flood
- ◆ anecdotal information from local community leaders

**Presidential Disaster Declarations** – Since 1965, there have been six presidential declarations in Jefferson County, five of which were flood related. Presidential disaster declarations were issued in Jefferson County for flooding in 1973, 1976, 1993, and 2004. On July 2, 1993 a declaration was issued for the June 1993 floods. As part of the declaration, federal and state grant dollars, \$1,235,097.96 and \$218,409.11, respectively, were awarded to local units of government to assist with the flood recovery through the Disaster Recover Aids Program.

**Historical National Flood Insurance Program Claims** In 1968, Congress adopted the National Flood Insurance Act, which among other things created the National Flood Insurance Program (NFIP). This Federal program allows property owners to purchase flood insurance if their community participates in the program. In fact, certain homeowners must purchase flood insurance when their property is located in the regulatory floodplain. All county residents are eligible to purchase flood insurance because all of the jurisdictions participate in the program.

Paid claims for flood damage under the NFIP are good indicators of the number of properties that are located in floodplains. From 1978 through 2006, 221 insurance claims were paid in Jefferson County for a total of \$1.37 million for building and content loss. Table 5-9 summarizes the number and type of claims made by year.

**Table 5-9. National Flood Insurance Program Paid Claims by Year; Jefferson County: 1978 through May 2006**

Year	Number of Claims	Building Loss	Content Loss	Total Loss
1978	1	\$861	\$0	\$861
1979	91	\$378,483	\$95,429	\$473,912
1982	9	\$7,078	\$2,491	\$9,578
1985	1	\$721	\$0	\$721
1986	28	\$43,823	\$1,603	\$45,426
1993	52	\$485,473	\$96,755	\$582,228
1996	8	\$23,392	\$2,585	\$25,977
2000	6	\$38,393	\$4,647	\$43,040
2004	25	181,546	\$6,987	\$188,533
<b>Total</b>	<b>221</b>	<b>\$1,159,770.00</b>	<b>\$210,497.00</b>	<b>\$1,370,276</b>

Source: National Flood Insurance Program, Federal Emergency Management Agency

The majority of claims were filed for the floods of 1979, 1986, 1993, and 2004. Building damage accounted for more than 84 percent of the total loss. It should be noted that the figures for content claims may not represent the true level of damage to building contents, because it is an optional policy and many people elect to not take content loss as part of their policy.

Table 5-10 summarizes the number and type of claims made by jurisdiction. In unincorporated Jefferson County, payments to policyholders exceeded \$1.3 million. Policyholders in Fort Atkinson received more than \$75,000.

**Table 5-10. National Flood Insurance Program Claims by Jurisdiction; 1978 through November 2006**

Jurisdiction	Total Losses [2]	Closed Losses [3]	Open Losses [4]	Unpaid Losses [5]	Total Payments [6]
Cambridge, village [1]	1	0	0	1	0
Fort Atkinson, city	22	19	0	3	\$76,588
Jefferson, city	9	6	0	3	\$15,334
Jefferson County, unincorporated	255	209	0	46	\$1,305,406
Johnson Creek, village	0	0	0	0	0
Lac La Belle, village [1]	1	0	0	1	0
Lake Mills, city	0	0	0	0	0
Palmyra, village	0	0	0	0	0
Sullivan, village	1	1	0	0	\$215
Waterloo, city	0	0	0	0	0
Watertown, city [1]	12	10	0	2	\$31,875
Whitewater, city [1]	0	0	0	0	0
<b>Total</b>	<b>301</b>	<b>245</b>	<b>0</b>	<b>56</b>	<b>\$1,429,418</b>

Source: National Flood Insurance Program, Federal Emergency Management Agency ([http://bsa.nfipstat.com/reports/1040\\_200611.htm](http://bsa.nfipstat.com/reports/1040_200611.htm))

- Notes:
1. Municipality located in Jefferson County and another county
  2. All losses submitted regardless of status
  3. Losses that have been paid
  4. Losses that have not been paid in full
  5. Losses that have been closed without payment
  6. Total amount paid on losses

***Without appropriate mitigation measures, the damage caused by a 100-year flood would dramatically exceed the damage caused by past floods.***

**Repetitive Loss Properties** A property for which two or more National Flood Insurance Program losses of at least \$1,000 each have been paid within any 10-year rolling period since 1978 is referred to as a repetitive loss property. According to the National Flood Insurance Program, there are 26 repetitive loss properties in Jefferson County. One is assumed to be a condominium and the remaining 25 are single-family structures. It is believed this number is not correct and efforts will be made to verify the actual number of repetitive loss properties in the county.

Requirements of the program stipulate that individual policy information may not be disclosed, including addresses of such properties.

**Records from U. S. Geological Survey Stream Gage Stations** – A summary of the annual mean stream flow, highest daily mean, instantaneous peak, percent of exceedance, and predicted flood flows for each gaging station is presented in Table 5-11. According to the flood frequencies estimated by the US Geological Service (Report 91-4128), the 1959 flood may have exceeded a 100-year event on the Crawfish River at Milford. The Rock River in 1979 was approximately a 50-year event at Watertown and Indianford. The largest event on the Bark River at Rome was between a 10- and 50-year flood. While Jefferson County has experienced several major floods—based on stream gage records—only one has been a 100-year flood event, and only on one river. Based on the available information, if a 100-year flood would occur in the county, potential damages could dramatically exceed those of past floods without appropriate mitigation measures.

**Table 5-11. Measured and Predicted Stream Flows at USGS Stream Gaging Stations, Jefferson County and Vicinity**

	Rock River at Watertown	Crawfish River at Milford	Bark River at Rome	Rock River at Indianford	Rock River at Fort Atkinson
Gage Number	0542550	05426000	05426250	05427570	05427085
Time Period	1931-2005	1931-2005	1972-2005	1975-2005	1999-2005
Drainage Area (square miles)	969	762	122	2,630	2,240
Annual Mean Flow (cfs)	503	418	88.9	1,807	1,479
10% Exceeds (cfs)	1,330	1,090	158	3,820	3,180
50% Exceeds (cfs)	262	194	76	1,320	960
90% Exceeds (cfs)	39	39	32	369	306
Highest Daily Mean (cfs) (year)	1,186 (1993)	6,130 (1959)	476 (1993)	11,700 (1979)	2,294 (2004)
Instantaneous Peak Flow (cfs) (year)	5,080 (1979)	6,140 (1959)	467 (1993)	11,900 (1979)	-
Predicted 10-Year Flow (cfs)	4,100 <sup>1</sup> 3,620 <sup>2</sup>	4,200 <sup>1</sup> 3,970 <sup>2</sup>	425 <sup>2</sup>	9,170 <sup>2</sup>	-
Predicted 50-Year Flow (cfs)	6,100 <sup>1</sup> 5,010 <sup>2</sup>	5,700 <sup>1</sup> 5,230 <sup>2</sup>	545 <sup>2</sup>	12,200 <sup>2</sup>	-
Predicted 100-Year Flow (cfs)	7,100 <sup>1</sup> 5,590 <sup>2</sup>	9,500 <sup>1</sup> 5,720 <sup>2</sup>	590 <sup>2</sup>	13,400 <sup>2</sup>	-
Predicted 500-Year Flow (cfs)	10,000 <sup>1</sup> 6,930 <sup>2</sup>	10,000 <sup>1</sup> 6,730 <sup>2</sup>	695 <sup>2</sup>	16,300 <sup>2</sup>	-

Source: U. S. Geological Survey Water Resources of Wisconsin Water Year 1999 (WDR-WI-05-1)

<sup>1</sup> Source: Flood Insurance Study for Jefferson County, FEMA 2005

<sup>2</sup> Source: USGS Water Resource Report 91-4128 "Flood Frequency Characteristics of Wisconsin Streams"

**2004 Flood Damage Assessment** – During the flooding of 2004, staff with Jefferson County completed a damage report following FEMA guidelines using the Residential Substantial Damage Estimator (RSDE). Table 5-12 shows the results. Of the 40 residential structures with some damage, 7 experienced damage in excess of 50 percent or substantial damage.

Seven in 10 of the damaged residential structures are located in the town of Sumner. The town of Koshkonong had the second highest number of damaged structures.

**Table 5-12. Flood Damages from the 2004 Flood; Unincorporated Jefferson County**

Jurisdiction	Percent Damage
Sumner, Town	1167.2
Sumner, Town	1042.0
Watertown, Town	240.9
Ixonia, Town	106.3
Sumner, Town	101.7
Sumner, Town	71.4
Sumner, Town	53.7
Watertown, Town	47.2
Koshkonong, Town	46.6
Sumner, Town	46.1
Sumner, Town	45.2
Sumner, Town	44.9

Continued

**Major Floods** – Severe flooding has occurred in 1929, 1959, 1973, 1976, 1979, 1982, 1986, 1993, 1994, 1996, 1997, 2000, 2004, 2006, 2007, 2008, and 2010. The worst recorded flood was in 1929. At the Fort Atkinson stream gage, the peak level in 1929 was measured at 784.3, which is approximately 6 feet above flood stage. During this time, there were fewer residential properties in the unincorporated sections along the river. The majority of the structures on Blackhawk Island and the North Shore were constructed in the late 1940s and early 1950s. In 1959 and 1979, the flood waters were approximately 4 to 5 feet above the river bank and all residents along the river were evacuated.

Typically the Rock River experiences high water during the spring as a result of winter melt. In 1986, the highest level recorded was in October, measuring about one foot below the 1959 spring flood. Some degree of high water is evident nearly every year along the Rock River at Blackhawk Island.

**1993 Flood** – In 1993, floodwater was within 10 inches of the all-time watermark set in 1929 at Blackhawk Island. All of the residents were evacuated for seven or more weeks beginning in the spring. Residents were encouraged to drink bottled water because many of the private wells were submerged and a number of local roadways were damaged because they remained under water for an extended period of time. A restaurant and a boat marina were damaged. The north shore area was also flooded, although resulting damage was not severe.

The Rock River in Fort Atkinson rose to its highest July level since records were first kept in 1933. According to the Director of Public Works, additional water inflow and infiltration caused the community's wastewater treatment plant to operate above hydraulic capacity. Many storm sewer inlets were damaged and needed to be repaired.

In July, the Department of Natural Resources observed more than a dozen sites underwater and inaccessible at the River Bend Resort/Campground.

Most of the development along the Rock River in the city of Jefferson is located outside of the 100-year floodplain. Most of the damage associated with the flooding was related to stormwater backups. The Dairy Queen, one block away from the river, was flooded by storm water, while properties closer to the river had no damage. Many residential structures experienced basement flooding. A warehouse and distribution operation, known at that time as Dorskocil Foods, was effectively protected by sandbags and remained open.

According to Capt. Dick Gallop of the Watertown Fire Department, that community experienced a number of flooded basements, but no significant damage to first floor living spaces in residential neighborhoods.

**2007 Flood** – Heavy rains, beginning on August 18 and lasting for seven days, caused significant property damage in 2007. On August 26, 2007, Jefferson County was added to a disaster declaration that was ultimately issued for 14 counties in southern Wisconsin. On September 17, a Mobile Disaster Recovery Center was set up at the Jefferson County fairgrounds. Federal, state, and local officials conducted a Preliminary Damage Assessment of those applying for individual assistance. As of October 11, 2007, 104 applications were received from residents. A total of \$115,442.42 was awarded for housing assistance and

**Table 5-12. (Continued) Flood Damages from the 2004 Flood; Unincorporated Jefferson County**

Jurisdiction	Percent Damage
Koshkonong, Town	44.4
Sumner, Town	42.4
Sumner, Town	40.2
Sumner, Town	36.4
Sumner, Town	36.4
Sumner, Town	33.9
Sumner, Town	33.4
Sumner, Town	29.2
Sumner, Town	28.5
Koshkonong, Town	27.5
Sumner, Town	26.4
Watertown, Town	24.8
Sumner, Town	24.1
Koshkonong, Town	23.9
Sumner, Town	23.1
Koshkonong, Town	21.4
Sumner, Town	18.5
Sumner, Town	15.6
Sumner, Town	12.6
Sumner, Town	12.6
Sumner, Town	11.2
Sumner, Town	11.1
Sumner, Town	10.2
Sumner, Town	8.4
Koshkonong, Town	7.8
Sumner, Town	5.2
Jefferson, Town	5.1
Ixonia, Town	1.8

Source: Jefferson County

\$3,021.32 for other needs assistance. Most of the damage resulted from sewer backups and stormwater in basements. In a few instances, basement walls were damaged from the saturated soils. The Lake Mills area suffered the most damage as reported to Jefferson County Emergency Management (Table 5-13).

**2008 Flood** – In June 2008, heavy rain caused severe flooding across southern Wisconsin, including portions of Jefferson County. The U.S. Geological Survey conducted a research study to generate flood-peak inundation maps and water surface profiles for nine communities in the study area, three of which are located in Jefferson County.<sup>2</sup> These include the Rock River at the city of Jefferson (Exhibit 5-1); Crawfish River at Milford, an unincorporated community (Exhibit 5-2); and Rock River at the city of Fort Atkinson (Exhibit 5-3).

**Flooding on Blackhawk Island, 2004**



**Table 5-13. Damage Reports for Flooding, August 2007**

	Damage Reports
<b>Town</b>	
Aztalan	2
Cold Spring	0
Concord	0
Farmington	0
Hebron	1
Ixonia	0
Jefferson	2
Koshkonong	0
Lake Mills	23
Milford	4
Oakland	1
Palmyra	0
Sullivan	1
Sumner	0
Waterloo	1
Watertown	1
<b>Village</b>	
Cambridge [1]	0
Johnson Creek	0
Lac La Belle [1]	0
Palmyra	0
Sullivan	0
<b>City</b>	
Fort Atkinson	1
Jefferson	18
Lake Mills	26
Waterloo	0
Watertown [1]	8
Whitewater [1]	0
<b>Jefferson County</b>	<b>53</b>

Source: Jefferson County Emergency Management

<sup>2</sup> Flood of June 2008 in Southern Wisconsin, 2008, Faith A. Fitzpatrick, et al; U.S. Geological Survey, U.S. Department of the Interior; Scientific Investigations Report 2008-5235

Exhibit 5-1. 2008 Flood Inundation Map; City of Jefferson, Wisconsin



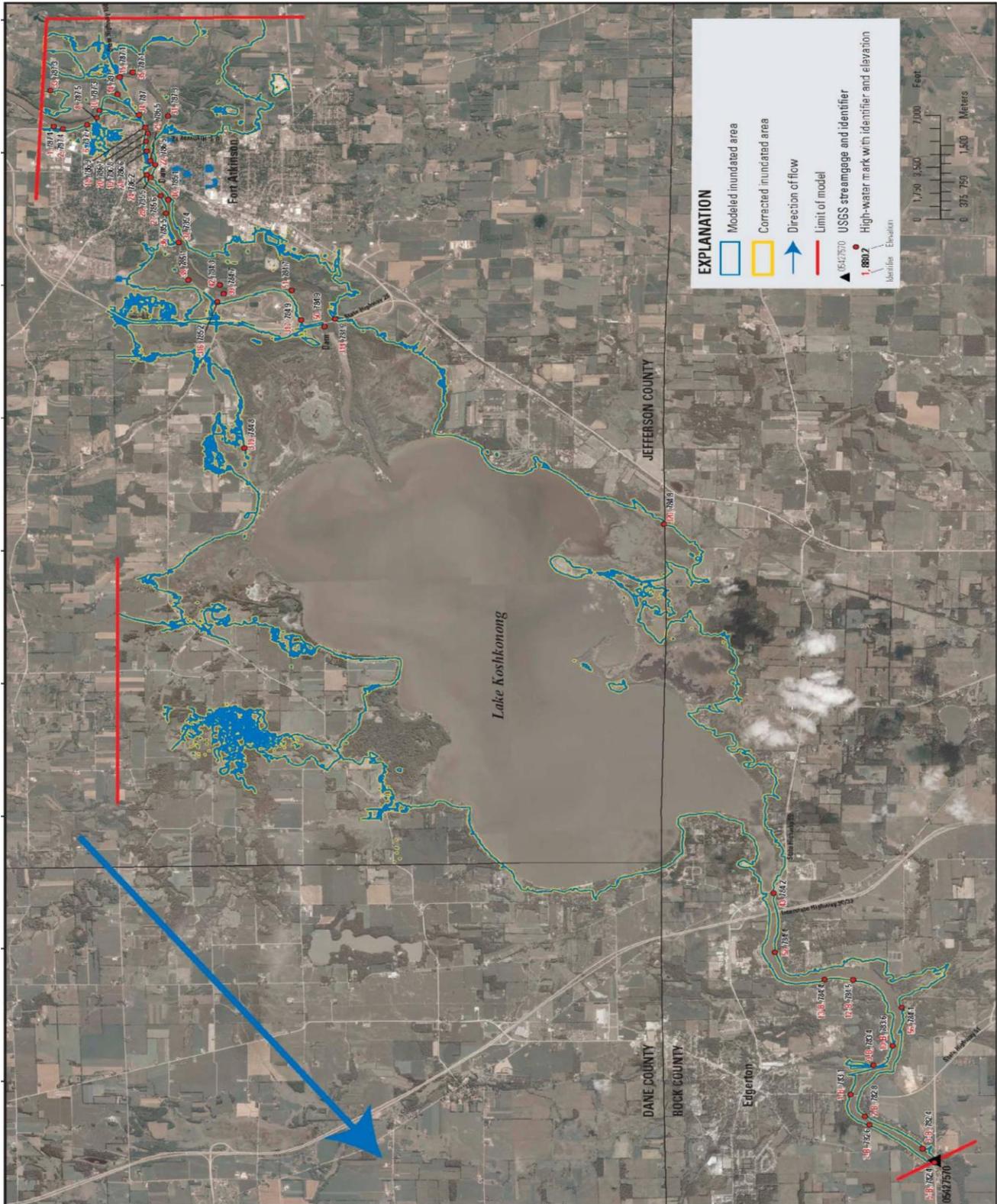
Source: *Flood of June 2008 in Southern Wisconsin*, 2008, Faith A. Fitzpatrick, et al; U.S. Geological Survey, U.S. Department of the Interior; Scientific Investigations Report 2008-5235

**Exhibit 5-2. 2008 Flood Inundation Map; Milford (Unincorporated), Wisconsin**



Source: *Flood of June 2008 in Southern Wisconsin*, 2008, Faith A. Fitzpatrick, et al; U.S. Geological Survey, U.S. Department of the Interior; Scientific Investigations Report 2008-5235

Exhibit 5-3. 2008 Flood Inundation Map; City of Fort Atkinson), Wisconsin



Source: *Flood of June 2008 in Southern Wisconsin*, 2008, Faith A. Fitzpatrick, et al; U.S. Geological Survey, U.S. Department of the Interior; Scientific Investigations Report 2008-5235

Throughout the region, there were evacuations and road closures and prolonged, extensive damage and losses associated with agriculture, businesses, housing, public health and human needs, and infrastructure, and transportation.

To further document some of these impacts, the Jefferson County Economic Development Consortium conducted a survey of those in the business community.<sup>3</sup> Over 200 employees were laid off according to the survey; with a significant number of individuals not returning to their jobs. The survey estimated a loss of \$4.7 million dollars related to physical damage, production and order loss, and infrastructure.

This flood event caused the first full activation of the Jefferson County emergency Operations Center (EOC) on June 12, 2008 with partial activation on June 23, 2008. There were 21 full road closures, 18 partial closures (including 5 bridges), and partial closure of I-94 due to concerns about the stability of the bridge over the Rock and Crawfish rivers. Multiple families were evacuated throughout the county.

Presidential Disaster Declaration (FEMA-1768-DR) was granted for individual and public assistance. Over \$4 million in SBA loans were received in Jefferson County, over \$3 million were received for Individual and household programs, over \$3 million were received for housing assistance, and over \$400,000 for other needs. In total, more than \$10 million was received.

## **VULNERABILITY ASSESSMENT – 2006**

**Effects on Facilities** – The consultant team identified 843 buildings (in 2006) within the 100-year floodplain (Table 5-14). Using the methodology described in Appendix H, it is estimated that if all waterbodies in the county experienced 100-year flood levels during the same time period, flood damage to buildings could potentially exceed \$13.3 million. It should be noted however, that flood magnitudes are generally not uniform across different watersheds and that it would be a rare occurrence for all water bodies in the county to experience a 100-year flood from the same event. The town of Sumner is anticipated to experience the highest amount of building damage followed by the town of Oakland<sup>4</sup>. Five municipalities do not have a building in the 100-year floodplain.

***A countywide 100-year flood could potentially cause more than \$13.3 million in damage to buildings.***

With the exception of wastewater treatment facilities, there are no critical facilities in the 100-year floodplain.

<sup>3</sup> Source: *Jefferson County 2008 Business Flood Assessment*, Dennis L. Hartwig, Jefferson County Economic Development Consortium.

<sup>4</sup> Note: The floodplain maps contained apparent errors, especially around Lake Ripley.

**Table 5-14. Buildings in 100-Year Floodplain and Estimated Damage: 2006**

	Number of Buildings by Percent Damaged			Total Number of Buildings	Market Value of Structures (\$ millions)	100-Year Flood Damage (\$ thousands)
	<10%	10-20%	>20%			
<b>Town</b>						
Aztalan	2	4	1	7	0.4	57.0
Cold Spring	2	3	1	6	0.5	83.7
Concord	2	0	0	2	0.3	23.6
Farmington	1	4	0	5	0.5	61.3
Hebron	5	7	4	16	1.5	297.2
Ixonia	1	0	0	1	0.03	0.001
Jefferson	4	9	0	13	1.3	135.1
Koshkonong	47	57	40	144	7.0	992.3
Lake Mills	4	2	0	6	0.6	63.1
Milford	6	9	3	18	1.2	215.2
Oakland	59	77	66	202	29.3	5,517.9
Palmyra	14	17	0	31	4.3	461.5
Sullivan	8	9	6	23	1.8	243.6
Sumner	132	54	17	203	10.0	1,095.4
Waterloo	0	1	0	1	0.1	14.8
Watertown	9	10	1	20	1.5	148.5
<b>Village</b>						
Cambridge [1]	0	0	0	0	0	0
Johnson Creek	1	0	0	1	0.2	12.6
Lac La Belle [1]	0	0	0	0	0	0
Palmyra	0	0	0	0	0	0
Sullivan	0	0	0	0	0	0
<b>City</b>						
Fort Atkinson	8	12	0	20	5.0	597.0
Jefferson	30	23	5	58	9.2	1,542.0
Lake Mills	10	15	13	38	5.7	970.6
Waterloo	9	8	9	26	4.6	728.2
Watertown [1]	2	2	0	4	0.2	26.0
Whitewater [1]	0	0	0	0	0	0
<b>Jefferson County</b>	<b>356</b>	<b>323</b>	<b>166</b>	<b>845</b>	<b>85.23</b>	<b>13,286.601</b>

Source: Civi Tek Consulting and Planning and Design Institute

Notes: 1. Municipality located in Jefferson County and another county

A number of areas have concentrations of buildings as generally described below.

1. **Blackhawk Island and Veterans Lane** – This area is located just upstream of Lake Koshkonong and southwest of the city of Fort Atkinson and has experienced significant flooding in the past. The area has been a targeted area for past county-sponsored removal of flood prone homes.

From 1996 through 1998, 38 structures were removed from the Blackhawk Island area as part of the County’s flood mitigation program.

2. **North Shore** - This area is on the north shore of Lake Koshkonong and includes both seasonal and permanent homes.
3. **Rock River Mobile Home Court** - This is a small subdivision of approximately 20 mobile homes located along the Rock River south of the village of Johnson Creek. There are also other permanent residential structures in the immediate area.
4. **Rock River Road** - This residential area is west of Fort Atkinson along the Rock River and has a number of year-round residences.
5. **Rock River Paradise Subdivision** - This small residential development is east of the city of Watertown along the Rock River.
6. **Pottawatom Trail** - This residential development is located on the south side of Lake Koshkonong.
7. **River Bend Resort/Campground** – This is a condominium campground located along the Crawfish River in the town of Milford. It contains approximately 300 campsites, which are individually owned. The recreation buildings, miniature golf, parking lot, and piers are owned jointly.

Countywide, damage to public facilities included erosion of recreational trails, damage to community and county parks, local and county road washouts, and damage to culverts and bridges. These infrastructure damages resulted in serious health and safety concerns as they impeded police, fire, and rescue personnel from getting to the scene of emergency situations.

**Effects on Population Groups** – There are no population groups that are especially vulnerable to flooding except to the extent older homes, which were built prior to floodplain regulations, are occupied by lower income residents.

**Effects on Economic Sectors** – While flooding can impact a number of economic sectors, the agricultural sector is the most vulnerable. Aside from damaging farm buildings, flooding can destroy crops and reduce crop yields for surviving crops. Table 5-15 summarizes the agricultural losses due to flooding from 1986 through 2006. In addition, harvesting crops on wet soils causes soil compaction that reduces crop yields in subsequent years. Heavy rains, which are often associated with flooding, cause a considerable amount of soil erosion on unprotected soils.

Damages sustained by businesses in the county are primarily a direct reflection of the agricultural production losses. The effects of the agricultural base extend throughout the county. Farming supports a variety of farm- (e.g., implement dealers, feed stores, granaries) and non-farm related (e.g., grocery stores, hardware stores) businesses. Most notably, the 1993 flooding affected a number of business sectors that support farmers.

**Other Effects** – During periods of flooding, no-wake boating restrictions are imposed which limit recreational uses, but are needed to protect shorelines from erosion.

**VULNERABILITY ASSESSMENT – 2007**

Flood analysis for Jefferson County was performed using HAZUS-MH released in July 2007. The bundled aggregated general building stock was updated to Dun & Bradstreet 2006. Building valuations were updated to R.S. Means 2006. Building counts based on census housing unit counts are available for RES1

**Table 5-15. Agricultural Losses Due to Flooding: Jefferson County: 1986 through 2000**

Year	Soybean (\$ millions)	Corn (\$ millions)
1986	0.7	3.9
1993	2.1	6.4
1996	2.5	6.4
1997	1.5	3.2
2000	1.0	2.1

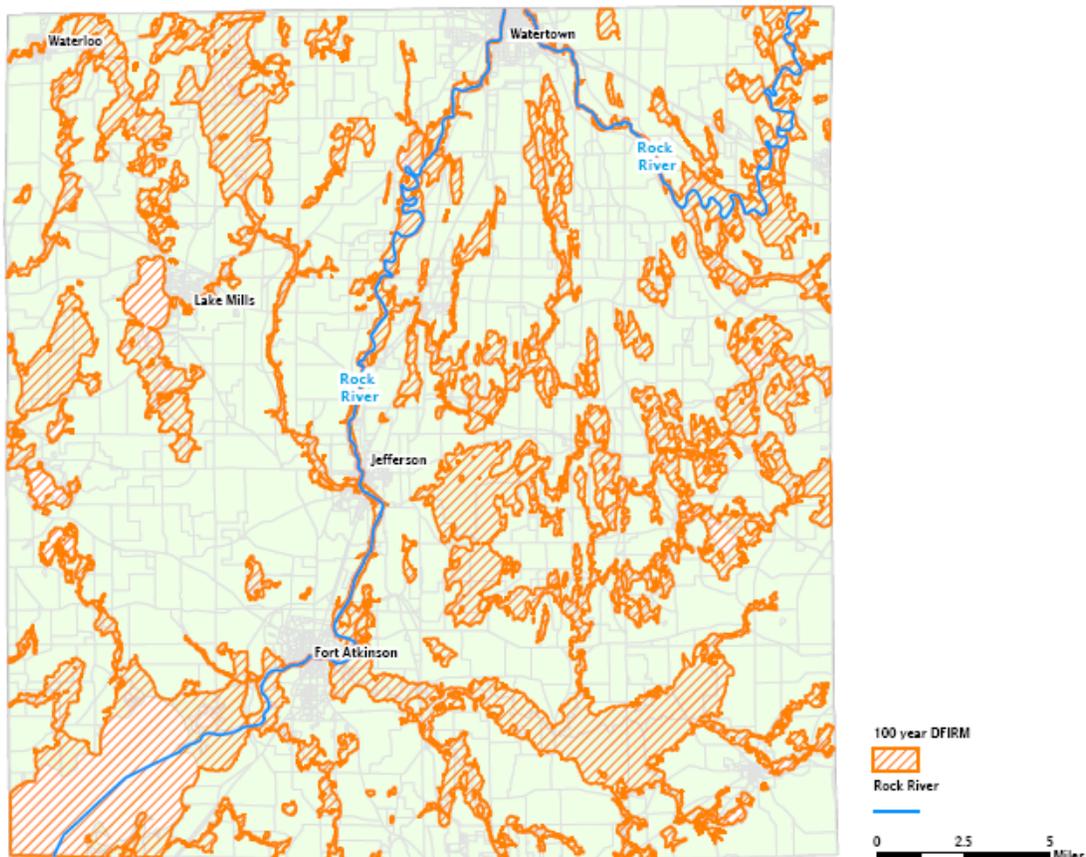
Source: Farm Services Agency

(single-family dwellings) and RES2 (manufactured housing) instead of calculated building counts.

The site specific inventory (specifically schools, hospitals, emergency operation centers, fire stations and police stations) was updated using the best available statewide information.

HAZUS-MH was used to generate the flood depth grid for a 100-year return period calculated by clipping the USGS 30m DEM to the DFIRM boundary. Exhibit 5-4 depicts the flood boundary from the HAZUS-MH analysis.

**Exhibit 5-4. HAZUS-MH Analysis (100-Year Flood): 2007**



**Aggregate Loss Analysis** – HAZUS-MH was used to estimate the damages for a 100-year flood event in Jefferson County. An estimated 129 buildings will be damaged totaling \$58 million in building losses and \$151 million in total economic losses. The total estimated number of damaged buildings, total building losses, and estimated total economic losses are shown in Table 5-16.

HAZUS-MH estimates 26 census blocks with losses exceeding \$1 million. The distribution of losses is shown in Exhibit 5-5.

HAZUS-MH aggregate loss analysis is evenly distributed across a census block. Census blocks of concern should be reviewed in more detail to determine the actual percentage of facilities that fall within the flood hazard areas. The aggregate losses reported in this study may be overstated.

**Table 5-16. Economic Loss for a 100-Year Flood: 2007**

General Occupancy	Estimated Total Buildings	Total Damaged Buildings	Total Building Exposure X 1000	Total Economic Loss X 1000	Total Building Loss X 1000
Agricultural	1	0	\$80,731	\$4,479	\$962
Commercial	192	1	\$948,602	\$29,472	\$6,758
Education	5	0	\$121,088	\$537	\$74
Government	13	0	\$42,507	\$1,495	\$154
Industrial	74	3	\$696,703	\$46,500	\$9,732
Religious/Non-Profit	13	0	\$98,065	\$3,531	\$460
Residential	24,675	125	\$4,488,760	\$64,473	\$39,486
<b>Total</b>	<b>24,973</b>	<b>129</b>	<b>\$6,476,456</b>	<b>\$150,487</b>	<b>\$57,626</b>

The reported building counts should be interpreted as degrees of loss rather than as exact numbers of buildings exposed to flooding. These numbers were derived from aggregate building inventories which are assumed to be dispersed evenly across census blocks. HAZUS-MH requires that a predetermined amount of square footage of a typical building sustain damage in order to produce a damaged building count. If only a minimal amount of damage to buildings is predicted, it is possible to see zero damaged building counts while also seeing economic losses.

**Exhibit 5-5. Economic Loss for a 100-Year Flood by Census District: 2007**

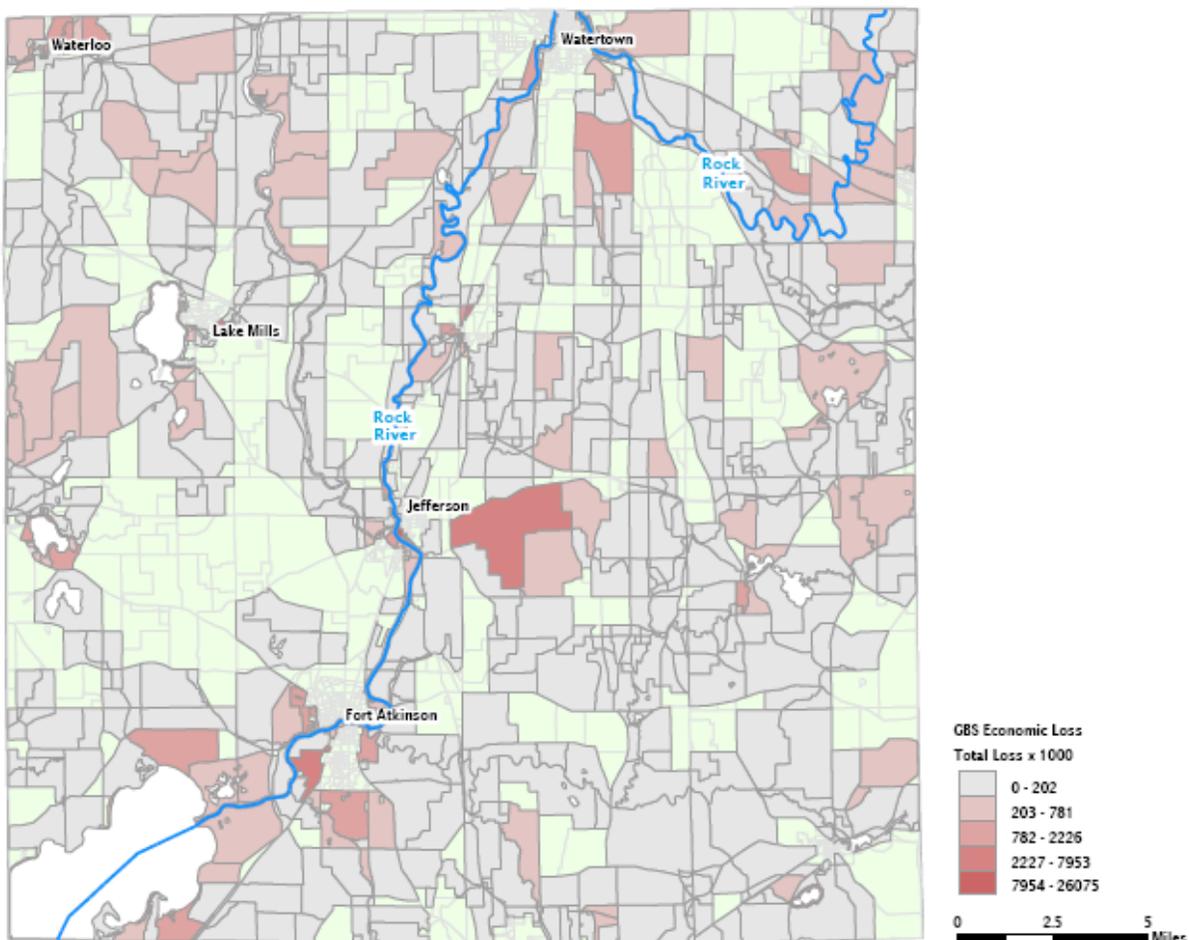


Exhibit 5-6 shows census blocks overlaid with the flood boundary and orthophoto of Jefferson. Census block 550559909002011 has an estimated building loss of \$866,000 with a combined replacement cost of \$3 million. HAZUS-MH estimates that 36 buildings are within the calculated flood boundary for this block. Although the orthophoto shows significant flooding in this census block, very few buildings appear to be at risk.

**Exhibit 5-6. Flood Damage Exposure in Jefferson: 2007**

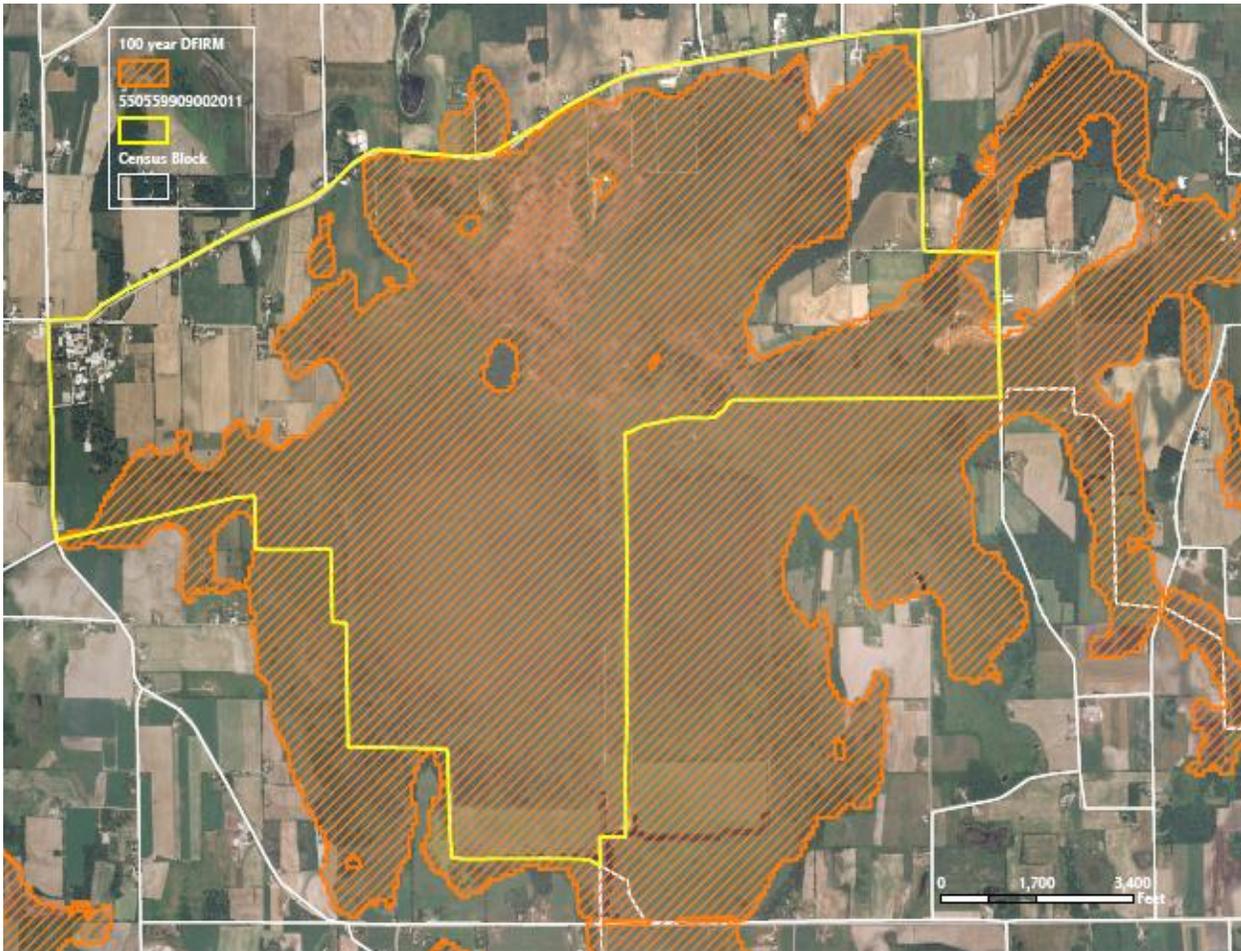
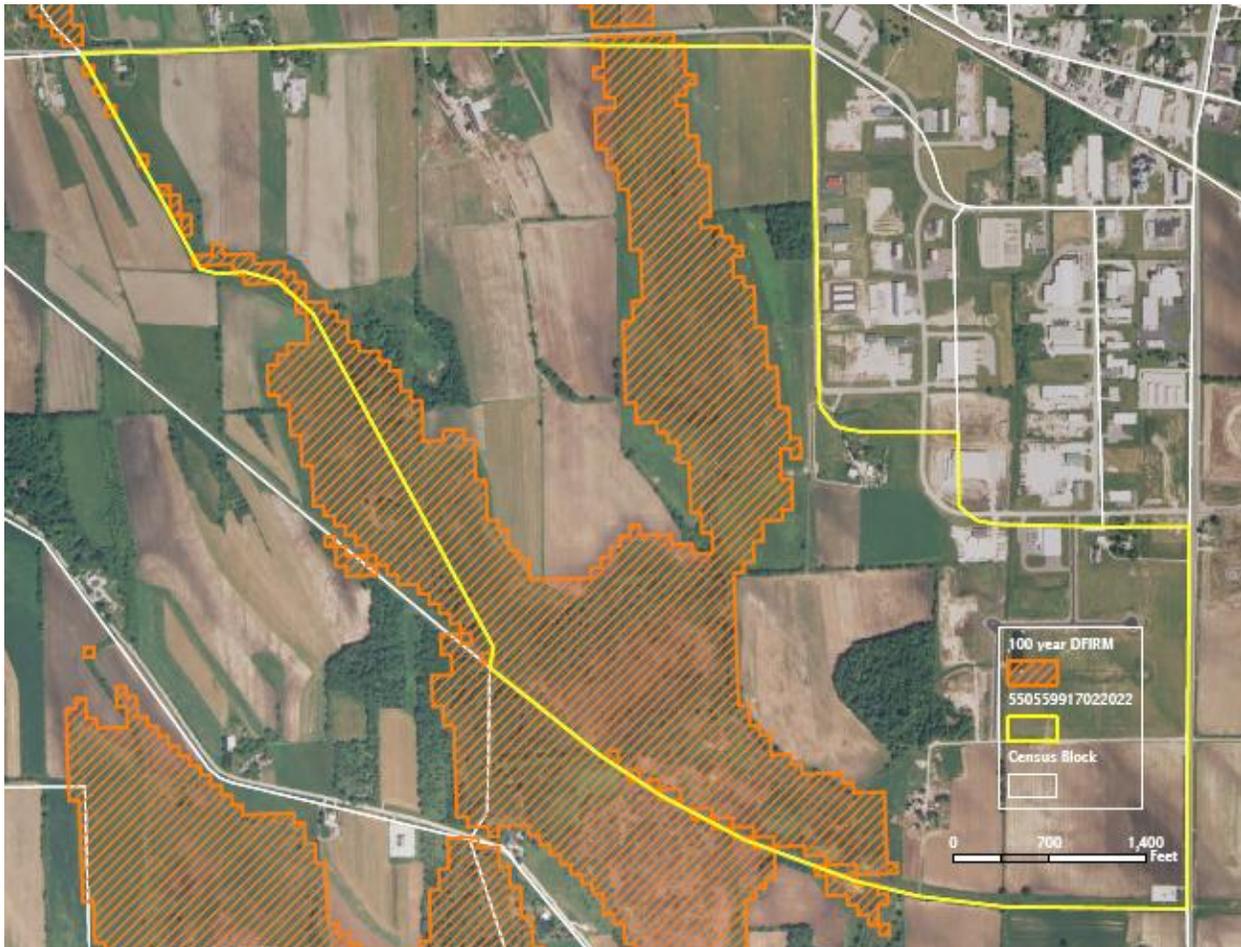


Exhibit 5-7 shows census blocks overlaid with the flood boundary and orthophoto of Ixonia. Census block 550559917022022 has an estimated building loss of \$225,000 with a combined replacement cost of \$930,000. HAZUS-MH estimates that 11 buildings are within the calculated flood boundary for this block. However, the orthophoto shows this area to be predominately forest.

**Exhibit 5-7. Flood Damage Exposure in Ixonia: 2007**



**Essential Facility Loss Analysis** – An essential facility would encounter many of the same impacts as any other building within the flood boundary. These impacts include: structural failure, extensive water damage to the facility, and loss of facility functionality (i.e. a damaged police station will no longer be able to serve the community).

The HAZUS-MH analysis identified that no essential facilities are subject to flooding. A list of the essential facilities within Jefferson County is included in Table 5-17.

**Table 5-17: Essential Facility Loss for a 100-Year Flood: 2007**

<b>Class</b>	<b>Building Count</b>	<b>At Least Moderate Damage</b>	<b>At Least Substantial Damage</b>	<b>Loss of Use</b>
Care Facilities	4	0	0	0
Fire Stations	11	0	0	0
Police Stations	13	0	0	0
Schools	55	0	0	0
EOC	0	0	0	0
<b>Total</b>	<b>83</b>	<b>0</b>	<b>0</b>	<b>0</b>

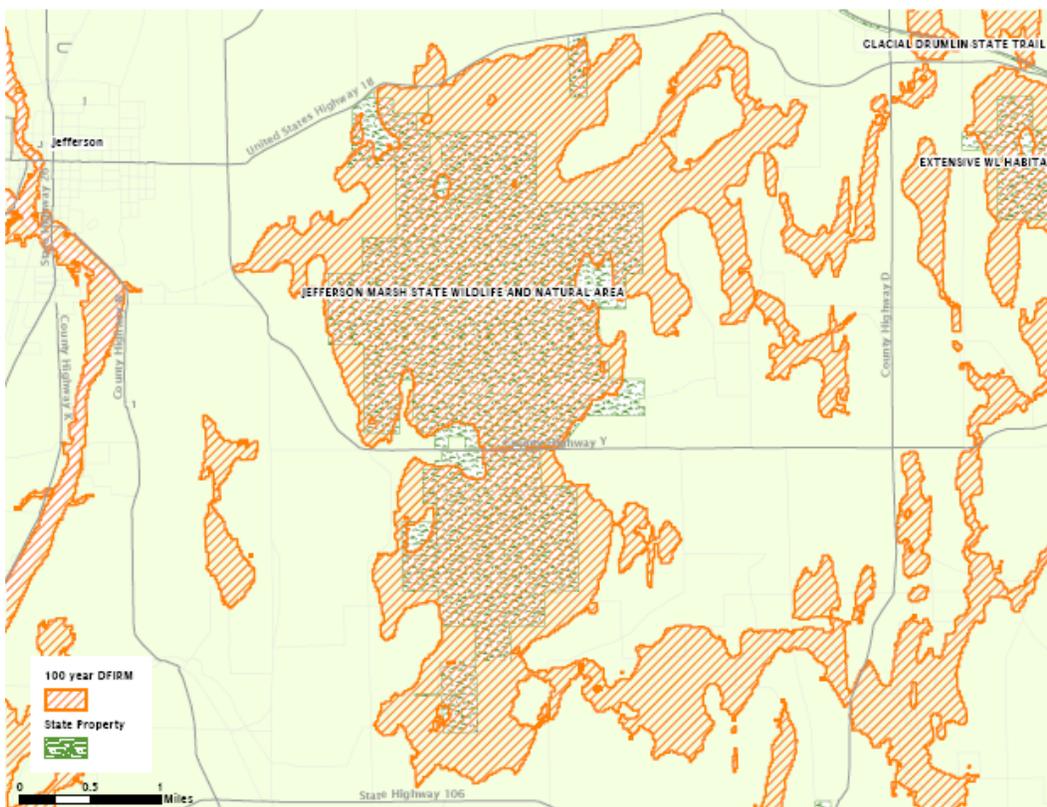
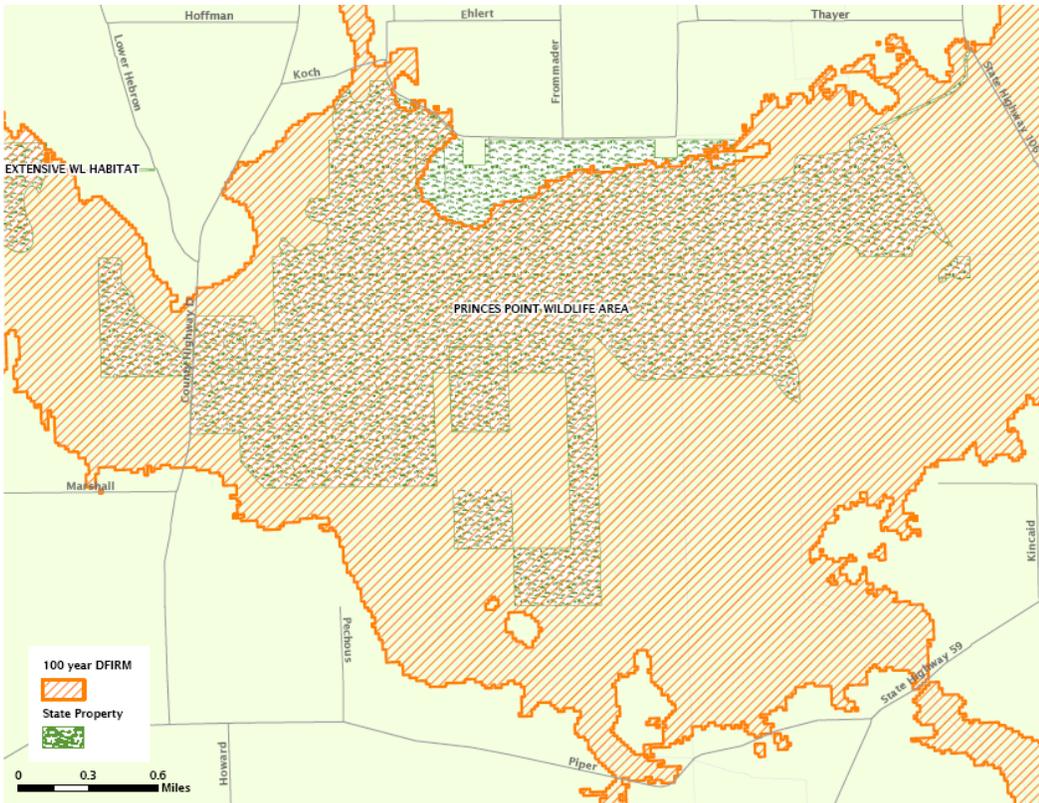
**Shelter Requirement Analysis** - HAZUS-MH estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. HAZUS-MH also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 1,921 households will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these 2,528 people (out of a total population of 74,021) will seek temporary shelter in public shelters.

**State Property Loss Analysis** – The flood boundaries were overlaid with the State of Wisconsin property boundaries as provided by the Department of Natural Resources. Table 5-18 provides a list of state properties impacted by the flood boundary. Exhibit 5-8 shows two examples of inundated areas.

**Table 5-18. State Property Flood Inundation: 2007**

<b>State Property</b>	<b>Percent Inundated</b>	<b>Acres</b>
Jefferson Marsh State Wildlife and Natural Area	93	3060
Lake Mills Wildlife Area	90	2472
Princes Point Wildlife Area	94	2019
Waterloo Wildlife Area	35	1496
Extensive Wildlife Habitat	11	1282
Rome Pond Wildlife Area	52	1188
Koshkonong Wildlife Area	86	726
Scattered Wildlife	3	349
Kettle Moraine State Forest-Southern Unit	1	251
Glacial Drumlin State Trail	9	61
Kanow Park Fishery Area	100	47
Lake Mills Hatchery	35	28
Aztalan State Park	14	27
Statewide Natural Area	0	25
Statewide Public Access	1	15
Rem-Golden Lake	32	11
Red Cedar Lake Natural Area	6	4
Lima Marsh Wildlife Area	0	0

**Exhibit 5- 8: Select State of Wisconsin Properties Boundary with 100-Year Flood Boundary: 2007**



## 7. ICE SHOVES

### PROFILE

An ice shove, also referred to as an ice flow, is a large accumulation of broken ice blocks and sheets which have been piled up by the wind along the shoreline of a lake. Ice shoves are characteristically found on large lakes in the spring during and immediately after ice breakup. The size of the ice shove is related to the amount of ice on the lake when breakup occurs and the strength and duration of the winds at breakup.

### HISTORY OF PAST OCCURRENCES

Ice shoves occur on a fairly frequent basis on the north and northeast shore of Lake Koshkonong. Rock Lake in the northwest quadrant of the county is the second largest lake in the county and has experienced ice shoves, but to a lesser degree than Lake Koshkonong. No other lakes in the county are large enough to generate ice shoves of any consequence.

### VULNERABILITY ASSESSMENT

Although ice shoves occur on a fairly frequent basis, most do not cause damage to man-made structures such as buildings, piers, boat landings, and roads. On a few occasions though, ice shoves have become rather large and damaged man-made structures. Damage estimates are not available for ice shoves.

**Effects on Facilities** – Ice shoves most directly affect buildings and structures near the lakeshore. Ice may pile on top of a road if not removed as it moves on shore.

**Effects on Population Groups** – Ice shoves do not negatively affect any population group in particular.

**Effects on Economic Sectors** – Ice shoves do not negatively affect any economic sector in particular.

## 8. FOG

### PROFILE

Fog is a visible concentration of small water droplets suspended in the air at the earth's surface that obscures visibility to less than one kilometer. It forms when air temperature falls to its dew point, which is the temperature at which air is holding as much moisture as it can. When air reaches its dew point, it condenses into very small water droplets.

### HISTORY OF PAST OCCURRENCES

Fog can form throughout the year, but is most common from September through April. As shown in Appendix G, there have been 41 reported occurrences of fog in Jefferson County since 1950. In Jefferson County fog tends to cover large areas.

### VULNERABILITY ASSESSMENT

**Effects on Facilities** – Fog does not damage or impair the operation of facilities.

**Effects on Population Groups** – Fog does not negatively affect any population group.

**Effects on Economic Sectors** – Fog impairs visibility and can hamper ground and air transportation. When visibility is decreased, the potential for motor vehicle crashes increase as does the possibility of an airplane accident on landing or take off.

## 9. TORNADO / HIGH WINDS

### PROFILE

A tornado is a violently rotating column of air extending from the ground to the base of a convective cloud. The tornado may or may not have a visible condensation funnel (commonly referred to as a "funnel cloud"), which may or may not extend from the cloud base all the way to the ground. In the absence of a visible condensation funnel, a severe weather spotter can determine they are looking at a tornado if they observe cloud-base rotation superimposed over rotating dirt and debris at ground level. Wind speeds in a tornado typically range from 80 mph to 150 mph, but on occasions reach speeds in excess of 200 mph. There have been documented tornado winds exceeding 300 mph outside of Wisconsin. The majority of damage resulting from a tornado occurs within one-eighth mile of the tornado's path, which characteristically does not exceed 16 miles. In fact, the average path length of tornadoes in Wisconsin for the period of 1950-2005 was 5.8 miles with a duration of about 10 minutes. Tornadoes with track lengths greater than 150 miles have been reported in Wisconsin, although they are quite rare.

Tornadoes are visible because low atmospheric pressure in the vortex leads to cooling of the air by expansion with condensation and formation of water droplets. They are also visible as a result of the airborne debris and dust associated with the vortex. The destructive power of the tornado lies primarily in its high horizontal winds, a built-in upward-lifting force, and airborne debris impacting structures (collectively resulting in about 95 percent of the damage). To a much lesser degree, air pressure differences associated with a tornado result in additional damage. Years ago, it was assumed that air pressure differences accounted for a large portion of the damage, however, it is now realized that most buildings have enough air leakage or infiltration so that most of the air pressure differences between the inside and outside of a structure are minimized as the tornado approaches. Since tornadoes are usually associated with organized storm systems that consist of several thunderstorm cells of varying intensity, large hail, torrential rain, and intense lightning usually accompany the storm that spins-up a tornado.

Although a tornado can form at any time during the year, the peak tornado season is May through July. They can also occur at any time of the day. The peak hour for tornado initiation is between 6 and 7 pm and the peak hours of occurrence are between 2 and 10 pm.

Prior to 2007, the Fujita Tornado Scale was used to estimate the wind speed of a tornado based on damage to structures (Table 5-18). Though the Fujita Scale has 13 ratings (F0-F12), tornadoes never exceed an F5 (261 to 318 MPH).

