PORTAGE COUNTY

ALL HAZARDS MITIGATION PLAN

PREPARED BY:
PORTAGE COUNTY EMERGENCY MANAGEMENT
IN COORDINATION WITH
WISCONSIN EMERGENCY MANAGEMENT

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Portage County 2019 Hazard Mitigation Plan

Acknowledgements

Portage County would like to thank the following offices, individuals, and organizations for their contributions to the 2019 All Hazards Mitigation Plan Update (the HMP).

Portage County Emergency Management Division

Portage County Board

University of Wisconsin Stevens Point

Town of Alban

Town of Almond

Town of Amherst

Town of Buena Vista

Town of Carson

Town of Dewey

Town of Grant

Town of Hull

Town of Lanark

Town of Linwood

Town of New Hope

Town of Pine Grove

Town of Plover

Town of Sharon

Town of Stockton

Village of Almond

Village of Amherst

Village of Amherst Jct.

Village of Junction City

Village of Nelsonville

Village of Park Ridge

Village of Plover

Village of Rosholt

City of Stevens Point

Prerequisites

The 2019 Portage County HMP Update meets the requirements of the *Disaster Mitigation Act of 2000*, which amended the *Robert T. Stafford Disaster Relief and Emergency Assistance Act* to require state, local, and tribal entities to closely coordinate mitigation planning and implementation efforts.

Plan Adoption

The HMP represents a comprehensive description of Portage County's commitment to significantly reduce or eliminate the potential impacts of disasters through planning and mitigation. Adoption by the local governing bodies within the County legitimizes the HMP and authorizes responsible agencies to implement mitigation responsibilities and activities.

Each participating jurisdiction must adopt the HMP to be eligible for federal mitigation funding. After a thorough review, the Portage County Board adopted the plan on <date adopted>. Appendix D. Participating Jurisdiction Plan Adoption includes information about additional adoptions.

Following Federal review and approval, the participating jurisdictions intend to adopt the Plan by formal adoption.

Jurisdiction Participation

All 27 jurisdictions were invited to participate in the planning process. The table below lists jurisdictions represented by one or more municipal officials. In addition to attending meetings, the Representatives supported the planning process through:

- Gathering appropriate data and historical information;
- Completing the community preparedness survey;
- Participating in their community hazard analysis;
- Identifying new mitigation strategies;
- Updating past mitigation strategies; and
- Participating in other efforts, such as webinars, phone interviews, and reviewing drafts.

Participating Jurisdictions

Name	Title / Position	Municipality	Municipality Participated in 2012 Plan	Municipality Participated in 2019 Plan
Raymond Oksuita	President	Town of Alban	Yes	Yes
Roger Hetzel	Supervisor	Town of Almond	Yes	Yes
Don Spierings	Town Chairman	Town of Amherst	Yes	Yes
David Walkowicz	Town Chairman	Town of Belmont	Yes	Yes
Duane Clark	Town Supervisor	Town of Buena Vista	Yes	Yes
Wallace Zywicki	Town Chairperson	Town of Carson	Yes	Yes
Maurice King	Chairperson	Town of Dewey	Yes	Yes

Roy Anderson	Chairperson	Town of Eau Pleine	Yes	Yes
James Yetter	Town Supervisor	Town of Grant	Yes	Yes
Janet Wolle	Town Clerk	Town of Hull	Yes	Yes
Michael Pagel	Chairperson	Town of Lanark	Yes	Yes
Howard Krieski	Chairperson	Town of Linwood	Yes	Yes
Todd Knepfel	Chairperson	Town of New Hope	Yes	Yes
Jeanette Wilson	Chairperson	Town of Pine Grove	Yes	Yes
Tim Karcheski	Chairperson	Town of Plover	Yes	Yes
Bill Gibbs	Town Supervisor	Town of Sharon	Yes	Yes
Lauri Novotny	Town Clerk	Town of Stockton	Yes	Yes
Dan Folan	Fire Chief	Village of Almond	Yes	Yes
Michael Juris	President	Village of Amherst	Yes	Yes
Victor Voss	Fire Chief	Village of Amherst Jct.	Yes	Yes
John Spreda	Village Trustee	Village of Junction City	Yes	Yes
Victor Voss	Fire Chief	Village of Nelsonville	Yes	Yes
Brian Lepper	Fire Chief	Village of Park Ridge	Yes	Yes
Ryan Kernosky	Manager	Village of Plover	Yes	Yes
Theresa Heartvig	Village Clerk	Village of Rosholt	Yes	Yes
Nicholas Schmeiser	Director of Public Works	Village of Whiting	Yes	Yes
Eric Southworth	Water Superintendent	City of Stevens Point	Yes	Yes
Corinna Neeb	Emergency Planner	University of Wisconsin Stevens Point	Yes	Yes

Chapter 1 – Introduction

Portage County, Wisconsin (the County) and the towns, villages, cities, and universities that within its boundaries are vulnerable to natural, technological, and human-made hazards that can pose threats to residents' health, welfare, and security. Through investing in mitigation, the County will reduce the future costs of responding to and recovering from disasters, lessening the possible loss of life and property. The HMP seeks to identify the County's jurisdictions' likelihood of hazards and understand their impact on vulnerable populations and infrastructure. Setting the framework and context for future mitigation actions and projects, the HMP can effectively reduce the risks faced by the County at minimal cost and social impact.

The HMP is not an emergency response or management plan. However, it can be used to identify gaps and enhance coordination of other plans, including comprehensive emergency management plans, continuity of operations, and emergency response plans. The HMP's primary focus is twofold. First, it seeks to improve decision-making directed toward lessening hazard impacts. Second, it contextualizes and informs the implementation of mitigation projects. The following is the Portage County HMP's second update.

Hazard Mitigation

Hazard mitigation is any sustained action(s) implemented to eliminate or reduce the long-term risk to life and property from natural hazard events. Hazard mitigation measures can be divided into three categories:

1) Isolate the hazard(s) from people, property, and structures.

2) Separate people, property, or structures away from the hazard.

3) Curtail the impact(s) of the hazard(s) on victims/survivors, i.e., insurance.

Hazard mitigation measures must be pragmatic, actionable, cost-effective, and uncontroversial - that is, culturally, environmentally, and politically acceptable. Actions taken to limit the vulnerability of society to hazards must also not in themselves be more costly than the anticipated damages. In other words, hazard mitigation planning should be at the point at which capital investment and/or land use decisions are made, based on vulnerability.

Capital investments largely determine the nature of and degree to which a community is vulnerable to hazards. Once a capital facility is in place, few opportunities will present themselves over the useful life of the facility to correct any errors in location or construction for the hazard vulnerability. For this reason, ordinances such as zoning and building codes are often a useful tool for jurisdictions to implement.

Mitigation measures take time to implement. This is because the implementation of hazard mitigation activities and projects are usually less of a priority relative to the threat they aim to mitigate. Still, mitigation success can be achieved. However, its success is contingent on the accuracy of information derived from hazard identification and impact studies, followed by effective mitigation management.

Section A - Purpose of the Plan

By identifying hazards that have occurred or could occur in the County, the HMP recommends strategies to minimize their impacts on human safety and public and private property. The HMP includes a description of each hazard, its frequency of occurrences, and recommended actions to mitigate the hazard.

The HMP emphasizes mitigation activities as a significant component of emergency management. These activities reduce the degree of long-term risk to human life and property from natural and technological hazards. The cooperation between government, private entities, and voluntary agencies are essential in mitigation efforts.

Purpose

The purposes of the HMP are the following:

- Fulfilling Federal and local mitigation planning responsibilities;
- Promoting pre- and post-disaster mitigation measures with short/long-range strategies to lessen the loss of life and property, impact on culture, and damage to the environment;
- Eliminating or reduce conditions that would have an undesirable impact on the people, culture, economy, environment, and well-being of the County at large.
- Enhancing the community's awareness of the threats to its way of life, and of what can be done to prevent or reduce the vulnerability and risk.

Scope

The Portage County HMP:

- Identifies areas of risk and assesses the potential cost and magnitude
- Establishes strategies and priorities to mitigate risk from natural and technological hazards
- Identifies specific mitigation projects to pursue each identified hazard
- Guides the community in their risk management activities and minimizes conflicts among agencies
- Establishes eligibility for future mitigation program funds

Federal and State Plan Compliance and Integration

As earlier noted, hazard mitigation is any sustained action(s) taken to reduce or eliminate the long-term risk to life and property from hazard events. As an on-going process that occurs before, during, and after disasters, hazard mitigation seeks to break the cycle of damage and repair in hazardous areas. FEMA has made reducing hazards one of its primary goals. Hazard mitigation planning and the subsequent implementation of the projects, measures, and policies developed as part of this Plan, is a central mechanism in achieving FEMA's goal.

The *Disaster Mitigation Act of 2000* (DMA2K) was approved by Congress on October 10, 2000. On October 30, 2000, the President signed the bill into law, creating Public Law 103-390, reinforcing the importance of pre-disaster mitigation planning to reduce disaster losses nationwide, the DMA2K

controls and streamlines the administration of federal disaster relief and programs to promote mitigation activities.

DMA2K established a pre-disaster hazard mitigation program and new requirements for the National Hazard Mitigation Grant Program (HMGP). Section 322 of the Act addresses mitigation planning explicitly at the local level and establishes criteria for local planning. The Portage County Natural Hazard Mitigation Plan, approved by the Federal Emergency Management Agency (FEMA) May 8, 2007, conformed to the local requirements of the Code of Federal Regulations §206 Hazard Mitigation Planning, the Hazard Mitigation Grant Program and the Disaster Mitigation Action of 2000. The development of this Plan was based on the FEMA's *2013 Local Mitigation Planning Handbook* and the *2017 Wisconsin Emergency Management Resource Guide*.

Plan Use

The HMP should be used to help County and City officials plan, design, and implement programs and projects that will help reduce the jurisdiction's vulnerability to natural, technological, and man-made hazards. The HMP should also be used to facilitate inter-jurisdiction coordination and collaboration related to all-hazard mitigation planning and implementation within the County and at the Regional level. Finally, the HMP should be used to develop or provide guidance for local emergency response planning. If adopted, the HMP will achieve compliance with the DMA2K.

Chapter 2 - Planning Process

The County completed its initial HMP in 2007 and updated it in 2012 and 2019. Each of the 27 participating municipalities and one university participated in the HMP and are covered by this plan.

The HMP is designed to comply with requirements of the *Robert T. Stafford Disaster Relief and Emergency Assistance Act*, as amended, and Related Authorities and 44 *Code of Federal Regulations* (CFR) Part 201, which states that to be eligible for pre-disaster and/or post-disaster mitigation funds, local governments must have an approved HMP. The HMP is also designed to comply with FEMA and Wisconsin Emergency Management (WEM), guidance documents (particularly the *Local Multi-Hazard Mitigation Planning Guidebook* dated 2013) and all applicable federal, state and local regulations. This was accomplished by evaluating the impacts of known natural and man-made hazards, prioritizing mitigation alternatives, and coordinating hazard mitigation planning efforts with other County programs and policies.

Hazards

During the planning process, the County and community representatives considered many hazards as described below. Some of these hazards were consolidated into similar groupings. Per FEMA's mandate to address all natural hazards, the following natural hazards were not included because they do not directly impact the County:

- Hurricanes
- Sea Level Rise
- Storm Surge
- Tsunami
- Earthquake
- Landslide and Land Subsidence

The final list of hazards identified and assessed for the HMP is as follows:

- Severe Weather (Including Tornadoes, High Winds, Hail, and Lightning)
- Flooding (Including Dam Failure)
- Wildfire
- Drought and Extreme Heat
- Winter Storms and Extreme Cold
- Hazardous Materials
- Utility (Power) Failure
- Major Transportation (Railroad) Incident

Plan Process

The HMP was prepared to provide a basis for identifying and managing natural, technological, and human hazards and meeting federal, state, and local requirements for hazard mitigation and FEMA grant funding.

Updating the HMP began with an initial kickoff meeting between the Portage County Emergency Management Division and the contractor team, Integrated Solutions Consulting. Following this meeting, the planning process involved review of the existing HMP; updating the County's hazard history; gathering information on local hazards from individual communities; gathering input on hazard priorities; identifying specific vulnerabilities and desired mitigation strategies; evaluating the previous HMP's goals, objectives, and mitigation strategies; determining the status of prior mitigation strategies and Action Plans; identifying repetitive loss properties; facilitating the activities of the Steering Committee and conducting multiple public meetings and outreach activities.

In summary, the planning process consisted of the following key tasks:

Task 1: Organize Resources

The Portage County Emergency Management Division created a planning team to attend meetings, gather data and historical information, review drafts, and participate in mitigation brainstorming sessions. In addition to the planning team, a steering committee was formed to provide overall guidance and direction throughout the mitigation planning process (see Steering Committee). Participating jurisdictions were invited to form Local Planning Teams to ensure their jurisdiction's mitigation needs and priorities were addressed (see Local Planning Teams & Community Representatives).

Task 2: Risk Assessment

The planning team identified the natural and technological hazards to include in this HMP, as well as hazard event profiles to address the possible magnitudes and severities associated with each hazard. The team then used local resources to inventory the county's assets and estimate losses. The Steering Committee provided input and subject matter expertise throughout this process. Chapter 4 - Risk Assessment highlights the findings.

Task 3: Public Involvement

The public was invited to attend a meeting to review the risk assessment results and discuss mitigation strategies. Additionally, the public participated in a Community Preparedness Survey, which is further detailed in the Community Preparedness & Mitigation Survey and Public Survey sections.

Task 4: Develop Mitigation Strategies

The planning team met with representatives of each community (Local Planning Team) to develop and prioritize mitigation strategies and action items that would reduce the costs of disaster response and recovery, protect people and infrastructure, and minimize overall disruption to the county in the event of a disaster. Chapter 5 - Mitigation Strategies highlights County mitigation goals.

Task 5: Complete the Plan

The planning team compiled all of the relevant sections of the HMP to produce a draft plan for review. The County planning team had multiple opportunities to review and revise the HMP Update before submitting it to WEM and FEMA for approval.

Task 6: Plan Adoption

The Portage County Emergency Management Division coordinated the effort to ensure the HMP was formally adopted by participating jurisdiction (see Plan Adoption)

Updating the HMP involved assistance in identifying and evaluating hazards and mitigation options from five key groups: core planning team, Steering Committee, local planning team/community representatives from the 27 municipalities, general public, and other stakeholders. Each of these is described further in this section.

Planning Process Detail

One of the necessary steps of the HMP was the organization of the Portage County Emergency Management Division. The Core Planning team consisted of key members from the Portage County Emergency Management Division and the Steering Committee comprised of members from various County organizations, town and village representatives, and a university representative. The full listing of committee members and additional committees is under the Prerequisites section: Planning Teams & Jurisdiction Participation.

Step 1 Identify Hazards

County hazards were identified, and their frequency of occurrence evaluated using several resources, including:

- Hazard planning documents developed by State, Federal, and private agencies,
- National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information (formerly National Climatic Data Center-NCDC) data dating back to 1950,
- Data from the United States Geological Survey (USGS) and the Wisconsin Department of Natural Resources (Wisconsin DNR),
- Data from the 2016 State of Wisconsin Hazard Mitigation Plan, and
- Numerous other sources highlighted under the Existing Plans section.

Step 2 Planning Team and Public Involvement

The Community Preparedness & Mitigation Survey for 2019 included 33 questions and one optional question (all located in the Appendix under the Survey Questions section) and concluded with mitigation and preparation resources available in the County. The survey was shared electronically with the option of a hard copy survey upon request. 117 individual surveys were completed.

Additionally, the members of the Steering Committee completed mitigation action worksheets and reviewed the HMP draft to provide feedback for improvement. A kick-off meeting and one in-person workshop occurred during the process, along with individual face-to-face meetings and phone calls with subject matter experts and stakeholders. For the municipalities that could not attend the in-person workshop, online sessions were offered. Jurisdictional interviews were additionally conducted. In addition, the draft HMP was made public for review.

At least once a week, through the entire process, the core planning team virtually met.

Step 3 Identify Vulnerabilities

The Committee examined the potential effects on the County of the listed hazards by identifying vulnerable populations, infrastructure, critical services, facilities, and the environment in the first meeting. Vulnerabilities were geographically identified using Geographical Information System (GIS) technology. Next, the vulnerabilities were linked to a GIS database describing the vulnerable target, including potential damage and estimates of losses.

