



Marinette County Natural Hazards Mitigation Plan



2020-2025

MARINETTE COUNTY, WISCONSIN NATURAL HAZARDS MITIGATION PLAN

ADOPTED: February 25, 2020

Prepared by:
Bay-Lake Regional Planning Commission
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Green Bay, WI 54301
(920) 448-2820



The preparation of this document was financed through contract #18003-06 between Marinette County and the Bay-Lake Regional Planning Commission. The cost to develop this plan was paid for through a grant from the Federal Emergency Management Agency (FEMA) through the Pre-Disaster Mitigation program. A local match for the grant was provided through in-kind efforts by Marinette County.

RESOLUTION OF COUNTY ADOPTION

CITY ADOPTION RESOLUTIONS

CITY OF MARINETTE, WISCONSIN
RESOLUTION 08-2020

Adoption of the Marinette County, Wisconsin Hazard Mitigation Plan.

WHEREAS, the City of Marinette, recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects.

NOW, THEREFORE BE IT RESOLVED, that the Board of Supervisors of the City of Marinette, Wisconsin, hereby adopts the Marinette County, Wisconsin Natural Hazards Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED, that upon approval of the Marinette County, Wisconsin Natural Hazards Mitigation Plan, the Bay-Lake Regional Planning Commission, on behalf of the Marinette County Emergency Management Division, will submit the adopted plan to Wisconsin Emergency Management and Federal Emergency Management Agency officials as required under the Hazard Mitigation Grant Program.

Resolves passed this 27th day of August, 2020.

Mark Anderson, Chair
Kathy Brandt, County Clerk

Resolution No. 02-20-20

Adoption of the Marinette County, Wisconsin Hazard Mitigation Plan.

WHEREAS, the City of Potosi recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects.

NOW, THEREFORE BE IT RESOLVED, that the Council of the City of Potosi, Wisconsin, hereby adopts the Marinette County, Wisconsin Natural Hazards Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED, that upon approval of the Marinette County, Wisconsin Natural Hazards Mitigation Plan, the Bay-Lake Regional Planning Commission, on behalf of the Marinette County Emergency Management Division, will submit the adopted plan to Wisconsin Emergency Management and Federal Emergency Management Agency officials as required under the Hazard Mitigation Grant Program.

Resolves passed this 25th day of February, 2020 by a majority of a quorum of the Council of the City of Potosi.

George Stroh
Justin Paulick

Resolution No. 2020-02

Adoption of the Marinette County, Wisconsin Hazard Mitigation Plan.

WHEREAS, the City of Potosi recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects.

NOW, THEREFORE BE IT RESOLVED, that the Council of the City of Potosi, Wisconsin, hereby adopts the Marinette County, Wisconsin Natural Hazards Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED, that upon approval of the Marinette County, Wisconsin Natural Hazards Mitigation Plan, the Bay-Lake Regional Planning Commission, on behalf of the Marinette County Emergency Management Division, will submit the adopted plan to Wisconsin Emergency Management and Federal Emergency Management Agency officials as required under the Hazard Mitigation Grant Program.

Resolves passed this 26th day of March, 2020 by a majority of a quorum of the Council of the City of Potosi.

John Mische
Dennis Johnson

1 **Resolution No. 525-20**

2 **Adoption of the Marinette County, Wisconsin Hazard Mitigation Plan**

3

4 **WHEREAS**, Marinette County recognizes the threat that natural hazards pose to people and

5 **property; and**

6

7 **WHEREAS**, undertaking hazard mitigation actions before disasters occur will reduce the

8 **potential for harm to people and property and save taxpayer dollars; and**

9

10 **WHEREAS**, an adopted all hazards mitigation plan is required as a condition of future grant

11 **funding for mitigation projects.**

12

13 **NOW, THEREFORE, BE IT RESOLVED**, that the County Board of Marinette County, Wisconsin,

14 **hereby adopts the Marinette County Natural Hazards Mitigation Plan as an official plan; and**

15

16 **BE IT FURTHER RESOLVED**, upon approval of the Marinette County Natural Hazards

17 **Mitigation Plan, the Bay-Lake Regional Planning Commission, on behalf of the Marinette**

18 **County Emergency Management Division, will submit the adopted plan to Wisconsin**

19 **Emergency Management and Federal Emergency Management Agency officials as required**

20 **under the Hazard Mitigation Grant Program.**

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22 **Approved this 25th day of February, 2020 by a majority of a quorum of the Marinette**

23 **County Board of Supervisors.**

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29 **Mark Anderson, Chair**

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31 **Kathy Brandt, County Clerk**

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34 **Recommended Public Services Committee - February 4, 2020**

35

VILLAGE ADOPTION RESOLUTIONS

RESOLUTION 4280

A RESOLUTION ADOPTING THE MARINETTE COUNTY, WISCONSIN HAZARD MITIGATION PLAN.

WHEREAS, the Village of Crosson recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects.

NOW, THEREFORE BE IT RESOLVED, that the Board of Trustees of the Village of Crosson, Wisconsin, hereby adopts the Marinette County, Wisconsin Natural Hazards Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED, that upon approval of the Marinette County, Wisconsin Natural Hazards Mitigation Plan, the Bay-Lake Regional Planning Commission, on behalf of the Marinette County Emergency Management Division, will submit the adopted plan to Wisconsin Emergency Management and Federal Emergency Management Agency officials as required under the Hazard Mitigation Grant Program.

Resolves passed this 17th day of March, 2020.

OFFICE OF TRUSTEES
SECRETARY/TREASURER
ATTEST

TRUSTEE
VILLAGE CLERK

Resolution No. 2020-01

Adoption of the Marinette County, Wisconsin Hazard Mitigation Plan.

WHEREAS, the Village of Crosson recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects.

NOW, THEREFORE BE IT RESOLVED, that the Board of Trustees of the Village of Crosson, Wisconsin, hereby adopts the Marinette County, Wisconsin Natural Hazards Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED, that upon approval of the Marinette County, Wisconsin Natural Hazards Mitigation Plan, the Bay-Lake Regional Planning Commission, on behalf of the Marinette County Emergency Management and Federal Emergency Management Agency officials as required under the Hazard Mitigation Grant Program.

Resolves passed this 2nd day of April, 2020 by a majority of a quorum of the Board of Trustees of the Village of Crosson.

Mark Anderson
Kathy Brandt

VILLAGE OF WISNANSIE
RESOLUTION 2020-01

Adoption of the Marinette County, Wisconsin Hazard Mitigation Plan.

WHEREAS, the Village of Wisnansie recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects.

NOW, THEREFORE BE IT RESOLVED, that the Board of Trustees, Village of Wisnansie, Wisconsin, hereby adopts the Marinette County, Wisconsin Natural Hazards Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED, that upon approval of the Marinette County, Wisconsin Natural Hazards Mitigation Plan, the Bay-Lake Regional Planning Commission, on behalf of the Marinette County Emergency Management Division, will submit the adopted plan to Wisconsin Emergency Management and Federal Emergency Management Agency officials as required under the Hazard Mitigation Grant Program.

The Resolution was adopted by the Wisconsin Village Board, Wisnansie, this 18th day of March, 2020.

Attest:

Village of Pound
Resolution No. 2020-00

ADOPTION OF THE MARINETTE COUNTY, WISCONSIN NATURAL HAZARDS MITIGATION PLAN

WHEREAS, the Village of Pound recognizes the threat that natural hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects.

NOW, THEREFORE BE IT RESOLVED, that the Board of Trustees of the Village of Pound, Wisconsin, hereby adopts the Marinette County, Wisconsin Natural Hazards Mitigation Plan as an official plan; and

BE IT FURTHER RESOLVED, that upon approval of the Marinette County, Wisconsin Natural Hazards Mitigation Plan, the Bay-Lake Regional Planning Commission, on behalf of the Marinette County Emergency Management Division, will submit the adopted plan to Wisconsin Emergency Management and Federal Emergency Management Agency officials as required under the Hazard Mitigation Grant Program.

EFFECTIVE DATE: The contents of this Resolution shall be effective immediately upon printing and publication, as pursuant to law.

Resolves passed this 9th day of March, 2020 by a majority of a quorum of the Board of Trustees of the Village of Pound.

Mayor: Meyer Secretary: Hancock

Vice Mayor: S. Robert
Attest: S. Robert

Attest: S. Robert

Date of Adoption: March 9, 2020 Date of Publication: March 12, 2020

Resolves passed this 9th day of March, 2020 by a majority of a quorum of the Board of Trustees of the Village of Pound.

WEM APPROVAL LETTER



STATE OF WISCONSIN
DEPARTMENT OF MILITARY AFFAIRS
DIVISION OF EMERGENCY MANAGEMENT
Darrell L. Williams, Ph.D. Administrator
Tony Evers Governor

April 22, 2020

Ms. Kathy Frank, Coordinator
Marinette County Emergency Management
501 Pine Street
Peshtigo, WI 54157

Dear Kathy:

It gives me great pleasure to inform you that the *Marinette County, Wisconsin Hazard Mitigation Plan 2020-2025* has officially been approved by FEMA for the County and all incorporated municipalities!

The plan complies with the requirements of the Disaster Mitigation Act of 2000. The approved jurisdictions are eligible to apply for funding through the Hazard Mitigation Grant Program, Building Resilient Infrastructure and Communities program, and Flood Mitigation Assistance program through April 20, 2025, for projects identified in the Plan. Per regulation, the Plan must be updated and resubmitted for approval every five years for the participating jurisdictions to remain eligible for mitigation funding.

Along with the Meets Requirements letter, you received the Local Mitigation Plan Review Tool, which includes recommended revisions for the five-year update.

Congratulations on the approval of your Plan! Our office commends the County for its commitment to mitigation and reducing future disaster losses, and we look forward to working with you in the future.

If you have any questions, please call me at (608) 242-3222 or Robyn Fennig at (608) 888-5292.

Sincerely,

Katie Sommers, CFM
Hazard Mitigation Section Supervisor

Enclosure

Cc: Teresa Erler, Northeast Region Emergency Management Director, WEM
Janell Rucinski, Northeast Region Office Operations Associate, WEM
Lenora Borchardt, EPTEC, Inc.

2400 Wright St. PO Box 7865 Madison, WI 53707-7865 24 Hour Emergency Hotline 1-800-943-0003

FEMA APPROVAL LETTER



U.S. Department of Homeland Security
536 S. Clark St. 6th Floor
Chicago, IL 60605

FEMA

April 21, 2020

Ms. Robyn Fennig
State Hazard Mitigation Officer
Wisconsin Emergency Management
2400 Wright Street, P.O. Box 7865
Madison, WI 53707-7865

Dear Ms. Fennig:

Thank you for submitting the adoption documentation for the Marinette County Hazard Mitigation Plan. The plan was reviewed based on the local plan criteria contained in 44 CFR Part 201, as authorized by the Disaster Mitigation Act of 2000. The Marinette County plan met the required criteria for a multi-jurisdiction hazard mitigation plan and the plan is now approved for the Marinette County; the cities of Marinette, Niagara, and Peshtigo; and the villages of Coleman, Crivitz, Pound, and Wausaukee. Please submit the adoption resolutions for any remaining jurisdictions who participated in the planning process.

The approval of this plan ensures continued availability of the full complement of Hazard Mitigation Assistance (HMA) Grants. All requests for funding, however, will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted.

We encourage Marinette County and the participating jurisdictions to follow the plan's schedule for monitoring and updating the plan, and to continue their efforts to implement the mitigation measures. The expiration date of the Marinette County plan is five years from the date of this letter. To continue project grant eligibility, the plan must be reviewed, revised as appropriate, resubmitted, and approved no later than the plan expiration date.

Please pass on our congratulations to Marinette County; the cities of Marinette, Niagara, and Peshtigo; and the villages of Coleman, Crivitz, Pound, and Wausaukee. If you or the communities have any questions, please contact Cadence Peterson at cadence.peterson@fema.dhs.gov or at 312-408-5260.

Sincerely,

Julia McCarthy
Chief, Risk Analysis Branch
Mitigation Division

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Nicole Barbiaux

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BAY-LAKE REGIONAL PLANNING COMMISSION STAFF

BAY LAKE

Regional Planning Commission | Since 1972

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Executive Summary

PLAN UPDATE SUMMARY

To aid in the identification of the changes that have been made to the Marinette County, Wisconsin Natural Hazards Mitigation Plan in this current update to the 2014 plan, Table 0.1 below lists the plan changes and the updates made to the identified mitigation actions.

HAZARD MITIGATION PLANNING OVERVIEW

- The Disaster Mitigation Act of 2000 requires State, Local, and Tribal governments to develop a hazard mitigation plan as a condition of receiving certain types of FEMA hazard mitigation disaster assistance, emergency and non-emergency.
- Having a plan, qualifies the county to apply for pre-disaster mitigation funds from FEMA. This grant may be used to fund mitigation projects identified in the plan, including hazard mitigation projects for critical facilities even if they are not owned by the county, such as hospitals or utilities -- as long as those projects are identified in the hazard mitigation plan. It also helps if those entities were involved in the plan development process.
- The focus of a hazard mitigation plan is to develop a set of actions designed to reduce or eliminate long-term risk to people and property from hazards.
- The Bay-Lake Regional Planning Commission has been providing communities and counties with hazard mitigation planning assistance since 2003. We have helped with submitting grants to FEMA to fund hazard mitigation plans and projects, and we have assisted in the development of hazard mitigation plans and updates.

PLAN STRUCTURE

The hazard mitigation plans are structured into five parts designed to address FEMA's local mitigation plan requirements. These parts include:

1. Introduction and Planning Process;
2. Community Profile;
3. Risk Assessment;
4. Mitigation Strategy; and
5. Plan Adoption and Maintenance.



Project Team:
Madison Smith
Nicole Barbiaux

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Regional Planning Commission | Since 1972

Table 0.1: Marinette County Hazard Mitigation Plan Update Summary

Project	Changes
Multi-Hazards	
Disaster Preparedness	Changed project timetable from "1-5 years" to "ongoing". Removed "federal" from costs of project.
Acquisition of Emergency Power Generators for Critical Facilities	Partially completed: City of Marinette Fire Department and County Health and Human Services added generators. Removed "state and federal block" from costs of project.
Storm Shelters for County Parks	Removed "state and federal block" from costs of project.
Flooding	
Flood Forecasting and Warning	Changed project timetable from "7-10 years" to "ongoing".
National Flood Insurance Program	Changed project timetable from "1-5 years" to "ongoing".
Preservation of Natural Resources in Floodplains	Changed project timetable from "1-5 years" to "ongoing".
Floodproofing Techniques	Removed "state and federal block" from costs of project. Changed project timetable from "7-10 years" to "ongoing".
Stormwater Detention	Removed "state and federal block" from costs of project. Changed project timetable from "7-10 years" to "ongoing".
Individual Property Measures for Basements	Removed "review of building and other local codes. Federal or state grant funding through block grants" and added "costs to be determined with assistance from grant funding". Changed "2010" in note to "2020".
Stormwater Management	Removed "state and federal block" from costs of project. Changed project timetable from "1-5 years" to "ongoing".
Incorporation of Floodplain Management in Comprehensive Planning	Completed in 2010, but will continue as "ongoing every ten years" with 10-year updates to comprehensive plans. Changed "2010" in note to "2020".
Orthophotography Base Maps of Marinette County	Completed in 2010, but will continue as "ongoing every five years".
Hydrology Study of Marinette County	Completed with FEMA floodplain updates.
Flood Insurance Rate Map (FIRM) Amendments and Revisions	Completed with FEMA floodplain updates.
Geographic Information System (GIS) Coverage	Completed with comprehensive planning, but will continue as "ongoing every ten years".
Inform Property Owners in Cases Where Property is Located in the 100-Year Floodplain	Removed.
Reevaluation of Floodplain Zoning Ordinances	Removed "state and federal block" from costs of project. Changed responsible parties from "Marinette County" to "Marinette County Zoning" and changed project timetable from "5-7 years" to "ongoing".
Acquisition and Relocation	Removed "state and federal block" from costs of project. Changed Project timetable from "5-7 years" to "as needed".

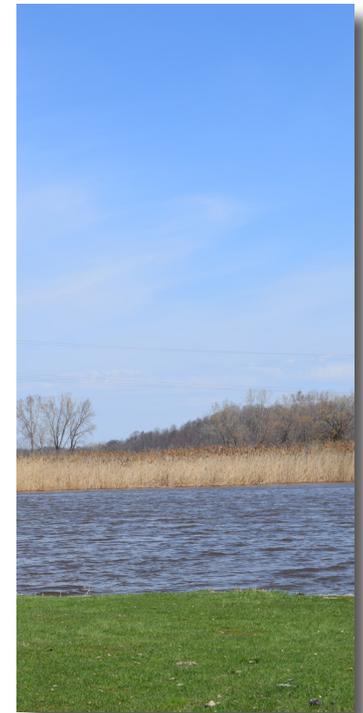


Table 0.1: Marinette County Hazard Mitigation Plan Update Summary (continued)

Project	Changes
Tornadoes	
Identification of Emergency Shelter Locations	Removed "state and federal block" from costs of project. Changed project timetable from "1-5 years" to "ongoing".
Identification of Emergency Shelter Deficit Locations	Partially completed: City of Marinette was completed and a shelter was added in Menominee. Removed "state and federal block" from costs of project. Changed project timetable from "7-10 years" to "ongoing".
Add shelters in mobile home parks	Addition
Enhanced Construction Standards and Techniques	Removed - State responsibility
Encourage use of Tie-Downs with Ground Anchors for Manufactured Home and Mobile Homes	Changed project timetable from "7-10 years" to "ongoing".
Lightning Storms and Thunderstorms	
Review of Building Codes	Removed - State responsibility
Lightning Safety Guidelines	Removed "federal" from costs of project. Changed project timetable from "7-10 years" to "ongoing". Added note "during Spring Severe Weather Awareness Week"
Wildland Fires	
Fire Education and Prevention	Changed project timetable from "5-7 years" to "ongoing".
Update structural zone maps (Marinette County Emergency Services Atlas	Addition
Extreme Heat	
Supplies for Vulnerable Populations	Removed
Publicize of Extreme Heat Events	Changed responsible parties from "Marinette County" to "Marinette County Public Health Department" changed project timetable from "1-5 years" to "ongoing during extreme heat forecasts". Changed priority from "high" to "low".
Winter Storms	
Promote winter storm hazard awareness	Removed "federal" from costs of project. Changed project timetable from "5-7 years" to "ongoing".
Priority policy for salting and plowing streets and highways	Added "review" to mitigation measure. Add "and communities" to responsible parties. Changed project timetable from "1-5 years" to "ongoing". Reworded note from "all jurisdictions in the planning area will work to better educate the public concerning their priority policy for salting and plowing the streets and highways. This policy gives top priority to the more highly traveled principal arterials, and gives lowest priority to low traveled local roads" to "jurisdictions in the planning area will work to educate the public concerning the counties priority policy for salting and plowing streets and highways."

Table 0.1: Marinette County Hazard Mitigation Plan Update Summary (continued)

Project	Changes
Extreme Cold	
Publicize of Extreme Cold Events	Removed "state and federal block" from costs of project. Changed responsible parties from "Marinette County Emergency Management Coordinator and American Red Cross Staff" to "Marinette County Public Health Department". Changed project timetable from "5-7 years" to "ongoing". Changed priority from "medium" to "low".
Fog	
Publicize of Fog Events	Changed responsible parties from "Marinette County Emergency Management Coordinator and American Red Cross staff" to "National Weather Service". Changed project timetable from "7-10 years" to "ongoing". Added note "ongoing". Removed note.
Dam Failure	
Dam Failure Warning Systems and Emergency Plans	Removed "federal" from costs of Project. Changed project timetable from "7-10 years" to "ongoing". Added note "ongoing by FERC regulations".
Coastal Hazards	
Promote Coastal Hazard Awareness	Removed "federal" from costs of project. Changed project timetable from "7-10 years" to "ongoing".
Drought	
Promote Water Conservation Activities during Drought	Removed "federal" from costs of project. Changed project timetable from "7-10 years" to "ongoing".





Chapter 1

Introduction

PURPOSE OF THE PLAN

Hazard Mitigation is defined as any action taken before, during, or after a disaster to permanently eliminate or reduce the long-term risk to human life and property from natural and man-made hazards. Hazard mitigation planning is a process that assesses risks and evaluates the community vulnerability from potential hazards. Deficiencies are identified and strategies are developed that help mitigate problem areas. By developing an effective hazard mitigation plan a community can potentially reduce the impacts of a future disaster. Potential impacts of a disaster include loss of lives and property, environmental and economic concerns, and reduced essential services and quality of life. The result of this planning process is an Action Plan that identifies the appropriate steps to help mitigate present and future hazards. The Marinette County, Wisconsin Hazard Mitigation Plan aims to identify risks and highlight areas where the community may be more vulnerable to potential hazards. Deficiencies are identified and strategies are developed to mitigate problems.

Consistent with the Code of Federal Regulations (44 CFR Part 201.6), the county decided to focus the scope of this planning effort to natural hazards at this time, though this plan conforms to Federal Emergency Management Agency (FEMA) requirements for local hazards mitigation planning. This plan provides county-level information on areas of risk, magnitude of risk, and strategies for reducing this risk. Through the process of developing this plan, the county addressed issues related to the protection of lives and property from natural hazards, the protection of critical facilities, and the reduction of community and taxpayer costs associated with disaster relief and rescue efforts. Completion and approval of the plan makes Marinette County eligible to apply for future FEMA disaster relief and mitigation project funds, helping the county to implement their recommended mitigation strategies.

Note: At the time of approval of this plan, Marinette County was responding to a national pandemic, coronavirus (COVID-19).

Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 (DMA 2000) (Public Law 106-390) provides the legal basis for the FEMA mitigation planning requirements for state, local and tribal governments as a condition of mitigation grant assistance. DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act by repealing the previous mitigation planning provisions and replacing them with a new set of requirements that emphasize the need for state, local, and tribal entities to closely coordinate mitigation planning and implementation efforts. The requirement for a state mitigation plan is continued as a condition of disaster assistance, adding incentives for increased coordination and integration of mitigation activities at the state level through the establishment of requirements for two different levels of state plans. DMA 2000 also established a requirement for local mitigation plans and authorized HMGP funds available to a state for development of state, local, and tribal mitigation plans.

Funding of the Hazard Mitigation Plan

In July 2018, Marinette County received a planning grant to develop an update to their hazard mitigation plan in the amount of \$24,981 from FEMA through the FFY17 Pre-Disaster Mitigation Program. Under the grant (Agreement #: PDMC-PL-05-WI-2017-004), FEMA provided 75 percent of the funds, while the remaining 25 percent local match (\$8,328) was met by Marinette County through in-kind work.

Marinette County entered into a contract (#18003-06) with the Bay-Lake Regional Planning Commission to prepare the update to the hazard mitigation plan. Development of the plan began in October 2018.



Resiliency

Human activities increase the amount of greenhouse gases in the atmosphere, primarily through the burning of fossil fuels and deforestation, which expedite global climate change. One type of mitigation strategy is inhibiting greenhouse gas emissions through laws that limit how much can be released into the air by specific nations or industries.

Globally, nations are still working to mediate limits on greenhouse gas emissions through the United Nations Framework Convention on Climate Change. Although the United States has not passed legislation to mitigate climate change, the following states: California, Minnesota, and Hawaii have set greenhouse gas emission targets.

Individuals can also help reduce emissions by decreasing energy use at school, work, and in their private dwellings; driving and flying less; and by increasing carpooling, biking, or walking. Mitigation attempts also include ways to store carbon in the environment to hinder its release into the atmosphere as carbon dioxide. Natural resource professionals can alleviate through preventing destruction of forests and protecting wetlands and peatlands that are a key contributors in capturing and storing greenhouse gases.

Adaptation means identifying and preparing for the impacts of climate change. Impacts like increased flooding, heat waves, longer growing seasons, and warmer winters will leave human populations and ecosystems at risk, but there are initiatives Marinette County can take to be less vulnerable to these changes.

For example, communities can prepare for climate change by updating stormwater infrastructure to handle bigger floods; rezoning flood plains to avoid property damage with increased flooding; and developing heat emergency action plans to assist vulnerable urban populations during heat waves. Natural resource managers can also help species adapt by altering planting vegetation to increase shade for coldwater trout streams or creating wildlife corridors to help animals move to better habitats as the climate changes.

Even with aggressive mitigation efforts, our climate will continue to change over the next 50 to 100 years because of the amount and longevity of greenhouse gases already in the atmosphere. We have to prepare for and adapt to those changes. It is important to pursue both mitigation and adaptation in order to remain resilient towards climate change.

For additional information, please visit: <https://climatewisconsin.org/>



In Wisconsin, temperatures are projected to increase 4 to 6 degrees by mid-century and may rise as much as 12 degrees by the end of this century. Precipitation in Wisconsin could increase 10 to 30 percent in the spring and winter by the end of this century.

On average, plant species below the forest canopy have migrated 30 miles northwest in the last 50 years, but changing climates have outpaced plant movement over the same period, shifting more than 50 miles in the same direction. These lags will likely increase and threaten the survival of species which cannot adapt.

Five Parts of this Natural Hazards Mitigation Plan

The Marinette County, Wisconsin Hazard Mitigation Plan was divided into five chapters in order to address FEMA's local mitigation plan requirements. The five chapters are as follows:

Chapter 1 – Introduction (Planning Process);

Chapter 2 – Planning Area;

Chapter 3 – Risk Assessment;

Chapter 4 – Mitigation Strategy; and

Chapter 5 – Plan Maintenance and Adoption Process.

PLANNING PROCESS

Development of the Marinette County Hazard Mitigation Plan was based on the planning requirements and guidance provided by FEMA and WEM. The planning area for this plan includes all of Marinette County with its three cities (Marinette, Niagara, and Peshtigo), four villages (Coleman, Crivitz, Pound, and Wausaukee), and eighteen towns (Amberg, Athelstane, Beaver, Beecher, Dunbar, Goodman, Grover, Lake, Middle Inlet, Niagara, Pembine, Peshtigo, Porterfield, Pound, Silver Cliff, Stephenson, Wagner, and Wausaukee).

Input into the plan was gained through regular collaborative meetings and discussions with the county and state officials, emergency coordinator, local officials, various organizations, and citizens. Public participation takes place throughout the entire plan process and is described in more detail in the plan. The process expanded over an 12-month timeframe beginning in October 2018. Professional planning support was provided by the Bay-Lake Regional Planning Commission. Public review and input was encouraged at all meetings and through an Open House to present the plan goals, mitigation actions plan, and mapped hazard areas.

The plan process is outlined below:

- PHASE I — ■ Pre-planning and review of steering committee appointments
- PHASE II — ■ Reassessing risks and critical facilities
- PHASE III — ■ Updating the mitigation action plan
- PHASE IV — ■ Reviewing the policies and procedures for plan implementation
- PHASE V — ■ Documenting the planning process and plan adoption

→ **Phase I** involved initial meetings to review the previous steering committee appointments, reconvening the steering committee, and outlining the planning process and responsibilities of the steering committee.

→ **Phase II** was comprised of a meeting with the steering committee to reassess natural hazards and potential risks to the county, and reassessing identified critical facilities.

→ **Phase III** involved updating the mitigation action plan to address identified risks including removing completed task and adding new mitigation methods to address risks.

→ **Phase IV** involved reviewing the policies that affect plan implementation and the procedures that would be followed to implement the plan.

→ **Phase V** involved documenting the planning process, developing a complete draft of the plan, and plan adoption.

Plan development was completed with the adoption of the plan by resolution at the Marinette County Board meeting on February 25, 2020. The maps in the Planning Area and Risk Assessment chapters of the plan were completed using the Bay-Lake Regional Planning Commission's Geographic Information System (GIS). Maps included in this plan are for general planning purposes only, and are not for legal or formal survey purposes.

Hazard Mitigation Plan Steering Committee

Eric Burmeister

Highway Commissioner/Emergency Management

Kirsten Burmeister

Communications Director

Tina Barnes

Land Information Property Listing

Madison Smith

Environmental Planner



Greg Cleerean

Land Information Director

Ted Sauve

Citizen

Tim Oestreich

Assistant Land Information Director/GIS Coordinator

Jay Heckel

Fire Chief, City of Marinette

Pete Villas

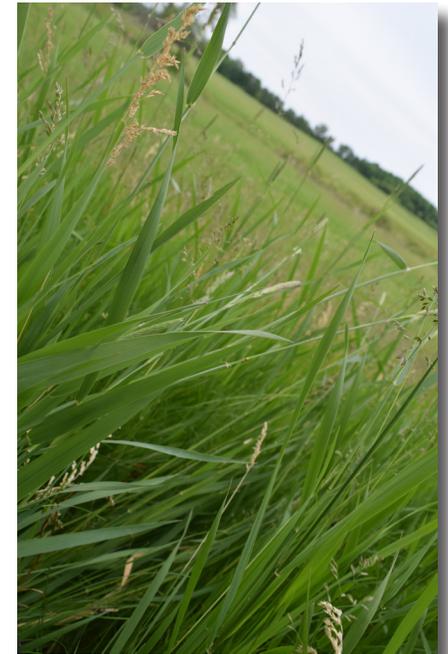
Forestry & Parks Director

Kathy Frank

Emergency Management Coordinator

Molly Bonjean

County Public Health Officer, Health & Human Services



Other contributors:
Angela Kowalzek-Adrians

Marinette County established a Hazard Mitigation Plan Steering Committee is comprised of county employees and members of the Local Emergency Planning Committee (LEPC), represented in the figure above. All steering committee meetings were open to the public. The steering committee was responsible for providing input, helping to guide the planning process, and reviewing draft chapters of the plan.

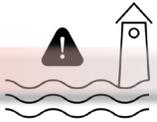
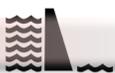
The hazards and risks were identified through research, meetings, surveys, and GIS spatial analysis.

Steering Committee Plan Review

The steering committee reviewed and analyzed each section of the plan, and evaluated which sections needed revision as part of the update process.

The steering committee held 6 meetings to develop the plan update: October 17, 2018; December 12, 2018; February 13, 2019; April 17, 2019; June 12, 2019; and, September 5, 2019. Copies of the sign-in sheets are included in Appendix A.

Prioritization of Hazards

- 1. Tornado/Strong Wind** 
- 2. Lightning Storm/Thunderstorm** 
- 3. Flooding** 
- 4. Winter Storm** 
- 5. Drought** 
- 6. Hail** 
- 7. Wildland Fire** 
- 8. Extreme Cold** 
- 9. Excessive Heat** 
- 10. Coastal Hazards** 
- 11. Dam Failure Flooding** 
- 12. Dense Fog** 

Public Involvement

Steering Committee Meetings

Opportunities for public comment during the drafting stage of the plan were held at all meetings of the steering committee, which were all open to the public.

Public Informational Meeting/Public Comments

An informational meeting was held for the public on October 23, 2019 at the Marinette County Courthouse from 4:00 - 6:00 p.m. This meeting was held to provide an opportunity for the public to review and comment on the draft plan and maps.

Both the steering committee meetings and the public informational meeting were open to the public. Notices were posted at County Courthouse, and notice was provided to local media. All meeting agendas and minutes are posted on the county website as well.

The draft plan was posted on the Marinette County website, and the Bay-Lake RPC website for at least 30 days with the ability to submit online comments.

County Board Meeting

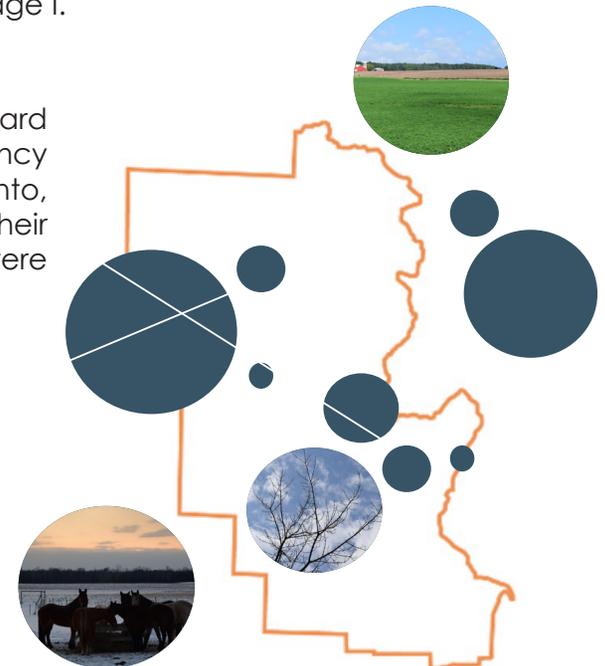
On February 25, 2020 the Marinette County Board adopted this hazard mitigation plan update at a meeting that was open to the public. A copy of the resolution of adoption can be found at the front of this plan on page I.

Neighboring Jurisdictions

The Marinette County, Wisconsin Hazard Mitigation Plan was sent to the Emergency Management Directors in Florence, Oconto, Forest, and Menominee (MI) counties for their review and comment. No comments were received.

Contact Information

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Management Coordinator
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Chapter 2

Community Profile

Table 2.1: Marinette County Planning Area

Municipality Total Planning Area (Sq. Miles)

Cities	
Marinette	7.29
Niagara	3.00
Peshigo	3.18
Villages	
Coleman	1.16
Crivitz	1.53
Pound	0.81
Wausaukee	1.39
Towns	
Amberg	72.31
Athelstane	107.13
Beaver	69.47
Beecher	49.52
Dunbar	105.20
Goodman	107.68
Grover	73.30
Lake	59.55
Middle Inlet	51.22
Niagara	68.35
Pembin	67.31
Peshigo	60.39
Porterfield	53.35
Pound	50.13
Silver Cliff	106.96
Stephenson	176.86
Wagner	54.63
Wausaukee	77.51

COUNTY TOTAL

1429.25

GENERAL GEOGRAPHY

The planning area for the Marinette County, Wisconsin Hazard Mitigation Plan completely covers Marinette County and includes all of the municipalities within the county. The county has seven incorporated communities (three cities and four villages). Map 2.1 illustrates the location of Marinette County and its municipalities. Table 2.1 indicates the geographical size of the county as well as the size of each municipality within the county.



Photo Source: University of Wisconsin, Digital Collections.

HISTORICAL SETTING

The Algonquin tribe, “the wild rice people”, are the earliest recorded residents. By the early 1820s, the Menominee numbered about 500 men, and were scattered throughout a dozen villages in Wisconsin. From 1670 to the early 1800s, numerous explorers, fur traders and missionaries visited the area as they traveled the water routes of Green Bay and the Menominee River.

Stanislaus Chappu was the first documented settler on the Menominee River, a French-Canadian fur trader who organized a trading post. Similarly, William Farnsworth arrived as another fur trader on the River Basin in 1822. Trading with the Chippewa Indians increased relations with other settlers. Farnsworth invested in the business venture of lumber, which commenced a new industry that would control the Menominee River Basin for close to fifty years. In 1832, the business partners constructed a water-powered sawmill.

The success of lumbering correlated to the success of Marinette. In 1853, the population was 478, in less than 10 years the growth reached 3,059 persons. Marinette's lumber boom reached its peak about 1895. Approximately 24 sawmills lined the Menominee River and other lumber related businesses prospered in Marinette, including sash, door and blind factories, planting mills, and box factories.

Source: U.S. Bureau of the Census, 2010, and Bay-Lake Regional Planning Commission, 2018. Note: Total Planning Area includes land areas only.