Beginning in 2007, tornadoes will be rated using the Enhanced Fujita Tornado Scale, which is essentially the same as the former scale except for the wind speed (Table 5-19).

**Table 5-18. Fujita Tornado Scale**

Fujita		
Rating	Wind Speed	Characteristic Damage
F0	40 to 72 mph	Some damage to chimneys, TV antennas, roof shingles, trees, and windows
F1	73 to 112 mph	Automobiles overturned, carports destroyed, and trees uprooted
F2	113 to 157 mph	Roofs blown off homes, sheds and outbuildings demolished, mobile homes overturned
F3	158 to 207 mph	Exterior walls and roofs blown off homes; metal buildings collapsed or are severely damaged; forests and farmland flattened
F4	208 to 260 mph	Few walls, if any, standing in well-built homes; large steel and concrete missiles thrown far distances
F5	261 to 318 mph	Homes leveled with all debris removed; schools, motels, and other larger structures have considerable damage with exterior walls and roofs gone; top stories demolished

**Table 5-19. Enhanced Fujita Tornado Scale**

Fujita		
Rating	Wind Speed	Characteristic Damage
EF0	65 to 86 mph	Some damage to chimneys, TV antennas, roof shingles, trees, and windows
EF1	86 to 110 mph	Automobiles overturned, carports destroyed, and trees uprooted
EF2	111 to 135 mph	Roofs blown off homes, sheds and outbuildings demolished, mobile homes overturned
EF3	136 to 165 mph	Exterior walls and roofs blown off homes; metal buildings collapsed or are severely damaged; forests and farmland flattened
EF4	166 to 200 mph	Few walls, if any, standing in well-built homes; large steel and concrete missiles thrown far distances
EF5	>200 mph	Homes leveled with all debris removed; schools, motels, and other larger structures have considerable damage with exterior walls and roofs gone; top stories demolished

### HISTORY OF PAST OCCURRENCES

Wisconsin lies along the northern edge of the nation's tornado belt that extends northeastward from Oklahoma into Iowa. Winter, spring, and fall tornadoes are more likely to occur in southern Wisconsin than in northern counties. Yet, tornadoes have occurred in Wisconsin during every month except February.

Wisconsin's tornado season runs from the beginning of April through September. The most severe tornadoes typically occur during April, May, and June. Many tornadoes strike in late afternoon or early evening. However, tornadoes have occurred at other times. Personal property damage, deaths, and injuries have and will continue to occur in Wisconsin. On average, one person dies from tornado-related injuries each year.

In 2005, Wisconsin had a record of 62 verified tornadoes, including 27 that occurred on August 18, 2005. Seven of the 27 tornadoes on that day visited Jefferson County.

**Table 5-20. Tornado Frequency: Jefferson County**

Fujita Rating	Number of Occurrences	Probability of Occurrence
[1]	[2]	
F0	8	30%
F1	12	44%
F2	6	22%
F3	1	4%
F4	0	0
F5	0	0

Notes: 1. Refer to Table 5-14 for a description of the Fujita ratings  
 2. Based on data collected by the National Weather Service

In Jefferson County, there have been 27 verified tornadoes from 1950 to October 2006 (Appendix G). The vast majority of them were F0 or F1 (Table 5-20). Prior to 1950, there were four verified tornadoes: 1851, 1878, 1883, and 1931. Prior to 1982 when the National Weather Service began classifying tornadoes, ratings are at best broad estimates, with an accuracy of plus/minus 1.

A presidential disaster declaration was issued for tornado damage in 1991 and 1993.

**VULNERABILITY ASSESSMENT**

**Effects on Facilities** – Because tornadoes apparently occur randomly across the landscape, all areas of the county are equally as likely to experience a tornado. Therefore, all of the critical facilities which have been identified are at risk.

**Effects on Population Groups** – Even though all areas of the county are equally likely to experience a tornado, those living in mobile homes or staying in a campground are more vulnerable than those people living in a residence with a basement. In 2006, there were 14 mobile home parks and 11 campgrounds, none of which had a storm shelter where people could go during a wind-related storm event.

**Effects on Economic Sectors** – While individual businesses may be damaged, the overall economy generally experiences short-term effects of a tornado, if at all.

Based on historical occurrences and documented damage estimates, a tornado would be expected to cause about \$375,000 on average. The range however, is quite wide depending on where the tornado occurs and its magnitude (Table 5-22).

**10. HAILSTORMS**

**PROFILE**

A hailstorm is a weather event where water particles in the upper atmosphere form into round or irregular masses of ice that fall to earth. Hail stones form when sub-freezing temperatures in the upper atmosphere cause water in thunderstorm clouds to accumulate in layers around an icy core. When strong underlying winds no longer can support their weight, the hailstones fall to Earth. The size of hail typically ranges from ¼” up to three inches in diameter. In a rather rare occurrence, a 2006-hail storm in Lake Mills created hail stones with a diameter of 4.25 inches.

Hail tends to fall in swaths that may be 20-115 miles long and 5-30 miles wide. The swath is not normally an even bombardment of hail, but generally consists of a series of hail strikes that are produced by individual thunderstorm clouds traversing the same general area. Hail strikes are typically one-half mile wide and up to five miles long. They may partially overlap, but often leave completely undamaged gaps between them.

Hailstorms tend to occur in conjunction with severe thunderstorms

**Table 5-21. Documented Tornadoes; Jefferson County: 1851 through 2006**

Year	Month	Number
1851	May	1
1878	May	1
1883	July	1
1931	September	1
1965	April	2
1967	June	1
1971	June	2
1972	July	2
1974	June	1
1979	August	1
1980	June	2
1981	June	1
1986	July	1
1986	September	1
1988	May	1
1991	March	1
1997	September	1
1999	June	1
2002	August	1
2004	June	1
2004	July	1
2005	August	7

Source: National Weather Service

**Table 5-22. Estimated Tornado Damage: Jefferson County**

Fujita Rating [1]	Damage Estimate
F0	0 to \$250,000
F1	\$25,000 to \$250,000
F2	\$25,000 to \$2,500,000
F3	\$250,000 to \$3,000,000
F4	\$500,000 to \$3,000,000
F5	\$750,000 to \$3,000,000

Notes: 1. Refer to Table 5-13 for a description of the Fujita ratings

## HISTORY OF PAST OCCURRENCES

Between 1950 and October 2006, there have been 80 documented hailstorm events in the county (Table 5-5).

## VULNERABILITY ASSESSMENT

**Effects on Facilities** – The threat of hail damage increases as the size of the hailstones increase. Hail can break windows, damage roofs and siding, and dent motor vehicles.

**Effects on Population Groups** – All population segments are equally susceptible to hail storms. Hail storms while resulting in property and crop damage, rarely causes serious injury or loss of life.

**Effects on Economic Sectors** – Of all the economic sectors, agriculture is the most susceptible to hail damage. When hailstones approach golf ball size, crops are damaged and are not able to recover, resulting in a total loss.

## ESTIMATED DAMAGE

Based on historical data, hailstorms, while quite numerous, do not cause widespread or significant damage. There is however, one exceptional event. In April 2006, a hailstorm caused \$4.4 million in property damage. This single event accounts for nearly 92 percent of all the documented damage that occurred between 1950 and 2006.

For the purposes of this plan, it is estimated that a hailstorm would cause about \$5,000 in property damage per event.

# 11. THUNDERSTORMS

## PROFILE

Thunderstorms are severe and violent forms of convection produced when warm moist air is overlaid by dry cool air. As the warm air rises, thunderheads (cumulonimbus clouds) form and cause the strong winds, lightning, hail, and rain characteristically associated with these storms. Thunderheads may be a towering mass 6 miles or more across and 40,000 to 50,000 feet high. As much as 1.5 million tons of water may be held in a thunderhead.

A storm event arising for a single thunderhead typically lasts less than 30 minutes in a given location. However, strong frontal systems may spawn more than one squall line composed of many individual thunderheads.

As defined by the National Weather Service, a severe thunderstorm is a thunderstorm event that produces one or more of the following: downbursts with winds of 58 mile per hour or greater, hail  $\frac{3}{4}$  of an inch in diameter, or a tornado.

## HISTORY OF PAST OCCURRENCES

Out of all the weather-related events in Jefferson County, powerful thunderstorms are the most common. They account for more than one-third (37%) of all weather-related events documented from 1950 to October 2006. On average county residents can expect slightly more than three significant thunderstorm events each year.

Although thunderstorms can occur throughout the year, they are most common from May through September. Typically, they occur after noon until 10:00 pm.

The most devastating thunderstorm to hit Jefferson County occurred May 31, 1998. Straight-line winds with peak gusts of 100 to 128 mph hit 12 counties in south central and southeast Wisconsin, while another 8 counties had peak gusts of 60 to 80 mph. It is believed that this event was the most damaging, widespread, straight-line thunderstorm wind event to hit southern Wisconsin in more than 100 years. Roofs were torn off of barns, homes, and other buildings. Thousands of trees were uprooted or significantly damaged. Hundreds of motor vehicles were either damaged or totaled by falling trees and branches or collapsed garages. At one point, about 60,000 customers were without electricity in south central Wisconsin and about 170,000 in southeast Wisconsin. Some areas were without power for as much as 5 or 6 days. Property damage for all 20 counties totaled more than \$55.85 million and \$1.48 million in crop losses. In Jefferson County, there were 8 reported injuries, \$2.7 million in property damage, and \$200,000 in crop losses.

## VULNERABILITY ASSESSMENT

**Effects on Facilities** – Aside from hail, straight line winds from a thunderstorm can damage property and to a less extent crops. Overhead utility lines are quite susceptible to downed trees and tree branches. Entire neighborhoods and even larger areas can lose power because of a thunderstorm. All areas of the county are equally susceptible to thunderstorms, meaning that all critical facilities are at risk.

**Effects on Population Groups** – Wind associated with severe thunderstorms can cause injury or loss of life. With the exception of those living in mobile home parks or staying in campgrounds, no population group is uniquely susceptible to a thunderstorm event. Those in mobile homes and campgrounds are at risk from falling trees and branches, and damage to their residence or camper.

**Effects on Economic Sectors** – Thunderstorms do not affect any economic sector disproportionately more than others.

Based on historical data, a thunderstorm is expected to cause less than \$20,000 in property damage and less than \$2,000 in crop damage.

## 12. WINTER STORMS

### PROFILE

Winter storms include a wide range of weather-related events including snowstorms, blizzards, freezing rain, sleet, and ice storms. Typical snow events produce totals of between one and three inches. On a statewide basis, heavy snowfalls happen on average only five times per winter. Total snow accumulations in southern Wisconsin average about 40-50 inches. While blizzard conditions can occur in southern Wisconsin, it is rare. Both ice and sleet storms can occur at any time from October into April. They are more common in southern Wisconsin than in the northern part of the state. Statewide, there are 3 to 5 freezing rain events.

### Terms Related to Winter Storms

**Heavy snowfall** - The accumulation of six or more inches of snow in a 12-hour period or eight or more inches in a 24-hour period.

**Blizzard** - The occurrence of sustained wind speeds in excess of 35 miles per hour accompanied by heavy snowfall or large amounts of blowing or drifting snow.

**Ice storm** - An occurrence where rain falls from warmer upper layers of the atmosphere to the colder ground, freezing upon contact with the ground and exposed objects near the ground forming an accumulation of at least 1/4" in 12 hours or less.

**Freezing drizzle / freezing rain** - The effect of drizzle or rain freezing upon impact on objects that have a temperature of 32 degrees Fahrenheit or below.

**Sleet** - Solid grains or pellets of ice formed by the freezing of raindrops or the refreezing of largely melted snowflakes. This ice does not cling to surfaces.

## HISTORY OF PAST OCCURRENCES

For the period of 1982 through 2006, there have been 60 winter storm events in Jefferson County consisting of either blizzard conditions, heavy snow, ice, or sleet -- about 2.5 per winter season.

## VULNERABILITY ASSESSMENT

**Effects on Facilities** – Heavy snow can cause the structural collapse of buildings with flat roofs. In recent memory there have been a few winter seasons where snow events taxed the ability of local governments to pay for the removal of snow from roads and keep them clear of snow.

**Effects on Population Groups** – Winter storms affect all population groups equally. People who commute a comparatively long distance are disproportionately affected.

**Effects on Economic Sectors** – A prolonged winter storm event with a large accumulation of snow can have a short term effect on the local economy in terms of lost productivity. Transportation-related businesses are often negatively affected when winter weather hits.

The cost of snow removal is incorporated into local government budgets so there is no direct financial impact arising from a winter storm.

## 13. EXTREME TEMPERATURE

### PROFILE

Periods of excessive heat, often referred to as heat waves, are quite common in Wisconsin during the summer months. When high temperatures do occur, they cover large areas of the country.

**Exhibit 5-9. Heat Disorders and Symptoms**

Heat Disorder	Symptoms
Sunburn	Redness and pain; in severe cases swelling of skin, blisters, fever, headaches
Heat Cramps	Painful spasms usually in muscles of legs and abdomen possible; heavy sweating
Heat Exhaustion	Heavy sweating, weakness, skin cold, pale and clammy; pulse thready; normal temperature possible; fainting and vomiting
Heat Stroke	High body temperature (106 or higher); hot dry skin; rapid and strong pulse; possible unconsciousness

Source: National Weather Service, National Oceanic and Atmospheric Administration

The National Weather Service (NWS) devised the Heat Index<sup>5</sup> as a way to measure the combined effects of temperature and relative humidity. The Heat Index chart (Exhibit 5-10) also shows when certain physiological responses are commonly seen with prolonged exposure and/or physical activity. As the relative

<sup>5</sup> The Heat Index is sometimes referred to as the apparent temperature.

humidity increases, even modest temperatures can cause heat stroke and other less serious heat disorders.

**Exhibit 5-10. Heat Index (Apparent Temperature)**

Air Temp. °F	Relative Humidity (%)												
	40	45	50	55	60	65	70	75	80	85	90	95	100
110	136												
108	130	137											
106	124	130	137										
104	119	124	131	137									
102	114	119	124	130	137								
100	109	114	118	124	129	136							
98	105	109	113	117	123	128	134						
96	101	104	108	112	116	121	126	132					
94	97	100	103	106	110	114	119	124	129	135			
92	94	96	99	101	105	108	112	116	121	126	131		
90	91	93	95	97	100	103	106	109	113	117	122	127	132
88	88	89	91	93	95	98	100	103	106	110	113	117	121
86	85	87	88	89	91	93	95	97	100	102	105	108	112
84	83	84	85	86	88	89	90	92	94	96	98	100	103
82	81	82	83	84	84	85	86	88	89	90	91	93	95
80	80	80	81	81	82	82	83	84	84	85	86	86	87

Source: National Weather Service, National Oceanic and Atmospheric Administration

With Prolonged Exposure and/or Physical Activity

	Extreme Danger – Heat stroke or sunstroke highly likely
	Danger – Sunstroke, muscle cramps, and/or heat exhaustion likely
	Extreme Caution – Sunstroke, muscle cramps, and/or heat exhaustion likely
	Caution – Fatigue possible

**HISTORY OF PAST OCCURRENCES**

From 1986 to 2006, there were 10 years in which at least one or more persons in Wisconsin died from the direct or indirect effects of excessive heat (Table 5-23).

**VULNERABILITY ASSESSMENT**

In those 10 years, a total of 115 people died. None of the deaths occurred in Jefferson County. However, some Jefferson County residents most likely received medical treatment for heat-related symptoms.

During that 20-year period, 1995 was the deadliest year when a total of 82 deaths were reported. Two heat waves gripped much of the state. The first occurred in mid-June and the second in mid-July. In the second heat wave, temperatures rose to between 100°F and 108°F with heat indices of 120°F to 130°F.

*Out of all of the natural hazards in Wisconsin, excessive heat is the leading cause of fatalities.*

According to the National Weather Service, the mortality rate from excessive heat in Wisconsin is the highest of all natural disasters – more than four times greater than the second highest cause of death, tornadoes.

Intensely urbanized areas feel the effects of heat waves more than rural areas in that the temperature in urban areas is often elevated because radiant energy is stored in pavement and the exterior building surfaces and is released slowly over a period of time. Even during a heat wave, nighttime temperatures typically drop, but less so in urban areas because these heat reservoirs dissipate the radiant heat collected during the day time. This phenomenon is often referred to as the heat island effect.

Not only are urban areas heat islands, pollutants often build up in the lower atmosphere during periods of excessive heat, causing respiratory problems, especially for the young, the elderly, and those with respiratory ailments such as asthma.

Although the more urban areas of the county experience the heat island effect, the change in the ambient temperature is modest. This is because the urban areas of the county are relatively small and street trees help to deflect solar radiation back into the atmosphere.

**Effects on Facilities** – Excessive heat does not directly impact critical facilities.

**Effects on Population Groups** – The elderly are disproportionately affected by heat. For example, during the heat waves of 1995, three-quarters of the fatalities were 60 years of age or older (Table 5-24).

**Effects on Economic Sectors** – Excessive heat can accompany drought causing a loss of crops. Additionally, some businesses may close or reduce production to minimize heat effects on employees.

**Table 5-23. Heat-Related Fatalities; Wisconsin: 1986 - 2006**

Year	Direct Deaths	Indirect Deaths
1986	1	0
1988	1	0
1993	2	0
1995	82	72
1997	1	0
1999	12	8
2001	10	5
2002	3	5
2003	0	4
2006	3	1
Total	115	95

Source: National Weather Service, Milwaukee - Sullivan Office

## 14. DROUGHT

### PROFILE

A drought is an extended period of time when rainfall is significantly below normal amounts. Unlike other natural disasters, it is not known until much later in time, when a drought begins. A drought could last for months, several years, and in extreme conditions, much longer. Droughts are typically accompanied by higher-than-normal temperatures and lower-than-normal relative humidity levels. Some droughts cover entire regions of a continent or can affect a sub-region as small as several counties.

A number of methodologies have been developed to measure droughts from a purely meteorological standpoint. Droughts can also be defined based on the consequences which result. For the purposes of this plan, two types of drought are considered: agricultural and hydrologic. An agricultural drought causes a noticeable drop in crop yields and a hydrological drought causes a drop in lake and stream levels and lowers the height of the ground water table.

Although these two types of droughts can occur at the same time, the negative effects of a drought are first seen on crop production. Hydrologic droughts characteristically lag behind an agricultural drought because it takes time for the lack of precipitation to lower surface and ground water levels. As a result, it is

**Table 5-24. Heat-Related Fatalities; United States: 1995**

Age	Number	Percent
0 – 19	14	1.4
20 – 29	5	0.5
30 – 39	34	3.3
40 – 49	79	7.7
50 – 59	95	9.3
60 – 69	179	17.5
70 – 79	253	24.8
80 – 89	241	23.6
90 and older	61	6.0
Unknown age	60	6.0
Total	1,021	100

Source: National Weather Service

possible for an area to experience a hydrologic drought long after the end of an agricultural drought.

**HISTORY OF PAST OCCURRENCES**

Agricultural and hydrologic droughts occur in Wisconsin on a regular basis. Since the Dust Bowl, short-lived droughts have occurred on an interval of about once in every ten years. Long-term droughts are more infrequent. Since the Dust Bowl, there have been four significant droughts in the state: 1987-1988, 1976-1977, 1955-1959, and 1948-1950.

**VULNERABILITY ASSESSMENT**

Given the nature of droughts, it is difficult to quantify the impacts on Jefferson County.

By most accounts, the 1987-1988 drought in Wisconsin was the most severe and is estimated to have a recurrence interval of about 75 years. All Wisconsin counties were eligible for drought assistance. Agricultural losses throughout the state totaled \$1.3 billion. More than half of the farms in the state suffered crop losses of 50 percent or more, with 14 percent experiencing a crop loss of 70 percent or more.

**POTENTIAL FOR FUTURE LOSSES**

**Effects on Facilities and Population Groups** – Unlike many of the other natural disasters addressed in this plan, drought conditions do not cause physical harm to people or destroy buildings and other structures.

**Effects on Economic Sectors** -- The two main concerns with drought relate to economic losses to agricultural crops and livestock and effects on ground water supplies available to both private and public water wells.

According to the Jefferson County Agricultural Preservation and Land Use Plan, roughly half of the unincorporated area of the county is in agricultural production. Droughts would therefore affect a significant portion of the county and a significant economic sector. During extended droughts, municipalities often see an increased water usage due primarily to increased use for lawns and gardens. It is important that municipal wells are properly sized for the number of residents they are intended to serve. At times it may be necessary to impose water restrictions when there is concern that the available water supply may not be sufficient to meet basic needs.

Because municipal wells are generally concentrated in a relatively small area, extended droughts can affect the level of the water table. With decreased rainfall, the water table will naturally drop. Most public water wells draw from the deep aquifers and typically are not negatively affected. However, those wells serving an individual household are comparatively shallow and are more susceptible to a dropping water table, especially when located near a municipal well. Nearly two-thirds of county residents receive their drinking water from a municipal system and the remaining one-third from a private well (Table 5-25).

**Table 5-25. Source of Drinking Water; Jefferson County: 2006**

	<b>Number of Residents</b>	<b>Percent of Total</b>
Public well	29,793	39.3
Private well	45,748	60.7
<b>Total</b>	<b>75,767</b>	<b>100</b>

Source: Estimated from population estimates prepared by Wisconsin Department of Administration, Demographic Service Center

## 15. WILDLAND FIRE

### PROFILE

A wildland fire is an uncontrolled fire burning natural vegetation and potentially buildings and other structures. A wildland fire can occur in a large forested area, woodlot, grassland, roadside ditch, or marsh.

Wildland fires can be ignited by lightening, human carelessness, and arson. In Wisconsin, human carelessness is the leading ignition source.

### HISTORY OF PAST OCCURRENCES

Because the majority of Jefferson County is in some form of agriculture, there have been few instances of wildland fires. Those wildland fires that have started are relatively small and contained comparatively quickly. Larger fires that do occur, often occur in marsh areas.

### VULNERABILITY ASSESSMENT

**Effects on Facilities** – With the exception of some utility infrastructure, no critical facilities are vulnerable to a wildland fire.

**Effects on Population Groups** – wildland fires do not negatively affect any population group.

**Effects on Economic Sectors** – Wildland fires do not negatively affect any of the economic sectors in Jefferson County.

It is estimated that direct costs for fighting a five acre grass fire is in the range of \$1,500 to \$4,500. Costs related to a fire exceeding 25 acres would be in the range of \$10,000 to \$25,000.

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## 16. SUMMARY OF RISK BY JURISDICTION

Table 5-26 presents a summary of risk for each jurisdiction in Jefferson County.

**Table 5-26. Summary of Risk by Jurisdiction: 2012**

	Dam Failure	Flooding [2]	Dense Fog	Tornado	Hail-storm	Thunder-storm	Winter Storms	Temp. Extremes	Drought	Wildland Fire
<b>Town</b>										
Aztalan	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Cold Spring	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Concord	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Farmington	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Hebron	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Ixonia	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Jefferson	Medium	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Koshkonong	Medium	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Lake Mills	Medium	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Milford	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Oakland	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Palmyra	Medium	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Sullivan	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Sumner	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Waterloo	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Watertown	Medium	High	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
<b>Village</b>										
Cambridge [1]	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Johnson Creek	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Lac La Belle [1]	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Palmyra	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Sullivan	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
<b>City</b>										
Fort Atkinson	Low	High	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Jefferson	Low	High	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Lake Mills	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Waterloo	Low	High	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Watertown [1]	Medium	High	Low	Medium	Medium	Medium	Medium	Medium	Low	Low
Whitewater [1]	Low	Medium	Low	Medium	Medium	Medium	Medium	Medium	Low	Low

Notes:  
 1. Municipality located in Jefferson County and another county  
 2. See Section 6 of this chapter for a detailed loss estimates.

## 17. SUMMARY OF DAMAGE ESTIMATES

Table 5-27 lists damage estimates for the various natural hazards reviewed in this chapter.

**Table 5-27. Damage Estimates for Natural Hazards; Jefferson County**

Natural Hazard	Damage Estimate
Dam Failure	Unknown
Flooding [1]	\$13.3 million (maximum)
Ice Shoves	\$1,000
Fog [2]	0
Tornado/High Wind	\$375,000
Hail Storms [2]	\$5,000
Thunderstorm [2]	\$20,000 property; \$2,000 crop
Winter Storms [2] [3]	0
Extreme Temperature – heat	0
Extreme Temperature – cold	0
Drought - short-lived	0
Drought - long-lived	0 property; \$100,000-\$200,000 crop
Wildland fire - 25 acres or more	\$10,000-\$20,000
Wildland fire - less than 25 acres	\$1,500-\$4,500

Notes: 1. Based on a 100-year flood  
 2. Estimates do not include damage to motor vehicle or other accident-related costs  
 3. Estimate does not include snow removal costs. These are included in local government budgets.

# MITIGATION STRATEGY

## 1. CHAPTER OVERVIEW

This chapter is intended to identify common mitigation strategies for each of the natural hazards reviewed in this plan and potential funding sources for carrying out mitigation activities. The bulk of the chapter is devoted to listing goals, objectives, and policies along with activities that apply broadly to the county and civil divisions. Where warranted, special programs or projects or activities that apply to a single jurisdiction are also listed.



## 2. TYPES OF POTENTIAL MITIGATION STRATEGIES

Mitigation strategies can be grouped into six broad categories:

- ◆ Prevention
- ◆ Property protection
- ◆ Public education and awareness
- ◆ Natural resource protection
- ◆ Emergency services
- ◆ Structural projects

Examples are listed below for each of the natural hazards addressed in this plan.

### Dam Failure

- ◆ Remove dams that don't serve a useful purpose
- ◆ Require the preparation of emergency action plans
- ◆ Ensure that emergency action plans are current
- ◆ Ensure that dam inspections are conducted as required by state law
- ◆ Include a dam failure in emergency planning exercises
- ◆ Minimize the level of development in a dam's hydraulic shadow in an effort to minimize damage resulting from a dam failure

### Chapter Contents

1. Chapter Overview
2. Types of Potential Mitigation Strategies
3. Existing Mitigation Strategies
4. Funding Sources
5. Review of Capabilities
6. Goals, Objectives, Policies, and Activities

### Key Terms in This Chapter

**Community Rating System (CRS)** – A voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum National Flood Insurance Programs requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from qualified community actions.

**Goal** – A statement that describes a desired condition to be achieved sometime in the future. A goal is often broad in scope, not easily measurable, and long-term in nature.

**Objective** – A specific and usually measurable intermediate end that is achievable and make progress toward a goal.

**National Flood Insurance Program** – A Federal program created in 1968 under which flood-prone areas are identified and flood insurance is made available to the owners of the property in participating communities.

**Policy** – A predetermined course of action or specific rule that an organization adopts and uses in decision-making and which when applied will help to achieve one or more of its goals or objectives.

**Repetitive loss community** – A community with one or more repetitive loss properties.

**Repetitive loss property (RLP)** – For purposes of the Community Rating System, a property for which two or more National Flood Insurance Program losses of at least \$1,000 each have been paid within any 10-year rolling period since 1978.

**Severe residential loss (SRL) property** – A residential property (1) that has at least four NFIP claim payments over \$5,000 each, when at least two such claims have occurred within any ten-year period, and the cumulative amount of such claims payments exceeds \$20,000; or (2) or which at least two separate claims payments have been made with the cumulative amount of the building portion of such claims exceeding the value of the property, when two such claims have occurred within any 10-year period.

**Safe room** – An above ground room within a building (most often homes) that is specifically designed to withstand high winds and provides occupants a safe refuge from tornadoes, hurricanes, or other high-wind events.

**Strategy** – An action or a group of actions intended to achieve a goal or objective.

**Flooding**

- ◆ Continue to enforce floodplain regulation and strengthen requirements when appropriate
- ◆ Limit development in the floodplain through local floodplain regulations or zoning
- ◆ Provide dryland access through flood-prone areas
- ◆ Retrofit legal nonconforming buildings that do not meet floodplain regulations (e.g., elevating, floodproofing)
- ◆ Purchase repetitive loss properties and remove structures (i.e., demolition or relocation)
- ◆ Raise the surface of local roads above 50-year flood elevations and arterials above 100-year flood elevations
- ◆ Enlarge the cross-section of culverts and bridges when they do not adequately carry anticipated flood flows
- ◆ Prohibit basements in new subdivisions where flooding from stormwater could be problematic
- ◆ Clean drainageways to allow a free flow of water
- ◆ Minimize the amount of impervious surfaces in a watershed so that stormwater can soak into the ground rather than contributing to flood water
- ◆ Maintain appropriate water rescue equipment
- ◆ Develop and implement appropriate evacuation procedures in flood-prone area
- ◆ Install gaging stations to better understand surface water flow regimes
- ◆ Construct stormwater facilities (e.g., detention and retention basins) to help manage stormwater
- ◆ Take steps to upgrade the National Flood Insurance Program requirements

**Ice Shoves**

- ◆ Limit development along lakeshores prone to ice shoves

**Fog**

- ◆ Identify those roadways where fog is localized and install appropriate signage
- ◆ Install automated visibility warning systems to detect reduced visibility conditions

**Tornado / High Winds**

- ◆ Construct storm shelters in campgrounds and mobile home parks
- ◆ Bury electrical and telephone lines and other utility cables
- ◆ Continue to enforce building codes and strengthen requirements when appropriate
- ◆ Include safety strategies for severe weather events in driver education classes

**Severe Storms/Hail**

- ◆ Encourage property owners to use building products (e.g., roofing, siding) resistant to hail damage

**Snow Storms**

- ◆ Bury electrical and telephone lines and other utility cables
- ◆ Install temporary snow fences along road ways that have experienced blowing and drifting snow

- ◆ Continue to enforce building codes and strengthen requirements when appropriate
- ◆ State and local governments can produce and distribute information to motorists relating to severe winter weather hazards
- ◆ Include safety strategies for severe weather events in driver education classes

#### **Extreme Temperature**

- ◆ Establish heating and cooling centers for vulnerable populations including the elderly and homeless
- ◆ Encourage local residents to contact friends, neighbors, and other family members during periods of extreme temperature

#### **Drought**

- ◆ Adopt local ordinances for prioritizing water usage during drought emergencies
- ◆ Develop public wells in deep aquifers
- ◆ Maintain enough water storage capacity in public water systems
- ◆ Protect wetlands from development
- ◆ Encourage the use of water-saving devices in homes and other places where water is used
- ◆ Encourage farmers to take out crop insurance
- ◆ Protect important aquifer recharge areas from inappropriate development

#### **Wildland Fire**

- ◆ Maintain appropriate fire fighting equipment to effectively respond to wildland fires
- ◆ Ensure that new homes are well protected from wildland fires and have multiple routes of ingress and egress
- ◆ Provide homeowners with information on how to create a defensible space around structures
- ◆ Bury electrical and telephone lines and other utility cables
- ◆ Institute measures to reduce soil erosion following a wildland fire event
- ◆ Local governments in rural areas can require the issuance of burn permits
- ◆ Encourage property owners to conduct controlled burns as a means of controlling fuel buildup

### **3. EXISTING MITIGATION STRATEGIES**

#### **NATIONAL FLOOD INSURANCE PROGRAM**

In 1968, Congress created the National Flood Insurance Program (NFIP)<sup>1</sup> to identify and map flood-prone communities and provide flood insurance to those property owners within a community that has adopted floodplain management regulations that meet minimum requirements. The Federal Insurance and Mitigation Administration, a division of the Federal Emergency Management Agency (FEMA), administers this Federal program. Over 21,000 communities across the United States and its territories now participate in the NFIP.

Jefferson County participates in the NFIP along with each of the cities and villages (Table 6-1). In 1971, the city of Fort Atkinson became the first jurisdiction in the county to participate. In a number of instances, revised flood

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<sup>1</sup> The National Flood Insurance Program was created with the passage of the National Flood Insurance Act of 1968.

insurance rate maps (FIRMs) have been adopted as more accurate information became available.

Beginning in 2006, the Federal Emergency Management Agency, in collaboration with the Wisconsin Department of Natural Resources, initiated a multi-year effort to create and adopt digital FIRMs for the entire county. Those FIRMs became effective June 2, 2009.

**Table 6-1. Participating Jurisdictions in the National Flood Insurance Program**

Jurisdiction	Number	Initial FIRM Adopted	Current FIRM Effective Date
Cambridge, village [1]	550080	6/4/1980	6/02/2009
Fort Atkinson, city	555554	8/6/1971	6/02/2009
Jefferson, city	555561	5/26/1972	6/02/2009
Jefferson County, unincorporated	55055	9/29/1978	6/02/2009
Johnson Creek, village	550194	9/30/1982	6/02/2009
Lac La Belle, village [1]	550565	1/18/1983	6/02/2009
Lake Mills, city	550195	7/2/1987	6/02/2009
Palmyra, village	550196	5/3/1990	6/02/2009
Sullivan, village	550197	9/18/1985	6/02/2009
Waterloo, city	550198	9/18/1985	6/02/2009
Watertown, city [1]	550107	4/1/1981	6/02/2009
Whitewater, city [1]	550200	6/1/1982	6/02/2009

Source: Federal Emergency Management Agency (<http://www.fema.gov/fema/csb.shtm>)

Notes: 1. Municipality located in Jefferson County and another county

Participation in the NFIP is based on an agreement between local communities and the federal government that states, if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas, the federal government will make flood insurance available within the community as a financial protection against flood losses.

The Jefferson County floodplain ordinance, adopted in August of 1978, is based on a model established by the Wisconsin Department of Natural Resources. Recently, the DNR drafted a new model ordinance. All existing floodplain ordinances need to meet the requirements of the new model.

Because Jefferson County and each of the cities and villages participate in the NFIP, property owners are able to purchase flood insurance, including those not located within a mapped floodplain area. Flood insurance pays even when no state or federal disaster is declared. Historically, federal disaster declarations have been issued in less than 50 percent of the flooding incidents.

There are two types of flood insurance. The first is a policy that insures the physical structure and the second is a policy that covers the content of the building. The standard flood insurance policy provides coverage for one building per policy. The only exception is 10 percent coverage for a detached garage. However, the total payment for flood damage to the detached garage and the house together cannot exceed the building policy limit. For coverage to apply, the garage can only be used for parking and storage. All other buildings on the

premises need separate coverage. The maximum allowable limits are \$250,000 for residential properties and \$500,000 for commercial properties.

Contents are not automatically included. If contents coverage is desired, a specific amount must be named and a separate premium charged. Contents coverage limits are \$100,000 for residential policies and \$500,000 for commercial policies.

Building property coverage includes:

- ◆ The insured building and its foundation
- ◆ The electrical and plumbing systems
- ◆ Central air conditioning equipment, furnaces, and water heaters
- ◆ Refrigerators, cooking stoves, and built-in appliances such as dishwashers
- ◆ Permanently installed carpeting over an unfinished floor
- ◆ Permanently installed paneling, wallboard, bookcases, and cabinets.
- ◆ Window blinds
- ◆ Detached garages (up to 10 percent of building property coverage)
- ◆ Debris removal

Personal property coverage includes:

- ◆ Personal belongings such as clothing, furniture, and electronic equipment
- ◆ Curtains
- ◆ Portable and window air conditioners
- ◆ Portable microwave ovens and portable dishwashers
- ◆ Carpets not included in building coverage (see above)
- ◆ Clothes washers and dryers
- ◆ Food freezers and the food in them
- ◆ Certain valuable items such as original artwork and furs (up to \$2,500)

The cost of an annual regular flood insurance policy varies depending on the site location, age of the building, design of the building, and elevation of the building if located in a flood hazard area

Sanitary sewer backups are not covered. However, many homeowners policies do have riders to cover sewer back-ups. Sewer back-up riders can cost as little as \$30 per year.

While flood insurance coverage can significantly reduce the potential economic loss to a landowner in case of a flood disaster, flood insurance also helps reduce the cost of disaster aid to the general public. It has been shown that every \$3 paid in flood insurance claims saves \$1 in disaster assistance payments.

At the beginning of 2012, there were more 345 insurance policies in Jefferson County with coverage of more than \$63.2 million (Table 6-2). Premiums totaled \$298,150 for those policies.

Since 2007, the number of policies increased by nearly 100 policies (246 to 345) and the total coverage doubled (\$33.7M to \$63.2M).

***Federal disaster declarations are issued in less than 50% of the flooding incidents.***

**Table 6-2. Flood Insurance Policies: 2012 (February 29, 2012)**

Jurisdiction	Policies	Total Coverage	Total Premiums
Cambridge, village [1]	6	\$1,641,300	\$6,280
Fort Atkinson, city	28	\$5,979,100	\$27,711
Jefferson, city	39	\$7,479,300	\$43,912
Jefferson County, unincorporated	206	\$33,334,600	\$179,158
Johnson Creek, village	0	0	0
Lac La Belle, village [1]	0	0	0
Lake Mills, city	6	\$1,427,500	\$2,044
Palmyra, village	1	\$175,000	\$324
Sullivan, village	0	0	0
Waterloo, city	11	\$1,528,400	\$7,244
Watertown, city [1]	34	\$7,863,900	\$24,026
Whitewater, city [1]	14	\$3,810,500	\$7,451
<b>Total</b>	<b>345</b>	<b>\$63,239,600</b>	<b>\$298,150</b>

Source: Federal Emergency Management Agency ([http://bsa.nfipstat.com/reports/1040\\_200611.htm](http://bsa.nfipstat.com/reports/1040_200611.htm))

Notes: 1. Municipality located in Jefferson County and another county

### COMMUNITY RATING SYSTEM

The Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum requirements of the National Flood Insurance Program (NFIP). Because flood risk has been reduced, policy holders in participating communities enjoy lower flood insurance premiums than those located in a community that is not part of CRS. Flood insurance premium rates are discounted as shown in Table 6-3 based on a community's rating. A Class 1 community receives a 45 percent premium discount, while a Class 9 community receives a 5 percent discount. A Class 10 community is not participating in CRS and receives no discount. The CRS classes for local communities are based on 18 activities, organized under four categories: (1) public information, (2) mapping and regulations, (3) flood damage reduction, and (4) flood preparedness. Nationwide, 1,049 communities are part of CRS, or roughly 5 percent of those who are eligible.

In Jefferson County, the city of Watertown is the only jurisdiction that is part of CRS (Table 6-4). All of the other communities have a CRS rating of 10.

### PROPERTY ACQUISITION AND STRUCTURE REMOVAL

Given the large number of buildings located in the 100-year floodplain, Jefferson County began a program in 1988 to acquire flood-prone properties with the intent of removing the buildings either through demolition or relocation. Since then, Jefferson County has acquired and demolished 91 residential structures located in flood-prone areas (Table 6-5).

**Table 6-3. Insurance Premium Reductions for Communities in the Community Rating System**

CRS Rating	Special Flood Hazard Area	Non-Special Flood Hazard Area
1	45%	10%
2	40%	10%
3	35%	10%
4	30%	10%
5	25%	10%
6	20%	10%
7	15%	5%
8	10%	5%
9	5%	5%
10	0	0

**Table 6-4. CRS Rating for Communities in Jefferson County: 2012**

Jurisdiction	CRS Rating
Jefferson County	10
City of Fort Atkinson	10
City of Jefferson	10
City of Lake Mills	10
City of Waterloo	10
City of Watertown [1] [2]	7
City of Whitewater [1]	10
Village of Cambridge [1]	10
Village of Johnson Creek	10
Village of Lac La Belle [1]	10
Village of Palmyra	10
Village of Sullivan	10

Notes: 1. Municipality located in Jefferson County and another county  
 2. Watertown enrolled in the CRS in October 1991 and has maintained its current rating since October 2001.

**Table 6-5. Flood-Prone Properties Acquired by Jefferson County: 1988–2012**

Municipality / Tax Key Number	Location	Acres	Date Acquired
<b>Town of Aztalan</b>			
002-0714-2341-001	Marobehl Lane	0.300	12-18-2009
<b>Town of Ixonia</b>			
012-0816-3422-004	CTH F	0.490	10-04-2010
<b>Town of Koshkonong</b>			
016-0513-1333-000	-	1.750	10-26-1995
016-0513-1333-001	-	0.250	10-26-1995
016-0513-1444-001	-	0.250	10-05-1988
016-0513-3413-023	N355 Oxbow Bend	-	-
016-0513-3413-028	N327 Oxbow Bend	-	-
016-0514-0541-003	STH 106	2.730	05-20-2010
016-0514-0821-001	N2098 Vets Lane	-	-
016-0514-0821-004	Vets Lane	0.250	07-15-2010
016-0514-1811-003	Blackhawk Island Road	0.250	08-31-2006
016-0514-1811-006	-	0.280	01-21-1997
016-0514-1811-008	Blackhawk Island Road	0.280	07-30-2010
016-0514-1811-015	-	0.200	04-18-1996
016-0514-1813-000	Blackhawk Island Road	0.444	05-20-2010
016-0514-1813-003	-	0.970	01-21-1997
016-0514-1813-007	Blackhawk Island Road	0.310	01-13-2010
016-0514-1813-020	Blackhawk Island Road	0.189	08-03-2004
016-0514-1813-021	W7085 Blackhawk Island Road	-	-
016-0514-1813-022	-	0.440	08-20-1998
016-0514-1823-006	W7253 Blackhawk Island Road	-	-
016-0514-1823-008	-	0.650	10-26-1995
016-0514-1823-010	-	0.250	09-12-1997
016-0514-1823-012	-	0.256	09-12-1997
016-0514-1824-000	-	0.230	11-28-2005
016-0514-1824-001	-	0.273	03-26-1999
016-0514-1824-002	Blackhawk Island Road	0.574	12-26-2009
016-0514-1824-004	-	0.296	04-05-1999
016-0514-1824-006	Blackhawk Island Road	0.740	07-30-2010
016-0514-1824-008	-	0.330	09-18-1995
016-0514-1824-009	Blackhawk Island Road	0.290	10-04-2010
<b>Town of Oakland</b>			
022-0613-0742-053	Sleepy Hollow Road	0.210	04-28-2010
028-0513-1141-004	North Shore Road	0.920	12-18-2009
028-0513-1141-007	North Shore Road	0.331	01-20-2010
028-0513-1141-013	N1852 North Shore Road	-	-
028-0513-1141-021	Lamp Road	1.260	03-19-2010
028-0513-1141-023	LAMP RD	0.540	05-21-2010
028-0513-1141-032	W7772 Lamp Road	-	-
028-0513-1141-035	W7764 Lamp Road	-	-
028-0513-1142-030	WILLOW RD	0.200	12-19-2009
028-0513-1142-051	WILLOW RD	0.055	07-15-2010
028-0513-1142-052	W7836 Willow Road	-	-
028-0513-1144-015	W7738 Lamp Road	-	-
028-0513-1144-020	W7724 Lamp Road	-	-
028-0513-1144-024	-	0.130	07-15-2010

Continued

**Table 6-5. Flood-Prone Properties Acquired by Jefferson County: 1988—2012**

Municipality / Tax Key Number	Location	Acres	Date Acquired
<b>Town of Oakland - continued</b>			
028-0513-1144-025	W7710 Lamp Road.	-	-
028-0513-1144-027	W7706 Lamp Road.	-	-
028-0513-1233-001	Lamp Road	0.107	07-15-2010
028-0513-1233-007	Lamp Road	0.220	03-10-2008
028-0513-1233-010	Lamp Road	0.240	10-02-2003
028-0513-1233-014	Lamp Road	0.220	09-09-2010
028-0513-1233-014	W7668 Lamp Road	-	-
028-0513-1233-017	W7674 Lamp Road	-	-
028-0513-1314-001	-	0.370	06-07-1999
028-0513-1314-002	-	0.150	06-07-1999
028-0513-1314-004	-	0.440	12-23-1996
028-0513-1314-005	-	0.360	06-10-1996
028-0513-1314-009	-	0.440	01-10-1997
028-0513-1314-010	-	0.440	09-08-1998
028-0513-1314-013	-	0.500	03-31-1997
028-0513-1314-014	-	0.310	09-18-1995
028-0513-1314-015	-	0.310	12-16-1996
028-0513-1314-017	-	0.070	09-12-1997
028-0513-1314-018	-	0.070	09-12-1997
028-0513-1314-020	-	0.270	03-31-1997
028-0513-1314-021	-	0.100	06-10-1996
028-0513-1331-002	-	3.920	02-27-1996
028-0513-1331-009	-	0.330	10-28-1996
028-0513-1331-011	W7604 Blackhawk Island Road	-	-
028-0513-1331-013	-	0.275	02-12-1999
028-0513-1331-014	-	0.275	12-01-1997
028-0513-1331-015	-	0.331	02-27-1996
028-0513-1331-016	W7632 Blackhawk Island Road	-	-
028-0513-1331-018	Blackhawk Island Road	0.448	07-30-2010
028-0513-1331-019	-	0.122	06-26-1997
028-0513-1332-002	-	0.600	12-17-1997
028-0513-1332-003	-	0.590	04-03-1997
028-0513-1333-002	-	0.450	11-16-1995
028-0513-1333-003	-	0.430	06-30-1997
028-0513-1333-007	W7706 Blackhawk Island Road	-	-
028-0513-1333-009	W7714 Blackhawk Island Road	-	-
028-0513-1333-013	-	0.350	09-18-1995
028-0513-1333-014	W7734 Blackhawk Island Road	-	-
028-0513-1333-015	W7740 Blackhawk Island Road	-	-
028-0513-1342-009	Blackhawk Island Road	0.240	11-24-2003
028-0513-1342-010	-	0.230	09-18-1995
<b>Town of Watertown</b>			
032-0815-1723-012	River View Road	0.330	12-15-2009
032-0815-2411-013	N2527 Rock River Paradise	-	-
032-0815-2411-016	W2545 Rock River Paradise	-	-
032-0815-2421-004	-	0.526	07-30-2010
032-0815-2421-005	Rock River Paradise	0.321	07-30-2010

Source: Jefferson County Emergency Management

## STORMREADY

StormReady is a national voluntary program, administered through local National Weather Service offices that encourages communities to take a proactive approach in developing plans to improve local hazardous weather operations and public awareness for all types of local severe weather threats<sup>2</sup>. It is intended to give communities the skills and education needed to cope with and manage potential weather-related disasters, before and during the event. By participating in StormReady, local agencies can earn recognition for their jurisdiction by meeting criteria established by the National Weather Service in partnership with federal, state, and local emergency management professionals.

The program does not replace any of the various federally or state-funded hazard mitigation programs, rather, it compliments them. The entire community - from the mayor, emergency managers, to business leaders and civic groups - can take the lead on becoming StormReady. Education and communication are a key part of the StormReady program. The Wisconsin StormReady Advisory Board, comprised of National Weather Service personnel and state, regional, and county emergency managers, reviews applications and visits the jurisdictions to verify the steps made in the process to become StormReady. The designation is only valid for two years.

The city of Lake Mills was initially certified in 2001, the first community in Wisconsin to receive the StormReady designation. The city of Whitewater, is the only other jurisdiction in the county to be certified (Table 6-6).

## NOAA WEATHER RADIO

NOAA Weather Radio (NWR) is a nationwide network of radio stations broadcasting continuous weather information direct from a nearby National Weather Service office. NWR broadcasts National Weather Service warnings, watches, forecasts, and other hazard information 24 hours a day. It is also used to broadcast warning and post-event information for all types of hazards - both natural events (e.g., severe weather, flooding) and man-made events (e.g., Amber Alerts, toxic, chemical, and biological releases, terrorist attacks). The radios can be programmed to receive information specific to a certain geographic area and sound an alarm to alert users of approaching dangerous weather. NWR is the primary actuator of the Federal Communications Commission's Emergency Alert System (EAS).

***The NOAA Weather Radio network provides authoritative weather and emergency information to the public.***

As of June, 2012, the NWR network included 1,000 stations covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories.

The Milwaukee/Sullivan Weather Service Forecast office is located in the town of Sullivan and serves 20 counties in south-central and southeast Wisconsin. NOAA Weather Radios are available through retail stores that sell electronic appliances, marine supply stores, truck stops, cable shopping networks, mail order catalogs, and the Internet.

**Table 6-6. StormReady Jurisdictions; Wisconsin 2012 (June)**

Jurisdiction	
Counties	
Lincoln	date not known
Oneida	date not known
Racine	12/08/2005
Communities	
Belleville	7/13/2004
Cedarburg	9/10/2001
Dousman	1/13/2005
Hillsboro	6/24/2008
Lake Mills	5/14/2001
Viroqua	9/28/2004
Waupaca	date not known
Whitewater	8/22/2001

Source: [www.stormready.noaa.gov/communities.htm](http://www.stormready.noaa.gov/communities.htm)

<sup>2</sup> More information about StormReady is available from the Milwaukee/Sullivan Weather Service Forecast office. [www.crh.noaa.gov/mkx/?n=stormready-mkx](http://www.crh.noaa.gov/mkx/?n=stormready-mkx)

## URBAN STORMWATER MANAGEMENT ORDINANCES

New urban development brings with it increases in impervious surfaces such as rooftops, driveways, and streets. As areas develop into urban land uses, there is an increase in both volume and rate of runoff. To control the rate of runoff and potential downstream increases in peak flood elevations, some communities require detention of stormwater.

Jefferson County has adopted a stormwater management ordinance and each of the cities and villages have an ordinance as well.

## EROSION AND SEDIMENT CONTROL ORDINANCES

Sediment from construction sites can deposit in local streams causing blockages that can result in potentially higher flood elevations during storm events. To control construction site erosion from construction sites, the Wisconsin Department of Commerce has adopted construction site erosion control regulations through the state Uniform Building Code. State erosion control regulations are enforced through the local building inspectors. In addition to the state regulations, the city of Watertown has adopted a citywide construction erosion control ordinance for new developments.

## SHORELAND ZONING

Under Wisconsin Administrative Code NR 115, counties are required to adopt a shoreland zoning ordinance that controls development within the shoreland<sup>3</sup> of lakes and streams. The shoreland-zoning ordinance establishes minimum lot sizes—10,000 square feet on public sanitary sewer and 20,000 square feet on private sanitary systems. Buildings must be setback 75 feet from the ordinary high-water mark and comply with local floodplain zoning ordinances. The ordinance regulates the cutting of trees and shrubbery within 35 feet of the ordinary high-water mark and prohibits more than 30 feet of every 100 feet to be removed. Primary uses in the shoreland-zoning district are limited to open space, agricultural, and maintenance of piers, roadways, and public utilities. These development standards follow land when it is annexed into a city or village, unless the municipality has adopted an ordinance as strict as the county ordinance. Jefferson County has adopted an ordinance consistent with state requirements. No city or village in Jefferson County has adopted a shoreland zoning ordinance.

## SHORELAND WETLAND ZONING

Under Wisconsin Administrative Code NR 115, counties are required to adopt a shoreland wetland zoning ordinance that creates a shoreland wetland zoning district to control the development of wetlands that are two acres or more in size within the shoreland area. Permitted uses in the shoreland wetland district are limited to:

- ◆ recreation (hiking, fishing, hunting, swimming, and boating)
- ◆ agriculture
- ◆ public roadways and railroad lines
- ◆ public utilities
- ◆ non-residential building used for aquaculture

These development standards follow land when it is annexed into a city or village, unless the municipality has adopted an ordinance as strict as the county ordinance. Jefferson County has adopted an ordinance consistent with state

<sup>3</sup> A shoreland is defined as land within the following distances from the ordinary high-water mark of navigable waters: 1000 feet from a lake, pond, or flowage; and 300 feet from a river or stream or the landward side of the floodplain, whichever is greater. (NR 115.03 (8))

requirements. No city or village in Jefferson County has adopted a shoreland zoning ordinance.

**COMPREHENSIVE PLANS**

In 1999, the Governor signed legislation that created a new framework for comprehensive planning in Wisconsin. By January 1, 2010, any community wanting to regulate land use must have an adopted comprehensive plan that meets minimum state requirements. Although state requirements do not require that natural hazard planning be a part of a comprehensive plan, communities do have an opportunity to consider natural hazards when devising land use plans and goals, objectives, and policies relating to land use and environmental management. Table 6-7 shows the status of these plans in the county.

**Table 6-7. Status of Comprehensive Plans in Jefferson County: 2012 (June)**

Jurisdiction	Status
Jefferson County	Sept. 8, 2012; February 14, 2012
City of Fort Atkinson	July 2008
City of Jefferson	March 18, 2008
City of Lake Mills	February 17, 2009
City of Waterloo	August 7, 2008
City of Watertown [1]	2000; November 17, 2009
City of Whitewater [1]	February 2, 2010
Village of Cambridge [1]	January 2006
Village of Johnson Creek	January 26, 2009
Village of Lac La Belle [1]	Not known
Village of Palmyra	May 19, 2008; January 16, 2012
Village of Sullivan	November 10, 2009

Source: Verified with community February, 2007

Notes: 1. Municipality located in Jefferson County and another county

**FARMLAND PRESERVATION PROGRAM**

The state of Wisconsin created the Wisconsin Farmland Preservation Program in 1977 to support the efforts of counties to preserve agricultural resources. If a county has an approved agricultural preservation plan that meets the standards of Chapter 91, Wisconsin Statutes, farmland owners are eligible to receive a state income tax credit.

In October 1999, the county board adopted the *Jefferson County Agricultural Preservation and Land Use Plan*. The agricultural preservation goals of the plan are to:

- ◆ Preserve the rural character and aesthetic quality of Jefferson County.
- ◆ Provide equity and fairness to owners of land with comparable resources and location characteristics.
- ◆ Minimize nonagricultural development on prime agricultural soils.
- ◆ Maintain the integrity of agricultural districts allowing for accepted agricultural practices.

The County adopted a new farmland preservation plan on September 12, 2011.

An additional benefit of agricultural preservation is the long-term protection of natural floodplains and flood storage. Sites managed for agricultural

preservation will have minimal urban development. Under the agricultural preservation program, the county has established an A-3 Agricultural/Rural Residential Zoning District that limits the number of residential lots in agricultural areas to a maximum of three 2-acre lots per agricultural parcel. The result of the county's agricultural zoning is that much of the floodplain and flood storage areas will be preserved from urban development and increases in flood elevations due to upstream urbanization will be minimized.

## ENVIRONMENTAL CORRIDORS

As part of its agricultural preservation and land use plan, Jefferson County designated certain land as environmental corridors where additional preservation policies and development standards apply. The environmental corridor protection effort is intended to:

- ◆ protect and preserve an environmental corridor system consisting of wetlands, floodplains, and steeply sloped glacial features,
- ◆ protect groundwater and surface water quality, and
- ◆ discourage development in areas that possess valuable natural resource characteristics and wildlife habitats.

Environmental corridors include the following area:

- ◆ Publicly-owned park, recreation, and conservancy lands.
- ◆ Water bodies and wetlands mapped as part of the wetland inventory conducted by the Wisconsin Department of Natural Resources.
- ◆ 100-year floodplains based on Federal Emergency Management Agency (FEMA) maps.
- ◆ Contiguous woodlands over 10 acres in size.
- ◆ Lands with slopes in excess of 20 percent.

Under the county's environmental corridor overlay district zoning, urban development is limited to one dwelling unit per 10 acres. Land disturbances associated with nonagricultural development are prohibited on slopes greater than 20 percent. No buildings should be constructed within 75 feet of wetlands designated by the Department of Natural Resources or navigable bodies of water. Within Jefferson County, 16,000 acres of environmental corridor is in public ownership. Approximately 55,000 acres, or 15.5 percent of the county, is wetland and/or land within the 100-year floodplain. The environmental corridor district provides another tier of protection for floodplains and flood storage areas such as wetlands. The result of the corridor program will be additional prohibition of building in flood-prone areas and greater protection of natural flood storage, minimizing future increases in flood elevations.