Step 4 Develop Goals and Objectives

As required by FEMA, the planning effort was centered on community-supported hazard reduction goals to be implemented and evaluated based on measurable objectives. Mitigation projects were assessed against the established goals and objectives to ensure that the selected projects reduce risk as desired.

Step 5 Write Plan

The HMP outline meets and exceeds, the requirements set forth by FEMA. The Steering Committee and public were presented with the HMP drafts in electronic form, as well as sections in a hard copy form. The HMP was also shared with neighboring jurisdictions for review. The finished HMP includes information on Plan adoption, including a promulgation page for the County and jurisdictional participation.

Step 6 Hazard Mapping

Concerning Steps 1 and 4, hazard maps are extremely important in illustrating hazard and vulnerability locations. Information used to conduct the risk assessment and to make loss estimates were linked electronically to the maps using GIS technology. The electronic versions of these maps were provided to the Committee and other reviewing agencies.

Step 7 Hazard Analyses

A risk analysis was conducted using the information gathered in Steps 1-6. For each hazard, two kinds of information are required in order to assess risk:

- information concerning the potential amount of damage a hazard event can cause (hazard magnitude - e.g., impact)
- likelihood of events occurring (hazard frequency - e.g., probability of occurrence)

To the extent that such data can be obtained quantitatively, the risk may then be determined as the product of the hazard's magnitude and its frequency. The modeling for the probability of occurrence, impact, and risk rate and ranking is described in the Planning Area Risk Ranking section. Additionally, each hazard profile ends with an analysis section that highlights key findings.

Step 7 Quantify Risk

Once a hazard's magnitude and its frequency have been evaluated, a picture of the over-all risk severity associated with that hazard emerges.

Step 8 Rank Severity

The severities of all hazards considered in the HMP are ranked relative to one another using the above plotting scheme to help prioritize mitigation activities. Prioritization is also based on goals and objectives developed and approved by the Portage County Core Team.

Step 9 Laws and Ordinances Review

The Portage County Comprehensive Plan and other applicable codes, standards, ordinances, and laws were reviewed against the list of ranked hazards to determine if there were any restrictions to or enabling powers that impact possible hazard mitigation alternatives. More details are in the Land Use Planning and Disaster Mitigation Integration and Plans and Ordinances sections.

Step 10 Develop Mitigation Alternatives

Potential projects to address identified risks are developed and listed. The project descriptions and associated roadmap have addressed approximate costs, possible returns on investments, environmental, and socio-economic benefits. Engineering cost estimates based on the conceptual design will be included if provided by the County.

Step 11 Develop Implementation Roadmap of Mitigation Actions

Road-mapping is essentially the development of a high-level project schedule. Mitigation actions for the County and jurisdictions are detailed in Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies.

Step 12 Plan Review

The plan review was conducted by the Core Planning Team during plan development and assessed the HMP using the most current FEMA HMP Review Crosswalks. Following the HMP's completion, the draft was submitted to the Steering Committee, stakeholders, and the public to review. After the public comment period and making corresponding revisions, the HMP was submitted to the WEM's Hazard Mitigation Officer, and then to FEMA Region 5‘s Hazard Mitigation Officer for review.

Step 13 Plan Adoption

The Plan provides a letter of Promulgation. Additionally, each participating jurisdiction will be requested to adopt the Plan by resolution with the respective municipal government body signing the appropriate multi-participation document.

Step 14 Implement

Following this process, the Portage County Public Safety/Emergency Management Committee can present to the County Board an implementable Multi-Jurisdiction All-Hazard Mitigation Plan.

Existing Plans

Many different plans, reports, data sources, and studies were reviewed throughout the planning process and drafting of this document. Several County municipalities and organizations previously adopted Emergency Response Plans or other related plans that give guidance when such an event would occur. Those Response Plans and other related plans were reviewed as part of the hazard mitigation planning process. Below is a complete list of those referenced plans, studies, and reports:

Incorporated Plans, Studies, Reports, and Technical Data	How was it Incorporated into Plan
Portage County Emergency Operations Plan	Used to identify other preparedness plans to better understand the full scope of what the County has in place to better prepare for hazards. Also used for the gathering of historical information and general updates throughout the plan.
Portage County Hazard Analysis Plan	Used to identify other preparedness plans to better understand the full scope of what the County has in place to better prepare for hazards. Also used for the gathering of historical information and general updates throughout the plan.
Portage County Wide Hazmat Plan	Used to identify other preparedness plans to better understand the full scope of what the County has in place to better prepare for hazards. Also used for the gathering of historical information and general updates throughout the plan.
Portage County Heat Emergency Plan	Used to identify other preparedness plans to better understand the full scope of what the County has in place to better prepare for hazards. Also used for the gathering of historical information and general updates throughout the plan.
Consolidated Water and Power Company Emergency Action Plans (DuBay Dam, Stevens Point Dam)	These plans were used to identify inundation areas for dam failure - our map data was created from these documents.
Portage County Comprehensive Plan	Were reviewed for suggestions to be included. Information regarding Demographics, Economic Development, and other community profile information.
Municipal Comprehensive Plans	Were reviewed for suggestions to be included.
2016 State of Wisconsin Hazard Mitigation Plan	Was reviewed for updated State-wide maps that were included in this plan. Updated from the last planning process.
National Climatic Data Center	This information was used to update the information for each of the hazards identified, to identify past occurrences, costs, etc. throughout this planning document.
U.S. Census Bureau	Updated 2010 census information was used for this plan.
Wisconsin Department of Natural Resources Community-at-risk Report	Was used to help identify vulnerability to wildfire across the county. Maps from this report have been included along with how they were compiled into this planning document.
Central Wisconsin Disaster Management Group (CWDMG)	Used to coordinate training sessions.

Plan Participation

Steering Committee

The core planning team consisted of key members from the Portage County Emergency Management Division. The core planning team also served on the Steering Committee and helped to guide the process.

Core Planning Team

Name	Organization	Title / Position	Phone	E-mail	Kick-off Meeting	Steering Committee Meeting	Weekly SitRep Conference Call
Portage County							
Bob Weinert	Emergency Management Division	Emergency Management Coordinator	715-346-1437	weinertr@co.portage.wi.us	X	X	X
James Williams	Emergency Management Division	Emergency Management	715-346-1397	williaja@co.portage.wi.us	X	X	X

Portage County Emergency Management Division headed the Steering Committee. Other members of the Steering Committee included representatives from various county departments, cities and villages, and other key groups and organizations. All members of the Steering Committee were involved in attending the HMP meetings, providing GIS data and historical hazard information, reviewing and providing comments on draft plans, coordinating and participating in the public input process, and coordinating the County's formal adoption of the HMP. All meeting sign-in sheets can be found in Appendix B.

Steering Committee Members

Name	Organization	Title / Position	Phone	E-mail
Portage County				
Bob Weinert	Emergency Management Division	Emergency Management Coordinator	715-346-1437	weinertr@co.portage.wi.us
James Williams	Emergency Management Division	Emergency Management	715-346-1397	williaja@co.portage.wi.us
Jeff Hartman	GIS Department	GIS Coordinator	715-346-1211	HartmanJ@co.portage.wi.us

Rod Sutter	GIS Department	GIS Specialist	715-346-1674	SutterR@co.portage.wi.us
Jeff Schuler	Planning and Zoning	Director	715-346-1338	Schulerj@co.portage.wi.us
Ben Beaudoin	Sheriff's Department	County Highway Safety Coordinator	715-346-1446	Beaudoinb@co.portage.wi.us
Chris Holman	Portage County Board	County Executive	715-346-1997	Holamnc@co.portage.wi.us
Town of Amherst				
Don Spierings	Town of Amherst	Chairperson	715-340-1230	Bigfoot-17@hotmail.com
Marj Bachhuber	Town of Amherst	Chairperson	715-824-2938	townofamherst@wi-net.com
Town of Buena Vista				
Duane Clark	Town of Buena Vista	Town Supervisor	715-366-2331	townofbuenavista@gmail.com
Town of Dewey				
Angela Lochinger	Town of Dewey	Town Clerk	715-254-5584	Townofdewey@yahoo.com
Maurice King	Town of Dewey	Chairperson	715-572-1835	Chairtownofdewey@yahoo.com
Town of Grant				
James Yetter	Town of Grant	Town Supervisor	715-213-2000	Diamondj@wctc.net
Town of Hull				
Mark Fritsche	Fire Department	Assistant Fire Chief	715-344-8280	None Provided
Town of Lanark				
Michael Pagel	Town of Lanark	Chairperson		K9uw@wi-net.com
Town of New Hope				
Todd Knepfel	Town of New Hope	Chairperson	715-824-3452	Tknepfel@yahoo.com
Town of Pine Grove				
Jeanette Wilson	Town of Pine Grove	Chairperson	715-335-6581	Willycrocket2001@yahoo.com
Town of Plover				

Tim Karcheski	Town of Plover	Chairperson	715-630-5493	Tim.karcheski@yahoo.com
Village of Junction City				
John Spreda	Village of Junction City	Village Trustee	715-347-4071	Jctutilities@tds.net
Village of Park Ridge				
Brian Lepper	Village of Park Ridge	Fire Chief	715-347-6152	Brilepper@yahoo.com
Kathy Bemowski	Village of Park Ridge	Village Clerk/Treasurer	715-343-1590	Kbemowski@parkridge.com
Village of Plover				
Ryan Kernosky	Village of Plover Community Development	Manager	715-345-5250	Rkernosky@ploverwi.gov
City of Stevens Point				
Eric Southworth	Water Department	Water Superintendent	715-342-4846	Esouthworth@stevenspoint.com
University of Wisconsin Stevens Point				
Corinna Neeb	Emergency Management Department	Emergency Planner	715-346-4464	Cneeb@uwsp.edu

Town of Buena Vista
Town of Eau Pleine

PLANNING PROCESS

Local Planning Teams & Community Representatives

Each of the 27 participating jurisdictions and the University of Wisconsin Stevens Point, identified representatives to serve on the Local Planning Team. The Local Planning Teams were instrumental in identifying community-specific risks/hazards and identified and prioritized mitigation strategies and action items that would reduce the costs of disaster response and recovery, protect people and infrastructure, and minimize overall disruption to their respective communities in the event of a disaster.

Mitigation Workshops

A Hazard Mitigation Planning workshop was held strategically in Portage County to identify hazards and update and consider new mitigation strategies. Also, phone calls were held with the 15 jurisdictions who were unable to bring their planning teams to the workshop. All 27 participating jurisdictions and the University of Wisconsin Stevens Point were able to attend one of the meetings, workshop, or provide information over a conference call and email documentations.

During the meeting, jurisdictions were asked to submit a hazard analysis. Each jurisdiction also completed a Hazard Mitigation Packet that included updating their community profile, point of contact, and mitigation actions.

Figure: Mitigation Plan Workshop Flyer

County of Portage

BOB WEINERT
EMERGENCY MANAGEMENT
COORDINATOR

EMERGENCY MANAGEMENT
DIVISION

1462 STRONGS AVENUE
STEVENS POINT, WI 54481
PHONE:715-346-1437
FAX: 715-343-6232

STEERING COMMITTEE
BOB WEINERT
JAMES WILLIAMS
JEFF HARTMAN
ROD SUTTER
JEFF SCHULER
BEN BEAUDOIN
CHRIS HOLMAN
MIKE PAGEL

FOR IMMEDIATE RELEASE

Contact:

Bob Weinert, Emergency Management Coordinator
Portage County Emergency Management Division
Phone: 715-340-0708; Email: weinertr@co.portage.wi.us

PUBLIC MEETING TO INFORM RESIDENTS ABOUT POTENTIAL DISASTERS THAT COULD IMPACT THE COUNTY

PORTAGE COUNTY, WISCONSIN – Portage County Emergency Management Division will be hosting public information and planning sessions to gather input from Portage County residents regarding potential emergencies and disasters that could impact the County. These sessions are part of the All-Hazard Mitigation Plan, which is undergoing a mandatory 5-year update. The public meeting will be held on the following date and location:

- Tuesday, May 14, 2019 at 5:30 p.m. to 8:30 p.m. at the Portage County Sheriff's Office, Emergency Management Division (1462 Strongs Avenue, Stevens Point, WI 54481)

The meeting will provide the public an opportunity to review the potential hazards that could occur within the County and will request input for the various mitigation measures intended to eliminate or reduce the negative impact of those hazards.

The U.S. Federal government requires local and state governments to have a FEMA-Approved Multi-Hazard Mitigation Plan as established by the Disaster Mitigation Act of 2000 in order to qualify for Pre-Disaster Mitigation (PDM) and Hazard Mitigation Grant Program (HMGP) project grant dollars. These programs are critical sources of Federal funding, especially for a community that wants to proactively initiate mitigation projects using PDM dollars, or for a community that needs HMGP funding following a presidentially declared disaster.

For more information about this plan and meeting, please contact Portage County Emergency Management Coordinator, weinertr@co.portage.wi.us or call 715-340-0708 .

- ### -

Figure: Mitigation Plan Workshop Invitation Email

Subject: Invitation for local collaboration on reducing disaster risk in your community.
Importance: High

Good Afternoon,

Portage County will be updating the county-wide hazard mitigation plan this year. This hazard mitigation program requires a *current* enacted plan that looks at and attempts to address hazards and risks that affects your particular town, village or city, and even the county as a whole. The content of the plan is **made up of ALL the municipalities** in Portage County. With this understanding the County seeks the interests and expertise of each municipality to ensure important hazards and risks are identified in your area.

Some of you may ask what does your town, village or city need to do, how much work is involved with this, and who exactly should be involved. For those that are not familiar with hazard mitigation or need better information about this invitation, this letter provides you with a background about this upcoming process with some frequently asked questions. This information should assist you in identifying the potential representatives from your town to participate, as well as to identify the mitigative projects for this important collaboration.

Question - What is Hazard Mitigation and how does this plan benefit you?
Hazard mitigation are steps that a village, town, city, or County can take to minimize potential damage from an emergency or disaster. These steps can be small projects such as swapping a larger diameter culvert for a smaller ineffective culvert. Larger mitigation projects may include retrofitting your sewer treatment plant with renewable energy, sinking a second well-head for a backup source of municipal water; constructing a "tornado-safe" room or building that can also double as a municipal "vault' for vital paper records, or to protect the children in a nearby school. Other optional projects are to raise up a frequently flooded roadway so the road can be accessed by first response vehicles or for evacuations. This list is by no means complete. By having a current plan in place this allows for funds to be potentially provided to the County to be used for such example projects mentioned above.

Question - How can you help?

Your Municipalities' involvement in this project is vital. The County simply asks and encourages each town/village/city to be involved in this project with two things:

1. Identify at least one mitigative project/task that your town/village feels can make a difference in reducing a hazard or risk to your jurisdiction. Some of these examples are mentioned in the paragraph above.

2. Identify individuals from your municipality who have the knowledge and expertise of your hazards and risks (such as frequently flooded roads, high-risk areas, hazardous or critical buildings or infrastructure) that can participate in updating the county's hazard mitigation plan. We ask that your identified "***Local Stakeholders***" participate in a few meetings to ensure your interests are included in the process. It is our goal that this participation does NOT take up peoples' valuable time; however, we also recognize the expertise and involvement of these people is absolutely vital to the outcome of this plan!
   For these identified people, we need the person's name, an email address and a reachable telephone number.

Question - Who might these individuals be from your jurisdiction??
Possible *examples* might be the public works director, road foreman, town manager or town chair, town clerk, fire, police, emergency medical services, local planning and zoning, building inspector, water/wastewater system manager.

Please email the identified peoples' names, a home or cell phone telephone number and their positions to Bob Weinert of the Portage County Emergency Management Office at WeinertR@co.portage.wi.us as soon as possible. Further guidance will then be provided by the contractor for this project who have staff available who also can assist you with any questions or concerns that may arise.

The Project Manager from Integrated Solutions Consulting (the contractor) will be in contact with the people you have identified for the next step in this process.

We sincerely thank you for your involvement with this project!

Bob Weinert, MS EM
Emergency Management Coordinator

Portage County Emergency Management
1462 Strongs Avenue
Stevens Point, Wisconsin 54481
(715) 340-0708
WeinertR@co.portage.wi.us

Online Planning System

Local Planning Team members were invited to participate via the online planning system (https://wi-portage.isc-cemp.com), known as the Portage County Knowledge Management System (KMS) developed by the contractor team, Integrated Solutions Consulting.