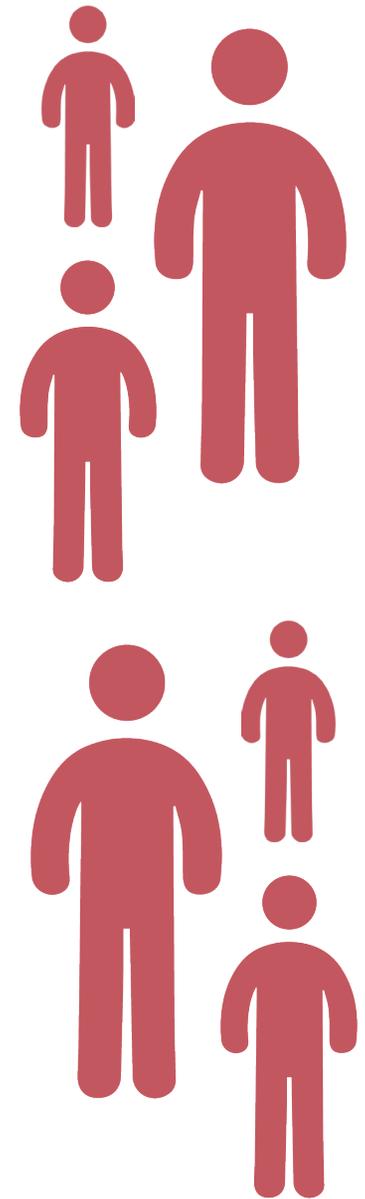
DEMOGRAPHIC PROFILE

Population Trends

From 1970 to 2010, Marinette County has grown by 5,040 persons (13.7%). The county's growth has fluctuated over time, but has maintained an upward trend from 1970 to 2000; the population had a dip of 3.8 percent in 2010. Table 2.2 and Figure 2.1 indicate the historic Census population counts by community in Marinette County. Although it has seen continued population loss since 1970, the City of Marinette comprises 26 percent of the population of the county. The towns of Dunbar, Beecher, Silver Cliff, and Wausaukee have seen substantial population growth of over 100 percent since 1970. Every municipality in Marinette County, except Marinette (city), Niagara (city), and Goodman (town) has had population gains from 1970 to 2010.

Table 2.2: Marinette County Population Trends

Municipality	1970	1980	1990	2000	2010	Number	Percent
Marinette (C)	12,696	11,965	11,843	11,749	10,968	-1,728	-13.6
Niagara (C)	2,347	2,079	1,999	1,880	1,624	-723	-30.8
Peshtigo (C)	2,836	2,807	3,154	3,357	3,502	666	23.5
Coleman (V)	683	852	839	716	724	41	6.0
Crivitz (V)	899	1,041	996	998	984	85	9.5
Pound (V)	284	407	434	355	377	93	32.7
Wausaukee (V)	557	648	656	572	575	18	3.2
Amberg (T)	665	852	917	854	726	61	9.2
Athelstane (T)	330	364	437	601	504	174	52.7
Beaver (T)	995	1,042	1,041	1,123	1,146	151	15.2
Beecher (T)	279	521	626	783	724	445	159.2
Dunbar (T)	359	522	838	1,303	1,094	735	204.7
Goodman (T)	750	803	758	820	619	-131	-17.5
Grover (T)	1,575	1,709	1,670	1,729	1,768	193	12.3
Lake (T)	741	915	989	1,064	1,135	394	53.2
Middle Inlet (T)	457	681	744	831	840	383	83.8
Niagara (T)	561	717	891	924	853	292	52.0
Pembine (T)	654	773	817	1,036	889	235	35.9
Peshtigo (T)	2,951	3,566	3,564	3,819	4,057	1,106	37.5
Porterfield (T)	1,405	1,857	1,805	1,991	1,971	566	40.3
Pound (T)	1,297	1,412	1,386	1,367	1,425	128	9.9
Silver Cliff (T)	189	267	259	529	491	302	159.8
Stephenson (T)	2,202	2,137	2,288	3,065	3,006	804	36.5
Wagner (T)	500	624	660	722	681	181	36.2
Wausaukee (T)	497	753	937	1,196	1,066	569	114.5
COUNTY TOTAL	36,709	39,314	40,548	43,384	41,749	5,040	13.7



Source: U.S. Census 1970-2010, BLRPC 2018.

Note: The 2020 Census was being conducted while this plan was going through the approval process.

Population Projections

Marinette County has seen a slow, but steady growth in its population from 1970 to 2000, with a 3.8 percent drop in 2010. According to the Wisconsin Department of Administration (WDOA), the county's population is expected to increase to 47,415 persons by the year 2030 (Table 2.3). However, the WDOA projections are based on the 2000 Census, not the 2010 Census so the decrease seen in 2010 is not factored into these projections. The WDOA projections have ended up quite accurate for the county and are only 8 percent greater than the actual 2010 Census.

Population projections deal with computations of future projection size and characteristics based on trends in fertility, mortality, and migration. Since it is not possible to predict the future trends in fertility, mortality, and migration with complete certainty, it is also not possible to predict the future size and characteristics of a population accurately. Projections are merely calculations as to what would happen to current population under specified assumptions of fertility, mortality and migration in future years. Hazard mitigation planning requires an idea of future populations to help address hazard impacts and draw conclusions.

Figure 2.1: Population Trends, Marinette County, 1970-2010

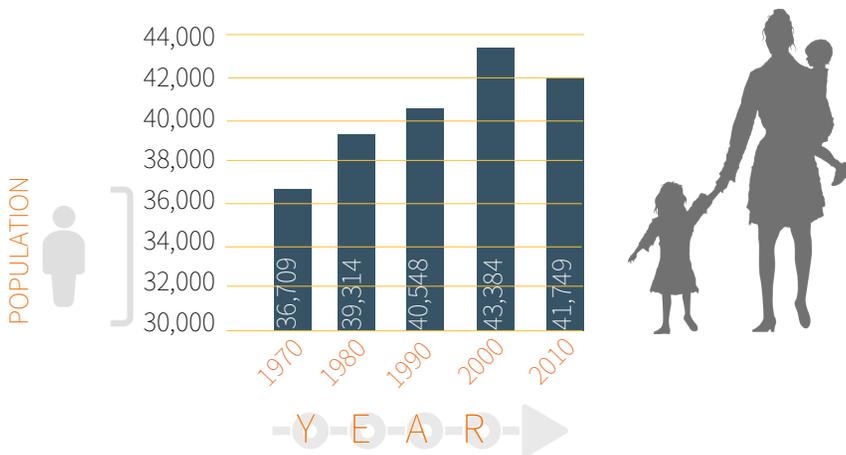


Table 2.3: Population Projections, Marinette County, 2015-2040

Cities	2020	2025	2030	2035	2040	# Change	% Change
Marinette	10,750	10,810	10,770	10,470	9,935	-1,033	-7.4%
Niagara	1,535	1,510	1,470	1,395	1,290	-334	-17.6%
Peshtigo	3,505	3,595	3,655	3,635	3,515	13	2.5%
Villages							
Coleman	720	725	725	710	680	-44	-4.9%
Crivitz	955	965	965	940	940	-89	-1.1%
Pound	380	385	390	385	385	-2	4.1%
Wausaukee	565	575	575	560	560	40	-0.9%
Towns							
Amberg	695	685	665	630	630	-141	-11.3%
Athelstane	505	515	515	505	505	-19	1.0%
Beaver	1,175	1,215	1,250	1,250	1,250	74	9.6%
Beecher	735	755	770	765	765	16	6.3%
Dunbar	965	980	980	960	960	-174	0.0%
Goodman	585	575	560	530	530	-129	-11.7%
Grover	1,860	1,940	2,005	2,025	2,025	222	13.1%
Lake	1,210	1,270	1,325	1,350	1,350	200	16.9%
Middle Inlet	850	875	890	890	890	25	7.2%
Niagara	855	870	870	855	855	-33	1.2%
Pembine	865	870	865	840	840	-94	-2.9%
Peshtigo	4,230	4,415	4,560	4,605	4,605	473	13.3%
Porterfield	2,035	2,115	2,160	2,170	2,170	144	9.9%
Pound	1,470	1,565	1,565	1,575	1,575	110	10.5%
Silver Cliff	525	555	575	590	590	94	18.0%
Stephenson	3,175	3,320	3,445	3,485	3,485	429	14.8%
Wagner	690	705	715	710	710	4	5.2%
Wausaukee	1,065	1,115	1,135	1,125	1,125	24	5.6%
COUNTY	41,925	42,865	43,400	42,955	41,445		

Source: Wisconsin Department of Administration, Official Municipal Population Projections, 2015-2040; 2018.

Table 2.4: Housing Units, Marinette County, 1990-2010

	1990	2000	2010	% Change 2000-2010
CITIES				
MARINETTE	5268	5553	5464	-1.6%
NIAGARA	826	812	797	-1.8%
PESHTIGO	1217	1315	1621	23.3%
VILLAGES				
COLEMAN	361	352	343	2.6%
CRIVITZ	449	457	533	16.6%
POUND	171	174	164	-5.7%
WAUSAUKEE	333	294	325	10.5%
TOWNS				
AMBERG	922	942	1051	11.6%
ATHELSTANE	999	955	1202	20.8%
BEAVER	615	542	797	47.0%
BEECHER	809	971	1097	13.0%
DUNBAR	771	793	883	11.3%
GOODMAN	648	680	840	23.5%
GROVER	652	976	763	12.9%
LAKE	704	524	875	67.0%
MIDDLE INLET	748	643	899	39.8%
NIAGARA	418	453	549	21.2%
PEMBINE	826	871	1016	16.6%
PESHTIGO	1490	1567	1854	18.3%
PORTERFIELD	780	848	993	17.1%
POUND	527	537	628	16.9%
SILVER CLIFF	880	963	1162	20.7%
STEPHENSON	3786	377	4708	24.6%
WAGNER	503	384	591	53.9%
WAUSAUKEE	947	1036	1224	18.1%
COUNTY	25,650	26,159	30,379	

Source: US Census 2000 and 2010; Wisconsin Department of Administration, Official Municipal Population Projections, 2000-2030; BLRPC 2018.

Housing Trends

The housing in Marinette County was primarily built before 1939 (34.8%), making the current housing stock in Marinette among the oldest in the U.S. The next largest group of housing age is from 1970 to 1999 (32.4%), followed by the years 1940 to 1969 (28.8%). Housing in Marinette County that has been built since 2000 is the smallest grouping (3.9%). Older structures are also more commonly linked to lead paint hazards.

After the 2008 recession, the number of new housing units dropped significantly, both in Marinette County and across Wisconsin. According to the Wisconsin Builders Association, the number of building permits from 2010 to 2018 shows that the market has not fully recovered.

From 1990 to 2010, Marinette County gained 4,729 housing units (Table 2.4), pictured left. The county and the municipalities have seen a lot of fluctuation in the number of housing units from decade to decade. Due to being the most populous municipality in the county, the City of Marinette has held the greatest percentage of housing units in the county over all decades from 1990 to 2010.



Marinette County

Occupied housing units
17,974

Owner occupied
13,889

Owned with a mortgage
8,048

Owned free/clear
5,841

Renter occupied
4,085



EMPLOYMENT CHARACTERISTICS

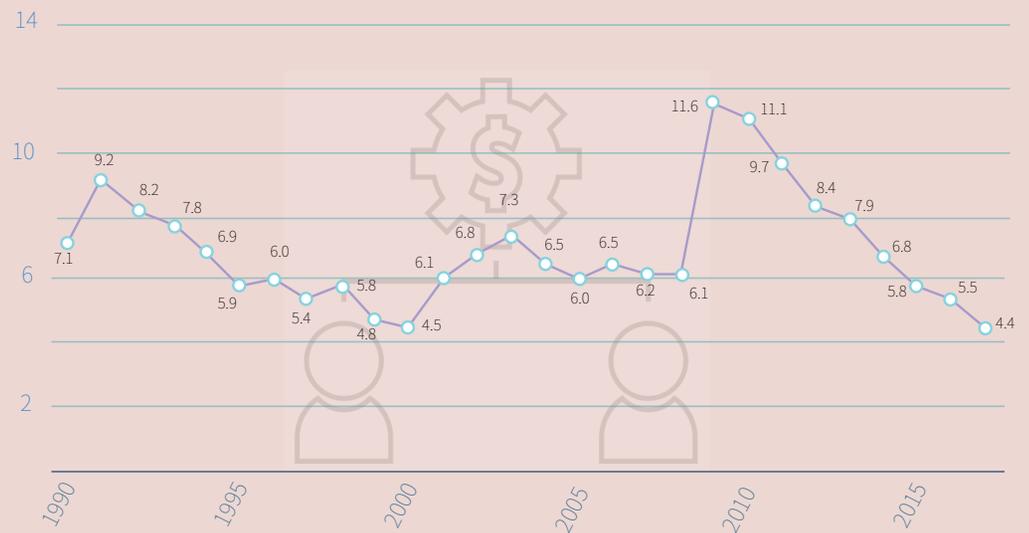
Marinette County has numerous large companies that employ thousands of people. In 2018, the State of Wisconsin created 120 economic opportunity zones, a designation under a new federal tax law created to increase development. The program creates a tax incentive for businesses and individuals to invest in these zones. In Marinette County, both Crivitz and Marinette were designated economic opportunity zones. Marinette Marine was founded in 1942 along the Menominee River in Marinette.

Shipbuilding is a major industry in the Marinette/Menominee area. Lockheed Martin Corp. and Marinette Marine Corp. received multiple multi-million dollar contracts to build Littoral Combat Ships at the Marinette shipyard. The State of Wisconsin awarded a \$5 million grant to develop the Wisconsin Maritime Center of Excellence and build strong economic growth for this and all industries in the county and region. Tyco Inc., another major employer in the region, has invested \$10 million in their Center for Excellence, creating hundreds of supplementary jobs. Tyco is increasing their Burn Division, opening 60 new jobs. Waupaca Foundry, Kimberly-Clark, KS Kolbenschmidt, ChemDesign and Aurora Medical Center Bay Area are also prominent employers in the market.

The economy of Marinette County employs 18,458 people, specialized in manufacturing, agriculture, forestry, fishing, hunting, and accommodation & food service, which employ more people than what would be expected in a location of this size. The largest employing industries are manufacturing, healthcare & social assistance, and retail trade. The highest paying industries are mining, quarrying, oil, gas extraction (\$60,000), utilities (\$58,542), and transportation & warehousing (\$35,096). Males in Marinette County have an average income that is 1.3 times higher than the average income of females, which is \$40,436. The income inequality of the county is 0.427, which is lower than the national average.

As a result of the recession that affected the entire country, there was a significant jump in the county's unemployed between 2008 and 2010. The unemployment rate in Marinette County has decreased steadily with the help of major employers in the region. The unemployment rate reached its highest level, 11.6 percent during this period (Table 2.5). Currently, the unemployment rate is among the lowest for the county since 2000. Civilian Labor Force is the sum of civilian employment and civilian unemployment. These individuals are civilians (not members of the Armed Services) who are age 16 years or older, and are not in institutions such as prisons, mental hospitals, or nursing homes. Changes in the age and sex characteristics of the population, changes in the number of residents aged 16 and over, and the proportion of this group working or seeking employment are all factors affecting the size of the labor force. The graph below helps illustrate the unemployment trends from 2000 – 2017.

Figure 2.2: Unemployment Rate in Marinette County



Source: U.S. Census Bureau American Community Survey (ACS), 2015.

Table 2.5 Average Civilian Labor Force Estimates, Marinette County

Year	Labor Force	Employment	Unemployment	Unemployment Rate
2017	20,044	19,155	889	4.4
2016	20,310	19,200	1,110	5.5
2015	20,762	19,558	1,204	5.8
2014	21,101	19,677	1,424	6.7
2013	21,452	19,753	1,699	7.9
2012	21,448	19,658	1,790	8.3
2011	21,527	19,440	2,087	9.7
2010	21,380	19,013	2,367	11.1
2009	22,450	19,854	2,596	11.6
2008	22,071	20,720	1,351	6.1
2007	22,337	20,942	1,395	6.2
2006	22,012	20,592	1,420	6.5
2005	22,349	21,000	1,349	6.0
2004	22,884	21,394	1,490	6.5
2003	23,390	21,675	1,715	7.3
2002	22,868	21,320	1,548	6.8
2001	22,637	21,257	1,380	6.1
2000	22,405	21,388	1,017	4.5

Source: Wisconsin Department of Workforce Development, Office of Economic Advisors, 2000-2017. BLRPC 2018.

GENERAL DEVELOPMENT PATTERN

Land and water resources are essential for farming, grazing, forestry, wildlife, tourism, development, transport infrastructure, and other environmental functions. The increasing demand for land, partnered with a limitation in its supplies, is a major cause for more conflicts over land use throughout the region.

Land-use planning is becoming complex and multidisciplinary as counties face multiple obstacles that need to be addressed within a single planning framework. Such problems include nonpoint-source pollution, water allocation, urbanization, ecosystem deterioration, climate change, deforestation, desertification, farmland deterioration, and low economic growth.

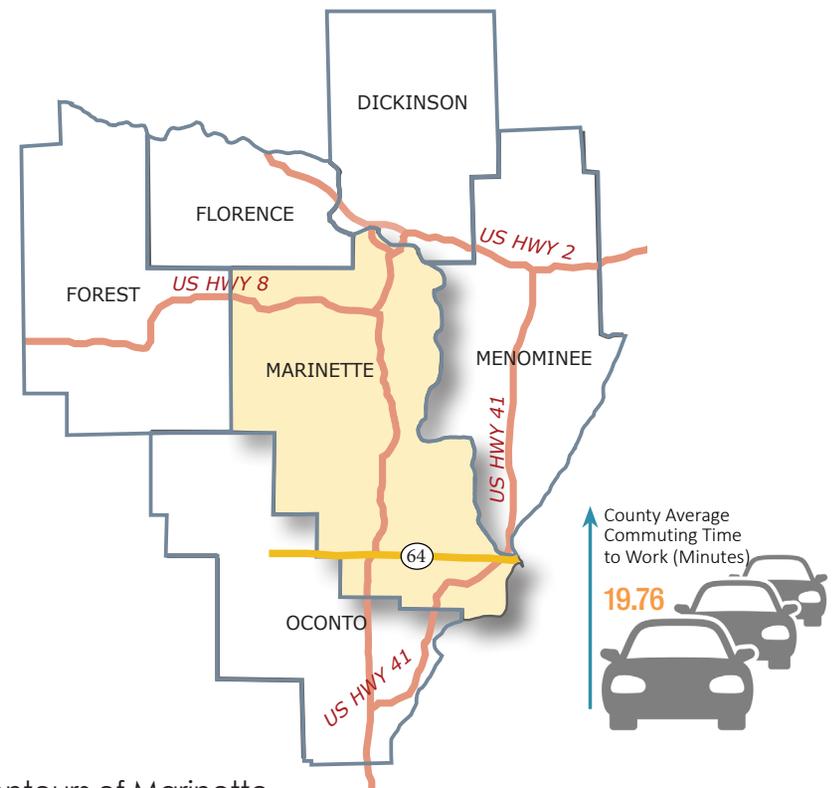
Land use management can be aided through GIS (geographic information systems), computer simulation, and spatial-temporal data modeling on present land use, alternative scenarios, and assessment of consequences. Using GIS, land use types were tabulated to calculate the total area of Marinette County at 914,286 acres, or approximately 1,430 square miles (Table 2.6). The vast majority of the county is comprised of natural areas (specifically woodlands) with 740,571 acres or 81% of the land. Agricultural land (crops and pasture) comprise 109,714 acres or 12%. Approximately 45,600 acres or about 5% of Marinette County is developed.



Table 2.6: Marinette County Land Use, 2008

Land Use Category	Acres	Percent of Total Land Use
Woodlands/Natural Areas	740,571	81%
Agricultural	109,714	12%
Water Features	20,114	2.2%
Roads	19,200	2.1%
Residential	12,800	1.4%
Parks and Recreation	4,571	0.5%
Open Space	2,742	0.3%
Transportation	1,828	0.2%
Mobile Homes	1,828	0.2%
Industrial	914	0.1%
Extractive Mining	914	0.1%
Commercial	914	0.1%
Communication/Utilities	914	0.1%
Government/Institutional	365	0.04%
TOTAL ACRES	914,286	100%

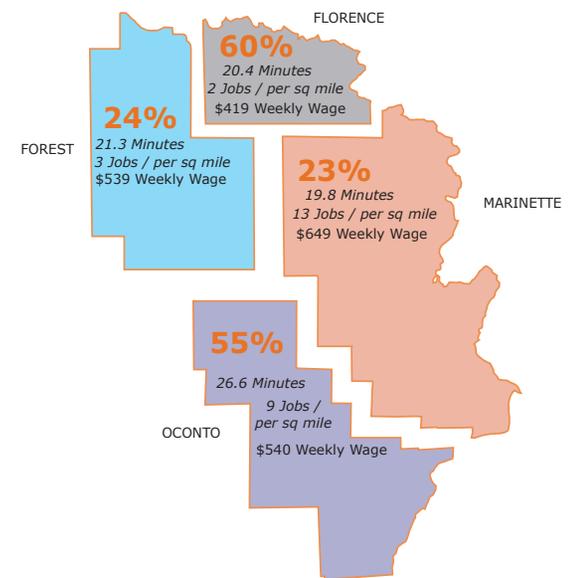
Source: Bay-Lake Regional Planning Commission, 2018.



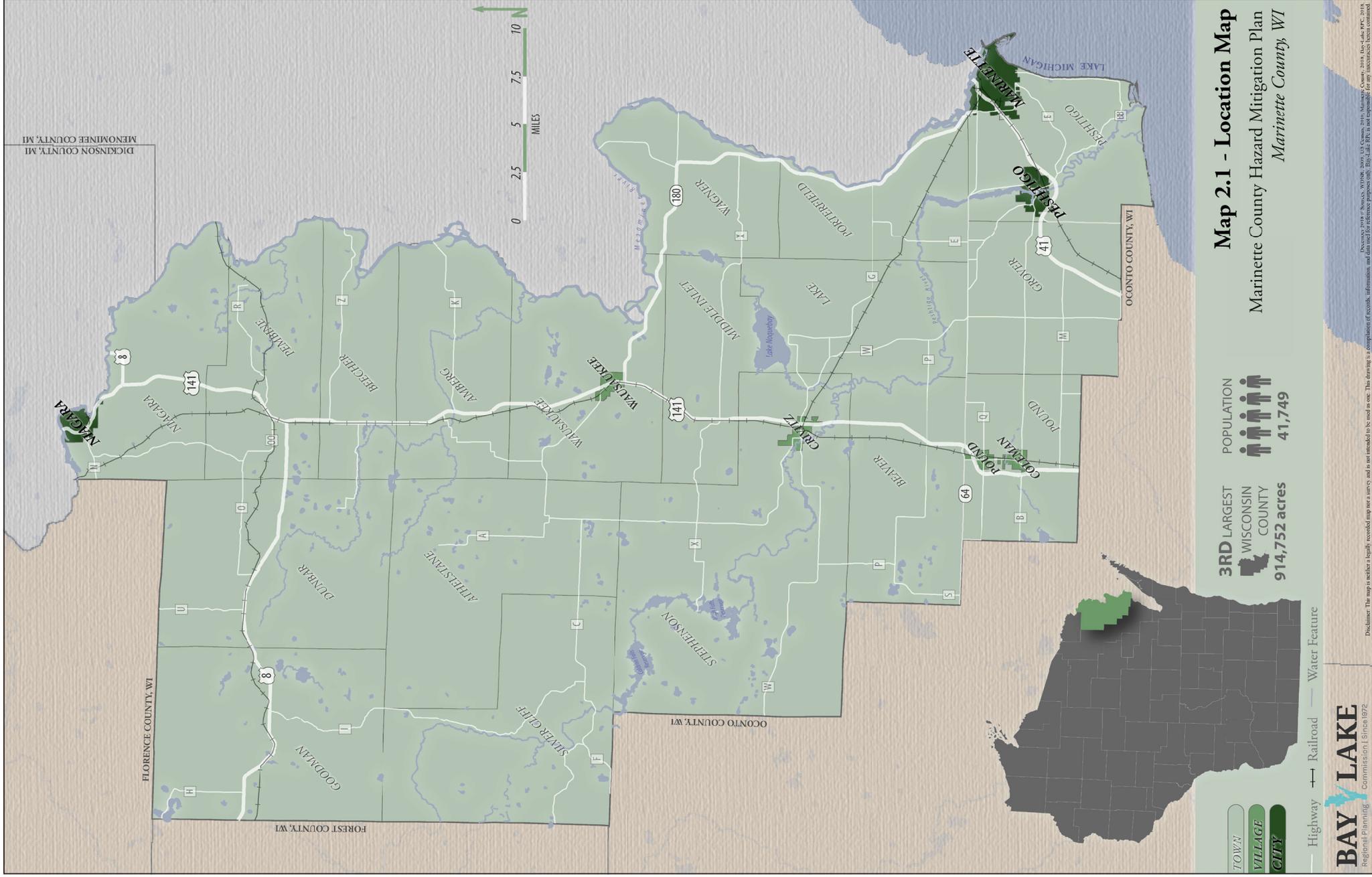
Commuting Patterns

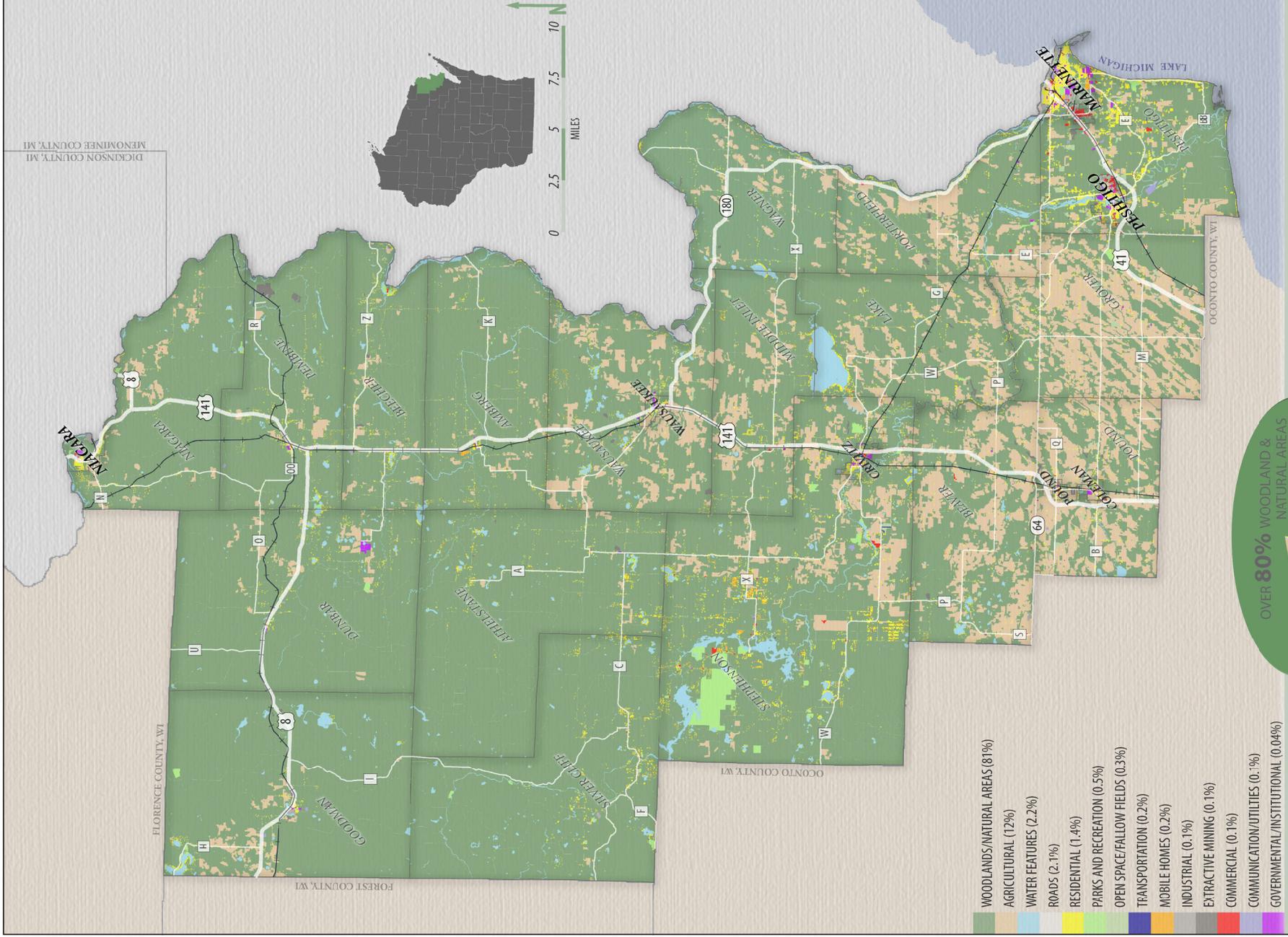
Census data reveals commuting patterns and flows to uncover the shape and contours of Marinette County's transportation. The information illustrates the residence/workplace relationship or an origin-destination combination. Commuting flows are created from home (place of residence) to work (primary place of work). It is important to know where people work by residence-based and workplace-based, this can aid future decisions regarding public health, and infrastructure. As well as understanding potential risks involved with infrastructure maintenance, and more sustainable options long-term. In Marinette County, 13,780 residents commute within the county, 4,453 commute to other counties, and approximately 1,279, commute within northeast Wisconsin to Marinette County. Health-wise, non-vehicle networks improve local air and water quality for the entire region, and local communities. As individuals choose to bike or walk to destinations such as work, school, shopping, or other purposes, greenhouse gas emissions will decrease and air quality will improve. Motor vehicles add to more than 50 percent of asthma triggers in urban areas, according to the Centers for Disease Control (CDC).

The transportation network of highways, rail, and water provide a basis of moving people, goods and services. The challenge is maintaining the infrastructure to efficiently and safely provide this function. To the north I-41 provides a route to Marinette and Florence Counties. The majority of people who work in Marinette County live in Marinette County; however, there are also a large number of people who live in Menominee County, MI, Oconto County, and Dickinson County, MI.



Source: U.S. Census Bureau American Community Survey (ACS), 2015.





Map 2.2 - Land Use
 Marinette County Hazard Mitigation Plan
 Marinette County, WI

TOWN
 VILLAGE
 CITY
 Highway Railroad

Disclaimer: This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information, and data used for reference purposes only. It may differ from the actual conditions shown on the ground. The drawing is not intended to be used as a legal document. The drawing is not intended to be used as a legal document. The drawing is not intended to be used as a legal document.

Chapter 3

Risk Assessment

A risk assessment has been prepared for Marinette County in order to provide an effective evaluation of potential hazard mitigation measures and develop useful strategies to address the risks associated with the identified natural hazards. The risk assessment identifies the hazards determined to pose the greatest risk to residents of the county, to profile the extent and severity of past natural hazard events that have affected the county, and to assess the vulnerability of the county to the risk of future natural hazard events.

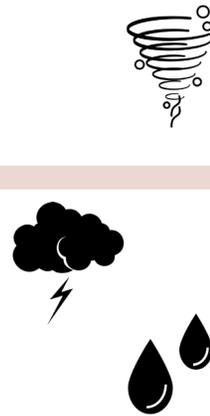


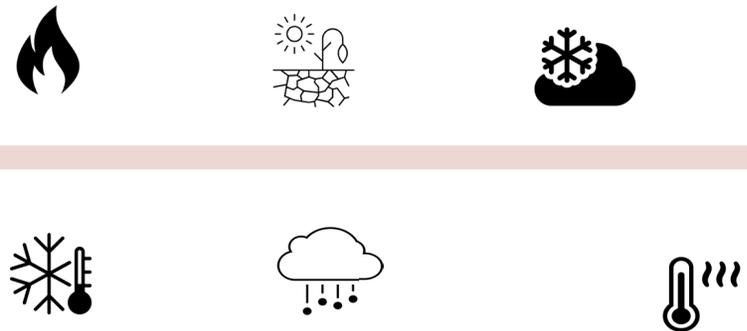
Table 3.1: Risk Assessment Ranking

Hazard	# of Events	Rank
Tornado/Strong wind	87	1
Lightning/Thunderstorm	4	2
Flooding	13	3
Winter storm	97	4
Drought	41	5
Hail	65	6
Wildland fire	1,199	7
Extreme cold	16	8
Excessive heat	0	9
Coastal hazards	ND	10
Dam failure flooding	0	11
Dense fog	2	12

Source: Marinette County Hazard Mitigation Plan Steering Committee, 2018.

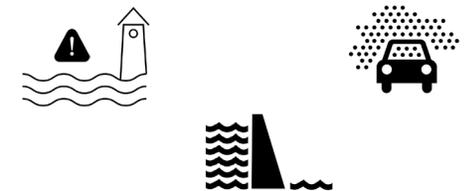
NATURAL HAZARD IDENTIFICATION

Although the county could potentially be at risk from several distinct hazards, this plan focuses on addressing the hazards that pose the greatest risk to people and property in the county. Identification of the natural hazards to be addressed was based on a query of the natural hazards that have impacted the county in the past, as determined from historical hazard occurrences data from the National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center (NCDC) and wildland fire data from the Wisconsin Department of Natural Resources (WDNR).



Hazard Risk Assessment Prioritization

To develop a hazard risk assessment prioritization for natural hazards, the steering committee participated in a consensus-based prioritization exercise. The steering committee used the number and frequency of occurrences, the number of injuries and deaths, the estimated costs of damages from the NCDC data, and professional knowledge and experience to guide the ranking of the natural hazards found in Table 3.2.



Ranking the potential risks associated with each natural hazard helped the steering committee prioritize the mitigation strategies that were addressed later in the process. The following natural hazards combined more than one listing from the NCDC data for consistency (the additional listings are provided in parenthesis).

- Tornado/Strong wind (includes thunderstorm wind, high wind, and funnel cloud);
- Lightning/Thunderstorm (includes heavy rain)
- Flooding (includes flash, riverine, lake, and stormwater flooding);
- Winter storm (includes heavy snow, ice storm, winter weather, and blizzard);
- Extreme cold (includes frost/freeze, cold/wind chill, and wind chill);



Natural Hazard Events Historical Summary

A query of historical hazard events from January 1, 2000 through June 30, 2018 (18.4 years) resulted in 1,420 events (Table 3-2). The data was compiled from NCDC and WDNR. NCDC publishes National Weather Service (NWS) data describing past weather events and the resulting deaths, injuries, and damages associated with each of these events. Event occurrence information is available at a local, county, or regional level – depending on the area covered by the hazard event. WDNR compile data annually on wildland fire occurrences.

The hazard occurrence data shows that of the 1,428 events, the hazards occurring most frequently in Marinette County from January 2000 to June 2018 include: wildland fire (1,199 events), winter storm (97 events), tornado/strong wind (87 events), and hail (65 events). Other hazard events in the county since 2000 include drought (41 events), extreme cold (16 events), flooding (13 events), lightning/thunderstorm (4 events), and dense fog (2 events).

Some of the recorded hazard events may not have been specific to Marinette County, as they may have been recorded for a larger regional area, or statewide. Additionally, some of the common hazard events, such as lightning, may only get reported to the NCDC if it was an extreme events that caused property damage, injury, or death.

There has been one death and one injury from natural hazards in Marinette County in the last 18 years. Both the death and the injury occurred from a tornado – the death from an August 2011 tornado, and the injury from a June 2007 tornado.

By far, the costliest hazard event in terms of property damage (including crop damage) since 2000 has resulted from flooding. Flooding has cost Marinette County a reported \$866,800 since 2000 – with approximately half of the damage resulting from a March 2004 event in the southern part of the county. Warm temperatures produced a significant, rapid snow melt causing many rivers to rise to near flood stage, combined with up to an inch of rainfall over the saturated ground. The Peshtigo River experienced moderate flooding and remained above flood stage into early April. Several dozen roads had to be closed. Numerous basements were flooded, and three homes sustained major structural damage.