## TORNADO SIRENS

Jefferson County has a variety of warning devices/methods. There is an outdoor warning siren system comprised of 41 sirens that reach about 37 percent of the county's population. This system is maintained by each municipality and is tested once a month throughout the year. The 911 Center activates all sirens with the exception of Fort Atkinson, Waterloo, and Fort Atkinson.

Annex B of the Jefferson County Emergency Operations Plan identifies the procedures and resources used to provide interagency communications between responders. The annex also identifies the county's procedures and resources used to provide warning to all county residents in the event of a disaster.

## ROADWAY CLOSURES DURING FLOOD EVENTS

In some of the larger flood events, roadways in the county are blocked with water. This can create a potentially dangerous scenario for drivers, limit access

Tornado Siren



to areas within the county, or cause travel delays. To deal with roadway closings, there are two categories of alternatives. The first are alternatives to modify the roadway (e.g. bridge replacement and elevate roadway) to prevent flooding. The second category includes maintenance of a system to actively close roadways when flooding occurs and identify alternate routes for emergency traffic.

**Bridge Replacement.** In some cases, an alternative to road inundation may be to increase the hydraulic opening of the bridges to allow less backwater on the upstream side of the bridge. The Flood Insurance Study does not provide enough information for most bridges to determine if the bridge is causing the roadway inundation. From the available information, it appears that most of the bridges in Jefferson County are inundated by backwater from downstream areas, and the bridge plays little roll in the roadway inundation. At this time, an active bridge replacement program with the sole purpose of reducing the frequency of inundation is recommended. When bridges are scheduled for replacement due to age or roadway expansion, the bridge designers should look at the effect of the bridge design on the roadway overtopping. If feasible, the new bridge should be replaced with a structure that would meet the criteria outlined in Table 6-8.

The Wisconsin Department of Transportation (WDOT) provides design criteria for structure crossings a stream in the Facilities Development Manual, Procedure 13-10-1. Major structures, such as bridges and box culverts, are designed using a process of selecting a design frequency which best produces a balance between structure costs and the cost of potential flood-related damages or risks. Structures in new locations are generally designed to accommodate the 100-year event without increasing the upstream flood stages over existing conditions. Replacement structures are generally designed not to increase the headwater elevation from existing conditions.

In some situations, structure sizes may be increased to reduce the upstream flood elevations. In those cases, if the existing structure is causing upstream flood storage, the flows will need to be re-evaluated to determine if the new structure will increase downstream flows and stages. Under Wisconsin Administrative Code NR 116, if a new bridge results in upstream or downstream increases in the flood elevation greater than 0.01 feet, easements from the affected landowners are required. Where feasible, roadway surfaces should be designed to provide emergency access during flood events. The recommended criterion for flood protection, based on roadway classification, is outlined in Table 6-6.

**Elevation of Roadways** An alternative to roadway inundation is to raise the pavement surface to above the regional flood elevation. Placing additional fill along the roadway corridor would raise the road surface. While this alternative would help maintain public access, the raising of the road surface may increase flood elevations upstream of the fill. The fill would need to be structurally designed to withstand the hydraulic pressures of the floodwaters. As with bridge replacement, wide-scale elevation of roadway surfaces is not recommended at this time. As roadway maintenance is scheduled, the designers should consider the alternative of roadway elevation. Roadways should only be raised where the project is cost effective.

**Road Closures During Flooding** Drowning is the number one cause of flood deaths. More people drown in their cars than anywhere else. During flood events, the depth of the water over road surfaces is difficult to predict. Many

**Table 6-8. Recommended Roadway Flood Protection Level**

Roadway Classification	Recommended Protection Level
Interstate and railroads	100-year flood
State & county highway	50-year flood
Local arterial	50-year flood
Minor and collector street	10-year flood

drivers enter water they think is a few inches deep, only to find themselves in the center of a flowing stream. For years, Jefferson County and the local municipalities have closed and barricaded roadways that are flooded. The Jefferson County Emergency Operations Plan (March 2000) outlines the procedures for emergency response during flood events. A coordinated system between Jefferson County Emergency Management, the Jefferson County Sheriffs Department, and local municipalities is in place to close flooded roads and reroute traffic.

**PUBLIC INFORMATION**

Information is one of the most important tools in helping people mitigate the potential impacts of natural hazards. To be effective, information needs to be available from several sources and be offered on an on-going basis.

By way of example, Table 6-9 outlines the roles of the various organizations involved in public education with regards to floodplain issues.

**Table 6-9. Organizations and Their Roles in Distributing Public Information Regarding Floodplain Management**

Organization / Activities
Federal Emergency Management Agency (FEMA) <ul style="list-style-type: none"> <li>◆ Provides information on National Flood Insurance Program (NFIP)</li> <li>◆ Provides training to insurance industry on implementation of NFIP</li> <li>◆ Provides technical information on flood mitigation activities</li> <li>◆ Maintains a national library of floodplain maps</li> </ul>
Wisconsin Emergency Management <ul style="list-style-type: none"> <li>◆ Provides information and training in emergency management including preparedness, response, recovery, and mitigation activities.</li> </ul>
Wisconsin Department of Natural Resources <ul style="list-style-type: none"> <li>◆ Provides information on National Flood Insurance Program (NFIP)</li> <li>◆ Provides technical information on flood mitigation activities</li> <li>◆ Maintains a state library of floodplain maps and flood profile models</li> <li>◆ Provides training to local zoning administrators on implementation of floodplain zoning ordinances</li> </ul>
Jefferson County Zoning and Sanitation Department <ul style="list-style-type: none"> <li>◆ Maintains local library of floodplain maps</li> <li>◆ Provides information on National Flood Insurance Program (NFIP)</li> <li>◆ Provides information on county floodplain regulations</li> </ul>
Local Insurance Agents <ul style="list-style-type: none"> <li>◆ Provides information on National Flood Insurance Program (NFIP)</li> </ul>
Local Lending Agencies <ul style="list-style-type: none"> <li>◆ Provides information on National Flood Insurance Program (NFIP). Flood insurance is required on federally-backed mortgages for properties located in a floodplain.</li> </ul>
Real Estate Agents <ul style="list-style-type: none"> <li>◆ Provides information on National Flood Insurance Program (NFIP)</li> <li>◆ Required by state law to notify buyers whether or not a structure is located in a regulatory floodplain</li> </ul>

In an effort to keep state residents informed about natural hazards, Wisconsin Emergency Management sponsors a number of public awareness campaigns, including:

- ◆ Tornado & Severe Weather Week
- ◆ Rip Current Awareness Week
- ◆ Heat Awareness Day
- ◆ Lightning Safety Week proclamations

## 4. FUNDING SOURCES

### AVAILABLE FEDERAL FUNDING SOURCES

The Federal Emergency Management Agency administers a number of programs that fund mitigation activities at the local and State level.

**Hazard Mitigation Grant Program** The Hazard Mitigation Grant Program (HMGP) provides grants to States and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. The HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

**Flood Mitigation Assistance Program** The Flood Mitigation Assistance (FMA) program was created as part of the National Flood Insurance Reform Act (NFIRA) of 1994 with the goal of reducing or eliminating claims under the National Flood Insurance Program (NFIP). FEMA provides FMA funds to assist States and communities implement measures that reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the National Flood Insurance Program.

**Pre-Disaster Mitigation Program** The Pre-Disaster Mitigation (PDM) program provides funds to states, territories, Indian tribal governments, communities, and universities for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event. Funding these plans and projects reduces overall risks to the population and structures, while also reducing reliance on funding from actual disaster declarations. PDM grants are to be awarded on a competitive basis and without reference to state allocations, quotas, or other formula-based allocation of funds.

**Repetitive Flood Claims Program** The Repetitive Flood Claims (RFC) grant program was authorized by the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004, which amended the National Flood Insurance Act of 1968. Up to \$10 million is available annually for FEMA to provide RFC funds to assist States and communities reduce flood damages to insured properties that have had one or more claims to the National Flood Insurance Program. Eligible activities include acquisition of properties, and either demolition or relocation of flood-prone structures, where the property is deed restricted for open space uses in perpetuity.

**Severe Repetitive Loss Program** The Severe Repetitive Loss (SRL) grant program was authorized by the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004, which amended the National Flood Insurance Act of 1968 to provide funding to reduce or eliminate the long-term risk of flood damage to severe repetitive loss (SRL) structures insured under the National Flood Insurance Program (NFIP). The act authorized up to \$40 million for each fiscal year 2005 through 2009.

Eligible flood mitigation project activities include floodproofing (historical properties only), relocation, elevation, acquisition, mitigation reconstruction (demolition rebuild), and minor physical localized flood control projects.

### FUNDING RECEIVED

Since 1996, Jefferson County has received more than \$18.1 million in federal funding for mitigation activities (Table 6-10).

**Table 6-10. Federal and State Funding for Mitigation Activities: 1965–2012**

Year	Jurisdiction	Amount	Funding Source	Funded Activities
1991	Jefferson County	\$108,684	Hazard Mitigation Grant Program through Presidential declaration FEMA-912-DR	Land acquisition – Flood Mitigation Program
1993	Jefferson County	\$458,635	Hazard Mitigation Grant Program through Presidential declaration FEMA-994-DR	Land acquisition – Flood Mitigation Program
1993	Jefferson County	\$509,000	Community Development Block Grant (CDBG)	Land acquisition – Flood Mitigation Program
1993	Jefferson County	\$611,900	Urban Rivers Grant Program through Wisconsin Department of Natural Resources	Land acquisition – Flood Mitigation Program
1998	Jefferson County	\$115,332	Flood Mitigation Assistance	
1999	Jefferson County	\$22,660	Flood Mitigation Assistance (FMA) program	Prepare a floodplain hazard mitigation plan
2000	Jefferson County	\$226,378	Hazard Mitigation Grant Program through Presidential declaration FEMA-1322-DR-WI	Land acquisition
2000	Jefferson County	\$975,000	Hazard Mitigation Grant Program through Presidential declaration FEMA-1332-DR-WI	Land acquisition – Flood Mitigation Program
2002	Jefferson County	\$344,582	Hazard Mitigation Grant Program through Presidential declaration FEMA-1369-DR-WI	Land acquisition – Flood Mitigation Program
2004	Jefferson County	\$300,000	Hazard Mitigation Grant Program through Presidential declaration FEMA-1526-DR-WI	Land acquisition
2005	Jefferson County	\$143,349	Flood Mitigation Assistance WI-2005-029	Land acquisition
2005	Jefferson County	\$58,900	Flood Mitigation Assistance (FMA) program	Prepare a flood mitigation plan
2005/06	Jefferson County	\$147,200	Flood Mitigation Assistance (FMA) program	Land acquisition – Flood Mitigation Program
2008	Jefferson County	\$8,774,643	Hazard Mitigation Grant Program FEMA-1768-DR-WI	Land acquisition
2008	Jefferson County	\$2,000,000	Community Development Block Grant	Land acquisition
2010	Jefferson County	\$3,318,400	Hazard Mitigation Grant Program FEMA-1933-DR-WI	Land acquisition
	Total	\$18,114,663		

Source: Jefferson County Emergency Management

## 5. REVIEW OF CAPABILITIES

This multi-jurisdictional plan covers all of the unincorporated area of Jefferson County and 11 municipalities – 5 villages and 6 cities. They all have different levels of resources and personnel that could be made available in the implementation of this plan.

Municipalities in the state are given the authority to adopt and enforce floodplain regulations. All municipalities have elected to do so. All of the municipalities also have adopted and enforce building codes.

**Table 6-11. Summary of Staff Capabilities: 2012**

	Administrator	Emergency Management Staff	Community Planner
<b>Village</b>			
Cambridge [1]	No	No	No
Johnson Creek	Yes	No	No
Lac La Belle [1]	No	No	No
Palmyra	No	No	No
Sullivan	No	No	No
<b>City</b>			
Fort Atkinson	Yes	No	Yes
Jefferson	Yes	No	No
Lake Mills	Yes	No	No
Waterloo	Yes	No	No
Watertown [1]	Yes	No	No
Whitewater [1]	Yes	Yes (1 FTE)	Yes
Jefferson County	Yes	Yes (1.2 FTE)	Yes

Notes:

1. Municipality located in Jefferson County and another county

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

This section builds off of the previous parts of the plan and 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 an estimated implementation cost. 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.

### PRIORITIZATION OF GOALS AND ACTIONS

Activities are prioritized as low, medium, or high based on the STAPLE+E approach. Exhibit 6-1 lists each of the criteria used to identify the priority. The mitigation actions with the highest priority were deemed to be the most cost effective and most compatible with the community’s social and cultural values.

**Exhibit 6-1. STAPLE+E**

Criteria	Description
S – Social	Mitigation actions are acceptable to the community if they do not adversely affect a particular segment of the population, do not cause relocation of lower income people, and if they are compatible with the community’s social and cultural values.
T – Technical	Mitigation actions are technically most effective if they provide long- term reduction of losses and have minimal secondary adverse impacts.
A – Administrative	Mitigation actions are easier to implement if the jurisdiction has the necessary staffing and funding.
P – Political	Mitigation actions can truly be successful if all stakeholders have been offered an opportunity to participate in the planning process and if there is public support for the action.
L – Legal	It is critical that the jurisdiction or implementing agency have the legal authority to implement and enforce a mitigation action.
E – Economic	Budget constraints can significantly deter the implementation of mitigation actions. Hence, it is important to evaluate whether an action is cost-effective, as determined by a cost benefit review, and possible to fund.
E – Environmental	Sustainable mitigation actions that do not have an adverse effect on the environment, that comply with Federal, State, and local environmental regulations, and that are consistent with the community’s environmental goals, have mitigation benefits while being environmentally sound.

**RELATIONSHIP TO OTHER LOCAL PLANNING EFFORTS**

It is strongly recommended that these goals and actions be adopted as part of local comprehensive planning efforts where appropriate, especially in areas where existing problems can be corrected and to prevent problems from occurring in newly developed areas.

**COST BENEFIT ANALYSIS FOR GOALS AND ACTIONS**

Specific cost benefit reviews will occur for each action in each participating jurisdiction during annual budget scenarios. Most identified actions are programmatic and not capital expenditures. The impact and cost of each program will be determined on an as needed basis prior to implementation. The information provided with each action is intended to assist in the cost benefit evaluation of each action. Costs estimates, funding sources, schedules, and responsible parties are preliminary and subject to change based on fiscal conditions. Federal funding for mitigation activities can only be obtained when benefits clearly outweigh the costs.

**MAJOR ACCOMPLISHMENTS**

Since this plan was first adopted in 2008, a number of significant work activities have been accomplished as described in Table 6-12.

**Table 6-12. Major Accomplishments: 2008-2012**

Description	Jurisdiction
1. Floodproofed or otherwise protected the Waterloo Carousel from flooding. (Activity #21 under Goal 2, Flooding in 2008 Plan)	City of Waterloo
2. Jefferson County Emergency Management secured funding from local, state, and federal sources to acquire more than 25 flood-prone properties. (Activity #2 under Goal 2, Flooding in 2008 Plan)	Jefferson County
3. Acquired a 1.6-acre site along the Maunasha River in the downtown area for flood storage. Demolished an old pickle factory (Both of these are related to Activity #21 under Goal 2, Flooding in 2008 Plan)	City of Waterloo

As part of the 2010 update, significant changes were made to this section of the plan. Those goals, objectives, policies, and activities that were added as part of the 2012 plan update are so noted, along with those that have been revised. Those that ensure continued compliance with the National Flood Insurance are also so designated.

The following exhibit presents a summary of changes in objectives, policies, and implementation activities between the 2008 plan and the 2012 plan. Cost estimates were updated as appropriate.

**Exhibit 6-2. Summary of Changes to Objectives, Policies, and Activities in 2012 Plan**

Goal	Objectives	Policies	Activities
Goal 1. Public Education and Communication	No change	No change	Added #8
Goal 2. Flooding and Dam Failure	No change	No change	Removed one activity (#21 in 2008 plan) Added #22, 25, 26 in this plan.
Goal 3. Tornadoes	No change	No change	Revised #6, added #7 (previous #7 now #8) Added #9 in this plan.
Goal 4. Extreme Temperature	No change	No change	No change
Goal 5. Severe Storms, Hail & High Winds	No change	No change	No change
Goal 6. Drought	No change	No change	No change
Goal 7. Wildland Fire	No change	No change	Revised responsible entity for #3

Most of the cities and villages adopting this plan have identified one or more unique implementation activity. The cities of Fort Atkinson and Jefferson and the Village of Cambridge share a single implementation activity (#2 under Goal 2, Flooding). The Lake Mills city manager worked with various departments and elected officials to identify potential implementation activities that are unique to the city and determined that the implementation activities it is responsible for are appropriate and that no unique implementation activity is warranted. Likewise, the City Administrator for the City of Whitewater determined that no unique implementation activity is warranted.

**Goal 1. Public Education**

Provide the public with the education they need to adequately prepare for and respond to natural hazards identified in this plan including dam failure, flooding, ice shoves, fog, tornado/high winds, hailstorms, thunderstorms, winter storms, extreme temperature, drought, and wildland fire. **(2008 Plan)**

**Objectives**

1. Strengthen emergency service preparedness and response by enhancing public education throughout the county. **(2008 Plan)**
2. Increase the number of households that have prepared a family emergency plan. **(2008 Plan)**
3. Increase the number of public outreach materials in Spanish. **(2008 Plan)**

**Policies**

1. Work with non-governmental organizations (youth, service, professional, religious) to promote mitigation education and awareness. **(2008 Plan)**
2. Look for multiple and varied opportunities to disseminate educational information to county residents. **(2008 Plan)**

Implementation Actions / Strategies	Cost Estimate (2012)	Priority	Schedule		Responsible Entity
			2013 to 2017	2018 to 2022	
1. Develop, enhance, and implement education programs aimed at mitigating natural hazards and reducing the risk to citizens, public agencies, private property owners, businesses, and schools. <b>(2008 Plan; 2012 status – no action)</b>	\$5,000	Medium	X	X	Jefferson County Emergency Management; American Red Cross
2. Create displays for use at public events (health fair, public awareness day, county fair). <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time and supplies	Low	X	X	Jefferson County Emergency Management
3. Establish a single webpage on the county's website to provide up-to-date hazard-related information. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time	Medium	X	X	Jefferson County Emergency Management
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. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X	X	Jefferson 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. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management; American Red Cross; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
6. Develop and maintain a geographic database for natural hazard events, including location, weather conditions, and resulting damage. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	High	X		Jefferson County Emergency Management; Jefferson County Land Information Office
7. Work to provide more hazard-related information in Spanish. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time	Medium	X		Jefferson County Emergency Management Jefferson County Literacy Council; United Migrant Opportunity Service; Jefferson County Public Health; Workforce Development
8. Enhance the Village's website (Village of Sullivan) to include more information about disaster preparedness <b>(2012 status – new action item)</b>	Staff time	Medium	X		Village of Sullivan

**Goal 2. Flooding**

Protect the public health, safety, and welfare of county residents and public and private property during flood events. **(2008 Plan)**

**Objectives**

1. Minimize the impact of flooding on potentially affected structures. **(2008 Plan)**
2. Decrease the number of structures currently located in the 100-year floodplain that are not properly flood-proofed. **(2008 Plan)**
3. Minimize the amount of impervious surface in new development projects to allow more infiltration of stormwater into the ground. **(2008 Plan)**
4. Decrease the number of repetitive loss properties. **(2008 Plan)**
5. Decrease the number of repetitive loss communities in the county. **(2008 Plan)**
6. Increase public awareness of flooding. **(2008 Plan)**
7. Improve communication between the county and local units of government when floods occur or are likely to occur. **(2008 Plan)**

**Policies**

1. Continue to enforce floodplain regulations to ensure that future development in the 100-year floodplain meets established standards. **(2008 Plan)**
2. Continue the buyout program on Blackhawk Island. **(2008 Plan)**
3. Support the identification and conservation of land with high flood mitigation value (e.g., wetlands, upland storage, and infiltration areas). **(2008 Plan)**
4. Support land acquisition and other management strategies to preserve open space for flood mitigation purposes. **(2008 Plan)**
5. Ensure that governmental officials and employees, county residents, and real estate agents are aware of floodplain regulations. **(2008 Plan)**
6. Ensure that people owning property in the 100-year floodplain, and their agents, notify buyers when selling their property. **(2008 Plan)**
7. Adopt standards to control the proportion of a site that can be covered with impervious surfaces. **(2008 Plan)**
8. Locate public infrastructure outside of the 100-year floodplain. When infrastructure has been located in the 100-year floodplain, it should be flood proofed or otherwise protected from flood water. **(2008 Plan)**
9. Design and properly size all new stream crossings to not create a significant upstream back-water effect. **(2008 Plan)**
10. Continue to enforce stormwater management regulations. **(2008 Plan)**
11. Use data records in on-going assessment of flood problems and effectiveness or response programs. **(2008 Plan)**
12. Formalize communications links and establish procedures. **(2008 Plan)**
13. Update flood insurance rate maps (FIRMs) when it can be shown that they are substantially inaccurate. **(2008 Plan)**
14. Ensure that all large dams in the county have emergency action plans and that they are up to date. **(2008 Plan)**
15. Undertake such activities as may be required to remain compliant with the requirements of the National Flood Insurance Program. **(2008 Plan)**

Implementation Actions / Strategies	Cost Estimate (2012)	Priority	Schedule		Responsible Entity
			2013 to 2017	2018 to 2022	
1. Identify and analyze feasible mitigation options for repetitive flood properties. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time	Medium	X	X	Jefferson County Emergency Management
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. <b>(2008 Plan; 2012 status – in progress)</b>	Staff time	High	X	X	Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, and Watertown; village of Cambridge
3. Design and budget for stormwater management facilities consistent with adopted stormwater management plans than have been or will be prepared / amended. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan as appropriate
4. Develop a computerized database containing information on each culvert and bridge within the county. <b>(2008 Plan; 2012 status – in progress)</b>	Staff time	Medium	X		Jefferson County Emergency Management; American Red Cross

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Implementation Actions / Strategies	Cost Estimate (2012)	Priority	Schedule		Responsible Entity
			2013 to 2017	2018 to 2022	
5. Identify those culverts and bridges that are undersized or are otherwise unable to handle expected flood flows. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time	Medium	X		Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan as appropriate
6. Develop a geographic database for public roadways that are susceptible to flooding. <b>(2008 Plan; 2012 status – ongoing)</b>	Staff time	Medium	X		Jefferson County Emergency Management cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan as appropriate
7. Prepare a strategy to prioritize road improvements for public roadways that are susceptible to flooding. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management; ; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan as appropriate
8. Identify undeveloped areas of the county, if any, that have flood mitigation value and develop appropriate strategies to protect them. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management; ; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan as appropriate
9. Establish a framework to compile and coordinate surface water management plans and data throughout Jefferson County. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan as appropriate
10. Post flood recovery plans and programs to help county residents rebuild and implement mitigation measures to protect against future floods. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time	Medium	X	X	Jefferson County Emergency Management; ; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
11. Distribute National Flood Insurance Program information. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X	X	Jefferson County Emergency Management; ; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
12. Explore options for improving the ability of local units of government to report flooding, receive information, and request assistance. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan

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Implementation Actions / Strategies	Cost Estimate (2012)	Priority	Schedule		Responsible Entity
			2013 to 2017	2018 to 2022	
13. Develop and maintain a geographic database for natural hazard events, including location, weather conditions, and resulting damage. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	High	X	X	Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
14. Evaluate the support for and the feasibility of becoming part of the Community Rating System (CRS) to lower flood insurance premiums for property owners. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time	High	X		Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
15. Work with the DNR to ensure that an emergency action plan is prepared for large dams and that they are periodically updated. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management
16. Develop a prioritized list of areas of the county meriting detailed flood studies. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time	Medium	X		Jefferson County Emergency Management
17. Install a surface water gaging station on the Crawfish River near Hubbleton. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management
18. Ensure that privately-owned large dams are inspected consistent with state law. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management; Cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan as appropriate
19. Inspect publicly-owned large dams consistent with state law. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan as appropriate
20. Revise existing floodplain regulations to ensure they comply with the most recent (2006) model floodplain regulations developed by the Wisconsin Department of Natural Resources. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time	High	X		Cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan as appropriate
21. Conduct a study to determine feasible and cost-effective solutions to minimize flooding in downtown Waterloo (Maunsha River). <b>(2008 Plan; 2012 status – in progress)</b>	\$8,000 to \$12,000	High	X		City of Waterloo
22. Enhance the 1.6-acre site the City acquired in 2012 for flood storage and restore the stream channel and other related efforts <b>(2012 status – new action item)</b>	Unknown	High	X		City of Waterloo
23. Repair the Mill Road Dam. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Unknown	High	X		Village of Palmyra
24. Mitigation projects as may be identified as a result of the Water Resources Management Study within the Village of Johnson Creek. <b>(2008 Plan; 2012 status – no action)</b>	Variable	Variable	X		Village of Johnson Creek
25. Enlarge the capacity of the city's (Watertown) stormwater sewer system which may include detention basins <b>(2012 status – new action item)</b>	Unknown	Medium	X	X	City of Watertown

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26. Complete a dam failure analysis for the Spring Lake Dam ( <b>2012 status – new action item</b> )	Cost included in current budget	High	X	Village of Palmyra
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**Goal 3. Tornadoes**

Lessen the effects of a tornado to the extent feasible and speed recovery following an event. **(2008 Plan)**

**Objectives**

1. Increase public education and awareness of the potential severity of tornadoes. **(2008 Plan)**
2. Minimize the amount of time that businesses damaged by a tornado are not operational. **(2008 Plan)**
3. Minimize the amount of time it takes to rebuild or restore dwellings damaged by a tornado. **(2008 Plan)**
4. Prevent injuries and death from tornadoes. **(2008 Plan)**

**Policies**

1. Bury overhead power and utility lines where feasible as a way to reduce power outages during all types of storm events. **(2008 Plan)**
2. Require that mobile homes and manufactured housing are securely anchored in place. **(2008 Plan)**
3. Ensure that adequate tornado shelters are available to county residents especially those living in mobile home parks. **(2008 Plan)**
4. Include redevelopment objectives in smart growth comprehensive plans to support post-disaster development activities. **(2008 Plan)**
5. Continue to support the efforts of severe weather spotters. **(2008 Plan)**
6. Keep the current siren system functioning and in good repair. **(2008 Plan)**
7. Encourage residents to obtain NOAA weather radios especially in those areas of the county that are not covered by a siren. **(2008 Plan)**

Implementation Actions / Strategies	Cost Estimate (2012)	Priority	Schedule		Responsible Entity
			2013 to 2017	2018 to 2022	
1. Periodically assess whether there are enough shelters to house displaced persons. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time	Medium	X	X	Jefferson County Emergency Management; American Red Cross
2. Apply for mitigation funding to purchase NOAA weather radios for county residents. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Low	X		Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
3. 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. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management
4. Develop and implement strategies for debris management. <b>(2008 Plan; 2012 status – in progress)</b>	Staff time	Medium	X		Jefferson County Emergency Management; American Red Cross; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
5. Amend land development regulations to require a storm shelter in mobile home parks when the number of mobile homes exceeds a threshold as established by the jurisdiction. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Zoning Department; Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
6. Install storm shelters near or in existing mobile home parks and high occupancy campgrounds, such as Bark River Campground & Resort and River Bend. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Mobile home park operators and campground operations with Jefferson County Emergency Management
7. Investigate grant funding for storm shelters. <b>(New 2012)</b>	Staff time	Medium	X		Jefferson County Emergency Management
8. Develop and maintain a geographic database for natural hazard events, including location, weather conditions, and resulting damage. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	High	X		Jefferson County Emergency Management; Jefferson County Land Information Office
9. Update and improve sirens <b>(2012 status – new action item)</b>	Unknown	Medium	X	X	City of Watertown

**Goal 4. Extreme Temperature**

Protect the health of Jefferson County residents from extreme temperature. **(2008 Plan)**

**Objectives**

1. Prevent deaths from extreme temperature. **(2008 Plan)**

**Policies**

1. Encourage volunteers to look after vulnerable individuals, especially the elderly, during times of extreme temperature. **(2008 Plan)**
2. Open county and other public facilities with air conditioning as appropriate for public access during periods of extreme heat. **(2008 Plan)**
3. Ensure that county residents are aware that there are different forms of assistance to help qualified individuals pay their winter heating costs. **(2008 Plan)**

Implementation Actions / Strategies	Cost Estimate (2012)	Priority	Schedule		Responsible Entity
			2013 to 2017	2018 to 2022	
1. Develop a directory of public buildings that would be open to the public during heat waves. <b>(2008 Plan; 2012 status – in progress)</b>	Staff time	Medium	X	X	Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
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. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	High	X		Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
3. Investigate the possibility of establishing a database of individuals who are vulnerable to extreme temperature and who have voluntarily placed their name on the call list. <b>(2008 Plan; 2012 status – in progress)</b>	Staff time	Medium	X		Jefferson County Volunteer Organization Acting in Disasters (VOAD); Jefferson County Emergency Management; Jefferson County Public Health
4. Publicise available programs that help residents pay for their utility expenses. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
5. Develop and maintain a geographic database for natural hazard events, including location, weather conditions, and resulting damage. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	High	X		Jefferson County Emergency Management; Jefferson County Land Information Office
6. Amend the county's emergency operations plan to address extreme temperatures. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time	High	X		Jefferson County Emergency Management; American Red Cross; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan

**Goal 5. Severe Storms, Hail, & High Winds**

Protect and prepare Jefferson County residents from the dangers of extreme weather. **(2008 Plan)**

**Objectives**

1. Increase public education and awareness of the potential dangers of thunderstorms, snow storms, hail, and windstorms. **(2008 Plan)**

**Policies**

1. Bury overhead power and utility lines where feasible as a way to reduce power outages during all types of storm events. **(2008 Plan)**
2. Provide citizens with early storm warnings. **(2008 Plan)**
3. Encourage the use of surge protectors on critical electronic equipment in governmental and critical facilities. **(2008 Plan)**
4. Work with utility companies to assess and to improve, when necessary, electric service reliability. **(2008 Plan)**
5. Work with utility companies to ensure that trees are properly trimmed near utility lines. **(2008 Plan)**

Implementation Actions / Strategies	Cost Estimate (2012)	Priority	Schedule		Responsible Entity
			2013 to 2017	2018 to 2022	
1. Continue to update and/or monitor the County's public early warning system and network. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X	X	Jefferson County Emergency Management
2. Review local building codes to determine if revisions are needed to improve the structure's ability to withstand greater wind velocities and encourage provision of safe rooms, especially in structures that do not have a basement. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Low	X		Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
3. Review local building codes to determine if revisions are needed to add requirements for hail-impact resistant roofing and other materials. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Low	X		Jefferson County Emergency Management
4. Produce and distribute emergency preparedness information related to thunderstorms, snow storms, hailstorms, and windstorm hazards. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time	Medium	X		Jefferson County Emergency Management; American Red Cross
5. Identify and pursue funding opportunities to develop and implement local and county mitigation activities. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time	Medium	X		Jefferson County Emergency Management; American Red Cross; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
6. 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. <b>(2008 Plan; 2012 status – ongoing effort)</b>	\$3,000	Medium	X		Jefferson County Emergency Management; American Red Cross; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
7. Provide the public with information about proven lightning safety guidelines to reduce the risk of lightning hazards. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time	Medium	X		Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan

Continued on next page

Continued

Implementation Actions / Strategies	Cost Estimate (2012)	Priority	Schedule		Responsible Entity
			2013 to 2017	2018 to 2022	
8. Develop and implement strategies for debris management. <b>(2008 Plan; 2012 status – ongoing effort)</b>	Staff time	Medium	X		Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
9. Apply for mitigation funding to purchase NOAA weather radios for county residents. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management
10. Develop and maintain a geographic database for natural hazard events, including location, weather conditions, and resulting damage. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	High	X		Jefferson County Emergency Management; Jefferson County Land Information Office

**Goal 6. Drought**

Protect the public health, safety, and welfare of Jefferson County residents during periods of drought. **(2008 Plan)**

**Objectives**

1. Decrease water consumption during periods of drought. **(2008 Plan)**
2. Minimize the economic impacts of drought on the local economy. **(2008 Plan)**

**Policies**

1. Encourage water conservation during periods of drought. **(2008 Plan)**
2. Impose watering restrictions during periods of extreme drought. **(2008 Plan)**
3. Work with multiple agencies to conserve water, provide drought prediction, and provide stream and groundwater monitoring. **(2008 Plan)**
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. **(2008 Plan)**
5. Continue to monitor groundwater levels to identify the status of groundwater resources and trends. **(2008 Plan)**
6. Work cooperatively with state agencies and other levels of government in developing appropriate strategies on a regional basis. **(2008 Plan)**
7. Provide water for livestock when the needs of humans have been or are being met. **(2008 Plan)**

Implementation Actions / Strategies	Cost Estimate (2012)	Priority	Schedule		Responsible Entity
			2013 to 2017	2018 to 2022	
1. Create an ordinance to prioritize or control water use during drought conditions. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X	X	Municipalities with public water systems
2. Provide public education about the potential severity of drought events. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Low	X		Jefferson County Emergency Management, cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
3. Develop a set of procedures for water distribution during drought to those in need. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management
4. Develop and maintain a geographic database for natural hazard events, including location, weather conditions, and resulting damage. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	High	X		Jefferson County Emergency Management; Jefferson County Land Information Office

**Goal 7. Wildland Fire**

Protect structures and residents in Jefferson County from the hazard of uncontrolled wildfire. **(2008 Plan)**

**Objectives**

1. Decrease the number of wildland fires occurring in the county. **(2008 Plan)**
2. Decrease the number of acres burned from wildland fires. **(2008 Plan)**
3. Increase public education. **(2008 Plan)**

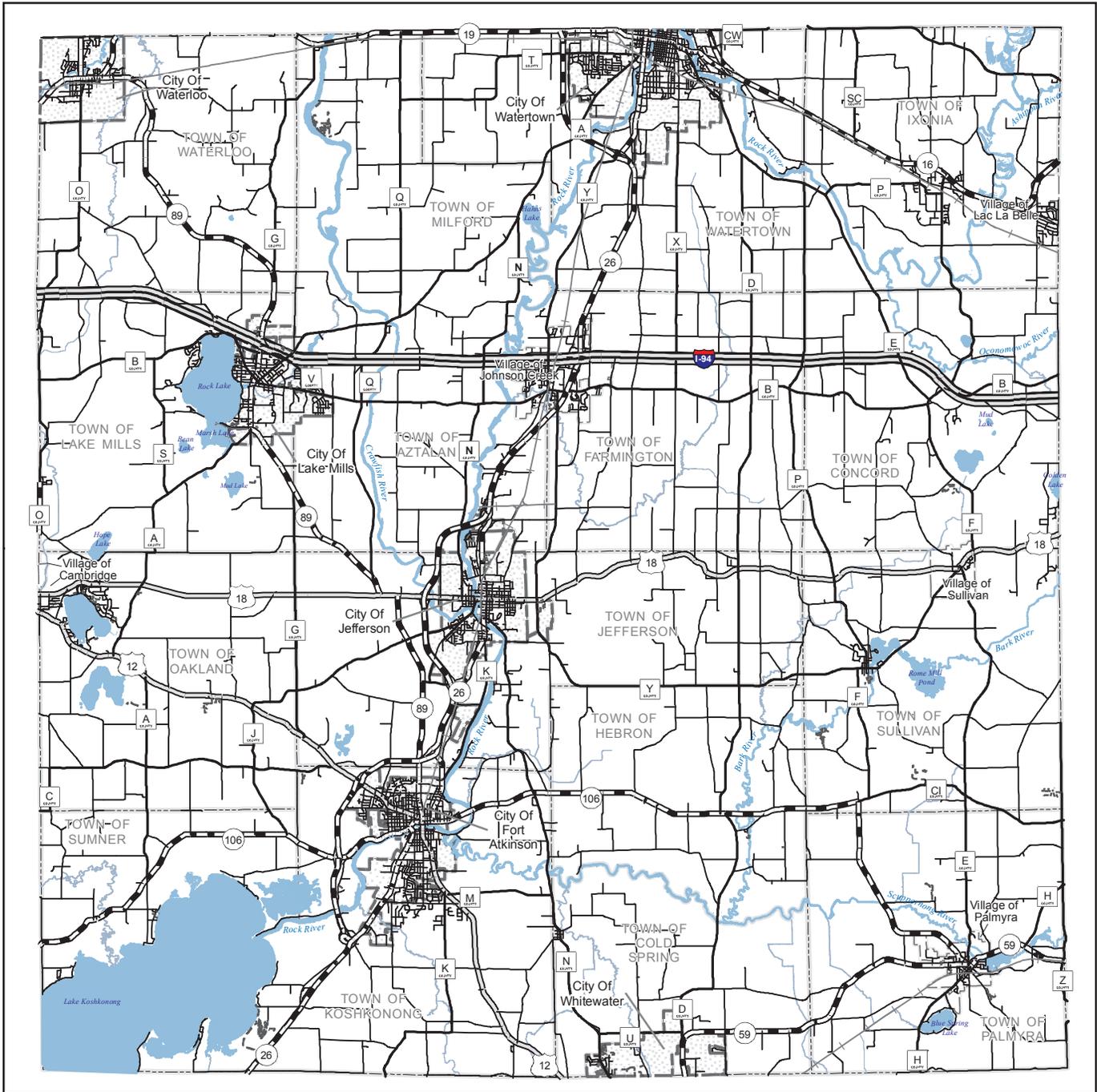
**Policies**

1. Support the use of controlled burns as a way of reducing the threat of dangerous wildland fires. **(2008 Plan)**
2. Enhance emergency services to increase the efficiency of wildfire response and recovery activities. **(2008 Plan)**
3. Keep track of wildfire events in the county to better document the extent and location of these events. **(2008 Plan)**

Implementation Actions / Strategies	Cost Estimate (2012)	Priority	Schedule		Responsible Entity
			2013 to 2017	2018 to 2022	
1. Apply for federal and state grants to enhance the capability of local fire departments. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X	X	Jefferson County Emergency Management; 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. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Low	X		Jefferson County Emergency Management; cities of Fort Atkinson, Jefferson, Lake Mills, Waterloo, Watertown, and Whitewater; villages of Cambridge, Johnson Creek, Lac La Belle, Palmyra, and Sullivan
3. Study the feasibility of and support for adopting a local burning permit program at the Town level. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management working with the Towns
4. Develop a database to keep track of wildfire events in the county. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	Medium	X		Jefferson County Emergency Management; American Red Cross
5. Develop and maintain a geographic database for natural hazard events, including location, weather conditions, and resulting damage. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	High	X		Jefferson County Emergency Management; Jefferson County Land Information Office
6. Investigate the establishment of a uniform way of providing information to the public regarding issuance of burning permits. <b>(2008 Plan; 2012 status – no action)</b>	Staff time	High	X		Jefferson County Sheriff's Department; local fire departments

## MAP SERIES

1. Road Network: 2012
2. Land Use; Unincorporated Jefferson County: 2008
3. Surface Water Resources: 2012
4. Campgrounds and Mobile Home Parks: 2012
5. Bridges and Dams: 2012
6. Public-Use Airports and Railroads: 2012
7. Telecommunication Facilities: 2012
8. Energy Facilities: 2012
9. Public Water and Wastewater Facilities: 2012
10. Public Safety Facilities: 2012
11. Government Facilities: 2012
12. Schools: 2012
13. Special Care Residential Facilities: 2012
14. Special Care Non-Residential Facilities: 2012
15. Health Care Facilities: 2012
16. Facilities with Hazardous Materials: 2012
17. Structures in 100-Year Floodplain: 2007
18. Critical Facilities by Type: 2012