One of the key features of the Online Planning System was the ability to provide real-time access to the HMP and to allow stakeholders to comment on key sections. Steering committee members and Local Planning Team members were given access to the system. The comments tool was used to encourage collaboration. The comments tool allowed the user to make comments on any page within the manual and mark the comment as an observation or feedback. Comments for pages were visible to all administrators and users who had editing privileges for the specific page.

In order to make a comment, users were instructed to click on the Comment link on the bottom of the content page, and a pop-up box would appear. The user used the drop-down box to designate whether the comment was Feedback or an Observation. After entering the comment, they clicked the "Send Comments" button to submit.

The comment would appear after the page refreshes (if a user is allowed to view comments). An email notification was sent to users who were designated to receive a comment notification.

Stakeholders, Subject Matter Experts, & Neighboring Communities

Stakeholder Participation and Outreach

Table: Stakeholder Involvement

Participating Stakeholder Agency/ Organization	Representative (Name, Position/ Title)	Description of Involvement	Takes Part in Hazard Mitigation Activities (Y/N)	Authority to Regulate Development (Y/N)	Neighboring Community (Y/N)
Plover	Ken Voss, Deputy Chief	Reviewing Plan, Steering Committee Member	Yes	Yes (in own municipality)	No
University of Wisconsin - Stevens Point	Corinna Neeb, Emergency Management Specialist	Reviewing Plan, Steering Committee Member	Yes	Yes (at the university)	No
Portage County Planning and Zoning	Jeff Schuler, Director	Reviewing Plan, Steering Committee Member	Yes	Yes	No
Marathon County	Philip Rentmeester, Marathon County	Reviewing Plan	Yes (in own County)	Yes (in own County)	Yes
Waushara County	Norman Duesterhoeft, Waushara Co EM Director	Reviewing Plan	Yes (in own County)	Yes (in own County)	Yes
Shawano County	James A. Davel, Shawano County	Reviewing Plan	Yes (in own County)	Yes (in own County)	Yes

State of Wisconsin

Portage County planning team invited the state to review and comment on the draft plan.

Table: State Participation

Person Participating	State	Organization	Participation Description
Katie Sommers	Wisconsin	Wisconsin Emergency Management	State Reviewer
Charles Nettesheim	Wisconsin	Wisconsin Emergency Management	State Reviewer

Schedule of Plan Development Activities

Highlighted below is a summary of the various forms of planning development activities utilized to develop the multi-jurisdictional plan.

Summary of Planning Actions:

- Kick-off Meeting: April 3, 2019
- Steering Committee Meeting: May 14, 2019
- Phone Interviews: July 2019
- Weekly SitRep Meeting: Every Friday at 12:30 p.m. CST from June 2019-September 2019
- Pubic Survey Participation: June 18th - July 18th
- Jurisdiction Hazard Mitigation Packet Review: September 4-6, 2019 and September 16-20,2019
- Stakeholder Draft Review: September 11-20, 2019
    - Appendix B includes all meeting sign-in sheets.

The following towns, villages, and cities had participation in the Public Survey:

- Town of Hull
- Town of Plover
- Town of Stockton
- Village of Plover
- Village of Whiting
- City of Stevens Point
- Town of Alban
- Town of Almond
- Town of Amherst
- Town of Buena Vista
- Town of Carson
- Town of Eau Pleine
- Town of Grant
- Town of Lanark
- Town of Linwood
- Town of Pine Grove
- Village of Almond

- Village of Amherst
- Village of Amherst Jct.
- Village of Park Ridge
- Village of Rosholt

Kick-off Meeting Attendees

Name	Organization	Title / Position	Phone	E-mail
Bob Weinert	Portage County Emergency Management Division	Emergency Management Coordinator	715-346-1437	weinertr@co.portage.wi.us
James Williams	Portage County Emergency Management Division	Emergency Management	715-346-1397	williaja@co.portage.wi.us
Jeff Hartman	Portage County GIS Department	GIS Coordinator	715-346-1211	HartmanJ@co.portage.wi.us
Rod Sutter	Portage County GIS Department	GIS Specialist	715-346-1674	SutterR@co.portage.wi.us
Jeff Schuler	Portage County Planning and Zoning	Director	715-346-1338	Schulerj@co.portage.wi.us
Ben Beaudoin	Portage County Sheriff's Department	County Highway Safety Coordinator	715-346-1446	Beaudoinb@co.portage.wi.us
Chris Holman	Portage County Board	County Executive	715-346-1997	Holamnc@co.portage.wi.us
Michael Pagel	Town of Lanark	Chairperson	715-824-5231	K9uw@wi-net.com

Steering Committee Meeting Attendees

Name	Organization	Title / Position	Phone	E-mail
Bob Weinert	Emergency Management Division	Emergency Management Coordinator	715-346-1437	weinertr@co.portage.wi.us
James Williams	Emergency Management Division	Emergency Management	715-346-1397	williaja@co.portage.wi.us
Don Spierings	Town of Amherst	Chairperson	715-340-1230	Bigfoot-17@hotmail.com

Marj Bachhuber	Town of Amherst	Chairperson	715-824-2938	townofamherst@wi-net.com
Duane Clark	Town of Buena Vista	Town Supervisor	715-366-2331	townofbuenavista@gmail.com
Angela Lochinger	Town of Dewey	Town Clerk	715-254-5584	Townofdewey@yahoo.com
Maurice King	Town of Dewey	Chairperson	715-572-1835	Chairtownofdewey@yahoo.com
James Yetter	Town of Grant	Town Supervisor	715-213-2000	Diamondj@wctc.net
Mark Fritsche	Town of Hull Fire Department	Assistant Fire Chief	715-344-8280	None Provided
Michael Pagel	Town of Lanark	Chairperson	715-824-5231	K9uw@wi-net.com
Todd Knepfel	Town of New Hope	Chairperson	715-824-3452	Tknepfel@yahoo.com
Jeanette Wilson	Town of Pine Grove	Chairperson	715-335-6581	Willycrocket2001@yahoo.com
Tim Karcheski	Town of Plover	Chairperson	715-630-5493	Tim.karcheski@yahoo.com
John Spreda	Village of Junction City	Village Trustee	715-347-4071	Jctutilities@tds.net
Brian Lepper	Village of Park Ridge	Fire Chief	715-347-6152	Brilepper@yahoo.com
Kathy Bemowski	Village of Park Ridge	Village Clerk/Treasurer	715-343-1590	Kbemowski@parkridge.com
Ryan Kernosky	Village of Plover Community Development	Manager	715-345-5250	Rkernosky@ploverwi.gov
Eric Southworth	City of Stevens Point Water Department	Water Superintendent	715-342-4846	Esouthworth@stevenspoint.com

Phone Interviews

Name	Organization	Title / Position	Phone	E-mail	Phone Interview
Sherry Forseth	Town of Belmont	Town Clerk	920-622-4417	None Provided	X

Bill Gibbs	Town of Sharon	Town Supervisor	715-592-6519	billkimgibbs@hotmail.comemail	X
Lauri Novotny	Town of Stockton	Town Clerk	715-592-4712	stockton@wi-net.com	X
Dan Folan	Village of Almond	Fire Chief	715-366-8171	None Provided	X
Michael Juris	Village of Amherst	President	715-824-3829	vilamher@wi-net.com	X
Victor Voss	Village of Amherst Jct.	Fire Chief	715-824-2699	chiefvvoss@gmail.com	X
Victor Voss	Village of Nelsonville	Fire Chief	715-824-2699	chiefvvoss@gmail.com	X
Theresa Hartvig	Village of Rosholt	Clerk/Treasurer	715-677-4510	rosholtvillage@wi-net.com	X
Nicholas Schmesier	Village of Whiting	Director of Public Works	715-340-7582	nicschmesier@villageofwhiting.com	X
Corinna Neeb	University of Wisconsin Stevens Point Emergency Management Department	Emergency Planner	715-346-4464	Cneeb@uwsp.edu	X

Public Involvement & Participation

After the planning process, the public was offered an opportunity to provide feedback on the draft HMP. Efforts to make this opportunity known to residents included the following:

- Posting to the Portage County Website
- Sharing the link to the draft on the Emergency Management website and announcing via social media outlets including posting to Facebook
- Announcements in the local newspaper
- Pictures that highlight news articles, website postings, and social media postings can be found in the Draft Plan Shared to Public section.

Portage County Community Preparedness and Mitigation Survey

The Community Preparedness & Mitigation Survey for 2019 included 34 questions and concluded with mitigation and preparation resources available in the County. The survey was shared electronically with the option of a hard copy survey upon request. 117 individual surveys were completed. 42% of the participants live and work in Portage County, 46% live (but do not work) in Portage County and 8% work (but do not live) in the County. The majority of participants, 61.7%, have lived in the County for 21 or more years.

The press release, along with samples of the survey and public forum advertisement is available in Appendix C. Public Participation Documentation section.

All communities had at least one survey participant with the largest representation being from City of Stevens Point (34.8% - 49 participants), Village of Plover (13.5% - 19 participants), and Town of Hull (12.1% - 17 participants).

In 2019, the top hazards survey takers indicated as high risk for impacting their household and place of business in Portage County are:

- Severe Winter Storm/Heavy Snowfall/Ice Storm (43.9%)
- Power Failure (39.1%)
- Tornado and High Winds (31%)
- Cybersecurity (30.2%)
- Extreme Cold Events (28.7%)
- Straight Line Wind (28.7%)
- Structural Fire (22.6%)

When asked what degree of emphasis the survey takers would expect their jurisdiction to mitigate hazards, these hazards received the highest percentages of high priority:

- Severe Winter Storm/Heavy Snowfall/Ice Storm (44.1%)
- Power Failure (41.4%)
- Extreme Cold Events (38.7%)

- Tornado and High Wind (32.7%)
- Flash Flooding/Overland Flooding (30.6%)
- Infrastructure Failure (30%)
- Hazardous Materials Release (29.1%)
- Cybersecurity (28.8%)
- Structural Fire (22.6%)
- Extreme Heat Events (22.5%)
- Public Health Emergency (21.6%
- Dam Failure (20.9%)

Additional highlighted results include:

- Communication and Information:
    - The type of device(s) an individual use to access the internet is a *cell phone* (90.7%) followed by *computer or laptop at home* (82.1).
    - The number one place survey takers indicated as to where they would go to obtain emergency and disaster preparedness information is a *web search* (56.1%) followed by *social media* (46.8%) and *County government website* (39.6%).
    - The number one place survey takers indicated as to where they would expect to get information during an emergency is *local television media* (78.3%) followed by *local radio* (63.8%) and *social media* (60.1%).
- Preparedness:
    - The number one activity individuals have done to prepare for emergencies and disasters is having a *signed up for emergency alerts from Portage County* (67.1%) followed by having a *weather radio* (34.3%), *an emergency preparedness plan* (22.9%), and *72-hour kit/disaster supply kit* (22.1%).
- Evacuation:
    - 44.6% indicated that they would *very likely immediately evacuate* if instructed, while 1.8% indicated that they would *refuse to evacuate.*
    - The top reasons that would prevent the survey takers from evacuating included first that *pet* (30%) then *no obstacles would prevent them from evacuating* (28.2%) followed by *no place to go* (25.5%), and *spouse/significant other won't leave* (22.7%).
    - 5.4% indicated *yes,* and 9.9% indicated *maybe* that in an evacuation, they would need special assistance for themselves or someone in their household. Out of the individuals that indicated yes or maybe, 29.4% *do not know who would provide the assistance.*
- Recovery:
    - The top reasons for possibly not being able to recover from a disaster were *no alternative power supply* (59.3%), *lack of financial savings* (40%), *limited water supply* (36.3%), and *disruption in employment* (26.7%).

The Appendix under the Public Survey section includes all results, excluding open-ended answers to ensure confidentiality is maintained. The Appendix under the Community Preparedness & Mitigation Survey section includes a copy of the questions.

FIGURE: Word Cloud based on Survey Response Answers

The word cloud above was created by one of the write-in questions and the answers provided would not violate survey respondent confidentiality: *If you have experienced any damage(s) or injury(ies) from a disaster, please list the hazard(s) that caused the damages/loses and/or injuries (Example: flooding, wind, winter storm).*

Chapter 3 - Planning Area/Community Profile

Introduction

This chapter contains background information regarding the county's geographical, physical, and demographic characteristics, along with recent development patterns. To have in-depth knowledge of the relevant conditions in the area and to determine sound hazard mitigation strategies, this collection of data must be referenced.

Section A - General Geography

Portage County is located in central Wisconsin. It is approximately 100 miles north of Madison, 100 miles northeast of La Crosse and 90 miles west of Green Bay. Portage County borders Adams, Wood, Marathon, Waupaca, and Waushara Counties, and includes 28 units of government: 17 Towns, nine Villages, the City of Stevens Point, and Portage County itself. The County's total land area is 823 square miles, with a 2018 population of 70,942, according to the United States (U.S.) Census estimates.

The County's topography is dominated by glacial features, from the rolling, terminal or end moraines oriented north to south in the eastern third of the County, to the flat sand outwash plain in the southwest portion. Elevation ranges from 1,320 feet above sea level in the Town of Almond to 920 feet above sea level along the southeast border of the County.

Map: Portage County Profile (larger map can be downloaded here)
Source: *U.S. Census Bureau*

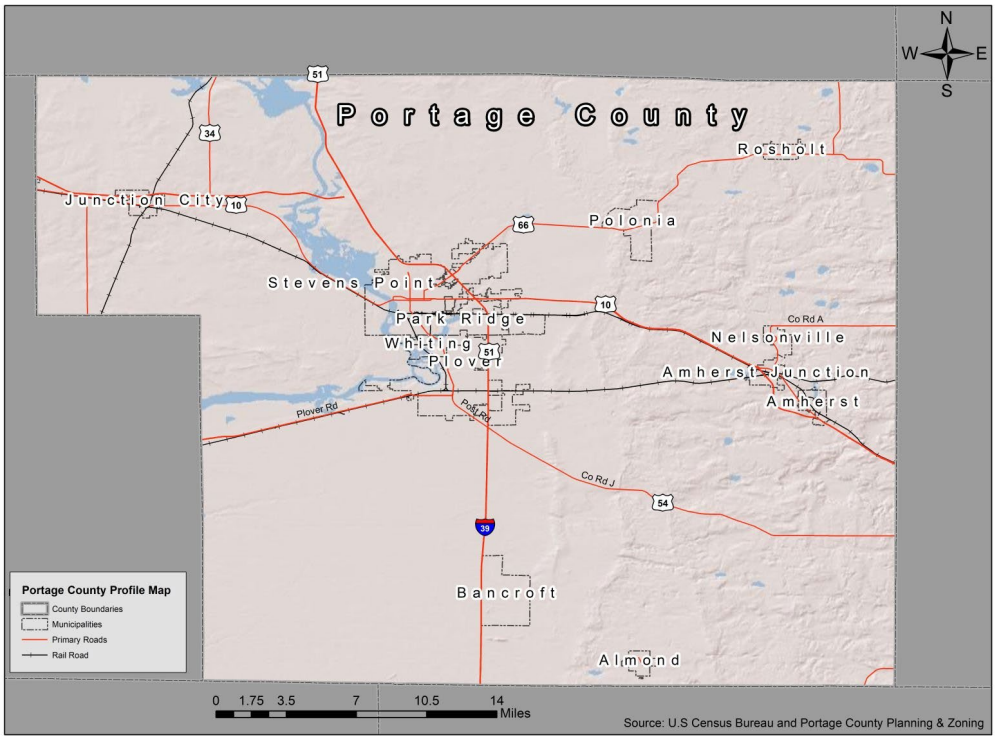


Table: Geographical Size of Civil Division

Municipality	Acreage	Square Miles
Town of Alban	23,191	36.24
Town of Almond	27,642	43.19
Town of Amherst	24,512	38.30
Town of Belmont	23,238	36.31
Town of Buena Vista	39,290	61.39
Town of Carson	35,332	55.21
Town of Dewey	30,100	47.03
Town of Eau Pleine	36,729	57.39
Town of Grant	45,618	71.78
Town of Hull	20,025	31.29
Town of Lanark	23,128	36.14
Town of Linwood	21,555	33.68
Town of New Hope	23,319	36.44
Town of Pine Grove	24,158	37.75
Town of Plover	26,297	41.09
Town of Sharon	41,488	64.83
Town of Stockton	37,053	57.9
Village of Almond	672	1.05
Village of Amherst	838	1.31
Village of Amherst Jct.	793	1.24
Village of Junction City	967	1.51
Village of Nelsonville	676	1.06
Village of Park Ridge	143	0.22
Village of Plover	7,014	10.96
Village of Rosholt	696	1.09
Village of Whiting	1,363	2.13
City of Stevens Point	10,976	17.15

Source: Portage County Planning & Zoning Dept.