Table 3.2: Natural Hazard Occurances Data, 2000-2018, Marinette County

Hazard	# of Events ^{1.}	Average #/Year	Risk ^{2.}	Deaths	Injuries	Property Damage ^{3.}
Tornado/Strong wind	87	5	Very High	1	1	\$246,000
Lightning/Thunderstorm	4	0	Low	0	0	\$100,000
Flooding	13	1	Moderate	0	0	\$866,800 ^{4.}
Winter storm	97	5	Very High	0	0	\$0
Drought	41	2	High	0	0	\$0
Hail	65	4	Very High	0	0	\$0
Wildland fire	1,199	65	Very High	ND	ND	ND
Extreme cold	16	1	Moderate	0	0	\$0
Excessive heat	0	0	Low	0	0	\$0
Coastal hazards	ND	0	Moderate	ND	ND	ND
Dam failure flooding	0	0	Low	0	0	\$0
Dense fog	2	0	Low	0	0	\$0
Total Events	1,524	--	--	1	1	\$1,212,800

ND = No data

1. January 1, 2000 to June 30, 2018 (18.4 years)

2. Risk Based on occurrences per year: Very High >3; High 2-3; Moderate 1; and Low <1

3. Does not factor in private losses for most occurrences

4. Includes \$200,000 in crop damage

Source: NOAA/NCDC, 2018; Wisconsin Department of Natural Resources, 2018; and Bay-Lake Regional Planning Commission, 2018.

Disaster Declaration History

There have been 20 major (federal) disaster declarations issued for Wisconsin since 2000. Marinette County was included in a FEMA disaster declaration in 2002 for flooding during June. In 2004 the County applied for and received a CDBG-EAP grant (for flooding) which Bay-Lake RPC assisted administering. Marinette County was also included in FEMA Disaster DR-4455 for the severe storm that impacted the southern portion of the County on July 19, 2019.

Other Natural Hazards Determined Not to Pose a Significant Risk; Earthquakes, landslides, and land subsidence have been determined to have minimal likelihood of occurring in Marinette County. Therefore, a full risk assessment for these hazards have been excluded, but are briefly described here.



Other Natural Hazards Determined Not to Pose a Significant Risk

Earthquakes, landslides, and land subsidence have impacted Wisconsin in the past, but have been determined to have minimal likelihood of occurring in Marinette County. Therefore, a full risk assessment for these hazards has not been included, but are briefly described here.

Earthquakes

According to the U.S. Geological Survey (USGS), there have been 19 earthquake events in Wisconsin. The closest of these to the county occurred in northern Ozaukee County (Lake Church) in 1956, as well as in Fond du Lac County in 1922. Where readings were available, these events were relatively small, most being 3.0 to 4.2 on the Richter Scale in intensity, and the largest being an intensity of 5.3 (Beloit, 1909), which may be strong enough to crack some plaster, but typically does not cause serious damage. Due to the lack of recent events, some geologists question whether many of these events were true earthquakes, but rather were quarry collapses, blasts, etc. The nearest active earthquake fault outside of Wisconsin is the New Madrid Fault, which stretches from northeast Arkansas to southern Illinois.

Marinette County falls within the lowest earthquake hazard shaking area, which represents the levels of horizontal shaking which have a 1-in-50 chance of being exceeded in a 50 year period. Similarly, Marinette County falls within a 0%g to 1%g peak ground acceleration (PGA) zone as shown on the USGS PGA values map with a 10 percent chance of being exceeded over 50 years. Therefore, the county is considered unlikely to be substantially affected by earthquakes in the long-term future. The earthquake threat to the county is very minimal.

Landslides

The term "landslide" includes a wide range of ground movement, including rock falls, deep failure of slopes and shallow debris flows. Although gravity acting on an overly steep slope is the primary reason for a landslide, there can be other contributing factors, such as erosion by rivers, excess weight from the accumulation of rain or snow, or man-made and other structures stressing weak slopes to the point of failure. In addition, slope material that becomes saturated with water may develop a debris flow or mudflow.

The U.S. Geological Survey Landslide Overview Map of the Conterminous United States identifies no large-scale landslide risks for most of the county. The majority of the land within the county does not involve steep slopes and does not pose a landslide risk. While there are steeper portions of the county, the soils involved pose more of a gradual erosion risk, as opposed to the sudden, large-scale movement of ground associated with landslide hazards. Hillside erosion (minor landslides) within the county is very uncommon, and is the result of man-made impacts, such as the removal of vegetation. Hillside erosion has not posed substantial risk to life or property, and has been largely mitigated through subdivision law, site plan review and erosion control plans for construction sites.

There are no records of substantial landslides occurring in Marinette County, and the threat from landslides is very low.

¹ Dutch, Steve; University of Wisconsin – Green Bay; <https://www.uwgb.edu/dutchs/GeologyWisconsin/wieqqs.htm>; 1999.

Land Subsidence

Land subsidence is an event in which a portion of the land surface collapses or settles. Common causes of subsidence are location in an area with karst topography or location in an area where large amounts of groundwater have been withdrawn. There are no records of substantial damage or injury from large landslides or land subsidence within the county, therefore they pose minimal threat to the county.



RISK AND VULNERABILITY ASSESSMENT

The risk and vulnerability assessment is intended for describing the frequency, severity, and probability of future occurrence of natural hazards that could impact the planning area. The following hazard profiles describe the characteristics of each natural hazard and how they have historically affected the population, infrastructure, and environment of the planning area, and the potential risk to the population and property.

Critical Facilities

Although the risk assessment focuses on the risk potential to the overall planning area, critical facilities are of particular concern. The function of critical facilities is to either preserve the health, welfare, and quality of life for residents in the county; or fulfill important public safety, emergency response, and/or disaster recovery functions; or to house vulnerable populations (such as schools, childcare, and manufactured housing communities).

Critical facilities in the planning area have been identified and mapped, and are illustrated in Map 3.3. Table 3.3 lists the types and number of critical facilities within the county.

The ANR Pipeline is also a critical facility in Marinette County, but has not been mapped due to the sensitivity of its specific location, as determined by the ANR Pipeline Company.



Table 3.3: Number of Critical Facilities by Type, Marinette County

Type	Count
Bridge	180
Communication Tower/Facility	51
Dry Hydrant/Fire Pond	43
Institutional/Government Facility	73
Hazmat	74
Healthcare Facility	36
Parks and Campground	33
Law Enforcement/Fire/Rescue	31
Utility	27
School (Primary & Secondary)	23
Water Supply Facility	23
Daycare	20
Manufactured Housing Community	21
Dam	19
Fuel Substation	19
Resident Health Care Facility	13
Wastewater Treatment Facility	6
Post-Secondary School	4
Temporary Emergency Gathering Center	5
Port Facility	3
Airport Facility	1
Military Installation	1
Total	706

Source: Bay-Lake Regional Planning Commission, 2019.

Hazard Profiles

The following pages contain hazard profiles describe the frequency, severity, and probability of future natural hazards that may have an impact on Marinette County. These hazard profiles attempt to historically describe the cause and characteristics of each natural hazard and how they have impacted the population, infrastructure, and environment of the county.

Potential risks are evaluated to determine their likelihood of reoccurrence and to gauge the impacts to the existing population and property that could occur as a result of these hazards.

Hazard probabilities are represented as very high, high, moderate, and low risk. Very high probability hazards are defined as hazards that occur an average of more than three incidents per year; high risk probability hazards are those that occur an average of two to three incidents per year; moderate risk probability hazards are those that occur an average of once per year; and low risk probability hazards occur less frequently than once per year.





Table 3.4: Tornado Magnitude Measurement, EF Scale

EF Rating	Wind Speeds	Expected Damage
EF-0	65-85 mph	<p>'Minor' damage: shingles blown off or parts of a roof peeled off, damage to gutters/siding, branches broken off trees, shallow rooted trees toppled.</p> 
EF-1	86-110 mph	<p>'Moderate' damage: more significant roof damage, windows broken, exterior doors damaged or lost, mobile homes overturned or badly damaged.</p> 
EF-2	111-135 mph	<p>'Considerable' damage: roofs torn off well constructed homes, homes shifted off their foundation, mobile homes completely destroyed, large trees snapped or uprooted, cars can be tossed.</p> 
EF-3	136-165 mph	<p>'Severe' damage: entire stories of well constructed homes destroyed, significant damage done to large buildings, homes with weak foundations can be blown away, trees begin to lose their bark.</p> 
EF-4	166-200 mph	<p>'Extreme' damage: Well constructed homes are leveled, cars are thrown significant distances, top story exterior walls of masonry buildings would likely collapse.</p> 
EF-5	> 200 mph	<p>'Massive/incredible' damage: Well constructed homes are swept away, steel-reinforced concrete structures are critically damaged, high-rise buildings sustain severe structural damage, trees are usually completely debarked, stripped of branches and snapped.</p> 

Description of Hazard

A tornado is a relatively short-lived storm comprised of an intense rotating column of air, extending from a thunderstorm cloud system. It is nearly always visible as a funnel, although its lower end does not necessarily touch the ground. Average winds in a tornado, although never accurately measured, are between 100 and 200 miles per hour, but some tornadoes may have winds in excess of 300 miles per hour.

A tornado path averages four miles, but may reach up to 300 miles in length. Widths average 300 to 400 yards, but severe tornadoes have cut swaths a mile or more in width, or have formed groups of two or three funnels traveling together. On average, tornadoes move between 25 and 45 miles per hour, but speeds over land of up to 70 miles per hour have been recorded. Tornadoes rarely last more than a couple of minutes in a single location or more than 15 to 20 minutes in a ten mile area, but their short periods of existence do not limit their devastation of an area.

Table 3.4 shows the Enhanced Fujita (EF Scale), which is recognized as the acceptable tornado magnitude measurement rating.

The destructive power of the tornado results primarily from its high wind velocities and sudden changes in pressure. Wind and pressure differentials probably account for 90 percent of the damage caused by tornadoes. Since tornadoes are generally associated with severe storm systems, they are usually accompanied by hail, torrential rain, and intense lightning. Depending on their intensity, tornadoes can uproot trees, down power lines and destroy buildings. Flying debris can cause serious injury and death. On the basis of 40 years of tornado history and more than 100 years of hurricane history, the United States has been divided into four zones that geographically reflect the number and strength of extreme wind storms. The zone which includes most of the southern two-thirds of Wisconsin (known as Zone IV) has experienced the most and the strongest tornado activity that has affected the entire U.S., with wind speeds of up to 250 miles per hour being recorded at some point. This zone includes the entire county for this Natural Hazards Mitigation Plan.

Wisconsin lies along the northern edge of the nation's maximum frequency belt for tornadoes (commonly known as "tornado alley"), which extends northeastward from Oklahoma into Iowa and then across to Michigan and Ohio. Generally, the southern and western portions of Wisconsin have a higher frequency of tornadoes; however, every county in Wisconsin has had tornadoes and is considered to be susceptible to a tornado disaster. Tornadoes have occurred in Wisconsin in every month except February. Wisconsin's tornado season runs from the beginning of April through September. The most severe tornadoes statewide typically occur during the months of April, May, and June. Many tornadoes strike in late afternoon or early evening. However, tornadoes have occurred during other times of the day. Personal property damage, deaths, and injuries have and will continue to occur due to tornado events in Wisconsin.

Previous Significant Hazard Occurrences

According to the NCDC, Marinette County has experienced 87 significant tornado/strong wind events (including thunderstorm wind, high wind, and funnel clouds) in the last 18 years from January 1, 2000 to June 30, 2018.

Hazard Frequency

Based on previous hazard occurrences as reported by the NCDC, Marinette County experiences approximately five significant tornado/strong wind events per year.

Probability of Hazard Occurring in the Future

Based on the hazard frequency, Marinette County is considered to have a **very high** probability of experiencing a tornado/strong wind event in any given year.

Areas at Greatest Risk

Tornadoes have no defined hazard area within the county. Past events have been relatively uniform across the planning area; however, manufactured home residents are often most vulnerable to death, injury, and property damage from tornadoes. Therefore, manufactured housing communities in the planning area are the areas of greatest risk from this hazard.



Impacts from Hazard

Death and Injury

One death and one injury have been reported from significant tornado/strong wind events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018, according to the NCDC data. The death occurred during an EF0 tornado event in Wausaukee on August 19, 2011. It also caused \$110,000 in property damages. The injury occurred during an EF1 tornado event in the unincorporated community of Harmony on June 7, 2007.

Structures at Risk

Although tornadoes strike at random, making all buildings vulnerable, there are three types of structures that are most likely to suffer damage. These structure types include manufactured homes, homes on crawlspaces (because they are more susceptible to lift), and buildings with large spans (such as airplane hangars, gymnasiums, warehouses, and factories).

Structures within the direct path of a tornado vortex are often reduced to rubble. However, structures adjacent to the path of the tornado are often severely damaged by high winds flowing into the tornado vortex (these winds are known as inflow winds). It is here, adjacent to the tornado's path, where the building type and construction techniques are critical to the structure's survival.

Similar to severe thunderstorms, street signs often face disrepair after tornadoes, and debris often litter streets and highways following a tornado, requiring clean-up. Downed trees caused by tornadoes can be problematic in terms of impacting infrastructure (transportation, sewer, water, etc.) as well as critical facilities.

Critical Facilities

Hospitals can see increases in patient load following tornadoes. Schools can sustain damage, and if they do not sustain damage, they often function as temporary shelters in the aftermath of tornadoes. Law enforcement and fire departments often see an increased workload during and after tornadoes. Powerlines and communication towers are at risk of being blown down.

Any critical facility in the planning area is capable of being hit. However, schools are a main concern for two reasons: (1) they have large numbers of people present, either during school or as a storm shelter; and (2) they have large span areas, such as gyms and theaters.

Economic Impacts

A tornado can have a significant economic impact to a local economy due to irrecoverable businesses and infrastructure damages. A heavily damaged business, especially one that was struggling to make a profit, often never reopens after the hazard event.

Infrastructure damage is usually limited to above ground utilities, such as power lines. Damage to utility lines can usually be repaired or replaced relatively quickly. Damage to roads and to railroads is also localized; if these facilities cannot be repaired promptly, alternate transportation routes are usually available.

Public expenditures include search and rescue, shelters, and emergency protection measures. The greatest public expenditures for a community result from repairs to public facilities, and clean up and disposal of debris. Most public facilities are insured, so the economic impact on the local treasury is likely to be small. Clean up and disposal can be a larger problem, especially if there is limited landfill capacity near the damage site.

Property Damage

Reported significant property damage from tornadoes for Marinette County has totaled approximately \$246,000 in property damages over the last 18 years from January 1, 2000 to June 30, 2018 according to the NCDC data.



Estimate of Potential Dollar Losses

Manufactured homes are especially vulnerable to tornadoes, a “worst case scenario” for a tornado/strong wind event would involve the total destruction of all manufactured homes in the county. In such a “worst case scenario,” the total destruction of all buildings and facilities in the 20 manufactured housing communities in Marinette County would result in estimated dollar losses of approximately \$6,353,000 plus with an additional estimated value of building contents of \$3,176,500 (calculated as 50 percent of the building value), for total estimate of potential dollar losses of \$9,529,500.

Lightning and Thunderstorm

Description of Hazard

Lightning and thunderstorms are most likely to happen in the spring and summer months and during the afternoon and evening hours, but can occur throughout the year and at all hours. The biggest threats from thunderstorms are lightning, high winds, and hail.

Lightning, which occurs during all thunderstorms, can strike anywhere. Generated by the buildup of charged ions in a thundercloud, the discharge of a lightning bolt interacts with the best conducting object or surface on the ground. The air in the channel of a lightning strike reaches temperatures higher than 50,000 degrees Fahrenheit. The rapid heating and cooling of the air near the channel causes a shock wave which produces thunder.

Thunderstorms winds include downburst winds and high winds. Downburst winds are strong, concentrated, straight-line winds created by falling rain and sinking air that can reach speeds of 125 miles per hour. High winds are high speeds winds that can be as damaging as a tornado, but remaining nearly straight line and are not the rotating column of air that is characteristic of a tornado.

Hailstones are ice crystals that form within a low pressure front due to warm air rising rapidly into the upper atmosphere and the subsequent cooling of the air mass. Frozen droplets gradually accumulate on the ice crystals until, having developed sufficient weight, they fall as precipitation. The size of hailstones is a direct function of the severity and size of the storm. Significant damage does not result until the hailstones reach 1.5 inches in diameter, which occurs in less than half of all hailstorms.

The National Weather Service classifies a thunderstorm as severe if its winds reach or exceed 58 miles per hour, produces a tornado, or drops surface hail at least 0.75 inch in diameter. Compared with other atmospheric hazards (such as tropical cyclones and winter low pressure systems), individual thunderstorms affect relatively small geographic areas. The average thunderstorm system is approximately 15 miles in diameter, covers 75 square miles, and lasts less than 30 minutes at a single location. However, weather monitoring reports indicate that coherent thunderstorm systems can travel intact for distances in excess of 600 miles.

Previous Significant Hazard Occurrences

According to the NCDC, Marinette County has experienced four significant lightning/thunderstorm events (including heavy rain) in the last 18 years from January 1, 2000 to June 30, 2018.

Hazard Frequency

Based on previous hazard occurrences as reported by the NCDC, Marinette County experiences approximately one significant lightning/thunderstorm event every four years. There are, of course, many other unrecorded events of lightning/thunderstorms that may not cause any damage or injuries.

Probability of Hazard Occurring in the Future

Based on the hazard frequency, Marinette County is considered to have a low probability of experiencing a lightning/thunderstorm event in any given year.

Areas at Greatest Risk

Based on review of the historic patterns of lightning and thunderstorms, there are no specific areas that are a higher than average risk. The events are relatively uniform throughout Marinette County. However, manufactured home residents are often most vulnerable to death, injury, and property damage from lightning and thunderstorms. Therefore, manufactured housing communities in the planning area are the areas of greatest risk from this hazard.

Impacts from Hazard

Death and Injury

No deaths or injuries from severe lightning/thunderstorms have been reported for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018, according to the NCDC data.

Structures at Risk

Mobile homes are at a high risk to damage from thunderstorms. Garages are also frequently damaged by thunderstorms. Wind and water damage can result when windows are broken by flying debris or hail. Lightning can cause direct damage to structures (especially those without lightning protection systems), and can cause fires that damage trees and structures. In addition, hail can inflict severe damage to roofs, windows, and siding, depending on hailstone size and winds. Downed trees and limbs cause frequent damage to structures during lightning and thunderstorms.

Critical Facilities

Hospitals can see increases in patient load with sufficiently severe lightning and thunderstorms. Schools can sustain damage, and if they do not sustain damage, they often function as temporary shelters in the aftermath of severe thunderstorms. Law Enforcement and fire departments often see an increased workload during and after lightning/severe thunderstorms. Emergency operations can be disrupted as lightning and thunderstorms affect radio and cellular communications, as antennas are a prime target for lightning.

Property Damage

Reported property damage from significant lightning/thunderstorm (including heavy rain) for Marinette County has totaled approximately \$100,000 over the last 18 years from January 1, 2000 to June 30, 2018 according to the NCDC data.

Estimate of Potential Dollar Losses

An estimate of potential dollar losses cannot be calculated for lightning/thunderstorms, since no vulnerable structures have been identified. Based on previous damages reported by the NCDC, property damages from lightning/thunderstorms has been minimal over the past 18 years.

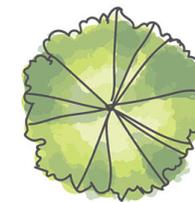
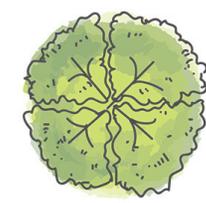
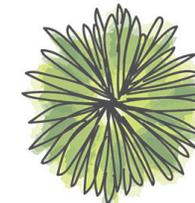
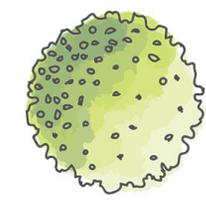
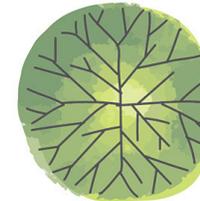
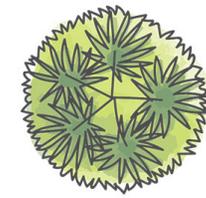
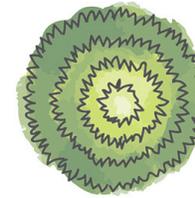
Flooding

Description of Hazard

Floods happen when the water draining from a watershed, whether from rainfall or melting snow, exceeds the capacity of the river or stream channel to hold it. Water overflows onto the nearby low-lying lands (floodplains). In hilly and mountainous areas flooding is likely to be rapid, deep, and dangerous. In relatively flat floodplains, land may stay covered with shallow, slow moving water for days or even weeks.

Stormwater Flooding

The waterways and stormwater drainage systems provides essential flood protection. Stormwater drainage systems cope well with most storms. However, occasionally storms, such as flash floods can occur of such intensity that not all the stormwater can get into the drains at once and flooding occurs. Flash floods happen when a large amount of rain falls in a localized area over a very short period. These localized storms are generally beyond the capacity of any drain, and it would not be economically feasible to design drains to cater for these very large, but infrequent storms. In addition, localized stormwater flooding can occur if drains in the area are blocked. It is important to keep the drainage system clear of litter and debris to avoid blocked drains. This is also necessary to protect and improve the health of Marinette County's waterways. Today, new developments and redevelopments incorporate stormwater management measures such as stormwater detention and retention basins that provide greater flood protection. Detention basins slow the flow of stormwater being carried in the drainage system by storing it for a time, while retention basins (i.e. ponds) hold water during most of the year. Detention basins often double as parks and playing fields.



Previous Significant Hazard Occurrences

According to the NCDC, Marinette County has experienced 13 significant flooding events (including flash flood) in the last 18 years from January 1, 2000 to June 30, 2018.

Hazard Frequency

Based on previous hazard occurrences as reported by the NCDC, Marinette County experiences approximately one significant flooding event per year.

Probability of Hazard Occurring in the Future

FEMA uses the “base” flood as the basis for its regulatory requirements and flood insurance ratings. The hazards mitigation plan also uses the base flood for planning purposes. The base flood is the one percent chance flood, or the flood that has a one percent (one out of 100) chance of occurring in any given year. The one percent chance flood is commonly referred to as the “100-year flood.”

Based on the hazard frequency, Marinette County is considered to have a moderate probability of sustaining a 100-year flood in any given year.

Areas at Greatest Risk

The areas at greatest risk from flooding include the “100-year floodplain” areas of Marinette County. FEMA Flood Insurance Rate Maps also call this the Special Flood Hazard Area, or “A Zone.” The base floodplains for the planning area are shown in Map 3.1. Properties that potentially lie within the floodplain and would be affected by the 100-year flood are shown in Map 3.2.



Impacts from Hazard

Death and Injury

No death or injuries from flooding has been reported for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018, according to the NCDC data.

Structures at Risk

Analysis of the data used to produce Map 3.2 indicates that 4,845 buildings could potentially be impacted by the base flood in the planning area.

A review of FEMA flood loss statistics from January 1, 1978 through September 30, 2018, indicates that there were six paid claims in Marinette County in the amount of \$24,044.06 (FEMA National Flood Insurance Program, W2RC1040).

Repetitive Loss Properties

According to FEMA, there are no repetitive loss properties in Marinette County. Repetitive loss structure is a term that is usually associated with the National Flood Insurance Program (NFIP) to describe a structure, covered by a contract of flood insurance under the NFIP, that has suffered flood damage on two or more occasions over a 10-year period ending on the date when a second claim is made, in which the cost to repair the flood damage, on average, equals or exceeds 25 percent of the market-value of the structure at the time of each flood loss event. For the Community Rating System (CRS) of the NFIP, a repetitive loss property is any property, which the NFIP has paid two or more flood claims of \$1,000 or more in any, given 10-year period since 1978. A repetitive loss structure is important to the NFIP, since structures that flood frequently put a strain on the flood insurance fund. It should also be important to a community because residents' lives are disrupted and may be threatened by the continual flooding.

Critical Facilities

Analysis of the GIS data used to produce Map 3.4, indicates that there are 209 critical facilities located within 100-year floodplains in Marinette County. Table 3.5 lists the critical facility types of those facilities potentially within the 100-year floodplains.

Table 3.5: Critical Facilities within the 100-Year Floodplains, Marinette County

Type	Count
Bridge	127
Dry Hydrant/Fire Pond	28
Dam	13
Parks and Campground	8
Utility	7
Hazmat	5
Communication Tower/Facility	2
Port Facility	2
School (Primary & Secondary)	1
Institutional/Government Facility	1
Total	194

Source: Bay-Lake Regional Planning Commission, 2019.



Property Damage

Reported significant property damage from flooding in Marinette County has totaled approximately \$666,800 over the last 18 years from January 1, 2000 to June 30, 2018 according to the NCDC data.

Value of Structures at Risk

The value of all at-risk structures is estimated at \$516 million. This information was obtained from Marinette County database on improved values of real property. The parcel map and the 100-year floodplains were merged to determine at-risk structures in the planning area.

Transportation Route Interruptions

Loss of road access is a major flood impact that affects all residents and businesses, not just those who own property in the floodplain. Sometimes, the loss is temporary, such as during a flood. However, on some occasions, the loss of transportation lasts well after the disaster. When a flood washes out roads, bridges, or railroads, it can be weeks or months before they are repaired. A key evacuation and safety concern is when roads and bridges submerge under water.

Analysis of the GIS data indicates that there are 127 bridges that could potentially be underwater during a base flood. There may be a number of additional bridges in areas that are not included in the mapped 100-year flood zones, such as areas located along small tributary streams.

Estimate of Potential Dollar Losses

“Vulnerable structures” are those structures located in the 100-year flood hazard area identified in Map 3.1. Since there is no reliable building height data for buildings in these flood hazard areas, a “worst case scenario” of total structural damage for buildings in all of the flood zones of the planning area was assumed in estimating potential dollar losses to vulnerable structures. Building height/elevation data should be collected in the future in order to better assess the risks of damage to structures because of the flood hazard. It is estimated that over \$516 million in losses would occur in a “worst case scenario” of total structural damage for buildings in all of the 100-year flood zones in the county. This information was obtained from a Marinette County database on assessed values of real property. This only involves damage to structures themselves, and may not account for damage to personal property inside or adjacent to vulnerable structures. In addition, there may be areas outside the 100-year flood zones that will flood during an event of that magnitude (or even of lesser magnitude); this planning process has no way of knowing the susceptibility of flooding outside of flood events that have been previously mapped by other governmental agencies.

Development in Areas Subject to Flooding

Development in floodplains, watersheds, and natural resource areas has been kept to a minimum in recent years through zoning. Marinette County has a Shoreland and Wetland Ordinance, and a Floodplain Ordinance. These ordinances can be useful tools in keeping inappropriate development out of many flood hazard zones in the county.

NFIP Participation

Marinette County has participated in the FEMA National Floodplain Insurance Program (NFIP) since August 1974 by adopting and enforcing floodplain management ordinances to reduce future flood damage. In exchange, the NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in the county.

Additionally, the following incorporated communities are also participating in the NFIP:

- City of Marinette since July 1973
- City of Niagara since February 1974
- City of Peshtigo since December 1973
- Village of Coleman since May 1974
- Village of Wausaukee since May 1974



Not Participating in NFIP

The villages of Crivitz and Pound are not participating in NFIP. Since there are no special flood hazard areas (SFHAs) within their municipal boundaries, these communities were not provided a floodplain map, and have not been asked to participate in the NFIP.



Winter Storm

Description of Hazard

Winter storms can vary in size and strength, and can include heavy snow storms, blizzards, freezing rain, sleet, ice storms and blowing and drifting snow conditions. Extremely cold temperatures accompanied by strong winds can result in wind chills that cause bodily injury such as frostbite and death. Winter storms can occur as a single event or they can occur in combination, which can make an event more severe. For example, a moderate snowfall could create severe conditions if it were followed by a freezing rain and subsequent extremely cold temperatures. The aftermath of a winter storm can impact a community or region for weeks, and even months.

A variety of weather phenomena and conditions can occur during winter storms. For purposes of classification, the following are National Weather Service approved descriptions of winter storm elements:

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.

Winter Storm – the occurrence of heavy snowfall accompanied by significant blowing snow, low wind chills, sleet or freezing rain.

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.

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.

Wind chill – an apparent temperature that describes the combined effect of wind and low air temperatures on exposed skin.



Much of the snowfall in Wisconsin occurs in small amounts of between one and three inches per occurrence. Heavy snowfalls (producing at least eight to ten inches of accumulation) happen on the average only five times per season.

True blizzards are rare in Wisconsin, and are more likely to occur in northwestern Wisconsin than in southern portions of the state, even though heavy snowfalls are more frequent in southeastern Wisconsin. However, blizzard-like conditions often exist during heavy snow storms when gusty winds cause the severe blowing and drifting of snow.

Both ice and sleet storms can occur at any time throughout the winter season from October into April. Early- and late-season ice and sleet storms are generally restricted to northern Wisconsin. Otherwise, the majority of these storms occur in southern Wisconsin.

In a typical winter season, there are three to five freezing rain events, and a major ice storm occurs on a frequency of about once every other year. If a half inch of rain freezes on trees and utility wires, extensive damage can occur, especially if accompanied by high winds that compound the effects of the added weight of the ice. There are also between three and five instances of glazing (less than one quarter inch of ice) throughout Wisconsin during a normal winter.

Winter storms present a serious threat to the health and safety of affected citizens, and can result in significant damage to property. This can occur when the heavy snow or accumulated ice causes structural collapse of buildings, downs power lines, severely affects electrical power distribution, or cuts off people from assistance or services. Winter storms in Wisconsin are caused by Canadian and Arctic cold fronts that push snow and ice deep into the interior of the United States.

Previous Significant Hazard Occurrences

According to the NCDC, Marinette County has experienced 97 significant winter storm events (including heavy snow, ice storm, winter weather, and blizzard) in the last 18 years from January 1, 2000 to June 30, 2018.

Hazard Frequency

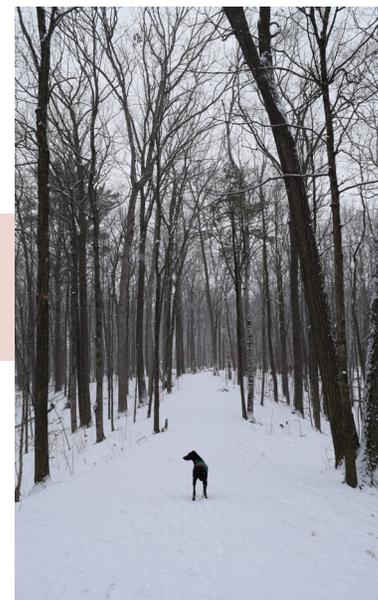
Based on previous hazard occurrences as reported by the NCDC, Marinette County experiences approximately five significant winter storm events per year.

Probability of Hazards Occurring in the Future

Based on the hazard frequency, Marinette County is considered to have a very high probability of experiencing a winter storm event in any given year. Winter storms tend to be a regional phenomenon in that they affect much of northeastern Wisconsin on nearly all of the occasions in which they affect Marinette County.

Areas at Greatest Risk

Winter storms have no defined hazard area within the planning area. Past events have been relatively uniform across the planning area or the larger regional area.



Impacts from Hazard

Death and Injury

No deaths or injuries have been reported from significant winter storm events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018 according to the NCDC data.

Structures at Risk

Occasionally, heavy snow or accumulated ice will cause structural collapse of buildings (particularly roofs), but most buildings are now constructed with low temperatures, snow loads and ice storms in mind. In addition, with the modern focus on energy conservation, buildings are much better insulated than they were in the past. Therefore, for the most part, winter storms do not have a major impact on buildings in the planning area.

The major impacts of winter storms on infrastructure are to utilities and roads. Power lines and tree limbs can be coated with heavy ice in some winter storms, resulting in disrupted power and telephone service, often for days. Cable and satellite television services can also be negatively impacted in certain winter storm events. In the case of transportation, even small accumulations of ice can be extremely dangerous to motorists and pedestrians. Bridges and overpasses are particularly dangerous because they freeze before other surfaces.

Critical Facilities

Street and road crews have an increased burden of snow removal (and salting in the case of ice storms) during and after winter storms. In some cases, winter storms can be so severe that these crews have to be called off the road for a period of time.

Hospitals and clinics can treat additional patients for frostbite, pedestrian and vehicular accident injuries, and conditions resulting from the shoveling of heavy snow during and following winter storms. Sometimes, these very hospitals and clinics have difficulty getting their own staff to report to work because of the storm, which increases the work load for the staff who is already there (double shifts, etc.). Law enforcement department staff needs to respond to more accidents. Utility and telephone companies need to respond to downed electrical and telephone lines, especially in the case of ice storms. Rescue services can receive more calls because of accidents or health related circumstances. Schools may need to have early dismissal or cancel classes altogether. Shelters may take in additional homeless persons during winter storm events as well, although this has been less of an issue in Marinette than it has been in larger cities.

Economic Impacts

Loss of power often means that businesses and manufacturing concerns must close down. Loss of access due to snow or ice covered roads can have a similar effect, especially when trucks cannot travel on major thoroughfares to make "just in time" deliveries to business and industry in the planning area. The effects are particularly difficult when the storm is widespread.

Property Damage

No significant property damages have been reported from winter storm events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018 according to the NCDC data.

Estimate of Potential Dollar Losses

An estimate of potential dollar losses cannot be calculated for winter storm events, since no vulnerable structures have been identified. Based on previous damages reported by the NCDC, property damages from winter storms has been minimal over the past 18 years.

Description of Hazard

A drought is an extended period of unusually dry weather, which may be accompanied by extreme heat. There are basically two types of drought in Wisconsin: agricultural drought and hydrologic drought. Agricultural drought is a dry period of sufficient length and intensity that markedly reduces crop yields. Hydrologic drought is a dry period of sufficient length and intensity to affect lake and stream levels as well as the height of the groundwater table. These two types of drought may, but do not necessarily, occur at the same time. The severity of a drought depends on a number of factors including duration, intensity, geographic extent, and regional water supply demands by humans and vegetation. In general, droughts have the greatest impact on agriculture. Small droughts of limited duration can significantly reduce crop growth and yields. More substantial drought events can decimate croplands and can result in a total loss. Droughts can also greatly increase the risk of wildland fires because of extreme dryness. In addition, the loss of vegetation in the absence of sufficient water can result in flooding, even from average rainfall, following drought conditions.

Previous Significant Hazard Occurrences

According to the NCDC, Marinette County has experienced 41 significant drought events in the last 18 years from January 1, 2000 to June 30, 2018.

Hazard Frequency

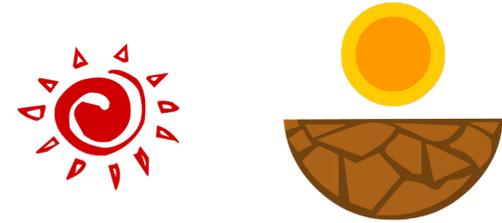
Based on previous hazard occurrences as reported by the NCDC, Marinette County experiences approximately two significant drought events per year.

Probability of Hazards Occurring in the Future

The future incidence of drought is highly unpredictable, as its occurrence is based on weather patterns, making it difficult to determine probability with any accuracy. Droughts tend to be a regional phenomenon in that it affects much of northeastern Wisconsin on nearly all of the occasions in which it affects Marinette County. However, based strictly on the hazard frequency, Marinette County is considered to have a **high** probability of experiencing a drought event in any given year.

Areas at Greatest Risk

Droughts have no defined hazard area within the planning area. Past events have been relatively uniform across the planning area. However, agricultural croplands are most vulnerable to losses from drought events; Marinette County contains 109,714 acres of agricultural lands.



Impacts from Hazard

Death and Injury

No deaths or injuries have been reported from significant drought events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018, according to the NCDC data.

Structures at Risk

There are no direct impacts to structures from a drought event. In terms of infrastructure, droughts have the most impact on municipal water supplies. Droughts will likely cause a shortage of water for human, industrial, and agricultural consumption, as wells and other water reserves may dry up. Also, water quality is often an issue before and after a drought event, which may place an additional burden on wastewater treatment facilities.

Critical Facilities

In drought conditions, water shortages may occur and affect the amount of water available for human consumption. Hospitals may be called upon to treat individuals suffering from dehydration as a result. Parks that provide recreational water facilities are likely to experience increased usage during times of drought as well. There are few other direct impacts on critical facilities as a result of drought conditions. However, droughts can trigger other natural and man-made hazards, such as wildland fires and post-drought flooding, which can have an impact on these facilities.