**Legend**

- Private Road
- Local Road
- COUNTY — Collector Road
- State Highway
- ⬢ Federal Highway
- ⬢ Interstate
- +— RailRoads
- ~~~~~ River
- Water Body
- Municipal Boundary

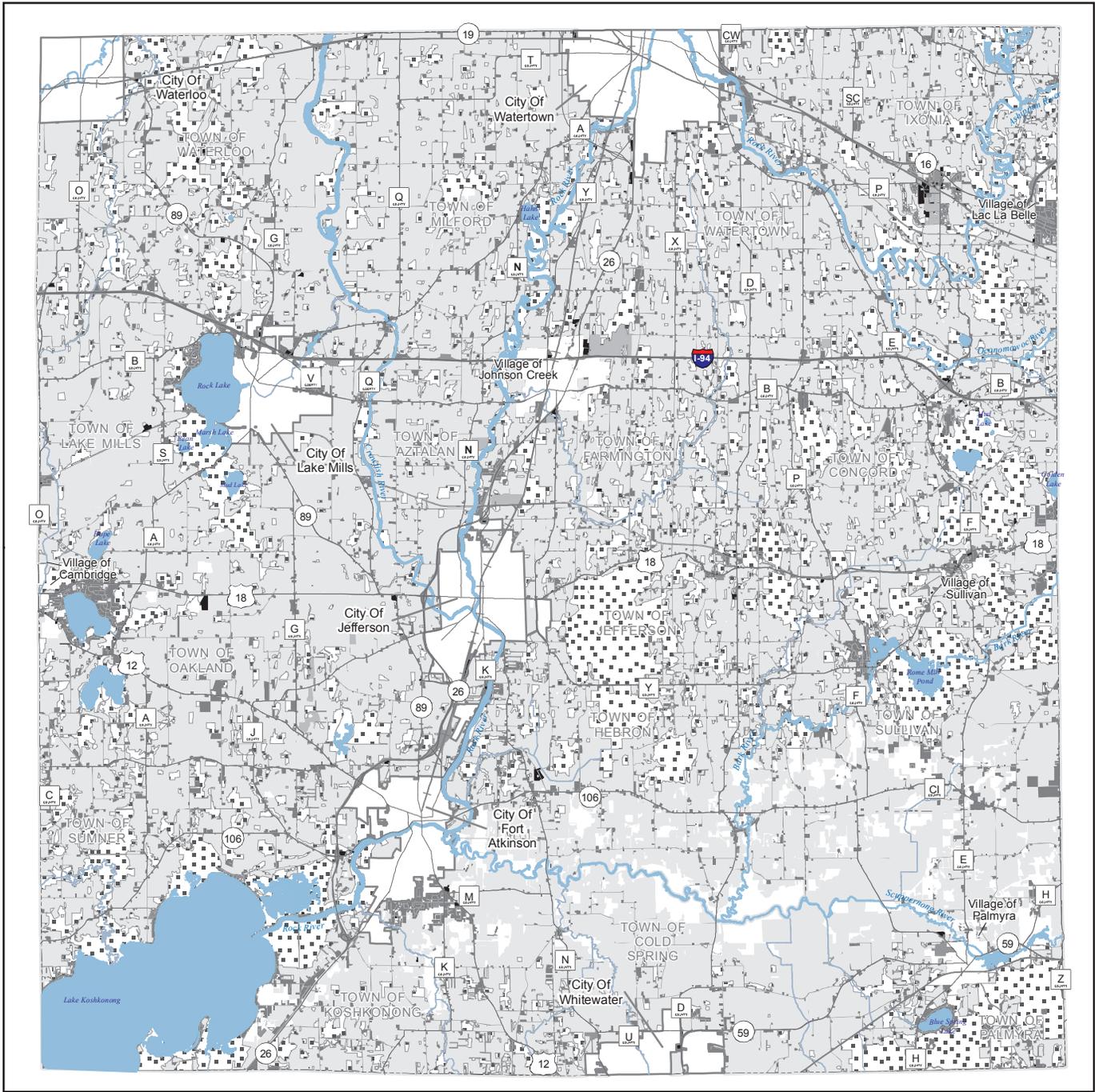
Source: Basemap from Jefferson County Land Information Office



**Map 1  
Road Network: 2012**

**Jefferson County  
Hazard Mitigation Plan**





**Legend**

-  Open Space
-  Agriculture
-  Industrial
-  Institutional
-  Residential
-  Retail
-  Road
-  River
-  Water Body
-  Municipal Boundary

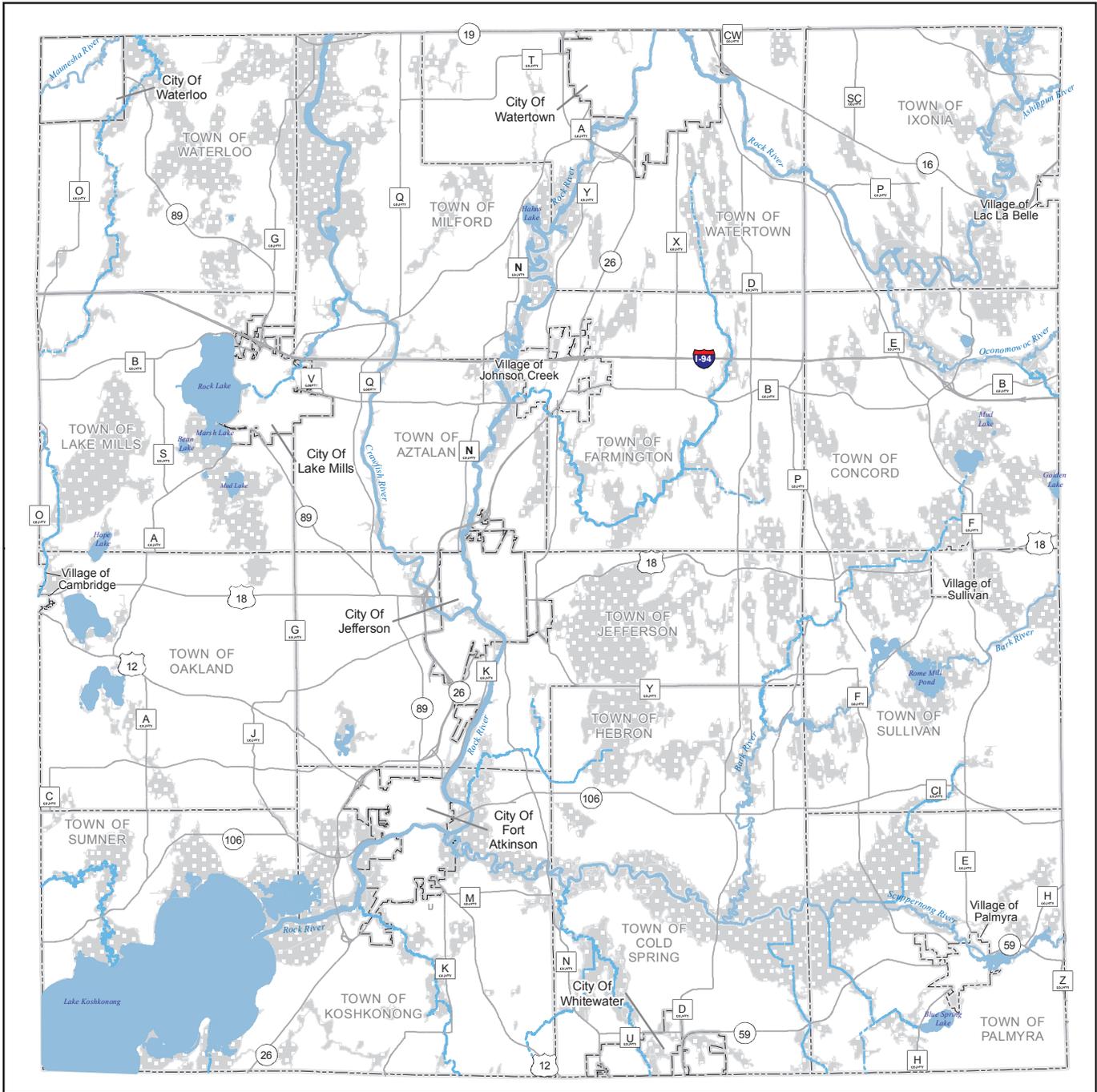
Source: Basemap from Jefferson County Land Information Office



**Map 2  
Land Use;  
Unincorporated  
Jefferson County: 2008**

**Jefferson County  
Hazard Mitigation Plan**





**Legend**

100 Year Floodplain

Road

River

Stream

Water Body

Municipal Boundary

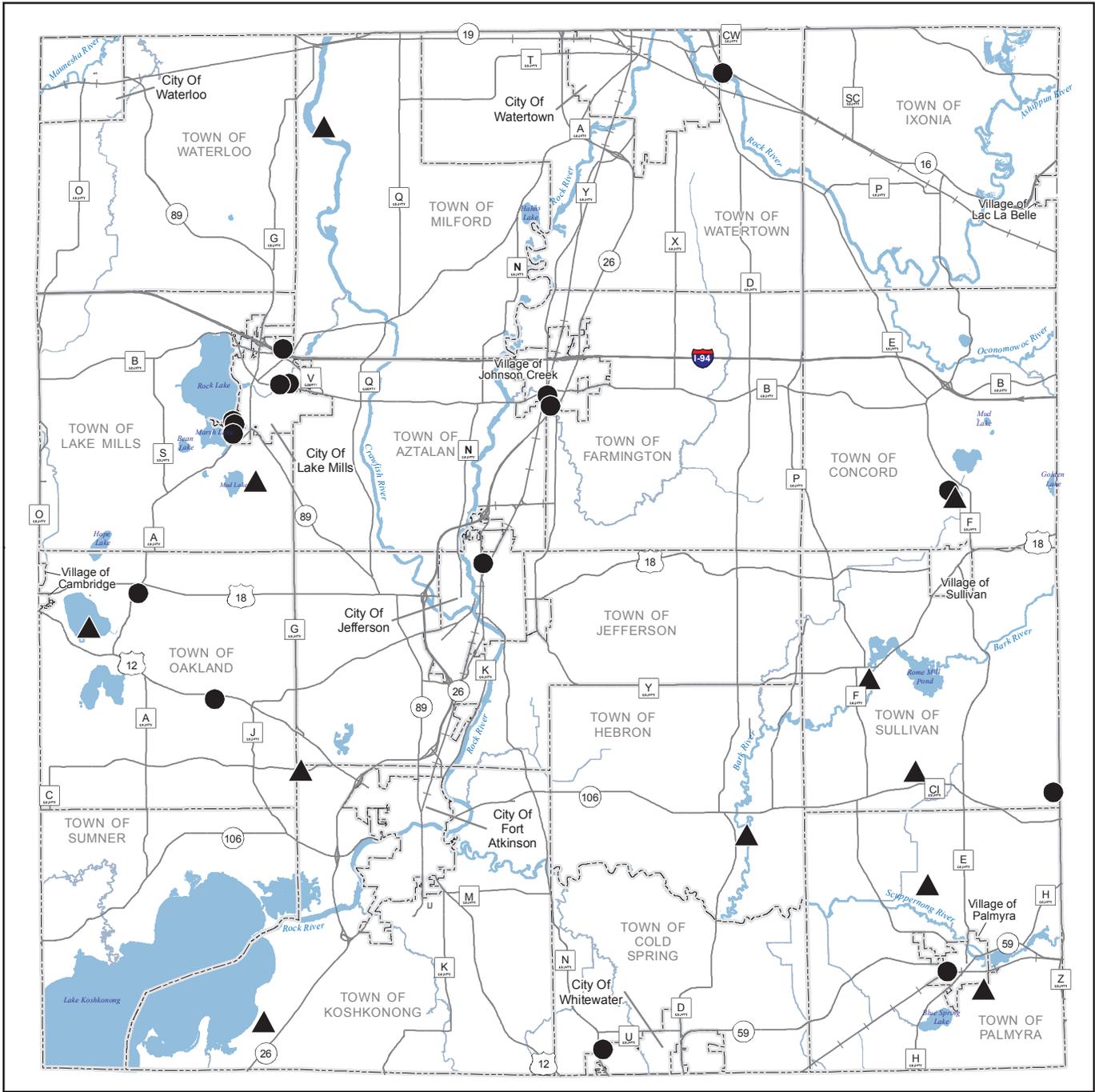
**Map 3  
Surface Water  
Resources: 2012**

**Jefferson County  
Hazard Mitigation Plan**



Source: Basemap from Jefferson County Land Information Office





**Legend**

- ▲ Campground
- Mobile Home Park
- Road
- ~ River
- Water Body
- Municipal Boundary

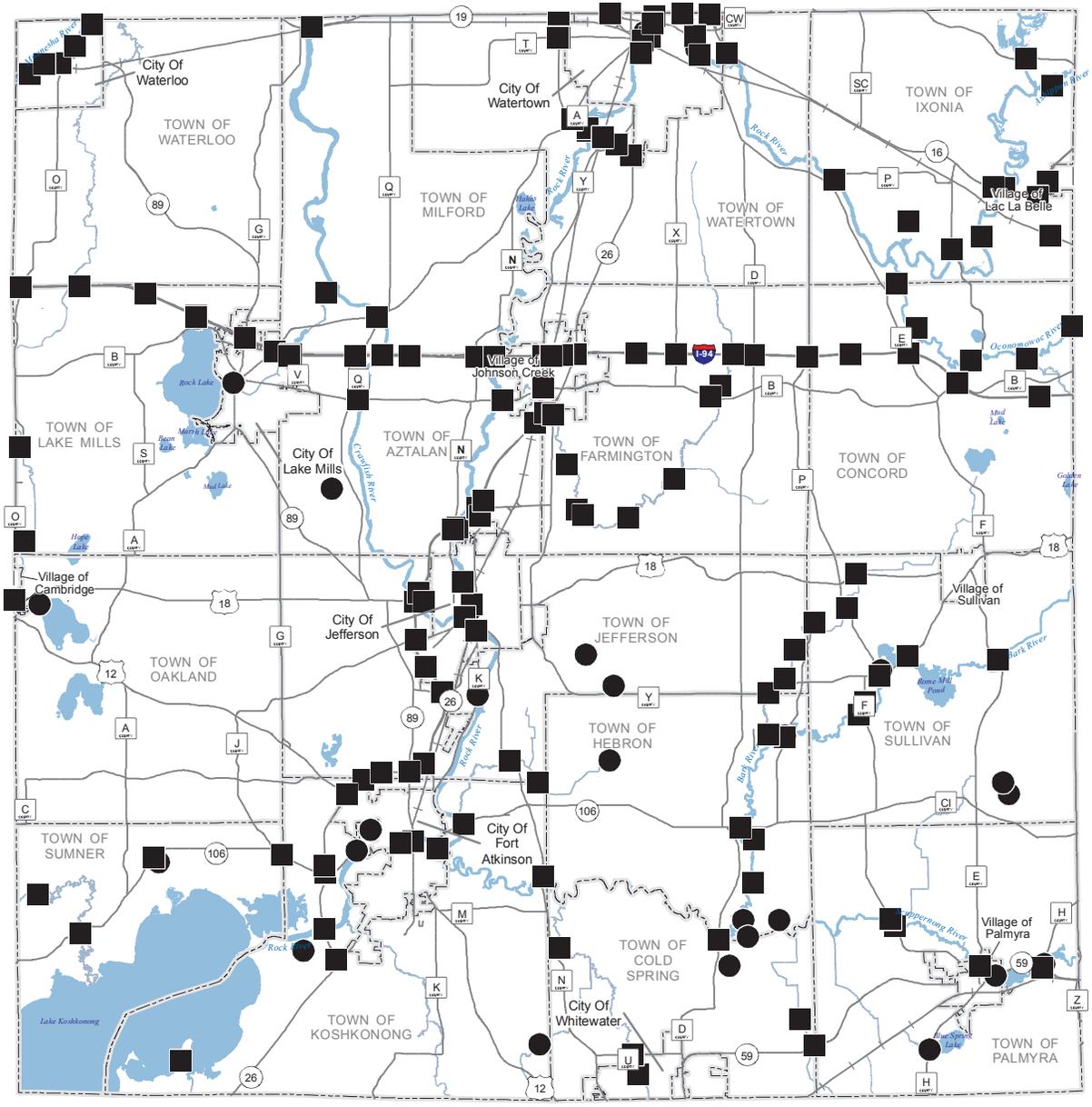
Source: Basemap from Jefferson County Land Information Office



**Map 4  
Campgrounds  
and Mobile Home  
Parks: 2012**

**Jefferson County  
Hazard Mitigation Plan**





**Legend**

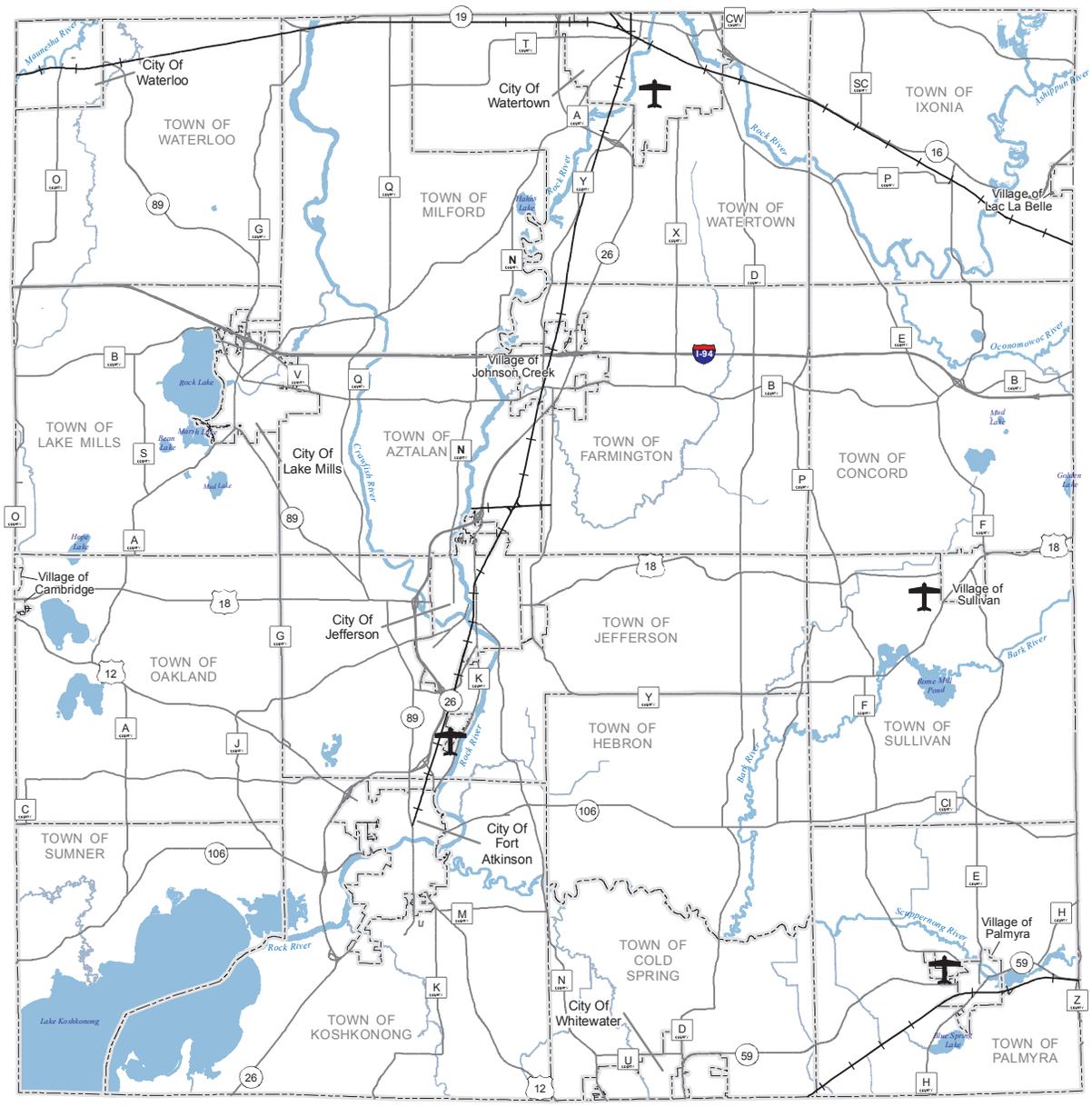
- Bridge
- Dam
- Road
- ~ River
- Water Body
- Municipal Boundary

**Map 5  
Bridges  
and Dams: 2012**

**Jefferson County  
Hazard Mitigation Plan**

Source: Basemap from Jefferson County Land Information Office





**Legend**

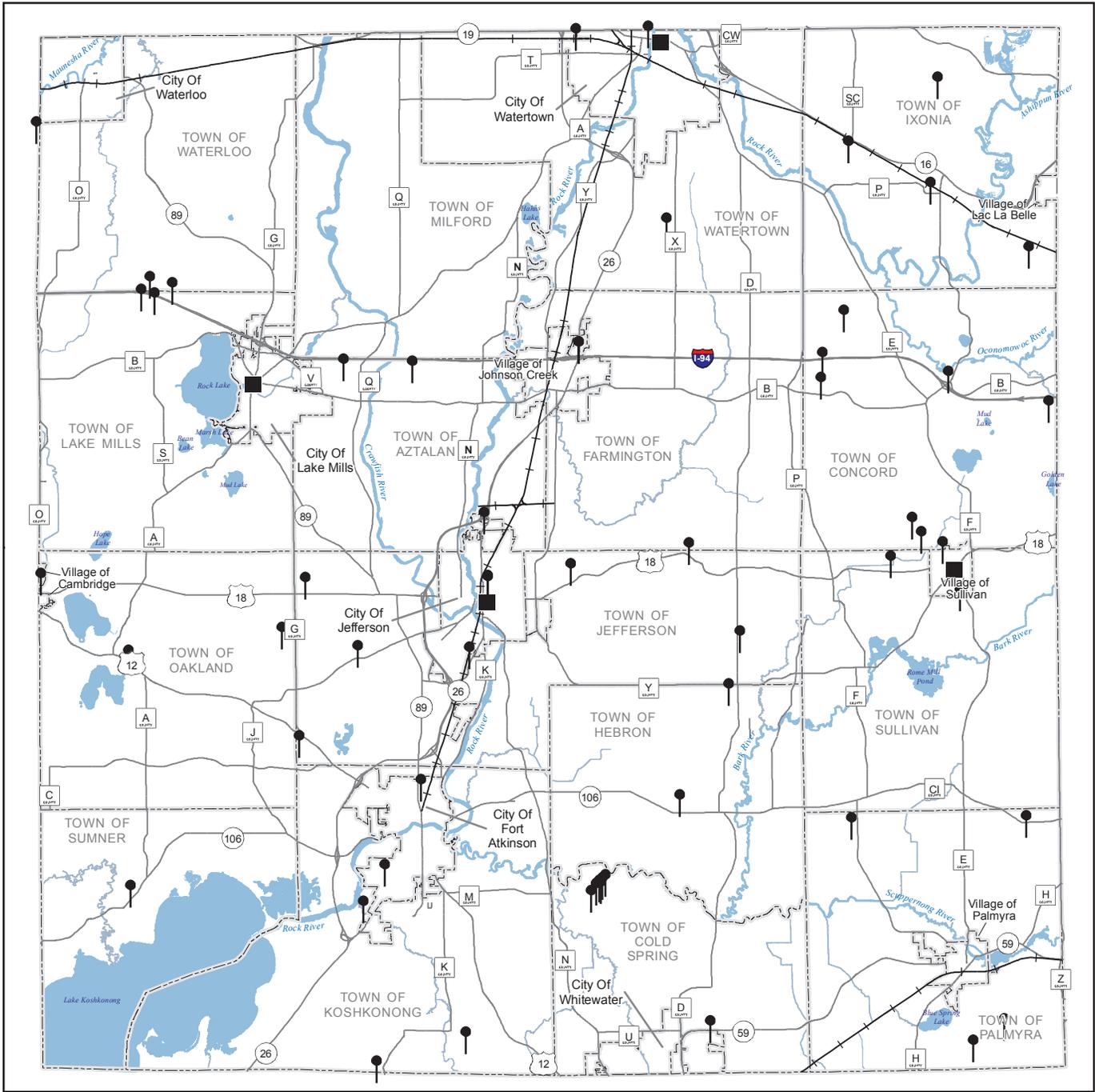
-  Airport
-  Railroad
-  Road
-  River
-  Water Body
-  Municipal Boundary

**Map 6  
Public-Use Airports  
and Railroads: 2012**

**Jefferson County  
Hazard Mitigation Plan**

Source: Basemap from Jefferson County  
Land Information Office





**Legend**

-  Communication Tower
-  Telephone Facility
-  Road
-  River
-  Water Body
-  Municipal Boundary

Source: Basemap from Jefferson County Land Information Office

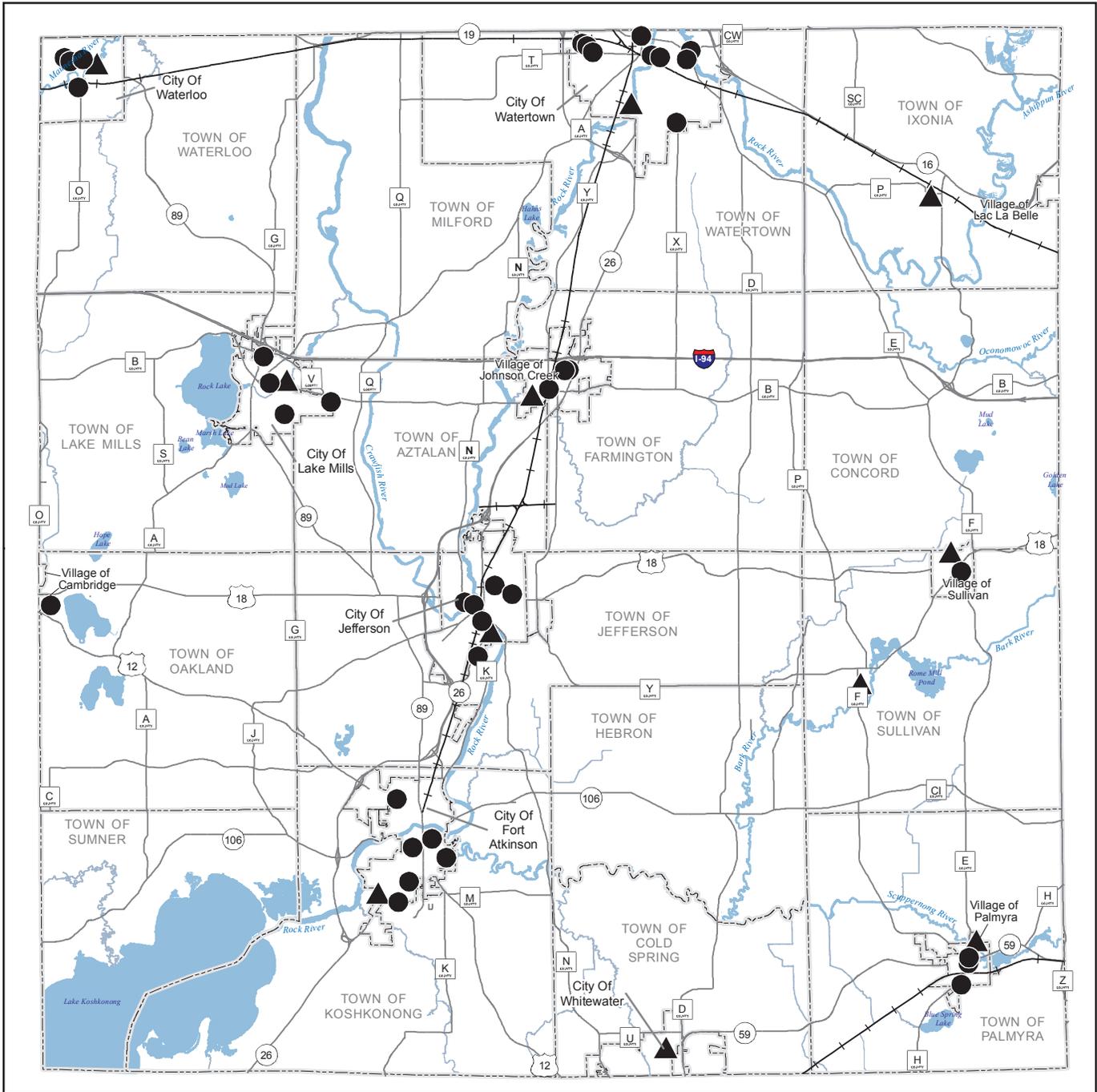


**Map 7  
Telecommunication  
Facilities: 2012**

**Jefferson County  
Hazard Mitigation Plan**







**Legend**

- Public Water Facility
- ▲ Wastewater Treatment Facility
- Road
- ~ River
- Water Body
- Municipal Boundary

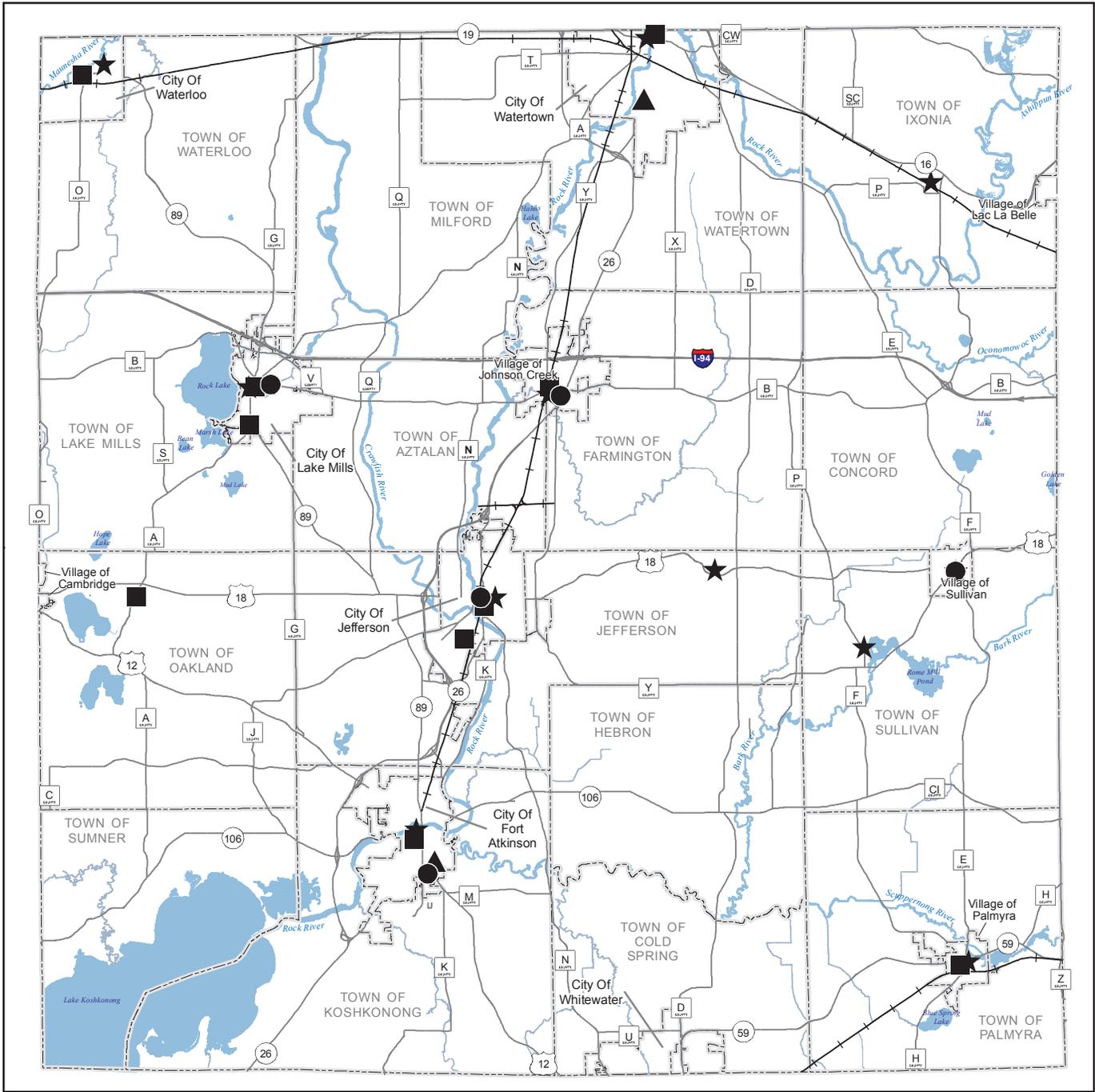
Source: Basemap from Jefferson County Land Information Office



**Map 9  
Public Water  
and Wastewater  
Facilities: 2012**

**Jefferson County  
Hazard Mitigation Plan**





**Legend**

- ▲ Military Facility
- EMS Facility
- ★ Fire Station
- Police Station
- Road
- ~ River
- Water Body
- Municipal Boundary

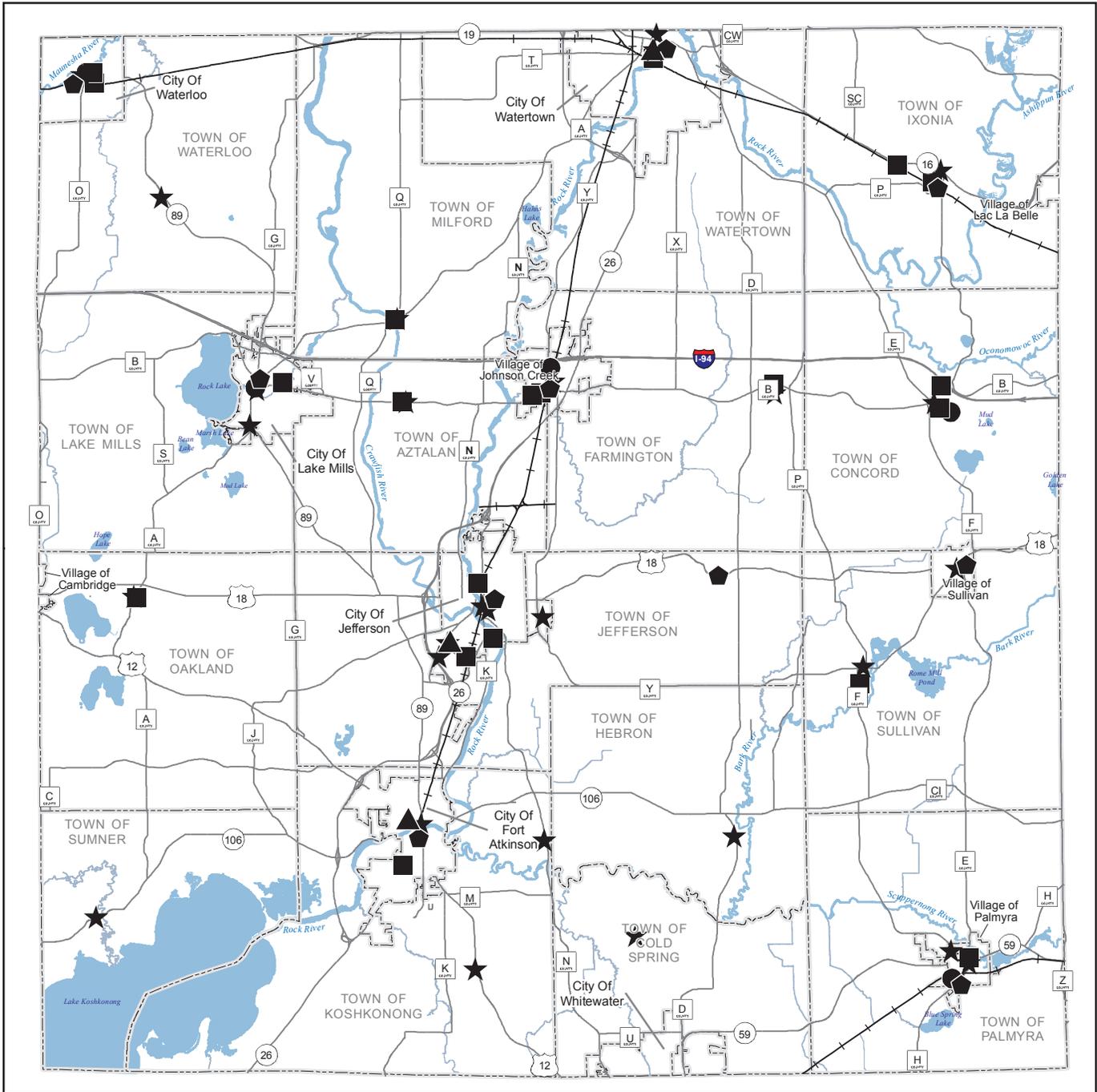
Source: Basemap from Jefferson County Land Information Office



**Map 10  
Public Safety  
Facilities: 2012**

**Jefferson County  
Hazard Mitigation Plan**





**Legend**

- ◆ Post Office
- ★ Municipal Office and Other
- Community Center
- Municipal Garage
- ▲ Senior Center
- Road
- ~ River
- Water Body
- Municipal Boundary

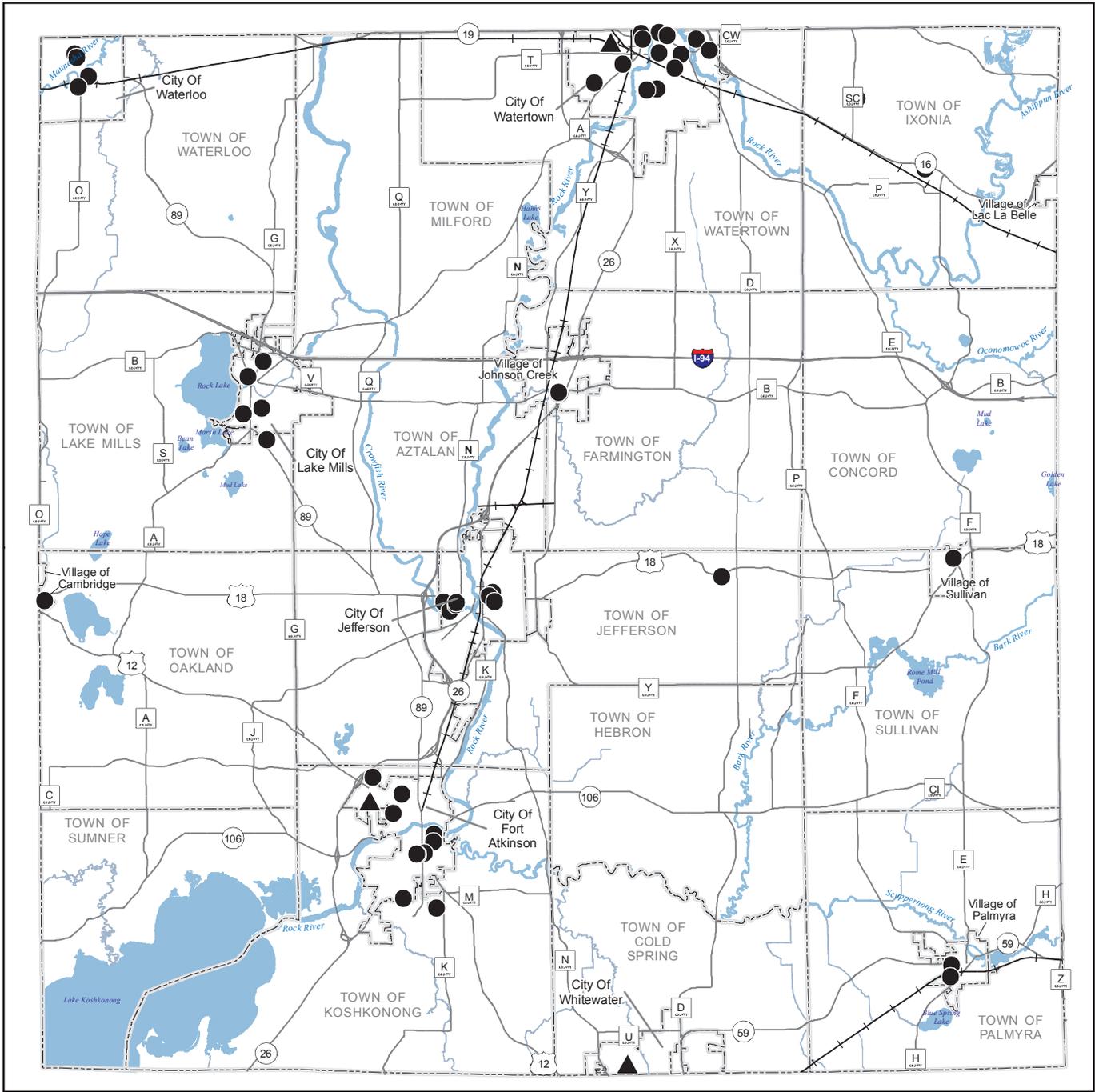
Source: Basemap from Jefferson County Land Information Office



**Map 11  
Government  
Facilities: 2012**

**Jefferson County  
Hazard Mitigation Plan**





**Legend**

- Preschool - 12
- ▲ Post High School
- Road
- ~ River
- Water Body
- Municipal Boundary

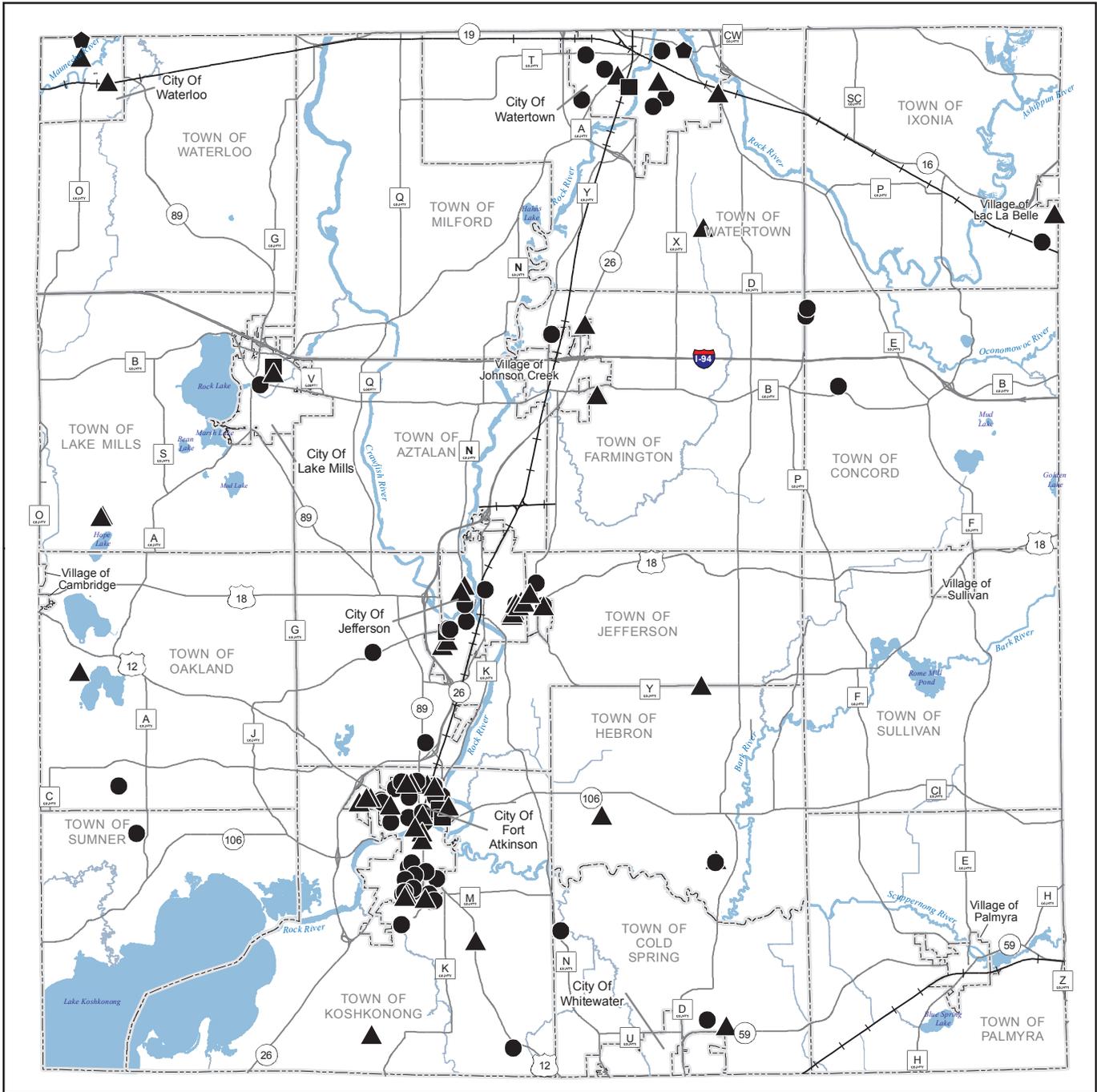
**Map 12 Schools: 2012**

**Jefferson County  
Hazard Mitigation Plan**

Source: Basemap from Jefferson County  
Land Information Office



**civi tek**  
CONSULTING



**Legend**

- Adult Family Home
- ▲ Community Based Residential Facility
- Nursing Home
- ⬠ Residential Care Apartment Complex
- Road
- ~ River
- Water Body
- ⊕ Municipal Boundary

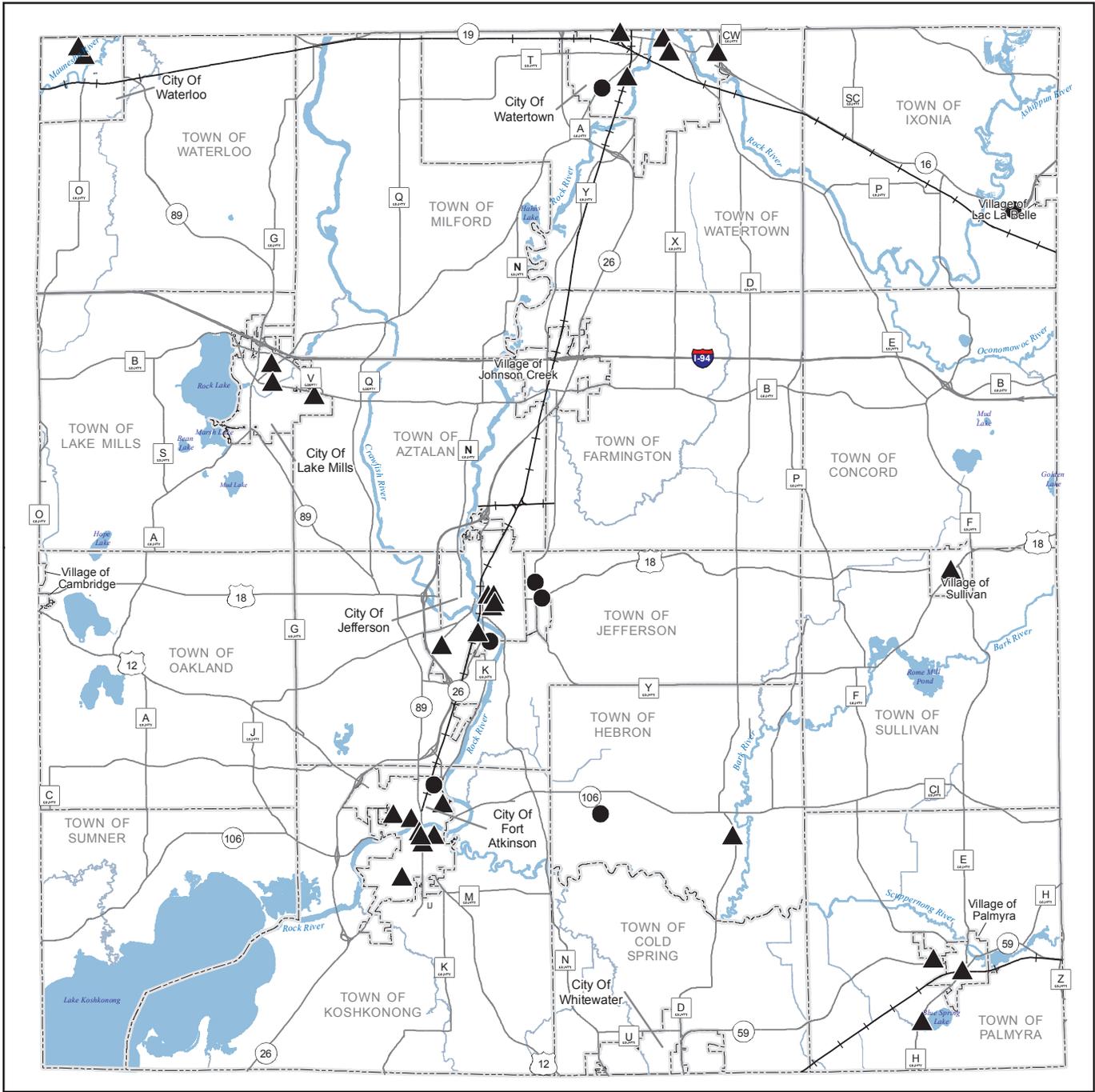
Source: Basemap from Jefferson County Land Information Office



**Map 13 Special Care Residential Facilities: 2012**

**Jefferson County Hazard Mitigation Plan**





**Legend**

- ▲ Group Child Care Center
- Adult Day Care
- Road
- ~ River
- Water Body
- Municipal Boundary

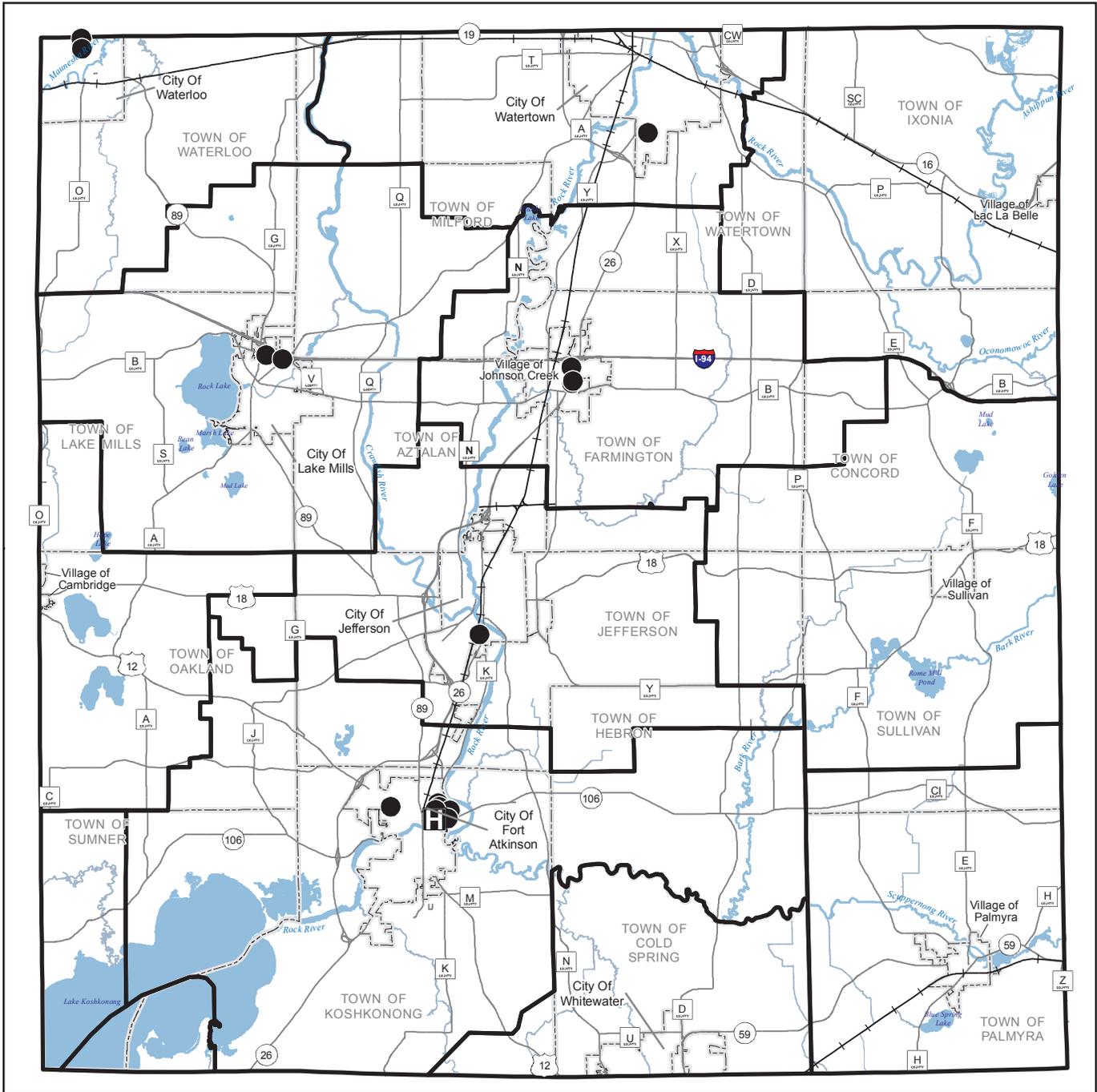
Source: Basemap from Jefferson County Land Information Office



**Map 14 Special Care Non-Residential Facilities: 2012**

**Jefferson County Hazard Mitigation Plan**





**Legend**

-  Hospital
-  Health Care Facility
-  EMS
-  Road
-  River
-  Water Body
-  Municipal Boundary

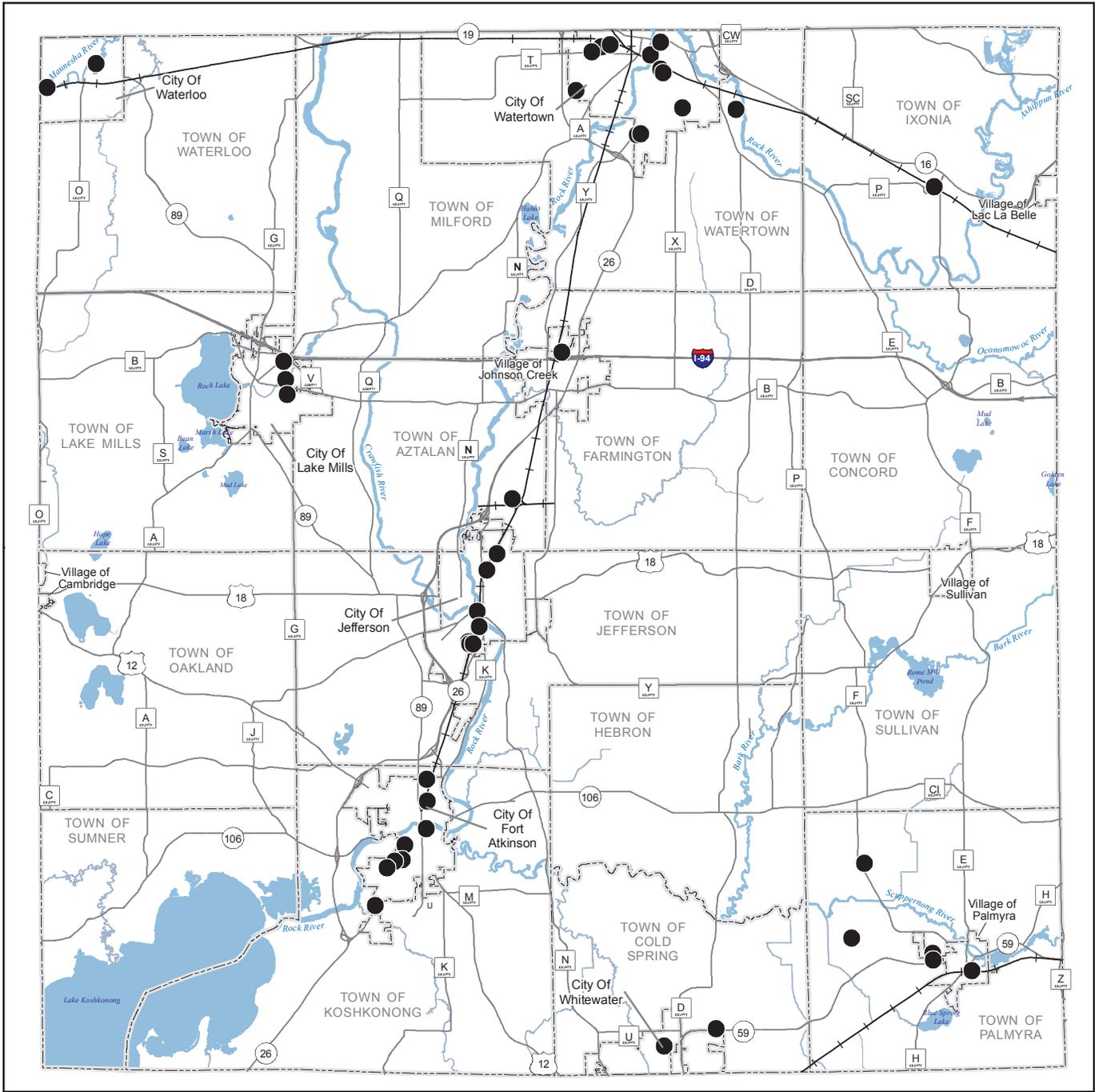
**Map 15 Health Care Facilities: 2012**

**Jefferson County Hazard Mitigation Plan**



Source: Basemap from Jefferson County Land Information Office





**Legend**

- Hazardous Facility
- Road
- ~ River
- Water Body
- Municipal Boundary

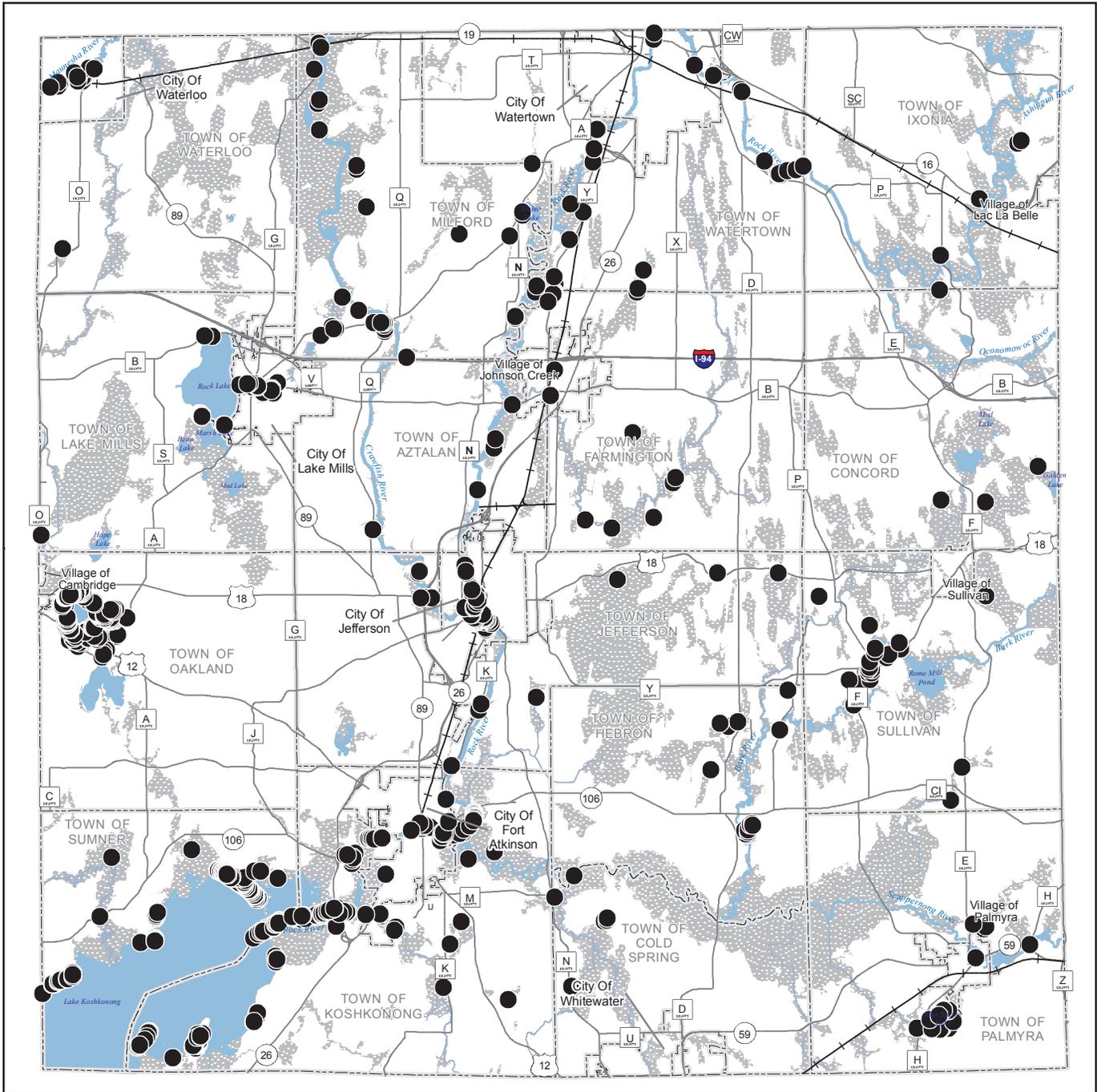
**Map 16 Facilities with Hazardous Materials: 2012**

**Jefferson County Hazard Mitigation Plan**

Source: Basemap from Jefferson County Land Information Office



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CONSULTING



**Legend**

- Structure
- ▨ 100 Year Floodplain
- Road
- ~ River
- Water Body
- Municipal Boundary

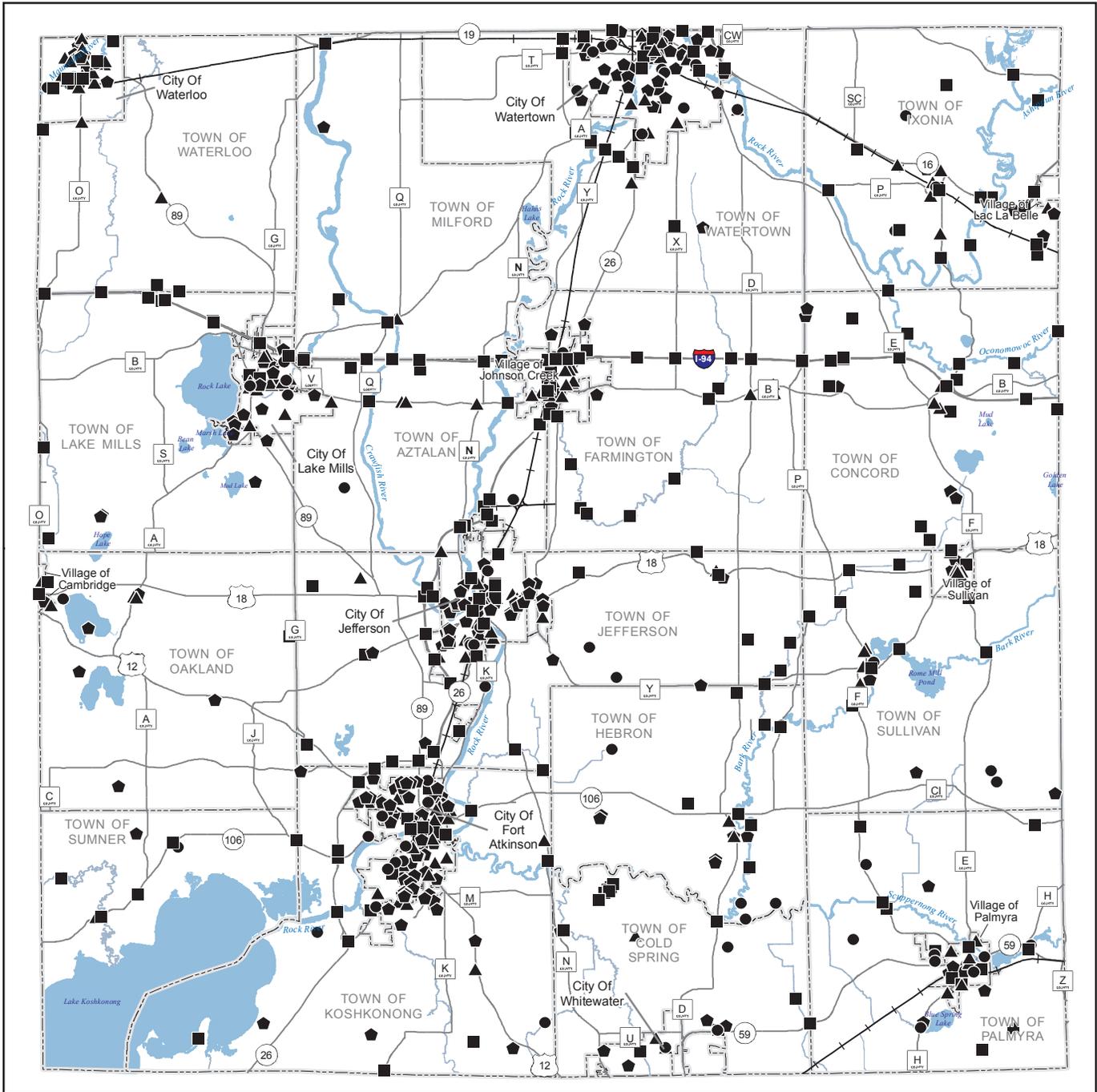
**Map 17 Structures  
in 100-Year  
Floodplain: 2012**

**Jefferson County  
Hazard Mitigation Plan**

Source: Basemap from Jefferson County  
Land Information Office



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CONSULTING



**Legend**

- ▲ Type I
- Type II
- Type III
- ◆ Type IV
- Road
- ~ River
- Water Body
- Municipal Boundary

Source: Basemap from Jefferson County Land Information Office



**Map 18 Critical Facilities by Type: 2012**

**Jefferson County Hazard Mitigation Plan**



# PUBLIC PARTICIPATION DOCUMENTATION

2012 Public Participation Plan .....	A-2
Sample correspondence sent to municipalities regarding participation .....	A-3
Sample of completed form for appointment of a point of contact .....	A-4
Municipal point of contacts .....	A-5
Steering committee meeting #1 .....	A-6
Correspondence sent to the American Red Cross and adjoining counties .....	A-7
Sample correspondence sent to the towns regarding review and comment on draft of the plan .....	A-8
Sample correspondence sent to the cities and villages regarding review and comment on draft of the plan .....	A-9
Acknowledgement form – City of Fort Atkinson .....	A-10
Acknowledgement form – City of Jefferson .....	A-11
Acknowledgement form – City of Lake Mills .....	A-12
Acknowledgement form – City of Waterloo .....	A-14
Acknowledgement form – City of Watertown .....	A-15
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Acknowledgement form – Village of Sullivan .....	A-21
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Correspondence to Jefferson County Planning Director regarding incorporating hazard mitigation plan into other planning efforts .....	A-24

**Note: the last three items will be done following tentative approval**

## **Public Participation Plan (2012) Jefferson County Hazard Mitigation Plan 5-Year Update**

Working in concert with local jurisdictions, Jefferson County has initiated a project to update the Jefferson County hazard mitigation plan that was first adopted in 2008. The items listed below are the ways in which the County will facilitate public participation in the plan update.

- ◆ **Formation of a Steering Committee.** A steering committee will be established to guide the project and provide oversight and input. Members will include county officials and staff and local officials and representatives who wish to participate.
- ◆ **Public Notices for Steering Committee Meetings.** All Steering Committee meetings will be formally noticed and open to the public consistent with the state's open meeting law.
- ◆ **Local Government Involvement.** Each of the local governments in Jefferson County will be contacted early in the process and informed about the project and asked to enter into a memorandum of understanding (MOU) with the County. Although the MOU would be non-binding, it would establish a framework for intergovernmental cooperation and coordination in terms of information sharing and give the jurisdiction the opportunity to also adopt the updated plan making it eligible for federal mitigation funding.
- ◆ **Local Jurisdiction Survey.** A set of maps, a listing of critical facilities in the jurisdiction, and a draft version of the assessment matrix used in the plan will be sent to each of the jurisdictions in the County. Local officials will have an opportunity to review and comment on the materials prepared up to that date.
- ◆ **Website.** Information about the project will be posted on the County's website, along with draft documents, maps, meeting notices and agendas, and project-related news.
- ◆ **Material Availability.** As various drafts are completed, copies will be sent to each of the local jurisdictions in Jefferson County and other interested parties for review and comment.
- ◆ **Acknowledgement by municipalities.** Each of the cities and villages in the county will be sent a proposed copy of the plan along with a form they can use to acknowledge that they have reviewed the plan, and either recommend one or more revisions or accept the plan as drafted.
- ◆ **Public Hearing.** The Board of Supervisors will hold at least one public hearing to formally accept public comment on the proposed plan. Each of the cities and villages in the county will need to conduct separate public hearings to collect public input from within their particular jurisdiction.
- ◆ **Press Releases.** Throughout the course of the project, press releases will be issued to the local media as necessary.
- ◆ **Other Means.** The County may provide other avenues for public participation and local government involvement during the course of the project.

**Adopted April 17, 2012 by the Jefferson County Board of Supervisors – Resolution 2012-04**

### Sample Correspondence Sent to Municipalities Regarding Participation

Gene Olson, Chairperson  
Town of Aztalan  
N5322 Watertown Road  
Jefferson, WI 53549

Subject: Update to Jefferson County's Hazards Mitigation Plan

Dear Mr. Olson:

In 2006, Jefferson County initiated an effort to prepare a multijurisdictional hazards mitigation plan consistent with the Disaster Mitigation Act of 2000. Jefferson County and all of the cities and villages in the county adopted the plan in 2008.

The county recently received a federal grant to partially fund the preparation of a five-year update to that plan. We need the involvement of all of the towns, cities, and villages in this effort to make sure we address local issues and concerns. I hope that all of the cities and villages will adopt the updated plan, because doing so will allow them to qualify to apply for federal funding for hazard mitigation projects and activities.

We are not asking local jurisdictions to help pay for the local share of the grant; Jefferson County will pay that amount.

If your jurisdiction would like to participate, complete the enclosed memorandum of understanding and appoint one person from your jurisdiction who will (1) verify the accuracy of a list of critical facilities that will be prepared for your jurisdiction, (2) review and comment on the draft plan, and (3) serve as a liaison during this 14-month project. If that individual would like to be more involved, he or she can also volunteer to serve on a steering committee that will have a direct role in overseeing the preparation of the plan.

I hope you can see the benefits (and low cost) of participating in this project. To participate, sign the enclosed memorandum and then appoint one person to represent your jurisdiction in the process. Please mail the completed forms in the enclosed stamped envelope to me by April 27, 2012.

The County Board has hired Civi Tek Consulting of Lake Mills to help prepare the plan update. If you should have any questions, you may contact me at (920) 674-7450 or at [donnah@jeffersoncountywi.gov](mailto:donnah@jeffersoncountywi.gov).

Sincerely,  
Jefferson County Office of Emergency Management

Donna Haugom, Director

enc. Memorandum of understanding and appointment form  
cc: Sandra Marks, Town Clerk; N6501 Ziebell Road; Jefferson, WI 53549

### Sample of Completed Form for Appointment of Point of Contact

#### Appointment of Local Representative

#### Jefferson County Hazards Mitigation Plan Update

Village of Johnson Creek, (name of jurisdiction) hereby appoints the person identified below to assist in the preparation and review of the all hazards mitigation plan for Jefferson County. The appointee understands that he or she will be asked to (1) verify the accuracy of a list of critical facilities that will be prepared for your jurisdiction, (2) review and comment on the draft plan, and (3) serve as a liaison – no meetings are anticipated.

If the appointee wishes, he or she may also volunteer to serve on a steering committee that is responsible for overseeing the preparation of the plan update – one meeting is anticipated. To do so, check the box.

Yes, this person is willing to serve on the steering committee.

Name: David F. Peterson

Title (if an elected official or employee): Fire Chief

Address: 120 S. Watertown Street

City: Johnson Creek Zip code: 53038

Daytime telephone number: 920-699-3456

Evening telephone number: 608-290-8809

Email address (if any): davep@johnsoncreekwi.org

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APR 18 2012

Jefferson County Office of  
Emergency Management

Please complete this form and the memorandum of understanding and mail them to Donna Haugom by April 27, 2012, at the address listed below.

Donna Haugom, Emergency Management Director  
Jefferson County Courthouse  
Office of Emergency Management  
411 S. Center Ave  
Jefferson, WI 53549

## Municipal Point of Contacts

Municipality	Point of Contact
<b>Town</b>	
Aztalan	James Frohmader, Supervisor
Cold Spring	Richard Rozelle, Supervisor
Concord	Bill Ingersoll, Town Chairman
Farmington	Don Reese, Town Chairman
Hebron	Matthew Foelker, Town Supervisor
Ixonia	None
Jefferson	Tom Beane, Town Constable
Koshkonong	George Jaeckel, Supervisor
Lake Mills	Hope Oostdik, Chair
Milford	Donald Hepp, Supervisor
Oakland	Dale Falk, Town Supervisor
Palmyra	Stewart Calkins, Town Chairman
Sullivan	Norman Stoner, Town Chair
Sumner	Glendan Rewoldt, Deputy Clerk
Waterloo	Todd Nieting, Supervisor
Watertown	Richard Gimler, Chairman
<b>Village</b>	
Cambridge	Dwight Christianson, Village Trustee
Johnson Creek	David Peterson, Fire Chief
Lac La Bell	none
Palmyra	Larry Kreger, Fire Chief
Sullivan	Randy McHugh
<b>City</b>	
Fort Atkinson	Thomas Emrick, Fire Chief
Jefferson	Mike Drew, Capt.
Lake Mills	Todd J. Yandre, Deputy Fire Chief
Waterloo	Timothy Thomas, Police Chief
Watertown	Greg Michalek, Fire Chief
Whitewater	Mike Ciardo, St. and E.G. Coordinator

**Steering Committee Meeting #1  
July 9, 2012**

AGENDA

**Jefferson County  
Hazard Mitigation Plan Update Steering Committee  
Kick-off Meeting**

July 9, 2012; 9:00 a.m.

Room 203, Jefferson County Courthouse  
320 S. Main Street; Jefferson, WI

1. Call to order
2. Roll call (introductions)
3. Certification of compliance with open meetings law
4. Public comment
5. Communications
6. Project description – What is a hazard mitigation plan?
7. Role of steering committee
8. Project timeline
9. Discussion regarding types of critical facilities addressed in the plan
10. Local jurisdiction survey regarding critical facilities
11. Prioritize hazards in terms of importance
12. Review mitigation strategies
13. Feedback and questions
14. Set date and time for next meeting (if needed)

**Meeting Attendance**

Matthew Foelker, Town of Hebron

Jim Fromader, Town of Aztalan

Glendan K. Rewoldt, Town of Sumner

Hope Oostdik, Town of Lake Mills

David F. Peterson, Village of Johnson Creek

Andy Erdman, Jefferson County Land Information

Stewart E. Calkins, Town of Palmyra

Steve Armstrong, Town of Oakland

Mike Ciardo, City of Whitewater

Greg Michalek, City of Watertown

Tim Thomas, City of Waterloo

Mike Drew, City of Jefferson

Donna Haugom, Jefferson County

Joe Nehmer, Jefferson County

**Correspondence to the American Red Cross and Adjoining Counties**

Date: October 12, 2012

To: Diana Tatili; Chief Disaster Services Officer, American Red Cross Badger & South Central Wisconsin Region

David Janda, Dane County Emergency Management

Joseph Meagher, Dodge County Emergency Management

Lt. John Ennis, Walworth County Emergency Management

William Stolte, Waukesha County Emergency Management

Shirley Connors, Rock County Emergency Management

From: Donna Haugom, Jefferson County Emergency Management

Subject: Jefferson County Hazard Mitigation Plan: 2013-2017 (5-year update)

Jefferson County Emergency Management has completed a draft of the 5-year update of its natural hazard mitigation plan. I have enclosed a copy of it on CD for your review and comment.

If you should have any comments, please send them to me by November 5, 2012 to [donnah@jeffersoncountywi.gov](mailto:donnah@jeffersoncountywi.gov) or to the above address.

**Sample Correspondence to the Towns Regarding Review and Comment on Draft of the Plan**

Gene Olson, Chairperson  
Town of Aztalan  
N5322 Watertown Road  
Jefferson, WI 53549

Subject: Update to Jefferson County's Hazards Mitigation Plan – Review of Draft 3

Dear Mr. Olson:

Jefferson County Emergency Management has been working with an ad hoc steering committee to update the county-wide hazard mitigation plan that was first adopted in 2008. I have enclosed five copies of the executive summary of the most recent draft for your review and comment. Please distribute them to the town board and others you deem appropriate, including Supervisor Frohmader who represented the Town on the steering committee.

If you would like to review the entire plan, it will be posted online by Wednesday, October 17, 2012. Go to: [http://www.jeffersoncountywi.gov/jc/public/jchome.php?page\\_id=427&page\\_name=Emergency%20Management](http://www.jeffersoncountywi.gov/jc/public/jchome.php?page_id=427&page_name=Emergency%20Management).

***If your community is thinking about doing a specific hazard mitigation project and wants to potentially apply for federal grant funding, it must be listed in the section of the plan that lists the goals, objectives, policies, and activities.*** If a project that you would like to do is not listed, please provide us with the following information: (1) project description; (2) cost estimate; (3) potential funding source; (4) priority - low, medium, high; (5) timeframe for doing the project; and (6) name of entity that will be responsible for spearheading the project. Please be aware that having a project listed does not obligate you to do the project, nor does it guarantee funding.

After you or others have had a chance to review the executive summary, please return the enclosed acknowledgement form to me by Monday, November 5, 2012. We will then prepare the final draft of the plan based on the comments we receive from you and the other municipalities. I will notify you when the final plan has been adopted by the County Board of Supervisors – towns do not need to take any action to adopt the plan.

If you should have any questions or comments about this draft, you may contact me at (920) 674-7450 or at [donna@jeffersoncountywi.gov](mailto:donna@jeffersoncountywi.gov).

Sincerely,  
Jefferson County Office of Emergency Management

Donna Haugom, Director

enc. Executive Summary of *Jefferson County Natural Hazards Mitigation Plan: 2013-2017 – DRAFT 3*  
Acknowledgement letter

cc: Sandra Marks, Town Clerk; N6501 Ziebell Road; Jefferson, WI 53549 (without enclosures)

**Sample Correspondence to the Cities and Villages Regarding Review and Comment on Draft of the Plan**

Jeff Milsap, President  
Village of Cambridge  
PO Box 99  
Cambridge, WI 53523

Subject: Update to Jefferson County's Hazards Mitigation Plan – Review of Draft 3

Dear Mr. Milsap:

Jefferson County Emergency Management has been working with an ad hoc steering committee to update the county-wide hazard mitigation plan that was first adopted in 2008. I have enclosed the most recent draft of the updated plan for your review and comment. Please forward this plan to others you deem appropriate, including Trustee Christianson who served as the village's point of contact for this project. The plan will be posted online by Wednesday, October 17, 2012, at:

[www.jeffersoncountywi.gov/jc/public/jchome.php?page\\_id=427&page\\_name=Emergency%20Management](http://www.jeffersoncountywi.gov/jc/public/jchome.php?page_id=427&page_name=Emergency%20Management).

If the Village of Cambridge would like to adopt the updated plan when it is done, we need your continued involvement.

***Although I encourage you to review the entire plan, you should in particular review the goals, objectives, policies, and activities listed in Chapter 7. If your community is thinking about doing a specific hazard mitigation project and wants to potentially apply for federal grant funding, it must be listed in this section.***

If a project that you would like to do is not listed, please provide us with the following information: (1) project description; (2) cost estimate; (3) potential funding source, (4) priority - low, medium, high; (5) timeframe for doing the project; and (6) name of entity that will be responsible for spearheading the project. Please be aware that having a project listed does not obligate you to do the project, nor does it guarantee funding.

After you or others have had a chance to review the draft plan, please return the enclosed acknowledgement form to me by Monday, November 5, 2012. We will then prepare the final draft of the plan based on the comments we receive from you and the other municipalities. When the final plan has been prepared, we will send you those pages of the plan that have been revised.

To adopt the plan, your municipality will need to adopt a resolution. ***However, do not adopt a resolution until after you receive a letter from me along with the revised pages.*** For your convenience, I will send you a sample resolution for your consideration.

If you should have any questions or comments about this draft, you may contact me at (920) 674-7450 or at [donna@jeffersoncountywi.gov](mailto:donna@jeffersoncountywi.gov).

Sincerely,  
Jefferson County Office of Emergency Management

Donna Haugom, Director

enc. *Jefferson County Natural Hazards Mitigation Plan: 2013-2017 – DRAFT 3*

Acknowledgement letter

Memorandum regarding specific mitigation activities

cc: Norma DeHaven, Clerk/Treasurer; PO Box 99; Cambridge, WI 53523-0099 (without enclosures)  
Dwight Christianson, Village Trustee; 406 E. Madison St; Cambridge, WI 53523 (without enclosures)

### Acknowledgement Form – City of Fort Atkinson

#### Acknowledgement Letter

#### Jefferson County Hazard Mitigation Plan Update

On behalf of the City/Village of Fort Atkinson, I hereby acknowledge that I have received a draft copy of *Jefferson County Natural Hazards Mitigation Plan: 2013-2017* and that I have reviewed it.

Check one

- No changes are needed to the draft plan.
- Please amend the draft plan based on the information described below. Attach additional pages if necessary.

Date: 11/5/12

Name: John Wilmet

Title: City Manager

Signature: [Handwritten Signature]

Daytime telephone: 920-563-7760

E-mail: jwilmet@fortatkinsonwi.net

**RECEIVED**  
**NOV - 5 2012**  
 Jefferson County Office of  
 Emergency Management

Comments:

*ongoing effort - Flood response and  
Action Plan in place.*

Please return this completed form to Donna Haugom, Emergency Management Director, by Monday, November 5, 2012.

### Acknowledgement Form – City of Jefferson



January 10, 2013

Donna Haugom, Director  
Jefferson County Emergency Management  
411 S. Center Street  
Jefferson, Wisconsin 53549

Re: Update to Jefferson County's Hazards Mitigation Plan

Dear Director Haugom:

This correspondence will advise your office that the City of Jefferson has reviewed the draft Update to Jefferson County's Hazards Mitigation Plan (**the Plan**). We concur with the specific mitigation activities included in the Plan and intend to adopt the Plan. I understand that at some future point the City Council will be required to consider a Resolution adopting the Plan. Please advise when this Resolution is required and I will have the Common Council duly consider.

Please feel free to contact me should you have any questions regarding this matter.

Sincerely,

*Timothy J. Freitag*  
Timothy J. Freitag  
Administrator

CC: Police Chief Bleecker  
Police Captain Drew  
Fire Chief Wegner  
City Engineer Weiss

### Acknowledgement Form – City of Lake Mills

#### Acknowledgement Letter

#### Jefferson County Hazard Mitigation Plan Update

On behalf of the City Village of Lake Mills, I hereby acknowledge that I have received a draft copy of *Jefferson County Natural Hazards Mitigation Plan: 2013-2017* and that I have reviewed it.

Check one

- No changes are needed to the draft plan.
- Please amend the draft plan based on the information described below. Attach additional pages if necessary.

Date: 11-26-12

Name: Steve Wilke

Title: City Manager

Signature: Steve Wilke

Daytime telephone: 920-648-2344

E-mail: swilke@ci.lake-mills.wi.us

Comments: sent via email.

Please return this completed form to Donna Haugom, Emergency Management Director, by Monday, November 5, 2012.

Continued

**City of Lake Mills  
Fire Department**

# Memo

**To:** Betsy Milbrath  
**From:** Todd J. Yandre, Deputy Chief  
**CC:** Steve Wilke, City Manager ✓  
**Date:** October 29, 2012  
**Re:** Natural Mitigation Plan 2013-2017 draft review

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I've reviewed the drafted plan and noticed a couple issues that should possibly be addressed.

- 1) Page 5-8 (table 5-8) should we update the date of last inspection for the Rock Creek dam? The last date of inspection is 1986. It also shows "not done" as far as an emergency action plan. The city of Lake Mills does have an EAP in place.
- 2) Page 6-29 Goal #7 Implementation Actions/Strategies #3; the adoption of a local burning permit program at the town level – Responsible Entity should be the towns, not cities as listed.
- 3) Appendix A A-12 no acknowledgement form from the City of Lake Mills?
- 4) Appendix E-8 "Electrical substations – missing the new substation located on CTH V or Tyrarena Park Road. This substation would also need to be listed under F-9 Critical infrastructures by jurisdiction.
- 5) Appendix E-5 "Communication tower" the communication tower located on STH 89 (South Main Street) is not listed. This tower will also need to be listed under F-9 Critical infrastructures by jurisdiction.

### Acknowledgement Form – City of Waterloo

#### Acknowledgement Letter

#### Jefferson County Hazard Mitigation Plan Update

On behalf of the City of Waterloo, I hereby acknowledge that I have received copies of the Executive Summary for *Jefferson County Natural Hazards Mitigation Plan: 2013-2017* and that I have reviewed the goals, objectives, policies, and action items.

Check one

- No changes are needed to the goals, objectives, policies, and action items.
- Please make changes based on the information described below. Attach additional pages if necessary.

Date: 12/17/2012

Name: MO HANSEN FOR MAYOR THOMPSON

Title: CLERK/TREAS.

Signature: Mo Hansen for Mayor Robert Thompson

Daytime telephone: 920 - 478 - 3025

E-mail: cityhall@waterloowi.us

Comments:

See email for additional

Please return this completed form to Donna Haugom, Emergency Management Director, by Monday, November 5, 2012.



136 North Monroe Street, Waterloo, Wisconsin 53594-1198  
Phone (920) 478-3025  
Fax (920) 478-2021

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### **720 East Madison Street -- Hazard Mitigation Project**

In an effort to reduce loss of life and property by lessening the impact of a future flood disaster, the City of Waterloo seeks hazard mitigation financial assistance to further improve the Mauneshia River channel, banks, floodway and flood fringe of municipal owned a 1.6 acre site (720 East Madison Street) to benefit the river system as a whole by increasing the water retention capacity of the floodway and flood fringe at this location.

The site was acquired by the City in 2012 for the purpose of benefiting the river system. A multi-story former pickle factory was demolished. This structure was adjacent to, and also built into, the Mauneshia River.

Currently a portion of the river bottom and banks are poured concrete at this site. The City seeks to restore the stream channel to its pre-pickle factory status and seeks to use the 1.6 acre site as additional flood fringe area during flood events.

Successful completion of a properly studied and designed mitigation project will:

- Protect life, health and property.
- Minimize public expenditures for more costly flood control projects downstream in our downtown area.
- Minimize the occurrence of future flood blight areas.
- Minimize business interruptions.
- Help prevent increases in the regional flood from occurring.

Respectfully Submitted,

Mo Hansen  
Clerk/Treasurer

### Acknowledgement Form – City of Watertown

#### Acknowledgement Letter

#### Jefferson County Hazard Mitigation Plan Update

On behalf of the City Village of Watertown, I hereby acknowledge that I have received a draft copy of *Jefferson County Natural Hazards Mitigation Plan: 2013-2017* and that I have reviewed it.

Check one

- No changes are needed to the draft plan.
- Please amend the draft plan based on the information described below. Attach additional pages if necessary.

Date: 10/24/12

Name: Row Krueger

Title: Mayor

Signature: [Handwritten Signature]

Daytime telephone: (920) 262-4000

E-mail: RowK@cityofwatertown.org

Comments:

- Work in Progress - Warning Sirens
- Enlarged Storm<sup>WATER</sup> Sewer Systems
- Large Detention Pond

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OCT 29 2012

Jefferson County Office of  
Emergency Management

Please return this completed form to Donna Haugom, Emergency Management Director, by Monday, November 5, 2012.

### Acknowledgement Form – City of Whitewater

#### Acknowledgement Letter

#### Jefferson County Hazard Mitigation Plan Update

On behalf of the City of Whitewater, I hereby acknowledge that I have received copies of the Executive Summary for *Jefferson County Natural Hazards Mitigation Plan: 2013-2017* and that I have reviewed the goals, objectives, policies, and action items.

Check one

- No changes are needed to the goals, objectives, policies, and action items.
- Please make changes based on the information described below. Attach additional pages if necessary.

Date: 12/17/2012

Name: Cameron Clapper

Title: City Manager

Signature: 

Daytime telephone: 262 473-0100

E-mail: cclapper@whitewater-wi.gov

Comments:

Please return this completed form to Donna Haugom, Emergency Management Director, by Monday, November 5, 2012.

### Acknowledgement Form – Village of Cambridge

#### Acknowledgement Letter

#### Jefferson County Hazard Mitigation Plan Update

On behalf of the Village of Cambridge, I hereby acknowledge that I have received copies of the Executive Summary for *Jefferson County Natural Hazards Mitigation Plan: 2013-2017* and that I have reviewed the goals, objectives, policies, and action items.

Check one

- No changes are needed to the goals, objectives, policies, and action items.
- Please make changes based on the information described below. Attach additional pages if necessary.

Date: 12/18/12

Name: Steven R. Struss

Title: Village Board President

Signature: Steven R. Struss

Daytime telephone: 608-224-4629

E-mail: steve.struss@wi.gov

-----  
Comments:

Please return this completed form to Donna Haugom, Emergency Management Director, by Monday, November 5, 2012.

### Acknowledgement Form – Village of Johnson Creek

#### Acknowledgement Letter

#### Jefferson County Hazard Mitigation Plan Update

On behalf of the <sup>Village</sup> City of Johnson Creek, I hereby acknowledge that I have received copies of the Executive Summary for *Jefferson County Natural Hazards Mitigation Plan: 2013-2017* and that I have reviewed the goals, objectives, policies, and action items.

Check one

- No changes are needed to the goals, objectives, policies, and action items.
- Please make changes based on the information described below. Attach additional pages if necessary.

Date: 12-18-12

Name: MARK JOHNSON

Title: Village Administrator

Signature: [Handwritten Signature]

Daytime telephone: 920-699-2296

E-mail: markj@johnsoncreekwi.org

Comments:

Please return this completed form to Donna Haugom, Emergency Management Director, by Monday, November 5, 2012.

**Acknowledgement Form – Village of Palmyra**

**Acknowledgement Letter**

**Jefferson County Hazard Mitigation Plan Update**

On behalf of the City/Village of Palmyra, I hereby acknowledge that I have received a draft copy of *Jefferson County Natural Hazards Mitigation Plan: 2013-2017* and that I have reviewed it.

Check one

No changes are needed to the draft plan.

Please amend the draft plan based on the information described below. Attach additional pages if necessary.

Page 5-8 - TABLE 5-8 "Dams" Spring Lake Dam was inspected By Rob Davis - DNR in Sept. 13, 2007

Date: 11-13-12

Name: Laurie Mueller

Title: Village Clerk

Signature: Laurie Mueller

Daytime telephone: 262-495-8316

E-mail: clerk@villageofpalmyra.com

Comments:

Our Lower Spring Lake Dam is a concern for the Village. We have had our own Engineering firm do a condition inspection in 2012 and there is a dam failure analysis in progress. In Aug of 2012 we had polyurethane injections done on the dam.

Please return this completed form to Donna Haugom, Emergency Management Director, by Monday, November 5, 2012.

### Acknowledgement Form – Village of Sullivan

#### Acknowledgement Letter

#### Jefferson County Hazard Mitigation Plan Update

On behalf of the Village of Sullivan, I hereby acknowledge that I have received copies of the Executive Summary for *Jefferson County Natural Hazards Mitigation Plan: 2013-2017* and that I have reviewed the goals, objectives, policies, and action items.

Check one

- No changes are needed to the goals, objectives, policies, and action items.
- Please make changes based on the information described below. Attach additional pages if necessary.

Date: December 19, 2012

Name: Terrisa Laurin

Title: Village President

Signature: Terrisa Laurin

Daytime telephone: 262-593-2388

E-mail: deputyclerk@villageofsullivan.com

Comments:

The Village of Sullivan will be looking at enhancing its web site to include more information about disaster preparedness.

Please return this completed form to Donna Haugom, Emergency Management Director, by Monday, November 5, 2012.

**Law Enforcement and Emergency Management Committee Agenda – \_\_\_\_\_, 2013**

**- Forthcoming -**

**Jefferson County Board Meeting Agenda – \_\_\_\_, 2013**

**- Forthcoming -**

**Correspondence to Jefferson County Planning Director Regarding Incorporating  
Hazard Mitigation Plan into Other Planning Efforts**

**- Forthcoming -**

# ADOPTION RESOLUTIONS (2012 PLAN UPDATE)

Jefferson County ..... B-2

City of Fort Atkinson ..... B-3

City of Jefferson ..... B-4

City of Lake Mills ..... B-5

City of Waterloo ..... B-6

City of Watertown ..... B-7

Village of Cambridge ..... B-8

Village of Johnson Creek ..... B-9

Village of Palmyra ..... B-10

Village of Sullivan ..... B-11

**Jefferson County - forthcoming**

**City of Fort Atkinson - forthcoming**

**City of Jefferson - forthcoming**

**City of Lake Mills – forthcoming**

**City of Waterloo - forthcoming**

**City of Watertown -- forthcoming**

**Village of Cambridge -- forthcoming**

**Village of Johnson Creek – forthcoming**

**Village of Palmyra – forthcoming**

**Village of Sullivan – forthcoming**

# LETTER OF CERTIFICATION

forthcoming

# CRITICAL FACILITIES SORTED BY TYPE: 2012

<b>Jurisdiction</b>	<b>Facility name</b>	<b>Address</b>
<b>Adult day care center</b>		
Fort Atkinson, city	Dreamcatchers ADC	218 W Blackhawk Drive
Fort Atkinson, city	Reflections Adult Day Care LLC	511 Madison Avenue
Hebron, town	Capabilities	N2489 Wenham Road
Jefferson, city	Elite Day Services LLC	1101 S Grove Avenue
Jefferson, town	St Coletta of Wisconsin - Golden Options Pro	N4637 CTH Y
Watertown, city	Bethesda	761 Millford Stre
<b>Adult family home (AFH)</b>		
Cold Spring, town	Fremont Manor	W4791 Fremont Road
Cold Spring, town	House of Care	W3460 Vannoy Drive
Concord, town	Hillside Gardens AFH	W2140 CTY Road B
Concord, town	Suzy's Country Acres	N7112 HWY P
Fort Atkinson, city	Arbor House	1103 Peterson Street
Fort Atkinson, city	Aspen Place AFH	918 Gail Place
Fort Atkinson, city	Bethesda Lutheran Communities - FOR	1200 Jefferson Street
Fort Atkinson, city	Black Bear AFH	222 W Blackhawk Drive
Fort Atkinson, city	Blue Raven	220 W Blackhawk Drive
Fort Atkinson, city	Caring Corner	1328 Commonwealth Drive
Fort Atkinson, city	Cherokee Hills	655 Cherokee Lane
Fort Atkinson, city	Clover Lane Place AFH	421 Clover Lane
Fort Atkinson, city	Elm Mound Adult Family Home	117/119 Healy Lane
Fort Atkinson, city	Gorniak AFH	1008 W Blackhawk Drive
Fort Atkinson, city	Gray Wolf	212 W Blackhawk Drive
Fort Atkinson, city	Hearts of Hope II	703 Badger Court
Fort Atkinson, city	Hearts of Hope LLC I	711 713 Badger Court
Fort Atkinson, city	Helping Hand Adult Family Home	205 Lucile Street
Fort Atkinson, city	Hil Nikki Home	506 Nikki Lane
Fort Atkinson, city	Hil Prairie Ridge	502 Nikki Lane
Fort Atkinson, city	Hil Songbird House	508 Nikki Lane
Fort Atkinson, city	Hil Stone Ridge	504 Nikki Lane
Fort Atkinson, city	In Good Hands	702 Badger Court
Fort Atkinson, city	Jamesway House	1264 Jamesway
Fort Atkinson, city	Jensen's AFH	224 Nadig Drive
Fort Atkinson, city	Lighted Pathways II	712 Badger Court
Fort Atkinson, city	Locust Corners AFH	28 E Sherman Avenue
Fort Atkinson, city	New Beginnings	402 Raintree Drive
Fort Atkinson, city	Parkview AFH	317 Robert Street
Fort Atkinson, city	Pine Circle AFH	503 Nikki Lane
Fort Atkinson, city	Secured Living LLC	404 N Main Street
Fort Atkinson, city	Silver Fox	214 W Blackhawk Drive
Fort Atkinson, city	Spruce Lane AFH	1122 Greene Street