Surface Water

Portage County has three river basins: Wisconsin River, Tomorrow (Waupaca) River, and Little Wolf River. 12 watersheds make up these river basins: Little Eau Pleine River, Johnson and Peplin Creeks, Little Eau Claire River, Lower Little Wolf River, Upper Little Wolf River, Plover, and Little Plover River, Waupaca River, Mill Creek, Wisconsin Rapids, Fourmile and Fivemile Creek, and Fourteenmile Creek.

Within these watersheds, there are approximately 135 lakes and 64 streams. Some of the waterways subject to flooding are discussed in greater detail below.

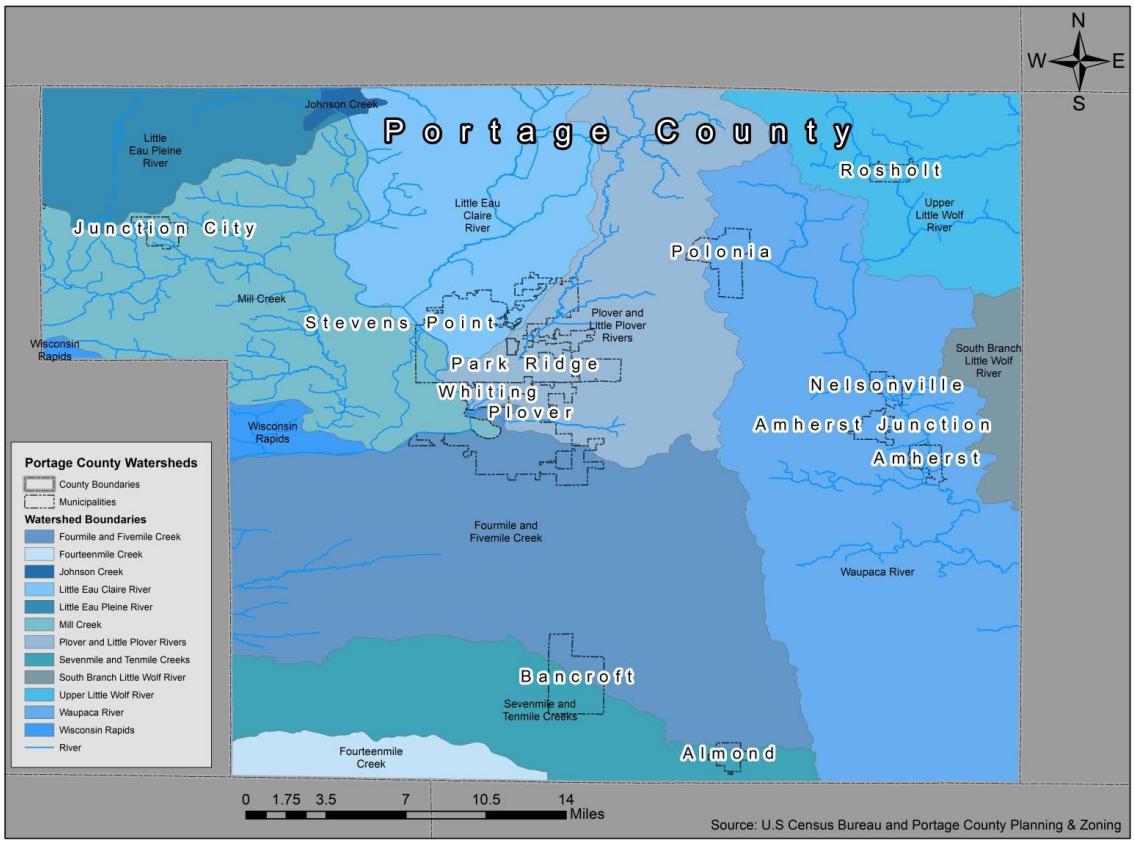
The Wisconsin River is a major waterway for Portage County and throughout the State of Wisconsin. In total, the Wisconsin River is 430 miles long with a 12,000 square mile drainage area and a vertical drop of 1,050 feet. The river runs either through or along the borders of the Portage County Towns of Carson, Dewey, Eau Plaine, Hull, Plover, Linwood, Village of Plover, and the City of Stevens Point, covering 22.5 miles. A series of dams along the river control water flow during storm and runoff events.

The Plover River runs through or along the border of the Towns of Sharon, Dewey, Hull, Village of Whiting, and the City of Stevens Point. In total, it is 16.98 miles long and averages 53 feet in width. The

Tomorrow River runs through or along the border of the Towns of Sharon, Stockton, New Hope, Amherst, Lanark, and the Villages of Nelsonville and Amherst. In total, it is 30.89 miles and averages 33 feet in width. When the Tomorrow River crosses the east county border into Waupaca County, the river's name changes to the Waupaca River.

Mill Creek runs through the Towns of Carson and Linwood and flows into the Wisconsin River from the Town of Linwood. In total, the creek is 21.92 miles long and averages 68 feet in width.

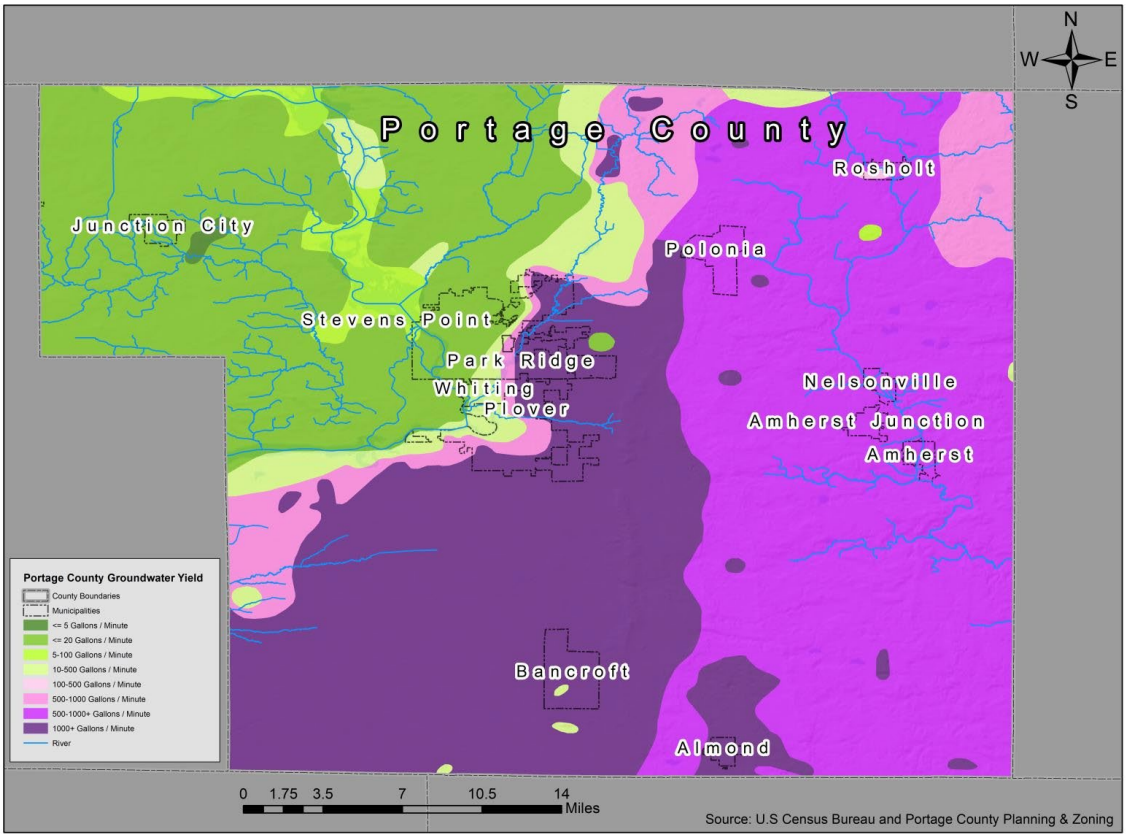
Map: Watersheds (larger map can be downloaded here)
Source: *U.S. Census Bureau and Portage County Planning & Zoning*



Groundwater

Groundwater resource supports 100% of domestic water use, 87% of irrigation water, and 68% of industrial water use (Wisconsin Department of Natural Resources). The County is divided into three distinct groundwater areas or provinces based on subsurface geology (Map 4). The unconsolidated glacial deposits are the most important aquifer in the County. Wells in the sand and gravel aquifer of the sandplain province generally have a potential yield exceeding one thousand gallons per minute (1,000 GPM), and wells in the sand and gravel aquifer of the drift province potentially yield over five hundred gallons per minute (500 GPM) (Maps 5 & 6). All municipal water supplies (except the Village of Junction City in the northwest portion of the County) are taken from wells terminating in sand and gravel aquifers (Portage County Water Resources).

Map: Groundwater (larger map can be downloaded here)
Source: *U.S. Census Bureau and Portage County Planning & Zoning*



Soils

Soils in Portage County vary from loamy and silty material west of the Wisconsin River (Kent-Norgo, Meadland-Rozellville-Dolph, and Point-Dancy-Mosinee), to sand and gravel throughout the central part of the County (Richford-Rosholt-Billet, PlainfieldFriendship, Leola-Pearl, and Roscommon-Meehan-Markey), to sandy glacial drift in the eastern portion of the County (Wyocena-Rosholt and Markey-Seelyeville-Cathro) are also located throughout the County, mainly located in the northern half (USDA Soil Survey).

There are at least 38 identified soil series in Portage County grouped into 11 soil associations. Four associations are generally related to the sandplain province, two to the drift province, three to the drift-crystalline rock province, and two associations are related to alluvial or organic deposits.

Below is a description of these general soil associations.

Soils formed in loamy or silty materials and the underlying residuum from bedrock:

1. Kert-Norgo variant association: Well-drained to somewhat poorly drained, nearly level to sloping soils that formed in silty deposits and the underlying sandy to clayey residuum from sandstone and shale.

2. Meadleand-Rozellville-Dolph association: Well-drained to somewhat poorly drained, nearly level to gently sloping soils that formed in loamy and silty deposits and the underlying loamy residuum from igneous rocks.

3. Point-Dancy-Mosinee association: Well-drained to poorly drained, nearly level to gently sloping soils that formed in loamy deposits and the underlying residuum from igneous rocks

Soils formed in sandy glacial drift:

4. Wyocena-Rosholt association: Well-drained, gently sloping to very steep soils that formed in loamy deposits and sandy glacial till or outwash sand and gravel

5. Kranski-Cloma-Mecan association: Excessively drained and well-drained, gently sloping to very steep soils that formed in sandy glacial till or in deep sandy deposits Soils formed mainly in outwash sand and gravel or sand.

6. Richford-Rosholt-Billett association: Well-drained, nearly level to gently sloping soils that formed in sandy and loamy deposits and outwash sand and gravel

7. Plainfield-Friendship association: Excessively drained and moderately well-drained, nearly level to sloping soils that formed in deep sandy deposits.

8. Leola-Pearl association: Moderately well-drained and somewhat poorly drained, nearly level soils that formed in outwash sand.

9. Roscommon-Meehan-Markey association: Somewhat poorly drained to very poorly drained, nearly level soils that formed in deep sandy deposits or, in places, inorganic deposits that overlie the sand.

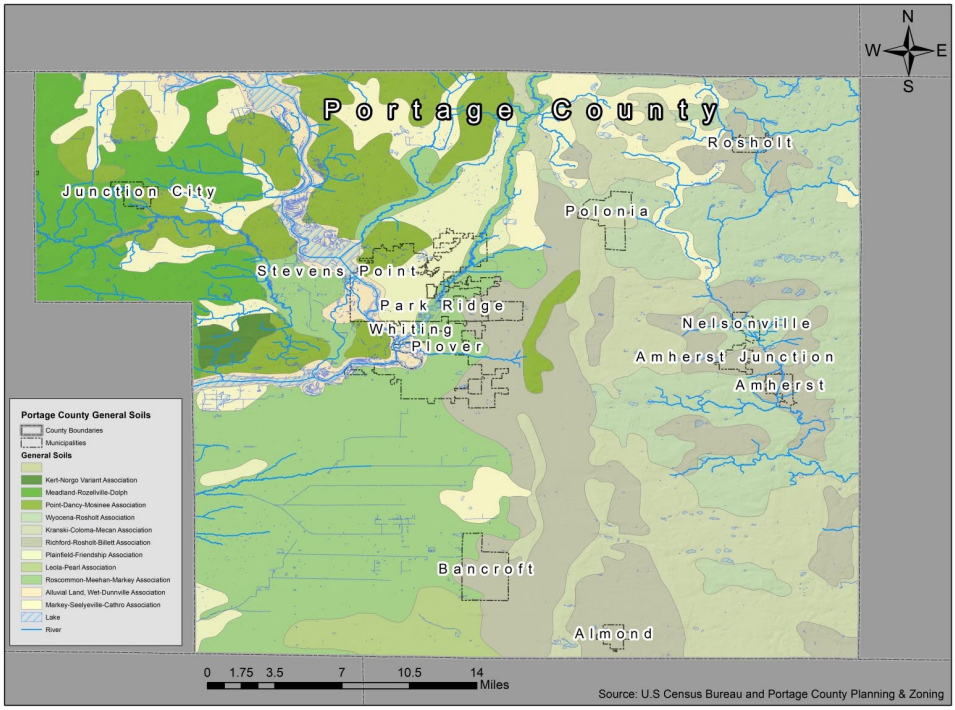
Soils formed in alluvial or organic deposits:

10. Alluvial land, wet-dunnville association: Well-drained to very poorly drained, nearly level to gently sloping that formed in alluvial deposits.

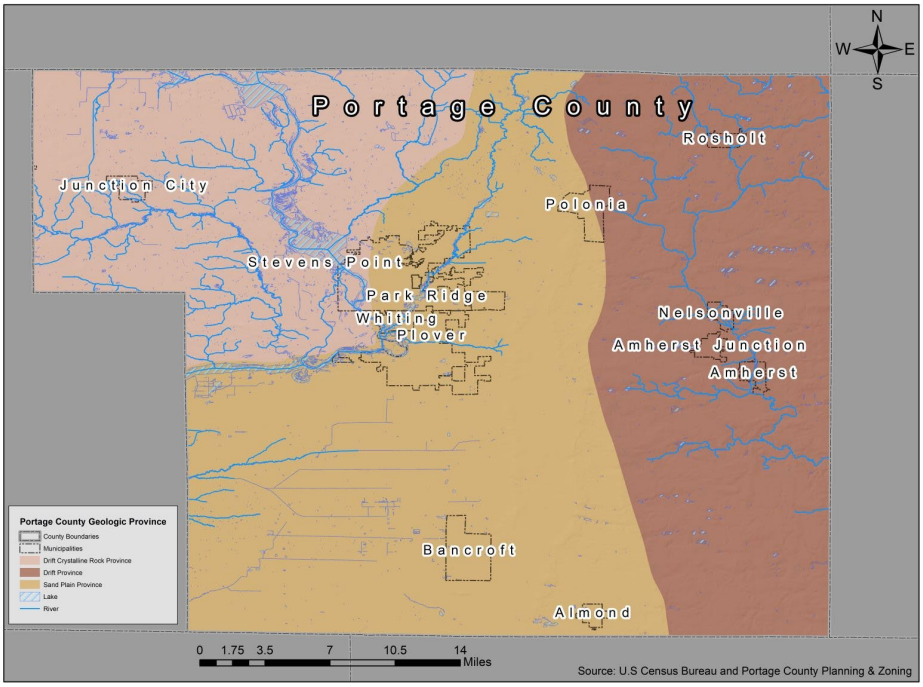
11. Markey-Seelyville-Cathro association: Very poorly drained, nearly level soils that formed inorganic deposits over sandy and loamy deposits.

The majority of heavy (higher silt and clay content) soils occur west of the River. This difference in soils affects permeability and flood potential.