Economic Impacts

Wisconsin is most susceptible to agricultural drought. Even small droughts of limited duration can significantly reduce crop growth and yields, which adversely affects farm income. Substantial drought events can lead to complete crop decimation, resulting in total loss. During severe drought periods farmers are often forced to seek financial assistance from the government to supplement lost income.

Livestock can also be adversely affected by droughts. Lack of water can lead to animal deaths. In addition, as drought conditions are often accompanied by periods of prolonged sunshine and high temperatures, animals are at risk to overexposure and heatstroke. Death of livestock can also lead to substantial loss of income for farmers. Drought can also affect local commercial and industrial businesses. During times of severe drought, limitations are often placed on water usage. These limitations could have a negative impact on businesses such as car washes and landscapers as they will likely be unable to provide services to their customers. It is also likely that areas depending on tourism will see fewer people traveling to their area in times of drought. Industries which utilize large amounts of water in processing materials may also be subject to these limitations, which could potentially reduce their production capabilities.

Property Damage

No significant public property damages have been reported from drought events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018 according to the NCDC data.

Estimate of Potential Dollar Losses

Agricultural croplands are most vulnerable to losses from drought events. A “worst case scenario” would involve the total destruction of all 109,714 acres of agricultural lands in the county (based on land use data shown in Land and water resources are essential for farming, grazing, forestry, wildlife, tourism, development, transport infrastructure, and other environmental functions.

The USDA conducts a Census of Agriculture every 5 years based on a sample of farms to estimate the market value of agricultural land and buildings. Based on the 2007 Census of Agriculture, the average value per acre of agricultural land in Marinette County was \$2,691. Therefore, it is estimated if this “worst case scenario” were to occur, the total destruction of all agricultural land in Marinette County would cause a loss of \$295 million.



Description of Hazard

A severe thunderstorm can produce frozen precipitation, or hail. Hailstones are ice crystals that form within a low-pressure front due to warm air rising rapidly into the upper atmosphere and the subsequent cooling of the air mass. Frozen droplets gradually accumulate on the ice crystals until they develop sufficient weight and fall as precipitation. The size of hailstones is a direct function of the severity and size of the storm. Significant damage does not result until the hailstones reach 1.5 inches in diameter, which occurs in less than half of all hailstorms. Hail in Wisconsin ranges from pea-sized to golf ball-sized. Area coverage of individual hailstorms is highly variable and spotty because of the unstable nature of cumulonimbus clouds.

Previous Significant Hazard Occurrences

According to the NCDC, Marinette County has experienced 65 significant hail storm events in the last 18 years from January 1, 2000 to June 30, 2018.

Hazard Frequency

Based on previous hazard occurrences as reported by the NCDC, Marinette County experiences approximately four significant hail storm events per year.

Probability of Hazard Occurring in the Future

Based on the hazard frequency, Marinette County is considered to have a very high probability of experiencing a significant hail storm event in any given year.

Areas at Greatest Risk

Hail storms have no defined hazard area within the planning area. Past events have been relatively uniform across the planning area or the larger regional area.

Impacts from Hazard

Death and Injury

No death or injuries from hail storms has been reported for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018, according to the NCDC data.

Structures at Risk

Hail can inflict severe damage to roofs, windows, and siding, depending on hailstone size and winds.

Critical Facilities Hail can inflict severe damage to roofs, windows, and siding of critical facilities, depending on hailstone size and winds.

Economic Impacts

Hail can damage or destroy crops. Taller crops, such as corn are particularly vulnerable to hail. Costly damage can occur to roofs, windows, and siding, as well as automobiles, RVs, and boats (including the body, paint and windshields and other windows).

Property Damage

No significant public property damages have been reported from hail events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018 according to the NCDC data.

Estimate of Potential Dollar Losses

An estimate of potential dollar losses cannot be calculated for hail storm events, since no vulnerable structures have been identified. Based on previous damages reported by the NCDC, property damages from hail storms has been minimal over the past 18 years.



Wildland Fire



Source: State Historical Society of Wisconsin.
Reference: Pam 57-1251, F902 P22 / MA

Description of Hazard

A wildland fire is any instance of unplanned burning in forests, woodlands, brush, marshes, grasslands, or field lands. Typical causes of these fires are lightning, human carelessness, or arson. In Marinette County, and Wisconsin as a whole, debris burning results in over 2/3's of wildland fires. Peak "fire season" occurs immediately after the snow melts and lasts through green up, typically March through May. However, forest fires can and do occur all months of the year that there is not complete snow cover. The county has large expanses of forested areas that could be susceptible to wildland fires. Wildland fires can occur at any time of the year and during any time of the day. The primary factors that can contribute to the start of a wildland fire are land use, vegetation, amount of combustible materials present, and weather conditions such as wind, low humidity, and lack of precipitation. Generally, fires are more likely when vegetation is dry from a winter with little snow or a spring and summer with sparse rainfall. As fires remain a possibility, fire stations in Marinette County are prepared to respond in accordance with established response procedures, while local zoning setback controls and building codes provide additional mitigation measures.

Previous Significant Hazard Occurrences

The annual fire occurrence in Marinette County is one of the highest in the state. From 2000-2018, an average of 67 fires were reported and suppressed annually in Marinette County. Annual occurrence during the past 18 years has ranged from a low of 28 fires to a high of 94. Several of those fires were over 100 acres in size (112-acre peat fire in 2011 and a 275-acre fire in 2007). An additional fire that occurred was the 103 acre Blue Bird Fire that burned a Marinette County jack pine plantation in August of 2015. According to the WDNR, Marinette County has experienced a total of 1,199 wildland fire events of various sizes (with the average being one acre) in the last 18 years from January 1, 2000 to June 30, 2018. Historically, Marinette County was impacted by the 1,912 acre Huigen Lake Fire on May 11, 1953. This fire burned west of High Falls Flowage in the Town of Stephenson and consumed six cabins plus one garage. The fire was the result of a landowner burning off his dump site. Several days later in 1953, Marinette County experienced a 806 acre fire in Athelstane and a 382 acre fire in Dunbar. These fires burned in more remote areas and less information on them has been documented.

The Great Peshtigo Fire of 1871

On the evening of October 8, 1871, Peshtigo, then a booming town of 1,700 people, was destroyed in the worst recorded forest fire in North American history. The fire raged through Northeastern Wisconsin and Upper Michigan, taking between 1,200 and 2,400 lives, and destroying millions of dollars' worth of property and forestland. (Source: Hipke, DC. <http://www.peshtigofire.info/>.) Although the perfect storm of drought, land clearing activities, and inefficient suppression technology that resulted in the Great Peshtigo Fire nearly 150 years ago is unlikely to occur again, wildland fire continues to be a very high risk in Marinette County.

Hazard Frequency

Based on previous hazard occurrences as reported by the WDNR, Marinette County experiences approximately 67 wildland fire events per year.

Probability of Hazard Occurring in the Future

According to the WDNR, Marinette County lies within an “intensive protection area.” Intensive protection areas are the most heavily forested and contain the most fire hazards and risk in the state. They have more DNR fire suppression resources and ranger stations. Fire detection is no longer accomplished with fire towers, but instead the DNR relies on an increased presence of aerial detection and citizen reporting. The most restrictive debris burning laws are in effect, which are regulated by the DNR and require a burning permit for debris burning whenever the ground is not snow covered throughout the year. Overall, the probability of a wildland fire occurring is very high for the county.

Areas at Greatest Risk

Wisconsin DNR has classified “communities at risk” and “communities of concern” for wildland fires throughout the state. The risk classifications include low risk, community of concern, high risk, and very high risk.

Nearly all of Marinette County has been classified as a community at risk or community of concern, with just three towns (Grover, Pound, and Wagner) and all seven cities and village in the county not considered to be a community at risk or a community of concern. Wildland fires can still occur in these areas, but are not expected to become a large-scale fire (i.e., more than 2 square miles in size).

One community, the Town of Stephenson, has been classified as a very high risk community. Table 3.6 lists the communities with wildfire risks, their size, and the acres of woodland. Areas of greatest risk from wildland fire include the Very High, High, and Concern communities (Map 3.6). Marinette County contains 649,735 acres of woodlands within these wildfire risk areas (based on 2008 land use data). The Town of Stephenson has recognized that they are a very high risk community and have taken steps to alleviate that risk. The Town of Stephenson has been enrolled in a Community Wildfire Protection Plan since 2010. As part of this plan the Town and Wisconsin DNR work together to identify and mitigate fire risk within the Town. The plan is reviewed every 5 years, and received a complete re-write and update to enter into the 2020’s. This document is available to the public and located on the Town website.

Within the Town of Stephenson the Thunder-Island-Eagle Lake Association (TIE Lakes) has become a nationally recognized Firewise USA site. This program pairs up local neighborhoods in high risk fire up areas with the Wisconsin DNR to identify and mitigate fire risk down to a house by house scale. We hope to establish more Firewise USA sites within the Town of Stephenson over the coming years.

Table 3.6: Wildland Fire Risk, Marinette County

Community	Risk Classification	Total Acres	Woodland Acres	% Woodland Acres of Total
Stephenson	Very High	114,166	88,853	78%
Amberg	High	46,281	39,455	85%
Athelstane	High	68,566	64,712	94%
Beecher	High	31,693	27,458	87%
Dunbar	High	67,328	63,195	94%
Middle Inlet	High	32,783	24,637	75%
Pembine	High	43,078	38,249	89%
Peshtigo	High	45,350	29,123	64%
Wausaukee	High	50,497	37,736	75%
Beaver	Concern	44,464	25,504	57%
Goodman	Concern	68,916	61,698	90%
Lake	Concern	38,109	25,550	67%
Niagara	Concern	45,665	39,824	87%
Porterfield	Concern	34,143	21,424	63%
Silver Cliff	Concern	68,455	65,727	96%
Total		800,669	653,145	

Note: Any city, village, or town not listed is not considered to be a community at risk or a community of concern. Wildland fires can still occur in these areas, but are not expected to become a large-scale fire (i.e., more than 2 sq.mi.).

Source: WDNR, 2018; Marinette County, 2018; Bay-Lake RPC, 2019



Impacts from Hazard Death and Injury

No data on deaths or injuries is available for significant wildland fire events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018.

Structures at Risk

Homes and other structures located within the Wildland Urban Interface (WUI) are at high risk to damage from wildland fires. The WUI refers to the zone of transition between forestland/wildland and human development. The wildland fire risk increases in the WUI because buildings are typically surrounded by fuel sources such as unmowed grass, unraked leaves, flammable vegetation, and dead branches. Structures constructed from materials that may melt or ignite when exposed to a fire present a high risk. In general, the potential for property damage from wildland fires increases as more development occurs on wooded lands.

Residential housing is typically the most dominant type of structure found within the WUI. Though many parts of a home can be affected by wildland fire damage, the roof is the most exposed portion of the building and is more at risk from flying embers. Attics may also be affected by airborne embers that enter through open eaves and vents. Structures attached to homes, such as decks, garages, and fences, can also carry a fire into a home.

Critical Facilities

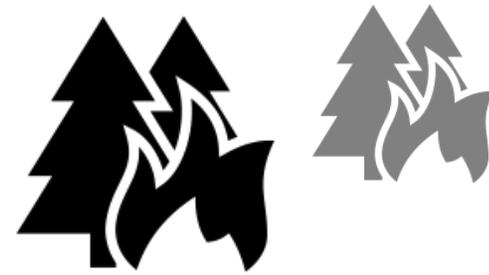
Law enforcement, fire, and emergency response personnel are greatly affected by wildland fires – suffering increased workloads during and after events. Hospitals can see increases in patient load resulting from burn related injuries and individuals suffering from the effects of smoke inhalation. Schools, if not affected by a fire, could potentially be used as temporary shelter for individuals that cannot return to their homes. All critical facilities located in the path of a wildland fire can be affected structurally and functionally if evacuation is deemed necessary.

Economic Impacts

Fires can have an extensive impact on the economy of an affected area by causing thousands of dollars in damages to citizens through loss of private property. Major direct costs associated with wildland fires are incurred by the salvage and removal of downed timber and debris; restoration of the burned area; and reconstruction. Wildland fires can also have a significant impact on local agriculture. Fires will strip the land of vegetation as well as harm the soil, waterways, and the land itself. Soil exposed to intense heat may lose its capability to absorb moisture and support life.

Property Damage

From January 1, 2005 to December 31, 2018, there has been no data on property damages is available for wildland fire events in Marinette County.

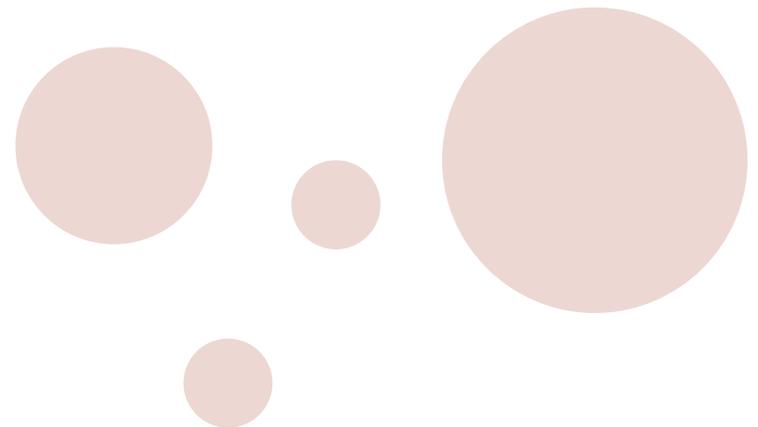


Estimate of Potential Dollar Losses

An assessment of structures within woodlands in a community at risk or community of concern, found there are approximately 16,713 structures potentially at risk from wildland fires throughout Marinette County. The value of all at-risk structures in Marinette County is estimated at \$1.22 billion.

This information was obtained from the Marinette County database on assessed values of real property (structures and land). This only involves damage to structures themselves, and may not account for damage to personal property inside or adjacent to vulnerable structures.

from January 1, 2005 to December 31, 2018. In that period, there have been a total of 272 structures threatened by wildfire in Marinette County. Of those 272 structures, 246 were saved by fire fighters and 26 were a total loss, reported by the DNR.



Description of Hazard

Dangerously cold conditions can be the result of extremely cold temperatures, or the combination of cold temperatures and high winds. The combination of cold temperatures and wind creates a perceived temperature known as “wind chill.” Whenever temperatures drop well below normal and as wind speed increases, heat can leave your body more rapidly. As winds increase, heat is carried away from the body at a faster rate, driving down both the skin temperature and eventually the internal body temperature. This weather related condition may lead to serious health problems. Extreme cold is a dangerous situation that can cause health emergencies for susceptible people, such as those without shelter, those stranded outdoors or in a disabled vehicle, or those living in a home that is poorly insulated or without heat.

Previous Significant Hazard Occurrences

According to the NCDC, Marinette County has experienced 16 significant extreme cold events in the last 18 years from January 1, 2000 to June 30, 2018.

Hazard Frequency

Based on previous hazard occurrences as reported by the NCDC, Marinette County experiences approximately one significant extreme cold event per year.

Probability of Hazard Occurring in the Future

Based on the hazard frequency, Marinette County is considered to have a moderate probability of experiencing an extreme cold event in any given year.

Areas at Greatest Risk

Extreme cold events have no defined hazard area within the planning area. Past events have been relatively uniform across the planning area.

Impacts from Hazard

Death and Injury

No deaths or injuries have been reported from significant extreme cold events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018 according to the NCDC data.

Structures at Risk

Extreme cold conditions can result in burst water pipes. In addition, it is more expensive to heat homes and other buildings during extreme cold events. Sometimes, residents of the planning area might consider use of space heaters during an extreme cold event. However, use of space heaters comes with its own risks, including a higher probability of fire to a structure if used improperly. Public domain water pipes can burst in extreme cold conditions, which can also ruin the street above the water pipes. In addition, damage to fiber optic cables can occur during extreme cold episodes, which can negatively affect commerce and hospitals in the planning area.

Critical Facilities

All buildings involving critical facilities will have greater heating expenses during an extreme cold event. Increased demand will also affect electric and natural gas utilities. Hospitals and clinics may be asked to treat patients exposed to the extreme cold conditions. Emergency shelters may take in additional individuals during the extreme cold event. Area schools may cancel classes or call for early dismissal in extreme cold events. Water utilities may need to repair damaged water mains caused by the extreme cold. Local fire departments and rescue services may also deal with direct or indirect consequences of the extreme cold event.

Economic Impacts

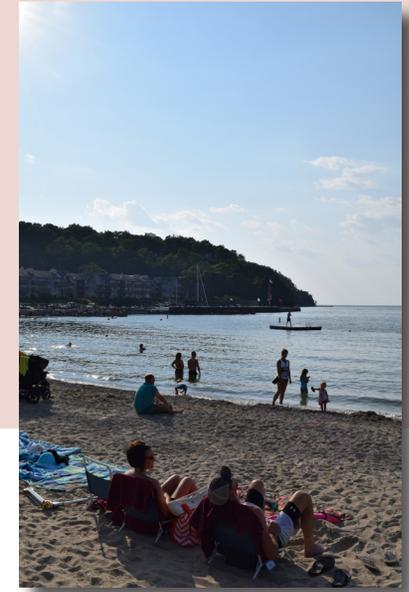
Economic impacts of extreme cold events can include lack of motivation to participate in the local economy unless absolutely necessary during the event. Utility bills following the event will also be higher, which will give the consumer less ability to purchase discretionary goods about a month after the event (unless that consumer is on a monthly even payment plan with the local utility). If area school districts need to call off school early on extremely cold days, there may be expenses involved with early busing and with paying staff for a full day while only having the benefit of a partial day of instruction. Non-profit organizations will incur expenses in the provision of emergency shelters. The private sector incurs economic losses and production decreases during an extreme cold event.

Property Damage

No significant public property damages have been reported from extreme cold events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018 according to the NCDC data.

Estimate of Potential Dollar Losses

An estimate of potential dollar losses cannot be calculated for extreme cold events, since no vulnerable structures have been identified. Based on previous damages reported by the NCDC, property damages from extreme cold has been minimal over the past 18 years.



Excessive Heat

Description of Hazard

Excessive heat (often referred to as a heat wave) is primarily a public health concern. During extended periods of very high temperatures or high temperatures with high humidity, individuals can suffer from several ailments, including heat exhaustion and heat stroke. Heat stroke is a particularly life-threatening condition that requires immediate medical attention. In addition to posing a public health hazard, periods of excessive heat usually result in high electrical consumption, which can cause power outages and brown outs. A by-product of this hazard in Marinette County often involves periods of high heat with loss of power. The elderly, disabled, and other vulnerable populations are especially susceptible to extreme heat.

Previous Significant Hazard Occurrences

According to the NCDC, Marinette County has not experienced any significant excessive heat events in the last 18 years from January 1, 2000 to June 30, 2018.

Hazard Frequency

Since there are no NCDC records of a significant excessive heat event in Marinette County in the last 18 years, no hazard frequency can be determined.

Probability of Hazard Occurring in the Future

Based on the hazard frequency, Marinette County is considered to have a low probability of experiencing an excessive heat event in any given year.

Areas at Greatest Risk

Excessive heat events have no defined hazard area within the planning area. Past events have been relatively uniform across the planning area.

Impacts from Hazard

Death and Injury

No deaths or injuries have been reported from significant excessive heat events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018 according to NCDC data.

Structures at Risk

While there are no direct impacts on buildings, periods of excessive heat can impact the ability of buildings to be comfortable and safe for human habitation. Periods of excessive heat usually result in high electrical consumption for air conditioning, which can cause power outages and brown outs. There are few impacts of excessive heat on publicly owned infrastructure. One impact that extreme heat can have on publicly owned infrastructure involves the buckling of certain streets and highways, which need to be repaired immediately.

Critical Facilities

Utilities may see peak demand for electricity during excessive heat episodes. There have been fears that an excessive heat episode could cause the power grid to. Hospitals and clinics will like experience an increased demand due to heat related illnesses during an excessive heat episode. In some cases, rescue services will experience an increased demand due to these same heat related illnesses. If school is in session during the excessive heat episode, area school districts may dismiss classes early in the day, at least in older schools without air conditioning. Emergency shelters will experience higher demand during the excessive heat episode, with some emergency shelters being set up specifically in response to the episode. Finally, there is likely to be increased water demand during the episode, both for human consumption as well as for lawn watering in the event that the extreme heat episode includes a drought.

Economic Impacts

Economic impacts of an excessive heat episode which can affect private businesses and consumers include higher electrical consumption and increased demands for medical treatment. Local governments may need to incur expenses when repairing streets and highways in the planning area that have been damaged due to buckling. If area school districts need to call off school early on extreme heat days, there may be expenses involved with early busing and with paying staff for a full day while only having the benefit of a partial day of instruction. Non-profit organizations will incur expenses in the provision of emergency shelters. Water utilities will incur the expenses involved with additional demand for water during excessive heat episodes, and these expenses will be passed on to area consumers. One less tangible economic impact of extreme heat involves lower productivity from persons who must work outside or in less than ideal conditions. In addition, people will be less motivated to shop at local businesses and may defer non-essential activities until the heat episode is over, negatively impacting the local economy. Excessive heat can negatively impact agriculture in the surrounding area when combined with drought.

Property Damage

No significant public property damages have been reported from excessive heat events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018 according to the NCDC data.

Estimate of Potential Dollar Losses

An estimate of potential dollar losses cannot be calculated for excessive heat events, since no vulnerable structures have been identified. Based on previous damages reported by the NCDC, there have been no property damages in Marinette County from extreme heat over the past 18 years.

Climate Change Impact

According to research conducted by the Wisconsin Initiative on Climate Change Impacts, extreme heat events are projected to become more frequent, longer lasting, and geographically widespread. By the middle of the century, Wisconsin residents are projected to experience 1.5 to 4 more weeks of daytime temperatures exceeding 90 °F. Public health officials and concerned citizens will be charged with the task of protecting the most vulnerable populations in the face of these changes.

Coastal Hazards

Description of Hazard

In northeastern Wisconsin, coastal hazards can be described as natural hazards occurring along the shores of Green Bay/Lake Michigan. The coastal hazards of concern in Wisconsin include:

- Erosion of coastal bluffs, banks, beaches and near shore lake beds (including erosion from freezing and thawing of lake ice);
- Flooding from upland runoff, high lake levels and storm-induced surge (temporary water level changes); and
- Damage to shorelines and shoreline structures from storm waves and ice shoves and dams.

Previous Significant Hazard Occurrences

There is no record of significant coastal hazards for Marinette County and sources for past coastal hazard occurrences could not be found. However, Marinette County has experienced occurrences of ice shoves along Lake Michigan.

Hazard Frequency

There is no record of significant coastal hazards for Marinette County in order to develop a hazard frequency.

Probability of Hazard Occurring in the Future

According to the Resource Guide for Great Lakes Coastal Hazards in Wisconsin website (<http://coastal.lic.wisc.edu/urpl999.htm>), Marinette County is at greatest risk for coastal flooding. Overall, the probability of coastal hazards occurring in the future is moderate for Marinette County.

Areas at Greatest Risk

Portions of the county situated along Lake Michigan are at risk for coastal hazards.

Impacts from Hazard

Death and Injury

No data on deaths or injuries is available for significant coastal hazard events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018.

Structures at Risk

Homes and other structures located along Green Bay/Lake Michigan are at risk to damage from coastal hazards. This risk increases where structures are closer to the shoreline, especially over high bluffs. There are 288 improved privately-owned structures directly adjacent to Lake Michigan in Marinette County.

Critical Facilities

There are no critical facilities located along Green Bay/Lake Michigan at risk of damage from coastal hazards.

Economic Impacts

Coastal hazards can have an extensive impact on the economy of an affected area by causing thousands of dollars in damages to public property and structures, as well a private property and houses.

Property Damage

No significant public property damages have been recorded from coastal hazard events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018.

Estimate of Potential Dollar Losses

A "worst case scenario" for potential dollar losses from coastal hazards in Marinette County would involve the total destruction of all private structures along Green Bay/Lake Michigan, which would cause a loss of \$31 million in private losses. There are no assessed values available for the public properties. This information was obtained from the Marinette County database on assessed values of real property (structures and land). This only involves damage to structures themselves, and may not account for damage to personal property inside or adjacent to vulnerable structures.

Description of Hazard

A "dam" is an artificial barrier constructed in or across a waterway for the primary purpose of impounding or diverting water. Dam failure can occur for a number of reasons, including overtopping caused by floods that exceed the capacity of the dam, deliberate acts of sabotage, structural failure of materials used in dam construction, movement and/or failure of the foundation supporting the dam, settlement and cracking of concrete or embankment dams, piping and internal erosion of soil in embankment dams, or inadequate maintenance and upkeep. In extreme cases, dam failure can occur with little warning and can result in the loss of life and significant property damage in areas downstream of the dam. Other failures and breaches can take much longer to occur. Almost 60% of the dams in Wisconsin are owned by a former company or private individual, 9% by the State of Wisconsin, 17% by a municipality such as a town or county government, and 14% by other ownership types. The federal government has jurisdiction over dams in Wisconsin that produce hydroelectricity - approximately 5% or nearly 200 dams. The Wisconsin Department of Natural Resources regulates the rest of the dams.

A dam with a structural height of over 6 feet and impounding 50 acre-feet or more, or having a structural height of 25 feet or more and impounding more than 15 acre-feet is classified as a large dam. There are approximately 1,160 large dams in the State of Wisconsin. (Source: WDNR; <http://dnr.wi.gov/topic/dams/damfacts.html>).

Dams are classified as Low, Significant, or High Hazard. The hazard rating is not based on the physical attributes, quality, or strength of the dam itself, but rather the potential for loss of life or property damage should the dam fail.

The WDNR regulates the permitting of new dam construction, repairs, reconstruction, ownership transfers, water levels, and abandonment. Many dams in the state have been in place since the late 1800s, and a great deal of time must be invested in inspecting aging dams and making sure they comply with public safety requirements, and environmental regulations.

Previous Significant Hazard Occurrences

No record has been found of any significant dam failures in Marinette County in the last 18 years from January 1, 2000 to June 30, 2018.

Hazard Frequency

No record has been found of any significant dam failures in Marinette County in the last 18 years from January 1, 2000 to June 30, 2018 on which to base a hazard frequency.

Probability of Hazard Occurring in the Future

Based on the hazard frequency information available, Marinette County is considered to have a low probability of experiencing a dam failure event in any given year.

Areas at Greatest Risk

As identified by the WDNR, there are a total of 74 dams in Marinette County. Of these, 29 are classified by the WDNR as large dams, meaning they have a structural height of over six feet and impound 50 acre-feet or more. The rest of the dams located in the county are regarded as small dams. Map 3.5 displays the dams in the county with a high or significant risk rating.

The WDNR assigns hazard ratings to large dams within the state based on existing land use and land use controls (zoning) downstream of the dam. A high hazard rating indicates that a failure would likely result in loss of life. A significant hazard rating indicates that a failure could result in significant property damage. A low hazard rating is given when a failure would result in only minimal property damage and loss of life is unlikely. In Marinette County, there are 13 large dams that have a high hazard rating and one large dam with a significant hazard rating.

The areas of greatest risk from dam failure are those areas within the hydraulic shadow of dam of these three dams. The hydraulic shadow of the dam is the area of land downstream from a dam that would be inundated by water upon failure of the dam during the regional flood (100-year flood).

Impacts from Hazard Structures at Risk

Marinette County would be affected if one or more of the electric power generating dams in the county was to fail. Though electric power generating dams within the area are the greatest concern, consistent maintenance keeps them in good shape; therefore, the probability of dam failure is low. There has never been a problem at any of the major electric power generating dams and there is no history of dam failure for the eighteen dams that are rated as "High" or "Significant" within the county. The risk of loss of life or significant property damaged is considered to be very low. However, in the event of dam failure, structures within the hydraulic shadow of the dam could sustain flooding damage.

Critical Facilities

Critical facilities that could be impacted by dam failure flooding are those located within the hydraulic shadow of the dam area.

Economic Impacts

Floods cause problems for businesses and industry. Businesses disrupted by floods may have to be closed. Public expenditures on flood fighting, sandbags, fire department calls, clean up, and on repairs to damaged public property affect all residents of the planning area, not just those in the shadow of the dam.

Property Damage

No significant property damages have been reported from dam failure events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018 according to NCDC data.

Estimate of Potential Dollar Losses

Vulnerable structures for losses are those within the hydraulic shadow of the dam. Since there is no reliable public data for all the hydraulic shadow of the dam areas in Marinette County, an estimate of potential dollar losses cannot be determined.



Dense Fog

Description of Hazard

Fog is a collection of liquid water droplets or ice crystals suspended in the air at or near the ground. While fog is a type of stratus cloud, the term "fog" is typically distinguished from the more generic term "cloud" in that fog is low-lying, and the moisture in the fog is often generated locally (such as from a nearby body of water, like a lake or stream, or from nearby moist ground or marshes). Fog is distinguished from mist because it has greater density and lower visibility than mist.

Fog is a hazard mainly because of reduced visibility. Airport delays, automobile accidents, ship wrecks, plane crashes, and many other problems are frequently caused by fog. The National Weather Service forecasts fog and issues dense fog advisories when visibility is decreased to less than one quarter of a mile. These advisories alert travelers to potentially dangerous conditions. Traveling in fog requires reduced speed and careful navigation. At night, traveling in fog is especially dangerous because darkness combines with fog to reduce visibility even more. In addition, light from automobile headlights and other navigational lights is scattered off the water droplets of the fog, limiting sight to only a short distance. In response to this problem, automobiles are often equipped with specially designed lights that illuminate a usually dry (and therefore clear) area just above the roadway surface.

Previous Significant Hazard Occurrences

According to the NCDC, Marinette County has experienced two significant dense fog events in the last 18 years from January 1, 2000 to June 30, 2018.

Hazard Frequency

Based on previous hazard occurrences as reported by the NCDC, Marinette County experiences approximately one significant dense fog event every eight years.

Probability of Hazard Occurring in the Future

Based on the hazard frequency, Marinette County is considered to have a low probability of experiencing a significant dense fog event in any given year.

Areas at Greatest Risk

Portions of the planning area along waterways, wetlands, and low lying areas can be at greater risk for dense fog under certain meteorological conditions. However, no portion of the planning area is free of the possibility of experiencing dense fog events. Fog events can often be a regional phenomenon in that they affect much of the northeastern Wisconsin on many of the occasions in which they affect Marinette County.



Impacts from Hazard

Death and Injury

No deaths or injuries have been reported from significant dense fog events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018, according to the NCDC data.

Structures at Risk

There are no direct impacts to buildings from a fog event. The main structures impacted are those associated with infrastructure during a fog event from vehicle accidents. This can result in rescue services helping injured drivers and passengers, clean-up of the affected portions of the street and highway network, and temporary rerouting of motorists after some incidents. In addition, motorists often must travel at slower speeds when fog is in the area, which adds travel time and can lead to vehicular congestion in cases where it would normally not occur. In fog events during the winter, icing can sometimes be a problem. Power lines and tree limbs can be coated with heavy ice in some winter fog events, resulting in disrupted power and telephone service. In addition, in fog events during the winter, even small accumulations of ice can be extremely dangerous to motorists and pedestrians. Bridges and overpasses are particularly dangerous because they freeze before other surfaces.

Critical Facilities

Law enforcement will be asked to respond to an increased number of accidents during many fog events. Hospitals and clinics may be asked to treat individuals injured in accidents that likely would have not occurred in the absence of the fog event. Rescue services may be called to respond to accidents that resulted from the fog event. The starting time for schools may be delayed by the fog event for the safety of students and all involved. Courtrooms may see increased adjudication of traffic law violations resulting from accidents occurring during the fog event. Municipal public works and county highway departments may need to perform emergency repairs to streets and highways in worst-case scenario accidents resulting from the fog event. Airports can experience flight delays and cancellations during certain fog events.

Economic Impacts

There are economic costs in the accidents caused by dense fog events. Vehicular accidents almost always involve property damage, and some vehicular accidents during fog events involve injuries and/or fatalities. All of these consequences to vehicular accidents have costs both to the individual involved and to society. Fog events can also cost businesses in lost time involving late workers and/or late shipments. If area school districts need to delay school during a fog event, there may be expenses involved with delayed busing and with paying staff for a full day while only having the benefit of a partial day of instruction. Airline delays due to fog have economic impacts for travelers as well as for commerce. There are additional economic impacts if the fog event occurs in conjunction with the icing of power lines in cases where the power lines are damaged and residents lose power.

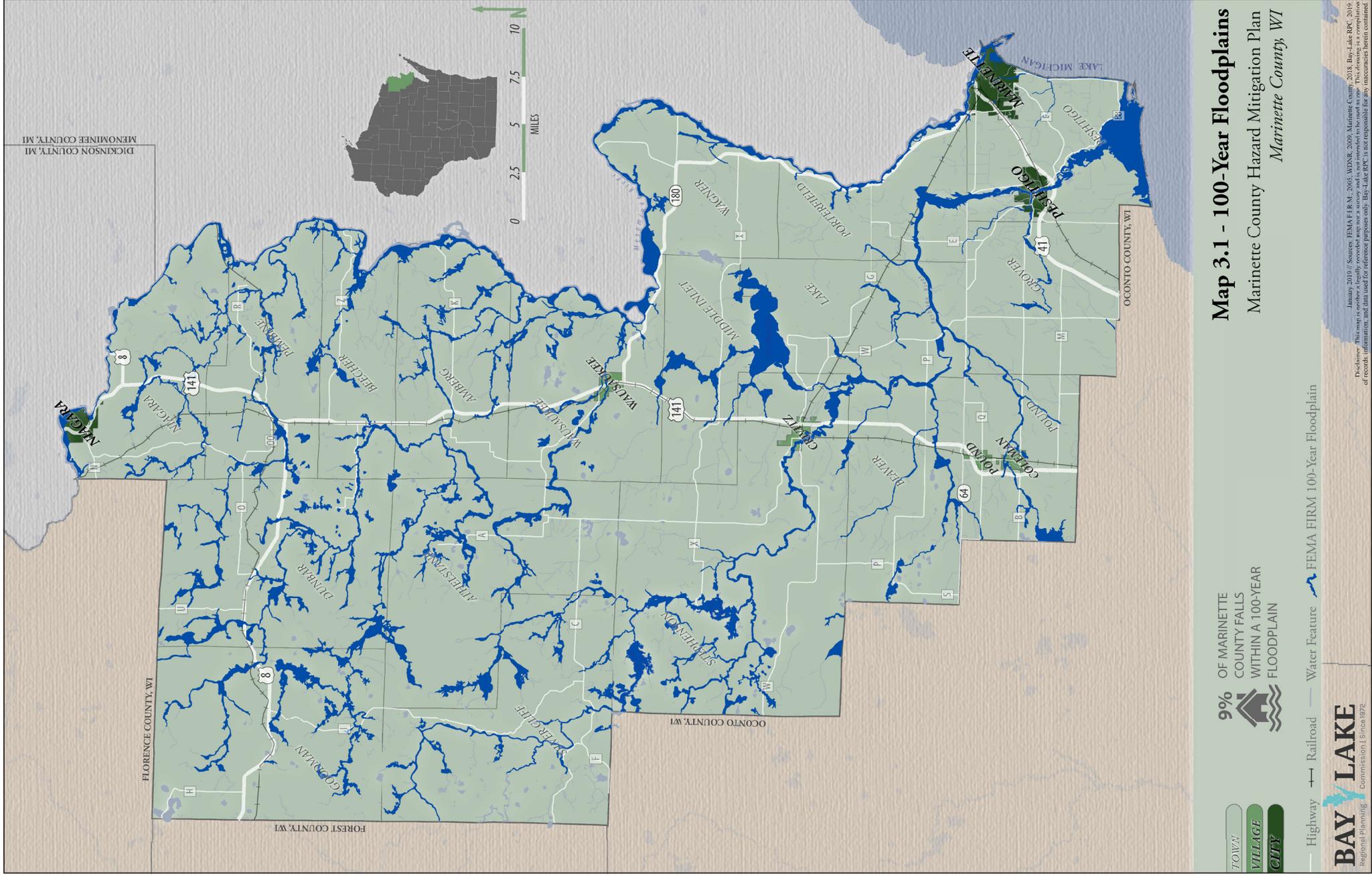
Property Damage

No significant property damage has been reported from dense fog events for Marinette County over the last 18 years from January 1, 2000 to June 30, 2018 according to the NCDC data.