Fort Atkinson, city	St Coletta of Wisconsin - Frederick Avenue	414 Frederick Avenue
Fort Atkinson, city	Walnut AFH	1442 Endl Boulevard

<b>Jurisdiction</b>	<b>Facility name</b>	<b>Address</b>
Fort Atkinson, city	Welter AFH	1333 Adrian Boulevard
Fort Atkinson, city	West Gate Retirement Home	1314 Commonwealth Drive
Fort Atkinson, city	Willow Way AFH	312 Rogers Street
Ixonia, town	Bethesda Lutheran Communities - VIC	N7721 Vicksburg Way
Ixonia, town	Bethesda Lutheran Communities - VIC	N7723 Vicksburg Way
Jefferson, city	Hickory AFH	312 Stiel Street
Jefferson, city	Juniper AFH	314 Stiel Street
Jefferson, city	St Coletta of Wisconsin - Clover 2	835 Clover Court
Jefferson, city	St Coletta of Wisconsin - Clover Ct	832 Clover Court
Jefferson, city	St Coletta of Wisconsin - Kranz Home	210 S Kranz Avenue
Jefferson, city	St Coletta of Wisconsin - Marshall Avenue	313 S Marshall Avenue
Jefferson, city	St Coletta of Wisconsin - St Rose	W4955 USH 18
Jefferson, city	Terasas House AFH	223 N Wilson Avenue
Jefferson, town	Country Acres AFH	N3108 STH 89
Jefferson, town	Peaceful Pines	W6556 CTH J
Jefferson, town	St Coletta of Wisconsin - St Clare	N4637 CTH Y
Johnson Creek, village	Bethesda Lutheran Communities - GRE	109 Green Ash Lane
Johnson Creek, village	CCLS Green Ash	113 Green Ash Lane
Koshkonong, town	Country Hearts	W5999 Friedel Road
Koshkonong, town	Country Hearts	N2767 STH 89
Koshkonong, town	Country Living AFH	N1504 Schneider Lane
Koshkonong, town	Hawks Ridge AFH	N2767 STH 89
Koshkonong, town	Jasper House	N1947 USH 12
Koshkonong, town	Orchard View Adult Family Home	W6429 USH 12
Koshkonong, town	Willow Winds Living	N372 Twinkling Star Road
Lake Mills, city	Victorian Splendor	312 E Lake Street
Oakland, town	Hidden Acres	N2701 Retzlaff Road
Sumner, town	Larson's AFH	N2297 Hwy A
Watertown, city	Bethesda Lutheran Communities - 162	1621 Carlson Place
Watertown, city	Bethesda Lutheran Communities - 163	1633 Carlson Place
Watertown, city	Bethesda Lutheran Communities - BRI	508 Bridlewood Lane
Watertown, city	Bethesda Lutheran Communities - CAS	917 Casey Drive
Watertown, city	Manor Family Home (The)	512 S Fifth Street
Watertown, city	Woodbridge Home	722 Woodbridge Trail
<b>Bridge, major</b>		
Aztalan, town	Bridge on CTH B over Crawfish River	CTH B
Aztalan, town	Bridge on CTH B over Rock River	CTH B
Aztalan, town	Bridge over Crawfish Rver	I-94
Aztalan, town	Bridge over Rock River	I-94
Cold Spring, town	Bridge on CTH D over Scuppernong Creek	CTH D
Cold Spring, town	Bridge on CTH U	CTH U
Farmington, town	Bridge on CTH Y over Johnson Creek	CTH Y
Fort Atkinson, city	Bridge on Janesville Avenue	Janesville Avenue

<b>Jurisdiction</b>	<b>Facility name</b>	<b>Address</b>
Fort Atkinson, city	Bridge on Main Street	Main Street
Hebron, town	Bridge on CTH D over Scuppernong Creek	CTH D
Hebron, town	Bridge on STH 106	STH 106
Ixonia, town	Bridge on CTH CW	CTH CW
Ixonia, town	Bridge on CTH F	CTH F
Ixonia, town	Bridge on CTH P	CTH P
Ixonia, town	Bridge on STH 16	STH 16
Jefferson, city	Bridge on Main Street over Rock River	Main Street
Jefferson, city	Bridge on North Street over Rock River	North Street
Jefferson, city	Bridge on Puerner Street over Rock River	Puerner Street
Jefferson, city	Bridge on Racine Street over Rock River	Racine Street
Jefferson, city	Bridge on Wisconsin Drive over Crawfish River	Wisconsin Drive
Jefferson, town	Bridge on STH 18 over Crawfish River	STH 18
Johnson Creek, village	Bridge on Aztalan Street	Aztalan Street
Johnson Creek, village	Bridge on STH 26 over Johnson Creek	STH 26
Koshkonong, town	Bridge on CTH J	CTH J
Koshkonong, town	Bridge on CTH N over Bark River	CTH N
Koshkonong, town	Bridge on STH 106	STH 106
Koshkonong, town	Bridge on STH 26	STH 26
Koshkonong, town	Bridge on STH 26	STH 26
Milford, town	Bridge on CTH A over Crawfish River	CTH A
Milford, town	Bridge on STH 19 over Crawfish River	STH 19
Palmyra, town	Bridge on STH 106	STH 106
Palmyra, village	Bridge on Jefferson Street	Jefferson Street
Palmyra, village	Bridge on Main Street/STH 59	Main Street
Palmyra, village	Bridge on Main Street/STH 59	Main Street
Sullivan, town	Bridge on CTH E	CTH E
Sullivan, town	Bridge on CTH F over Bark River	CTH F
Sullivan, town	Bridge on CTH F over Rome Mill Pond	CTH F
Sullivan, town	Bridge on CTH P	CTH P
Sullivan, town	Bridge on Main Street over Bark River	Main Street (CTH F)
Sumner, town	Bridge on STH 106	STH 106
Waterloo, city	Bridge on East Madison B-28-104	E Madison Street
Waterloo, city	Bridge on East Madison B-28-77-93	E Madison Street
Waterloo, city	Bridge on Portland Road	Portland Road / STH 19
Waterloo, city	Bridge on West Madison	W Madison Street
Waterloo, city	Bridge on West Madison Street	W Madison Street
Watertown, city	Bridge on Church Street over Rock River	Church Street
Watertown, city	Bridge on Cody Street over Rock River	Cody Street
Watertown, city	Bridge on East Main Street over Rock River	E Main Street
Watertown, city	Bridge on Main Street over Rock River	Main Street
Watertown, city	Bridge on Milwaukee Street over Rock River	Milwaukee Street
Watertown, city	Bridge on Oconomowoc Avenue over Rock River	Oconomowoc Avenue

<b>Jurisdiction</b>	<b>Facility name</b>	<b>Address</b>
<b>Campground</b>		
Hebron, town	Hebron Campground	N2316 Museum Road
Koshkonong, town	Jellystone Park Camping Resort	N551 Wishing Well Lane
Koshkonong, town	Pilgrim's Campground	W7271 County Road C
Lake Mills, town	Sandhill Station State Campground (DNR)	N5595 Mud Lake Road
Milford, town	River Bend RV Resort	W6940 Rubidell Road
Oakland, town	Hoard & Curtis Scout Camp	N4189 Island Lane
Palmyra, town	Circle K Campground	W1316 Island Road
Palmyra, town	Horsedriver's Campground (DNR)	W830 Little Prairie Road
Sullivan, town	Bark River Campground & Resort	W2340 Hanson Road
Sullivan, town	Nature's Villa	Roger Road
Sullivan, town	Rome Riverside Campground	N3780 Water Street
<b>Child care center - group</b>		
Fort Atkinson, city	Beautiful Beginnings Day Care and Preschool	1255 Talcott Avenue
Fort Atkinson, city	Fort Atkinson Preschool and Child Care	31 W Milwaukee Avenue
Fort Atkinson, city	Jefferson County Head Start CESA 2	719 S Main Street
Fort Atkinson, city	Kids Konnection	660 McMillen Street
Fort Atkinson, city	Parents Cooperative Preschool	320 S Main Street
Fort Atkinson, city	Shooting Star School Age Club SAC	1000 Harriette Street
Fort Atkinson, city	TLC Preschool	314 Barrie Street
Hebron, town	Jefferson County Head Start CESA 2	N2313 CTH D
Jefferson, city	Busy Bees Preschool	1541 Annex Road
Jefferson, city	I Think Child Care	232 E Church Street
Jefferson, city	Jefferson County Head Start CESA 2	120 S Sanborn Avenue
Jefferson, city	Kiddie Kollege	159 W Garland
Jefferson, city	Small World Preschool	324 S Sanborn Avenue
Jefferson, city	St John the Baptist - Extended Care	333 E Church Street
Lake Mills, city	Kiddos Memorial Park LLC	510 Owen Street
Lake Mills, city	Kuhl Corner Campus LLC	695 S Industrial Drive
Lake Mills, city	Teddy Bear Preschool	271 E Prospect Street
Palmyra, town	Country Kids School House	W1476 N Blue Spring Lake Drive
Palmyra, village	Vita Kids Learning Center	1205 W Royal Lee Drive
Sullivan, village	Premier Child Care of Sullivan LLC	618 Bakertown Drive
Waterloo, city	Kuhl Campus	1003 N Monroe Street
Waterloo, city	Little Bears Childcare	807 Lum Avenue
Watertown, city	Gingerbread Preschool and Child Care Center	120 Kuckkan Lane
Watertown, city	Great Expectations Early Learning Center	690 Johnson Street
Watertown, city	Jefferson County Head Start Watertown	415 S 8th Street
Watertown, city	Kiddie Kampus Preschool and Day Care	828 W Main Street
Watertown, city	Kids Palace	217 N 5th Street
Watertown, city	Mary Linsmeier School	415 S 8th Street
<b>Communication tower</b>		
Aztalan, town	Communication tower	Ziebell Road

Jurisdiction	Facility name	Address
Aztalan, town	Communication tower	Gomoll Road
Aztalan, town	Communication tower	W5403 Junction Road
Cambridge, Village	Communication tower (FCC #1237719)	Lagoon Road
Cold Spring, town	Communication tower	N555 Howard Road
Cold Spring, town	Communication tower (FCC #1035461)	W4362 Findlay Road
Cold Spring, town	Communication tower (FCC #1035462)	W4362 Findlay Road
Cold Spring, town	Communication tower (FCC #1035463)	W4362 Findlay Road
Cold Spring, town	Communication tower (FCC #1035464)	W4362 Findlay Road
Cold Spring, town	Communication tower (FCC #1035465)	W4362 Findlay Road
Concord, town	Communication tower	N6217 Morgan Road
Concord, town	Communication tower	Bakertown Road
Concord, town	Communication tower	W2228 CTH B
Concord, town	Communication tower (FCC #1034429)	Bakertown Road
Concord, town	Communication tower (FCC #1062004)	N6498 CTH F
Concord, town	Communication tower (FCC #1208265)	N6656 S Island Road
Farmington, town	Communication tower	Glover Lane
Farmington, town	Communication tower (FCC #1234475)	Glover Lane
Fort Atkinson, city	Communication tower (FCC #1050098)	Janesville Avenue
Fort Atkinson, city	Communication tower (FCC #1219156)	Janesville Avenue
Fort Atkinson, city	Communication tower (FCC #1229114)	Blackhawk Drive
Hebron, town	Communication tower	CTH D South of CTH Y
Hebron, town	Communication tower	2641 Kitzinger Lane
Ixonia, town	Communication tower	W1156 / W1158 Gopher Hill Road
Ixonia, town	Communication tower	N7614 Ski Slide Road
Ixonia, town	Communication tower	STH 16
Jefferson, city	Communication tower	Greenwood Street
Jefferson, city	Communication tower	Greenwood Street
Jefferson, town	Communication tower	Christberg Road
Jefferson, town	Communication tower	Bakertown Road
Jefferson, town	Communication tower	W6604 CTH J
Jefferson, town	Communication tower (FCC # n/a )	W6998 USH 18
Jefferson, town	Communication tower (FCC #1239957)	W3022 Markert Road
Koshkonong, town	Communication tower (FCC #1034447)	Hoge Road
Lake Mills, city		1401 S Main Street
Lake Mills, town	Communication tower	Cemetery Road
Lake Mills, town	Communication tower (FCC #1057070)	W8668 Airport Road
Lake Mills, town	Communication tower (FCC #1200052)	W8538 Airport Road
Oakland, town	Communication tower	USH 12
Oakland, town	Communication tower (FCC #1042741)	N4097 CTH G
Palmyra, town	Communication tower	W581 Little Prarie Road
Palmyra, town	Communication tower	CTH CI
Palmyra, town	Communication tower	Tamarack Road
Palmyra, town	Communication tower (FCC #1047466)	N2404 STH 106

Jurisdiction	Facility name	Address
Sullivan, town	Communication tower	USH 18 (West of Village)
Sullivan, town	Communication tower	Village Line Road
Sullivan, village	Communication tower	Recycling Lane
Sumner, town	Communication tower	Loga Road
Waterloo, town	Communication tower	N7389 Newville Road
Waterloo, town	Communication tower (FCC #1229718)	Sunset View Lane
Watertown, city	Communication tower	106 Jones Street
Watertown, city	Communication tower	110 Votech Drive
Watertown, city	SBC tower	115 S 4th Street
Watertown, town	Communication tower	N7907 CTH X
<b>Community based residential facility (CBRF)</b>		
Cold Spring, town	Strawberry Hill CBRF	N556 Howard Road
Farmington, town	Shady Acres CBRF	N5015 HWY Y
Fort Atkinson, city	Apple House	1621 Premier Place
Fort Atkinson, city	Birch Terrace	1109 Caswell Street
Fort Atkinson, city	Black Hawk Senior Residence	1 Milwaukee Avenue West
Fort Atkinson, city	Commonwealth Home	1501 Commonwealth Drive
Fort Atkinson, city	Falcons Nest CBRF	160 W Blackhawk Drive
Fort Atkinson, city	Golden Eagle CBRF	216 W Blackhawk Drive
Fort Atkinson, city	Hil Linden Corner	325 W Blackhawk Drive
Fort Atkinson, city	Hil Sandstone	1533 S Main Street
Fort Atkinson, city	Hil Willow Court	575 W Blackhawk Drive
Fort Atkinson, city	Rem Wisconsin II - Dommo Drive	1501 Dommo Drive
Fort Atkinson, city	Rem Wisconsin II - Stacy Lane	1403 Stacy Lane
Fort Atkinson, city	Sienna Crest Fort Atkinson	1531 Commonwealth Drive
Fort Atkinson, city	Stepping Stone CBRF	318 N Main Street
Fort Atkinson, city	Wellington Meadows	N2550 Weiss Lane (Memorial Dr)
Fort Atkinson, city	Wellington Place of Fort Atkinson	200 S Water Street
Hebron, town	Maple Run CBRF	N2489 Wenham Road
Hebron, town	Oak Grove CBRF	W3343 Hoffman Road
Ixonia, town	Margaret Ruth Home	N8007 Lakeview Drive
Jefferson, city	Bethesda Lutheran Communities - HYE	411 Hyer Drive
Jefferson, city	Eagle View Manor	881 Collins Road
Jefferson, city	Lueder Haus	1473 Annex Road
Jefferson, city	St Coletta of Wisconsin - Dower CBRF	528 S Kranz Avenue
Jefferson, city	St Coletta of Wisconsin - Jacoba	640 E Theodore Street
Jefferson, city	St Coletta of Wisconsin - Lourdes	140 S Kranz Avenue
Jefferson, city	St Coletta of Wisconsin - Luchenbach	648 E Luchenbach Lane
Jefferson, city	St Coletta of Wisconsin - Padua Heights	724 E Racine Street
Jefferson, city	St Coletta of Wisconsin - San Damiano	128 S Kranz Avenue
Jefferson, city	St Coletta of Wisconsin - St Agnes	900 E Racine Street
Jefferson, city	St Coletta of Wisconsin - St Isidore	W4955 USH 18
Jefferson, city	St Coletta of Wisconsin - St Michael	822 E Racine Street

<b>Jurisdiction</b>	<b>Facility name</b>	<b>Address</b>
Jefferson, city	St Coletta of Wisconsin - Tau	621 E Spring Street
Jefferson, city	St Coletta of Wisconsin - Theodore	621 Theodore Street
Jefferson, city	Sylvan Crossings at Jefferson	279 N Jackson Street
Jefferson, town	St Coletta of Wisconsin - St John The Baptist	W5078 USH 18
Jefferson, town	St Coletta of Wisconsin - St Martha	W5092 USH 18
Johnson Creek, village	Bethesda Lutheran Communities - MAR	140 Mark Drive
Johnson Creek, village	Bethesda Lutheran Communities - MIC	141 Michelle Drive
Johnson Creek, village	Sunset Ridge Assisted Living	1275 Rimmel Drive
Koshkonong, town	Cedar Hill	N1366 USH 12
Koshkonong, town	Rolling Meadows CBRF	N464 Poeppel Road
Lake Mills, city	Brook Gardens Assisted Living	300 O'Neil Street
Lake Mills, town	London Lodge I	W9095 London Road
Lake Mills, town	London Lodge II	W9097 London Road
Oakland, town	Autumn Winds of Oakland LLC	N3767 Airport Road
Waterloo, city	Bethesda Lutheran Communities - MAD	968 E Madison Street
Waterloo, city	Bethesda Lutheran Communities - MON	734 N Monre Street
Watertown, city	Bethesda Lutheran Communities - EAS	208 E Haven Drive
Watertown, city	Bethesda Lutheran Communities - WAK	1320/1322 Wakoka Street
Watertown, city	Bethesda Lutheran Communities - WAK	1316/1318 Wakoka Street
Watertown, city	Mertin's Home Care	682 Milford Street
Watertown, town	Doherty Home	N7855 Little Coffee Road
<b>Community center</b>		
Concord, town	Town of Concord Community Center	W1095 Concord Center Drive
Johnson Creek, village	Johnson Creek Community Center	417 Union Street
Lake Mills, city	Lake Mills Community Center	200 A Water Street
Palmyra, village	Ervin L. Young Community Center	123 Burr Oak Street
Waterloo, city	Waterloo Youth Center	Mill Street
<b>Dam - large</b>		
Hebron, town	Jefferson Marsh WRP - North	n/a
Hebron, town	Princes Point WLA Dam No. 1	n/a
Hebron, town	Princes Point WLA Dam No. 2	n/a
Jefferson, city	Jefferson Dam	n/a
Lake Mills, city	Lake Mills Dam	129 S Main Street
Palmyra, town	Blue Springs Lake	n/a
Palmyra, town	Carlin Dam	Mill Road
Palmyra, village	Spring Lake Dam	n/a
Sullivan, town	Rome Dam	n/a
Watertown, city	Lower Watertown Dam	n/a
Watertown, city	Upper Watertown Dam	n/a
<b>Dam - small</b>		
Aztalan, town	William R. Wolff Dam	n/a
Cold Spring, town	Witte Dam	n/a
Fort Atkinson, city	Leo R. Roethe Dam	n/a

<b>Jurisdiction</b>	<b>Facility name</b>	<b>Address</b>
Hebron, town	Muck Farms Dam No. 2	n/a
Hebron, town	Princes Point WLA Dam	n/a
Jefferson, town	Anhalt & Knox Dam	n/a
Jefferson, town	Muck Farms Dam No. 1	n/a
Koshkonong, town	Evergreen Dam	n/a
Koshkonong, town	Koshkonong Wetland Dam	n/a
Koshkonong, town	William Heffron Dam	n/a
Oakland, town	Lake Ripley Dam	n/a
Sullivan, town	Fin-n-feather Club Dam	n/a
Sullivan, town	Jack Y. Miller Dam	n/a
<b>Electric power plant</b>		
Watertown, city	Lower Watertown Hydroelectric Project	n/a
Watertown, city	Upper Watertown Hydroelectric Project	n/a
Watertown, town	Wisconsin Electric Concord Generating Station	N8914 CTH E
Whitewater, city	Cogentrix	111 CTH U
<b>Electrical substation</b>		
Aztalan, town	Electrical substation	CTH B at CTH N
Farmington, town	Electrical substation	CTH B at CTH D
Hebron, town	Electrical substation	N2457 CTH D
Ixonia, town	Electrical substation	CTH F
Jefferson, city	Electrical substation	Pitzner Parkway
Jefferson, city	Electrical substation	Racine Street
Jefferson, city	Electrical substation	170 Riverview Drive
Jefferson, town	Electrical substation	N4695 STH 89
Johnson Creek, village	Electrical substation	Grell Lane
Koshkonong, town	Electrical substation (WEPCO)	Hackbarth Road
Lake Mills, city	Electrical substation	Campus Street
Lake Mills, city	Electrical substation	550 East Tyrana Park Road
Lake Mills, city	Electrical substation	CP Avenue
Palmyra, town	Electrical substation	CTH H
Sullivan, town	Electrical substation	Jefferson Street and Summer Hill Road
Sullivan, village	Electrical substation	Front Street
Waterloo, city	Electrical substation	W Madison Street
Waterloo, town	Electrical substation	N8896 CTH O
<b>EMS facility</b>		
Fort Atkinson, city	Ryan Brothers EMS	1210 Arndt Street
Jefferson, city	Jefferson EMS	121 W Racine Street
Johnson Creek, village	Johnsonville Creek EMS	145 S Watertown Street
Lake Mills, city	Lake Mills Emergency	603 E Lake Street
Sullivan, village	Sullivan EMS	802 Pleasant Street
<b>Fire department</b>		
Fort Atkinson, city	City of Fort Atkinson Fire Department	124 W Milwaukee Street
Ixonia, town	Ixonia Fire Department	N8320 N Street

<b>Jurisdiction</b>	<b>Facility name</b>	<b>Address</b>
Jefferson, city	Jefferson Fire Department	351 E Racine Street
Jefferson, town	Helenville Volunteer Fire Department	N4737 Helenville Road
Johnson Creek, village	Johnson Creek Fire Department	120 S Watertown
Lake Mills, city	Lake Mills Fire Department	120 Veterans Lane
Palmyra, village	Palmyra Fire Department	126 N First Street
Sullivan, town	Rome Volunteer Fire Department	W1904 CTH F
Sullivan, village	Sullivan Volunteer Fire Department	800 Pleasant Street
Waterloo, city	Waterloo Fire Department	900 Industrial Lane
Watertown, city	City of Watertown Fire Department	106 Jones Street
<b>Hazardous chemical facility</b>		
Aztalan, town	Valero Renewable Fuels Co	N5355 E Junction Road
Cold Spring, town	Frontier FS - Whitewater	W3364 STH 59
Fort Atkinson, city	Ball Container LLC	105 E Blackhawk Drive
Fort Atkinson, city	Jones Dairy Farm	Jones Avenue
Fort Atkinson, city	Loeb -Lorman Iron & Metal Company, Inc.	115 Lorhman Street
Fort Atkinson, city	McCain Foods	801 Rockwell Avenue
Fort Atkinson, city	Nasco Biology Department	901 Janesville Avenue
Fort Atkinson, city	Redi Serve	1200 Industrial Drive
Fort Atkinson, city	SBC/WI Bell - Fort Atkinson	201 Milwaukee Avenue East
Fort Atkinson, city	Spacesaver Corporation (Plant II)	1700 Janesville Avenue
Jefferson, city	Americold Cold Storage Corporation	230 Collins Road
Jefferson, city	Americold Cold Storage Corporation	1025 Industrial Avenue
Jefferson, city	Frontier FS Cooperative	222 E Puermer Street
Jefferson, city	LD Foods	1015 Industrial Drive
Jefferson, city	Nestle Purina	150 Riverview Drive
Jefferson, city	Remis Power Systems	925 N Parkway
Jefferson, city	Tyson Foods (Dorskocil Food Service)	1 Rock River Road
Johnson Creek, village	United Cooperative	N6731 Old Hwy 26
Lake Mills, city	Lake Mills wastewater treatment plant	308 N CP Avenue
Lake Mills, city	Lakeland Cold Storage	1028 Mulberry Street
Palmyra, village	Epic Resins	600 Industrial Boulevard
Palmyra, village	Frontier FS-Palmyra	212 Third Street
Palmyra, village	Standard Process Inc	1200 W Royal Lee Drive
Watertown, city	Baso Gas Products, LLC	
Watertown, city	Reiss Industries	319 Hart Street
Watertown, city	SBC / WI Bell - Watertown	115 S 4th Street
Watertown, city	Tractor Supply Store	1911 Market Way
Watertown, city	US Chemical	316 Hart Street
Watertown, city	UTI/US Chemical Distribution Center	
Watertown, city	WalMart Store 1776	1901 E Market Way
Watertown, city	Watertown Hops Company	1224 American Way
Watertown, city	Watertown Water Department	806 S 1st Street
Watertown, city	Watertown Water Department	870 West Street

<b>Jurisdiction</b>	<b>Facility name</b>	<b>Address</b>
Watertown, city	WisPak of Watertown	860 West Street
Watertown, town	Wisconsin Electric Concord Generating Station	N8914 CTH E
Whitewater, city	LSP Limited Partners - Whitewater Cogeneration Plan	111 CTH U
Whitewater, city	Whitewater wastewater treatment plant (WWTP)	W3875 CTH U
<b>Health care clinic</b>		
Fort Atkinson, city	Davis Duehr Dean	1100 Madison Avenue
Fort Atkinson, city	Fort Atkinson Medical Center	211 W Memorial Drive
Fort Atkinson, city	Fort Health Care	426 McMillen Street
Fort Atkinson, city	Fort HealthCare Center for Women's Health	650 McMillen Street
Fort Atkinson, city	Purity	525 Handeyside Lane
Fort Atkinson, city	UW Health-Fort Atkinson	601 Handeyside Lane
Jefferson, city	Rockwood Family Health	152 W Garland Steet
Johnson Creek, village	Johnson Creek Medical Center - Fort HealthCare Cen	400 Doctors Court
Johnson Creek, village	Lakewood Family Clinic of Johnson Creek	540 Village Walk Lane
Johnson Creek, village	UW Cancer Center	250 Doctors Court
Lake Mills, city	Lakewood Family Clinic	1025 Mulberry Street
Lake Mills, city	Urgent Care of Lake Mills/Family Practice of Lake Mill	200 E Tyranaena Park Road
Waterloo, city	UW Health-Waterloo (Park Hill Clinic)	111 Anna Street
Waterloo, city	Waterloo Clinic	105 Highland Terrace
Watertown, city	ProHealth Care Medical Centers	109 Air Park Drive
<b>Hospital</b>		
Fort Atkinson, city	Fort Atkinson Memorial Hospital	611 E Sherman Avenue
<b>Military installation</b>		
Fort Atkinson, city	Wisconsin Army National Guard	420 Bark River Road
Watertown, city	Wisconsin National Guard	1700 River Drive
<b>Mobile / manufactured home park</b>		
Concord, town	Spacious Acres Mobile Home Community	W1211 Sunnyside Drive
Jefferson, city	Maple Grove Mobile Home Park	Main Street
Johnson Creek, village	Back Acres Mobile Home Park	105 Aztalan Street
Johnson Creek, village	Village Terrace	South Street
Lake Mills, city	East Lake Estates Mobile Home Park	E Lake Street
Lake Mills, city	Lakeland Mobile Home Community	E Lake Street
Lake Mills, city	Sandy Beach Mobile Home Park	Sandy Beach Road
Lake Mills, city	Topel's Mobile Home Park	Topel Street
Lake Mills, city	Woodland Beach Resort	Woodland Drive
Lake Mills, town	Country Acres	N6789 CTH A
Oakland, town	Breezy Knoll	CTH A
Oakland, town	Oak Ridge Mobile Community	N3525 Trieloff Road
Palmyra, village	Pal Park	Beech Street
Sullivan, town	Tremain Mobile Home Park	N2639 CTH Z
Watertown, town	Hickory Hill Park	3266 E Gate Drive
Whitewater, city	Twin Oaks Park	CTH N
<b>Municipal building</b>		

<b>Jurisdiction</b>	<b>Facility name</b>	<b>Address</b>
Aztalan, town	Aztalan Town Hall	W6260 Highway B
Cold Spring, town	Cold Springs Town Hall	N1409 Fremont Road
Concord, town	Concord Town Hall	W1095 Concord Center Drive
Farmington, town	Farmington Town Hall	N6468 Farmington Road
Fort Atkinson, city	Fort Atkinson City Hall	100 N Main Street
Hebron, town	Hebron Town Hall / Community Center	N2313 CTH D
Ixonia, town	Ixonia Town Hall	N8340 N Street
Jefferson, city	City of Jefferson Municipal Building	317 S Main Street
Jefferson, city	Jefferson County Community Resource Center	1571 Annex Road
Jefferson, city	Jefferson County Courthouse	320 S Main Street
Jefferson, city	Jefferson Town Hall	N4390 CTH Y
Jefferson, city	UW Extension/Workforce Development	864 Collins Road
Johnson Creek, village	Johnson Creek Village Hall	125 Depot Street
Koshkonong, town	Jefferson County Sheriff's Storage	Bark River Road
Koshkonong, town	Koshkonong Town Hall	W5609 Star School Road
Lake Mills, city	Lake Mills City Hall	200 Water Street
Lake Mills, city	Town of Lake Mills Town Hall	1111 S Main Street
Milford, town	Milford Town Hall	W6335 Highway A
Oakland, town	Oakland Town Hall	N4450 CTH A
Palmyra, town	Palmyra Town Hall	W1125 Highway 106
Palmyra, village	Palmyra Village Hall	100 W Taft Street
Sullivan, town	Sullivan Town Hall	N3866 West Street
Sullivan, village	Sullivan Village Hall	500 Madison
Sumner, town	Sumner Town Hall	N1525 Church Street
Waterloo, city	Waterloo City Hall	136 N Monroe Street
Waterloo, town	Waterloo Town Hall	N8193 Highway 89
Watertown, city	Watertown City Hall	106 Jones Street
Watertown, city	Watertown Health Dept. and Parks and Forestry Dept.	515 S 1st Street
Watertown, town	Watertown Town Hall	N8321 STH 26
<b>Municipal garage</b>		
Aztalan, town	Aztalan Road Shop	W6260 Highway B
Concord, town	Jefferson County Road Shop	N6496 County Shop Road
Concord, town	Town of Concord Municipal Garage	N1185 Concord Center Drive
Farmington, town	Farmington Road Shop	N6468 Farmington Road
Fort Atkinson, city	Fort Atkinson Municipal Garage	700 James Place
Ixonia, town	Ixonia municipal garage	N8320 N Street
Ixonia, town	Road Shop - County	W1593 Marrietta Road
Jefferson, city	Jefferson County Highway Shop	Puerner Street
Jefferson, city	Jefferson County Parks Maintenance Facility	1555 Industrial Avenue
Jefferson, city	Jefferson Municipal Garage	1122 S Tensfeldt Avenue
Johnson Creek, village	Johnson Creek Municipal Garage	210 Aztalan Street
Johnson Creek, village	Secondary village garage	110 Aztalan Street
Lake Mills, city	Lake Mills Municipal Garage	307 N C.P. Avenue

<b>Jurisdiction</b>	<b>Facility name</b>	<b>Address</b>
Milford, town	Milford Garage	W6335 Highway A
Oakland, town	Oakland Municipal Garage	N4450 CTH A
Palmyra, village	Palmyra Municipal Garage	203 Jefferson Street
Sullivan, town	Public works garage	West Street
Waterloo, city	Jefferson County Highway Shop	Pierce Street
Waterloo, city	Waterloo Municipal Garage	211 Hendricks
Watertown, city	Watertown Municipal Garage	810 S 2nd Street
<b>Natural gas facility</b>		
Ixonia, town	Guardian Pipeline metering station	W1621 Rockvale Road
Ixonia, town	Guardian Pipeline metering station	N8952 Highview Road
<b>Nursing home</b>		
Fort Atkinson, city	Fort Atkinson Subacute Care Center	611 E Sherman Avenue
Fort Atkinson, city	Golden Living Center - Fort Atkinson	430 Wilcox Street
Jefferson, city	Alden Estates of Jefferson	1130 Collins Road
Lake Mills, city	Willowbrook Nursing and Rehabilitation Center	901 Mulberry Street
Watertown, city	Bethesda Lutheran Home	700 Hoffman Drive
<b>Police department</b>		
Fort Atkinson, city	City of Fort Atkinson Police Department	101 S Water Street
Jefferson, city	Jefferson County Sheriff's Department	320 S Main Street
Jefferson, city	Jefferson Police Department	425 Collins Road
Johnson Creek, village	Johnson Creek Police Department	119 Depot Street
Lake Mills, city	Lake Mills Police Department	200 A Water Street
Lake Mills, city	Town of Lake Mills Police Department	1111 South Main Street
Oakland, town	Oakland Police Department	N4450 CTH A
Palmyra, village	Palmyra Police Department	202 N Second Street
Waterloo, city	City of Waterloo Police Department	136 N Monroe Street
Watertown, city	City of Watertown Police Department	106 Jones Street
<b>Post office</b>		
Fort Atkinson, city	Fort Atkinson Post Office	24 E Milwaukee Avenue
Ixonia, town	Ixonia Post Office	1235 Marietta Street
Jefferson, city	Jefferson Post Office	122 S Center Avenue
Jefferson, town	Helenville Post Office	W3200 USH 18
Johnson Creek, village	Johnson Creek Post Office	115 Depot Street
Lake Mills, city	Lake Mills Post Office	155 E Oak Street
Palmyra, village	Palmyra Post Office	116 N Third Street
Sullivan, village	Sullivan Post Office	707 Palmyra Street
Waterloo, city	Waterloo Post Office	W Madison Street
Watertown, city	Watertown Post Office	411 Dodge Street
<b>Public library</b>		
Fort Atkinson, city	Dwight Foster Public Library	102 E Milwaukee Avenue
Jefferson, city	Jefferson Public Library	317 S Main Street
Johnson Creek, village	Johnson Creek Public Library	125 Lincoln Street
Lake Mills, city	L.D. Fargo Public Library	120 E Madison

<b>Jurisdiction</b>	<b>Facility name</b>	<b>Address</b>
Palmyra, village	Powers Memorial Library	115 W Main Street
Waterloo, city	Karl Junginger Memorial Library	625 N Monroe Street
Watertown, city	Watertown Public Library	100 S Water Street
<b>Public-use airport</b>		
Fort Atkinson, city	Fort Atkinson Municipal Airport	N3321 Airport Road
Palmyra, town	Palmyra Municipal Airport	W1125 Second Street
Sullivan, town	Sullivan Airport	CTH F
Watertown, city	Watertown Municipal Airport	1741 River Road
<b>Residential care apartment complex (RCAC)</b>		
Waterloo, city	Highland House Assisted Living	161 Goehl Road
Watertown, city	Riverview Plantinum LLC	1301 E Main Street
<b>School - K-12</b>		
Cambridge, Village	Cambridge High School	Blue Jay Way
Fort Atkinson, city	Barrie Elementary School	1000 Harriette Street
Fort Atkinson, city	Fort Atkinson High School	925 Lexington Boulevard
Fort Atkinson, city	Fort Atkinson Middle School	310 S Fourth Street East
Fort Atkinson, city	Luther Alternative School	205 Park Street
Fort Atkinson, city	Luther Elementary School	205 Park Street
Fort Atkinson, city	Purdy Elementary School	719 S Main Street
Fort Atkinson, city	Rockwell Elementary School	821 Monroe Street
Fort Atkinson, city	St. Joseph's Catholic School	Endl Boulevard
Fort Atkinson, city	St. Paul's Evangelical Lutheran School	309 Bluff Street
Ixonia, town	Ixonia Elementary School	N8425 N Street
Ixonia, town	St. Paul's Evangelical Lutheran School	W1956 Gopher Hill Road
Jefferson, city	Jefferson County Alternative School	700 W Milwaukee Street
Jefferson, city	Jefferson East Elementary School	120 S Sanborn Avenue
Jefferson, city	Jefferson High School	700 W Milwaukee Street
Jefferson, city	Jefferson Middle School	206 S Taft Avenue
Jefferson, city	Jefferson West Elementary School	900 W Milwaukee Street
Jefferson, city	St. John the Baptist Catholic School	333 E Church Street
Jefferson, city	St. John's Evangelical Lutheran School	232 E Church Street
Jefferson, town	Saint Peters Lutheran School	W3255 USH 18
Johnson Creek, village	Johnson Creek Elementary	305 Milwaukee Street
Johnson Creek, village	Johnson Creek High School	111 S Street
Johnson Creek, village	Johnson Creek Pre-School	305 Milwaukee Street
Koshkonong, town	Faith Community Christian School	W5949 Hackbarth Road
Lake Mills, city	Lake Mills High School	615 Catlin Drive
Lake Mills, city	Lake Mills Middle School	318 College Street
Lake Mills, city	Lakeside Lutheran High School	231 Woodland Beach Road
Lake Mills, city	Prospect Elementary School	135 E Prospect Street
Lake Mills, city	St. Paul Lutheran School	1530 S Main Street
Palmyra, village	Palmyra Elementary/Middle School	701 W Maple Street
Palmyra, village	Palmyra-Eagle High School	123 Burr Oak Street

<b>Jurisdiction</b>	<b>Facility name</b>	<b>Address</b>
Sullivan, village	Sullivan Elementary School	618 Bakertown Drive
Waterloo, city	St. John Evangelical Lutheran School	413 E Madison Street
Waterloo, city	St. Joseph School	387 S Monroe Street
Waterloo, city	Waterloo Elementary School	785 N Monroe Street
Waterloo, city	Waterloo High School and Middle School	865 N Monroe Street
Watertown, city	Calvary Baptist Christian School	792 Milford Street
Watertown, city	Faith Lutheran Day School	626 Milford Street
Watertown, city	Good Shepherd Lutheran School	1611 E Main Street
Watertown, city	Lincoln Elementary School	210 N Montgomery Street
Watertown, city	Luther Preparatory School	1300 Western Avenue
Watertown, city	Riverside Middle School	131 Hall Street
Watertown, city	Schurz Elementary School	1508 Neenah Street
Watertown, city	St. Bernard's School	111 S Montgomery Street
Watertown, city	St. Henry Parish School	300 E Cady Street
Watertown, city	St. John's Lutheran School	317 N 6th Street
Watertown, city	St. Mark's Lutheran School	705 E Cady Street
Watertown, city	Trinity - St. Lukes Lutheran School (Clark Street Cam	303 Clark Street
Watertown, city	Trinity - St. Lukes Lutheran School (Western Campus	801 S 5th Street
Watertown, city	Webster Elementary School	634 S 12th Street
<b>School - secondary</b>		
Fort Atkinson, city	Madison Area Technical College - Fort Atkinson	827 Banker Road
Watertown, city	Maranatha Baptist Bible College	745 W Main Street
Whitewater, city	UW-Whitewater	UW-Whitewater
<b>Senior center</b>		
Fort Atkinson, city	Fort Senior Center	307 Robert Street
Jefferson, city	Jefferson Area Senior Center	859 Collins Road
Watertown, city	Watertown Senior and Community Center	514 S 1st Street
<b>Telephone facility</b>		
Jefferson, city	Telephone facility (SBC)	211 S Center Avenue
Lake Mills, city	Telephone facility	117 Water Street
Sullivan, village	Telephone facility	156 Main Street
Watertown, city	Telephone facility	115 S 4th Street
<b>Utility office/yard</b>		
Fort Atkinson, city	Fort Atkinson Water Utility	37 N Water Street
Jefferson, city	Jefferson Utilities	425 Collins Road
Lake Mills, city	Lake Mills Utility	307 N C.P. Avenue
Lake Mills, city	Lake Mills Utility	Campus Street
Waterloo, city	Waterloo Water and Light	575 Commercial Lane
Watertown, city	WE Energies	Wakoka Street
<b>Wastewater treatment plant</b>		
Fort Atkinson, city	Fort Atkinson wastewater treatmen plant	1600 Farmco Lane
Ixonia, town	Ixonia wastewater treatment plant	W1275 Elmwood
Jefferson, city	Jefferson wastewater treatmen plant	221 E Henry Street

<b>Jurisdiction</b>	<b>Facility name</b>	<b>Address</b>
Johnson Creek, village	Johnson Creek wastewater treatment plant	200 Aztalan Street
Lake Mills, city	Lake Mills wastewater treatment plant	308 N CP Avenue
Palmyra, village	Palmyra wastewater treatment plant	700 Brennan Road
Sullivan, town	Town of Sullivan wastewater treatment plant (District N	N3704 CTH F
Sullivan, village	Sullivan wastewater treatment plant	624 Bakertown Drive
Waterloo, city	Waterloo wastewater treatment plant	401 Hendricks Street
Watertown, city	Watertown wastewater treatment plant	800 Hoffman Drive
Whitewater, city	Whitewater wastewater treatment plant (WWTP)	W3875 CTH U
<b>Water facility</b>		
Cambridge, village	Water well	Skogen Road
Fort Atkinson, city	Water reservoir - underground	S Sixth Street and Grove Street
Fort Atkinson, city	Water tower	Hackbarth Road
Fort Atkinson, city	Water tower	S Fourth Street East
Fort Atkinson, city	Water well	Bark River Road
Fort Atkinson, city	Water well No. 6	Zaffke Street
Fort Atkinson, city	Water well No. 7	James Way
Jefferson, city	Water tower	N3971 CTH K (STH 26)
Jefferson, city	Water tower	Greenwood Street
Jefferson, city	Water well	311 Wisconsin Avenue (Business Center Park)
Jefferson, city	Water well No. 2	751 S Main Street
Jefferson, city	Water well No. 4	510 W Milwaukee Street
Jefferson, city	Water well No. 5	N Midway Street
Johnson Creek, village	Water tower	525 Hartwig Boulevard
Johnson Creek, village	Water well	Depot Street
Johnson Creek, village	Water well No. 3	300 Grell Lane
Lake Mills, city	Water reservoir and well	Owen Street and Franklin Street
Lake Mills, city	Water tower	Harvey Road
Lake Mills, city	Water well	900 CP Avenue
Lake Mills, city	Water well	Prairie Avenue
Palmyra, village	Water tower	Village Park - 8th Street
Palmyra, village	Water well	100 W Taft Street
Palmyra, village	Water well	131 Jefferson Street
Sullivan, village	Water well	CTH E
Waterloo, city	Water tower	Squire Road
Waterloo, city	Water tower	Herron Court
Waterloo, city	Water well	461 Porter Street
Waterloo, city	Water well	661 Lum Avenue
Watertown, city	Water tower	Warren Street
Watertown, city	Water tower	Western Avenue
Watertown, city	Water well	1000 West Street
Watertown, city	Water well	1432 E Main Street
Watertown, city	Water well	806 S 1st Street
Watertown, city	Water well	Water Tower Court

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<b>Jurisdiction</b>	<b>Facility name</b>	<b>Address</b>
Watertown, city	Water well #4	407 Western Avenue
Watertown, city	Water well and tower	870 West Street
Watertown, city	Water well and tower	308 Air Park Drive

# CRITICAL FACILITIES SORTED BY JURISDICTION: 2012

Facility Type	Facility Name	Address
<b>Aztalan, town</b>		
Bridge, major	Bridge over Rock River	I-94
Bridge, major	Bridge over Crawfish Rver	I-94
Bridge, major	Bridge on CTH B over Crawfish River	CTH B
Bridge, major	Bridge on CTH B over Rock River	CTH B
Communication tower	Communication tower	Ziebell Road
Communication tower	Communication tower	Gomoll Road
Communication tower	Communication tower	W5403 Junction Road
Dam - small	William R. Wolff Dam	n/a
Electrical substation	Electrical substation	CTH B at CTH N
Hazardous chemical facility	Valero Renewable Fuels Co	N5355 E Junction Road
Municipal building	Aztalan Town Hall	W6260 Highway B
Municipal garage	Aztalan Road Shop	W6260 Highway B
<b>Cambridge, Village</b>		
Communication tower	Communication tower (FCC #1237719)	Lagoon Road
School - K-12	Cambridge High School	Blue Jay Way
Water facility	Water well	Skogen Road
<b>Cold Spring, town</b>		
Adult family home (AFH)	Fremont Manor	W4791 Fremont Road
Adult family home (AFH)	House of Care	W3460 Vannoy Drive
Bridge, major	Bridge on CTH U	CTH U
Bridge, major	Bridge on CTH D over Scuppernong Creek	CTH D
Communication tower	Communication tower (FCC #1035461)	W4362 Findlay Road
Communication tower	Communication tower	N555 Howard Road
Communication tower	Communication tower (FCC #1035464)	W4362 Findlay Road
Communication tower	Communication tower (FCC #1035465)	W4362 Findlay Road
Communication tower	Communication tower (FCC #1035463)	W4362 Findlay Road
Communication tower	Communication tower (FCC #1035462)	W4362 Findlay Road
Community based residential facility (CBRF)	Strawberry Hill CBRF	N556 Howard Road
Dam - small	Witte Dam	n/a
Hazardous chemical facility	Frontier FS - Whitewater	W3364 STH 59
Municipal building	Cold Springs Town Hall	N1409 Fremont Road
<b>Concord, town</b>		
Adult family home (AFH)	Suzy's Country Acres	N7112 HWY P
Adult family home (AFH)	Hillside Gardens AFH	W2140 CTY Road B
Communication tower	Communication tower	Bakertown Road
Communication tower	Communication tower (FCC #1034429)	Bakertown Road
Communication tower	Communication tower	N6217 Morgan Road
Communication tower	Communication tower (FCC #1208265)	N6656 S Island Road
Communication tower	Communication tower	W2228 CTH B
Communication tower	Communication tower (FCC #1062004)	N6498 CTH F
Community center	Town of Concord Community Center	W1095 Concord Center Drive
Mobile / manufactured home park	Spacious Acres Mobile Home Community	W1211 Sunnyside Drive

Facility Type	Facility Name	Address
Municipal building	Concord Town Hall	W1095 Concord Center Drive
Municipal garage	Town of Concord Municipal Garage	N1185 Concord Center Drive