Map: General Soils (larger map can be downloaded here)
Source: *U.S. Census Bureau and Portage County Planning & Zoning*



Map: Geologic Provinces (larger map can be downloaded here)
Source: *U.S. Census Bureau and Portage County Planning & Zoning*



Climate Data

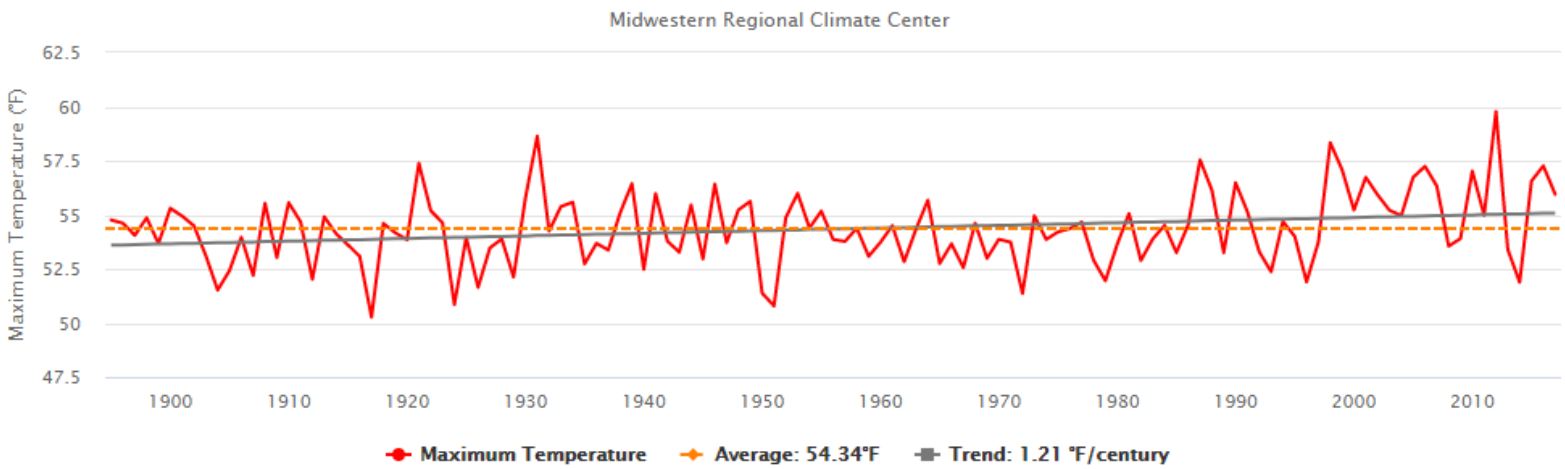
The warmest month in Portage County is July, with an average high temperature of 81.6° and low temperature of 59.2°; the coldest is January with an average high of 23.0° and low of 4.4°. Average annual rainfall is 32.1"; average annual snowfall is 42.1". As can be seen in the graph below, the trend of the average maximum temperature for the Portage County region has steadily risen.

Table: Portage County Climate Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Degree High (Fº)	23.0	28.1	39.7	55.6	68.3	77.0	81.6	78.8	69.9	58.5	42.6	27.6	54.2
Average Degree Low (Fº)	4.4	8.4	20.6	34.1	45	54	59.2	56.9	48.7	38.5	26.1	11.4	33.9
Precipitation (inches)	1.02	1.09	2.18	2.98	3.2	3.82	3.65	3.99	4.08	2.4	2.18	1.51	32.1
Average Snowfall (inches)	9.7	7.7	7.8	1.4	0	0	0	0	0	0.1	3.9	11.5	42.1
Growing Degree Days	0	1	22	128	311	474	624	557	344	161	27	2	2,674

Source: [Weather Station Number 478171, Stevens Point WI]

W105 Annual Maximum Temperature based on 1895 – 2017



Source: Midwestern Regional Climate Center, [https://mrcc.illinois.edu/mw_climate/climateTrends.jsp]

Section B - Demographic and Economic Profile

Demographics

Over the past 100 years, Portage County has seen a steady increase in population, with growth remaining at a moderate pace (1.8% annually) since 1960. More recently, the population has continued to grow; however, the rate of growth has slowed. The population estimate for July 1, 2018, was 70,942 and the Census 2010 data indicated the population was 70,019 (Census). In 2017, the population density was 88.36 persons/square mile *(State of Wisconsin Department of Administration - Wisconsin Geography Maps and Graphics)*. The table below highlights the population growth over the last decade.

Table: Portage County Population Census Data and Past Decade

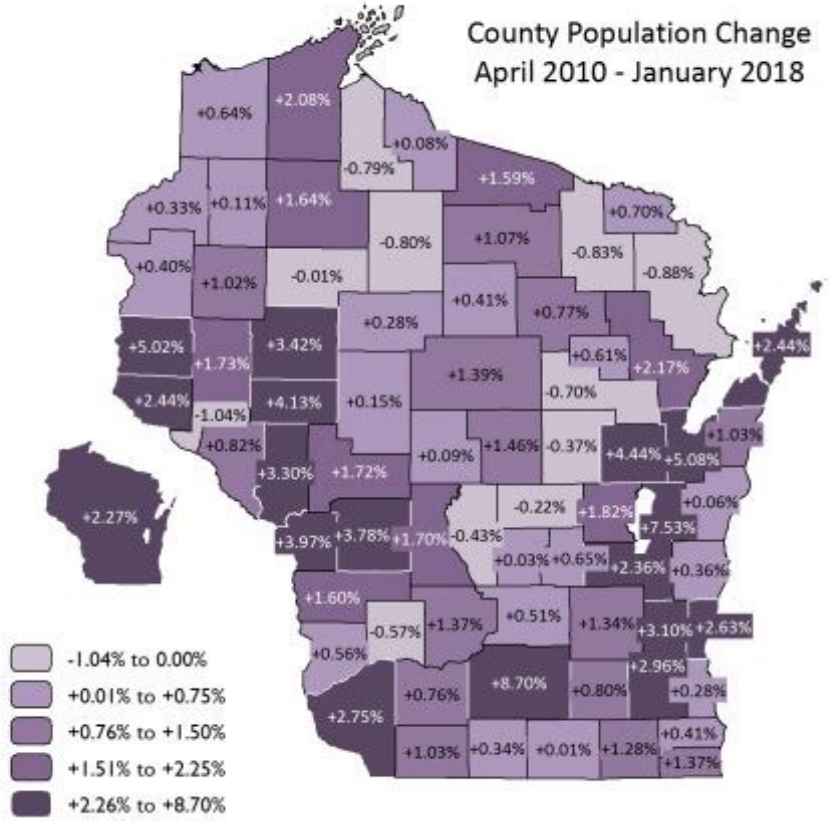
Source: State of Wisconsin Department of Administration - Time Series Population Estimates

Year	1970 Census	1980 Census	1990 Census	2000 Census	2010 Census	2011	2012	2013	2014	2015	2016	2017	2018
Population Estimate	47,541	57,420	61,405	67,182	70,019	70,370	70,806	70,903	70,882	70,940	70,883	70,761	71,038

The County's population growth is consistent with the population growth trend throughout much of Wisconsin. On average, county population growth from 2010 to 2018 was 2.27%. Portage County population growth was 1.46% which is highlighted in the map below.

Map: Wisconsin Population Change April 2010-January 2018

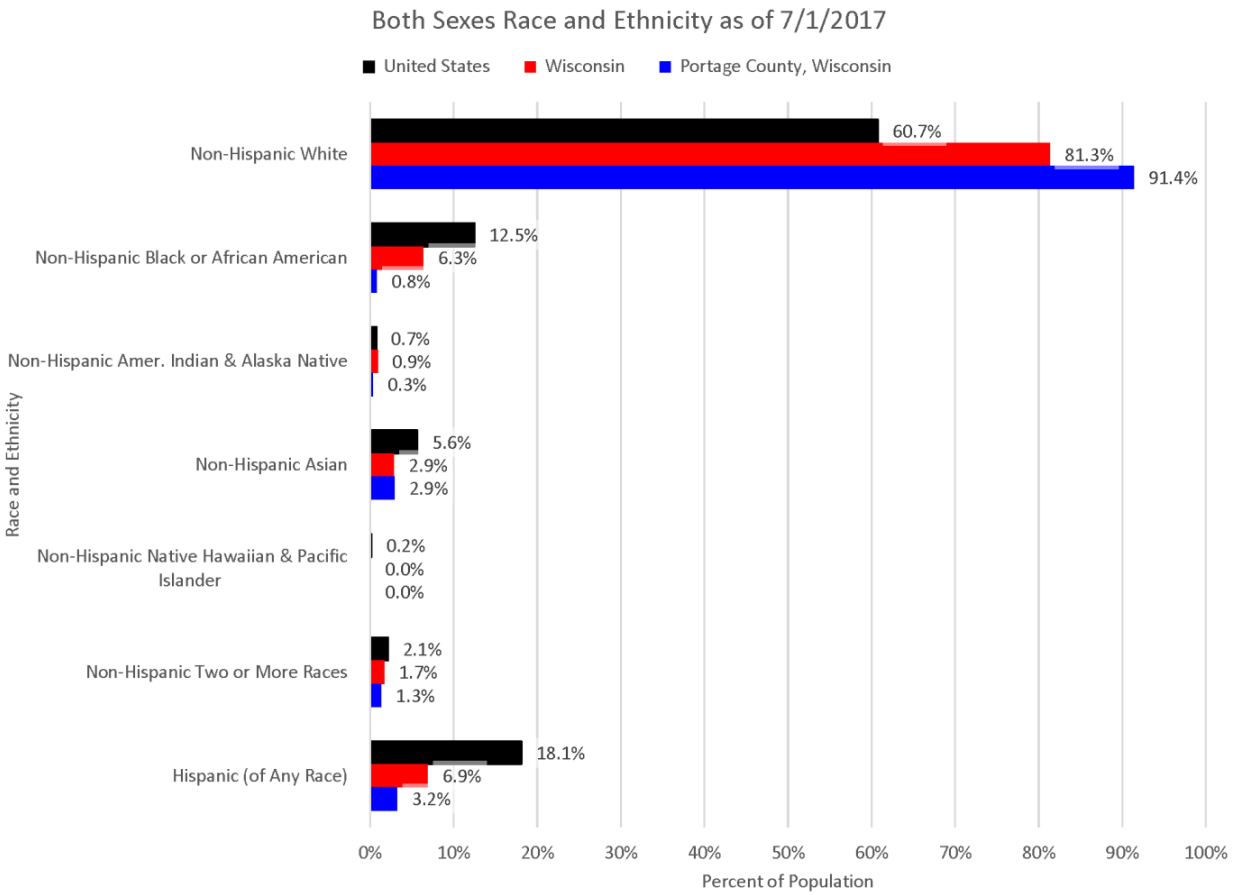
Source: [State of Wisconsin Department of Administration - Population Estimate Summary]



Exploring the demographics further, the majority of the population (91%) identifies as White, non-Hispanic, with a relatively even distribution of female (49.6%) and male-identifying persons (Vintage 2018 Population Estimate Program). The majority of the population (93.5%) over 25 years of age have a high school diploma or higher, and 31.5% have a Bachelor's degree or higher (2013-2017 Estimates). The median age is 39.2 years old (2013-2017 American Community Survey 5-Year Estimate).

Table: Portage County and Wisconsin 2017 Demographics

Source: [State of Wisconsin Department of Administration - Wisconsin Geography Maps and Graphics]



Housing Statistics

In 2017, the estimated total number of households in Portage County was 30,633 with 28,072 of the housing units listed as occupied and 2,561 listed as vacant. Central to mitigation planning is understanding vulnerabilities that exist. In Portage County, 1,456 mobile homes exist (4.8% of the housing units). Mobile homes are particularly susceptible to Tornado and High Winds.

Additionally, three housing units are considered either Boats, RVs, or vans. In addition to the hazards mentioned as particularly hazardous for mobile homes, Extreme Heat, Extreme Cold, Severe Storm - Summer Events, and Severe Storm Winter Events could profoundly impact individuals units that do not have a means for temperature regulation. Of the housing units, 1% are identified as not using fuel, 0.4% lack complete plumbing facilities, and 1.2% lack complete kitchen facilities.

The table below further breaks down the household statistics in Portage County:

Total households	30,633
Occupied households	28,072
Average household size	2.39

Another important aspect of mitigation planning is understanding the codes that existed during the year houses and buildings were constructed. The majority of housing structures were built in 1939 or earlier, in 1970-79, 1990-99, and 2000-09. A further breakdown of years houses was built are noted in the table below. While these structures may be retrofitted or remodeled, many of the units built earlier, particularly ones constructed in 1939 or earlier, are likely not equipped with the latest standard of multi-hazard protection.

Year Constructed	Number of Units
Built 2014 or later	153
Built 2010 to 2013	630
Built 2000 to 2009	4,228
Built 1990 to 1999	5,006
Built 1980 to 1989	3,887
Built 1970 to 1979	5,891
Built 1960 to 1969	2,801
Built 1950 to 1959	1,835
Built 1940 to 1949	1,093
Built 1939 or earlier	5,109

Poverty and Unemployment Data

11.9% -13.1% of the population in the County live at or below the poverty line (Census and Data USA). In 2018, the federal poverty income threshold was $25,465 for a family of four with two children and $17,308 for a single parent of one child. An individual and their family (dependents) are considered in poverty if their income within the last 12 months was below the poverty level. Relevant to mitigation planning is the correlation between poverty and access to materials to help prepare and recover from disasters.

The unemployment rate in 2017 in Portage County was the same as the rate for Wisconsin - 3.1% of the population. Of the population over 16 years old in the labor force, 1,808 of the County residents identify as unemployed. Post-disaster, the ability to return to employment highly influences a community's return rate.

2,647 people in the County receive Food Stamp/SNAP benefits within the past 12 months (3.7% of the County population), 811 (1.1%) receive cash public assistance income, and 1,058 (1.5%) receive supplemental security income (Live Stories ACS 2015). Relevant to disaster planning is the awareness that the lack or delay of these benefits can have during disaster recovery.

Disability Data

7.8% of the population under 65 years old has an identified disability, and 5.5% of the County's population under 65 years old does not have access to health insurance (Census). Especially during evacuation orders, special attention, and time need to be given to assist the population with a disability. Additionally, important to evacuation data is vehicle access. Important to note is that 5.5% (1,544 units) do not have access to a vehicle (Fact Finder, Census). Before a disaster, pre-registration of individuals that will require assistance during an evacuation or a sheltering situation is vital.

Communication Data

The majority of the population speaks only English (94.2%); however, 1.7% of the population speaks English less than "very well." Important to disaster preparedness is ensuring the population understands how to prepare. In order to communicate with all the population, the translation will be needed for the 1,160 individuals that speak English less than "very well." Of these individuals, the primary languages spoken include Asian and Pacific Islander (45.6%), Spanish (29.1%), and other Indo-European languages (14.3%) (Fact Finder, Census).

Additionally, important to preparedness messaging is ensuring the entire population has access to the messaging. 88.2% of the households in the County have a computer, and 81.2% had a broadband Internet subscription (U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates). Given the computer limitation, other communication methods must be utilized to ensure the population is fully aware of preparedness messaging. Utilizing different forms of communication is not only important pre and post-disaster but year-round to ensure the community remains aware of mitigation activities.