Estimate of Potential Dollar Losses

An estimate of potential dollar losses cannot be calculated for fog events, since no vulnerable structures have been identified. Based on previous damages reported by the NCDC, there has been no reported property damage resulting from a dense fog event over the past 18 years.





Map 3.1 - 100-Year Floodplains
 Marinette County Hazard Mitigation Plan
 Marinette County, WI

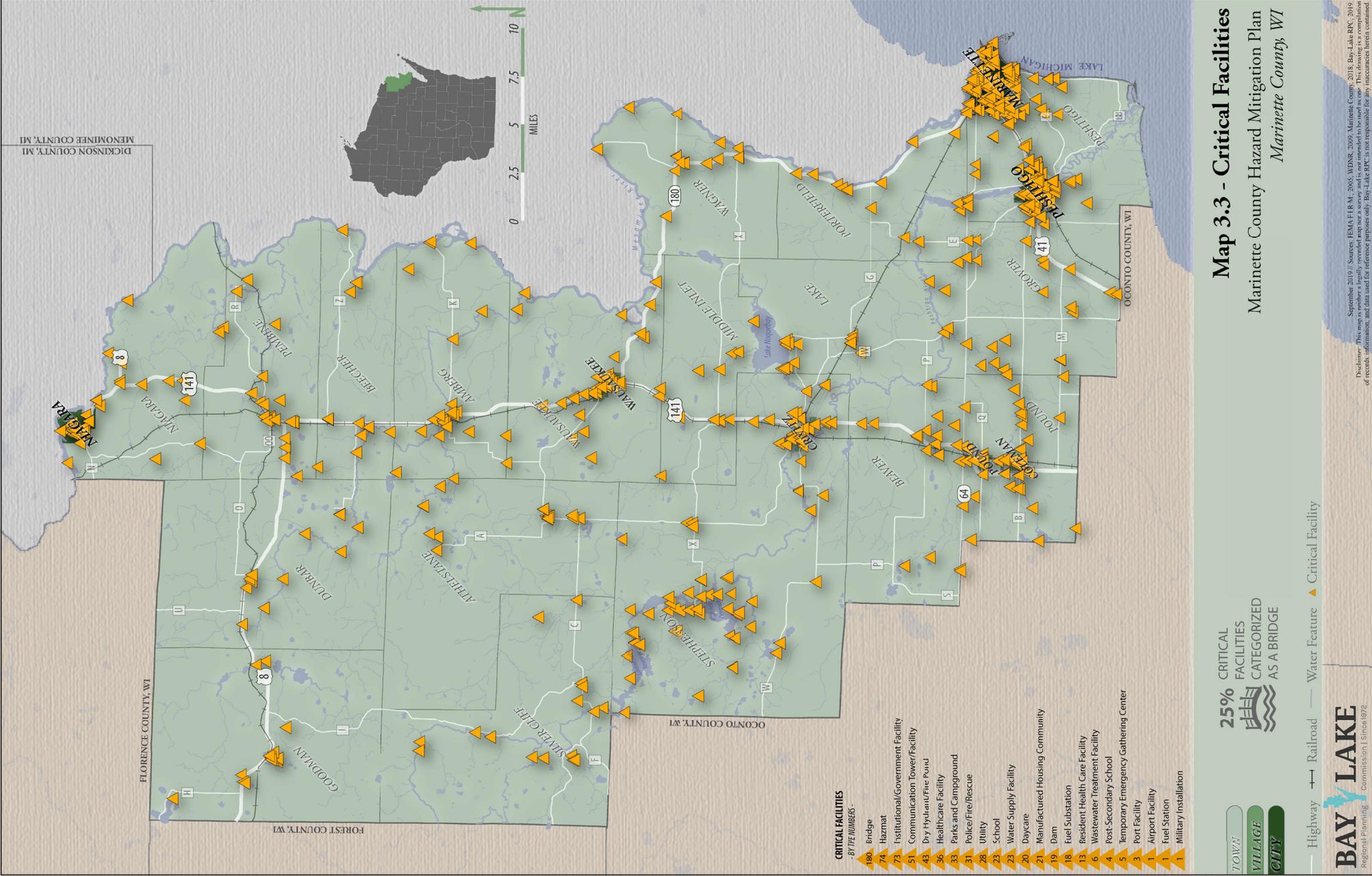
9% OF MARINETTE COUNTY FALLS WITHIN A 100-YEAR FLOODPLAIN

TOWN
 VILLAGE
 CITY

Highway —+— Railroad — Water Feature — FEMA FIRM 100-Year Floodplain

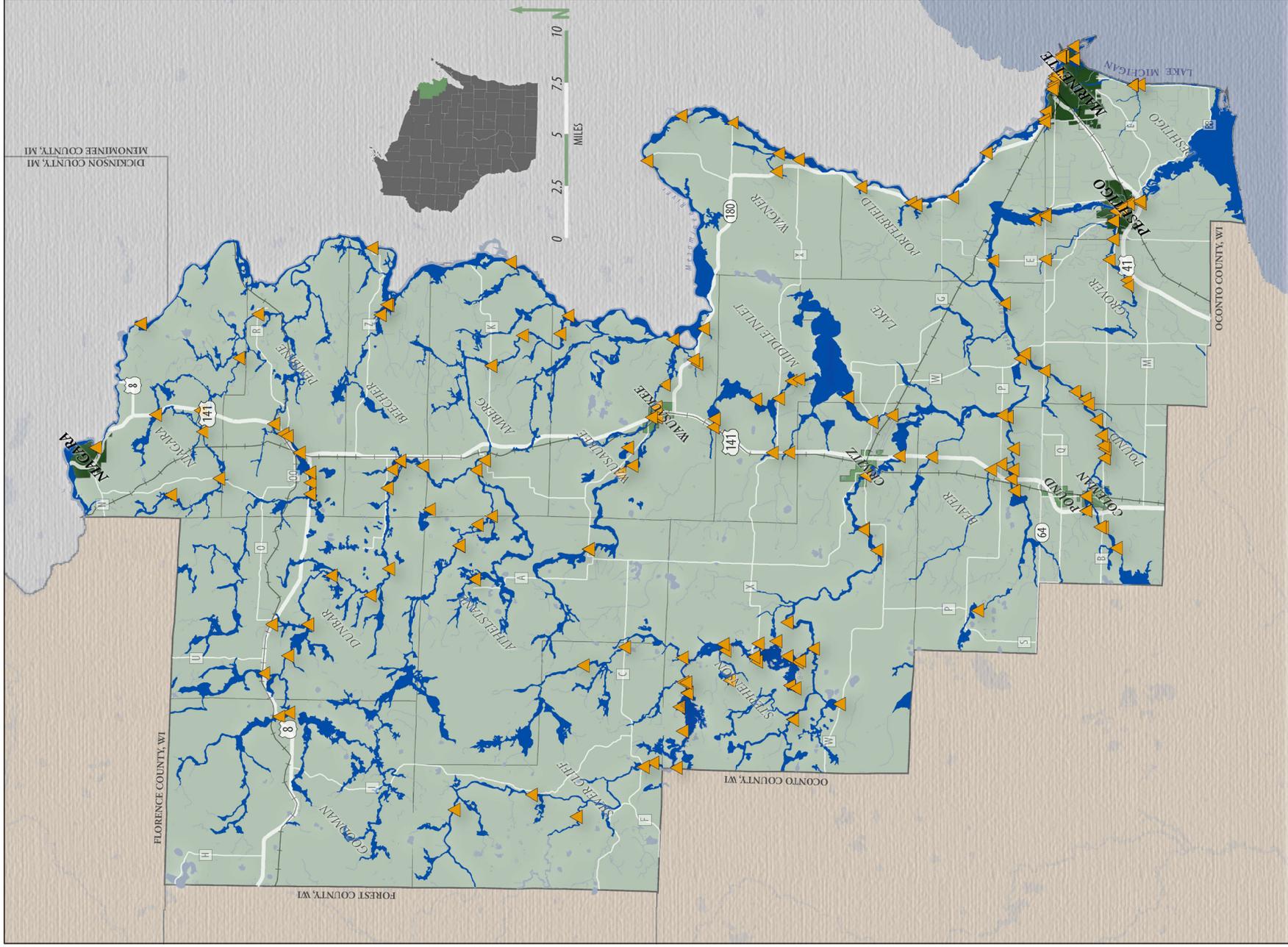
BAY LAKE
 Regional Planning Commission | Since 1972

January 2019 / Sources: FEMA FIRM, 2005; WDNR, 2009; Marinette County, 2018; Bay-Lake RPC, 2019
 Disclaimer: This map is for informational purposes only. Bay-Lake RPC is not responsible for any inaccuracies herein contained
 of records, information, and data used for reference purposes only. Bay-Lake RPC is not responsible for any inaccuracies herein contained



Map 3.3 - Critical Facilities
 Marinette County Hazard Mitigation Plan
 Marinette County, WI

September 2019 // Sources: FEMA FIRM, 2005; WDNR, 2009; Marinette County, 2018; Bay-Lake RPC, 2019
 Disclaimer: This map is neither a legally recorded map nor a survey and is not intended to be used as one. This planning is a compilation of records, information, and data used for reference purposes only. Bay-Lake RPC is not responsible for any inaccuracies herein contained.



Map 3.4 - Critical Facilities within the 100-Year Floodplain
 Marinette County Hazard Mitigation Plan
 Marinette County, WI

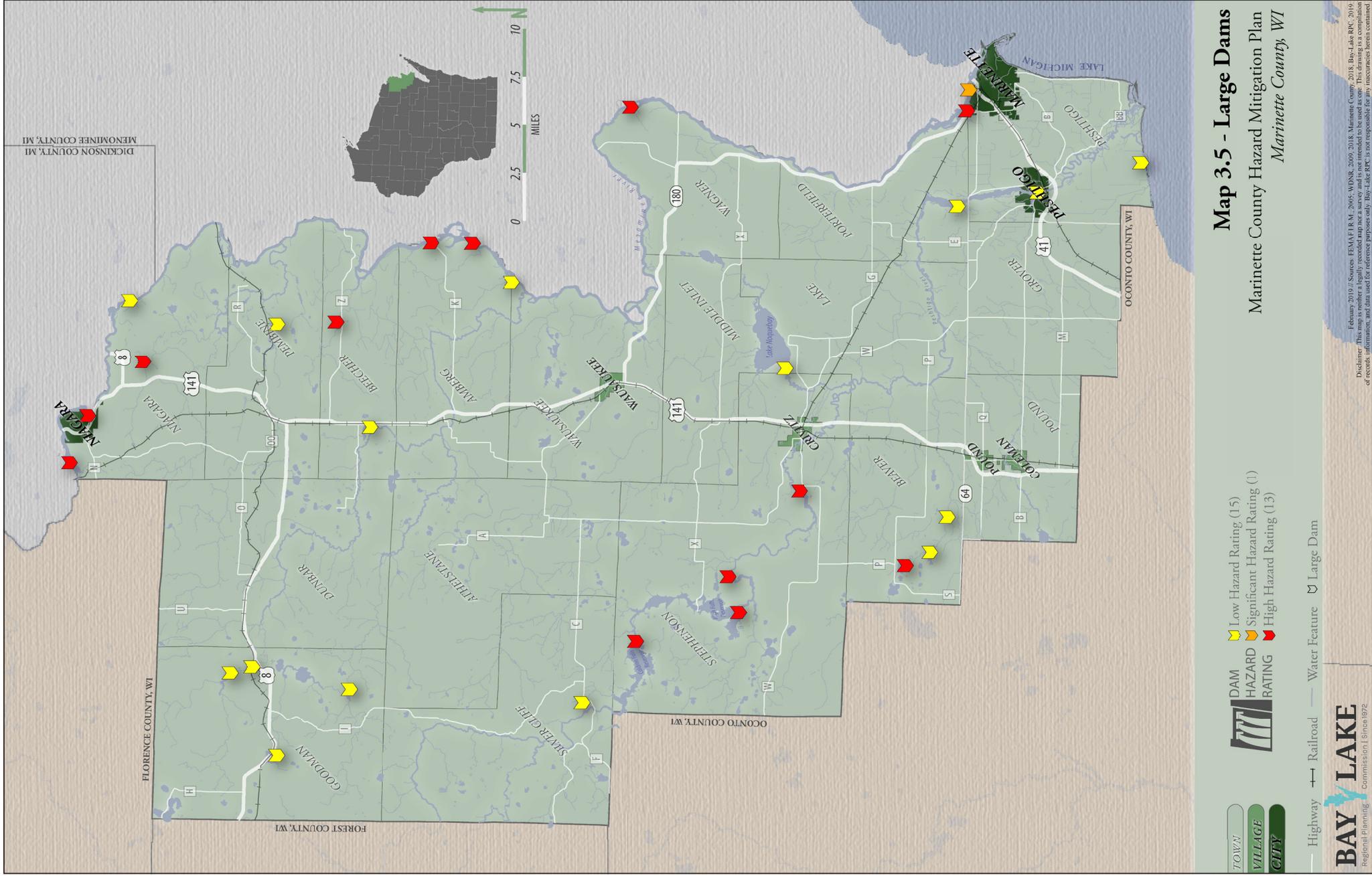
27% OF CRITICAL FACILITIES ARE WITHIN A 100-YEAR FLOODPLAIN

Highway — Railroad — Water Feature — FEMA FIRM 100-Year Floodplain — Critical Facility within the 100-Year Floodplain

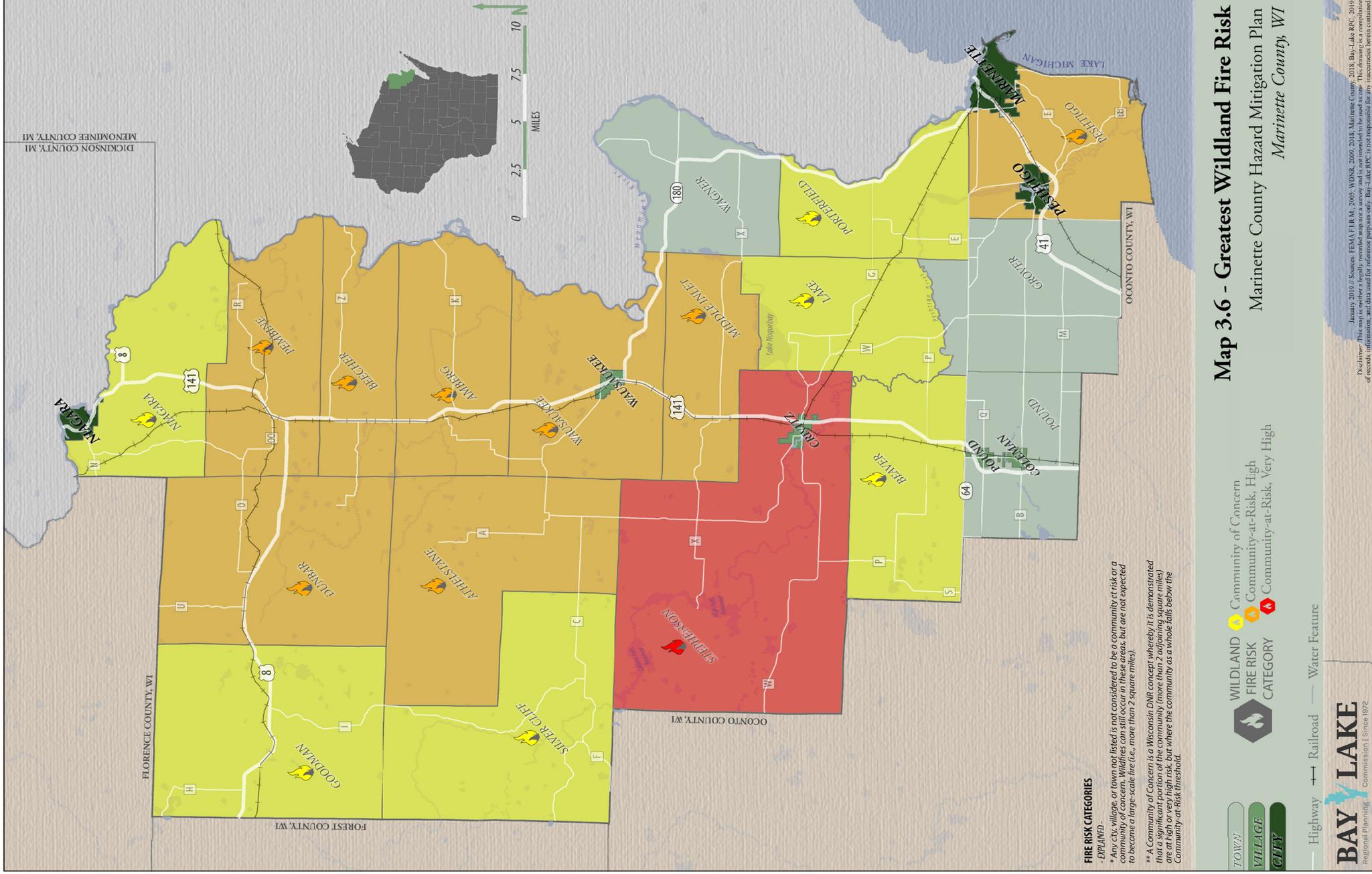
TOWN
 VILLAGE
 CITY

BAY LAKE
 Regional Planning Commission | Since 1972

September 2019 // Sources: FEMA FIRM, 2005; WDRS, 2009; Marinette County, 2018; Bay Lake RPC, 2019
 Disclaimer: This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records information, and data used for reference purposes only. Bay Lake RPC is not responsible for any inaccuracies herein contained.



February 2019 // Sources: FEMA/FIRM, 2005; WDNR, 2009, 2018; Marinette County, 2018; Bay-Lake RPC, 2019.
 Disclaimer: This map is neither a legally recorded map nor a survey and is not intended to be used as such. This drawing is a compilation of records, information, and data used for reference purposes only. Bay-Lake RPC is not responsible for any inaccuracies herein contained.



FIRE RISK CATEGORIES

- EXPLAINED -

* Any city, village, or town not listed is not considered to be a community at risk or a community of concern. Wildland fire risk is not expected, but are not expected to become a large-scale fire (i.e., more than 2 square miles).

** A Community of Concern is a Wisconsin DNR concept whereby it is demonstrated that a significant portion of the community (more than 2 adjoining square miles) are at high or very high risk, but where the community as a whole falls below the Community-at-Risk threshold.

TOWN
VILLAGE
CITY

WILDLAND FIRE RISK CATEGORY
Community of Concern
Community-at-Risk, High
Community-at-Risk, Very High

Highway Railroad Water Feature

BAY LAKE
Regional Planning Commission | Since 1972

Map 3.6 - Greatest Wildland Fire Risk
Marinette County Hazard Mitigation Plan
Marinette County, WI

Chapter 4

Mitigation Strategy

INTRODUCTION

As defined by the Disaster Mitigation Act of 2000, mitigation is a "sustained action that reduces or eliminates long-term risk to people and property from natural hazards and their effects." Mitigation planning is the systematic process of learning about the hazards that can affect the planning area, setting clear goals, identifying appropriate actions, and following through with an effective mitigation strategy. Mitigation encourages long-term reduction of hazard vulnerability and can reduce the enormous cost of disasters to the government and property owners. Mitigation can also protect critical community facilities and infrastructure; reduce exposure to liability; and minimize community disruption.

The mitigation strategy outlines the general goals to be achieved through the implementation of the Marinette County hazard mitigation plan. From the identified hazard mitigation goals, a mitigation strategy was developed to identify specific projects and activities that could help achieve the County's hazard mitigation goals to make them safer and better prepared for disasters.

This chapter includes a discussion of the mitigation efforts that are currently underway, the County's plan to implement the mitigation actions, an assessment of the County's pre- and post-disaster hazard management policies, programs, and capability to mitigate hazards, and an evaluation of the current and potential sources of federal, state, or private funding to implement mitigation activities.

MITIGATION GOALS

The following mitigation goals are intended to be used by public officials and emergency response personnel as general guidelines to mitigate the hazards identified in Chapter 3. These goals are broad in order to apply to all of the hazards addressed in the plan.

Goal #1: Implement policies, procedures and projects designed to reduce or eliminate the impacts of natural hazards on people and property.

Goal #2: Collect and utilize data, and conduct necessary studies, in order to provide the information needed to improve policymaking and to identify appropriate mitigation projects.

Goal #3: Improve planning processes in order to reduce the impact of natural hazards on people and property.

Goal #4: Enhance enforcement capabilities in order to reduce the impacts of natural hazards on people and property.

Goal #5: Enhance the use of natural resource protection measures as a means to reduce the impacts of natural hazards on people and property.

Goal #6: Obtain additional resources necessary to reduce the impact of natural hazards on people and property.

Goal #7: Provide training, and enhance education and outreach efforts describing the potential effects of natural hazards and the means to reduce their impact.

MITIGATION ACTION PLAN

Mitigation actions form the core of the mitigation plan. Table 4.1 lists the mitigation action plan developed for Marinette County. The table lists the hazard type, associated mitigation actions, the estimated costs of each project, responsible agencies, the project timetable, and potential funding sources available for each mitigation action identified. The identified actions and projects address reducing the effects of hazards on the population, services, and existing and new buildings and infrastructure.

The County Division Emergency Management will track the implementation of mitigation actions over time. Information on completed or revised actions will be documented in future five-year updates of the County hazard mitigation plan.

Prioritization Process

In developing this mitigation strategy, members of the plan steering committee considered, from their perspective, the various proposed action items and came to consensus on how each would be ranked, "high," "medium" or "low," based on need, funding, cost-benefit, and anticipated political support.

Cost-Benefit Review

In developing this mitigation strategy, members of the plan steering committee considered, from their perspective, the costs and benefits of the various proposed action items. The cost-benefit review was a factor of the prioritization process. Full-blown cost-benefit calculations were not prepared for each action item included in the plan. The cost effectiveness of each action item will be addressed and completed through the project development process.

COMPLETED MITIGATION ACTIONS

Since the preparation of the 2007 hazard mitigation plan for Marinette County, some mitigation actions identified in the action plan have been completed. The following lists those actions that have been completed in Marinette County.

- Hydrology Study of Marinette County has been completed with FEMA floodplain updates.
- Flood Insurance Rate Map (FIRM) Amendments and Revisions have been completed with FEMA floodplain updates.



Table 4.1 Prioritized Action Plan

Hazard Type	Mitigation Measures	Costs of Project	Responsible Parties	Project Timetable	Priority	Comments
Multi Hazard	Disaster preparedness	Covered by existing budgets with assistance from grants	County Emergency, Management Coordinator, County Land Information, and County Health & Human Services	Ongoing	High	
	Acquisition of emergency power generators for critical facilities	Covered by existing budgets with assistance from grants	Marinette County and municipalities	Ongoing	Low	For use when the power supply may be interrupted. Educate personnel in critical facilities as to proper use of the generators. Priority should be given to the critical facilities that impact public health and safety or maintain life saving operations.
	Storm shelters for county parks	Costs to be determined with assistance from grant funding	County Emergency Management and Parks Department	7-10 years	Low	
Tornado and Strong Wind	Identification of emergency shelter locations	Covered by existing budget	County Emergency Management, Red Cross, and towns	Ongoing	High	
	Identification of emergency shelter deficit locations	Covered by existing budget	County Emergency Management, Red Cross, and towns	Ongoing	Low	
	Add shelters in manufactured housing communities	Covered by property owners	Property owners, County Emergency Management, and towns	7-10 years	Low	
Lightning and thunderstorms; and Hail	Provide public information about severe weather	Covered by existing budgets	County Emergency Management	Ongoing	Low	During Spring Severe Weather Awareness Week
Flooding	Incorporation of floodplain management in comprehensive planning*	Covered by existing budgets with assistance from grants	County Land Information	Ongoing every ten years	High	Comprehensive plans will need to be updated for Marinette County and all the towns by 2020.
	County maintenance in the National Flood Insurance Program*	Covered by existing budgets with grant funding through HAS	County Land Information	Ongoing	High	Enactment and enforcement of floodplain management regulations consistent with National Flood Insurance Program (NFIP) requirements is the responsibility of local jurisdictions in the planning area.
	Update Floodplain mapping	Covered by existing budgets	FEMA	2019-2024	High	In process by FEMA.
	Preservation of natural resources in floodplains	Covered by existing annual budget with state stewardship grant funding	County Land Information	Ongoing	High	
	Stormwater management	Costs to be determined with assistance from grant funding	County Land Information, City of Marinette, and WDNR	Ongoing	High	

Table 4.1 Prioritized Action Plan (cont'd)

Hazard Type	Mitigation Measures	Costs of Project	Responsible Parties	Project Timetable	Priority	Comments
Flooding (cont'd)	Acquisition and relocation	Costs to be determined with assistance from grant funding	County Land Information	As needed	Medium	Direct assistance in acquisition and relocation activities would only occur if grants became available.
	Address farm manure storage concerns with respect to flooding	Covered by existing budget	County Land Information	Ongoing	Medium	
	Develop GIS culvert inventory	Costs to be determined with assistance from grant funding	County Land Information and County Highway Commission	2019-2024	Medium	
	Flood forecasting and warning systems, and emergency plans	Covered by existing budgets with federal grant assistance through HAS	National Weather Service, County Emergency Management	Ongoing	Low	
	Implement floodproofing, where needed	Covered by existing budgets and grants	Cities of Marinette, Peshtigo, and Niagara; and villages of Coleman, Crivitz, Pound and Wausaukee	Ongoing	Low	Covered under existing budgets in the case of review of proposed new construction, but floodproofing activities for existing structures would only occur if grants become available.
	Maintain county orthophotography	Covered by property owners	County Land Information and County Highway Commission	2020, then ongoing every 5 years	Low	
Winter Storms	Review priority policy for salting and plowing streets and highways	Covered by existing budgets	County Emergency Management and municipalities	Ongoing	High	Municipalities will provide information to the public concerning the counties priority policy for salting and plowing streets and highways.
	Promote winter storm hazard awareness	Covered by existing budgets	County Emergency Management	Ongoing	Medium	
Drought	Promote water conservation activities during drought	Covered by existing budgets	USDA through FSA and NRCS and UW-Extension	Ongoing	Low	
Wildland Fire	Maintain fire breaks	Covered by existing budgets with assistance from state and federal forestry grants	County Forestry	Ongoing annually	High	The county maintains 60-70 miles of fire break.
	Provide fire education and prevention information	Covered by existing budgets with assistance from state and federal forestry grants	WDNR and municipal fire response units	Ongoing	Medium	Provided through Community Wildfire Protection Plans, and brochures.
	Update structural zone maps	Covered by WDNR budget	County Land Information and DNR	Ongoing every five years	Low	Initiated and developed by WDNR with data provided by County Land Information.

Table 4.1 Prioritized Action Plan (cont'd)

Hazard Type	Mitigation Measures	Costs of Project	Responsible Parties	Project Timetable	Priority	Comments
Extreme Cold	Publicize extreme cold events	Covered by existing budgets	County Public Health and County Emergency Management	Ongoing	Low	
Excessive Heat	Publicize excessive heat events	Covered by existing budgets	County Public Health and County Emergency Management	Ongoing	Low	
Coastal Hazards	Promote coastal hazard awareness	Covered by existing budgets	NOAA through WCMP and UW Sea Grant	Ongoing	Low	
Dam Failure Flooding	Dam failure warning systems and emergency plans	Covered by existing budgets	County Emergency Management and facility owners/operators	Ongoing	Low	WPS & WE Energies have separate plans in place that address specific actions and notifications in case of dam failure. Ongoing by FERC regulations.
Dense Fog	Publicize of fog events	Covered by existing budget	National Weather Service	Ongoing	Low	

POLICIES, PROGRAMS, AND RESOURCES FOR MITIGATION

Marinette County has a number of authorities that enforce policies, execute programs, and provide resources that support the mitigation action plan for reducing potential losses identified in the risk assessment. These authorities have been identified under the responsible parties (where applicable) in the mitigation action plan (Table 4.1), and include the following;

Marinette County Zoning

→ Relevant policies and programs include planning and zoning (including enforcement of county shoreland and floodplain management regulations).

Municipal Law Enforcement and Fire Departments

→ Relevant policies and programs include coordinating emergency preparedness, mitigation, response, and recovery efforts.

Marinette County Forestry and Parks Department

→ Relevant policies and programs include mitigation and recovery efforts.

Marinette County Emergency Management

→ Relevant policies and programs include coordinating effective disaster response and recovery efforts in the county through response, recovery, planning, training, and exercises, and mitigation.

Marinette County Highway Department

→ Relevant policies and programs include road maintenance, stormwater management, and management of salt storage for winter storms.

Power Utilities

→ Relevant policies and programs include maintaining electrical power and transmission facilities.

Marinette County Sheriff's Department

→ Relevant policies and programs include coordinating emergency preparedness, mitigation, response, and recovery efforts.

Marinette County Health & Human Services Department

→ Relevant policies and programs focus on protecting and promoting the health and safety of the people in the county in cooperation with community partners (includes assisting citizens with emergency preparedness).

American Red Cross – Northeast Wisconsin

→ Relevant policies and programs include disaster relief and educational programs that promote health and safety.

Wisconsin Department of Natural Resources

→ Relevant policies and programs include regulation enforcement of state shoreland and floodplain management rules; and wildland fire response and education, training of volunteer fire departments, implementing fire response MOUs, and providing grant assistance.

National Weather Service (Green Bay Regional Office)

→ Relevant policies and programs include publicizing information, and providing outreach and education about hazardous weather.



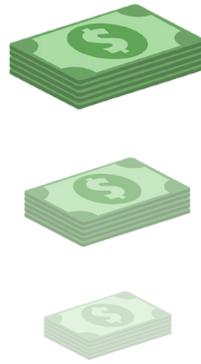
The authorities listed above have the ability to expand or modify their programs when needed to improve existing tools to address mitigation. Marinette County has taxing authority through property taxes to raise funds for the purpose hazard mitigation. Additional funding sources for hazard mitigation actions are available from a number of federal and state grant programs. Below in Table 4.2 are the mitigation strategies for communities in Marinette County. These communities were contacted to add or update their mitigation measures.

Table 4.2 Mitigation Strategies for Communities in Marinette County

Hazard Type	Mitigation Measures	Costs of Project	Responsible Parties	Project Timetable	Priority
City of Marinette					
Multi-Hazard	Disaster preparedness.	Covered by existing budgets	City of Marinette and County Emergency Management	Ongoing	High
Tornado	Maintain the City's four outdoor emergency sirens.	~\$1,300/yr	City of Marinette	Ongoing	High
Tornado	Identify, communicate, and maintain emergency storm shelters in close proximity to manufactured housing communities within the City.	Costs to be determined with assistance from grant funding	City of Marinette	2020-2025	Medium
City of Niagara					
Excessive Heat	Cooling or splash station/shelter.	Existing budget and grants	City of Niagara	2020	Low
City of Peshtigo					
Flooding	Address flooding issues.	To be determined	City of Peshtigo	2020-2025	High
Multi-Hazard	Updating comprehensive plan.	\$10,000	City of Peshtigo	2020-2025	High
Extreme Cold	Address issues with frozen/broken pipes and road damage.	Covered by existing budget	City of Peshtigo	Ongoing	High
Village of Coleman					
Multi-Hazard	Establish emergency gathering centers.	Covered by existing budgets	Village of Coleman and Faith Christian School	2023	Medium
Multi-Hazard	Purchase backup generators for emergency gathering centers.	\$25,000	Village of Coleman and Faith Christian School	2023	Medium
Village of Crivitz					
Multi-Hazard	Purchase backup generators and contract for installation in alternate emergency shelters with transfer switches.	Existing budget and grants	Village of Crivitz	4 years	High
Village of Pound					
Multi-Hazard	Water tower failure prevention mechanism.	\$1,500,00	Village of Pound Utility Department	2020	High
Village of Wausaukee					
Dam Failure	Establish dam failure warning systems and emergency plans.	Existing budget and grants	Village of Wausaukee	7-10 years	High
Wildland Fire	Dredge fire pond. Upgrade the existing fire suppression system to carfair composites.	Existing budgets and grants	Village of Wausaukee	7-10 years	High

Potential Funding Sources for Mitigation

Funding for hazard mitigation programs and projects can come from a number of sources both public and private. Non-local funding can come from a number of sources, either in the form of a grant or a loan. The following text provides a description of a number of potential grant programs available to Marinette County (or other entities seeking to carry out hazard mitigation actions) in funding future mitigation actions identified in this plan:



Federal Programs

EDA Public Works and Development Facilities

These funds are available for local units of government to enhance regional competitiveness and promote long-term economic development in regions experiencing substantial economic distress. EDA provides Public Works investments to help distressed communities and regions revitalize, expand, and upgrade their physical infrastructure to attract new industry, encourage business expansion, diversify local economies, and generate or retain long-term private sector jobs and investment.

FEMA Assistance to Firefighters Grant

The primary goal of the Assistance to Firefighters Grants (AFG) is to meet the firefighting and emergency response needs of fire departments and nonaffiliated emergency medical services organizations. The AFG program has helps firefighters and other first responders to obtain critically needed equipment, protective gear, emergency vehicles, training, and other resources needed to protect the public and emergency personnel from fire and related hazards. The National Preparedness Directorate in the Federal Emergency Management Agency administers the grants in cooperation with the U.S. Fire Administration.

FEMA Staffing: Adequate Fire & Emergency Response Grant

The Staffing for Adequate Fire and Emergency Response (SAFER) Grants were created to provide funding directly to fire departments and volunteer firefighter interest organizations to help them increase the number of trained, "front line" firefighters available in their communities. The goal of SAFER is to enhance the local fire departments' abilities to comply with staffing, response and operational standards established by the NFPA and OSHA (NFPA 1710 and/or NFPA 1720 and OSHA 1910.134).

FEMA Fire Prevention and Safety Grant

The Fire Prevention & Safety (FP&S) Grants are part of the Assistance to Firefighters Grants and support projects that enhance the safety of the public and firefighters from fire and related hazards. The primary goal is to reduce injury and prevent death among high-risk populations. In 2005, Congress reauthorized funding for FP&S and expanded the eligible uses of funds to include Firefighter Safety Research and Development.

FEMA 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. Eligible activities include: acquisition, relocation, elevation, and flood-proofing of flood-prone insured properties; flood mitigation planning; and technical assistance. In order to be eligible for funding through this program the local government must be in compliance with the National Flood Insurance Program.

FEMA 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. Eligible activities include: flood proofing; acquisition and relocation of flood prone properties; elevation of flood prone properties; retrofitting properties to be wind resistant; stormwater improvements; and education and awareness. In order to be eligible for funding through this program, the local government must be in compliance with the National Flood Insurance Program. All projects must be cost-effective, environmentally sound, and solve a problem. Funds are available anytime after a Presidential Disaster Declaration has been made in the State of Wisconsin.

FEMA 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. Grant funds can be used to cover management costs, information dissemination, planning, technical assistance, and mitigation projects. In order to be eligible for funding through this program the local government must be in compliance with the National Flood Insurance Program. All projects must be cost-effective and environmentally sound.