Municipal garage	Jefferson County Road Shop	N6496 County Shop Road
<b>Farmington, town</b>		
Bridge, major	Bridge on CTH Y over Johnson Creek	CTH Y
Communication tower	Communication tower (FCC #1234475)	Glover Lane
Communication tower	Communication tower	Glover Lane
Community based residential facility (CBRF)	Shady Acres CBRF	N5015 HWY Y
Electrical substation	Electrical substation	CTH B at CTH D
Municipal building	Farmington Town Hall	N6468 Farmington Road
Municipal garage	Farmington Road Shop	N6468 Farmington Road
<b>Fort Atkinson, city</b>		
Adult day care center	Reflections Adult Day Care LLC	511 Madison Avenue
Adult day care center	Dreamcatchers ADC	218 W Blackhawk Drive
Adult family home (AFH)	Cherokee Hills	655 Cherokee Lane
Adult family home (AFH)	Gorniak AFH	1008 W Blackhawk Drive
Adult family home (AFH)	Elm Mound Adult Family Home	117/119 Healy Lane
Adult family home (AFH)	In Good Hands	702 Badger Court
Adult family home (AFH)	Willow Way AFH	312 Rogers Street
Adult family home (AFH)	New Beginnings	402 Raintree Drive
Adult family home (AFH)	Parkview AFH	317 Robert Street
Adult family home (AFH)	Jensen's AFH	224 Nadig Drive
Adult family home (AFH)	Secured Living LLC	404 N Main Street
Adult family home (AFH)	Locust Corners AFH	28 E Sherman Avenue
Adult family home (AFH)	Hil Stone Ridge	504 Nikki Lane
Adult family home (AFH)	Hil Prairie Ridge	502 Nikki Lane
Adult family home (AFH)	Helping Hand Adult Family Home	205 Lucile Street
Adult family home (AFH)	St Coletta of Wisconsin - Frederick Avenue	414 Frederick Avenue
Adult family home (AFH)	Pine Circle AFH	503 Nikki Lane
Adult family home (AFH)	West Gate Retirement Home	1314 Commonwealth Drive
Adult family home (AFH)	Hearts of Hope II	703 Badger Court
Adult family home (AFH)	Spruce Lane AFH	1122 Greene Street
Adult family home (AFH)	Walnut AFH	1442 Endl Boulevard
Adult family home (AFH)	Clover Lane Place AFH	421 Clover Lane
Adult family home (AFH)	Gray Wolf	212 W Blackhawk Drive
Adult family home (AFH)	Caring Corner	1328 Commonwealth Drive
Adult family home (AFH)	Blue Raven	220 W Blackhawk Drive
Adult family home (AFH)	Black Bear AFH	222 W Blackhawk Drive
Adult family home (AFH)	Jamesway House	1264 Jamesway
Adult family home (AFH)	Hil Nikki Home	506 Nikki Lane
Adult family home (AFH)	Lighted Pathways II	712 Badger Court
Adult family home (AFH)	Bethesda Lutheran Communities - FOR	1200 Jefferson Street
Adult family home (AFH)	Aspen Place AFH	918 Gail Place

Facility Type	Facility Name	Address
Adult family home (AFH)	Silver Fox	214 W Blackhawk Drive
Adult family home (AFH)	Hearts of Hope LLC I	711 713 Badger Court
Adult family home (AFH)	Welter AFH	1333 Adrian Boulevard
Adult family home (AFH)	Arbor House	1103 Peterson Street
Adult family home (AFH)	Hil Songbird House	508 Nikki Lane
Bridge, major	Bridge on Janesville Avenue	Janesville Avenue
Bridge, major	Bridge on Main Street	Main Street
Child care center - group	Shooting Star School Age Club SAC	1000 Harriette Street
Child care center - group	TLC Preschool	314 Barrie Street
Child care center - group	Fort Atkinson Preschool and Child Care	31 W Milwaukee Avenue
Child care center - group	Kids Konnection	660 McMillen Street
Child care center - group	Beautiful Beginnings Day Care and Preschool	1255 Talcott Avenue
Child care center - group	Parents Cooperative Preschool	320 S Main Street
Child care center - group	Jefferson County Head Start CESA 2	719 S Main Street
Communication tower	Communication tower (FCC #1219156)	Janesville Avenue
Communication tower	Communication tower (FCC #1229114)	Blackhawk Drive
Communication tower	Communication tower (FCC #1050098)	Janesville Avenue
Community based residential facility (CBRF)	Commonwealth Home	1501 Commonwealth Drive
Community based residential facility (CBRF)	Rem Wisconsin II - Dommo Drive	1501 Dommo Drive
Community based residential facility (CBRF)	Rem Wisconsin II - Stacy Lane	1403 Stacy Lane
Community based residential facility (CBRF)	Hil Sandstone	1533 S Main Street
Community based residential facility (CBRF)	Hil Linden Corner	325 W Blackhawk Drive
Community based residential facility (CBRF)	Hil Willow Court	575 W Blackhawk Drive
Community based residential facility (CBRF)	Golden Eagle CBRF	216 W Blackhawk Drive
Community based residential facility (CBRF)	Wellington Meadows	N2550 Weiss Lane (Memorial Dr)
Community based residential facility (CBRF)	Wellington Place of Fort Atkinson	200 S Water Street
Community based residential facility (CBRF)	Sienna Crest Fort Atkinson	1531 Commonwealth Drive
Community based residential facility (CBRF)	Apple House	1621 Premier Place
Community based residential facility (CBRF)	Stepping Stone CBRF	318 N Main Street
Community based residential facility (CBRF)	Birch Terrace	1109 Caswell Street
Community based residential facility (CBRF)	Black Hawk Senior Residence	1 Milwaukee Avenue West
Community based residential facility (CBRF)	Falcons Nest CBRF	160 W Blackhawk Drive
Dam - small	Leo R. Roethe Dam	n/a
EMS facility	Ryan Brothers EMS	1210 Arndt Street
Fire department	City of Fort Atkinson Fire Department	124 W Milwaukee Street
Hazardous chemical facility	Ball Container LLC	105 E Blackhawk Drive
Hazardous chemical facility	Nasco Biology Department	901 Janesville Avenue
Hazardous chemical facility	Redi Serve	1200 Industrial Drive
Hazardous chemical facility	McCain Foods	801 Rockwell Avenue
Hazardous chemical facility	Jones Dairy Farm	Jones Avenue
Hazardous chemical facility	SBC/WI Bell - Fort Atkinson	201 Milwaukee Avenue East
Hazardous chemical facility	Loeb -Lorman Iron & Metal Company, Inc.	115 Lorchman Street
Hazardous chemical facility	Spacesaver Corporation (Plant II)	1700 Janesville Avenue

Facility Type	Facility Name	Address
Health care clinic	Fort HealthCare Center for Women's Health	650 McMillen Street
Health care clinic	Fort Health Care	426 McMillen Street
Health care clinic	Davis Duehr Dean	1100 Madison Avenue
Health care clinic	Fort Atkinson Medical Center	211 W Memorial Drive
Health care clinic	UW Health-Fort Atkinson	601 Handeyside Lane
Health care clinic	Purity	525 Handeyside Lane
Hospital	Fort Atkinson Memorial Hospital	611 E Sherman Avenue
Military installation	Wisconsin Army National Guard	420 Bark River Road
Municipal building	Fort Atkinson City Hall	100 N Main Street
Municipal garage	Fort Atkinson Municipal Garage	700 James Place
Nursing home	Fort Atkinson Subacute Care Center	611 E Sherman Avenue
Nursing home	Golden Living Center - Fort Atkinson	430 Wilcox Street
Police department	City of Fort Atkinson Police Department	101 S Water Street
Post office	Fort Atkinson Post Office	24 E Milwaukee Avenue
Public library	Dwight Foster Public Library	102 E Milwaukee Avenue
Public-use airport	Fort Atkinson Municipal Airport	N3321 Airport Road
School - K-12	Fort Atkinson Middle School	310 S Fourth Street East
School - K-12	Luther Elementary School	205 Park Street
School - K-12	Purdy Elementary School	719 S Main Street
School - K-12	St. Paul's Evangelical Lutheran School	309 Bluff Street
School - K-12	Rockwell Elementary School	821 Monroe Street
School - K-12	St. Joseph's Catholic School	Endl Boulevard
School - K-12	Luther Alternative School	205 Park Street
School - K-12	Fort Atkinson High School	925 Lexington Boulevard
School - K-12	Barrie Elementary School	1000 Harriette Street
School - secondary	Madison Area Technical College - Fort Atkinson	827 Banker Road
Senior center	Fort Senior Center	307 Robert Street
Utility office/yard	Fort Atkinson Water Utility	37 N Water Street
Wastewater treatment plant	Fort Atkinson wastewater treatment plant	1600 Farmco Lane
Water facility	Water well	Bark River Road
Water facility	Water well No. 7	James Way
Water facility	Water well No. 6	Zaffke Street
Water facility	Water reservoir - underground	S Sixth Street and Grove Street
Water facility	Water tower	S Fourth Street East
Water facility	Water tower	Hackbarth Road
<b>Hebron, town</b>		
Adult day care center	Capabilities	N2489 Wenham Road
Bridge, major	Bridge on STH 106	STH 106
Bridge, major	Bridge on CTH D over Scuppernong Creek	CTH D
Campground	Hebron Campground	N2316 Museum Road
Child care center - group	Jefferson County Head Start CESA 2	N2313 CTH D
Communication tower	Communication tower	2641 Kitzinger Lane
Communication tower	Communication tower	CTH D South of CTH Y

Facility Type	Facility Name	Address
Community based residential facility (CBRF)	Oak Grove CBRF	W3343 Hoffman Road
Community based residential facility (CBRF)	Maple Run CBRF	N2489 Wenham Road
Dam - large	Princes Point WLA Dam No. 2	n/a
Dam - large	Princes Point WLA Dam No. 1	n/a
Dam - large	Jefferson Marsh WRP - North	n/a
Dam - small	Princes Point WLA Dam	n/a
Dam - small	Muck Farms Dam No. 2	n/a
Electrical substation	Electrical substation	N2457 CTH D
Municipal building	Hebron Town Hall / Community Center	N2313 CTH D
<b>Ixonia, town</b>		
Adult family home (AFH)	Bethesda Lutheran Communities - VIC	N7723 Vicksburg Way
Adult family home (AFH)	Bethesda Lutheran Communities - VIC	N7721 Vicksburg Way
Bridge, major	Bridge on CTH CW	CTH CW
Bridge, major	Bridge on STH 16	STH 16
Bridge, major	Bridge on CTH F	CTH F
Bridge, major	Bridge on CTH P	CTH P
Communication tower	Communication tower	STH 16
Communication tower	Communication tower	W1156 / W1158 Gopher Hill Road
Communication tower	Communication tower	N7614 Ski Slide Road
Community based residential facility (CBRF)	Margaret Ruth Home	N8007 Lakeview Drive
Electrical substation	Electrical substation	CTH F
Fire department	Ixonia Fire Department	N8320 N Street
Municipal building	Ixonia Town Hall	N8340 N Street
Municipal garage	Road Shop - County	W1593 Marrietta Road
Municipal garage	Ixonia municipal garage	N8320 N Street
Natural gas facility	Guardian Pipeline metering station	N8952 Highview Road
Natural gas facility	Guardian Pipeline metering station	W1621 Rockvale Road
Post office	Ixonia Post Office	1235 Marrietta Street
School - K-12	St. Paul's Evangelical Lutheran School	W1956 Gopher Hill Road
School - K-12	Ixonia Elementary School	N8425 N Street
Wastewater treatment plant	Ixonia wastewater treatment plant	W1275 Elmwood
<b>Jefferson, city</b>		
Adult day care center	Elite Day Services LLC	1101 S Grove Avenue
Adult family home (AFH)	St Coletta of Wisconsin - Clover 2	835 Clover Court
Adult family home (AFH)	St Coletta of Wisconsin - St Rose	W4955 USH 18
Adult family home (AFH)	Terasas House AFH	223 N Wilson Avenue
Adult family home (AFH)	Juniper AFH	314 Stiel Street
Adult family home (AFH)	St Coletta of Wisconsin - Clover Ct	832 Clover Court
Adult family home (AFH)	St Coletta of Wisconsin - Marshall Avenue	313 S Marshall Avenue
Adult family home (AFH)	St Coletta of Wisconsin - Kranz Home	210 S Kranz Avenue
Adult family home (AFH)	Hickory AFH	312 Stiel Street
Bridge, major	Bridge on Wisconsin Drive over Crawfish River	Wisconsin Drive
Bridge, major	Bridge on Puerner Street over Rock River	Puerner Street

Facility Type	Facility Name	Address
Bridge, major	Bridge on North Street over Rock River	North Street
Bridge, major	Bridge on Racine Street over Rock River	Racine Street
Bridge, major	Bridge on Main Street over Rock River	Main Street
Child care center - group	St John the Baptist - Extended Care	333 E Church Street
Child care center - group	Kiddie Kollege	159 W Garland
Child care center - group	I Think Child Care	232 E Church Street
Child care center - group	Small World Preschool	324 S Sanborn Avenue
Child care center - group	Jefferson County Head Start CESA 2	120 S Sanborn Avenue
Child care center - group	Busy Bees Preschool	1541 Annex Road
Communication tower	Communication tower	Greenwood Street
Communication tower	Communication tower	Greenwood Street
Community based residential facility (CBRF)	St Coletta of Wisconsin - San Damiano	128 S Kranz Avenue
Community based residential facility (CBRF)	Eagle View Manor	881 Collins Road
Community based residential facility (CBRF)	Bethesda Lutheran Communities - HYE	411 Hyer Drive
Community based residential facility (CBRF)	St Coletta of Wisconsin - St Michael	822 E Racine Street
Community based residential facility (CBRF)	St Coletta of Wisconsin - St Isidore	W4955 USH 18
Community based residential facility (CBRF)	Lueder Haus	1473 Annex Road
Community based residential facility (CBRF)	St Coletta of Wisconsin - Theodore	621 Theodore Street
Community based residential facility (CBRF)	St Coletta of Wisconsin - Tau	621 E Spring Street
Community based residential facility (CBRF)	St Coletta of Wisconsin - St Agnes	900 E Racine Street
Community based residential facility (CBRF)	St Coletta of Wisconsin - Padua Heights	724 E Racine Street
Community based residential facility (CBRF)	St Coletta of Wisconsin - Lourdes	140 S Kranz Avenue
Community based residential facility (CBRF)	St Coletta of Wisconsin - Dower CBRF	528 S Kranz Avenue
Community based residential facility (CBRF)	St Coletta of Wisconsin - Jacoba	640 E Theodore Street
Community based residential facility (CBRF)	St Coletta of Wisconsin - Luchenbach	648 E Luchenbach Lane
Community based residential facility (CBRF)	Sylvan Crossings at Jefferson	279 N Jackson Street
Dam - large	Jefferson Dam	n/a
Electrical substation	Electrical substation	170 Riverview Drive
Electrical substation	Electrical substation	Racine Street
Electrical substation	Electrical substation	Pitzner Parkway
EMS facility	Jefferson EMS	121 W Racine Street
Fire department	Jefferson Fire Department	351 E Racine Street
Hazardous chemical facility	Remis Power Systems	925 N Parkway
Hazardous chemical facility	Frontier FS Cooperative	222 E Puerner Street
Hazardous chemical facility	LD Foods	1015 Industrial Drive
Hazardous chemical facility	Tyson Foods (Dorskocil Food Service)	1 Rock River Road
Hazardous chemical facility	Americold Cold Storage Corporation	230 Collins Road
Hazardous chemical facility	Americold Cold Storage Corporation	1025 Industrial Avenue
Hazardous chemical facility	Nestle Purina	150 Riverview Drive
Health care clinic	Rockwood Family Health	152 W Garland Steet
Mobile / manufactured home park	Maple Grove Mobile Home Park	Main Street
Municipal building	Jefferson County Community Resource Center	1571 Annex Road
Municipal building	UW Extension/Workforce Development	864 Collins Road

Facility Type	Facility Name	Address
Municipal building	Jefferson Town Hall	N4390 CTH Y
Municipal building	Jefferson County Courthouse	320 S Main Street
Municipal building	City of Jefferson Municipal Building	317 S Main Street
Municipal garage	Jefferson Municipal Garage	1122 S Tensfeldt Avenue
Municipal garage	Jefferson County Parks Maintenance Facility	1555 Industrial Avenue
Municipal garage	Jefferson County Highway Shop	Puerner Street
Nursing home	Alden Estates of Jefferson	1130 Collins Road
Police department	Jefferson Police Department	425 Collins Road
Police department	Jefferson County Sheriff's Department	320 S Main Street
Post office	Jefferson Post Office	122 S Center Avenue
Public library	Jefferson Public Library	317 S Main Street
School - K-12	Jefferson East Elementary School	120 S Sanborn Avenue
School - K-12	Jefferson Middle School	206 S Taft Avenue
School - K-12	Jefferson County Alternative School	700 W Milwaukee Street
School - K-12	Jefferson West Elementary School	900 W Milwaukee Street
School - K-12	Jefferson High School	700 W Milwaukee Street
School - K-12	St. John the Baptist Catholic School	333 E Church Street
School - K-12	St. John's Evangelical Lutheran School	232 E Church Street
Senior center	Jefferson Area Senior Center	859 Collins Road
Telephone facility	Telephone facility (SBC)	211 S Center Avenue
Utility office/yard	Jefferson Utilities	425 Collins Road
Wastewater treatment plant	Jefferson wastewater treamen plant	221 E Henry Street
Water facility	Water tower	Greenwood Street
Water facility	Water well	311 Wisconsin Avenue (Business Center P
Water facility	Water well No. 4	510 W Milwaukee Street
Water facility	Water tower	N3971 CTH K (STH 26)
Water facility	Water well No. 2	751 S Main Street
Water facility	Water well No. 5	N Midway Street
<b>Jefferson, town</b>		
Adult day care center	St Coletta of Wisconsin - Golden Options Pro	N4637 CTH Y
Adult family home (AFH)	Country Acres AFH	N3108 STH 89
Adult family home (AFH)	Peaceful Pines	W6556 CTH J
Adult family home (AFH)	St Coletta of Wisconsin - St Clare	N4637 CTH Y
Bridge, major	Bridge on STH 18 over Crawfish River	STH 18
Communication tower	Communication tower	Bakertown Road
Communication tower	Communication tower (FCC #1239957)	W3022 Markert Road
Communication tower	Communication tower	W6604 CTH J
Communication tower	Communication tower (FCC # n/a )	W6998 USH 18
Communication tower	Communication tower	Christberg Road
Community based residential facility (CBRF)	St Coletta of Wisconsin - St Martha	W5092 USH 18
Community based residential facility (CBRF)	St Coletta of Wisconsin - St John The Baptist	W5078 USH 18
Dam - small	Muck Farms Dam No. 1	n/a
Dam - small	Anhalt & Knox Dam	n/a

Facility Type	Facility Name	Address
Electrical substation	Electrical substation	N4695 STH 89
Fire department	Helenville Volunteer Fire Department	N4737 Helenville Road
Post office	Helenville Post Office	W3200 USH 18
School - K-12	Saint Peters Lutheran School	W3255 USH 18
<b>Johnson Creek, village</b>		
Adult family home (AFH)	Bethesda Lutheran Communities - GRE	109 Green Ash Lane
Adult family home (AFH)	CCLS Green Ash	113 Green Ash Lane
Bridge, major	Bridge on STH 26 over Johnson Creek	STH 26
Bridge, major	Bridge on Aztalan Street	Aztalan Street
Community based residential facility (CBRF)	Bethesda Lutheran Communities - MIC	141 Michelle Drive
Community based residential facility (CBRF)	Sunset Ridge Assisted Living	1275 Rimmel Drive
Community based residential facility (CBRF)	Bethesda Lutheran Communities - MAR	140 Mark Drive
Community center	Johnson Creek Community Center	417 Union Street
Electrical substation	Electrical substation	Grell Lane
EMS facility	Johnsonville Creek EMS	145 S Watertown Street
Fire department	Johnson Creek Fire Department	120 S Watertown
Hazardous chemical facility	United Cooperative	N6731 Old Hwy 26
Health care clinic	Lakewood Family Clinic of Johnson Creek	540 Village Walk Lane
Health care clinic	Johnson Creek Medical Center - Fort HealthCare Cen	400 Doctors Court
Health care clinic	UW Cancer Center	250 Doctors Court
Mobile / manufactured home park	Village Terrace	South Street
Mobile / manufactured home park	Back Acres Mobile Home Park	105 Aztalan Street
Municipal building	Johnson Creek Village Hall	125 Depot Street
Municipal garage	Johnson Creek Municipal Garage	210 Aztalan Street
Municipal garage	Secondary village garage	110 Aztalan Street
Police department	Johnson Creek Police Department	119 Depot Street
Post office	Johnson Creek Post Office	115 Depot Street
Public library	Johnson Creek Public Library	125 Lincoln Street
School - K-12	Johnson Creek Elementary	305 Milwaukee Street
School - K-12	Johnson Creek High School	111 S Street
School - K-12	Johnson Creek Pre-School	305 Milwaukee Street
Wastewater treatment plant	Johnson Creek wastewater treatment plant	200 Aztalan Street
Water facility	Water well No. 3	300 Grell Lane
Water facility	Water tower	525 Hartwig Boulevard
Water facility	Water well	Depot Street
<b>Koshkonong, town</b>		
Adult family home (AFH)	Orchard View Adult Family Home	W6429 USH 12
Adult family home (AFH)	Willow Winds Living	N372 Twinkling Star Road
Adult family home (AFH)	Country Living AFH	N1504 Schneider Lane
Adult family home (AFH)	Jasper House	N1947 USH 12
Adult family home (AFH)	Hawks Ridge AFH	N2767 STH 89
Adult family home (AFH)	Country Hearts	N2767 STH 89
Adult family home (AFH)	Country Hearts	W5999 Friedel Road

Facility Type	Facility Name	Address
Bridge, major	Bridge on STH 26	STH 26
Bridge, major	Bridge on STH 106	STH 106
Bridge, major	Bridge on STH 26	STH 26
Bridge, major	Bridge on CTH J	CTH J
Bridge, major	Bridge on CTH N over Bark River	CTH N
Campground	Pilgrim's Campground	W7271 County Road C
Campground	Jellystone Park Camping Resort	N551 Wishing Well Lane
Communication tower	Communication tower (FCC #1034447)	Hoge Road
Community based residential facility (CBRF)	Cedar Hill	N1366 USH 12
Community based residential facility (CBRF)	Rolling Meadows CBRF	N464 Poeppel Road
Dam - small	William Heffron Dam	n/a
Dam - small	Koshkonong Wetland Dam	n/a
Dam - small	Evergreen Dam	n/a
Electrical substation	Electrical substation (WEPCO)	Hackbarth Road
Municipal building	Koshkonong Town Hall	W5609 Star School Road
Municipal building	Jefferson County Sheriff's Storage	Bark River Road
School - K-12	Faith Community Christian School	W5949 Hackbarth Road
<b>Lake Mills, city</b>		
Adult family home (AFH)	Victorian Splendor	312 E Lake Street
Child care center - group	Kuhl Corner Campus LLC	695 S Industrial Drive
Child care center - group	Kiddos Memorial Park LLC	510 Owen Street
Child care center - group	Teddy Bear Preschool	271 E Prospect Street
Communication tower		1401 S Main Street
Community based residential facility (CBRF)	Brook Gardens Assisted Living	300 O'Neil Street
Community center	Lake Mills Community Center	200 A Water Street
Dam - large	Lake Mills Dam	129 S Main Street
Electrical substation	Electrical substation	Campus Street
Electrical substation	Electrical substation	550 East Tyranaena Park Road
Electrical substation	Electrical substation	CP Avenue
EMS facility	Lake Mills Emergency	603 E Lake Street
Fire department	Lake Mills Fire Department	120 Veterans Lane
Hazardous chemical facility	Lakeland Cold Storage	1028 Mulberry Street
Hazardous chemical facility	Lake Mills wastewater treatment plant	308 N CP Avenue
Health care clinic	Lakewood Family Clinic	1025 Mulberry Street
Health care clinic	Urgent Care of Lake Mills/Family Practice of Lake Mill	200 E Tyranaena Park Road
Mobile / manufactured home park	Topel's Mobile Home Park	Topel Street
Mobile / manufactured home park	Woodland Beach Resort	Woodland Drive
Mobile / manufactured home park	Lakeland Mobile Home Community	E Lake Street
Mobile / manufactured home park	Sandy Beach Mobile Home Park	Sandy Beach Road
Mobile / manufactured home park	East Lake Estates Mobile Home Park	E Lake Street
Municipal building	Town of Lake Mills Town Hall	1111 S Main Street
Municipal building	Lake Mills City Hall	200 Water Street
Municipal garage	Lake Mills Municipal Garage	307 N C.P. Avenue

Facility Type	Facility Name	Address
Nursing home	Willowbrook Nursing and Rehabilitation Center	901 Mulberry Street
Police department	Town of Lake Mills Police Department	1111 South Main Street
Police department	Lake Mills Police Department	200 A Water Street
Post office	Lake Mills Post Office	155 E Oak Street
Public library	L.D. Fargo Public Library	120 E Madison
School - K-12	Lake Mills High School	615 Catlin Drive
School - K-12	Prospect Elementary School	135 E Prospect Street
School - K-12	Lake Mills Middle School	318 College Street
School - K-12	St. Paul Lutheran School	1530 S Main Street
School - K-12	Lakeside Lutheran High School	231 Woodland Beach Road
Telephone facility	Telephone facility	117 Water Street
Utility office/yard	Lake Mills Utility	307 N C.P. Avenue
Utility office/yard	Lake Mills Utility	Campus Street
Wastewater treatment plant	Lake Mills wastewater treatment plant	308 N CP Avenue
Water facility	Water well	Prairie Avenue
Water facility	Water tower	Harvey Road
Water facility	Water well	900 CP Avenue
Water facility	Water reservoir and well	Owen Street and Franklin Street
<b>Lake Mills, town</b>		
Campground	Sandhill Station State Campground (DNR)	N5595 Mud Lake Road
Communication tower	Communication tower	Cemetery Road
Communication tower	Communication tower (FCC #1200052)	W8538 Airport Road
Communication tower	Communication tower (FCC #1057070)	W8668 Airport Road
Community based residential facility (CBRF)	London Lodge I	W9095 London Road
Community based residential facility (CBRF)	London Lodge II	W9097 London Road
Mobile / manufactured home park	Country Acres	N6789 CTH A
<b>Milford, town</b>		
Bridge, major	Bridge on STH 19 over Crawfish River	STH 19
Bridge, major	Bridge on CTH A over Crawfish River	CTH A
Campground	River Bend RV Resort	W6940 Rubidell Road
Municipal building	Milford Town Hall	W6335 Highway A
Municipal garage	Milford Garage	W6335 Highway A
<b>Oakland, town</b>		
Adult family home (AFH)	Hidden Acres	N2701 Retzlaff Road
Campground	Hoard & Curtis Scout Camp	N4189 Island Lane
Communication tower	Communication tower	USH 12
Communication tower	Communication tower (FCC #1042741)	N4097 CTH G
Community based residential facility (CBRF)	Autumn Winds of Oakland LLC	N3767 Airport Road
Dam - small	Lake Ripley Dam	n/a
Mobile / manufactured home park	Oak Ridge Mobile Community	N3525 Triefoff Road
Mobile / manufactured home park	Breezy Knoll	CTH A
Municipal building	Oakland Town Hall	N4450 CTH A
Municipal garage	Oakland Municipal Garage	N4450 CTH A

Facility Type	Facility Name	Address
Police department	Oakland Police Department	N4450 CTH A
<b>Palmyra, town</b>		
Bridge, major	Bridge on STH 106	STH 106
Campground	Circle K Campground	W1316 Island Road
Campground	Horsedriver's Campground (DNR)	W830 Little Prairie Road
Child care center - group	Country Kids School House	W1476 N Blue Spring Lake Drive
Communication tower	Communication tower	W581 Little Prarie Road
Communication tower	Communication tower (FCC #1047466)	N2404 STH 106
Communication tower	Communication tower	CTH CI
Communication tower	Communication tower	Tamarack Road
Dam - large	Blue Springs Lake	n/a
Dam - large	Carlin Dam	Mill Road
Electrical substation	Electrical substation	CTH H
Municipal building	Palmyra Town Hall	W1125 Highway 106
Public-use airport	Palmyra Municipal Airport	W1125 Second Street
<b>Palmyra, village</b>		
Bridge, major	Bridge on Main Street/STH 59	Main Street
Bridge, major	Bridge on Main Street/STH 59	Main Street
Bridge, major	Bridge on Jefferson Street	Jefferson Street
Child care center - group	Vita Kids Learning Center	1205 W Royal Lee Drive
Community center	Ervin L. Young Community Center	123 Burr Oak Street
Dam - large	Spring Lake Dam	n/a
Fire department	Palmyra Fire Department	126 N First Street
Hazardous chemical facility	Frontier FS-Palmyra	212 Third Street
Hazardous chemical facility	Epic Resins	600 Industrial Boulevard
Hazardous chemical facility	Standard Process Inc	1200 W Royal Lee Drive
Mobile / manufactured home park	Pal Park	Beech Street
Municipal building	Palmyra Village Hall	100 W Taft Street
Municipal garage	Palmyra Municipal Garage	203 Jefferson Street
Police department	Palmyra Police Department	202 N Second Street
Post office	Palmyra Post Office	116 N Third Street
Public library	Powers Memorial Library	115 W Main Street
School - K-12	Palmyra Elementary/Middle School	701 W Maple Street
School - K-12	Palmyra-Eagle High School	123 Burr Oak Street
Wastewater treatment plant	Palmyra wastewater treamen plant	700 Brennan Road
Water facility	Water well	100 W Taft Street
Water facility	Water well	131 Jefferson Street
Water facility	Water tower	Village Park - 8th Street
<b>Sullivan, town</b>		
Bridge, major	Bridge on CTH F over Rome Mill Pond	CTH F
Bridge, major	Bridge on CTH E	CTH E
Bridge, major	Bridge on CTH F over Bark River	CTH F
Bridge, major	Bridge on Main Street over Bark River	Main Street (CTH F)

Facility Type	Facility Name	Address
Bridge, major	Bridge on CTH P	CTH P
Campground	Rome Riverside Campground	N3780 Water Street
Campground	Nature's Villa	Roger Road
Campground	Bark River Campground & Resort	W2340 Hanson Road
Communication tower	Communication tower	USH 18 (West of Village)
Communication tower	Communication tower	Village Line Road
Dam - large	Rome Dam	n/a
Dam - small	Fin-n-feather Club Dam	n/a
Dam - small	Jack Y. Miller Dam	n/a
Electrical substation	Electrical substation	Jefferson Street and Summer Hill Road
Fire department	Rome Volunteer Fire Department	W1904 CTH F
Mobile / manufactured home park	Tremain Mobile Home Park	N2639 CTH Z
Municipal building	Sullivan Town Hall	N3866 West Street
Municipal garage	Public works garage	West Street
Public-use airport	Sullivan Airport	CTH F
Wastewater treatment plant	Town of Sullivan wastewater treatment plant (District N	N3704 CTH F
<b>Sullivan, village</b>		
Child care center - group	Premier Child Care of Sullivan LLC	618 Bakertown Drive
Communication tower	Communication tower	Recycling Lane
Electrical substation	Electrical substation	Front Street
EMS facility	Sullivan EMS	802 Pleasant Street
Fire department	Sullivan Volunteer Fire Department	800 Pleasant Street
Municipal building	Sullivan Village Hall	500 Madison
Post office	Sullivan Post Office	707 Palmyra Street
School - K-12	Sullivan Elementary School	618 Bakertown Drive
Telephone facility	Telephone facility	156 Main Street
Wastewater treatment plant	Sullivan wastewater treatment plant	624 Bakertown Drive
Water facility	Water well	CTH E
<b>Sumner, town</b>		
Adult family home (AFH)	Larson's AFH	N2297 Hwy A
Bridge, major	Bridge on STH 106	STH 106
Communication tower	Communication tower	Loga Road
Municipal building	Sumner Town Hall	N1525 Church Street
<b>Waterloo, city</b>		
Bridge, major	Bridge on West Madison	W Madison Street
Bridge, major	Bridge on East Madison B-28-77-93	E Madison Street
Bridge, major	Bridge on East Madison B-28-104	E Madison Street
Bridge, major	Bridge on Portland Road	Portland Road / STH 19
Bridge, major	Bridge on West Madison Street	W Madison Street
Child care center - group	Little Bears Childcare	807 Lum Avenue
Child care center - group	Kuhl Campus	1003 N Monroe Street
Community based residential facility (CBRF)	Bethesda Lutheran Communities - MAD	968 E Madison Street
Community based residential facility (CBRF)	Bethesda Lutheran Communities - MON	734 N Monre Street

Facility Type	Facility Name	Address
Community center	Waterloo Youth Center	Mill Street
Electrical substation	Electrical substation	W Madison Street
Fire department	Waterloo Fire Department	900 Industrial Lane
Health care clinic	UW Health-Waterloo (Park Hill Clinic)	111 Anna Street
Health care clinic	Waterloo Clinic	105 Highland Terrace
Municipal building	Waterloo City Hall	136 N Monroe Street
Municipal garage	Jefferson County Highway Shop	Pierce Street
Municipal garage	Waterloo Municipal Garage	211 Hendricks
Police department	City of Waterloo Police Department	136 N Monroe Street
Post office	Waterloo Post Office	W Madison Street
Public library	Karl Junginger Memorial Library	625 N Monroe Street
Residential care apartment complex (RCAC)	Highland House Assisted Living	161 Goehl Road
School - K-12	Waterloo Elementary School	785 N Monroe Street
School - K-12	Waterloo High School and Middle School	865 N Monroe Street
School - K-12	St. Joseph School	387 S Monroe Street
School - K-12	St. John Evangelical Lutheran School	413 E Madison Street
Utility office/yard	Waterloo Water and Light	575 Commercial Lane
Wastewater treatment plant	Waterloo wastewater treatment plant	401 Hendricks Street
Water facility	Water tower	Squire Road
Water facility	Water tower	Herron Court
Water facility	Water well	461 Porter Street
Water facility	Water well	661 Lum Avenue
<b>Waterloo, town</b>		
Communication tower	Communication tower (FCC #1229718)	Sunset View Lane
Communication tower	Communication tower	N7389 Newville Road
Electrical substation	Electrical substation	N8896 CTH O
Municipal building	Waterloo Town Hall	N8193 Highway 89
<b>Watertown, city</b>		
Adult day care center	Bethesda	761 Milford Stre
Adult family home (AFH)	Woodbridge Home	722 Woodbridge Trail
Adult family home (AFH)	Bethesda Lutheran Communities - 162	1621 Carlson Place
Adult family home (AFH)	Bethesda Lutheran Communities - BRI	508 Bridlewood Lane
Adult family home (AFH)	Manor Family Home (The)	512 S Fifth Street
Adult family home (AFH)	Bethesda Lutheran Communities - 163	1633 Carlson Place
Adult family home (AFH)	Bethesda Lutheran Communities - CAS	917 Casey Drive
Bridge, major	Bridge on Oconomowoc Avenue over Rock River	Oconomowoc Avenue
Bridge, major	Bridge on Cody Street over Rock River	Cody Street
Bridge, major	Bridge on Main Street over Rock River	Main Street
Bridge, major	Bridge on Milwaukee Street over Rock River	Milwaukee Street
Bridge, major	Bridge on East Main Street over Rock River	E Main Street
Bridge, major	Bridge on Church Street over Rock River	Church Street
Child care center - group	Kiddie Kampus Preschool and Day Care	828 W Main Street
Child care center - group	Kids Palace	217 N 5th Street

Facility Type	Facility Name	Address
Child care center - group	Gingerbread Preschool and Child Care Center	120 Kuckkan Lane
Child care center - group	Jefferson County Head Start Watertown	415 S 8th Street
Child care center - group	Mary Linsmeier School	415 S 8th Street
Child care center - group	Great Expectations Early Learning Center	690 Johnson Street
Communication tower	Communication tower	110 Votech Drive
Communication tower	SBC tower	115 S 4th Street
Communication tower	Communication tower	106 Jones Street
Community based residential facility (CBRF)	Bethesda Lutheran Communities - WAK	1316/1318 Wakoka Street
Community based residential facility (CBRF)	Mertin's Home Care	682 Milford Street
Community based residential facility (CBRF)	Bethesda Lutheran Communities - EAS	208 E Haven Drive
Community based residential facility (CBRF)	Bethesda Lutheran Communities - WAK	1320/1322 Wakoka Street
Dam - large	Lower Watertown Dam	n/a
Dam - large	Upper Watertown Dam	n/a
Electric power plant	Upper Watertown Hydroelectric Project	n/a
Electric power plant	Lower Watertown Hydroelectric Project	n/a
Fire department	City of Watertown Fire Department	106 Jones Street
Hazardous chemical facility	WisPak of Watertown	860 West Street
Hazardous chemical facility	WalMart Store 1776	1901 E Market Way
Hazardous chemical facility	Watertown Water Department	806 S 1st Street
Hazardous chemical facility	Tractor Supply Store	1911 Market Way
Hazardous chemical facility	Watertown Water Department	870 West Street
Hazardous chemical facility	UTI/US Chemical Distribution Center	
Hazardous chemical facility	SBC / WI Bell - Watertown	115 S 4th Street
Hazardous chemical facility	Baso Gas Products, LLC	
Hazardous chemical facility	Watertown Hops Company	1224 American Way
Hazardous chemical facility	Reiss Industries	319 Hart Street
Hazardous chemical facility	US Chemical	316 Hart Street
Health care clinic	ProHealth Care Medical Centers	109 Air Park Drive
Military installation	Wisconsin National Guard	1700 River Drive
Municipal building	Watertown Health Dept. and Parks and Forestry Dept.	515 S 1st Street
Municipal building	Watertown City Hall	106 Jones Street
Municipal garage	Watertown Municipal Garage	810 S 2nd Street
Nursing home	Bethesda Lutheran Home	700 Hoffman Drive
Police department	City of Watertown Police Department	106 Jones Street
Post office	Watertown Post Office	411 Dodge Street
Public library	Watertown Public Library	100 S Water Street
Public-use airport	Watertown Municipal Airport	1741 River Road
Residential care apartment complex (RCAC)	Riverview Plantinum LLC	1301 E Main Street
School - K-12	St. John's Lutheran School	317 N 6th Street
School - K-12	Trinity - St. Lukes Lutheran School (Clark Street Cam	303 Clark Street
School - K-12	Calvary Baptist Christian School	792 Milford Street
School - K-12	Faith Lutheran Day School	626 Milford Street
School - K-12	Lincoln Elementary School	210 N Montgomery Street

Facility Type	Facility Name	Address
School - K-12	Luther Preparatory School	1300 Western Avenue
School - K-12	Riverside Middle School	131 Hall Street
School - K-12	Schurz Elementary School	1508 Neenah Street
School - K-12	Good Shepherd Lutheran School	1611 E Main Street
School - K-12	St. Henry Parish School	300 E Cady Street
School - K-12	St. Mark's Lutheran School	705 E Cady Street
School - K-12	Trinity - St. Lukes Lutheran School (Western Campus)	801 S 5th Street
School - K-12	Webster Elementary School	634 S 12th Street
School - K-12	St. Bernard's School	111 S Montgomery Street
School - secondary	Maranatha Baptist Bible College	745 W Main Street
Senior center	Watertown Senior and Community Center	514 S 1st Street
Telephone facility	Telephone facility	115 S 4th Street
Utility office/yard	WE Energies	Wakoka Street
Wastewater treatment plant	Watertown wastewater treatment plant	800 Hoffman Drive
Water facility	Water well and tower	308 Air Park Drive
Water facility	Water tower	Warren Street
Water facility	Water well	806 S 1st Street
Water facility	Water tower	Western Avenue
Water facility	Water well	1432 E Main Street
Water facility	Water well	Water Tower Court
Water facility	Water well	1000 West Street
Water facility	Water well and tower	870 West Street
Water facility	Water well #4	407 Western Avenue
<b>Watertown, town</b>		
Communication tower	Communication tower	N7907 CTH X
Community based residential facility (CBRF)	Doherty Home	N7855 Little Coffee Road
Electric power plant	Wisconsin Electric Concord Generating Station	N8914 CTH E
Hazardous chemical facility	Wisconsin Electric Concord Generating Station	N8914 CTH E
Mobile / manufactured home park	Hickory Hill Park	3266 E Gate Drive
Municipal building	Watertown Town Hall	N8321 STH 26
<b>Whitewater, city</b>		
Electric power plant	Cogentrix	111 CTH U
Hazardous chemical facility	LSP Limited Partners - Whitewater Cogeneration Plan	111 CTH U
Hazardous chemical facility	Whitewater wastewater treatment plant (WWTP)	W3875 CTH U
Mobile / manufactured home park	Twin Oaks Park	CTH N
School - secondary	UW-Whitewater	UW-Whitewater
Wastewater treatment plant	Whitewater wastewater treatment plant (WWTP)	W3875 CTH U

## WEATHER-RELATED EVENTS; JEFFERSON COUNTY: 1950–2011

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
<b>Drought</b>	Jefferson County	8/1/2002	-	0	0	0	\$200K
	Jefferson County	8/1/2003	-	0	0	0	unknown
	Jefferson County	9/1/2003	-	0	0	0	unknown
	Jefferson County	10/1/2003	-	0	0	0	unknown
	Jefferson County	11/1/2003	-	0	0	0	unknown
	Jefferson County	12/1/2003	-	0	0	0	unknown
	Jefferson County	7/1/2005	-	0	0	0	unknown
	Jefferson County	8/1/2005	-	0	0	0	unknown
	Jefferson County	9/1/2005	-	0	0	0	unknown
	Jefferson County	10/1/2005	-	0	0	0	unknown
	Jefferson County	11/1/2005	-	0	0	0	unknown
	Jefferson County	7/1/2007	-	0	0	0	\$100K
<b>Dust Devil</b>	Fort Atkinson	3/26/2003	-	0	0	0	0
<b>Excessive Heat</b>	Jefferson County	7/13/1995	-	0	0	0	0
	Jefferson County	11/23/1998	-	0	0	0	0
	Jefferson County	12/1/1998	-	0	0	0	0
	Jefferson County	7/4/1999	-	0	0	0	0
	Jefferson County	7/23/1999	-	0	0	0	0
	Jefferson County	7/29/1999	-	0	0	0	0
	Jefferson County	7/21/2001	-	0	0	0	0