Population by Municipality

Table: Portage County Municipalities Population and Projections

Municipal Type	Municipality Name	County	Preliminary Estimate 2019	Census 2010	Numeric Change	Percentage Change
T	Alban	Portage	886	885	1	0.11%
V	Almond	Portage	423	448	- 25	- 5.58%
T	Almond	Portage	672	680	- 8	- 1.18%

V	Amherst	Portage	1,067	1,035	32	3.09%
T	Amherst	Portage	1,366	1,325	41	3.09%
V	Amherst Junction	Portage	389	377	12	3.18%
T	Belmont	Portage	629	616	13	2.11%
T	Buena Vista	Portage	1,211	1,198	13	1.09%
T	Carson	Portage	1,326	1,305	21	1.61%
T	Dewey	Portage	979	932	47	5.04%
T	Eau Pleine	Portage	988	908	80	8.81%
T	Grant	Portage	1,964	1,906	58	3.04%
T	Hull	Portage	5,476	5,346	130	2.43%
V	Junction City	Portage	437	439	- 2	- 0.46%
T	Lanark	Portage	1,559	1,527	32	2.10%
T	Linwood	Portage	1,146	1,121	25	2.23%
V	Nelsonville	Portage	161	155	6	3.87%
T	New Hope	Portage	713	718	- 5	- 0.70%
V	Park Ridge	Portage	495	491	4	0.81%
T	Pine Grove	Portage	931	937	- 6	- 0.64%
V	Plover	Portage	13,298	12,123	1,175	9.69%
T	Plover	Portage	1,742	1,701	41	2.41%
V	Rosholt	Portage	498	506	- 8	- 1.58%
T	Sharon	Portage	2,076	1,982	94	4.74%
C	Stevens Point	Portage	26,490	26,717	- 227	- 0.85%
T	Stockton	Portage	3,080	2,917	163	5.59%
V	Whiting	Portage	1,678	1,724	- 46	- 2.67%

Employment

There are 5,074 companies in Portage County, and 1,340 of the firms have paid employees (2012 Survey of Business Owners). According to the Portage County Business Council, major employers in the County include:

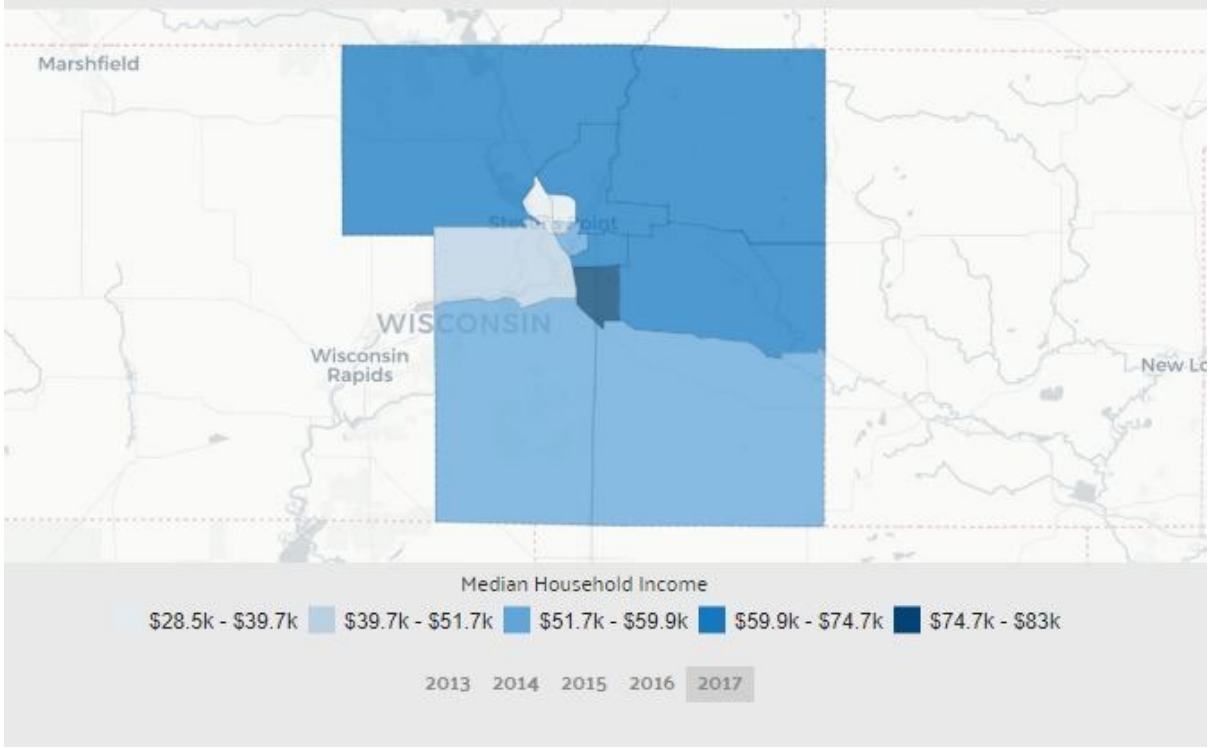
- AIG
- Associated Bank
- Ascension
- Canadian National Railway
- City of Stevens Point
- Del Monte Corporation

- Delta Dental of Wisconsin
- Donaldson Company
- Herrschners Inc.
- H.O. Wolding
- Ki Mobility
- McCain Foods USA
- Monogram Foods
- Portage County
- RR Donnelly
- Sentry Insurance
- Skyward
- Stevens Point Area Public School District
- University of Wisconsin-Stevens Point
- Verso Paper Corporation
- Worzalla Publishing

The median household income is $54,620; however, the median income varies greatly by location in Portage County (see image below).

Table: Median Household Income by Location

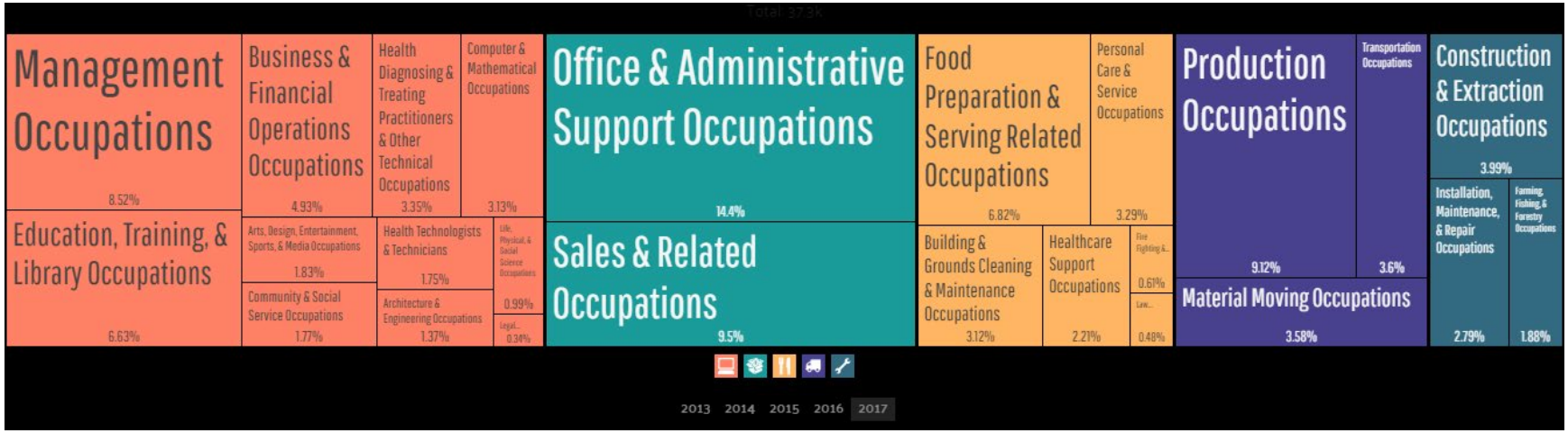
Source: [Data USA]



From 2016 to 2017, employment in County grew (1.22%). The most common job group by the number of people living in Portage County is Office and Administrative Support, Sales & Related Occupations, and Production occupations. Portage County has an unusually high number of residents that work in Farming, Fishing, and Forestry, Production, and Material Moving Occupations. The highest-paid occupation (based on median earnings) is Legal, Computer, and Mathematical, and Health Diagnosing Treating Practitioners and Other Technical Occupations. The chart below shows the breakdown of the primary jobs held by Portage residents.

Table: Employment by Occupations

Source: Data USA



Analyzing employment by sector, the most common employment sectors are Manufacturing, Retail Trade, and Health Care and Social Assistance. The most specialized sectors with a higher number of employees, then other counties include Agriculture, Forestry, Fishing, and Hunting, Finance and Insurance, and Manufacturing.

Table: Employment by Industries

Source: [Data USA]

Below is a breakdown of the estimated number of Portage County residents employed in each sector:

Table: Occupation of the Civilian Workforce Residing in Portage County

Source: [2013-2017 American Community Survey 5-Year Estimates]

Civilian employed population 16 years and over	**37,291**
Management, business, science, and arts occupations:	**12,906**
Management, business, and financial occupations:	**5,016**
Management occupations	3,178
Business and financial operations occupations	1,838
Computer, engineering, and science occupations:	**2,047**
Computer and mathematical occupations	1,166
Architecture and engineering occupations	510
Life, physical, and social science occupations	371
Education, legal, community service, arts, and media occupations:	**3,941**
Community and social services occupations	660
Legal occupations	127
Education, training, and library occupations	2,472

Arts, design, entertainment, sports, and media occupations	682
Healthcare practitioner and technical occupations:	**1,902**
Health diagnosing and treating practitioners and other technical occupations	1,251
Health technologists and technicians	651
Service occupations:	**6,170**
Healthcare support occupations	825
Protective service occupations:	**407**
Fire fighting and prevention, and other protective service workers including supervisors	228
Law enforcement workers including supervisors	179
Food preparation and serving related occupations	2,545
Building and grounds cleaning and maintenance occupations	1,165
Personal care and service occupations	1,228
Sales and office occupations:	**8,905**
Sales and related occupations	3,544
Office and administrative support occupations	5,361
Natural resources, construction, and maintenance occupations:	**3,229**
Farming, fishing, and forestry occupations	702
Construction and extraction occupations	1,488
Installation, maintenance, and repair occupations	1,039
Production, transportation, and material moving occupations:	**6,081**
Production occupations	3,402
Transportation occupations	1,343
Material moving occupations	1,336

Section C - General Development Patterns in Portage County

An essential component of developing an effective HMP is the examination of land use or development patterns throughout the planning area. The location, type, and density of development have a direct impact on the potential risk of damage to human health and personal and public property. Understanding land use patterns is an essential step in mitigating loss due to potential hazards.

For this plan, land use was broken down into 11 generalized categories. Due to the Planning and Zoning Department recently receiving the updated 2010 aerial photography and not having immediate plans to create new generalized land use from the updated 2010 photos, the HMP will still utilize the generalized information from the previous plan with 2000 aerial photography interpretation.

Table: Portage County Generalized Land Use 2000*

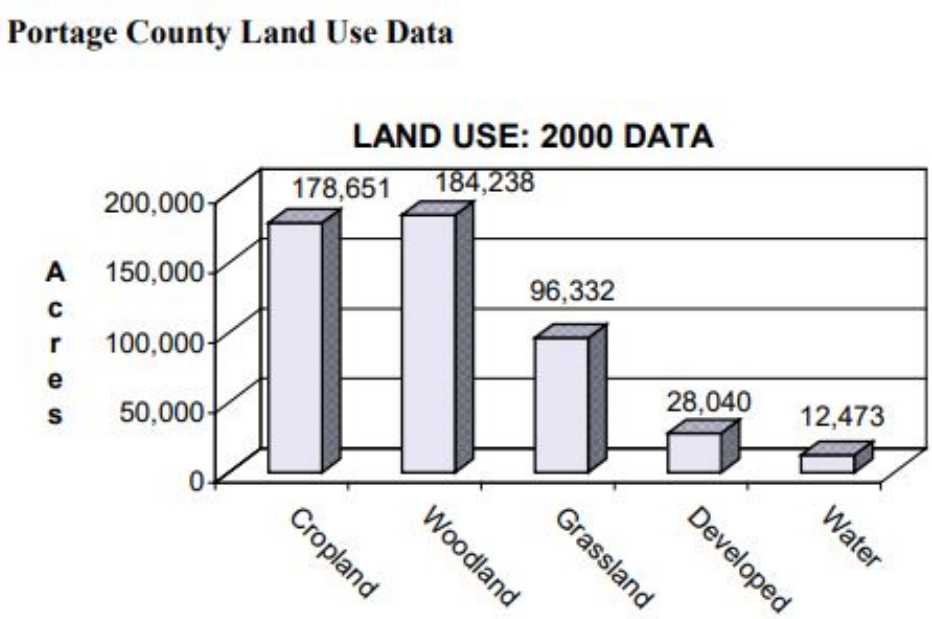
General Land Use	Acreage	Percent
Agriculture	194,531	36.9%
Forested	183,689	34.9%
Undeveloped	91,410	17.4%
Right of Way	19,180	3.0%
Residential	15,507	2.9%
Water Bodies	13,608	2.6%
Institutional	2,446	0.5%
Commercial	2,446	0.5%
Industrial	1,667	0.3%
Non-Metallic Mining	1,036	0.2%
Parks	2,362	0.4%
Unclassified	182	**0.0%**
Total	**526,802**	**100.0%**

Source: Portage County Planning and Zoning Department 2004
**updated information was not available for the timeline of this plan*

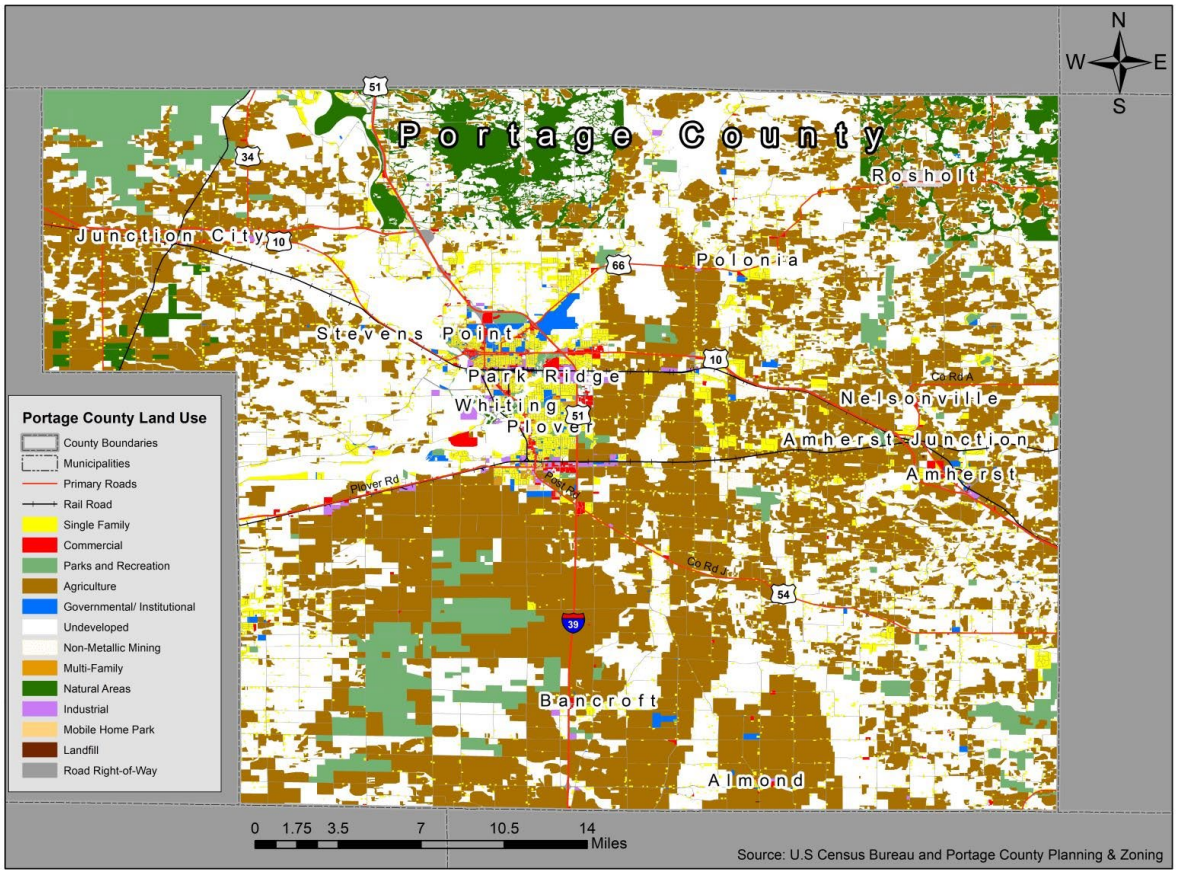
The December 2014 revised version of the Land and Water Resource Management Plan highlights the 2000 land-use trends (no updated version currently exists).

Graph: Land Use

Source: Land and Water Resource Management Plan



Map: Generalized Land Use (larger map can be downloaded here)
Source: *Portage GIS*



Residential

Portage County gained 864 residents from April 2010 to January 2016, increasing at a rate of 1.2%, which is slightly below the statewide growth rate of 1.5%. The County ranks as the 22nd fastest-growing county among the state's 72 counties (2017 Economic and Workforce Profile). The 10 most populated municipalities in the County are highlighted in the chart below

Table: Portage County's 10 Most Populous Municipalities

Source: 2017 Economic and Workforce Profile

Municipality	April 2010 Census	January 2016 Estimate	Numeric Change	Proportional Change
City of Stevens Point	26,717	26,895	178	0.7%
Village of Plover	12,123	12,603	480	4.0%
Town of Hull	5,346	5,380	34	0.6%
Town of Stockton	2,917	2,983	66	2.3%
Town of Sharon	1,982	2,018	36	1.8%
Town of Grant	1,906	1,915	9	0.5%
Town of Plover	1,701	1,731	39	1.8%
Village of Whiting	1,724	1,685	-39	-2.3%

Town of Lanark	1,527	1,544	17	1.1%
Town of Amherst	1,325	1,335	10	0.8%

The largest concentration of residential use is in the central part of the County, within Stevens Point and Plover, which is considered the urban area. Roughly 38% of the population is located in the City of Stevens Point and 18% in the Village of Plover.