Pipeline and Hazardous Materials Safety Administration, Hazardous Materials Emergency Preparedness

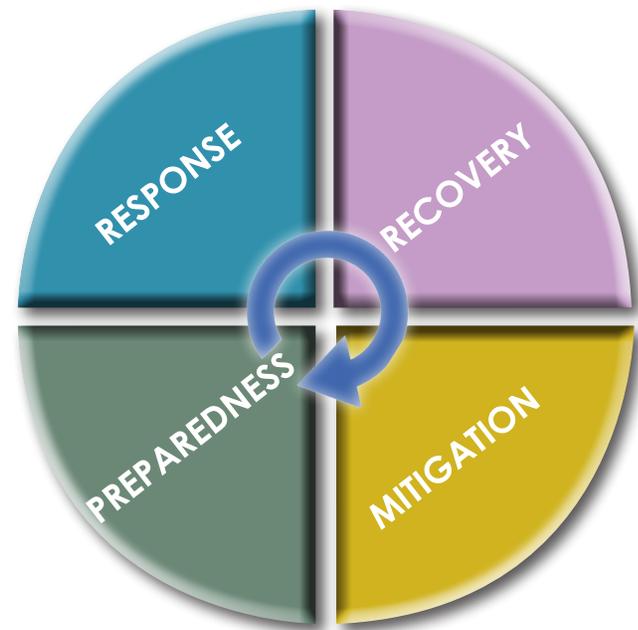
The Hazardous Materials Emergency Preparedness (HMEP) grant program is intended to provide financial and technical assistance as well as national direction and guidance to enhance State, Territorial, Tribal, and local hazardous materials emergency planning and training. The HMEP Grant Program distributes fees collected from shippers and carriers of hazardous materials to emergency responders for hazmat training and to Local Emergency Planning Committees (LEPCs) for hazmat planning.

U.S. Department of Agriculture Rural Development Assistance

USDA Rural Development assistance is provided in many ways, including direct or guaranteed loans, grants, technical assistance, research, and educational materials. Grant programs include Business and Cooperative Grant Assistance, Housing and Community Facilities Grant Assistance, and Utilities Grants.

U.S. Department of Education School Emergency Response and Crisis Management Plan Discretionary Grant Program

This grant program is designed to provide funds to Local Education Agencies (LEA) to strengthen and improve their emergency response and crisis plans, at the district and school-building level. Grantees are required to address all four phases of crisis planning: prevention and mitigation, preparedness, response, and recovery. In addition, LEAs are required to form partnerships and collaborate with community organizations, local law enforcement agencies, heads of local governments, and offices of public safety, health, and mental health as they review and revise school crisis plans. Plans must be coordinated with state or local homeland security plans and support implementation of the National Incident Management System (NIMS). Grant funds may be used for the following activities: training school safety teams and students; conducting building and facilities audits; communicating emergency response policies to parents and guardians; implementing an Incident Command System (ICS); purchasing school safety equipment (to a limited extent); conducting drills and tabletop simulation exercises; and preparing and distributing copies of crisis plans.



State of Wisconsin Programs

WDNR Lake Planning Grant Program

Counties, towns, cities, villages, tribes, qualified non-profit conservation organizations, qualified lake associations, school districts (in partnership with another eligible party), public inland lake protection and rehabilitation districts, town sanitary districts, and other local governmental units that are established for the purpose of lake management, are eligible to apply for funding to collect and analyze information needed to protect and restore lakes and their watersheds.

Eligible activities include: gathering and analysis of physical, chemical, and biological information on lakes; describing present and potential land uses within lake watersheds and on shorelines; reviewing jurisdictional boundaries and evaluating ordinances that relate to zoning, sanitation, or pollution control or surface use; assessments of fish, aquatic life, wildlife, and their habitats; and developing, evaluating, publishing, and distributing alternative courses of action and recommendations in a lake management plan.

WDNR Municipal Flood Control Grant Program

The Wisconsin Department of Natural Resources, Bureau of Community Financial Assistance and Bureau of Watershed Management, offers this grant assistance package to all cities, villages, towns, Indian Tribes, and metropolitan sewerage districts concerned with municipal flood control management in the State of Wisconsin. Assistance is provided with the availability of Acquisition and Development grants to purchase property or vacant land, structure removal, construction or other development costs and with Local Assistance Grants for providing administrative support activities.

WDNR River Planning Grant Program

Under this grant program, counties, cities, towns, villages, tribes, other local governmental units, qualified river management organizations, and qualified nonprofit conservation organizations are eligible to apply for funding under this program. Projects funded by this program must be designed to collect, assess and disseminate information on riverine ecosystems; assist in developing organizations to help manage rivers; assist the public in understanding riverine ecosystems; and/or create management plans for the long term protection and improvement of riverine ecosystems. Eligible activities include: organizational development for existing river protection/improvement organizations; assistance with the formation of a qualified river management organization; public education projects; and planning and assessment projects. Capital improvement projects are not eligible for funding under this grant.

WDNR Forest Fire Protection Grant

Forest Fire Protection (FFP) grants are available to Wisconsin fire departments and county/area fire associations. Grant funding is intended to expand the use of local fire departments to augment and strengthen the Department of Natural Resources (DNR) overall initial attack fire suppression capabilities on forest fires. By May 1 of each year, Wisconsin fire departments and county/area fire associations statewide receive notification that the FFP application cycle is open. The FFP program is a 50/50 cost-share reimbursement grant program.

WDOA Comprehensive Planning Grant Program

The Division of Intergovernmental Relations administers the Wisconsin Comprehensive Planning Grant Program to assist local governments in the development and adoption of comprehensive plans. The Comprehensive Planning Grant Program has established a framework that promotes cooperation, collaboration and the exchange of ideas relating to planning and land use issues.

WDOA, Division of Housing and Intergovernmental Relations, Emergency Housing Grant Program

This program makes available funds for acquisition, rehabilitation, and/or demolition projects after a disaster event has occurred. These funds can be used as a local match to receive FEMA mitigation funds. The project must be used to benefit low and moderate income individuals.

WDOA, Division of Housing and Intergovernmental Relations, Emergency Housing Grant Program

This program makes available funds for acquisition, rehabilitation, and/or demolition projects after a disaster event has occurred. These funds can be used as a local match to receive FEMA mitigation funds. The project must be used to benefit low to moderate income individuals.

WEM EPCRA Grants

Wisconsin Emergency Management offers three grants administered by the EPCRA program.

1. Planning Grant

- The Planning Grant and the Emergency Management Performance Grant (EPMG) share the same plan of work.
- Local Emergency Planning Committees (LEPCs) must complete plan-of-work components to be reimbursed.
- Award is based on the annual Planning Grant Formula.
- Funded by EPCRA program revenue (fees).

2. Computer & Hazmat Equipment

- Maximum total award for counties with an eligible hazardous materials team is \$10,000.
- Counties without a county level team are eligible for the computer portion only.
- The grant requires a 20% cash or in-kind match.
- Award criteria is based on an approved equipment list and funding available.
- Funding comes from state general revenue (GPR).

3. Hazardous Materials Emergency Preparedness (HMEP) Sub-Grant

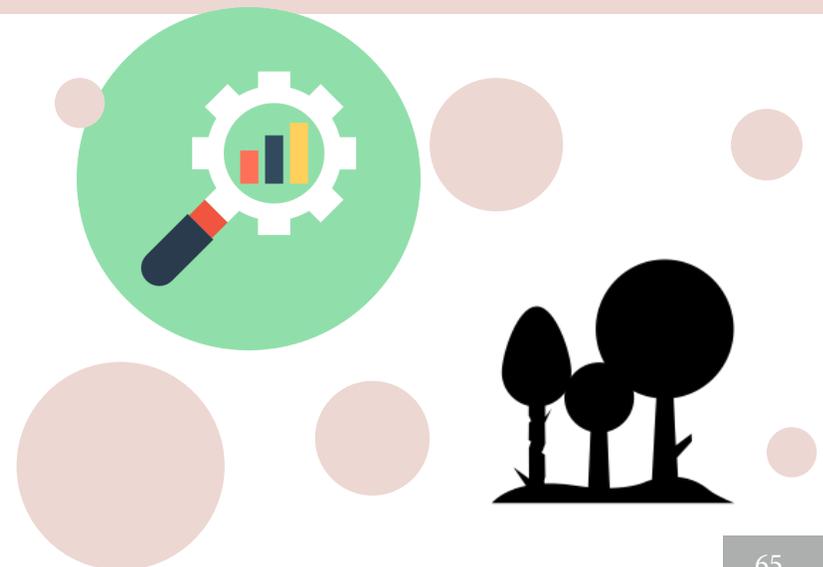
- Training and Planning grant funded by US DOT (EPCRA administers the planning portion).
- Purpose is to improve the delivery of EPCRA and enhance planning efforts with a focus on transportation.
- Training grants are to be used by HMEP subgrantees for the funding of training activities that enhance the capabilities of states, territories, and Native American governments.
- Training should be developed and delivered in accordance with requirements for emergency responders under National Fire Protection Association (NFPA) standard 472.
- Training grants are to be used by HMEP subgrantees for training public sector employees to respond safely and efficiently to accidents and incidents involving the transportation of hazardous materials.

Wisconsin Disaster Fund

The Wisconsin Disaster Fund (WDF) is a state-funded reimbursement program intended to assist county, local, and tribal units of government recoup costs incurred in responding to, and recovering from natural disasters. The WDF is administered within the Recovery Section of WEM. The state reimburses up to 70% of eligible costs, with the local government responsible for the remaining share. The fund does not cover losses suffered by individuals, businesses, or the agricultural sector, or those covered by insurance. It also does not provide management or administrative costs for the applicants.

WDF is modeled after FEMA's Public Assistance Program and is guided by the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended. In order to be eligible for the WDF, the following steps must occur:

- The local unit of government (city, village, county) has declared a "State of Emergency," according to their own policies and procedures.
- The applicant must show that Federal Disaster Assistance is NOT available.
- Recovery costs meet or exceed the countywide per capita damage threshold.



Chapter 5

Plan Adoption and Maintenance

PLAN ADOPTION PROCESS

The Marinette County Hazard Mitigation Plan development process was guided by the County Hazard Mitigation Plan Steering Committee over an 18-month timeframe, with professional planning support from the Bay-Lake Regional Planning Commission. A list of Steering Committee members is located on Page 9 of this document.

Wisconsin Emergency Management (WEM) reviewed the Marinette County Wisconsin Multi-Hazards Mitigation Plan 2020-2025. The Federal Emergency Management Agency (FEMA) and WEM have signed a Program administration by States operational agreement, dated November 9, 2017, allowing WEM to review the local mitigation plans to ensure they meet the required criteria for a multi-jurisdictional hazard mitigation plan outlined in 44 CFR Part 201. Comments received from WEM and FEMA were reviewed by the Steering Committee and necessary revisions were made.

The plan was then adopted by resolution by the Marinette County Board on ___ 2020. The resolution adopting the plan can be found on page I, just before the Table of Contents. After the plan was adopted by the Marinette County Board, it was approved by WEM and FEMA. Approval letter from WEM and FEMA can be found on page II.

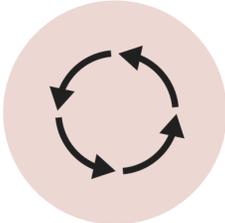
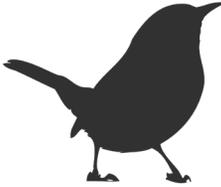
PLAN MAINTENANCE

Planning is an ongoing process, and this plan should grow and adapt in order to keep pace with growth and change in the planning area and its local jurisdictions. The Disaster Mitigation Act of 2000 requires that local plans be evaluated and updated at least every five years in order to remain eligible for assistance.

Plan Monitoring, Evaluation, and Updating

This Marinette County Hazard Mitigation Plan is an update to the initial 2009 plan, and will continue to be monitored, evaluated, and updated by Marinette County Emergency Management. Every five years, the Marinette County Hazards Mitigation Plan will be comprehensively reviewed, and fully updated. The most recent update of this plan was completed in 2014. This update includes the the most current available data to support the plan and the development of new mitigation strategies and an implementation plan. This planning effort is comprehensive, and incorporates opportunities for public involvement to meet all requirements of 44 CFR Part 201.6 and/or any applicable requirements or regulations developed over the next five years.

The five-year plan update will be coordinated by the Marinette County Emergency Management Coordinator for Marinette County Board approval. All meetings to update the plan shall be subject to the Wisconsin Open Meeting Law, and shall be properly noticed to allow for public involvement and comment.



Additional Plan Review

Within three to six months following a significant natural hazard event, a post-disaster review will occur. Information concerning the disaster shall be collected by the Marinette County Emergency Management Coordinator from local law enforcement personnel, fire department personnel, disaster response personnel, Wisconsin Emergency Management staff, FEMA staff, affected citizens, and any other pertinent entities. These resources will be provided to the Steering Committee for its review.

At a public meeting, the Steering Committee members will assess accumulated factors to any impacts of the hazard event, the chance of reoccurrence, and any strategies that should be implemented to mitigate the impacts in the event of a reoccurrence.

The County Emergency Management Coordinator will have primary responsibility for establishing post-disaster review meeting dates, distributing materials, facilitating meetings, and advertising these meetings to those affected in order to gain additional input.

Post-disaster review meetings will align with the Wisconsin Open Meeting Law and be advertised to allow for public involvement and comment.

The Steering Committee may choose to revise or amend the existing county plan based on what is learned in the review process. Any recommended changes to the plan shall be forwarded to the Marinette County Board for its action and consideration.



PLAN COORDINATION

The mitigation action plan in Chapter 4 ties the mitigation strategies to related plans or policies. As the County and jurisdictions in the planning area develop or update their comprehensive plans, incorporation of this Hazard Mitigation Plan is highly recommended.

The Wisconsin comprehensive planning law includes a detailed description of elements that need to be addressed in all comprehensive plans. The following items must be considered when incorporating this Hazard Mitigation Plan into the required elements of local comprehensive plans for jurisdictions in the planning area:

- **Issues and Opportunities Element** – A summary of major hazards that local governments are vulnerable to, and what is proposed to be done to mitigate future losses from the hazards.
- **Housing Element** – An inventory of the properties that are in the floodplain boundaries, the location of manufactured homes, recommendations concerning building codes, shelter opportunities, and a survey of homeowners that may be interested in a voluntary buyout and relocation program.
- **Transportation Element** – Identify any transportation routes or facilities that are more at risk during flooding or winter storms.
- **Agricultural, and Natural and Cultural Resources Element** – Identify the floodplains and agricultural areas that are at risk during hazardous events. Incorporate recommendations on how to mitigate future losses to these areas.
- **Economic Development Element** – Describe the impacts that past hazards have had on area businesses.
- **Intergovernmental Cooperation Element** – Identify intergovernmental police, fire and EMS service sharing agreements that are in effect or which may merit further investigation, and consider cost sharing and resource pooling of government services and facilities.

- **Land Use Element** – Describe how flooding has impacted land uses and what is being done to mitigate negative land use impacts from flooding; map and identify natural hazard areas, such as floodplains and soils with limitations.
- **Implementation Element** – Recommended actions from this plan may be included in the implementation element of comprehensive plans of all jurisdictions in the planning area.

To maximize coordination with other related plans for Marinette County, mitigation strategies recommended in this plan have been and should continue to be considered when developing capital improvement plans, stormwater management plans, or flood mitigation plans.

SOURCES

A number of plans, reports, and technical data were referenced and incorporated into the Marinette County Hazard Mitigation Plan. The following is a comprehensive list of the data and reports that were utilized in plan development:

- Population, housing, and employment data from the Bureau of the Census (2010);
- Bay-Lake Regional Planning Commission land use inventory data (2011);
- Risk Assessment Matrix Worksheet adapted from the Resource Guide to All Hazards Mitigation Planning in Wisconsin (AWRPC, 2003);
- Local Hazard Mitigation Plan Review Crosswalk, completed for Marinette County in April 2009 was used to complete the updated Crosswalk;
- State of Wisconsin Hazard Mitigation Plan (2016) was used to develop hazard descriptions for the risk assessment;
- FEMA Local Mitigation Plan Review Guide (2011) was used to ensure the plan contained all required information;
- Past hazard occurrences were obtained from National Oceanic and Atmospheric Administration (NOAA) – National Climatic Data Center – severe weather event data (2000 – October 2018);

- U.S. Geological Survey maps on landslides, land subsidence and earthquakes were used to describe those hazards;
- FEMA Flood Insurance Studies and FEMA Flood Insurance Rate Maps (FIRMs) were used to map floodplain areas;
- Parcel data from Marinette County was used to determine impacts of hazards with defined areas;
- Assessed valuation data from Marinette County was used to derive estimates of potential dollar losses;
- *Marinette County Emergency Operations Plan* contributed to the development of the mitigation action plan;
- *Marinette County Comprehensive Plan* was used to develop the community profile and contributed to the development of the mitigation action plan;
- Local municipal comprehensive plans contributed to the development of the mitigation action plan; and
- *FEMA Mitigation Ideas: Possible Mitigation Measures by Hazard Type (2013)* contributed to the development of the mitigation action plan.

It is recommended that similar materials be referenced when completing any updates to the hazard mitigation plan.



Appendix A

Steering Committee Sign-In Sheets

In order to assist in plan development, Marinette County established a Hazard Mitigation Plan Steering Committee. A table listing all members of the Committee can be found in Chapter 1 - Introduction.

The plan steering committee met on six occasions: to develop the plan update: October 17, 2018; December 12, 2018; February 13, 2019; April 17, 2019; June 12, 2019, September 5, 2019. This Appendix contains the sign-in sheets from each of these meetings to verify attendance and participation by Committee members. After the public notice for a 30-day review, the open house was held on October 23, 2019 from 4:00-6:00 p.m. The draft plan was posted on the County website and Bay-Lake Regional Planning Commission Website.

The public found two grammatical changes, and Bay-Lake RPC received the email below from the Wisconsin DNR. No other comments were received or changed.

Hello Madison,

My name is Derrick McGee, I am a Forester-Ranger with the Wisconsin DNR at the Wausaukee Ranger Station in Marinette County. I assist with Wildland Fire Control across the entire county. I had the chance to review the wildland fire portion of the Hazard Mitigation Plan and have a few suggestions:

Wildland Fire, Description of Hazard, p. 39

- Typical causes are listed as lightning, human carelessness, and arson. In Marinette County, and Wisconsin as a whole, people debris burning results in over 2/3's of our wildland fires. Our peak "fire season" occurs immediately after the snow melts and lasts through green up, typically March through May. However, forest fires can and do occur all months of the year that there is not complete snow cover. This may be a useful nugget of information for description section.

Wildland Fire, Previous Significant Hazard Occurrences, p. 39

- Nice work here. An additional fire that occurred in recent memory was the 103 acre Blue Bird Fire that burned up a Marinette County jack pine plantation in August of 2015.
- Historically, our county was impacted by the 1,912 acre Huigen Lake Fire on May 11, 1953. This fire burned west of High Falls Flowage in the Town of Stephenson and consumed six cabins plus one garage. The fire was the result of a landowner burning off his dump site.
- 8 days later in 1953, on May 19th, our county was rocked again by a 806 acre fire in Athelstone and a 382 acre fire in Dunbar. These fires burned in more remote areas and less information on them has survived over the years.
- We have a history of large scale forest fires in our county, and the landscape still exists for them to occur.

Wildland Fire, Hazard Frequency, p. 40

- Under this section it lists fire towers as a detection method. As of 2016 all DNR fire towers in the State have been retired. We now rely on an increased presence of aerial detection and citizen reporting.

Wildland Fire, Areas of Greatest Risk, p. 40

- The Town of Stephenson has recognized that they are a very high risk community and has taken steps to alleviate that risk. The Town of Stephenson has been enrolled in a Community Wildfire Protection Plan since 2010. As part of this plan the Town and Wisconsin DNR work together to identify and mitigate fire risk within the Town. The plan is reviewed every 5 years, and just received a complete re-write and update to enter into the 2020's. This document is available to the public and located on the Town website.
- Within the Town of Stephenson the Thunder-Island-Eagle Lake Association (TIE Lakes) has become a nationally recognized Firewise USA site. This program pairs up local neighborhoods in high risk fire up areas with the Wisconsin DNR to identify and mitigate fire risk down to a house by house scale. We hope to establish more Firewise USA sites within the Town of Stephenson over the coming years.

Wildland Fire, Property Damage, p. 41

- I have some more detailed info regarding property damage. I can only reliably query property damage going back to 1/1/2005, so all this data represents the period from 1/1/2005 to 12/31/2018. In that period, there have been a total of 272 structures threatened by wildfire in Marinette County. Of those 272 structures, 246 were saved by fire fighters and 26 were a total loss.

If you have any other questions, please feel free to reach out to me. I will likely attend the public information meeting on 10/23 to meet you folks and answer any specific questions the public may have on the fire side of things. This a very well put together document, nice work!

-Derrick

Steering Committee Sign-In Sheets & Open House

Oct. 17, 2018 Hazard Mitigation Plan Steering Committee Meeting

NAME	SIGNATURE
Barnes Tina	EXCUSED
Bonjean Molly	<i>Molly Bonjean</i>
Burmeister Eric	<i>E.S. Burmeister</i>
Burmeister Kirsten	<i>Kirsten Burmeister</i>
Cleerman Greg	EXCUSED
Heckel Chief Jay	<i>Jay Heckel</i>
Oestrich Tim	<i>Tim Oestrich</i>
Sauve Ted	<i>Ted Sauve</i>
Villas Pete	<i>Pete Villas</i>
Angela Kowalzek-Adrians	<i>Angela Kowalzek-Adrians</i>
Kathy Frank	<i>Kathy Frank</i>

Dec. 12, 2018 Hazard Mitigation Plan Steering Committee Meeting

NAME	SIGNATURE
Barnes Tina	<i>Tina Barnes</i>
Bonjean Molly	<i>Molly Bonjean</i>
Burmeister Eric	<i>Eric Burmeister</i>
Burmeister Kirsten	<i>Kirsten Burmeister</i>
Cleerman Greg	<i>Greg Cleerman</i>
Heckel Chief Jay	<i>Jay Heckel</i>
Oestrich Tim	<i>Tim Oestrich</i>
Sauve Ted	<i>Ted Sauve</i>
Villas Pete	<i>Pete Villas</i>
Angela Kowalzek-Adrians	<i>Angela Kowalzek-Adrians</i>
Kathy Frank	<i>Kathy Frank</i>

Feb. 15, 2019 Hazard Mitigation Steering Committee

Kathy Frank	<i>Kathy Frank</i>
Tina Barnes	<i>Tina Barnes</i>
Molly Bonjean	<i>Molly Bonjean</i>
TIM OESTRICH	<i>Tim Oestrich</i>
Angela Kowalzek-Adrians	<i>Angela Kowalzek-Adrians</i>
Ted Sauve	<i>Ted Sauve</i>
Van Veen	<i>Van Veen</i>
GREG CLEERMAN	<i>Greg Cleerman</i>
Theresa Anderson	<i>Theresa Anderson</i>
Chief - Jay Heckel	<i>Jay Heckel</i>

17-Apr-19 Hazard Mitigation Plan Steering Committee Meeting

NAME	SIGNATURE
Barnes Tina	<i>Tina Barnes</i>
Bonjean Molly	EXCUSED
Burmeister Eric	EXCUSED
Burmeister Kirsten	<i>Kirsten Burmeister</i>
Cleerman Greg	<i>Greg Cleerman</i>
Heckel Chief Jay	<i>Jay Heckel</i>
Oestrich Tim	<i>Tim Oestrich</i>
Sauve Ted	<i>Ted Sauve</i>
Villas Pete	<i>Pete Villas</i>
Madison Smith	<i>Madison Smith</i>
Kathy Frank	<i>Kathy Frank</i>
Jessica Demler	<i>Jessica Demler</i>

5-Sep-19 Hazard Mitigation Plan Steering Committee Meeting

NAME	SIGNATURE
Barnes Tina	<i>Tina Barnes</i>
Bonjean Molly	<i>Molly Bonjean</i>
Burmeister Eric	<i>Eric Burmeister</i>
Burmeister Kirsten	<i>Kirsten Burmeister</i>
Cleerman Greg	<i>Greg Cleerman</i>
Heckel Chief Jay	<i>Jay Heckel</i>
Oestrich Tim	<i>Tim Oestrich</i>
Sauve Ted	<i>Ted Sauve</i>
Villas Pete	<i>Pete Villas</i>
Frank Kathy	<i>Kathy Frank</i>
Madison Smith	<i>Madison Smith</i>
Jessica Demler	<i>Jessica Demler</i>

23-Sep-19

Hazard Mitigation Plan Public Review

NAME - PRINT	STREET ADDRESS, CITY	SIGNATURE
Derrick McLee	1025 City Rd C, Wausau, WI	<i>Derrick McLee</i>
Matthew Roberts	720 Oak St., Keshigo WI	<i>Matthew Roberts</i>
Diane Patz (Village of Pound)	250 Center St., Coleman WI	<i>Diane Patz</i>
Madison Smith	BLRPC 425 S. Adams St. Green Bay, WI	<i>Madison Smith</i>
Kathy Frank	Marinette Co EM, 501 Line Keshigo, WI	<i>Kathy Frank</i>

Sign In June 12 2019

Madison Smith	BLRPC
Kathy Frank	Emerg. Mgmt
Tim Oestrich	LID
GREG CLEERMAN	LID
Tina Barnes	LID
Jessica Demler	Emerg Mgmt
Eric Burmeister	H. Shumy
JAY HOUER	MARINETTE CO
Ted Sauve	County Board



AGENDA
HAZARD MITIGATION PLAN STEERING COMMITTEE
 Wednesday, October 17, 2018
 10:00 a.m.
 Training Room A106A
 Marinette County Law Enforcement Center
 2161 University Drive, Marinette WI

1. Call meeting to order
2. Approve agenda
3. Election of Chairperson
4. Election of Vice Chairperson
5. Public comment – speaker will be limited to 5 minutes
6. Project description: Overview of planning process and plan content – information only.
7. Review project schedule/expectations of steering committee – information only.
8. Review 2014 Hazard Mitigation Plan – information only
9. Evaluate/update goals and hazard ratings, action if any.
10. Discuss next steps – information only.
11. Next meeting – Date/Time/Location
12. Adjournment

Addendum(s) when applicable

Eric Burmeister	Greg Cleereman	Kirsten Burmeister	Molly Bonjean
Pete Villas	Ted Sauve	Tim Oestrich	Tina Barnes
Jay Heckel	County Clerk	Agendas	Angela Kowalzek-Adrians

Supervisors present at this meeting may constitute an unintended quorum of other County Board committees. Supervisors appointed to the committee shall participate in action. Others may be present to listen and observe.

Note: Agenda items may not be considered and acted upon in the order listed.

1



AGENDA
HAZARD MITIGATION PLAN STEERING COMMITTEE
 Wednesday, December 12, 2018
 10:00 a.m.
 Training Room A106A
 Marinette County Law Enforcement Center
 2161 University Drive, Marinette WI

1. Call meeting to order
2. Approve agenda
3. Approval/correction of minutes October 17, 2018, action if any.
4. Public Comment – Speaker will be limited to 5 minutes
5. Review goals for the Hazard Mitigation Plan - information only.
6. Review/modify hazard risks and ratings – action if any.
7. Review/modify draft Chapters 1 and 2 of the Hazard Mitigation Plan – action if any.
8. Evaluate/update the identified mitigation strategies – action if any.
9. Discuss next steps – information only.
10. Next meeting – Date/Time/Location
11. Adjournment

Addendum(s) when applicable

Eric Burmeister	Greg Cleereman	Kirsten Burmeister	Molly Bonjean
Pete Villas	Ted Sauve	Tim Oestreich	Tina Barnes
Jay Heckel	County Clerk	Agendas	Angela Kowalzek-Adrians

Supervisors present at this meeting may constitute an unintended quorum of other County Board committees. Supervisors appointed to the committee shall participate in action. Others may be present to listen and observe.

Note: Agenda items may not be considered and acted upon in the order listed.

1



AGENDA
HAZARD MITIGATION PLAN STEERING COMMITTEE
 Wednesday, February 13, 2019
 10:00 a.m.
 Training Room A106A
 Marinette County Law Enforcement Center
 2161 University Drive, Marinette WI

1. Call meeting to order
2. Approve agenda
3. Approval/correction of minutes December 12, 2018, action if any.
4. Public Comment – Speaker will be limited to 5 minutes
5. Review/modify goals for the Hazard Mitigation Plan – action if any.
6. Review critical facilities and mitigation project documents returned from municipalities – action if any.
7. Review/modify critical facility categories and definitions – action if any.
8. Review/modify mitigation strategies – action if any.
9. Review/modify draft Chapter 3 of the Hazard Mitigation Plan – action if any.
10. Discuss next steps – information only.
11. Next meeting – Date/Time/Location
12. Adjournment

Addendum(s) when applicable

Eric Burmeister	Greg Cleereman	Kirsten Burmeister	Molly Bonjean
Pete Villas	Ted Sauve	Tim Oestrich	Tina Barnes
Jay Heckel	County Clerk	Agendas	Angela Kowalzek-Adrians

Supervisors present at this meeting may constitute an unintended quorum of other County Board committees. Supervisors appointed to the committee shall participate in action. Others may be present to listen and observe.

Note: Agenda items may not be considered and acted upon in the order listed.

1




AGENDA
HAZARD MITIGATION PLAN STEERING COMMITTEE
 Wednesday, June 12, 2019
 10:00 a.m.
 Jury Assembly Room A027
 Marinette County Courthouse
 1926 Hall Ave., Marinette WI

1. Call meeting to order
2. Approve agenda
3. Approval/correction of minutes April 17, 2019, action if any.
4. Public Comment – Speaker will be limited to 5 minutes
5. Review/modify Critical Facilities list – action if any.
6. Review/Discuss State of Wisconsin Hazard Mitigation Plan Section 4.4.2 & 4.4.3 (Att A) – action if any
7. Review/modify corrections of Chapters 3 of the Hazard Mitigation Plan – action if any.
8. Review/modify drafts of Chapter 4 and 5 of the Hazard Mitigation Plan – action if any.
9. Review/modify Mitigation Strategies of the Hazard Mitigation Plan – action if any.
10. Discuss next steps – information only.
11. Next meeting – Date/Time/Location
12. Adjournment

Addendum(s) when applicable

Eric Burmeister, Chair	Greg Cleereman	Kirsten Burmeister	Molly Bonjean
Pete Villas, Vice Chair	Ted Sauve	Tim Oestrich	Tina Barnes
Jay Heckel	County Clerk	Agendas	Madison Smith, BayLake RPC

Supervisors present at this meeting may constitute an unintended quorum of other County Board committees. Supervisors appointed to the committee shall participate in action. Others may be present to listen and observe.

Note: Agenda items may not be considered and acted upon in the order listed.

If you are an individual who needs a special accommodation while attending this meeting as required by the "Americans With Disabilities Act", please notify County Clerk Kathy Brandt, Marinette County Courthouse (715-732-7406) at least 24 hours prior to the meeting in order to make suitable arrangements. Thank you. (TDD 715-732-7780)

1



AGENDA
HAZARD MITIGATION PLAN STEERING COMMITTEE
 Wednesday, April 17, 2019
 10:00 a.m.
 Annex Conference Room A103
 Marinette County Courthouse
 1926 Hall Ave., Marinette WI

1. Call meeting to order
2. Approve agenda
3. Approval/correction of minutes February 13, 2019, action if any.
4. Public Comment – Speaker will be limited to 5 minutes
5. Review/modify Critical Facilities list – action if any.
6. Review/modify Draft Chapters 3, 4, and 5 of the Hazard Mitigation Plan – action if any.
7. Review/modify Mitigation Strategies of the Hazard Mitigation Plan – action if any.
8. Discuss next steps – information only.
9. Next meeting – Date/Time/Location
10. Adjournment

Addendum(s) when applicable

Eric Burmeister, Chair	Greg Cleereman	Kirsten Burmeister	Molly Bonjean
Pete Villas, Vice Chair	Ted Sauve	Tim Oestreich	Tina Barnes
Jay Heckel	County Clerk	Agendas	Madison Smith, BayLake RPC

Supervisors present at this meeting may constitute an unintended quorum of other County Board committees. Supervisors appointed to the committee shall participate in action. Others may be present to listen and observe.

Note: Agenda items may not be considered and acted upon in the order listed.

If you are an individual who needs a special accommodation while attending this meeting as required by the "Americans With Disabilities Act", please notify County Clerk Kathy Brandt, Marinette County Courthouse (715-732-7406) at least 24 hours prior to the meeting in order to make suitable arrangements. Thank you. (TDD 715-732-7780)

1



AGENDA
HAZARD MITIGATION PLAN STEERING COMMITTEE
 9:30 a.m.
 Jury Assembly Room A027
 Marinette County Courthouse
 1926 Hall Ave., Marinette WI

1. Call meeting to order
2. Approve agenda
3. Approval/correction of minutes June 12, 2019, action if any.
4. Public Comment – Speaker will be limited to 5 minutes
5. Review/modify Chapter 5 Plan Maintenance of the Hazard Mitigation Plan – action if any.
6. Review/Discuss Public Informational Meeting – action if any
7. Discuss next steps – information only.
8. Next meeting – Date/Time/Location
9. Adjournment

Addendum(s) when applicable

Eric Burmeister, Chair	Greg Cleereman	Kirsten Burmeister	Molly Bonjean
Pete Villas, Vice Chair	Ted Sauve	Tim Oestrich	Tina Barnes
Jay Heckel	County Clerk	Agendas	Madison Smith, BayLake RPC
Kathy Frank			

Supervisors present at this meeting may constitute an unintended quorum of other County Board committees. Supervisors appointed to the committee shall participate in action. Others may be present to listen and observe.

Note: Agenda items may not be considered and acted upon in the order listed.

If you are an individual who needs a special accommodation while attending this meeting as required by the "Americans With Disabilities Act", please notify County Clerk Kathy Brandt, Marinette County Courthouse (715-732-7406) at least 48 hours prior to the meeting in order to make suitable arrangements. Thank you.

1





MINUTES
HAZARD MITIGATION PLAN STEERING COMMITTEE
 Wednesday, October 17, 2018
 Marinette County Law Enforcement Center
 2161 University Drive, Marinette WI

MEMBERS PRESENT: Molly Bonjean
 Eric Burmeister
 Kirsten Burmeister
 Jay Heckel
 Ted Sauve
 Tim Oestreich
 Pete Villas

MEMBERS EXCUSED: Greg Cleereman
 Tina Barnes

OTHERS PRESENT: Kathy Frank
 Angela Kowalzek-Adrians, Bay Lake RPC

- Call to order**
 Eric Burmeister called the meeting to order at 10:04 am
- Approve agenda**
Motion (Sauve/Heckel) to approve the agenda as presented. Motion carried. No negative votes.
- Election of Chairperson**
 Election was carried out in accordance with Robert's Rules of Order. K. Burmeister nominated Eric Burmeister. No other nominations.
Motion (Oestreich/K. Burmeister) to close nominations and elect Eric Burmeister as Chairperson. Motion carried. No negative votes.
- Election of Vice-Chairperson**
 Election was carried out in accordance with Robert's Rules of Order. K. Burmeister nominated Pete Villas. No other nominations.
Motion (K. Burmeister/Heckel) to close nominations and elect Pete Villas as Vice-Chairperson. Motion carried. No negative votes.
- Public Comment - None**
- Project description: Overview of planning process and plan content - information only.**
 Angela Kowalzek-Adrians provided an overview of the hazard mitigation plan process and content.
- Review project schedule/expectations of steering committee - information only.**
 Angela Kowalzek-Adrians distributed a meeting schedule with goals.