	Jefferson County	7/31/2001	-	0	0	0	0
	Jefferson County	8/6/2001	-	0	0	0	0
	Jefferson County	4/15/2002	-	0	0	0	0
	Jefferson County	6/22/2002	-	0	0	0	0
	Jefferson County	6/30/2002	-	0	0	0	0
	Jefferson County	7/1/2002	-	0	0	0	0
	Jefferson County	7/8/2002	-	0	0	0	0
	Jefferson County	7/21/2002	-	0	0	0	0
	Jefferson County	7/24/2005	-	0	0	0	0
	Jefferson County	7/30/2006	-	0	0	0	0
	Jefferson County	8/1/2006	-	0	0	0	0
Jefferson County	7/14/2010	-	0	0	0	0	
Jefferson County	8/11/2010	-	0	0	0	0	
Jefferson County	7/1/2011	-	0	0	0	0	
Jefferson County	7/17/2011	-	0	0	0	0	
<b>Extreme Cold</b>	Jefferson County	12/9/1995	-	0	0	0	0
	Jefferson County	1/30/1996	-	0	0	0	0

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
<b>Extreme Cold – cont.</b>	Jefferson County	1/31/1996	-	0	10	0	0
	Jefferson County	2/1/1996	-	0	0	0	0
	Jefferson County	1/17/1997	-	0	0	0	0
	Jefferson County	1/5/1999	-	0	0	0	0
	Jefferson County	12/18/2005	-	0	0	0	0
	Jefferson County	2/17/2006	-	0	0	0	0
	Jefferson County	2/18/2006	-	0	0	0	0
	Jefferson County	1/30/1996	-	2	0	0	0
	Jefferson County	2/3/2007	-	0	0	\$2K	0
	Jefferson County	1/19/2008	-	0	0	0	0
	Jefferson County	1/30/2008	-	0	0	0	0
	Jefferson County	2/10/2008	-	0	0	0	0
	Jefferson County	12/15/2008	-	0	0	0	0
	Jefferson County	12/21/2008	-	0	0	0	0
	Jefferson County	1/14/2009	-	0	0	0	0
	Jefferson County	1/24/2009	-	0	0	0	0
Jefferson County	1/21/2011	-	0	0	0	0	
<b>Flood</b>	Jefferson County	4/19/1993	-	0	0	\$50K	\$50K
	Jefferson County	4/22/1993	-	0	0	\$500K	\$500K
	Jefferson County	4/23/1993	-	0	0	\$5M	\$500K
	Jefferson County	4/30/1993	-	0	0	\$500K	\$50K
	Jefferson County	8/1/1993	-	0	0	0	\$5K
	Jefferson County	6/17/1996	-	0	0	\$250K	\$8M
	Jefferson County	2/21/1997	-	0	0	\$1K	0
	Jefferson County	4/23/1999	-	0	0	\$5K	0
	Jefferson County	2/9/2001	-	0	0	\$10K	0
	Jefferson County	5/24/2004	-	0	0	\$500K	\$500K
	Jefferson County	6/1/2004	-	0	0	\$2.6M	\$20M
	Jefferson County	7/1/2004	-	0	0	\$100K	0
	Watertown	6/17/1996	-	0	1	\$400K	0
	Johnson Creek	6/17/1996	-	0	0	\$150K	0
	Jefferson County	5/17/1999	-	0	0	\$30K	0
	Watertown	5/17/2000	-	0	0	\$25K	0
	Jefferson County	6/1/2000	-	0	0	\$150K	\$1M
	Jefferson County	8/3/2004	-	0	0	\$30K	0
	Milford	9/12/2006	-	0	0	\$100K	0
	Fort Atkinson	7/25/1995	-	0	0	0	0
	Watertown	8/9/1995	-	0	0	0	0
	Fort Atkinson	8/9/1995	-	0	0	0	0
	Watertown	6/21/1997	-	0	0	\$50K	0
Watertown	5/28/1998	-	0	0	0	0	
Sullivan	7/2/2000	-	0	0	0	0	
Watertown	8/21/2002	-	0	0	0	0	
Jefferson County	8/19/2007	-	0	0	\$100K	\$500K	

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
<b>Flood – cont.</b>	Jefferson County	8/22/2007	-	0	0	\$50K	\$200K
	Jefferson County	6/8/2008	-	0	0	\$102.22M	\$35M
	Jefferson County	6/23/2010	-	0	0	\$25K	\$5K
	Jefferson County	7/22/2010	-	0	0	\$150K	\$10K
<b>Fog</b>	Jefferson County	11/13/1999	-	0	0	0	0
	Jefferson County	12/3/1999	-	0	0	0	0
	Jefferson County	12/13/1999	-	0	0	0	0
	Jefferson County	1/9/2000	-	0	0	0	0
	Jefferson County	2/25/2000	-	0	0	0	0
	Jefferson County	3/21/2000	-	0	0	0	0
	Jefferson County	8/23/2000	-	0	0	0	0
	Jefferson County	8/24/2000	-	0	0	0	0
	Jefferson County	10/24/2000	-	0	0	0	0
	Jefferson County	1/12/2001	-	0	0	0	0
	Jefferson County	1/14/2001	-	0	0	0	0
	Jefferson County	2/24/2001	-	0	0	0	0
	Jefferson County	3/22/2001	-	0	0	0	0
	Jefferson County	4/7/2001	-	0	0	0	0
	Jefferson County	5/25/2001	-	0	0	0	0
	Jefferson County	7/19/2001	-	0	0	0	0
	Jefferson County	7/30/2001	-	0	0	0	0
	Jefferson County	8/3/2001	-	0	0	0	0
	Jefferson County	8/22/2001	-	0	0	0	0
	Jefferson County	9/30/2001	-	0	0	0	0
	Jefferson County	10/22/2001	-	0	0	0	0
	Jefferson County	11/15/2001	-	0	0	0	0
	Jefferson County	12/2/2001	-	0	0	0	0
	Jefferson County	12/16/2001	-	0	0	0	0
	Jefferson County	2/20/2002	-	0	0	0	0
	Jefferson County	4/13/2002	-	0	0	0	0
	Jefferson County	9/6/2002	-	0	0	0	0
	Jefferson County	3/20/2003	-	0	0	0	0
	Jefferson County	3/23/2003	-	0	0	0	0
	Jefferson County	2/26/2004	-	0	0	0	0
	Jefferson County	10/12/2004	-	0	0	0	0
	Jefferson County	12/9/2004	-	0	0	0	0
	Jefferson County	12/29/2004	-	0	0	0	0
	Jefferson County	11/27/2005	-	0	0	0	0
	Jefferson County	12/27/2005	-	0	0	0	0
Jefferson County	3/9/2006	-	0	0	0	0	
Jefferson County	3/29/2006	-	0	0	0	0	
Jefferson County	5/9/2006	-	0	0	0	0	
Jefferson County	9/14/2006	-	0	0	0	0	
Jefferson County	9/15/2006	-	0	0	0	0	

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
<b>Fog – cont.</b>	Jefferson County	9/23/2006	-	0	0	0	0
	Jefferson County	12/11/2006	-	0	0	0	0
	Jefferson County	12/21/2006	-	0	0	0	0
	Jefferson County	3/9/2007	-	0	0	0	0
	Jefferson County	3/23/2007	-	0	0	0	0
	Jefferson County	6/1/2007	-	0	0	0	0
	Jefferson County	10/1/2007	-	0	0	0	0
	Jefferson County	12/19/2007	-	0	0	0	0
	Jefferson County	12/21/2007	-	0	0	0	0
	Jefferson County	1/5/2008	-	0	0	0	0
	Jefferson County	1/7/2008	-	0	0	0	0
	Jefferson County	2/4/2008	-	0	0	0	0
	Jefferson County	9/21/2008	-	0	0	0	0
	Jefferson County	12/26/2008	-	0	0	0	0
	Jefferson County	3/7/2009	-	0	0	0	0
	Jefferson County	9/4/2009	-	0	0	0	0
	Jefferson County	9/10/2009	-	0	0	0	0
	Jefferson County	3/7/2010	-	0	0	0	0
	Jefferson County	3/10/2010	-	0	0	0	0
	Jefferson County	5/21/2010	-	0	0	0	0
Jefferson County	12/30/2010	-	0	0	\$10K	0	
<b>Funnel Cloud</b>	Whitewater	8/10/1993	-	0	0	0	0
	Johnson Creek	7/4/1994	-	0	0	0	0
	Waterloo	7/11/1994	-	0	0	0	0
	Lake Mills	7/25/1997	-	0	0	0	0
	Watertown	8/21/1998	-	0	0	0	0
	Lake Mills	6/1/2000	-	0	0	0	0
	Fort Atkinson	8/21/2002	-	0	0	0	0
	Lake Mills	7/11/2004	-	0	0	0	0
	Jefferson County	10/2/2006	-	0	0	0	0
	Jefferson County	6/7/2008	-	0	0	0	0
	Jefferson County	6/7/2008	-	0	0	0	0
	Jefferson County	6/7/2008	-	0	0	0	0
	Jefferson County	6/12/2008	-	0	0	0	0
	Jefferson County	6/12/2008	-	0	0	0	0
	Jefferson County	7/22/2010	-	0	0	0	0
<b>Hail</b>	Jefferson County	4/3/1956	1 in.	0	0	0	0
	Jefferson County	7/2/1960	0.75 in.	0	0	0	0
	Jefferson County	4/11/1965	0.75 in.	0	0	0	0
	Jefferson County	9/17/1972	2.50 in.	0	0	0	0
	Jefferson County	8/27/1976	0.75 in.	0	0	0	0
	Jefferson County	4/2/1977	1.75 in.	0	0	0	0
	Jefferson County	4/3/1978	1 in.	0	0	0	0

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
Hail – cont.	Jefferson County	4/3/1978	0.75 in.	0	0	0	0
	Jefferson County	8/5/1979	1 in.	0	0	0	0
	Jefferson County	6/5/1980	0.75 in.	0	0	0	0
	Jefferson County	5/21/1987	2 in.	0	0	0	0
	Jefferson County	5/21/1987	0.75 in.	0	0	0	0
	Jefferson County	4/5/1988	0.75 in.	0	0	0	0
	Jefferson County	3/13/1990	1.75 in.	0	0	0	0
	Jefferson County	3/27/1991	2 in.	0	0	0	0
	Jefferson County	7/19/1992	1 in.	0	0	0	0
	Jefferson County	7/19/1992	1 in.	0	0	0	0
	Helenville	3/23/1994	1.75 in.	0	0	0	0
	Jefferson County	9/9/1994	0.75 in.	0	0	0	0
	Waterloo	6/7/1995	0.88 in.	0	0	0	0
	Sullivan	6/7/1995	1 in.	0	0	0	0
	Cambridge	7/27/1995	1 in.	0	0	0	0
	Farmington	8/9/1995	2.50 in.	0	0	0	0
	Watertown	8/9/1995	1.75 in.	0	0	0	0
	Sullivan	8/9/1995	0.75 in.	0	0	0	0
	Johnson Creek	7/20/1998	0.75 in.	0	0	0	0
	Jefferson	8/24/1998	2 in.	0	0	0	0
	Lake Mills	5/16/1999	1 in.	0	0	0	0
	Waterloo	6/28/1999	0.75 in.	0	0	0	0
	Sullivan	6/28/1999	0.88 in.	0	0	0	0
	Waterloo	3/8/2000	0.75 in.	0	0	0	0
	Palmyra	3/8/2000	0.75 in.	0	0	0	0
	Watertown	5/8/2000	0.75 in.	0	0	0	0
	Hebron	5/8/2000	0.75 in.	0	0	0	0
	Sullivan	5/11/2000	0.75 in.	0	0	0	0
	Sullivan	5/11/2000	0.75 in.	0	0	0	0
	Lake Mills	5/18/2000	1 in.	0	0	0	0
	Lake Mills	5/18/2000	1 in.	0	0	0	0
	Lake Mills	6/1/2000	0.75 in.	0	0	0	0
	Fort Atkinson	6/30/2000	0.88 in.	0	0	0	0
	Johnson Creek	7/2/2000	1.75 in.	0	0	\$50K	\$100K
	Rome	7/2/2000	2.25 in.	0	0	\$75K	\$100K
	Jefferson	9/11/2000	0.88 in.	0	0	0	0
	Palmyra	5/3/2001	0.75 in.	0	0	0	0
	Johnson Creek	5/14/2001	0.88 in.	0	0	0	0
	Sullivan	5/14/2001	1.50 in.	0	0	0	0
	Watertown	5/14/2001	3.75 in.	0	0	\$300K	0
Concord	5/14/2001	0.75 in.	0	0	0	0	
Waterloo	6/30/2001	0.75 in.	0	0	0	0	
Waterloo	9/3/2001	0.75 in.	0	0	0	0	
Cold Spring	9/9/2002	0.75 in.	0	0	0	0	
Sullivan	7/31/2003	0.75 in.	0	0	0	0	

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
Hail – cont.	Fort Atkinson	8/3/2003	0.75 in.	0	0	0	0
	Hebron	3/1/2004	0.75 in.	0	0	0	0
	Sullivan	3/1/2004	0.75 in.	0	0	0	0
	Waterloo	3/1/2004	1 in.	0	0	0	0
	Fort Atkinson	5/7/2004	0.75 in.	0	0	0	0
	Jefferson	5/23/2004	0.75 in.	0	0	0	0
	Johnson Creek	5/23/2004	0.75 in.	0	0	0	0
	Cambridge	6/23/2004	0.75 in.	0	0	0	0
	Fort Atkinson	6/23/2004	0.88 in.	0	0	0	0
	Fort Atkinson	6/23/2004	1.75 in.	0	0	\$10K	0
	Waterloo	3/30/2005	0.88 in.	0	0	0	0
	Busseyville	5/6/2005	0.75 in.	0	0	0	0
	Waterloo	5/6/2005	0.88 in.	0	0	0	0
	Lake Mills	5/6/2005	1 in.	0	0	0	0
	Waterloo	5/19/2005	0.75 in.	0	0	0	0
	Lake Mills	6/5/2005	0.75 in.	0	0	0	0
	Fort Atkinson	8/18/2005	1 in.	0	0	0	0
	Lake Mills	4/13/2006	2.50 in.	0	0	0	0
	Lake Mills	4/13/2006	4.25 in.	0	0	\$4.4M	0
	Johnson Creek	4/13/2006	2.50 in.	0	0	\$4.4M	0
	Jefferson	4/13/2006	1.50 in.	0	0	0	0
	Concord	4/13/2006	2 in.	0	0	\$4.4M	0
	Waterloo	5/17/2006	0.75 in.	0	0	0	0
	Lake Mills	8/24/2006	0.75 in.	0	0	0	0
	Waterloo	8/24/2006	0.75 in.	0	0	0	0
	Fort Atkinson	8/25/2006	0.75 in.	0	0	0	0
	Palmyra	9/30/2006	0.75 in.	0	0	0	0
	Jefferson County	10/2/2006	0.75 in.	0	0	0	0
	Jefferson County	10/2/2006	0.75 in.	0	0	0	0
	Jefferson County	10/2/2006	0.75 in.	0	0	0	0
	Jefferson County	10/2/2006	0.75 in.	0	0	0	0
	Jefferson County	10/2/2006	0.75 in.	0	0	0	0
	Jefferson County	3/21/2007	0.75 in.	0	0	0	0
	Jefferson County	3/21/2007	0.75 in.	0	0	0	0
	Jefferson County	3/21/2007	0.75 in.	0	0	0	0
	Jefferson County	4/30/2007	0.75 in.	0	0	0	0
	Jefferson County	7/9/2007	1 in.	0	0	0	0
	Jefferson County	7/9/2007	0.75 in.	0	0	0	0
	Jefferson County	6/5/2008	0.88 in.	0	0	0	0
	Jefferson County	6/7/2008	0.75 in.	0	0	0	0
	Jefferson County	6/7/2008	1 in.	0	0	0	0
	Jefferson County	6/7/2008	0.88 in.	0	0	0	0
Jefferson County	6/14/2008	1 in.	0	0	0	0	
Jefferson County	6/14/2008	0.75 in.	0	0	0	0	
Jefferson County	7/2/2008	1 in.	0	0	0	0	

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
<b>Hail – cont.</b>	Jefferson County	6/2/2010	1 in.	0	0	0	0
	Jefferson County	6/2/2010	1.75 in.	0	0	0	0
	Jefferson County	6/2/2010	1 in.	0	0	0	0
	Jefferson County	6/21/2010	1.50 in.	0	0	\$15K	0
	Jefferson County	6/21/2010	1 in.	0	0	0	0
	Jefferson County	9/6/2010	0.88 in.	0	0	0	0
	Jefferson County	4/3/2011	0.88 in.	0	0	0	0
	Jefferson County	5/11/2011	1.75 in.	0	0	0	0
	Jefferson County	5/11/2011	4.25 in.	0	0	0	0
	Jefferson County	5/11/2011	2 in.	0	0	0	0
	Jefferson County	5/11/2011	2.75 in.	0	0	0	0
	Jefferson County	5/22/2011	1 in.	0	0	0	0
	Jefferson County	5/22/2011	1.75 in.	0	0	0	0
	Jefferson County	5/22/2011	1.25 in.	0	0	0	0
	Jefferson County	6/8/2011	0.75 in.	0	0	0	0
<b>Heavy Rain</b>	Johnson Creek	4/1/1998	-	0	0	\$3K	0
	Sullivan	9/18/2001	-	0	0	0	0
	Waterloo	8/3/2003	-	0	0	0	0
	Fort Atkinson	11/1/2003	-	0	0	0	0
	Jefferson	5/17/2004	-	0	0	0	0
	Lake Mills	7/11/2006	-	0	0	0	0
	Jefferson County	4/2/2007	-	0	0	0	0
	Jefferson County	7/26/2007	-	0	0	0	0
Jefferson County	9/12/2008	-	0	0	0	0	
<b>High Wind</b>	Jefferson County	10/30/1996	50 knots	0	0	\$20K	0
	Jefferson County	4/6/1997	63 knots	0	0	\$20K	0
	Jefferson County	3/8/1998	50 knots	0	0	\$5K	0
	Jefferson County	11/10/1998	59 knots	0	2	\$900K	\$200K
	Jefferson County	3/17/1999	52 knots	0	0	\$2K	0
	Jefferson County	4/7/2001	51 knots	0	0	0	0
	Jefferson County	4/11/2001	55 knots	0	0	0	0
	Jefferson County	11/12/2003	55 knots	0	0	\$3K	0
	Jefferson County	2/9/2004	53 knots	0	0	0	0
	Jefferson County	10/26/2010	50 knots	0	0	\$20K	0
<b>Lightning</b>	Fort Atkinson	7/27/1995	-	0	2	0	0
	Cambridge	8/28/1995	-	0	0	\$11K	0
	Fort Atkinson	8/28/1995	-	0	0	0	0
	Ixonia	4/11/1996	-	0	0	0	0
	Watertown	4/11/1996	-	0	0	0	0
	Ixonia	10/6/1996	-	0	0	\$50K	0
	Ixonia	7/16/1997	-	0	0	\$250K	0

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
<b>Lightning – cont.</b>	Waterloo	7/18/1997	-	0	0	\$50K	0
	Waterloo	7/20/1997	-	0	0	\$50K	0
	Lake Mills	7/26/1997	-	0	0	\$10K	0
	Watertown	7/26/1997	-	0	0	\$15K	0
	Watertown	7/26/1997	-	0	0	\$5K	0
	Cambridge	4/15/1998	-	0	0	\$100K	0
	Fort Atkinson	6/1/2000	-	0	0	\$30K	0
	Lake Mills	6/1/2000	-	0	0	\$3K	0
	Lake Mills	7/17/2001	-	0	0	\$25K	0
	Fort Atkinson	4/18/2002	-	0	0	0	0
	Watertown	7/15/2003	-	0	1	0	0
	Palmyra	7/15/2003	-	0	0	\$2K	0
	Fort Atkinson	6/25/2005	-	0	5	0	0
	Watertown	7/23/2005	-	0	0	\$1K	0
	Watertown	7/23/2005	-	0	0	\$100K	0
	Cold Spring	11/27/2005	-	0	0	\$100K	0
	Jefferson County	7/7/2008	-	1	0	0	0
	Jefferson County	7/7/2008	-	0	1	\$30K	0
<b>Record Rainfall</b>	Lake Mills	5/31/2000	-	0	0	0	0
<b>Strong Wind</b>	Sullivan	9/29/1997	43 knots	0	0	\$5K	0
	Jefferson County	5/24/2000	46 knots	0	0	\$3K	0
	Jefferson County	9/19/2001	49 knots	0	0	\$10K	0
	Jefferson County	10/24/2001	45 knots	0	0	\$10K	0
	Jefferson County	12/5/2001	44 knots	0	0	\$15K	0
	Jefferson County	3/7/2004	42 knots	0	0	\$2K	0
	Jefferson County	3/14/2004	39 knots	0	0	\$2K	0
	Jefferson County	4/18/2004	49 knots	0	0	\$10K	0
	Jefferson County	12/12/2004	38 knots	0	0	\$1K	0
	Jefferson County	1/24/2006	39 knots	0	0	\$5K	0
	Jefferson County	3/13/2006	41 knots	0	0	\$5K	0
	Jefferson County	3/31/2006	39 knots	0	0	\$5K	0
	Jefferson County	5/11/2006	36 knots	0	0	\$1K	0
	Jefferson County	2/22/2007	39 knots	0	0	\$2K	0
	Jefferson County	5/24/2007	39 knots	0	0	\$2K	0
	Jefferson County	8/27/2007	39 knots	0	0	\$15K	0
	Jefferson County	11/5/2007	39 knots	0	0	\$5K	0
	Jefferson County	12/23/2007	39 knots	0	0	\$5K	0
	Jefferson County	4/26/2008	40 knots	0	0	\$5K	0
	Jefferson County	10/26/2008	47 knots	0	0	\$5K	0
	Jefferson County	10/6/2009	42 knots	0	0	\$5K	0
	Jefferson County	5/5/2010	39 knots	0	0	\$10K	0
	Jefferson County	1/1/2011	39 knots	0	0	\$4K	0
	Jefferson County	2/18/2011	26 knots	0	0	\$2K	0

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
<b>Strong Wind – cont.</b>	Jefferson County	4/15/2011	26 knots	0	0	\$3K	0
	Jefferson County	5/15/2011	32 knots	0	0	\$5K	0
	Jefferson County	9/29/2011	46 knots	0	0	\$2K	0
<b>Thunderstorm Winds</b>	Jefferson County	8/3/1960	50 knots	0	0	0	0
	Jefferson County	8/3/1960	50 knots	0	0	0	0
	Jefferson County	8/3/1960	50 knots	0	0	0	0
	Jefferson County	8/8/1960	50 knots	0	0	0	0
	Jefferson County	5/14/1961	52 knots	0	0	0	0
	Jefferson County	5/14/1961	53 knots	0	0	0	0
	Jefferson County	8/13/1961	65 knots	0	0	0	0
	Jefferson County	6/17/1962	50 knots	0	0	0	0
	Jefferson County	6/17/1962	50 knots	0	0	0	0
	Jefferson County	6/19/1964	50 knots	0	0	0	0
	Jefferson County	6/22/1964	50 knots	0	0	0	0
	Jefferson County	7/17/1964	50 knots	0	0	0	0
	Jefferson County	6/22/1965	50 knots	0	0	0	0
	Jefferson County	5/23/1966	50 knots	0	0	0	0
	Jefferson County	8/1/1966	50 knots	0	0	0	0
	Jefferson County	6/10/1970	50 knots	0	0	0	0
	Jefferson County	6/27/1972	50 knots	0	0	0	0
	Jefferson County	6/9/1974	50 knots	0	0	0	0
	Jefferson County	6/20/1974	50 knots	0	0	0	0
	Jefferson County	7/3/1974	50 knots	0	0	0	0
	Jefferson County	7/9/1974	50 knots	0	0	0	0
	Jefferson County	6/4/1975	50 knots	0	0	0	0
	Jefferson County	6/13/1975	50 knots	0	0	0	0
	Jefferson County	5/20/1977	50 knots	0	0	0	0
	Jefferson County	5/21/1977	60 knots	0	0	0	0
	Jefferson County	7/6/1977	61 knots	0	0	0	0
	Jefferson County	7/6/1977	50 knots	0	0	0	0
	Jefferson County	7/6/1977	50 knots	0	0	0	0
	Jefferson County	7/6/1977	50 knots	0	0	0	0
	Jefferson County	7/16/1977	50 knots	0	0	0	0
	Jefferson County	8/4/1977	50 knots	0	0	0	0
	Jefferson County	6/17/1978	50 knots	0	0	0	0
	Jefferson County	6/17/1978	50 knots	0	0	0	0
	Jefferson County	7/20/1978	50 knots	0	0	0	0
	Jefferson County	7/28/1978	50 knots	0	0	0	0
Jefferson County	6/20/1979	50 knots	0	0	0	0	
Jefferson County	6/29/1979	50 knots	0	0	0	0	
Jefferson County	6/7/1980	52 knots	0	0	0	0	
Jefferson County	8/4/1980	50 knots	0	0	0	0	
Jefferson County	4/3/1981	55 knots	0	0	0	0	
Jefferson County	6/24/1981	50 knots	0	0	0	0	

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
Thunderstorm Winds – cont.	Jefferson County	8/31/1981	50 knots	0	0	0	0
	Jefferson County	7/6/1982	50 knots	0	0	0	0
	Jefferson County	7/6/1982	50 knots	0	0	0	0
	Jefferson County	7/17/1983	50 knots	0	0	0	0
	Jefferson County	7/17/1983	50 knots	0	0	0	0
	Jefferson County	7/19/1983	50 knots	0	0	0	0
	Jefferson County	7/19/1983	50 knots	0	0	0	0
	Jefferson County	7/19/1983	50 knots	0	0	0	0
	Jefferson County	7/19/1983	69 knots	0	0	0	0
	Jefferson County	7/19/1983	56 knots	0	0	0	0
	Jefferson County	8/16/1983	50 knots	0	0	0	0
	Jefferson County	6/6/1984	50 knots	0	0	0	0
	Jefferson County	7/9/1984	50 knots	0	0	0	0
	Jefferson County	7/9/1984	61 knots	0	0	0	0
	Jefferson County	10/16/1984	52 knots	0	0	0	0
	Jefferson County	4/23/1985	50 knots	0	0	0	0
	Jefferson County	5/11/1985	50 knots	0	0	0	0
	Jefferson County	7/25/1986	50 knots	0	0	0	0
	Jefferson County	9/28/1986	50 knots	0	1	0	0
	Jefferson County	8/16/1987	50 knots	0	0	0	0
	Jefferson County	8/16/1987	50 knots	0	0	0	0
	Jefferson County	5/8/1988	50 knots	0	0	0	0
	Jefferson County	8/18/1988	50 knots	0	0	0	0
	Jefferson County	11/15/1988	52 knots	0	0	0	0
	Jefferson County	5/24/1989	50 knots	0	0	0	0
	Jefferson County	8/4/1989	50 knots	0	0	0	0
	Jefferson County	8/4/1989	50 knots	0	0	0	0
	Jefferson County	8/4/1989	55 knots	0	0	0	0
	Jefferson County	8/4/1989	61 knots	0	0	0	0
	Jefferson County	8/5/1989	50 knots	0	0	0	0
	Jefferson County	6/2/1990	50 knots	0	0	0	0
	Jefferson County	6/28/1990	50 knots	0	0	0	0
	Jefferson County	6/28/1990	50 knots	0	0	0	0
	Jefferson County	4/29/1991	50 knots	0	0	0	0
	Jefferson County	7/1/1991	50 knots	0	0	0	0
	Jefferson County	7/7/1991	56 knots	0	0	0	0
	Jefferson County	7/7/1991	50 knots	0	0	0	0
	Jefferson County	7/7/1991	50 knots	0	0	0	0
	Jefferson County	7/7/1991	50 knots	0	0	0	0
	Jefferson County	7/7/1991	70 knots	0	0	0	0
	Fort Atkinson	4/18/1994	50 knots	0	0	0	0
	Sullivan	4/18/1994	50 knots	0	0	0	0
	Lake Mills	6/25/1994	50 knots	0	0	0	\$50K
	Johnson Creek	6/25/1994	50 knots	0	0	0	\$50K
	Jefferson	7/4/1994	50 knots	0	0	0	\$50K

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
Thunderstorm Winds – cont.	Palmyra	7/15/1995	50 knots	0	0	0	0
	Fort Atkinson	7/25/1995	50 knots	0	0	0	0
	Waterloo	8/7/1995	50 knots	0	0	0	0
	Lake Mills	8/7/1995	50 knots	0	0	0	0
	Milford	8/7/1995	50 knots	0	0	\$80K	0
	Fort Atkinson	8/9/1995	50 knots	0	0	0	0
	Palmyra	8/9/1995	50 knots	0	0	0	0
	Palmyra	8/9/1995	50 knots	0	0	0	0
	Watertown	8/28/1995	50 knots	0	0	0	0
	Fort Atkinson	8/28/1995	50 knots	0	0	0	0
	Busseyville	4/18/1996	50 knots	0	0	\$1K	0
	Sullivan	4/18/1996	54 knots	0	0	0	0
	Ixonia	8/5/1996	50 knots	0	0	\$12K	0
	Jefferson	10/29/1996	50 knots	0	0	\$5K	0
	Fort Atkinson	10/29/1996	50 knots	0	0	\$20K	0
	Hebron	4/5/1997	50 knots	0	0	\$100K	0
	Lake Mills	6/21/1997	56 knots	0	0	\$3K	0
	Watertown	6/24/1997	62 knots	0	0	\$2K	0
	Lake Mills	6/24/1997	50 knots	0	0	\$15K	0
	Waterloo	7/16/1997	50 knots	0	0	\$1K	0
	Cambridge	7/25/1997	50 knots	0	0	\$2K	0
	Busseyville	7/25/1997	50 knots	0	0	0	0
	Concord	7/25/1997	50 knots	0	0	\$1K	0
	Hebron	7/25/1997	50 knots	0	0	0	0
	Cold Spring	7/25/1997	50 knots	0	0	0	0
	Lake Mills	7/26/1997	52 knots	0	0	43K	0
	Jefferson	7/26/1997	50 knots	0	0	\$159K	0
	Sullivan	7/26/1997	51 knots	0	0	0	0
	Palmyra	7/26/1997	50 knots	0	0	\$1K	0
	Lake Mills	7/27/1997	50 knots	0	0	\$1K	0
	Fort Atkinson	7/27/1997	50 knots	0	0	\$1K	0
	Lake Mills	5/15/1998	52 knots	0	0	\$1K	0
	Jefferson	5/28/1998	50 knots	0	0	\$70K	0
	Sullivan	5/28/1998	55 knots	0	0	0	0
	Jefferson	5/31/1998	50 knots	0	8	\$2.7M	\$200K
	Jefferson	6/18/1998	50 knots	0	0	\$6K	0
	Palmyra	6/25/1998	50 knots	0	0	\$2K	0
	Waterloo	7/20/1998	50 knots	0	0	\$1K	0
	Ixonia	7/20/1998	50 knots	0	0	\$5K	0
	Lake Mills	2/11/1999	56 knots	0	0	\$1K	0
Palmyra	2/11/1999	50 knots	0	0	\$1K	0	
Lake Mills	6/6/1999	50 knots	0	0	0	0	
Hebron	6/6/1999	50 knots	0	0	\$30K	0	
Sullivan	6/6/1999	50 knots	0	0	\$1K	0	
Concord	6/10/1999	50 knots	0	0	\$1K	0	

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
Thunderstorm Winds – cont.	Hebron	6/11/1999	50 knots	0	0	\$3K	0
	Watertown	7/23/1999	52 knots	0	0	0	0
	Fort Atkinson	7/23/1999	50 knots	0	0	\$2K	0
	Farmington	9/19/1999	50 knots	0	0	\$2K	0
	Watertown	5/11/2000	52 knots	0	0	\$1K	0
	Watertown	5/11/2000	56 knots	0	0	\$1K	0
	Lake Mills	6/1/2000	52 knots	0	0	\$2K	0
	Fort Atkinson	6/1/2000	50 knots	0	0	\$3K	0
	Lake Mills	8/26/2000	50 knots	0	0	\$2K	0
	Johnson Creek	8/26/2000	50 knots	0	0	\$4K	0
	Lake Mills	6/11/2001	56 knots	0	0	\$30K	0
	Johnson Creek	6/30/2001	52 knots	0	0	0	0
	Palmyra	9/3/2001	50 knots	0	0	0	0
	Palmyra	9/7/2001	52 knots	0	0	0	0
	Lake Mills	4/18/2002	51 knots	0	0	0	0
	Concord	6/10/2002	52 knots	0	0	0	0
	Rome	8/21/2002	56 knots	0	0	0	\$2K
	Busseyville	8/21/2002	52 knots	0	0	0	0
	Fort Atkinson	5/10/2003	56 knots	0	0	0	0
	Jefferson	6/25/2003	52 knots	0	0	0	0
	Fort Atkinson	6/28/2003	50 knots	0	0	0	0
	Watertown	7/4/2003	56 knots	0	0	0	0
	Waterloo	7/15/2003	65 knots	0	0	\$175K	0
	Watertown	7/30/2003	50 knots	0	0	0	0
	Fort Atkinson	3/1/2004	52 knots	0	0	\$2K	0
	Palmyra	3/5/2004	52 knots	0	0	\$1K	0
	Palmyra	3/5/2004	52 knots	0	0	\$1K	0
	Watertown	5/17/2004	52 knots	0	0	0	0
	Fort Atkinson	6/23/2004	80 knots	0	0	0	0
	Watertown	8/3/2004	56 knots	0	0	\$20K	0
	Palmyra	10/29/2004	52 knots	0	0	0	0
	Fort Atkinson	3/30/2005	56 knots	0	0	\$15K	0
	Busseyville	5/19/2005	61 knots	0	0	\$10K	0
	Jefferson	6/4/2005	65 knots	0	0	\$75K	0
	Johnson Creek	6/4/2005	56 knots	0	0	0	0
	Concord	6/4/2005	55 knots	0	0	0	0
	Cambridge	6/26/2005	52 knots	0	0	0	0
	Fort Atkinson	6/26/2005	52 knots	0	0	0	0
	Busseyville	6/26/2005	52 knots	0	0	\$10K	0
	Lake Mills	6/26/2005	52 knots	0	0	0	0
Watertown	7/21/2005	53 knots	0	0	\$1K	0	
Fort Atkinson	7/23/2005	58 knots	0	0	\$30K	0	
Cambridge	7/25/2005	52 knots	0	0	\$2K	0	
Fort Atkinson	8/18/2005	52 knots	0	0	\$1K	0	
Palmyra	9/13/2005	52 knots	0	0	0	0	

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
Thunderstorm Winds – cont.	Fort Atkinson	5/24/2006	50 knots	0	0	\$10K	0
	Waterloo	7/20/2006	56 knots	0	0	\$5K	0
	Fort Atkinson	7/20/2006	56 knots	0	0	\$25K	0
	Rome	7/20/2006	56 knots	0	0	0	0
	Fort Atkinson	7/27/2006	52 knots	0	0	0	0
	Busseyville	7/27/2006	52 knots	0	0	0	0
	Ixonia	7/30/2006	52 knots	0	0	0	0
	Johnson Creek	8/24/2006	52 knots	0	0	0	0
	Jefferson County	10/2/2006	52 knots	0	0	0	0
	Jefferson County	10/2/2006	56 knots	0	0	0	0
	Jefferson County	4/3/2007	45 knots	0	0	\$1K	0
	Jefferson County	6/3/2007	56 knots	0	0	\$25K	0
	Jefferson County	6/18/2007	52 knots	0	0	0	0
	Jefferson County	7/26/2007	43 knots	0	0	\$1K	0
	Jefferson County	8/12/2007	52 knots	0	0	0	0
	Jefferson County	6/6/2008	50 knots	0	0	0	0
	Jefferson County	6/8/2008	50 knots	0	0	\$25K	0
	Jefferson County	6/8/2008	50 knots	0	0	0	0
	Jefferson County	6/28/2008	74 knots	0	0	\$40K	0
	Jefferson County	7/10/2008	56 knots	0	0	\$20K	0
	Jefferson County	7/10/2008	50 knots	0	0	0	0
	Jefferson County	3/24/2009	56 knots	0	0	\$2K	0
	Jefferson County	6/8/2009	56 knots	0	0	0	0
	Jefferson County	6/18/2009	56 knots	0	0	\$10K	0
	Jefferson County	6/25/2009	56 knots	0	0	\$0.10K	0
	Jefferson County	6/25/2009	56 knots	0	0	0	0
	Jefferson County	6/18/2010	50 knots	0	0	0	0
	Jefferson County	6/21/2010	70 knots	0	0	0	0
	Jefferson County	8/9/2010	65 knots	0	0	0	0
	Jefferson County	8/20/2010	50 knots	0	0	0	0
	Jefferson County	8/20/2010	50 knots	0	0	0	0
	Jefferson County	8/20/2010	50 knots	0	0	0	0
	Jefferson County	9/2/2010	56 knots	0	0	0	0
	Jefferson County	9/2/2010	56 knots	0	0	0	0
	Jefferson County	10/26/2010	65 knots	0	0	\$15K	0
	Jefferson County	10/26/2010	65 knots	0	0	\$20K	0
	Jefferson County	5/22/2011	56 knots	0	0	\$50K	0
	Jefferson County	5/22/2011	50 knots	0	0	\$5K	0
	Jefferson County	6/8/2011	65 knots	0	0	0	0
	Jefferson County	6/8/2011	65 knots	0	0	0	0
Jefferson County	6/8/2011	65 knots	0	0	0	0	
Jefferson County	6/8/2011	70 knots	0	0	0	0	
Jefferson County	6/8/2011	52 knots	0	0	0	0	
Jefferson County	6/21/2011	56 knots	0	0	0	0	

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
<b>Thunderstorm Winds – cont.</b>	Jefferson County	7/11/2011	56 knots	0	0	0	0
	Jefferson County	9/3/2011	65 knots	0	0	0	0
	Jefferson County	9/3/2011	65 knots	0	0	\$15K	0
<b>Tornado [1, 2]</b>	3N NW Busseyville	4/11/1965	F2	?	?	?	?
	3NW Jefferson	4/11/1965	F2	3	25	\$2M	0
	6SE Watertown	6/12/1967	F0	0	0	0	0
	Near Sullivan	6/18/1971	F1	0	1	\$25K	0
	2S Jefferson	6/24/1971	F1	0	0	\$3K	0
	3NE Sullivan	7/14/1972	F1	0	0	\$250K	0
	Near Lake Mills	7/19/1972	F1	0	3	\$250K	0
	Near Lake Mills	6/20/1974	F1	0	0	0	0
	2.5SE Watertown	8/9/1979	F1	0	0	\$25K	0
	0.2E Watertown	6/5/1980	F2	0	0	\$25K	0
	2N Johnson Creek	6/5/1980	F3	0	0	\$250K	0
	4SW Fort Atkinson	6/15/1981	F2	0	3	\$250K	0
	1.5NE Ixonia	7/12/1986	F0	0	0	0	0
	1N Whitewater	9/28/1986	F2	0	1	\$2.5M	0
	2.5S Lake Mills	5/8/1988	F2	0	0	\$250K	0
	2N NW Busseyville	3/27/1991	F2	0	0	\$2.5M	0
	Lake Mills	9/19/1997	F0	0	0	\$650K	0
	Lake Mills	6/6/1999	F0	0	0	\$3K	0
	1.8SW Fort Atkinson	8/13/2002	F0	0	0	\$5K	0
	1.8SE Cold Spring	6/23/2004	F1	0	0	\$150K	0
	3.4SW Watertown	7/11/2004	F0	0	0	0	0
	2.5N NW Busseyville	8/18/2005	F1	0	0	0	\$2K
	5.5W Fort Atkinson	8/18/2005	F0	0	0	\$50K	\$2K
	5W Fort Atkinson	8/18/2005	F1	0	0	\$30K	\$2K
	4.1W SW Fort Atkinson	8/18/2005	F1	0	0	\$30K	\$2K
	1.2S SW Fort Atkinson	8/18/2005	F1	0	0	\$355K	0
	5.6SW Fort Atkinson	8/18/2005	F1	0	0	\$20K	\$2K
	3.2SE Fort Atkinson	8/18/2005	F0	0	0	\$7K	\$1K
	Jefferson County	6/7/2008	EF0	0	0	0	0
	Jefferson County	6/21/2010	EF1	0	0	\$620K	\$10K
	Jefferson County	7/22/2010	EF0	0	0	0	0
	Jefferson County	7/22/2010	EF0	0	0	0	0
	Jefferson County	7/22/2010	EF0	0	0	0	0
Jefferson County	7/22/2010	EF0	0	0	0	0	
<b>Winter Storm [3]</b>	Jefferson County	1/26/1994	-	0	0	0	0
	Jefferson County	2/7/1994	-	0	0	0	0
	Jefferson County	2/12/1994	-	0	0	0	0
	Jefferson County	2/22/1994	-	0	0	0	0

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
Winter Storm – cont.	Jefferson County	2/25/1994	-	0	0	0	0
	Jefferson County	12/5/1994	-	0	0	0	0
	Jefferson County	1/19/1995	-	0	0	0	0
	Jefferson County	11/11/1995	-	0	0	0	0
	Jefferson County	11/26/1995	-	0	1	0	0
	Jefferson County	12/8/1995	-	0	0	0	0
	Jefferson County	12/13/1995	-	0	0	0	0
	Jefferson County	1/16/1996	-	0	0	0	0
	Jefferson County	1/23/1996	-	0	0	0	0
	Jefferson County	1/26/1996	-	0	0	0	0
	Jefferson County	1/29/1996	-	0	0	0	0
	Jefferson County	12/23/1996	-	0	0	0	0
	Jefferson County	1/16/1997	-	0	0	0	0
	Jefferson County	2/4/1997	-	0	0	0	0
	Jefferson County	4/11/1997	-	0	0	0	0
	Jefferson County	1/8/1998	-	0	0	0	0
	Jefferson County	1/2/1999	-	0	0	0	0
	Jefferson County	3/9/1999	-	0	0	0	0
	Jefferson County	4/7/2000	-	0	0	0	0
	Jefferson County	12/11/2000	-	0	0	0	0
	Jefferson County	12/18/2000	-	0	0	0	0
	Jefferson County	3/2/2002	-	0	0	0	0
	Jefferson County	2/3/2003	-	0	0	0	0
	Jefferson County	2/11/2003	-	0	0	0	0
	Jefferson County	4/4/2003	-	0	0	0	0
	Jefferson County	4/7/2003	-	0	0	0	0
	Jefferson County	12/10/2003	-	0	0	0	0
	Jefferson County	1/4/2004	-	0	0	0	0
	Jefferson County	1/16/2004	-	0	0	0	0
	Jefferson County	12/18/2004	-	0	0	0	0
	Jefferson County	1/6/2005	-	0	0	0	0
	Jefferson County	1/22/2005	-	0	0	0	0
	Jefferson County	2/16/2006	-	0	0	0	0
	Jefferson County	11/10/2006	-	0	0	0	0
	Jefferson County	12/1/2006	-	0	0	0	0
	Jefferson County	1/12/2007	-	0	0	0	0
	Jefferson County	1/14/2007	-	0	0	0	0
	Jefferson County	1/21/2007	-	0	0	0	0
	Jefferson County	2/23/2007	-	0	0	0	0
	Jefferson County	2/24/2007	-	0	0	0	0
	Jefferson County	2/25/2007	-	0	0	0	0
	Jefferson County	3/2/2007	-	0	0	0	0
Jefferson County	4/11/2007	-	0	0	\$10K	0	
Jefferson County	11/21/2007	-	0	0	0	0	
Jefferson County	12/1/2007	-	0	0	0	0	

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
Winter Storm – cont.	Jefferson County	12/4/2007	-	0	0	0	0
	Jefferson County	12/11/2007	-	0	0	0	0
	Jefferson County	12/15/2007	-	0	0	\$50K	0
	Jefferson County	12/22/2007	-	0	0	0	0
	Jefferson County	12/28/2007	-	0	0	0	0
	Jefferson County	1/21/2008	-	0	0	0	0
	Jefferson County	1/29/2008	-	0	0	0	0
	Jefferson County	2/5/2008	-	0	0	0	0
	Jefferson County	2/9/2008	-	0	0	0	0
	Jefferson County	2/11/2008	-	0	0	0	0
	Jefferson County	2/17/2008	-	0	0	\$20K	0
	Jefferson County	3/21/2008	-	0	0	0	0
	Jefferson County	11/24/2008	-	0	0	0	0
	Jefferson County	11/30/2008	-	0	0	0	0
	Jefferson County	12/1/2008	-	0	0	0	0
	Jefferson County	12/3/2008	-	0	0	0	0
	Jefferson County	12/8/2008	-	0	0	0	0
	Jefferson County	12/16/2008	-	0	0	0	0
	Jefferson County	12/18/2008	-	0	0	0	0
	Jefferson County	12/21/2008	-	0	0	0	0
	Jefferson County	12/23/2008	-	0	0	0	0
	Jefferson County	12/24/2008	-	0	0	0	0
	Jefferson County	12/25/2008	-	0	0	0	0
	Jefferson County	12/27/2008	-	0	0	0	0
	Jefferson County	1/3/2009	-	0	0	0	0
	Jefferson County	1/9/2009	-	0	0	0	0
	Jefferson County	1/9/2009	-	0	0	0	0
	Jefferson County	1/12/2009	-	0	0	0	0
	Jefferson County	1/13/2009	-	0	0	0	0
	Jefferson County	2/21/2009	-	0	0	0	0
	Jefferson County	2/26/2009	-	0	0	0	0
	Jefferson County	3/28/2009	-	0	0	0	0
	Jefferson County	12/8/2009	-	0	0	0	0
	Jefferson County	12/23/2009	-	0	0	0	0
	Jefferson County	1/7/2010	-	0	0	0	0
	Jefferson County	2/8/2010	-	0	0	0	0
	Jefferson County	3/19/2010	-	0	0	0	0
	Jefferson County	12/3/2010	-	0	0	0	0
	Jefferson County	12/9/2010	-	0	0	0	0
	Jefferson County	12/11/2010	-	0	0	0	0
Jefferson County	12/20/2010	-	0	0	0	0	
Jefferson County	1/17/2011	-	0	0	0	0	
Jefferson County	2/1/2011	-	0	0	0	0	
Jefferson County	2/6/2011	-	0	0	0	0	
Jefferson County	2/20/2011	-	0	0	0	0	

Event Type	Location	Date	Magnitude	Direct Deaths	Direct Injuries	Property Damage	Crop Damage
<b>Winter Storm – cont.</b>	Jefferson County	2/21/2011	-	0	0	0	0
	Jefferson County	12/29/2011	-	0	0	0	0

Source: National Climactic Data Center database initially accessed on February 21, 2007. <http://www4.ncdc.noaa.gov/cgi-win/wcqi.dll?wwevent-storms> Data verified by Rusty Kapela on April 10, 2007. Data update on May 30, 2012.

- Note:
1. The location for some events is denoted by direction from the center of a nearby community and distance
  2. Tornadoes through the end of 2006 were rated on the Fujita Tornado Scale. Beginning January 1, 2007, the Enhanced Fujita scale was used.
  3. Winter storms include blizzards, heavy snow, sleet events and ice storm events.

# METHODOLOGY FOR ESTIMATING FLOOD DAMAGE (2006)

**Overview** – This narrative is intended to document the resources, process, and assumptions used in estimating how much damage would occur to buildings during a 100-year flood. Although flood damages were calculated for each building in the floodplain, it should be emphasized that the total calculated damage estimate was prepared to compare damage from flooding to damage caused by other natural hazards to help decision makers set priorities and devise appropriate mitigation activities.

**Resources Used** – Jefferson County has a well-developed geographic information system (GIS). It includes a number of map themes and includes a topographic relief map with two-foot contour intervals and an orthographic base with a resolution of two feet. The GIS system also includes property tax information for every parcel in the county.

Beginning in 2006, the Federal Emergency Management Agency, in collaboration with the Wisconsin Department of Natural Resources, initiated a multi-year effort to create and adopt digital flood insurance rate maps (FIRMs) for the entire county. Preliminary FIRM maps were produced as part of that effort and were made available in September, 2006. Adoption of the final set of flood insurance maps would occur in 2008. Because the preliminary FIRMs were the best available data at the time, they were used in this project.

**Methodology and Assumptions** – The approach was straight forward – identify buildings located within the 100-year floodplain and estimate how much damage each would suffer during a 100-year flood. Initially, a query was used to identify those parcels that were located, in whole or in part, in the 100-year floodplain. The consultant then viewed each of those parcels to determine if a principal building (e.g., house, commercial building, industrial building) was located within the 100-year floodplain. In some cases, a single parcel had more than one building in the floodplain. For example, there were many parcels that had a house with a detached garage. In deciding which of the buildings is the principal building, the consultant viewed the orthographic map and considered the size of the buildings and proximity to driveways or other access points.

A point was located on the approximate center of the principal building to identify it and its location. The elevation of the ground at the point was derived from the relief map. It was assumed that the first floor was 18 inches above the ground elevation.

Flood levels at each of the points were derived from the preliminary flood data. The first floor elevation and flood elevation were then compared. The extent of damage for each principal building was expressed as a percent based on standardized flood loss tables prepared by the Federal Emergency Management Agency. For this analysis, damage estimates for one or two story buildings with basements were used (Table H-1).

The consultant then classified each principal building as residential, commercial, industrial, or agricultural based on zoning information in the GIS.

**Table H-1. Percent of Building Damaged Based on Extent of Flooding**

First Floor Flood Depth (feet)	Percent of Building Damaged
-2	4
-1	8
0	11
1	15
2	20
3	23
4	28
5	33
6	38
7	44
8	49
>8	51

Source: Based on Table 3 of *Resource Guide to All Hazards Mitigation Planning In Wisconsin*, 2003. Wisconsin Emergency Management

# ESTIMATED FLOOD DAMAGE TO BUILDINGS: 2006

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
City of Fort Atkinson	Residential	\$87,751	4%	\$3,510
City of Fort Atkinson	Residential	\$90,977	4%	\$3,639
City of Fort Atkinson	Commercial	\$91,764	8%	\$7,341
City of Fort Atkinson	Residential	\$96,722	8%	\$7,738
City of Fort Atkinson	Residential	\$56,192	8%	\$4,495
City of Fort Atkinson	Commercial	\$492,269	8%	\$39,381
City of Fort Atkinson	Commercial	\$66,187	8%	\$5,295
City of Fort Atkinson	Commercial	\$1,043,169	8%	\$83,453
City of Fort Atkinson	Residential	\$120,175	11%	\$13,219
City of Fort Atkinson	Residential	\$77,677	11%	\$8,544
City of Fort Atkinson	Commercial	\$1,327,039	11%	\$145,974
City of Fort Atkinson	Commercial	\$23,689	15%	\$3,553
City of Fort Atkinson	Residential	\$88,852	15%	\$13,328
City of Fort Atkinson	Residential	\$64,534	15%	\$9,680
City of Fort Atkinson	Residential	\$74,293	15%	\$11,144
City of Fort Atkinson	Residential	\$54,382	15%	\$8,157
City of Fort Atkinson	Residential	\$68,863	15%	\$10,329
City of Fort Atkinson	Commercial	\$125,999	15%	\$18,900
City of Fort Atkinson	Commercial	\$59,969	20%	\$11,994
City of Fort Atkinson	Commercial	\$936,215	20%	\$187,243
		<b>\$5,046,718.00</b>		<b>\$596,917.00</b>
City of Jefferson	Residential	\$74,277	4%	\$2,971
City of Jefferson	Residential	\$79,962	4%	\$3,198
City of Jefferson	Commercial	\$82,989	4%	\$3,320
City of Jefferson	Residential	\$84,272	4%	\$3,371
City of Jefferson	Residential	\$54,011	4%	\$2,160
City of Jefferson	Residential	\$69,417	4%	\$2,777
City of Jefferson	Residential	\$81,521	4%	\$3,261
City of Jefferson	Commercial	\$117,926	4%	\$4,717
City of Jefferson	Residential	\$45,850	4%	\$1,834
City of Jefferson	Residential	\$74,736	4%	\$2,989
City of Jefferson	Residential	\$83,264	8%	\$6,661
City of Jefferson	Residential	\$72,443	8%	\$5,795
City of Jefferson	Residential	\$59,880	8%	\$4,790
City of Jefferson	Residential	\$84,823	8%	\$6,786
City of Jefferson	Rural	\$149,654	8%	\$11,972
City of Jefferson	Residential	\$88,674	8%	\$7,094
City of Jefferson	Residential	\$97,385	8%	\$7,791
City of Jefferson	Residential	\$78,862	8%	\$6,309
City of Jefferson	Residential	\$74,644	8%	\$5,972
City of Jefferson	Residential	\$63,456	8%	\$5,077
City of Jefferson	Residential	\$64,098	8%	\$5,128
City of Jefferson	Residential	\$74,185	8%	\$5,935
City of Jefferson	Residential	\$110,499	8%	\$8,840
City of Jefferson	Commercial	\$72,993	8%	\$5,839
City of Jefferson	Residential	\$101,787	8%	\$8,143
City of Jefferson	Residential	\$90,691	8%	\$7,255
City of Jefferson	Residential	\$18,340	8%	\$1,467
City of Jefferson	Residential	\$84,731	8%	\$6,778

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
City of Jefferson	Residential	\$82,347	8%	\$6,588
City of Jefferson	Residential	\$90,966	8%	\$7,277
City of Jefferson	Commercial	\$42,090	11%	\$4,630
City of Jefferson	Commercial	\$116,551	11%	\$12,821
City of Jefferson	Residential	\$172,946	11%	\$19,024
City of Jefferson	Residential	\$81,888	11%	\$9,008
City of Jefferson	Residential	\$100,870	11%	\$11,096
City of Jefferson	Residential	\$73,177	11%	\$8,049
City of Jefferson	Residential	\$53,553	11%	\$5,891
City of Jefferson	Residential	\$59,788	11%	\$6,577
City of Jefferson	Residential	\$67,766	11%	\$7,454
City of Jefferson	Residential	\$127,555	11%	\$14,031
City of Jefferson	Industrial	\$404,580	15%	\$60,687
City of Jefferson	Residential	\$56,120	15%	\$8,418
City of Jefferson	Residential	\$88,857	15%	\$13,329
City of Jefferson	Residential	\$86,840	15%	\$13,026
City of Jefferson	Residential	\$65,382	15%	\$9,807
City of Jefferson	Commercial	\$281,519	15%	\$42,228
City of Jefferson	Residential	\$57,129	15%	\$8,569
City of Jefferson	Residential	\$68,500	20%	\$13,700
City of Jefferson	Commercial	\$124,712	20%	\$24,942
City of Jefferson	Residential	\$47,592	20%	\$9,518
City of Jefferson	Residential	\$129,022	20%	\$25,804
City of Jefferson	Residential	\$68,408	20%	\$13,682
City of Jefferson	Commercial	\$25,951	20%	\$5,190
City of Jefferson	Industrial	\$3,907,245	23%	\$898,666
City of Jefferson	Government	\$137,092	23%	\$31,531
City of Jefferson	Industrial	\$137,092	28%	\$38,386
City of Jefferson	Residential	\$94,634	33%	\$31,229
City of Jefferson	Residential	\$85,006	38%	\$32,302
		<b>\$9,170,548.00</b>		<b>\$1,541,690.00</b>
City of Lake Mills	Residential	\$79,600	8%	\$6,368
City of Lake Mills	Commercial	\$250,400	8%	\$20,032
City of Lake Mills	Residential	\$129,000	8%	\$10,320
City of Lake Mills	Residential	\$226,400	8%	\$18,112
City of Lake Mills	Commercial	\$182,700	8%	\$14,616
City of Lake Mills	Residential	\$147,300	8%	\$11,784
City of Lake Mills	Commercial	\$159,700	8%	\$12,776
City of Lake Mills	Residential	\$111,000	8%	\$8,880
City of Lake Mills	Commercial	\$210,000	8%	\$16,800
City of Lake Mills	Commercial	\$63,600	8%	\$5,088
City of Lake Mills	Commercial	\$901,700	11%	\$99,187
City of Lake Mills	Commercial	\$165,200	11%	\$18,172
City of Lake Mills	Commercial	\$83,200	11%	\$9,152
City of Lake Mills	Commercial	\$107,300	11%	\$11,803
City of Lake Mills	Commercial	\$132,400	11%	\$14,564
City of Lake Mills	Commercial	\$214,100	11%	\$23,551
City of Lake Mills	Commercial	\$115,400	15%	\$17,310
City of Lake Mills	Residential	\$91,300	15%	\$13,695
City of Lake Mills	Residential	\$88,300	15%	\$13,245
City of Lake Mills	Residential	\$104,600	15%	\$15,690