From 2010-2016, the net migration, which is defined as people moving into the county minus those leaving, was negative for over a third of Wisconsin counties, including Portage County. For the period studied, where over a third of Wisconsin counties experienced negative net migrations over the last five years. Population change due to net-migration was -0.2% from 2010 to 2016, up by a 0.2% percentage point increase in the 2010-2015 trend in the last county profile. Growth due to natural increase was 1.4% in Portage County, slightly lower than the statewide percent gain of 1.8% (2017 Economic and Workforce Profile).

Commercial and Industrial

The majority of commercial and industrial uses are also located within/near the Stevens Point-Plover Urban Area. These uses account for approximately 0.7% of the land in the County. Most commercial areas are concentrated along transportation corridors in the Urban Area and Villages throughout the County. Business parks and areas designated for concentrations of commercial and some industrial development are located in the City of Stevens Point, and Villages of Amherst and Plover. The majority of these uses are located along the State Hwy 54 corridor, within Business and Industrial Parks, paper mills along with Wisconsin River, and US HWY 10/STH 66 Corridor.

Institutional

These uses include government services and buildings, educational, religious, medical facilities, and the Stevens Point Airport. Lands in this category represent 0.5% of the total county acreage and are located predominately in the Urban Area. Small municipal buildings, churches, and schools are scattered throughout rural Portage County.

Agricultural

Agriculture is the dominant land use in the County. Lands in this category account for approximately 37% of the County's total land area (according to 2000 aerial photo interpretation). Portage County consistently ranks first in the state for potato, snap bean, and sweet corn production. Agricultural practices are diverse, ranging from irrigated vegetable production to dairy and beef operations, cranberry production and small organic, family or corporately owned farms.

A majority of the irrigated vegetable operations are located in the sandplain province while other agricultural uses are situated throughout the County. According to the 2007 Census of Agriculture data, the land in farms had decreased by 4% since 2002. Between the 1997 and 2002 Census of Agriculture data reported that Portage County saw an increase of 2% for land in farms; this was a reverse of a declining trend since 1992 in the County's agricultural acreage.

According to the 2007 Census of Agriculture data, the average farm size increased by 8% and the market value of products sold increased by 41%, with the average farm seeing an increase of 58% of the value of products sold. The 2012 Census of Agriculture has not yet been completed.

The December 2014 revised version of the Land and Water Resource Management Plan highlights that priority farms have also been identified in the area that has significant problems with manure management; croplands with excessive nutrient applications; croplands with exorbitant rates of soil erosion. The County is making efforts to inform Portage County landowners about the required agricultural performance standards and prohibitions. Both County and Federal staff provide landowners with an overview of the regulatory requirements, as well as available cost-sharing programs. If a landowner is found to be in violation and refuses the technical and financial assistance of the Portage County LCC, they will be referred to the DNR

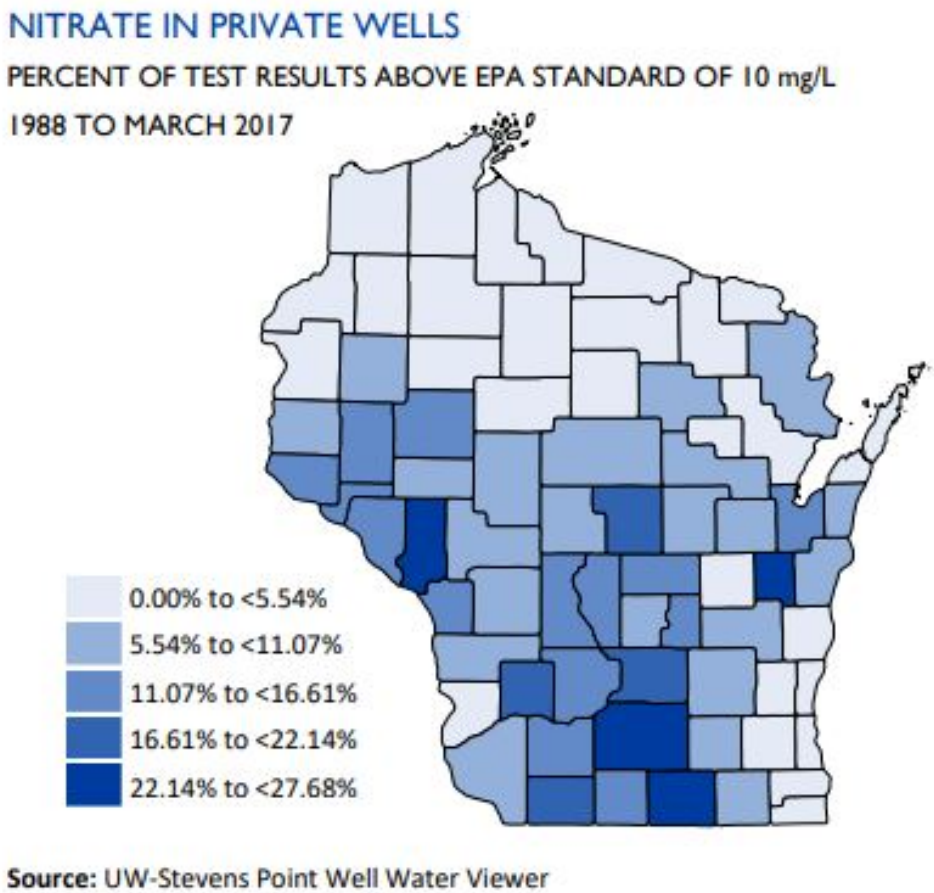
Environmental Issues

Based on the Steering Committee for the Land and Water Resource Management Plan (2014), these were the top environmental issues in the County:

1. Groundwater quality decline
2. Urban Sprawl
3. Nitrate and pesticide groundwater contamination
4. Protection of marginally developed lands
5. Wind erosion
6. Lack of knowledge/education of the public
7. Commercial/industrial air and water pollution
8. Wind and water social erosion
9. Surface water quality

In line with this report is the concern for nitrate in well water. About four in 10 Wisconsin homes get their water from wells. In the County, 19.4% of the wells tested had results above EPA standards.

Image: Nitrates in Private Wells (interactive map can be located through the University of Wisconsin Stevens Point website - https://www.uwsp.edu/cnr-ap/watershed/Pages/WellWaterViewer.aspx)
Source: Portage County 2019 County Environmental Health profile



Forested Areas

Lands in this category represent the second-largest land cover, comprising 35% of the land area in the County. Some of these areas are likely to experience increasing development pressure as individuals continue their desire to live in less urban and more of a country area. Increased development among forested lands may increase the probability of loss due to fire. Forested wetlands have also been included in this category.

Parks

Lands in this category include State, County, and Stevens Point-Plover Urban Area parks. They account for only 0.1% of the County's land area and are located throughout the County. Structures located on these lands include public restrooms, open shelters, and lodges that may be available through rentals.

Non-Metallic Mining

The geologic history of the area rendered many portions of the County favorable to nonmetallic mining, mainly sand and gravel. Glacial action left north-south oriented moraines that run the length of the eastern third of the County. It is in these areas that conditions are more suitable for certain types of aggregate extraction. Some of the higher intensity operations are located in the Town of Stockton near Custer Road between US Hwy 10 and Standing Rocks Road.

Right of Way

Lands used for transportation make up approximately 3-4% of the total area of the County and include the entire right-of-way for roads and railroads. These transportation corridors are vital links to other areas of the State and Nation, providing the foundation for the movement of people and goods throughout the region. Some of these facilities, especially in the lowland areas, are subject to periodic flooding from spring meltwaters or significant storm events.

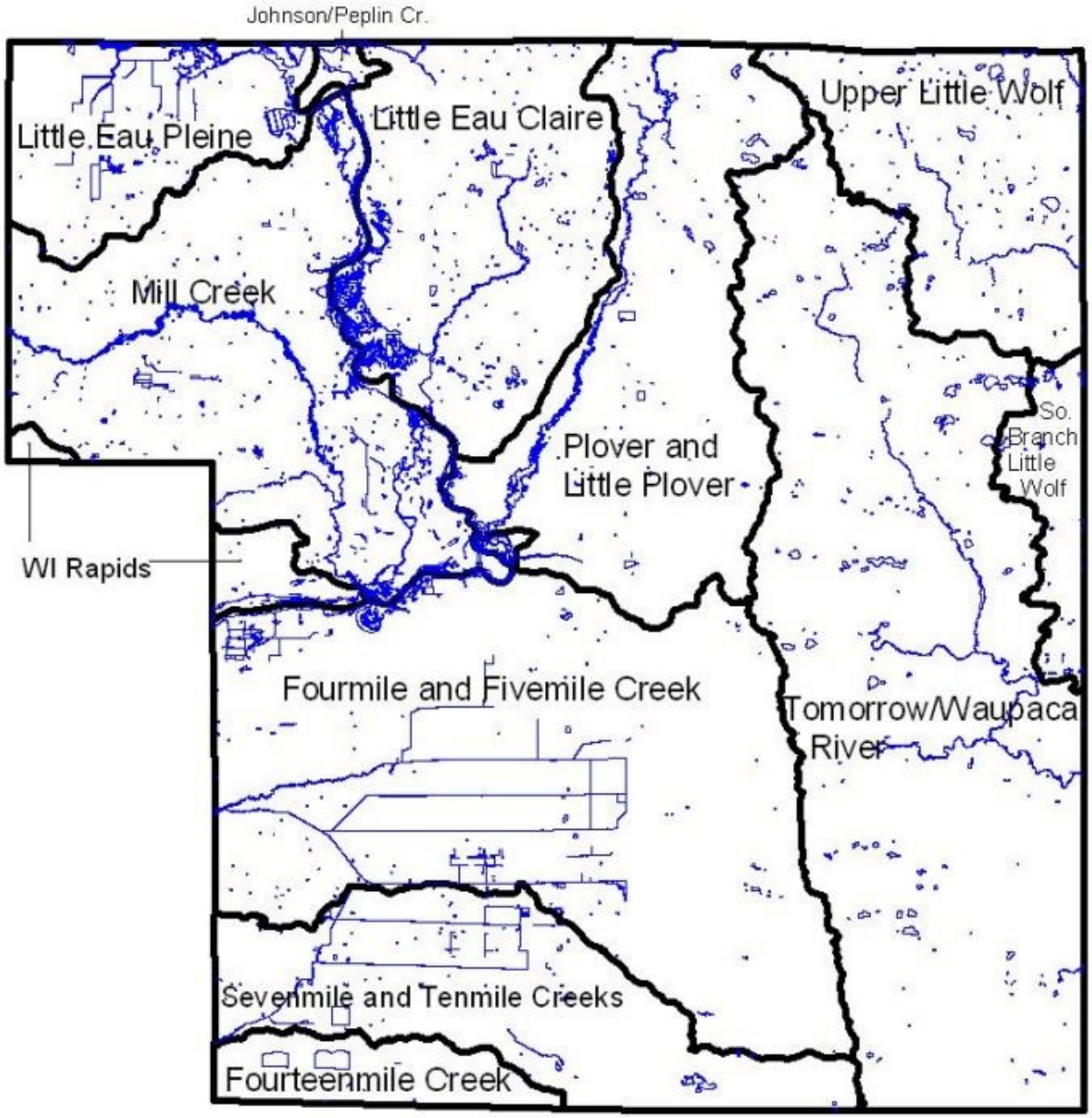
Undeveloped Areas

Lands in this category represent approximately 17% of the total area of the County. They include; non-forested wetlands, public lands used for wildlife management, herbaceous cover, and shrub. It is unlikely that these areas will not experience significant development pressure due to natural constraints, including wetness, steep slopes, and stormwater management concerns.

Water Bodies

There are over 13,600 acres of surface waters in Portage County, (2.6% of total area) comprised of rivers, creeks, and approximately 130 named and unnamed lakes. The majority of the lakes are found in the eastern one-third of the County.

Image: Portage County Watersheds
Source: *Land and Water Resource Management Plan (2014)*



The Wisconsin River, flowing south from Marathon County, turning west at the Village of Plover, is the dominant water feature. Three dams, owned by the Consolidated Water and Power Company, control water flows for the Wisconsin River throughout the year. Lake DuBay, an impoundment lake created by the northern-most dam in Portage County, has experienced a significant amount of residential development along its shores. Many of these residences are located within the 100-year floodplain. Areas along the Wisconsin River in the Towns of Hull and Plover have also experienced an increase in development.

The Plover River is a 42-mile river that originates in Langlade County and flows through Marathon County and into Portage County, where it joins the Wisconsin River in the Village of Whiting. Portage County residents have identified this river corridor as a unique water resource, and a majority of it remains in a natural state. The Portage County Board adopted the Plover River Plan in 2000 to preserve and protect the aesthetics, recreation, and water quality of the Corridor. The river has five dams along its 20-mile length through Portage County.

Other water systems include the Tomorrow River, a Class 1 trout stream located in the eastern portion of the County, and Mill Creek, located west of the Wisconsin River. Areas in the Towns of Carson and Linwood near Mill Creek are subject to periodic flooding from massive storm events and spring meltwaters.

Below is the Nonpoint Source Priority Rankings for Portage County Watersheds.

Table: Nonpoint Source Priority Rankings for Portage County Watersheds

Source: Land and Water Resource Management Plan (2014)

Watershed Name	Stream Score	Lake Score	Groundwater Score	Surface Water Ranking	Groundwater Ranking
Mill Creek	7.2	0	10	High	High
Little Eau Pleine River	3.26	0	5	Low	Medium
Little Eau Claire River	5.7	0	10	Medium	High
Little Plover and Plover Rivers	4.57	2.47	10	Medium	High
Seven and Ten Mile Creeks	7.8	0	10	High	High
Four Mile and Five Mile Creeks	4.8	3.99	10	Medium	High
Upper Little Wolf River	Medium	not ranked	High	Medium	High
Tomorrow/Waupaca River	Medium	not ranked	High	Medium	High

Section D - Emergency Services and Facilities

Table: Fire Departments

Source: Portage County Emergency Management Department

Department	Phone
Almond 114 Main Street Almond, WI 54909	715-366-7181 Validated 2019
Amherst 4535 Fair Grounds Rd. Amherst, WI 54406	715-824-2699 Validated 2019
Bancroft 5444 County Road W Bancroft, WI 54921	715-335-6601 Validated 2019
Dewey 430 Dewey Drive Stevens Point, WI 54481	715-340-2681 Validated 2019
Grand Rapids 2410 48th Street Wisconsin Rapids, WI 54494	715-424-1815 Validated 2019
Hull 4818 Wojcik Memorial Drive Stevens Point, WI 54481	715-344-2174 Validated 2019
Iola PO Box 322 Iola, WI 54945	715-445-2515 Validated 2019

Park Ridge 24 Crestwood Drive Stevens Point, WI 54481	715-344-2134 Validated 2019
Village of Plainfield P.O. Box 352 Plainfield, WI 54966	715-335-4253 Validated 2019
Plover 2400 Post Road Plover, WI 54467	715-345-5310 Validated 2019
Rosholt 9075 State Highway 66 Rosholt, WI 54473	715-677-4911
Rudolph *Station 1 Rudolph (Wood Co)* Main Street Rudolph, WI 54475 *Station 2 (Linwood)* 1875 West River Dr. Stevens Point, WI 54481 *Station 3 (Eau Pleine)* 3191 State Highway 34 Junction City, WI 54443 *Station 4 (Carson)* 3675 County Road M Junction City, WI 54443 *Station 5 (Junction City)* 1001 Main Street Junction City, WI 54443	715-435-3740 Validated 2019
Scandinavia 349 N Main St PO Box 227 Scandivia, WI 54977	715-467-2360 Validated 2019

Stevens Point *Station 1* 1701 Franklin Street Stevens Point, WI 54977 *Station 2* 4401 Industrial Park Dr. Stevens Point, WI 54481	715-344-1833 Validated 2019
Stockton 7252 Sixth Street Custer, WI 54423	715-592-3473 Validated 2019
Waupaca 124 S. Washington St Waupaca, WI 54981	715-258-4434
Whiting- Covered by Plover Fire Department	715-345-5310 Validated 2019
Pulver Ranger Station 2510 Maple Drive Plover, WI 54467-3901	715-344-2752 Validated 2019
Wild Rose Fire District 145 Grant Ave Wild Rose, WI 54984	920-622-3699 Validated 2019

18 fire districts serve Portage County. There are 17 fire stations within the County, with the Stevens Point Fire Department (SPFD) and the Rudolph Fire Department operating multiple stations. Plover Fire Department now covers the area previously covered by Whiting Fire Department. For locations of fire districts and fire stations see Map 10.