Page 1 of 2



MINUTES
HAZARD MITIGATION PLAN STEERING COMMITTEE
 Wednesday, December 12, 2018
 Marinette County Law Enforcement Center
 2161 University Drive, Marinette WI

MEMBERS PRESENT: Molly Bonjean
 Tina Barnes
 Eric Burmeister
 Kirsten Burmeister
 Greg Cleereman
 Jay Heckel
 Ted Sauve
 Tim Oestreich
 Pete Villas

OTHERS PRESENT: Kathy Frank
 Angela Kowalzek-Adrians, Bay Lake RPC

- Call to order**
 Vice-Chair Villas called the meeting to order at 10:00 am
- Approve agenda**
Motion (Sauve/K. Burmeister) to approve the agenda as presented. Motion carried. No negative votes.
- Approval/correction of minutes October 17, 2018, action if any.**
Motion (Oestreich/K. Burmeister) to approve the minutes of October 17, 2018. Motion carried. No negative votes.
- Public Comment - None**
- Review goals for the Hazard Mitigation Plan - information only.**
 Discussion about adding "resilience" to goals. To be brought back at next meeting.
- Review/modify hazard risks and ratings - action if any.**
 Marinette County Hazard Events (1/1/2000 to 6/30/2018) document was reviewed. No modifications were made.
 Eric Burmeister arrived at 1005
- Review/modify draft Chapters 1 and 2 of the Hazard Mitigation Plan - action if any.**
 Chapters 1 and 2 from existing plan were reviewed and corrections were noted. To be brought back at next meeting.
- Evaluate/update the identified mitigation strategies - action if any.**
 Review and update of mitigation strategies section was continued from previous meeting. Changes were noted and will be brought back at the next meeting.
 K. Burmeister was excused at 1050

Page 1 of 2



MINUTES
HAZARD MITIGATION PLAN STEERING COMMITTEE
 Wednesday, February 13, 2019
 Marinette County Law Enforcement Center
 2161 University Drive, Marinette WI

MEMBERS PRESENT: Molly Bonjean
 Tina Barnes
 Greg Cleereman
 Jay Heckel
 Ted Sauve
 Tim Oestreich
 Pete Villas

MEMBERS EXCUSED: Eric Burmeister
 Kirsten Burmeister

OTHERS PRESENT: Kathy Frank
 Angela Kowalzek-Adrians, Bay Lake RPC
 Mark Anderson

- Call to order**
 Vice-Chair Villas called the meeting to order at 10:06 am
- Approve agenda**
Motion (Sauve/Oestreich) to approve the agenda as presented. Motion carried. No negative votes.
- Approval/correction of minutes December 12, 2018, action if any.**
Motion (Cleereman/Oestreich) to approve the minutes of December 12, 2018. Motion carried. No negative votes.
- Public Comment - None**
- Review/modify goals for the Hazard Mitigation Plan - action if any.**
Motion (Cleereman/Barnes) to accept the goals as presented and provide further clarification of "resilient" in the text of the plan. Motion carried. No negative votes.
 Jay Heckel arrived at 10:16 am
- Review critical facilities and mitigation project documents returned from municipalities - action if any.**
 Discussion on whether privately owned facilities should be included on the critical facilities list with consensus to include those that are on a state database.
Motion (Cleereman/Oestreich) to not include recycling centers as critical facilities. Motion carried. No negative votes.
 Jay Heckel excused at 10:40 am.



MINUTES
HAZARD MITIGATION PLAN STEERING COMMITTEE
 Wednesday, April 17, 2019
 Annex Conference Room A103
 Marinette County Courthouse
 1926 Hall Ave., Marinette WI

MEMBERS PRESENT: Tina Barnes
 Kirsten Burmeister
 Greg Cleereman
 Jay Heckel
 Tim Oestreich
 Ted Sauve
 Pete Villas

MEMBERS EXCUSED: Molly Bonjean
 Eric Burmeister

OTHERS PRESENT: Kathy Frank
 Jessica Demler
 Madison Smith, BayLake RPC

- Call meeting to order**
 Vice-Chair Villas called the meeting to order at 10:00 am
- Approve agenda**
Motion (Sauve/Oestreich) to approve agenda as presented. Motion carried. No negative votes.
- Approval/correction of minutes February 13, 2019, action if any.**
Motion (Barnes/Heckel) to approve the minutes of February 13, 2019. Motion carried. No negative votes.
- Public Comment - None**
 To be brought back at next meeting with Municipal data.
- Review/modify Critical Facilities list - action if any.**
 Reviewed chapters 3 and 4 and corrections/changes were noted. Consensus to address resiliency in Chapter 4 Introduction. Chapter 3, 4 and 5 to be brought back at next meeting.
- Review/modify Draft Chapters 3, 4, and 5 of the Hazard Mitigation Plan - action if any.**
 Reviewed chapters 3 and 4 and corrections/changes were noted. Consensus to address resiliency in Chapter 4 Introduction. Chapter 3, 4 and 5 to be brought back at next meeting.
- Review/modify Mitigation Strategies of the Hazard Mitigation Plan - action if any.**
 To be brought back at next meeting.
- Discuss next steps - Information only**
 Bay Lake RPC provided committee members with a schedule. (Att A)
- Next meeting - Date/Time/Location**
 June 12, 2019 9:30 am Jury Assembly Room A027
- Adjournment**
Motion (Oestreich/Cleereman) to adjourn at 12:10 pm. No negative votes
 Jessica Demler, Administrative Specialist
 Date approved/corrected:

1



MINUTES
HAZARD MITIGATION PLAN STEERING COMMITTEE
 Wednesday, June 12, 2019
 Jury Assembly Room A027
 Marinette County Courthouse
 1926 Hall Ave., Marinette WI

MEMBERS PRESENT: Eric Burmeister
 Jay Heckel
 Greg Cleereman
 Ted Sauve
 Tim Oestreich
 Tina Barnes

MEMBERS EXCUSED: Molly Bonjean
 Pete Villas
 Kirsten Burmeister

OTHERS PRESENT: Kathy Frank
 Jessica Demler
 Madison Smith, BayLake RPC

- Call meeting to order**
 Chair Burmeister called the meeting to order at 9:35 am
- Approve agenda**
Motion (Oestreich/Sauve) to approve the agenda as presented. Motion carried. No negative votes.
- Approval/correction of minutes April 17, 2019, action if any.**
Motion (Sauve/Oestreich) to approve the minutes of April 17, 2019 as presented. Motion carried. No negative votes.
 Heckel arrives at 9:50 am.
- Public Comment - None**
- Review/modify Critical Facilities list - action if any.**
Motion (Oestreich/Heckel) to approve Critical Facilities List as presented. Motion carried. No negative votes.
- Review/Discuss State of Wisconsin Hazard Mitigation Plan Section 4.4.2 & 4.4.3 - action if any**
Motion (Cleereman/Barnes) to include climate change and resiliency in the plan as presented in chapter. Motion carried. No negative votes.
- Review/modify corrections of Chapter 3 of the Hazard Mitigation Plan - action if any.**
Motion (Cleereman/Heckel) to approve Chapter 3 as presented. Motion carried. No negative votes.
- Review/modify drafts of Chapter 4 and 5 of the Hazard Mitigation Plan - action if any.**
Motion (Oestreich/Cleereman) to approve Chapter 4 with corrections/modifications discussed. Motion carried. No negative votes. Chapter 5 to be brought back at next meeting.
 Heckel excused at 11:00 am.

1



MINUTES
HAZARD MITIGATION PLAN STEERING COMMITTEE
 Thursday, September 5, 2019
 Jury Assembly Room A027
 Marinette County Courthouse
 1926 Hall Ave., Marinette WI

MEMBERS PRESENT: Eric Burmeister
 Jay Heckel
 Greg Cleereman
 Kathy Frank
 Ted Sauve
 Tim Oestreich
 Tina Barnes
 Molly Bonjean
 Pete Villas
 Kirsten Burmeister

OTHERS PRESENT: Jessica Demler
 Madison Smith, BayLake RPC

- Call meeting to order**
 Vice Chair Villas called the meeting to order at 9:35 am
- Approve agenda**
Motion (Cleereman/Heckel) to approve the agenda as presented. Motion carried. No negative votes.
- Approval/correction of minutes June 12, 2019, action if any.**
Motion (Barnes/Frank) to approve the corrections of the spelling of Ted Sauve, and placement of Kathy Frank to the Members Present section.
 K. Burmeister arrives at 9:40 am.
- Public Comment - Speaker will be limited to 5 minutes**
 None
 E. Burmeister arrives at 9:45 am assumed role of Chair.
- Review/modify Chapter 5 Plan Maintenance of the Hazard Mitigation Plan - action if any.**
Motion (Villas/K. Burmeister) to approve Chapter 5 with corrections/modifications discussed. Motion carried. No Negative Votes.
 T. Oestreich arrives at 10:15 am.
- Review/Discuss Public Informational Meeting - action if any**
 Public meeting will be held October 23, 2019 from 4:00 pm until 6:00 pm in the Marinette County Courthouse, Jury Assembly Room.
- Discuss next steps - Information only.**
 Adoption and Resolution Process was reviewed.

1

Appendix B

Multi-Jurisdictional Cooperation Exercise

As a way to ensure accurate data and multi-jurisdictional cooperation in the update of the county's hazard mitigation plan, the steering committee and Bay-Lake Regional Planning Commission engaged the local communities in a cooperation exercise to review and provide input on plan materials.

Communities were provided a listing of their critical facilities, goals identified in the plan, and hazards mitigation actions, and were asked to review and comment on the materials. Additionally, they were asked to identify mitigation actions specific to their community.

The letter to the right was sent to the municipalities in Marinette County and Table B.1 and B.2 (page 74) on the following page displays the incorporated communities (i.e. cities and villages) that returned the reviewed materials. Table D.1 (page 76) reflects the entire list of critical facilities. Each participating community and neighboring communities, including local and regional agencies were notified by email for input and involvement, as well as contacted to view the final draft plan update.

Stakeholders were involved through the collaboration of the Steering Committee and individual community participation was completed by Bay-Lake RPC reaching out to both participating and non-participating communities through letters mailed out, follow up calls and e-mails. The Bay-Lake RPC and Marinette County social media pages such as Facebook, Twitter, websites, and monthly e-newsletters were also used to increase stakeholder awareness and participation. Stakeholders on the Steering Committee helped create the plan update, stakeholders in the community such as clerks and administrators helped update the critical facilities list for their community and their mitigation action plan updates. The county land services also helped update the GIS collection of critical facilities.

December 20, 2018

RE: Request for Review of Hazard Mitigation Materials

(Please forward to the Plan Commission or Town Board for review)

The Marinette County Emergency Management and the Bay-Lake Regional Planning Commission have been working with a local steering committee to update the Hazard Mitigation Plan for Marinette County and the towns.

The Federal Disaster Mitigation Act of 2000 established a **requirement for local governments** to prepare a hazard mitigation plan to be eligible for FEMA funding. The hazard mitigation planning process is being conducted at the county level, and will meet the local government requirement for all towns.

The following materials have been enclosed to facilitate town participation in development of the plan, and ensure that the plan contains accurate information for the towns:

EXERCISE #1: Using the current inventory of the critical facilities found in your community, plus a list of the critical facility types/categories that are to be included, **review the information for accuracy and write in any edits.**

- Ensure that there is an address or lat/long coordinates provided for each critical facility that you add.
- Only include publicly owned facilities.

Please return your information (with or without edits) **no later than February 8, 2019** to Angela Kowalzek-Adrians at AngelaKA@baylakerpc.org or 425 S. Adams Street, Suite 201, Green Bay, WI 54301.

If you have any questions or need any additional information, please contact Angela by email or phone at (920) 448-2820, Ext. 106. Thank you for your participation in reviewing the enclosed materials.

PLEASE NOTE THAT THIS IS THE ONLY REQUEST THAT WILL BE MADE FOR THIS INFORMATION.

Sincerely,

Eric Burmeister
Emergency Management Director

Enclosures (1): Exercise #1 - Critical Facility Categories and Town Critical Facilities List

Appendix B

All Critical Facilities (Table B.1 & B.2)

Table B.1: Municipal Review Return List

Municipality	Received
City of Marinette	X
City of Niagara	X
City of Peshtigo	X
Village of Coleman	X
Village of Crivitz	X
Village of Pound	X
Village of Wausaukee	X
Town of Amberg	
Town of Athelstane	
Town of Beaver	
Town of Beecher	
Town of Dunbar	X
Town of Goodman	
Town of Grover	X
Town of Lake	X
Town of Middle Inlet	X
Town of Niagara	X
Town of Pembine	X
Town of Peshtigo	X
Town of Porterfield	X
Town of Pound	X
Town of Silver Cliff	
Town of Stephenson	X
Town of Wagner	
Town of Wausaukee	

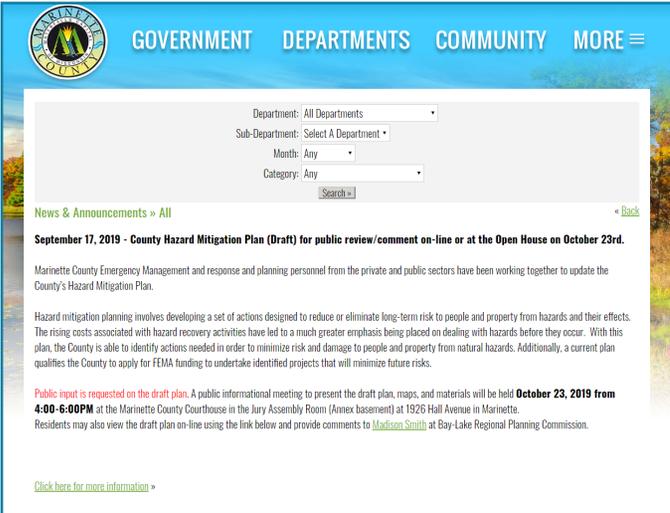
Table B.2: Status of Review Materials for Incorporated Communities

Municipality	Community Representative		
	Name	Title	Date Signed
City of Marinette	Steve Genisot	Mayor	02/21/2019
City of Niagara	George Bousley	Mayor	02/06/2019
City of Peshtigo	Catherine Malke	Mayor	01/31/2019
Village of Coleman	Glenn A. Woulf	President	02/27/2019
Village of Crivitz	John J. Deschane	President	02/05/2019
Village of Pound	Patricia Schutte	Clerk/Treasurer	02/26/2019
Village of Wausaukee	Hilbert R. Radtke	President	01/16/2019



Appendix C

Public Meeting Notice & Review



GOVERNMENT DEPARTMENTS COMMUNITY MORE

Department: All Departments
 Sub-Department: Select A Department
 Month: Any
 Category: Any

News & Announcements » All

September 17, 2019 - County Hazard Mitigation Plan (Draft) for public review/comment on-line or at the Open House on October 23rd.

Marinette County Emergency Management and response and planning personnel from the private and public sectors have been working together to update the County's Hazard Mitigation Plan.

Hazard mitigation planning involves developing a set of actions designed to reduce or eliminate long-term risk to people and property from hazards and their effects. The rising costs associated with hazard recovery activities have led to a much greater emphasis being placed on dealing with hazards before they occur. With this plan, the County is able to identify actions needed in order to minimize risk and damage to people and property from natural hazards. Additionally, a current plan qualifies the County to apply for FEMA funding to undertake identified projects that will minimize future risks.

Public input is requested on the draft plan. A public informational meeting to present the draft plan, maps, and materials will be held **October 23, 2019 from 4:00-6:00PM** at the Marinette County Courthouse in the Jury Assembly Room (Annex basement) at 1926 Hall Avenue in Marinette.

Residents may also view the draft plan on-line using the link below and provide comments to [Madison Smith](#) at Bay-Lake Regional Planning Commission.

[Click here for more information](#)

MARINETTE COUNTY HAZARD MITIGATION PLAN UPDATE



Hazard Mitigation is defined as any action taken before, during, or after a disaster to permanently eliminate or reduce the long-term risk to human life and property from natural and man-made hazards. Hazard mitigation planning is a process that assesses risks and evaluates the community vulnerability from potential hazards. Marinette County has worked alongside the Bay-Lake Regional Planning Commission to create the updated **Marinette County, Wisconsin Hazard Mitigation Plan 2020-2025.**

Please review the draft document online and submit written comments on the proposed updated hazard plan. Feedback can be emailed to [Madison Smith](#) or also submitted on the [Marinette County website](#).

A public informational meeting to present the draft plan, maps, and materials will be held **October 23, 2019 from 4:00-6:00PM** at the Marinette County Courthouse in the Jury Assembly Room (Annex basement) at 1926 Hall Avenue in Marinette County.

Hazard Mitigation Draft Available for Review

Marinette County Emergency Management, response, and planning personnel from the private and public sectors have been working together to update the County's Hazard Mitigation Plan. The plan was originally developed in 2007 under funding from the Federal Emergency Management Agency (FEMA). This will be the third update to the plan.

Public input is requested on the draft plan. A public informational meeting to present the draft plan, maps, and materials will be held Oct. 23, from 4-6 PM at the Marinette County Courthouse in the Jury Assembly Room (Annex basement) at 1926 Hall Ave., Marinette.

Alternatively, the draft plan can be viewed and comments, submitted on-line at Marinette County's website at [www.marinette-county.com](#). On-line comments are being accepted through Oct. 23.

Hazard mitigation planning involves developing a set of actions designed to reduce or eliminate long-term risk to people and property from hazards and their effects. The rising costs associated with hazard recovery activities have led to a much greater emphasis being placed on dealing with hazards before they occur through hazard mitigation planning. Hazard mitigation planning is the only phase of emergency management planning specifically dedicated to breaking the cycle of damage, reconstruction, and repeated damage.

With this plan, the County is able to identify the actions steps it needs to take in order to minimize risk and damage to people and property from natural hazards. Additionally, the County and municipalities maintain their qualification to apply for FEMA funding to undertake identified projects that will minimize future risks.



MARINETTE COUNTY HIGHWAY DEPARTMENT
DIVISION OF EMERGENCY MANAGEMENT

Kathy Frank, IM Coordinator/Public Information Officer
 Jessica Demier, Administrative Specialist

Media Contact: Kathy Frank, Tel: 715-732-7666

For Immediate Release

October 9, 2019

Marinette County Hazard Mitigation Plan Draft Available for Public Review

(Peshtigo, WI) Marinette County Emergency Management, response, and planning personnel from the private and public sectors have been working together to update the County's Hazard Mitigation Plan. The plan was originally developed in 2007 under funding from the Federal Emergency Management Agency (FEMA). This will be the third update to the plan.

Public input is requested on the draft plan. A public informational meeting to present the draft plan, maps, and materials will be held October 23, 2019 from 4:00-6:00PM at the Marinette County Courthouse in the Jury Assembly Room (Annex basement) at 1926 Hall Avenue in Marinette.

Alternatively, the draft plan can be viewed and comments submitted on-line at Marinette County's website at [www.marinettecounty.com](#). On-line comments are being accepted through October 23, 2019.

Hazard mitigation planning involves developing a set of actions designed to reduce or eliminate long-term risk to people and property from hazards and their effects. The rising costs associated with hazard recovery activities have led to a much greater emphasis being placed on dealing with hazards before they occur through hazard mitigation planning. Hazard mitigation planning is the only phase of emergency management planning specifically dedicated to breaking the cycle of damage, reconstruction, and repeated damage.

With this plan, the County is able to identify the actions steps it needs to take in order to minimize risk and damage to people and property from natural hazards. Additionally, the County and municipalities maintain their qualification to apply for FEMA funding to undertake identified projects that will minimize future risks.

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501 Pine Street • Peshtigo, WI 54157 • Phone 715.732.7666 • FAX 715.582.4348

Marinette Co. Hazard Mitigation Plan Available for Public Review

Marinette County Emergency Management, response, and planning personnel from the private and public sectors have been working together to update the County's Hazard Mitigation Plan. The plan was originally developed in 2007 under funding from the Federal Emergency Management Agency (FEMA). This will be the third update.

Development of the plan update is being led by the County Emergency Management Division with the Bay-Lake Regional Planning Commission facilitating the process and writing the plan under the direction of a steering committee. The steering committee is made up of personnel from other county departments including Land Information, Highway, Public Health, Communications/Dispatch, and Forestry. The committee also includes representatives from the Marinette County Local Emergency Planning Committee (LEPC).

Hazard mitigation planning involves developing a set of actions designed to reduce or eliminate long-term risk to people and property from hazards and their effects. The rising costs associated with hazard recovery activities have led to a much greater emphasis being placed on dealing with hazards before they occur through hazard mitigation planning. Hazard mitigation planning is the only phase of emergency management planning specifically dedicated to breaking the cycle of damage, reconstruction, and repeated damage.

Lowis Promoted to Assistant VP



Lynn Lewis has been promoted to Assistant Vice President, Deposit Operations at The Stephenson National Bank & Trust (SNBT). She is currently responsible for overseeing call center support, deposit operations specialists, and eServices specialists.

Peshtigo Grads Sept. 27-28

invited to bring a dish/snack for the buffet.

On Saturday, Sept. 28th, Randy Meunier invited classmates to view the Peshtigo Historical Days parade on his front lawn located at 125 N. Emery Avenue. Bring lawn chair or blanket to sit on. Following the parade, members are invited to activities at Badger Park. For more information, contact Clara (Ericsson) Murphy at 920-457-2658.

The public meeting notice was released on September 16, 2019 by the Emergency Management Coordinator. This was emailed, posted on e-newsletter articles, websites, and in the local newspapers.




Appendix D

All Critical Facilities (Table B.2)

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Bridge	Hattie St Bridge	City of Marinette	Hattie St/Menominee River
Bridge	Ogden/Menokaune Bridge	City of Marinette	Ogden St/Menominee River
Bridge	Ogden/Menokaune Bridge	City of Marinette	Ogden St/Menominee River
Bridge	Railroad Bridge	City of Marinette	Railroad/Menominee River
Bridge	Railroad Bridge	City of Marinette	Railroad/Menominee River
Bridge	US Highway 41 Interstate Bridge	City of Marinette	USH 41/Bridge St/Menominee River
Bridge	US Highway 41 Interstate Bridge	City of Marinette	USH 41/Bridge St/Menominee River
Communication Tower/Facility	Time Warner Cable	City of Marinette	3611 Murray St
Communication Tower/Facility	WLCJ 925	City of Marinette	1223 Carney Blvd
Communication Tower/Facility	WMAM 570	City of Marinette	400 Wells St
Communication Tower/Facility	WMAM 570 Tower	City of Marinette	400 Wells St
Dam	Kimberly Clark/Menominee River	City of Marinette	Menominee River
Dam	Menominee River	City of Marinette	Menominee River
Daycare	FAITH LUTHERAN PRESCHOOL	City of Marinette	4009 Irving St, Marinette, WI
Daycare	KIDS R US TAKE TWO	City of Marinette	3917 Hall Ave, Marinette, WI
Daycare	KIDS R US UNIVERSITY LLC	City of Marinette	3919 Hall Ave, Marinette, WI
Daycare	KIDS R US UNIVERSITY LLC	City of Marinette	3088 Carney Ave, Marinette, WI
Daycare	NOAH'S ARK CHRISTIAN DAY CARE	City of Marinette	2535 Roosevelt Rd, Marinette, WI
Daycare	OPEN ARMS FAMILY DAY CARE	City of Marinette	1503 Dagggett St, Marinette, WI
Daycare	PETER PIPER KIDDIE NURSERY INC	City of Marinette	561 Cleveland Ave, Marinette, WI
Dry Hydrant/Fire Pond	Waupaca Foundary	City of Marinette	805 Ogden St
Fuel Substation	FerrellGas, Inc.	City of Marinette	2909 Mary St
Fuel Substation	WPSC	City of Marinette	Roosevelt Rd
Hazmat	Aigas North Central, INC.	City of Marinette	1801 Marinette Ave
Hazmat	Alliance Industries, Inc.	City of Marinette	301 E Russell St
Hazmat	Bieh Construction Company, Inc.	City of Marinette	2505 Bieh Ave
Hazmat	ChemLink - Marinette	City of Marinette	1727 Stephenson St
Hazmat	ChemDesign Corp.	City of Marinette	2 Stanton St
Hazmat	Karl Schmidt Kolberschmidt US, Inc.	City of Marinette	1731 Industrial Pkwy
Hazmat	Karl Schmidt Unital Inc.	City of Marinette	1731 Industrial Pkwy
Hazmat	Kimberly-Clark Tissue Co.	City of Marinette	3120 Riverside Ave
Hazmat	KS Large Bore Platons, Inc.	City of Marinette	2945 Angwall Dr
Hazmat	Marinette Marine Corp.	City of Marinette	1600 Ely St
Hazmat	Nestegg Marine	City of Marinette	300 Wells St

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Hazmat	Silvan Industries, INC	City of Marinette	2121 Cleveland Ave
Hazmat	The Marinette Fuel & Dock Co. Docks	City of Marinette	808 Ogden St
Hazmat	Time Warner Cable Headend/Hub #8	City of Marinette	3611 Murray St
Hazmat	Tyco Fire Protection Products	City of Marinette	One Stanton St
Hazmat	Tyco Fire Protection Products, Industrial Parkway	City of Marinette	2700 Industrial Pkwy
Hazmat	United Postal Service	City of Marinette	2640 Industrial Pkwy
Hazmat	Waupaca Foundary Inc. - Plant 4	City of Marinette	805 Ogden St
Hazmat	Westlund Bus Lines, Inc.	City of Marinette	1615 Badger Pkwy
Hazmat	Wirsert, Inc.	City of Marinette	2645 Industrial Pkwy
Hazmat	Wirsert, Inc.	City of Marinette	2645 Industrial Pkwy
Healthcare Facility	Augustana Manor/Luther Manor	City of Marinette	881 Pine Beach Rd, Marinette
Healthcare Facility	Aurora Health Center	City of Marinette	4061 Old Peshtigo Rd
Healthcare Facility	Aurora Healthcare Clinic	City of Marinette	1510 University Dr
Healthcare Facility	Aurora Healthcare Clinic	City of Marinette	3130 Shore Dr
Healthcare Facility	Bay Area Medical Center	City of Marinette	3003 University Dr, Marinette, WI
Healthcare Facility	Bay Shore Pines South	City of Marinette	3206 Woodland Rd, Marinette
Healthcare Facility	Bayshore Pines North	City of Marinette	875 University Dr, Marinette
Healthcare Facility	Edgewood Manor	City of Marinette	1101 Northland Terrace Ln, Marinette
Healthcare Facility	Mobility Rehab Center, LLC	City of Marinette	3117 Shore Dr
Healthcare Facility	Northern Lights Clinic [ENT]	City of Marinette	3200 Shore Dr
Healthcare Facility	Northland Terrace Estates & Homes	City of Marinette	1200 Northland Terrace Ln, Marinette
Healthcare Facility	Northland Village	City of Marinette	1025 Pine Beach Rd, Marinette
Healthcare Facility	NorthReach Healthcare	City of Marinette	2935 Shore Dr
Healthcare Facility	NorthReach Healthcare	City of Marinette	3123 Shore Dr
Healthcare Facility	NorthReach Healthcare - Marinette Clinic	City of Marinette	2720 Cahill Rd
Healthcare Facility	NorthReach Healthcare Pediatric Clinic	City of Marinette	1106 University Dr
Healthcare Facility	Prevea Marinette Health Center	City of Marinette	1409 Cleveland Ave
Healthcare Facility	REM Wisconsin	City of Marinette	413 W. Russell St, Marinette
Healthcare Facility	The Renaissance	City of Marinette	2909 Shore Dr, Marinette
Healthcare Facility	Washington Square	City of Marinette	2502 Taylor St, Marinette
Institutional/Government Facility	County Health and Human Services	City of Marinette	2500 Hall Ave
Institutional/Government Facility	Marinette City Hall	City of Marinette	1905 Hall Ave
Institutional/Government Facility	Marinette Civic Center	City of Marinette	2000 Alice Ln
Institutional/Government Facility	Marinette County Courthouse	City of Marinette	1926 Hall Ave

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Institutional/Government Facility	Marinette County Jail	City of Marinette	2161 University Dr
Institutional/Government Facility	Marinette County Jail (vacant)	City of Marinette	1925 Ella Ct
Institutional/Government Facility	Marinette Housing Authority	City of Marinette	1520 Ludington St
Institutional/Government Facility	Senior Citizens Center	City of Marinette	1603 Ludington St
Institutional/Government Facility	Stephenson Public Library	City of Marinette	1700 Hall Ave
Military Installation	Army National Guard	City of Marinette	2000 Mary St
Mobile Home Park	Country Meadows	City of Marinette	3415 Pierce Ave
Mobile Home Park	Country Meadows	City of Marinette	3325 Pierce Ave
Mobile Home Park	Cramer's Mobile Home Park	City of Marinette	2650 Merchant St
Mobile Home Park	Forest Glen	City of Marinette	1450 Myrtle St
Mobile Home Park	Foxx Glen	City of Marinette	3920 Hall Ave
Mobile Home Park	Golden Sands	City of Marinette	3400 Pierce Ave
Mobile Home Park	Marinette Mobile Home Court	City of Marinette	1596 Marinette Ave
Mobile Home Park	Parkview Terrace	City of Marinette	2430 Mary St
Municipal Garage	Marinette Public Works	City of Marinette	2411 Cleveland Ave
Parks and Campground	Marinette City Park	City of Marinette	Mary St
Parks and Campground	Red Arrow Park	City of Marinette	Leonard St
Parks and Campground	Stephenson Island Park	City of Marinette	USH 41/Bridge St
Police/Fire/Rescue	Emergency Rescue Squad Inc.	City of Marinette	623 Madison St
Police/Fire/Rescue	Marinette County Sheriff Dept	City of Marinette	2161 University Dr
Police/Fire/Rescue	Marinette Fire Dept	City of Marinette	1450 Marin St
Police/Fire/Rescue	Marinette Police Dept	City of Marinette	1905 Hall Ave
Port Facility	Ansil Fire Protection; Coal Dock	City of Marinette	1 Stanton St
Port Facility	Marinette Fuel & Dock Co	City of Marinette	808 Ogden St
Port Facility	Marinette Marine Corp	City of Marinette	1600 Ely St
Post office	Post office	City of Marinette	2016 Maple Ave
Post-Secondary School	NWTC - Marinette	City of Marinette	1601 University Dr
Post-Secondary School	University of Wisconsin - Marinette	City of Marinette	750 W Bayshore Dr
Resident Health Care Facility	Bayshore Pines North	City of Marinette	875 University Dr
Resident Health Care Facility	Bayshore Pines South	City of Marinette	3206 Woodland Rd
Resident Health Care Facility	Edgewood Manor	City of Marinette	1101 Northland Terrace Ln
Resident Health Care Facility	Northland Lutheran Services	City of Marinette	831 Pine Beach Rd
Resident Health Care Facility	Northland Village	City of Marinette	1025 Pine Beach Rd
Resident Health Care Facility	REM Wisconsin	City of Marinette	413 W Russell St

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Resident Health Care Facility	The Renaissance	City of Marinette	2909 Shore Dr
Resident Health Care Facility	Washington Square	City of Marinette	2502 Taylor St
School (Primary & Secondary)	Garfield Elementary	City of Marinette	1615 Carney Blvd
School (Primary & Secondary)	Marinette High	City of Marinette	2135 Pierce Ave
School (Primary & Secondary)	Marinette Middle	City of Marinette	1011 Water St
School (Primary & Secondary)	Menominee Sunrise Early Learning Center	City of Marinette	115 Hancock St
School (Primary & Secondary)	Merryman Elementary	City of Marinette	611 Elizabeth Ave
School (Primary & Secondary)	Park Elementary	City of Marinette	1225 Hockridge St
School (Primary & Secondary)	St. Thomas Aquinas Academy Middle/High	City of Marinette	1200 Main St
School (Primary & Secondary)	Trinity Lutheran	City of Marinette	1501 Thomas St
Utility	Electric Substation	City of Marinette	CTH T
Utility	Electric Substation	City of Marinette	805 Ogden St
Utility	Electric Substation	City of Marinette	Wells St
Utility	Electric Substation at Dam/Menominee River	City of Marinette	
Wastewater Treatment Facility	Marinette Wastewater Treatment Plant	City of Marinette	1603 Ely St
Water Supply Facility	Marinette Water Utility	City of Marinette	501 Water St
Water Supply Facility	Water Tower	City of Marinette	Pierce Ave
Water Supply Facility	Water Tower	City of Marinette	Cleveland Ave
Bridge	Bridge	City of Niagara	Roosevelt Rd/Menominee River
Bridge	Bridge	City of Niagara	Railroad/Menominee River
Communication Tower/Facility	Borderlands Communications	City of Niagara	1133 Main St
Dam	Menominee River	City of Niagara	Menominee River
Daycare	AUNTIE M'S CHILD CARE CENTER LLC	City of Niagara	801 Roosevelt Rd, Niagara, WI
Daycare	WEE CARE DAY CARE AND PRESCHOOL LLC	City of Niagara	537 Adams St, Niagara, WI
Hazmat	Gurville Trucking Inc.	City of Niagara	1050 Washington Ave
Healthcare Facility	Mary Hill Manor	City of Niagara	501 Madison Ave, Niagara
Healthcare Facility	Niagara Health Center; Pain Management Ctr	City of Niagara	1601 Roosevelt Rd
Healthcare Facility	Northern Lights Clinic (BNT)	City of Niagara	500 Roosevelt Rd
Institutional/Government Facility	County Health and Human Services	City of Niagara	1201 Jackson St
Institutional/Government Facility	Niagara City Hall	City of Niagara	1029 Roosevelt Rd
Institutional/Government Facility	Public Health Clinic/Senior Center	City of Niagara	569 Washington Ave
Municipal Garage	Niagara City Garage	City of Niagara	Tyler Rd
Police/Fire/Rescue	Niagara Fire/Rescue Dept	City of Niagara	1241 Jackson St
Police/Fire/Rescue	Niagara Police Dept	City of Niagara	1029 Roosevelt Rd

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Post office		City of Niagara	617 Washington Ave
Post-Secondary School	NWTC - Niagara	City of Niagara	705 Washington Ave
Resident Health Care Facility	Mary Hill Manor	City of Niagara	501 Madison Ave
School (Primary & Secondary)	Niagara Schools	City of Niagara	700 Jefferson Ave
Utility		City of Niagara	Washington Ave
Wastewater Treatment Facility	Niagara Wastewater Treatment Plant	City of Niagara	2309 Sherman St
Water Supply Facility		City of Niagara	Roosevelt Rd
Bridge		City of Peshigo	N Lake St/Trout Creek
Bridge		City of Peshigo	N Emery Ave/Trout Creek
Bridge		City of Peshigo	French St/Peshigo River
Bridge		City of Peshigo	Railroad/Peshigo River
Daycare	GOOD HANDS ACADEMY	City of Peshigo	101 S Beebe Ave, Peshigo, WI
Daycare	MARINETTE-PESHIGO HEAD START	City of Peshigo	830 Pine St, Peshigo, WI
Daycare	PITTER PATTER CHILD CARE AND LRN CTR	City of Peshigo	131 S Stephenson Ave, Peshigo, WI
Daycare	ZION LUTHERAN CHILD DEVELOPMENT CTR	City of Peshigo	241 S Ellis Ave, Peshigo, WI
Fuel Substation	Charter Fuels, Inc.	City of Peshigo	371 S Cranberry Ave
Fuel Substation	FerrellGas, Inc	City of Peshigo	319 W Railroad St
Fuel Substation	WPS	City of Peshigo	E Front St
Hazmat	BPM, Inc.	City of Peshigo	200 W Front St
Hazmat	Sentinel Structures, Inc.	City of Peshigo	477 S Peck Ave
Hazmat	Tom Joy & Son Trucking, LLC	City of Peshigo	970 Frontage Rd
Hazmat	UTC Aerospace	City of Peshigo	701 Maple St
Healthcare Facility	Aurora Health Center - Peshigo	City of Peshigo	603 French St.
Healthcare Facility	NorthReach Healthcare - Peshigo Clinic	City of Peshigo	441 French St
Healthcare Facility	Park Manor (Elderly/Disabled)	City of Peshigo	131 N. West Front St, Peshigo
Healthcare Facility	Remmes Health & Rehab Center - East	City of Peshigo	701 Willow Rd, Peshigo
Healthcare Facility	Remmes Health & Rehab Center - West	City of Peshigo	501 N. Lake St, Peshigo
Healthcare Facility	Whispering Oaks Care Center	City of Peshigo	620 Harper Ave, Peshigo
Healthcare Facility	Woodland Manor (Elderly/Disabled)	City of Peshigo	181 Chicago Ct, Peshigo
Institutional/Government Facility	Peshigo City Hall	City of Peshigo	331 French St.
Mobile Home Park	Brookview Village	City of Peshigo	901 Aubin St
Mobile Home Park	Kramer's Woodside Estates	City of Peshigo	1100 French St
Municipal Garage	Marinette County Highway Department-Peshigo	City of Peshigo	501 Pine St
Municipal Garage	Peshigo City Utility Garage	City of Peshigo	451 S E Front St