City of Lake Mills	Commercial	\$120,600	15%	\$18,090
City of Lake Mills	Residential	\$92,200	15%	\$13,830
City of Lake Mills	Residential	\$96,300	20%	\$19,260
City of Lake Mills	Residential	\$97,000	20%	\$19,400
City of Lake Mills	Residential	\$99,600	20%	\$19,920
City of Lake Mills	Commercial	\$135,900	23%	\$31,257

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
City of Lake Mills	Commercial	\$100,200	23%	\$23,046
City of Lake Mills	Commercial	\$127,500	23%	\$29,325
City of Lake Mills	Commercial	\$97,100	28%	\$27,188
City of Lake Mills	Commercial	\$149,200	28%	\$41,776
City of Lake Mills	Commercial	\$86,600	28%	\$24,248
City of Lake Mills	Commercial	\$153,500	28%	\$42,980
City of Lake Mills	Commercial	\$134,300	33%	\$44,319
City of Lake Mills	Commercial	\$81,000	33%	\$26,730
City of Lake Mills	Commercial	\$162,200	33%	\$53,526
City of Lake Mills	Commercial	\$293,700	38%	\$111,606
City of Lake Mills	Commercial	\$60,100	44%	\$26,444
City of Lake Mills	Commercial	\$71,700	51%	\$36,567
		<b>\$5,721,900.00</b>		<b>\$970,657.00</b>
City of Waterloo	Commercial	\$23,033	4%	\$921
City of Waterloo	Industrial	\$321,088	8%	\$25,687
City of Waterloo	Commercial	\$18,280	8%	\$1,462
City of Waterloo	Commercial	\$370,627	8%	\$29,650
City of Waterloo	Commercial	\$9,871	8%	\$790
City of Waterloo	Commercial	\$30,985	8%	\$2,479
City of Waterloo	Commercial	\$71,383	8%	\$5,711
City of Waterloo	Commercial	\$351,799	8%	\$28,144
City of Waterloo	Residential	\$74,308	8%	\$5,945
City of Waterloo	Commercial	\$111,874	11%	\$12,306
City of Waterloo	Commercial	\$63,523	11%	\$6,988
City of Waterloo	Commercial	\$58,405	11%	\$6,425
City of Waterloo	Industrial	\$1,925,341	15%	\$288,801
City of Waterloo	Commercial	\$88,292	15%	\$13,244
City of Waterloo	Commercial	\$113,336	15%	\$17,000
City of Waterloo	Commercial	\$19,560	20%	\$3,912
City of Waterloo	Industrial	\$74,125	20%	\$14,825
City of Waterloo	Commercial	\$76,319	23%	\$17,553
City of Waterloo	Commercial	\$67,819	23%	\$15,598
City of Waterloo	Commercial	\$78,604	23%	\$18,079
City of Waterloo	Residential	\$37,931	23%	\$8,724
City of Waterloo	Commercial	\$29,248	23%	\$6,727
City of Waterloo	Commercial	\$5,393	23%	\$1,240
City of Waterloo	Industrial	\$440,182	28%	\$123,251
City of Waterloo	Commercial	\$22,850	28%	\$6,398
City of Waterloo	Industrial	\$150,719	44%	\$66,316
		<b>\$4,634,895.00</b>		<b>\$728,176.00</b>
City of Watertown	Commercial	\$12,418	8%	\$993
City of Watertown	Residential	\$35,835	8%	\$2,867
City of Watertown	Residential	\$1,331	11%	\$146
City of Watertown	Commercial	\$146,887	15%	\$22,033
		<b>\$196,471.00</b>		<b>\$26,039.00</b>
Town of Aztalan	Residential	\$71,656	4%	\$2,866
Town of Aztalan	Residential	\$65,628	8%	\$5,250
Town of Aztalan	Rural	\$142,462	11%	\$15,671
Town of Aztalan	Residential	\$679	20%	\$136
Town of Aztalan	Residential	\$32,687	20%	\$6,537
Town of Aztalan	Residential	\$62,317	20%	\$12,463
Town of Aztalan	Residential	\$61,468	23%	\$14,138
		<b>\$436,897.00</b>		<b>\$57,061.00</b>
Town of Cold Spring	Rural	\$29,234	8%	\$2,339

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
Town of Cold Spring	Rural	\$90,411	8%	\$7,233
Town of Cold Spring	Rural	\$90,411	15%	\$13,562
Town of Cold Spring	Residential	\$111,800	15%	\$16,770
Town of Cold Spring	Rural	\$90,411	20%	\$18,082
Town of Cold Spring	Residential	\$111,800	23%	\$25,714
		<b>\$524,067.00</b>		<b>\$83,700.00</b>
Town of Concord	Residential	\$227,273	8%	\$18,182
Town of Concord	Residential	\$67,340	8%	\$5,387
		<b>\$294,613.00</b>		<b>\$23,569.00</b>
Town of Farmington	Residential	\$171,239	8%	\$13,699
Town of Farmington	Residential	\$20,381	11%	\$2,242
Town of Farmington	Residential	\$82,745	11%	\$9,102
Town of Farmington	Residential	\$104,520	11%	\$11,497
Town of Farmington	Rural	\$165,229	15%	\$24,784
		<b>\$544,114.00</b>		<b>\$61,324.00</b>
Town of Hebron	Residential	\$92,772	4%	\$3,711
Town of Hebron	Rural	\$102,307	8%	\$8,185
Town of Hebron	Residential	\$85,986	8%	\$6,879
Town of Hebron	Residential	\$51,884	8%	\$4,151
Town of Hebron	Residential	\$74,304	8%	\$5,944
Town of Hebron	Residential	\$75,506	11%	\$8,306
Town of Hebron	Residential	\$141,391	11%	\$15,553
Town of Hebron	Rural	\$133,317	15%	\$19,998
Town of Hebron	Residential	\$63,394	20%	\$12,679
Town of Hebron	Residential	\$96,552	20%	\$19,310
Town of Hebron	Rural	\$133,317	20%	\$26,663
Town of Hebron	Residential	\$43,036	20%	\$8,607
Town of Hebron	Rural	\$120,861	28%	\$33,841
Town of Hebron	Residential	\$58,412	49%	\$28,622
Town of Hebron	Rural	\$56,694	49%	\$27,780
Town of Hebron	Residential	\$131,341	51%	\$66,984
		<b>\$1,461,074.00</b>		<b>\$297,213.00</b>
Town of Ixonia	Residential	\$13,844	8%	\$1,108
		<b>\$13,844</b>		<b>\$1,108</b>
Town of Jefferson	Residential	\$187,317	4%	\$7,493
Town of Jefferson	Residential	\$112,169	8%	\$8,974
Town of Jefferson	Residential	\$88,528	8%	\$7,082
Town of Jefferson	Residential	\$71,225	8%	\$5,698
Town of Jefferson	Rural	\$119,815	11%	\$13,180
Town of Jefferson	Residential	\$139,029	11%	\$15,293
Town of Jefferson	Residential	\$162,972	11%	\$17,927
Town of Jefferson	Commercial	\$108,044	11%	\$11,885
Town of Jefferson	Residential	\$18,611	11%	\$2,047
Town of Jefferson	Rural	\$141,444	11%	\$15,559
Town of Jefferson	Residential	\$42,956	20%	\$8,591
Town of Jefferson	Residential	\$10,462	20%	\$2,092
Town of Jefferson	Residential	\$96,475	20%	\$19,295
		<b>\$1,299,047.00</b>		<b>\$135,116.00</b>
Town of Koshkonong	Residential	\$68,228	4%	\$2,729
Town of Koshkonong	Residential	\$45,347	4%	\$1,814
Town of Koshkonong	Rural	\$78,718	4%	\$3,149
Town of Koshkonong	Residential	\$52,616	8%	\$4,209

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
Town of Koshkonong	Residential	\$71,366	8%	\$5,709
Town of Koshkonong	Rural	\$68,723	8%	\$5,498
Town of Koshkonong	Residential	\$39,152	8%	\$3,132
Town of Koshkonong	Residential	\$24,615	8%	\$1,969
Town of Koshkonong	Residential	\$34,362	8%	\$2,749
Town of Koshkonong	Residential	\$57,159	8%	\$4,573
Town of Koshkonong	Residential	\$63,685	8%	\$5,095
Town of Koshkonong	Residential	\$25,523	8%	\$2,042
Town of Koshkonong	Residential	\$73,431	8%	\$5,875
Town of Koshkonong	Rural	\$33,453	8%	\$2,676
Town of Koshkonong	Residential	\$76,983	8%	\$6,159
Town of Koshkonong	Residential	\$23,871	8%	\$1,910
Town of Koshkonong	Residential	\$70,706	8%	\$5,656
Town of Koshkonong	Residential	\$100,772	8%	\$8,062
Town of Koshkonong	Rural	\$40,639	8%	\$3,251
Town of Koshkonong	Rural	\$73,266	8%	\$5,861
Town of Koshkonong	Residential	\$55,425	8%	\$4,434
Town of Koshkonong	Residential	\$83,343	8%	\$6,667
Town of Koshkonong	Residential	\$62,280	8%	\$4,982
Town of Koshkonong	Residential	\$33,370	8%	\$2,670
Town of Koshkonong	Residential	\$78,140	8%	\$6,251
Town of Koshkonong	Residential	\$29,240	8%	\$2,339
Town of Koshkonong	Residential	\$85,491	8%	\$6,839
Town of Koshkonong	Residential	\$190,393	8%	\$15,231
Town of Koshkonong	Residential	\$45,265	8%	\$3,621
Town of Koshkonong	Residential	\$59,142	8%	\$4,731
Town of Koshkonong	Residential	\$35,435	8%	\$2,835
Town of Koshkonong	Residential	\$63,106	8%	\$5,049
Town of Koshkonong	Residential	\$57,159	8%	\$4,573
Town of Koshkonong	Residential	\$29,075	8%	\$2,326
Town of Koshkonong	Residential	\$5,865	8%	\$469
Town of Koshkonong	Residential	\$42,209	8%	\$3,377
Town of Koshkonong	Residential	\$38,657	8%	\$3,093
Town of Koshkonong	Residential	\$64,015	8%	\$5,121
Town of Koshkonong	Rural	\$25,689	8%	\$2,055
Town of Koshkonong	Residential	\$55,672	8%	\$4,454
Town of Koshkonong	Residential	\$186,098	8%	\$14,888
Town of Koshkonong	Rural	\$22,715	8%	\$1,817
Town of Koshkonong	Residential	\$29,984	8%	\$2,399
Town of Koshkonong	Residential	\$67,319	8%	\$5,386
Town of Koshkonong	Residential	\$54,846	8%	\$4,388
Town of Koshkonong	Rural	\$34,196	8%	\$2,736
Town of Koshkonong	Residential	\$46,834	8%	\$3,747
Town of Koshkonong	Residential	\$54,186	11%	\$5,960
Town of Koshkonong	Residential	\$60,463	11%	\$6,651
Town of Koshkonong	Residential	\$48,238	11%	\$5,306
Town of Koshkonong	Rural	\$34,527	11%	\$3,798
Town of Koshkonong	Residential	\$45,843	11%	\$5,043
Town of Koshkonong	Rural	\$25,028	11%	\$2,753
Town of Koshkonong	Residential	\$33,288	11%	\$3,662
Town of Koshkonong	Residential	\$24,532	11%	\$2,699
Town of Koshkonong	Residential	\$66,823	11%	\$7,351
Town of Koshkonong	Rural	\$139,924	11%	\$15,392
Town of Koshkonong	Residential	\$39,235	11%	\$4,316
Town of Koshkonong	Rural	\$75,249	11%	\$8,277
Town of Koshkonong	Residential	\$83,343	11%	\$9,168
Town of Koshkonong	Residential	\$87,391	15%	\$13,109
Town of Koshkonong	Commercial	\$33,783	15%	\$5,068

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
Town of Koshkonong	Residential	\$21,476	15%	\$3,221
Town of Koshkonong	Residential	\$15,777	15%	\$2,366
Town of Koshkonong	Residential	\$50,964	15%	\$7,645
Town of Koshkonong	Residential	\$50,138	15%	\$7,521
Town of Koshkonong	Residential	\$56,498	15%	\$8,475
Town of Koshkonong	Residential	\$66,080	15%	\$9,912
Town of Koshkonong	Residential	\$49,643	15%	\$7,446
Town of Koshkonong	Residential	\$19,576	15%	\$2,936
Town of Koshkonong	Residential	\$10,325	15%	\$1,549
Town of Koshkonong	Residential	\$52,781	15%	\$7,917
Town of Koshkonong	Residential	\$53,277	15%	\$7,992
Town of Koshkonong	Residential	\$18,337	15%	\$2,751
Town of Koshkonong	Residential	\$32,297	15%	\$4,844
Town of Koshkonong	Residential	\$34,114	15%	\$5,117
Town of Koshkonong	Residential	\$58,398	15%	\$8,760
Town of Koshkonong	Residential	\$110,106	15%	\$16,516
Town of Koshkonong	Residential	\$47,908	15%	\$7,186
Town of Koshkonong	Residential	\$56,829	15%	\$8,524
Town of Koshkonong	Rural	\$78,635	15%	\$11,795
Town of Koshkonong	Residential	\$108,702	15%	\$16,305
Town of Koshkonong	Residential	\$17,511	15%	\$2,627
Town of Koshkonong	Residential	\$64,263	15%	\$9,639
Town of Koshkonong	Residential	\$54,681	15%	\$8,202
Town of Koshkonong	Residential	\$8,343	15%	\$1,251
Town of Koshkonong	Residential	\$15,033	15%	\$2,255
Town of Koshkonong	Commercial	\$149,176	20%	\$29,835
Town of Koshkonong	Residential	\$49,395	20%	\$9,879
Town of Koshkonong	Residential	\$104,985	20%	\$20,997
Town of Koshkonong	Residential	\$52,534	20%	\$10,507
Town of Koshkonong	Residential	\$4,378	20%	\$876
Town of Koshkonong	Commercial	\$30,810	20%	\$6,162
Town of Koshkonong	Residential	\$14,951	20%	\$2,990
Town of Koshkonong	Residential	\$117,953	20%	\$23,591
Town of Koshkonong	Rural	\$102,094	20%	\$20,419
Town of Koshkonong	Residential	\$75,331	20%	\$15,066
Town of Koshkonong	Rural	\$16,768	20%	\$3,354
Town of Koshkonong	Residential	\$63,106	20%	\$12,621
Town of Koshkonong	Residential	\$19,989	20%	\$3,998
Town of Koshkonong	Residential	\$20,898	20%	\$4,180
Town of Koshkonong	Residential	\$186,098	20%	\$37,220
Town of Koshkonong	Residential	\$28,497	20%	\$5,699
Town of Koshkonong	Residential	\$37,913	20%	\$7,583
Town of Koshkonong	Residential	\$46,091	23%	\$10,601
Town of Koshkonong	Residential	\$45,430	23%	\$10,449
Town of Koshkonong	Residential	\$40,391	23%	\$9,290
Town of Koshkonong	Residential	\$25,441	23%	\$5,851
Town of Koshkonong	Residential	\$69,219	23%	\$15,920
Town of Koshkonong	Residential	\$46,091	23%	\$10,601
Town of Koshkonong	Residential	\$30,149	23%	\$6,934
Town of Koshkonong	Residential	\$35,518	23%	\$8,169
Town of Koshkonong	Residential	\$48,982	23%	\$11,266
Town of Koshkonong	Residential	\$73,184	23%	\$16,832
Town of Koshkonong	Commercial	\$7,517	23%	\$1,729
Town of Koshkonong	Residential	\$23,293	23%	\$5,357
Town of Koshkonong	Residential	\$22,385	23%	\$5,148
Town of Koshkonong	Residential	\$9,995	23%	\$2,299
Town of Koshkonong	Residential	\$27,341	23%	\$6,288
Town of Koshkonong	Residential	\$42,456	23%	\$9,765

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
Town of Koshkonong	Residential	\$35,601	23%	\$8,188
Town of Koshkonong	Residential	\$6,030	23%	\$1,387
Town of Koshkonong	Residential	\$14,125	23%	\$3,249
Town of Koshkonong	Residential	\$248	23%	\$57
Town of Koshkonong	Residential	\$110,106	23%	\$25,324
Town of Koshkonong	Residential	\$48,734	23%	\$11,209
Town of Koshkonong	Rural	\$4,378	23%	\$1,007
Town of Koshkonong	Residential	\$53,442	23%	\$12,292
Town of Koshkonong	Government	\$413	23%	\$95
Town of Koshkonong	Residential	\$52,121	23%	\$11,988
Town of Koshkonong	Residential	\$34,196	23%	\$7,865
Town of Koshkonong	Residential	\$10,490	23%	\$2,413
Town of Koshkonong	Residential	\$1,074	23%	\$247
Town of Koshkonong	Residential	\$33,453	23%	\$7,694
Town of Koshkonong	Residential	\$27,258	23%	\$6,269
Town of Koshkonong	Residential	\$29,653	28%	\$8,303
Town of Koshkonong	Residential	\$30,397	28%	\$8,511
Town of Koshkonong	Residential	\$37,748	28%	\$10,569
Town of Koshkonong	Rural	\$578	28%	\$162
Town of Koshkonong	Residential	\$21,641	28%	\$6,060
Town of Koshkonong	Residential	\$74,340	28%	\$20,815
Town of Koshkonong	Residential	\$7,682	28%	\$2,151
Town of Koshkonong	Residential	\$1,569	28%	\$439
Town of Koshkonong	Residential	\$14,125	33%	\$4,661
		<b>\$7,024,884.00</b>		<b>\$992,332.00</b>
Town of Lake Mills	Residential	\$45,114	4%	\$1,805
Town of Lake Mills	Residential	\$28,531	8%	\$2,282
Town of Lake Mills	Residential	\$40,788	8%	\$3,263
Town of Lake Mills	Residential	\$119,068	8%	\$9,525
Town of Lake Mills	Residential	\$220,317	11%	\$24,235
Town of Lake Mills	Rural	\$110,004	20%	\$22,001
		<b>\$563,822.00</b>		<b>\$63,111.00</b>
Town of Milford	Rural	\$157,360	4%	\$6,294
Town of Milford	Rural	\$68,640	8%	\$5,491
Town of Milford	Commercial	\$54,240	8%	\$4,339
Town of Milford	Residential	\$134,800	8%	\$10,784
Town of Milford	Residential	\$23,680	8%	\$1,894
Town of Milford	Residential	\$47,120	8%	\$3,770
Town of Milford	Residential	\$72,960	11%	\$8,026
Town of Milford	Rural	\$640	11%	\$70
Town of Milford	Residential	\$119,440	11%	\$13,138
Town of Milford	Residential	\$37,040	11%	\$4,074
Town of Milford	Residential	\$11,680	11%	\$1,285
Town of Milford	Residential	\$34,560	15%	\$5,184
Town of Milford	Residential	\$4,800	15%	\$720
Town of Milford	Residential	\$126,400	20%	\$25,280
Town of Milford	Residential	\$47,600	20%	\$9,520
Town of Milford	Rural	\$91,680	33%	\$30,254
Town of Milford	Residential	\$91,680	33%	\$30,254
Town of Milford	Residential	\$112,080	49%	\$54,919
		<b>\$1,236,400.00</b>		<b>\$215,296.00</b>
Town of Oakland	Residential	\$89,400	4%	\$3,576
Town of Oakland	Residential	\$100,900	4%	\$4,036
Town of Oakland	Residential	\$142,000	4%	\$5,680
Town of Oakland	Residential	\$158,500	4%	\$6,340

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
Town of Oakland	Residential	\$185,800	4%	\$7,432
Town of Oakland	Residential	\$254,300	4%	\$10,172
Town of Oakland	Residential	\$206,800	4%	\$8,272
Town of Oakland	Residential	\$68,900	4%	\$2,756
Town of Oakland	Residential	\$115,000	4%	\$4,600
Town of Oakland	Residential	\$95,900	4%	\$3,836
Town of Oakland	Residential	\$229,400	8%	\$18,352
Town of Oakland	Residential	\$97,600	8%	\$7,808
Town of Oakland	Residential	\$136,100	8%	\$10,888
Town of Oakland	Residential	\$137,200	8%	\$10,976
Town of Oakland	Rural	\$72,400	8%	\$5,792
Town of Oakland	Residential	\$180,700	8%	\$14,456
Town of Oakland	Residential	\$69,700	8%	\$5,576
Town of Oakland	Residential	\$173,100	8%	\$13,848
Town of Oakland	Residential	\$96,300	8%	\$7,704
Town of Oakland	Residential	\$241,700	8%	\$19,336
Town of Oakland	Residential	\$91,200	8%	\$7,296
Town of Oakland	Residential	\$93,100	8%	\$7,448
Town of Oakland	Residential	\$160,700	8%	\$12,856
Town of Oakland	Residential	\$112,200	8%	\$8,976
Town of Oakland	Residential	\$152,000	8%	\$12,160
Town of Oakland	Residential	\$165,600	8%	\$13,248
Town of Oakland	Residential	\$183,100	8%	\$14,648
Town of Oakland	Residential	\$284,200	8%	\$22,736
Town of Oakland	Residential	\$83,800	8%	\$6,704
Town of Oakland	Residential	\$224,300	8%	\$17,944
Town of Oakland	Residential	\$167,700	8%	\$13,416
Town of Oakland	Residential	\$238,800	8%	\$19,104
Town of Oakland	Residential	\$182,700	8%	\$14,616
Town of Oakland	Commercial	\$205,800	8%	\$16,464
Town of Oakland	Residential	\$12,100	8%	\$968
Town of Oakland	Residential	\$101,000	8%	\$8,080
Town of Oakland	Residential	\$68,200	8%	\$5,456
Town of Oakland	Residential	\$146,300	8%	\$11,704
Town of Oakland	Residential	\$93,200	8%	\$7,456
Town of Oakland	Residential	\$134,900	8%	\$10,792
Town of Oakland	Residential	\$84,800	8%	\$6,784
Town of Oakland	Residential	\$115,700	8%	\$9,256
Town of Oakland	Commercial	\$155,400	8%	\$12,432
Town of Oakland	Residential	\$157,300	8%	\$12,584
Town of Oakland	Residential	\$220,400	8%	\$17,632
Town of Oakland	Residential	\$105,700	8%	\$8,456
Town of Oakland	Residential	\$156,100	8%	\$12,488
Town of Oakland	Residential	\$136,600	8%	\$10,928
Town of Oakland	Residential	\$267,000	8%	\$21,360
Town of Oakland	Residential	\$124,500	8%	\$9,960
Town of Oakland	Residential	\$146,000	8%	\$11,680
Town of Oakland	Residential	\$122,500	8%	\$9,800
Town of Oakland	Residential	\$103,200	8%	\$8,256
Town of Oakland	Residential	\$88,500	8%	\$7,080
Town of Oakland	Residential	\$40,000	8%	\$3,200
Town of Oakland	Residential	\$101,500	8%	\$8,120
Town of Oakland	Commercial	\$115,000	8%	\$9,200
Town of Oakland	Residential	\$114,200	8%	\$9,136
Town of Oakland	Residential	\$128,100	8%	\$10,248
Town of Oakland	Residential	\$112,600	11%	\$12,386
Town of Oakland	Commercial	\$30,400	11%	\$3,344
Town of Oakland	Residential	\$120,000	11%	\$13,200

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
Town of Oakland	Residential	\$34,400	11%	\$3,784
Town of Oakland	Residential	\$104,100	11%	\$11,451
Town of Oakland	Residential	\$175,000	11%	\$19,250
Town of Oakland	Residential	\$119,900	11%	\$13,189
Town of Oakland	Residential	\$77,300	11%	\$8,503
Town of Oakland	Residential	\$149,700	11%	\$16,467
Town of Oakland	Residential	\$167,000	11%	\$18,370
Town of Oakland	Residential	\$211,700	11%	\$23,287
Town of Oakland	Residential	\$108,000	11%	\$11,880
Town of Oakland	Residential	\$106,400	11%	\$11,704
Town of Oakland	Residential	\$200,900	11%	\$22,099
Town of Oakland	Residential	\$289,400	11%	\$31,834
Town of Oakland	Residential	\$69,500	11%	\$7,645
Town of Oakland	Residential	\$86,900	11%	\$9,559
Town of Oakland	Residential	\$111,500	11%	\$12,265
Town of Oakland	Residential	\$161,400	11%	\$17,754
Town of Oakland	Residential	\$47,600	11%	\$5,236
Town of Oakland	Residential	\$53,000	11%	\$5,830
Town of Oakland	Residential	\$292,300	11%	\$32,153
Town of Oakland	Residential	\$96,900	11%	\$10,659
Town of Oakland	Residential	\$92,900	11%	\$10,219
Town of Oakland	Residential	\$64,100	11%	\$7,051
Town of Oakland	Residential	\$102,600	11%	\$11,286
Town of Oakland	Residential	\$122,800	11%	\$13,508
Town of Oakland	Residential	\$127,000	11%	\$13,970
Town of Oakland	Residential	\$146,500	11%	\$16,115
Town of Oakland	Residential	\$175,000	11%	\$19,250
Town of Oakland	Residential	\$146,600	11%	\$16,126
Town of Oakland	Residential	\$37,600	11%	\$4,136
Town of Oakland	Residential	\$125,600	11%	\$13,816
Town of Oakland	Residential	\$209,900	15%	\$31,485
Town of Oakland	Residential	\$76,100	15%	\$11,415
Town of Oakland	Residential	\$195,200	15%	\$29,280
Town of Oakland	Residential	\$412,000	15%	\$61,800
Town of Oakland	Residential	\$73,700	15%	\$11,055
Town of Oakland	Residential	\$121,200	15%	\$18,180
Town of Oakland	Residential	\$294,500	15%	\$44,175
Town of Oakland	Residential	\$177,700	15%	\$26,655
Town of Oakland	Residential	\$56,300	15%	\$8,445
Town of Oakland	Residential	\$72,400	15%	\$10,860
Town of Oakland	Residential	\$112,900	15%	\$16,935
Town of Oakland	Residential	\$56,000	15%	\$8,400
Town of Oakland	Residential	\$60,800	15%	\$9,120
Town of Oakland	Residential	\$257,600	15%	\$38,640
Town of Oakland	Residential	\$161,900	15%	\$24,285
Town of Oakland	Residential	\$287,500	15%	\$43,125
Town of Oakland	Residential	\$196,500	15%	\$29,475
Town of Oakland	Residential	\$96,000	15%	\$14,400
Town of Oakland	Residential	\$60,800	15%	\$9,120
Town of Oakland	Residential	\$162,700	15%	\$24,405
Town of Oakland	Residential	\$85,600	15%	\$12,840
Town of Oakland	Residential	\$83,600	15%	\$12,540
Town of Oakland	Rural	\$637,100	15%	\$95,565
Town of Oakland	Residential	\$128,600	15%	\$19,290
Town of Oakland	Residential	\$242,000	15%	\$36,300
Town of Oakland	Residential	\$102,700	15%	\$15,405
Town of Oakland	Residential	\$800	20%	\$160
Town of Oakland	Residential	\$141,400	20%	\$28,280

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
Town of Oakland	Residential	\$184,000	20%	\$36,800
Town of Oakland	Residential	\$104,400	20%	\$20,880
Town of Oakland	Residential	\$329,900	20%	\$65,980
Town of Oakland	Residential	\$140,200	20%	\$28,040
Town of Oakland	Residential	\$137,700	20%	\$27,540
Town of Oakland	Residential	\$234,700	20%	\$46,940
Town of Oakland	Residential	\$130,400	20%	\$26,080
Town of Oakland	Residential	\$220,200	20%	\$44,040
Town of Oakland	Residential	\$136,100	20%	\$27,220
Town of Oakland	Residential	\$101,200	20%	\$20,240
Town of Oakland	Residential	\$119,400	20%	\$23,880
Town of Oakland	Residential	\$213,800	20%	\$42,760
Town of Oakland	Residential	\$286,500	20%	\$57,300
Town of Oakland	Residential	\$254,600	20%	\$50,920
Town of Oakland	Residential	\$220,500	20%	\$44,100
Town of Oakland	Residential	\$105,900	20%	\$21,180
Town of Oakland	Residential	\$276,200	23%	\$63,526
Town of Oakland	Residential	\$93,900	23%	\$21,597
Town of Oakland	Residential	\$124,400	23%	\$28,612
Town of Oakland	Residential	\$104,700	23%	\$24,081
Town of Oakland	Residential	\$296,100	23%	\$68,103
Town of Oakland	Residential	\$75,400	23%	\$17,342
Town of Oakland	Residential	\$48,000	23%	\$11,040
Town of Oakland	Residential	\$90,000	23%	\$20,700
Town of Oakland	Residential	\$149,300	23%	\$34,339
Town of Oakland	Residential	\$265,100	23%	\$60,973
Town of Oakland	Residential	\$148,000	23%	\$34,040
Town of Oakland	Residential	\$127,200	23%	\$29,256
Town of Oakland	Residential	\$70,600	23%	\$16,238
Town of Oakland	Residential	\$110,700	23%	\$25,461
Town of Oakland	Residential	\$161,900	23%	\$37,237
Town of Oakland	Residential	\$140,500	28%	\$39,340
Town of Oakland	Residential	\$102,600	28%	\$28,728
Town of Oakland	Residential	\$110,100	28%	\$30,828
Town of Oakland	Residential	\$451,500	28%	\$126,420
Town of Oakland	Residential	\$237,100	28%	\$66,388
Town of Oakland	Residential	\$107,300	28%	\$30,044
Town of Oakland	Residential	\$80,400	28%	\$22,512
Town of Oakland	Residential	\$154,400	28%	\$43,232
Town of Oakland	Residential	\$143,900	28%	\$40,292
Town of Oakland	Residential	\$235,000	28%	\$65,800
Town of Oakland	Residential	\$269,400	28%	\$75,432
Town of Oakland	Residential	\$72,700	33%	\$23,991
Town of Oakland	Residential	\$132,800	33%	\$43,824
Town of Oakland	Residential	\$90,700	33%	\$29,931
Town of Oakland	Residential	\$92,700	33%	\$30,591
Town of Oakland	Residential	\$210,700	33%	\$69,531
Town of Oakland	Commercial	\$257,100	33%	\$84,843
Town of Oakland	Residential	\$53,000	33%	\$17,490
Town of Oakland	Residential	\$64,100	33%	\$21,153
Town of Oakland	Residential	\$205,100	33%	\$67,683
Town of Oakland	Residential	\$122,500	33%	\$40,425
Town of Oakland	Residential	\$155,400	33%	\$51,282
Town of Oakland	Residential	\$140,600	33%	\$46,398
Town of Oakland	Residential	\$194,900	33%	\$64,317
Town of Oakland	Residential	\$192,800	33%	\$63,624
Town of Oakland	Residential	\$107,900	33%	\$35,607
Town of Oakland	Residential	\$84,600	33%	\$27,918

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
Town of Oakland	Commercial	\$178,400	38%	\$67,792
Town of Oakland	Residential	\$104,900	38%	\$39,862
Town of Oakland	Residential	\$165,100	38%	\$62,738
Town of Oakland	Residential	\$103,800	38%	\$39,444
Town of Oakland	Residential	\$216,100	38%	\$82,118
Town of Oakland	Residential	\$237,800	38%	\$90,364
Town of Oakland	Residential	\$162,100	38%	\$61,598
Town of Oakland	Rural	\$143,200	38%	\$54,416
Town of Oakland	Residential	\$115,800	38%	\$44,004
Town of Oakland	Residential	\$92,100	44%	\$40,524
Town of Oakland	Residential	\$145,700	44%	\$64,108
Town of Oakland	Residential	\$98,900	44%	\$43,516
Town of Oakland	Residential	\$92,900	44%	\$40,876
Town of Oakland	Rural	\$19,900	49%	\$9,751
Town of Oakland	Residential	\$147,000	49%	\$72,030
Town of Oakland	Residential	\$151,600	49%	\$74,284
Town of Oakland	Residential	\$108,600	51%	\$55,386
Town of Oakland	Residential	\$101,300	51%	\$51,663
Town of Oakland	Residential	\$60,900	51%	\$31,059
Town of Oakland	Residential	\$149,700	51%	\$76,347
Town of Oakland	Residential	\$165,200	51%	\$84,252
Town of Oakland	Residential	\$88,800	51%	\$45,288
Town of Oakland	Residential	\$72,300	51%	\$36,873
Town of Oakland	Residential	\$283,200	51%	\$144,432
		<b>\$29,341,300.00</b>		<b>\$5,517,863.00</b>
Town of Palmyra	Residential	\$61,886	4%	\$2,475
Town of Palmyra	Residential	\$88,076	8%	\$7,046
Town of Palmyra	Residential	\$226,010	8%	\$18,081
Town of Palmyra	Residential	\$64,311	8%	\$5,145
Town of Palmyra	Residential	\$93,605	8%	\$7,488
Town of Palmyra	Residential	\$224,652	8%	\$17,972
Town of Palmyra	Residential	\$217,862	8%	\$17,429
Town of Palmyra	Residential	\$121,153	8%	\$9,692
Town of Palmyra	Residential	\$127,749	8%	\$10,220
Town of Palmyra	Residential	\$69,258	8%	\$5,541
Town of Palmyra	Residential	\$144,433	8%	\$11,555
Town of Palmyra	Residential	\$189,247	8%	\$15,140
Town of Palmyra	Residential	\$65,184	8%	\$5,215
Town of Palmyra	Residential	\$302,931	8%	\$24,234
Town of Palmyra	Residential	\$111,744	11%	\$12,292
Town of Palmyra	Residential	\$55,096	11%	\$6,061
Town of Palmyra	Residential	\$204,185	11%	\$22,460
Town of Palmyra	Residential	\$78,958	11%	\$8,685
Town of Palmyra	Residential	\$101,365	11%	\$11,150
Town of Palmyra	Residential	\$176,928	11%	\$19,462
Town of Palmyra	Residential	\$166,452	11%	\$18,310
Town of Palmyra	Residential	\$122,802	11%	\$13,508
Town of Palmyra	Residential	\$169,653	11%	\$18,662
Town of Palmyra	Rural	\$357,930	11%	\$39,372
Town of Palmyra	Residential	\$82,935	15%	\$12,440
Town of Palmyra	Residential	\$83,129	15%	\$12,469
Town of Palmyra	Residential	\$202,730	15%	\$30,410
Town of Palmyra	Residential	\$155,976	15%	\$23,396
Town of Palmyra	Residential	\$102,820	20%	\$20,564
Town of Palmyra	Residential	\$50,149	20%	\$10,030
Town of Palmyra	Residential	\$124,936	20%	\$24,987
		<b>\$4,344,145.00</b>		<b>\$461,491.00</b>

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
Town of Sullivan	Rural	\$155,493	8%	\$12,439
Town of Sullivan	Residential	\$6,645	8%	\$532
Town of Sullivan	Residential	\$7,797	8%	\$624
Town of Sullivan	Commercial	\$56,438	8%	\$4,515
Town of Sullivan	Rural	\$158,505	8%	\$12,680
Town of Sullivan	Residential	\$226,550	8%	\$18,124
Town of Sullivan	Rural	\$70,880	8%	\$5,670
Town of Sullivan	Residential	\$59,716	8%	\$4,777
Town of Sullivan	Residential	\$96,131	11%	\$10,574
Town of Sullivan	Residential	\$162,492	11%	\$17,874
Town of Sullivan	Residential	\$142,912	11%	\$15,720
Town of Sullivan	Residential	\$30,744	11%	\$3,382
Town of Sullivan	Residential	\$7,354	11%	\$809
Town of Sullivan	Residential	\$975	15%	\$146
Town of Sullivan	Residential	\$26,403	15%	\$3,960
Town of Sullivan	Residential	\$64,412	15%	\$9,662
Town of Sullivan	Residential	\$37,212	20%	\$7,442
Town of Sullivan	Residential	\$149,380	23%	\$34,357
Town of Sullivan	Residential	\$7,265	23%	\$1,671
Town of Sullivan	Residential	\$13,290	23%	\$3,057
Town of Sullivan	Residential	\$92,498	23%	\$21,275
Town of Sullivan	Rural	\$87,360	28%	\$24,461
Town of Sullivan	Residential	\$90,372	33%	\$29,823
		<b>\$1,750,824.00</b>		<b>\$243,574.00</b>
Town of Sumner	Residential	\$39,365	4%	\$1,575
Town of Sumner	Rural	\$2,669	4%	\$107
Town of Sumner	Residential	\$49,373	8%	\$3,950
Town of Sumner	Residential	\$153,873	8%	\$12,310
Town of Sumner	Residential	\$31,025	8%	\$2,482
Town of Sumner	Residential	\$6,839	8%	\$547
Town of Sumner	Residential	\$52,125	8%	\$4,170
Town of Sumner	Residential	\$1,668	8%	\$133
Town of Sumner	Residential	\$45,286	8%	\$3,623
Town of Sumner	Residential	\$104,167	8%	\$8,333
Town of Sumner	Residential	\$40,449	8%	\$3,236
Town of Sumner	Residential	\$11,009	8%	\$881
Town of Sumner	Residential	\$23,936	8%	\$1,915
Town of Sumner	Commercial	\$3,336	8%	\$267
Town of Sumner	Residential	\$57,379	8%	\$4,590
Town of Sumner	Residential	\$37,447	8%	\$2,996
Town of Sumner	Residential	\$42,784	8%	\$3,423
Town of Sumner	Residential	\$38,030	8%	\$3,042
Town of Sumner	Residential	\$167	8%	\$13
Town of Sumner	Residential	\$18,682	8%	\$1,495
Town of Sumner	Residential	\$48,205	8%	\$3,856
Town of Sumner	Residential	\$38,197	8%	\$3,056
Town of Sumner	Residential	\$21,100	8%	\$1,688
Town of Sumner	Residential	\$41,366	8%	\$3,309
Town of Sumner	Commercial	\$45,370	8%	\$3,630
Town of Sumner	Residential	\$54,043	8%	\$4,323
Town of Sumner	Residential	\$58,213	8%	\$4,657
Town of Sumner	Rural	\$1,168	8%	\$93
Town of Sumner	Residential	\$127,852	8%	\$10,228
Town of Sumner	Residential	\$34,194	8%	\$2,736
Town of Sumner	Residential	\$18,014	8%	\$1,441
Town of Sumner	Residential	\$27,856	8%	\$2,228

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
Town of Sumner	Rural	\$34,194	8%	\$2,736
Town of Sumner	Rural	\$29,440	8%	\$2,355
Town of Sumner	Rural	\$8,590	8%	\$687
Town of Sumner	Residential	\$35,362	8%	\$2,829
Town of Sumner	Residential	\$77,812	8%	\$6,225
Town of Sumner	Residential	\$85,318	8%	\$6,825
Town of Sumner	Residential	\$25,437	8%	\$2,035
Town of Sumner	Residential	\$28,690	8%	\$2,295
Town of Sumner	Rural	\$30,941	8%	\$2,475
Town of Sumner	Residential	\$15,679	8%	\$1,254
Town of Sumner	Residential	\$92,157	8%	\$7,373
Town of Sumner	Residential	\$26,271	8%	\$2,102
Town of Sumner	Residential	\$59,881	8%	\$4,790
Town of Sumner	Residential	\$39,448	8%	\$3,156
Town of Sumner	Residential	\$17,014	8%	\$1,361
Town of Sumner	Residential	\$19,849	8%	\$1,588
Town of Sumner	Residential	\$30,441	8%	\$2,435
Town of Sumner	Residential	\$38,030	8%	\$3,042
Town of Sumner	Residential	\$103,416	8%	\$8,273
Town of Sumner	Residential	\$25,187	8%	\$2,015
Town of Sumner	Residential	\$30,274	8%	\$2,422
Town of Sumner	Residential	\$42,617	8%	\$3,409
Town of Sumner	Residential	\$81,565	8%	\$6,525
Town of Sumner	Commercial	\$34,694	8%	\$2,776
Town of Sumner	Commercial	\$104,167	8%	\$8,333
Town of Sumner	Rural	\$40,949	8%	\$3,276
Town of Sumner	Residential	\$98,495	8%	\$7,880
Town of Sumner	Rural	\$834	8%	\$67
Town of Sumner	Residential	\$25,270	8%	\$2,022
Town of Sumner	Residential	\$47,955	8%	\$3,836
Town of Sumner	Rural	\$60,465	8%	\$4,837
Town of Sumner	Residential	\$33,610	8%	\$2,689
Town of Sumner	Commercial	\$86,569	8%	\$6,926
Town of Sumner	Residential	\$41,867	8%	\$3,349
Town of Sumner	Residential	\$45,953	8%	\$3,676
Town of Sumner	Residential	\$31,609	8%	\$2,529
Town of Sumner	Residential	\$113,841	8%	\$9,107
Town of Sumner	Residential	\$30,941	8%	\$2,475
Town of Sumner	Residential	\$90,072	8%	\$7,206
Town of Sumner	Residential	\$33,026	8%	\$2,642
Town of Sumner	Residential	\$35,111	8%	\$2,809
Town of Sumner	Residential	\$43,285	8%	\$3,463
Town of Sumner	Residential	\$54,210	8%	\$4,337
Town of Sumner	Residential	\$58,213	8%	\$4,657
Town of Sumner	Residential	\$53,042	8%	\$4,243
Town of Sumner	Residential	\$24,937	8%	\$1,995
Town of Sumner	Residential	\$21,267	8%	\$1,701
Town of Sumner	Residential	\$29,273	8%	\$2,342
Town of Sumner	Residential	\$34,528	8%	\$2,762
Town of Sumner	Residential	\$9,341	8%	\$747
Town of Sumner	Commercial	\$69,222	8%	\$5,538
Town of Sumner	Residential	\$32,443	8%	\$2,595
Town of Sumner	Residential	\$6,672	8%	\$534
Town of Sumner	Residential	\$21,934	8%	\$1,755
Town of Sumner	Residential	\$10,258	8%	\$821
Town of Sumner	Commercial	\$36,279	8%	\$2,902
Town of Sumner	Residential	\$73,892	8%	\$5,911
Town of Sumner	Commercial	\$34,194	8%	\$2,736

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
Town of Sumner	Commercial	\$40,032	8%	\$3,203
Town of Sumner	Residential	\$85,151	8%	\$6,812
Town of Sumner	Residential	\$21,517	8%	\$1,721
Town of Sumner	Residential	\$44,869	8%	\$3,590
Town of Sumner	Residential	\$40,199	8%	\$3,216
Town of Sumner	Residential	\$6,589	8%	\$527
Town of Sumner	Residential	\$27,939	8%	\$2,235
Town of Sumner	Residential	\$99,163	8%	\$7,933
Town of Sumner	Residential	\$32,776	8%	\$2,622
Town of Sumner	Residential	\$182,146	8%	\$14,572
Town of Sumner	Residential	\$56,462	8%	\$4,517
Town of Sumner	Residential	\$33,610	8%	\$2,689
Town of Sumner	Residential	\$56,545	8%	\$4,524
Town of Sumner	Rural	\$48,539	8%	\$3,883
Town of Sumner	Residential	\$87,487	8%	\$6,999
Town of Sumner	Residential	\$41,033	8%	\$3,283
Town of Sumner	Residential	\$46,204	8%	\$3,696
Town of Sumner	Residential	\$25,270	8%	\$2,022
Town of Sumner	Residential	\$44,035	8%	\$3,523
Town of Sumner	Residential	\$48,622	8%	\$3,890
Town of Sumner	Residential	\$59,548	8%	\$4,764
Town of Sumner	Residential	\$15,262	8%	\$1,221
Town of Sumner	Residential	\$41,700	8%	\$3,336
Town of Sumner	Residential	\$48,372	8%	\$3,870
Town of Sumner	Residential	\$193,405	8%	\$15,472
Town of Sumner	Residential	\$48,706	8%	\$3,896
Town of Sumner	Residential	\$44,202	8%	\$3,536
Town of Sumner	Rural	\$3,336	8%	\$267
Town of Sumner	Residential	\$46,370	8%	\$3,710
Town of Sumner	Residential	\$58,046	8%	\$4,644
Town of Sumner	Residential	\$27,856	8%	\$2,228
Town of Sumner	Residential	\$34,277	8%	\$2,742
Town of Sumner	Residential	\$49,540	8%	\$3,963
Town of Sumner	Residential	\$16,930	8%	\$1,354
Town of Sumner	Residential	\$44,702	8%	\$3,576
Town of Sumner	Residential	\$124,850	8%	\$9,988
Town of Sumner	Residential	\$39,281	8%	\$3,143
Town of Sumner	Residential	\$52,042	8%	\$4,163
Town of Sumner	Residential	\$110,338	8%	\$8,827
Town of Sumner	Residential	\$43,702	8%	\$3,496
Town of Sumner	Commercial	\$39,615	8%	\$3,169
Town of Sumner	Residential	\$44,953	8%	\$3,596
Town of Sumner	Residential	\$59,464	11%	\$6,541
Town of Sumner	Rural	\$64,885	11%	\$7,137
Town of Sumner	Residential	\$72,808	11%	\$8,009
Town of Sumner	Residential	\$46,954	11%	\$5,165
Town of Sumner	Residential	\$98,579	11%	\$10,844
Town of Sumner	Residential	\$69,639	11%	\$7,660
Town of Sumner	Residential	\$97,328	11%	\$10,706
Town of Sumner	Residential	\$33,944	11%	\$3,734
Town of Sumner	Residential	\$99,830	11%	\$10,981
Town of Sumner	Residential	\$2,919	11%	\$321
Town of Sumner	Residential	\$26,021	11%	\$2,862
Town of Sumner	Rural	\$39,365	11%	\$4,330
Town of Sumner	Residential	\$46,287	11%	\$5,092
Town of Sumner	Residential	\$57,379	11%	\$6,312
Town of Sumner	Residential	\$56,545	11%	\$6,220
Town of Sumner	Residential	\$118,011	11%	\$12,981

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
Town of Sumner	Residential	\$61,549	11%	\$6,770
Town of Sumner	Residential	\$35,362	11%	\$3,890
Town of Sumner	Residential	\$95,827	11%	\$10,541
Town of Sumner	Residential	\$37,864	11%	\$4,165
Town of Sumner	Residential	\$32,276	11%	\$3,550
Town of Sumner	Rural	\$40,699	11%	\$4,477
Town of Sumner	Residential	\$46,370	11%	\$5,101
Town of Sumner	Residential	\$49,123	11%	\$5,403
Town of Sumner	Residential	\$67,554	11%	\$7,431
Town of Sumner	Residential	\$4,253	11%	\$468
Town of Sumner	Residential	\$30,858	11%	\$3,394
Town of Sumner	Commercial	\$41,533	11%	\$4,569
Town of Sumner	Residential	\$63,467	11%	\$6,981
Town of Sumner	Residential	\$51,124	11%	\$5,624
Town of Sumner	Commercial	\$45,536	11%	\$5,009
Town of Sumner	Residential	\$172,555	11%	\$18,981
Town of Sumner	Residential	\$85,652	11%	\$9,422
Town of Sumner	Residential	\$48,706	11%	\$5,358
Town of Sumner	Rural	\$160,962	11%	\$17,706
Town of Sumner	Residential	\$3,336	15%	\$500
Town of Sumner	Residential	\$81,065	15%	\$12,160
Town of Sumner	Residential	\$43,285	15%	\$6,493
Town of Sumner	Rural	\$119,095	15%	\$17,864
Town of Sumner	Rural	\$74,226	15%	\$11,134
Town of Sumner	Residential	\$10,425	15%	\$1,564
Town of Sumner	Rural	\$59,381	15%	\$8,907
Town of Sumner	Residential	\$42,701	15%	\$6,405
Town of Sumner	Residential	\$28,606	15%	\$4,291
Town of Sumner	Residential	\$52,459	15%	\$7,869
Town of Sumner	Residential	\$126,351	15%	\$18,953
Town of Sumner	Residential	\$51,875	20%	\$10,375
Town of Sumner	Residential	\$47,038	20%	\$9,408
Town of Sumner	Residential	\$14,678	20%	\$2,936
Town of Sumner	Residential	\$26,438	20%	\$5,288
Town of Sumner	Residential	\$69,055	20%	\$13,811
Town of Sumner	Residential	\$33,860	20%	\$6,772
Town of Sumner	Residential	\$37,613	20%	\$7,523
Town of Sumner	Residential	\$25,854	20%	\$5,171
Town of Sumner	Residential	\$49,540	23%	\$11,394
Town of Sumner	Residential	\$60,131	23%	\$13,830
Town of Sumner	Residential	\$31,775	23%	\$7,308
Town of Sumner	Residential	\$38,864	23%	\$8,939
Town of Sumner	Residential	\$110,755	23%	\$25,474
Town of Sumner	Residential	\$37,363	23%	\$8,594
Town of Sumner	Residential	\$42,200	23%	\$9,706
Town of Sumner	Rural	\$1,751	23%	\$403
Town of Sumner	Residential	\$40,949	23%	\$9,418
Town of Sumner	Residential	\$110,755	23%	\$25,474
Town of Sumner	Residential	\$50,374	23%	\$11,586
Town of Sumner	Residential	\$49,957	23%	\$11,490
Town of Sumner	Residential	\$44,202	23%	\$10,166
Town of Sumner	Rural	\$49,540	28%	\$13,871
Town of Sumner	Residential	\$40,699	28%	\$11,396
Town of Sumner	Residential	\$29,440	28%	\$8,243
Town of Sumner	Residential	\$64,885	44%	\$28,549
		<b>\$10,038,188.00</b>		<b>\$1,095,432.00</b>
Town of Waterloo	Residential	\$98,729	15%	\$14,809

Jurisdiction	Land Use	Market Value of Structure	Percent Damage	100-Year Flood Damage
		<b>\$98,729</b>		<b>\$14,809</b>
Town of Watertown	Residential	\$97,271	4%	\$3,891
Town of Watertown	Residential	\$108,885	4%	\$4,355
Town of Watertown	Residential	\$132,968	4%	\$5,319
Town of Watertown	Residential	\$162,175	4%	\$6,487
Town of Watertown	Residential	\$15,457	8%	\$1,237
Town of Watertown	Residential	\$598	8%	\$48
Town of Watertown	Residential	\$5,807	8%	\$465
Town of Watertown	Residential	\$74,810	8%	\$5,985
Town of Watertown	Residential	\$3,843	8%	\$307
Town of Watertown	Residential	\$97,356	11%	\$10,709
Town of Watertown	Residential	\$90,353	11%	\$9,939
Town of Watertown	Residential	\$82,838	11%	\$9,112
Town of Watertown	Residential	\$77,799	11%	\$8,558
Town of Watertown	Residential	\$114,778	11%	\$12,626
Town of Watertown	Residential	\$54,229	11%	\$5,965
Town of Watertown	Residential	\$77,885	11%	\$8,567
Town of Watertown	Residential	\$30,915	15%	\$4,637
Town of Watertown	Residential	\$83,521	15%	\$12,528
Town of Watertown	Residential	\$89,841	15%	\$13,476
Town of Watertown	Residential	\$105,469	23%	\$24,258
		<b>\$1,506,798.00</b>		<b>\$148,469.00</b>
Village of Johnson Creek	Residential	\$157,934	8%	\$12,635
		<b>\$157,934</b>	<b>8%</b>	<b>\$12,635</b>