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Parks and Campground	Badger Park	City of Peshigo	E Park Dr
Police/Fire/Rescue	City of Peshigo Fire Dept Station #2	City of Peshigo	800 Pine St
Police/Fire/Rescue	City of Peshigo Police & Fire Dept	City of Peshigo	331 French St
Post office	Post office	City of Peshigo	201 W Front St
Resident Health Care Facility	Remmes Health & Rehab Center - East	City of Peshigo	701 Willow Rd
Resident Health Care Facility	Remmes Health & Rehab Center - West	City of Peshigo	501 N. Lake St
School (Primary & Secondary)	Peshigo Elementary	City of Peshigo	341 N Emery Ave
School (Primary & Secondary)	Peshigo Middle/High	City of Peshigo	380 Green St
School (Primary & Secondary)	St. Thomas Aquinas Academy Elementary	City of Peshigo	141 S Wood Ave
Temporary Emergency Gathering Center	Good Shepherd Lutheran Church	City of Peshigo	331 Pine St
Temporary Emergency Gathering Center	Zion Lutheran Church	City of Peshigo	221 S Ellis Ave
Utility	Electric Power Substation	City of Peshigo	E Front St
Utility	Electric Substation at Dam/Peshigo River	City of Peshigo	
Utility	Wastewater Lift Station	City of Peshigo	451 S E Front St
Water Supply Facility	Peshigo Water Tower	City of Peshigo	Maple St
Water Supply Facility	Peshigo Water Tower	City of Peshigo	W Railroad St
Water Supply Facility	Peshigo Water Well #2	City of Peshigo	548 1/2 French St
Water Supply Facility	Peshigo Water Well #3	City of Peshigo	461 E Park Dr
Water Supply Facility	Peshigo Water Well #4	City of Peshigo	680 Pine St
Bridge	Bridge	Town of Amberg	CTH K/Pike River
Bridge	Bridge	Town of Amberg	USH 141/Pike River
Bridge	Bridge	Town of Amberg	CTH V/Pike River
Bridge	Bridge	Town of Amberg	Mathis Rd/SB Pike River
Bridge	Bridge	Town of Amberg	Barker Rd/Pike River
Bridge	Bridge	Town of Amberg	Dow Dam Rd/NB Pike River
Bridge	Bridge	Town of Amberg	CTH K/Menominee River
Bridge	Bridge	Town of Amberg	Railroad/Pike River
Communication Tower/Facility	Communication Tower/Facility	Town of Amberg	Weycker Rd
Communication Tower/Facility	Communication Tower/Facility	Town of Amberg	Amberg Wausaukee Rd
Communication Tower/Facility	Communication Tower/Facility	Town of Amberg	NI 5570 Old 38 Rd
Dam	McAllister Creek	Town of Amberg	McAllister Creek
Dam	Squaw Creek	Town of Amberg	Squaw Creek
Dry Hydrant/Fire Pond		Town of Amberg	
Fuel Substation	Amerigas Propane	Town of Amberg	NI 5291 USH 141

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Fuel Substation	Customers Gas Service of Amberg	Town of Amberg	W8975 Smith Rd
Institutional/Government Facility	Old Amberg Town Hall - Museum Complex	Town of Amberg	N15065 Grant St
Institutional/Government Facility	Town of Amberg Community Center	Town of Amberg	N15035 Grant St
Municipal Garage	Amberg Town Garage	Town of Amberg	McClellan Aly
Parks and Campground	Dave's Falls Park	Town of Amberg	County Park Rd
Police/Fire/Rescue	Amberg Fire & Rescue	Town of Amberg	N15065 Grant St
Post office	Victory Academy for Boys	Town of Amberg	N15075 Duffon Ave
School (Primary & Secondary)		Town of Amberg	W4705 Wallace Rd
Utility		Town of Amberg	CTH K
Utility		Town of Amberg	USH 141
Bridge	Bridge	Town of Athelstane	CTH C/Wausaukee River
Bridge	Bridge	Town of Athelstane	Benson Lake Rd/SB Pike River
Bridge	Bridge	Town of Athelstane	Forbes Rd/SB Pike River
Dry Hydrant/Fire Pond	Fire Pond	Town of Athelstane	N12244 CTH AC
Dry Hydrant/Fire Pond		Town of Athelstane	Northway Dr/Railroad St
Dry Hydrant/Fire Pond		Town of Athelstane	Benson Lake Rd/SB Pike River
Dry Hydrant/Fire Pond		Town of Athelstane	Forbes Rd/SB Pike River
Dry Hydrant/Fire Pond		Town of Athelstane	CTH C/Wausaukee River
Institutional/Government Facility	Athelstane Town Hall	Town of Athelstane	N12244 CTH AC
Municipal Garage	Athelstane Town Shop	Town of Athelstane	W10073 CTH C
Parks and Campground	Dolan Lake Park	Town of Athelstane	Doland Landing Rd
Police/Fire/Rescue	Athelstane Fire Dept Station #1	Town of Athelstane	W10073 CTH C
Police/Fire/Rescue	Athelstane Fire Dept Station #2	Town of Athelstane	W10815 Benson Lake Rd
Post office	Athelstane Post office	Town of Athelstane	W10056 CTH C
Temporary Emergency Gathering Center	Cornerstone Assembly of God Church	Town of Athelstane	W10082 Peach Lake Rd
Bridge	Bridge	Town of Beaver	CTH P/NB Beaver Creek
Bridge	Bridge	Town of Beaver	USH 141/SB Beaver Creek
Bridge	Bridge	Town of Beaver	19th Rd/SB Beaver Creek
Bridge	Bridge	Town of Beaver	5TH 64/SB Beaver Creek
Bridge	Bridge	Town of Beaver	3rd Rd/Beaver Creek
Bridge	Bridge	Town of Beaver	11th Rd/Beaver Creek
Bridge	Bridge	Town of Beaver	CTH P/Peshlago River
Bridge	Bridge	Town of Beaver	15th Rd/SB Beaver Creek
Bridge	Bridge	Town of Beaver	Railroad/NB Beaver Creek

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Communication Tower/Facility		Town of Beaver	21st Rd
Dam	Murphy Creek	Town of Beaver	Murphy Creek
Dam	Murphy Creek	Town of Beaver	Murphy Creek
Hazmat	Pound Control #66, Northeast Asphalt, Inc.	Town of Beaver	W7980 Highway 64
Institutional/Government Facility	Beaver Town Hall	Town of Beaver	W8405 CTH P
Utility		Town of Beaver	USH 141
Bridge	Bridge	Town of Beecher	CTH Z/Menominee River
Bridge	Bridge	Town of Beecher	Sand Rd/Miscauno Creek
Bridge	Bridge	Town of Beecher	Town Corner Lake Rd/NB Pike River
Bridge	Bridge	Town of Beecher	Smeestier School Rd/NB Pike River
Bridge	Bridge	Town of Beecher	Dam Rd/Beecher Creek
Communication Tower/Facility		Town of Beecher	W8998 Pembine Beecher Rd
Dam	Beecher Lake	Town of Beecher	Beecher Lake
Dry Hydrant/Fire Pond		Town of Beecher	
Dry Hydrant/Fire Pond		Town of Beecher	
Institutional/Government Facility	Beecher Town Hall	Town of Beecher	W7971 CTH Z
Municipal Garage	Beecher Town Garage	Town of Beecher	W7971 CTH Z
Bridge	Bridge	Town of Dunbar	Lily Lake Rd/NB Pike River
Bridge	Bridge	Town of Dunbar	CCC Camp Rd/NB Pike River
Bridge	Bridge	Town of Dunbar	Old County A Rd/NB Pike River
Bridge	Bridge	Town of Dunbar	Twin Lake Rd/NB Pike River
Bridge	Bridge	Town of Dunbar	USH 8/ K. C. Creek
Bridge	Bridge	Town of Dunbar	Old County A Rd/SB Pike River
Bridge	Bridge	Town of Dunbar	Railroad/K. C. Creek
Dry Hydrant/Fire Pond		Town of Dunbar	USH 8
Institutional/Government Facility	Dunbar Town Hall	Town of Dunbar	N18945 CCC Camp Rd
Municipal Garage		Town of Dunbar	USH 8
Parks and Campground	Twelvefoot Falls County Park	Town of Dunbar	Twelve Foot Falls Rd
Parks and Campground	Veteran's Memorial Park	Town of Dunbar	N18961 CTH O
Post-Secondary School	Northland Baptist Bible College	Town of Dunbar	W10085 Pike Plains Rd
Bridge	Bridge	Town of Goodman	USH 8/NB Pike River
Bridge	Bridge	Town of Goodman	Pike River Dr/NB Pike River
Bridge	SOO LINE	Town of Goodman	Railroad/US 8
Communication Tower/Facility		Town of Goodman	A. Ave

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Communication Tower/Facility		Town of Goodman	Partridge Rd
Communication Tower/Facility		Town of Goodman	USH 8
Communication Tower/Facility		Town of Goodman	W14553 Wilderness Dr
Fuel Substation		Town of Goodman	USH 8
Institutional/Government Facility	Goodman Town Hall	Town of Goodman	506 Mill St
Municipal Garage		Town of Goodman	Woods Lake Rd
Parks and Campground	Goodman Township Park	Town of Goodman	Town Park Dr
Police/Fire/Rescue	Goodman Fire/Rescue Dept	Town of Goodman	506 Mill St
Post office		Town of Goodman	200 A St
School (Primary & Secondary)	Goodman - Armstrong Creek Elementary	Town of Goodman	4th St
School (Primary & Secondary)	Goodman - Armstrong Creek High	Town of Goodman	1 Falcon Crest
Utility		Town of Goodman	Woods Lake Rd
Utility		Town of Goodman	4th St
Utility		Town of Goodman	4th St
Water Supply Facility		Town of Goodman	7th St
Bridge	Bridge	Town of Grover	Radtke Rd/Bundy Creek
Bridge	Bridge	Town of Grover	CTH B/Bundy Creek
Bridge	Bridge	Town of Grover	CTH W/Little Peshtigo River
Bridge	Bridge	Town of Grover	STH 84/Little Peshtigo River
Bridge	Bridge	Town of Grover	CTH W/Peshtigo River
Bridge	Bridge	Town of Grover	Townline Rd/Little Peshtigo River
Bridge	Bridge	Town of Grover	Tower Hill Rd/Little Peshtigo River
Bridge	Bridge	Town of Grover	Poplar Ridge Ln/Trout Creek
Bridge	Bridge	Town of Grover	Railroad/Unnamed Water
Communication Tower/Facility	WSFO 96.3 Tower	Town of Grover	Gross La
Communication Tower/Facility		Town of Grover	Augustine Rd
Communication Tower/Facility		Town of Grover	Lepinsky Ln
Communication Tower/Facility		Town of Grover	Tower Hill Rd
Communication Tower/Facility		Town of Grover	Church Ln
Communication Tower/Facility		Town of Grover	W5170 Votava Ln
Communication Tower/Facility		Town of Grover	N2793 CTH Y
Fuel Substation	Coleman Propane	Town of Grover	W6586 CTH M
Institutional/Government Facility	Grover Town Hall	Town of Grover	W5161 Town Hall Rd
Police/Fire/Rescue	Grover-Porterfield Fire Dept	Town of Grover	N3890 S Harmony Rd

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
School (Primary & Secondary)	St John Lutheran	Town of Grover	N1926 Church Rd
Utility		Town of Grover	N3898 CTH E
Bridge	Bridge	Town of Lake	Noquebay Rd/The Outlet
Bridge	Bridge	Town of Lake	Ferndale Rd/Peshtigo River
Dam	The Outlet	Town of Lake	The Outlet
Daycare	LITTLE TYKES CHILD CARE	Town of Lake	W6675 Birchwood Rd, Civitz, WI
Dry Hydrant/Fire Pond		Town of Lake	
Dry Hydrant/Fire Pond		Town of Lake	
Dry Hydrant/Fire Pond		Town of Lake	
Dry Hydrant/Fire Pond		Town of Lake	
Institutional/Government Facility	Town of Lake Hall	Town of Lake	W6202 Loomis Rd
Mobile Home Park		Town of Lake	N7900 Noquebay Rd
Mobile Home Park		Town of Lake	W6296 Circle Dr
Mobile Home Park		Town of Lake	W6225 CTH GG
Municipal Garage		Town of Lake	W6188 CTH GG
Municipal Garage		Town of Lake	Loomis Rd
Parks and Campground	Lake Noquebay Park	Town of Lake	Crescent Ln
Police/Fire/Rescue	Town of Lake Fire Dept	Town of Lake	W6202 Loomis Rd
Bridge	Bridge	Town of Middle Inlet	USH 141/Middle Inlet
Bridge	Bridge	Town of Middle Inlet	USH 141/Lower Middle Inlet
Bridge	Bridge	Town of Middle Inlet	Camp 5 Rd/Middle Inlet
Bridge	Bridge	Town of Middle Inlet	Creek Rd/Upper Middle Inlet
Bridge	Bridge	Town of Middle Inlet	CTH X/Middle Inlet
Bridge	Bridge	Town of Middle Inlet	Maple Beach Rd/Middle Inlet
Bridge	Bridge	Town of Middle Inlet	Railroad/Middle Inlet
Communication Tower/Facility	Middle Inlet Town Hall	Town of Middle Inlet	Moonshine Hill Rd
Institutional/Government Facility		Town of Middle Inlet	W7901 CTH X
Mobile Home Park		Town of Middle Inlet	N8598 Lake Rd
Police/Fire/Rescue	Middle Inlet Fire Dept	Town of Middle Inlet	N9299 USH 141
Bridge	Bridge	Town of Niagara	USH 8/Menominee River
Bridge	Bridge	Town of Niagara	Morgan Park Rd/NB Permebonwon River
Bridge	Bridge	Town of Niagara	CTH O/NB Permebonwon River
Bridge	Bridge	Town of Niagara	Forest Rd 1003/NB Permebonwon River
Bridge	Bridge	Town of Niagara	USH 141/NB Permebonwon River

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Bridge	Bridge	Town of Niagara	West Rd/Spikehorn Creek
Bridge	Bridge	Town of Niagara	USH 141/Spikehorn Creek
Bridge	Bridge	Town of Niagara	Railroad/Menominee River
Bridge	Bridge	Town of Niagara	Railroad/NB Pembebonwon River
Bridge	Bridge	Town of Niagara	Railroad/Menominee River
Communication Tower/Facility	Cell Tower	Town of Niagara	N22370 Schindler Rd
Communication Tower/Facility	Cell Tower	Town of Niagara	N20888 Gerlich Rd
Dam	Menominee River	Town of Niagara	Menominee River
Dam	Menominee River	Town of Niagara	Menominee River
Institutional/Government Facility	Niagara Town Hall	Town of Niagara	W6889 USH 8
Municipal Garage	Niagara Town Garage	Town of Niagara	W7280 USH 8
Municipal Garage	Niagara Town Garage	Town of Niagara	W7250 USH 8
Parks and Campground	Morgan Park	Town of Niagara	Morgan Park Rd
Water Supply Facility	Niagara Water Well #3	Town of Niagara	South Tuman St
Bridge	Bridge	Town of Pembine	CTH R/SB Pembebonwon River
Bridge	Bridge	Town of Pembine	USH 141/SB Pembebonwon River
Bridge	Bridge	Town of Pembine	USH 141/SB Pembebonwon River
Bridge	Bridge	Town of Pembine	USH 8/SB Pembebonwon River
Bridge	Bridge	Town of Pembine	USH 8/SB Pembebonwon River
Bridge	Bridge	Town of Pembine	CTH R/SB Pembebonwon River
Bridge	Bridge	Town of Pembine	CTH R/NB Pembebonwon River
Bridge	Bridge	Town of Pembine	Railroad/SB Pembebonwon River
Bridge	Bridge	Town of Pembine	USH 141/Railroad
Bridge	Bridge	Town of Pembine	Railroad/SB Pembebonwon River
Bridge	Bridge	Town of Pembine	Railroad/SB Pembebonwon River
Bridge	Bridge	Town of Pembine	Railroad/SB Pembebonwon River
Bridge	Bridge	Town of Pembine	Railroad/SB Pembebonwon River
Bridge	Bridge	Town of Pembine	Railroad/NB Pembebonwon River
Bridge	Bridge	Town of Pembine	Railroad/SB Pembebonwon River
Bridge	Bridge	Town of Pembine	Railroad/SB Pembebonwon River
Communication Tower/Facility		Town of Pembine	N18670 Algonquin Trl
Communication Tower/Facility		Town of Pembine	W7622 Cemetery Rd
Communication Tower/Facility		Town of Pembine	W8095 Rifle Range Rd
Dam	Miscauno Creek	Town of Pembine	Miscauno Creek

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Dry Hydrant/Fire Pond		Town of Pembine	
Hazmat	Specialty Granules	Town of Pembine	Kremlin Rd
Institutional/Government Facility	Pembine Town Hall	Town of Pembine	N18765 Sauld St
Municipal Garage	Marquette County Highway Department-Pembine	Town of Pembine	N18291 USH 141
Municipal Garage		Town of Pembine	N18835 Milwaukee St
Parks and Campground	Pembine Township Park	Town of Pembine	Pembine Park Ln
Police/Fire/Rescue	Beecher-Dunbar-Pembine Fire Dept	Town of Pembine	W8095 Rifle Range Ln
Police/Fire/Rescue	Pembine-Dunbar-Beecher Rescue Squad	Town of Pembine	N18251 USH 141
Post office		Town of Pembine	N18656 USH 141
School (Primary & Secondary)	Beecher-Dunbar-Pembine Schools	Town of Pembine	N18775 Sauld St
Bridge	Bridge	Town of Peshigo	CTH BB/Little River
Bridge	Bridge	Town of Peshigo	Hale School Rd/Unnamed Water
Bridge	Bridge	Town of Peshigo	Hale Rd/Unnamed Water
Bridge	Bridge	Town of Peshigo	Richter Rd/Unnamed Water
Bridge	Bridge	Town of Peshigo	Drys Rd/Unnamed Water
Bridge	Bridge	Town of Peshigo	Spitzmacher Rd/Unnamed Water
Bridge	Bridge	Town of Peshigo	USH 41/Railroad
Bridge	Bridge	Town of Peshigo	USH 41/Railroad
Bridge	Bridge	Town of Peshigo	USH 41/Railroad
Bridge	Bridge	Town of Peshigo	USH 41/Railroad
Bridge	Bridge	Town of Peshigo	Railroad/Unnamed Water
Bridge	Bridge	Town of Peshigo	USH 41/Schacht Rd
Bridge	Bridge	Town of Peshigo	USH 41/Schacht Rd
Bridge	Bridge	Town of Peshigo	USH 41/Old Peshigo Rd
Bridge	Bridge	Town of Peshigo	USH 41/Old Peshigo Rd
Bridge	Bridge	Town of Peshigo	USH 41/CTH B
Bridge	Bridge	Town of Peshigo	USH 41/CTH B
Bridge	Bridge	Town of Peshigo	USH 41/Peshigo River
Bridge	Bridge	Town of Peshigo	USH 41/Peshigo River
Bridge	Bridge	Town of Peshigo	Hale Rd/USH 41
Bridge	Bridge	Town of Peshigo	CTH Y/USH 41
Communication Tower/Facility	WHYB 103.7 Tower	Town of Peshigo	W1450 Roosevelt Rd
Communication Tower/Facility	WLST 95.1	Town of Peshigo	N2880 Roosevelt Rd
Communication Tower/Facility		Town of Peshigo	Krause Rd

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Communication Tower/Facility		Town of Peshigo	N2170 Keller Rd
Communication Tower/Facility		Town of Peshigo	Old Peshigo Rd
Communication Tower/Facility		Town of Peshigo	N2400 Hale Rd
Dry Hydrant/Fire Pond	Dry Hydrant	Town of Peshigo	N1618 Hale Rd
Dry Hydrant/Fire Pond	Dry Hydrant	Town of Peshigo	Badger Rd/Harbor Rd
Dry Hydrant/Fire Pond	Dry Hydrant	Town of Peshigo	Rader Rd
Dry Hydrant/Fire Pond	Dry Hydrant	Town of Peshigo	Leaf Rd
Dry Hydrant/Fire Pond	Dry Hydrant	Town of Peshigo	W1432 CTH B
Dry Hydrant/Fire Pond	Dry Hydrant	Town of Peshigo	SH 64/Peshigo River
Fuel Substation	WPS	Town of Peshigo	W2753 CTH B
Hazmat	Marinette Concrete Products	Town of Peshigo	W1584 USH 41
Institutional/Government Facility	Peshigo Town Hall	Town of Peshigo	W2435 Old Peshigo Rd
Municipal Garage	Peshigo Town Garage	Town of Peshigo	W2435 Old Peshigo Rd
Parks and Campground	Michaelis Park	Town of Peshigo	CTH B8
Police/Fire/Rescue	Town of Peshigo Fire Dept	Town of Peshigo	W2435 Old Peshigo Rd
Resident Health Care Facility	Crossroads Group Home	Town of Peshigo	N2189 Schacht Rd
Utility	WPS	Town of Peshigo	W1830 W Cleveland Ave
Wastewater Treatment Facility	Peshigo Wastewater Treatment Plant	Town of Peshigo	N1890 Harbor Rd
Bridge	Bridge	Town of Porterfield	SH 180/Twin Creek
Bridge	Bridge	Town of Porterfield	CTH E/Peshigo River
Bridge	Bridge	Town of Porterfield	SH 64/Peshigo River
Communication Tower/Facility	WLWR 107.7	Town of Porterfield	N5233 Nettleton Rd
Communication Tower/Facility		Town of Porterfield	W Townline Rd
Hazmat	Marinette Iron & Metal	Town of Porterfield	N4395 STH 180
Hazmat	Northeast Asphalt Forfeible Asphalt Plant 27	Town of Porterfield	Anderson Rd
Institutional/Government Facility	Porterfield Town Hall	Town of Porterfield	W3435 CTH G
Mobile Home Park	Buller's Mobile Home	Town of Porterfield	W4660 STH 64
Parks and Campground	Crystal Springs County Park	Town of Porterfield	SH 180
Parks and Campground	Green's Green Acres Campground	Town of Porterfield	N4247 River Dr
Parks and Campground	Weber Field	Town of Porterfield	Shady Lane
Post office		Town of Porterfield	N5460 CTH E
Utility	Electric Substation at Dam/White Potato Rapids	Town of Porterfield	
Bridge	Bridge	Town of Pound	CTH B/Little Peshigo River
Bridge	Bridge	Town of Pound	CTH B/Little Peshigo River

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Bridge	Bridge	Town of Pound	N 7th Rd/Little Peshigo River
Bridge	Bridge	Town of Pound	CTH B/Little Peshigo River
Bridge	Bridge	Town of Pound	N 1st Rd/Little Peshigo River
Bridge	Bridge	Town of Pound	N 5th Rd/Little Peshigo River
Bridge	Bridge	Town of Pound	N 23rd Rd/Little Peshigo River
Bridge	Bridge	Town of Pound	S 27th Rd/Little Peshigo River
Bridge	Bridge	Town of Pound	S 31st Rd/Little Peshigo River
Bridge	Bridge	Town of Pound	CTH B/Unnamed Water
Bridge	Bridge	Town of Pound	CTH B/USH 41
Bridge	Bridge	Town of Pound	USH 141/Little Peshigo River
Bridge	Bridge	Town of Pound	USH 141/Little Peshigo River
Bridge	Bridge	Town of Pound	USH 141/Unnamed Water
Bridge	Bridge	Town of Pound	USH 141/Unnamed Water
Bridge	Bridge	Town of Pound	CTH Q/USH 141
Communication Tower/Facility		Town of Pound	W 24th Rd
Communication Tower/Facility		Town of Pound	W6254 E 12th Rd
Daycare	PLAYFUL MINDS CHILD CARE LLC	Town of Pound	W6919 County Road M, Coleman, WI
Dry Hydrant/Fire Pond	Fire Pond	Town of Pound	CTH M/7th Rd
Institutional/Government Facility	Pound Town Hall	Town of Pound	W6484 CTH B
Mobile Home Park		Town of Pound	W9294 W 14th Rd
Municipal Garage		Town of Pound	W6484 CTH B
Parks and Campground	Montana Lake Park	Town of Pound	W 12th Rd
Utility	Electric Substation	Town of Pound	E Springside Rd
Utility		Town of Pound	N 15th Rd
Bridge	Bridge	Town of Silver Cliff	Camp 5 Rd/Peshigo River
Bridge	Bridge	Town of Silver Cliff	Harper Rd/Rat River
Bridge	Bridge	Town of Silver Cliff	Swede John Rd/Peshigo River
Bridge	Bridge	Town of Silver Cliff	CTH C/Eagle Creek
Bridge	Bridge	Town of Silver Cliff	CTH C/Peshigo River
Communication Tower/Facility		Town of Silver Cliff	Conklin Rd
Communication Tower/Facility		Town of Silver Cliff	Harveys Ln
Communication Tower/Facility		Town of Silver Cliff	Harveys Ln
Dam	Babson Pond Creek	Town of Silver Cliff	Babson Pond Creek
Dry Hydrant/Fire Pond		Town of Silver Cliff	Harper Rd/Rat River

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Utility	Electric Substation at Dam/High Falls Reservoir	Town of Stephenson	
Utility	Electric Substation at Dam/Peshigo River	Town of Stephenson	
Utility	Electric Substation at Dam/Sandstone Reservoir	Town of Stephenson	
Utility		Town of Stephenson	High Falls Rd
Water Supply Facility	Crivitz Water Well #2	Town of Stephenson	N7615 St. Paul Rd
Water Supply Facility	Crivitz Water Well #3	Town of Stephenson	N7707 St. Paul Rd
Water Supply Facility		Town of Stephenson	W8707 CTH W
Bridge	Bridge	Town of Wagner	CTH JJ/Menominee River
Bridge	Bridge	Town of Wagner	Pohl Rd/Unnamed Water
Bridge	Bridge	Town of Wagner	Buettie Rd/Wagner Creek
Bridge	Bridge	Town of Wagner	Cottage Rd/Unnamed Water
Bridge	Bridge	Town of Wagner	Buettie Rd/Wagner Creek
Bridge	Bridge	Town of Wagner	Wagner Rd/Wagner Creek
Bridge	Bridge	Town of Wagner	Golf Rd/Wagner Creek
Bridge	Bridge	Town of Wagner	Old Rail Rd/Wagner Creek
Bridge	Bridge	Town of Wagner	CTH JJ/Menominee River
Communication Tower/Facility		Town of Wagner	W2361 CTH X
Communication Tower/Facility		Town of Wagner	N10143 STH 180
Dam	Menominee River	Town of Wagner	Menominee River
Fuel Substation	Charter Fuels, Inc.	Town of Wagner	N10101 STH 180
Institutional/Government Facility	Wagner Town Hall	Town of Wagner	N2379 CTH JJ
Parks and Campground	Menominee River Park	Town of Wagner	N9012 Park Place Dr
Police/Fire/Rescue	Wagner Fire Dept	Town of Wagner	W2379 CTH JJ
Temporary Emergency Gathering Center		Town of Wagner	W2680 STH 180
Bridge	Bridge	Town of Wausaukee	Pike River Rd/Pike River
Bridge	Bridge	Town of Wausaukee	Jamros Rd/Wausaukee River
Bridge	Bridge	Town of Wausaukee	McMahon Rd/Upper Middle Inlet
Bridge	Bridge	Town of Wausaukee	Glendale Rd/Wausaukee River
Bridge	Bridge	Town of Wausaukee	Bielak Rd/Wausaukee River
Bridge	Bridge	Town of Wausaukee	Railroad/Upper Middle Inlet
Bridge	Bridge	Town of Wausaukee	Railroad/Little Wausaukee Creek
Bridge	Bridge	Town of Wausaukee	Old Hwy 38/Little Wausaukee Creek
Bridge	Bridge	Town of Wausaukee	USH 141 /Upper Middle Inlet
Communication Tower/Facility		Town of Wausaukee	Russ Mainik Rd

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Communication Tower/Facility		Town of Wausaukee	N12910 USH 141
Communication Tower/Facility		Town of Wausaukee	N12324 USH 141
Daycare	WAUSAUKEE LITTLE LEARNERS CENTER	Town of Wausaukee	N11941 Us Hwy 141, Wausaukee, WI
Fuel Substation	FerrellGas, Inc.	Town of Wausaukee	W7390 USH 141
Institutional/Government Facility	Wausaukee Town Hall	Town of Wausaukee	N11854 USH 141
Municipal Garage	Wausaukee Town Garage	Town of Wausaukee	N11856 USH 141
Parks and Campground	Bear Point Boat Landing	Town of Wausaukee	STH 180/Menominee River
Parks and Campground	Grogan Rd Boat Landing	Town of Wausaukee	Grogan Rd/Menominee River
Parks and Campground	Long Lake Boat Landing	Town of Wausaukee	Long Lake Rd/Long Lake
Parks and Campground	McCall Lake Boat Landing	Town of Wausaukee	McCall Lake Rd/McCall Lake
Parks and Campground	River Road Boat Landing	Town of Wausaukee	River Rd/Menominee River
School (Primary & Secondary)	Wausaukee Schools	Town of Wausaukee	N11941 USH 141
Wastewater Treatment Facility	Wausaukee Water & Sewer Treatment Plant	Town of Wausaukee	N11888 Decor Dr
Bridge	Bridge	Village of Coleman	CTH CF/Little Peshigo River
Bridge	Bridge	Village of Coleman	Railroad/Little Peshigo River
Communication Tower/Facility		Village of Coleman	119 Hammes St
Daycare	JUST KIDD'N CHILD CARE CENTER	Village of Coleman	219 Linda Ln, Coleman, WI
Hazmat	AgVentures, LLC	Village of Coleman	123 McArthur Dr
Hazmat	ChemCoat Inc	Village of Coleman	117 Hammes St
Hazmat	Patz Corporation	Village of Coleman	917 Business 141
Institutional/Government Facility	Coleman Village Hall	Village of Coleman	202 E Main St
Police/Fire/Rescue	Coleman Fire Dept	Village of Coleman	107 W Main St
Police/Fire/Rescue	Coleman Police Dept	Village of Coleman	202 E Main St
Police/Fire/Rescue	Coleman Rescue Squad	Village of Coleman	119 E 16th Rd
Post office		Village of Coleman	153 W Main St
School (Primary & Secondary)	Coleman Elementary	Village of Coleman	347 Bus 141 N
School (Primary & Secondary)	Coleman Middle/High	Village of Coleman	343 Business 141 N
School (Primary & Secondary)	Faith Christian	Village of Coleman	233 W Main St
Wastewater Treatment Facility	Coleman Wastewater Treatment Plant	Village of Coleman	718 CTH CP
Water Supply Facility	Water Supply Well #1	Village of Coleman	217 Bus USH 141
Water Supply Facility	Coleman Water Well #2	Village of Coleman	651 N USH 141
Water Supply Facility	Water Tower	Village of Coleman	217 Bus USH 141
Bridge	Bridge	Village of Crivitz	Main Ave/Peshigo River
Daycare	CRIVITZ YOUTH CHILD DEVELOP CTR	Village of Crivitz	713 George St, Crivitz, WI

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Daycare	KID'S PLACE DAY CARE	Village of Crivitz	717 Anderson Ave, Crivitz, WI
Fuel Substation		Village of Crivitz	409 Hall Ave
Hazmat	Lake Gas Co.	Village of Crivitz	409 Hall Ave
Healthcare Facility	NEWCARE Convalescent Center	Village of Crivitz	903 Main St, Crivitz
Healthcare Facility	NorthReach Healthcare - Crivitz Medical Ctr	Village of Crivitz	218 S. USH 141, Ste. 100
Institutional/Government Facility	Crivitz Village Hall	Village of Crivitz	800 Henriette Ave
Mobile Home Park	Westwood Meadows	Village of Crivitz	1516 Kenny Drive
Municipal Garage	Marinette County Highway Department-Crivitz	Village of Crivitz	E2235 CTH W
Police/Fire/Rescue	Crivitz Fire Dept	Village of Crivitz	FJ Street
Police/Fire/Rescue	Crivitz Police Dept.	Village of Crivitz	800 Henriette Ave
Police/Fire/Rescue	Crivitz Rescue Squad	Village of Crivitz	1020 Henrietta Ave
Post office		Village of Crivitz	1210 FJ St
Resident Health Care Facility	NEWCARE Residence/Convalescent Center	Village of Crivitz	903 Main St
School (Primary & Secondary)	Crivitz Elementary/Middle	Village of Crivitz	718 Hall Hay St
School (Primary & Secondary)	Crivitz High	Village of Crivitz	400 South Ave
Wastewater Treatment Facility	Crivitz Wastewater Treatment Plant	Village of Crivitz	2000 Gene St
Water Supply Facility		Village of Crivitz	1130 Wilberf St
Bridge	Bridge	Village of Pound	Bus US 141/USH 141
Daycare	GRANDMA BIRDIE'S CHILDCARE CENTER	Village of Pound	2026 County Road Q, Pound, WI
Healthcare Facility	Parkview Apts. (Elderly)	Village of Pound	2029 CTH Q, Pound
Institutional/Government Facility	Community Center	Village of Pound	1013 County Rd Q
Institutional/Government Facility	Pound Village Hall	Village of Pound	2002 CTH Q
Municipal Garage	Pound Village Garage	Village of Pound	Parkview Ln
Police/Fire/Rescue	Village of Pound Fire Dept	Village of Pound	2002 CTH Q
Post office		Village of Pound	1018 CTH Q
Utility	Electric Substation	Village of Pound	CTH Q
Water Supply Facility	Village of Pound Water	Village of Pound	2002 CTH Q
Bridge	Bridge	Village of Wausaukee	Main St/Wausaukee River
Bridge	Bridge	Village of Wausaukee	Railroad/Wausaukee River
Communication Tower/Facility		Village of Wausaukee	515 Van Buren Ave
Dam	Wausaukee River	Village of Wausaukee	Wausaukee River
Daycare	Pam's Daycare	Village of Wausaukee	715 Church St
Dry Hydrant/Fire Pond	Wausaukee Pond	Village of Wausaukee	Wausaukee Pond
Fuel Substation	Hot Flame Gas, Inc.	Village of Wausaukee	913 Main St

TYPE	NAME	LOCATION COMMUNITY	ADDRESS
Hazmat	Wausaukee Composites, Inc.	Village of Wausaukee	837 Cedar St
Healthcare Facility	Wausaukee Rural Healthcare	Village of Wausaukee	536 Kenny Dr
Institutional/Government Facility	Ranger Station	Village of Wausaukee	1025 CTH C
Institutional/Government Facility	Wausaukee Housing Authority	Village of Wausaukee	926 Main St
Institutional/Government Facility	Wausaukee Village Hall	Village of Wausaukee	428 Harrison Ave
Municipal Garage	Wausaukee Village Garage	Village of Wausaukee	428 Harrison Ave
Parks and Campground	Evergreen Park	Village of Wausaukee	North Ave
Parks and Campground	Payant Park	Village of Wausaukee	Main St
Parks and Campground	Steve Strumbis Sr. Memorial Park	Village of Wausaukee	132 Fairgrounds Rd
Police/Fire/Rescue	Wausaukee Fire Dept	Village of Wausaukee	428 Harrison Ave
Police/Fire/Rescue	Wausaukee Rescue Squad	Village of Wausaukee	429 Harrison Ave
Post office		Village of Wausaukee	614 Main St
Utility	WPS	Village of Wausaukee	912 Main St
Water Supply Facility	Water Tower	Village of Wausaukee	West end of Vamburen Ave
Water Supply Facility	Wausaukee Composites Fire Protection Building	Village of Wausaukee	Cedar St/Fairgrounds Rd
Water Supply Facility	Well #1	Village of Wausaukee	Pump House Rd
Water Supply Facility	Well #3	Village of Wausaukee	N11941 USH 141



Marinette County, Wisconsin Hazard Mitigation Plan 2020-2025



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