Portage County fire departments are members of Division 110 of the Mutual Aid Box Alarm System (MABAS). MABAS is an all-hazard interstate mutual aid agreement, which addresses pre-planned responses and station backfilling. MABAS is designed to obtain targeted interventions without depleting any particular neighboring department. County dispatchers receive regular training in the utilization of the MABAS system. County Fire Departments also have adopted the Wisconsin Plan for Mutual Aid

Communications Frequencies, which, along with the MABAS policies, establishes standardized radio channels and communication systems.

All fire departments are required to check pre-fire response plans and perform inspections regularly, as well as local ordinances. Firefighters are trained on typical fire scenarios for locally identified hazards, and routinely conduct joint training exercises with other departments for high hazard occupancies and scenarios.

Several initiatives to coordinate fire and rescue services have taken place across Portage County. These include the creation of a universal Fire Chiefs' Association policy manual (2008), the formation of a countywide technical rescue team, and the development of the Metropolitan Portage County Fire Protection District (Metro Fire District) in 2010- 2011.

The Metro Fire District joins the City of Stevens Point, Village of Plover (which includes Village of Whiting), and Town of Hull into a single operationally consolidated all-hazard response area. The coordination of the Metro Fire District effectively erases the borders between the municipalities and puts all three fire departments on a first alarm response across the entire district for structural fires. Other fire departments have entered into automatic aid agreements with neighboring agencies.

The Portage County Hazardous Materials Team operated by the Plover Fire Department contains members trained at the technician and operations level. The Team is designed to provide command and control, surveillance, and operations level functions as part of a tiered response plan.

Responders at the operations level defensively respond to incidents to protect nearby persons, property, or the environment but take no action to stop a release of hazardous materials. At the technician level, responders are trained to prevent the release of hazardous materials. The Level A Regional Hazardous Materials Response Teams respond to the most serious of spills and releases that require the highest level of the skin and respiratory protective gear. Such events include all chemical, biological, or radiological emergencies (Source: EPCRA).

Map: Fire Stations (larger map can be downloaded here)
Source: *U.S. Census Bureau and Portage County Planning & Zoning*

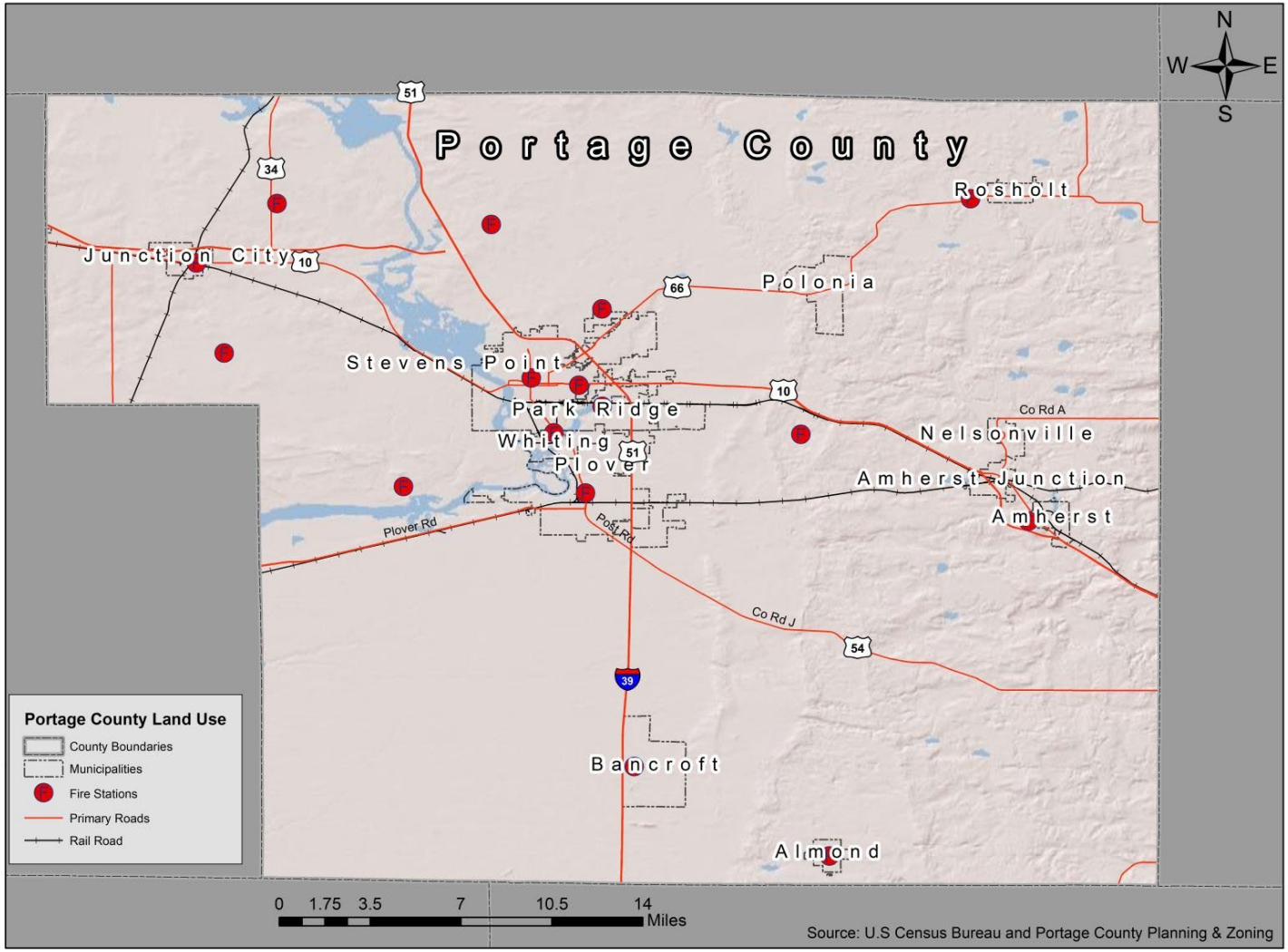


Table: Hazardous Materials Response Validated 26 August 2019

Department	Phone	Notes
Portage County HazMat Team 2400 Post Rd, Plover, WI 54467	715-345-5310 Validated 2019	
Local HazMat Team **Waupaca County** 1402 E Royalton St Waupaca, WI 54981 (1 hr response time)	715-258-4464 Validated 2019	Contact number is County EMA
Regional HazMat Team **Wausau Fire Department** 606 E Thomas St. Wausau, WI 54403-6443 (1 hr response time)	715-261-7900 Validated 2019	

Source: Portage County Emergency Management Department

Technician level support is provided under contract by the Waupaca County Hazardous Incident Response Team. They respond upon request and have a travel time of not more than one hour to the central part of Portage County.

The City of Wausau Fire Department is the designated Regional Hazardous Materials Response Level A-Team (HMRT) for an 11 county area (including Portage County) in North Central Wisconsin. A regional HMRT may be activated for incidents involving a hazardous materials spill, leak, or explosion that poses an immediate threat to life, environment, or property (Source: City of Wausau Fire Department Hazardous Materials Division).

There are three major ambulance service providers operating within Portage County; (1) the Portage County Ambulance Service - SPFD (administered by the Stevens Point Fire Department), (2) Portage County Ambulance Service - Amherst (operated by the Amherst Fire District), and (3) United Emergency Medical Response (UEMR), a privately owned ambulance provider. See Map 12 for the ambulance service areas. Additionally, the Portage County Ambulance Service along with Plover Fire Department, Stevens Point Fire Department, and Amherst Fire Department have signed contracts to provide ambulance service for Portage County. The Village of Plover operates an ambulance through the Portage County System as well.

The Portage County First Responder program covers every municipality in Portage County. There are 12 municipal-based first responder groups. Portage County provides financial support to all groups on an annual basis.

The Portage County Ambulance Service along with Plover Fire Department, Stevens Point Fire Department, and Amherst Fire Department has signed contracts to provide ambulance service for Portage County.

Map: Hazardous Materials (larger map can be downloaded here)
Source: *U.S. Census Bureau and Portage County Planning & Zoning*

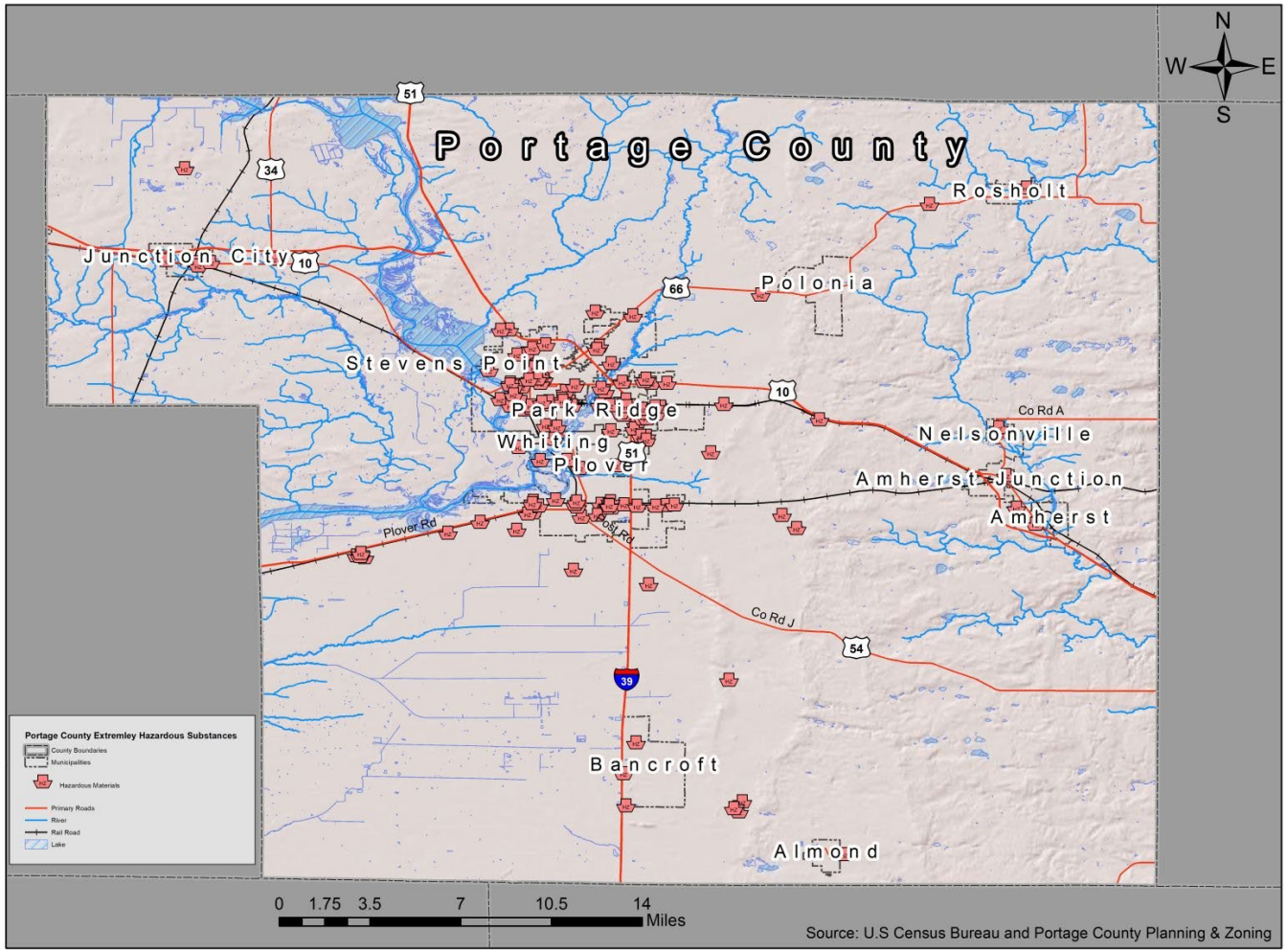
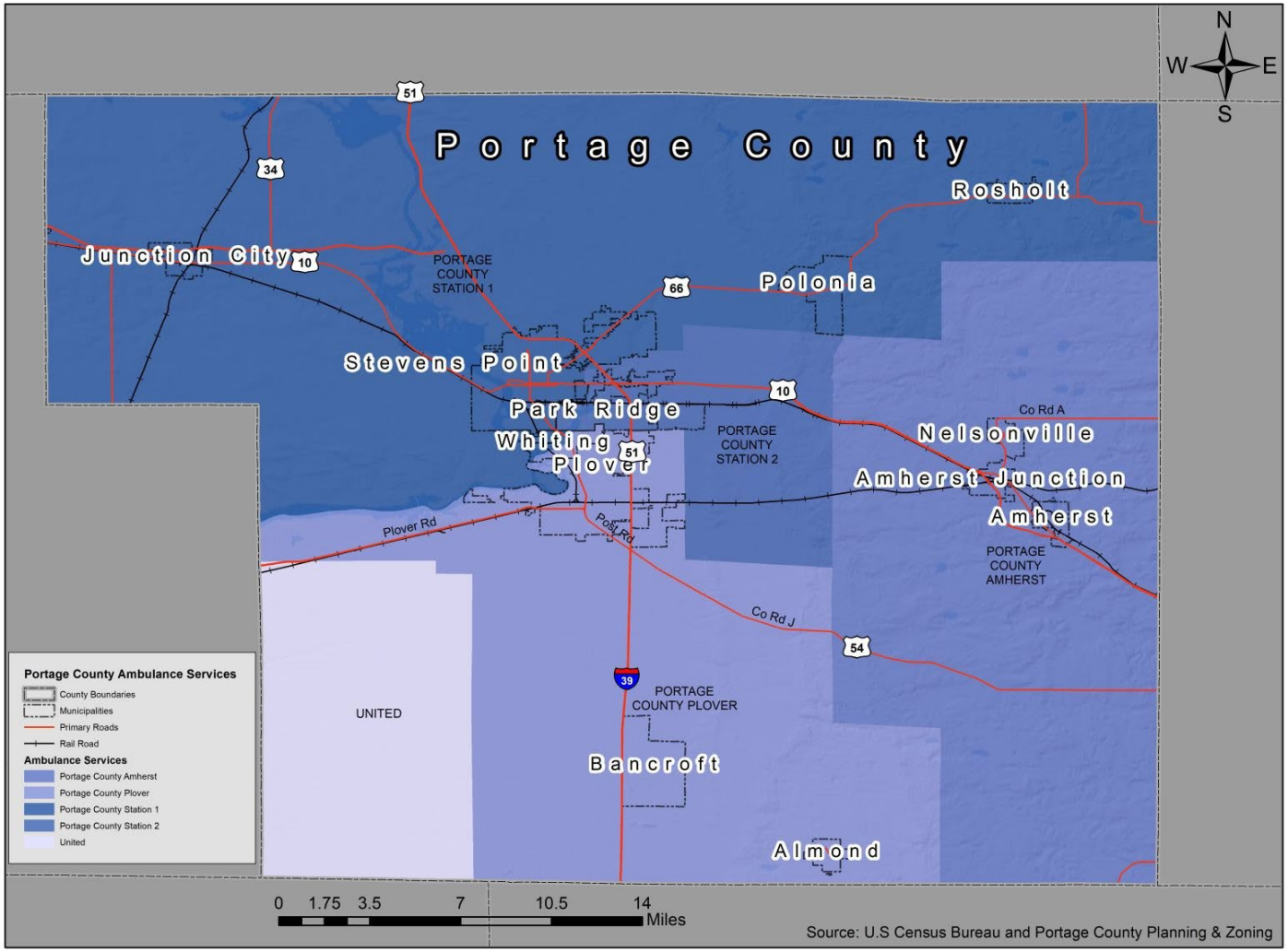


Table: Emergency Medical Services Validated 26 August 2019

Department	Phone	
Portage County Ambulance Service - SPFD City of Stevens Point Fire Department 1701 Franklin St. Stevens Point, WI 54481	715-344-1833 Validated 2019	Portage County Ambulance Service Main Contact Number is 715-346-1399
Portage County Ambulance Service - Amherst Amherst Fire District 4585 Fairgrounds Road Amherst, WI 54406	715-824-5511 Validated 2019	
Portage County Ambulance Service - Plover Plover Fire Department 2400 Post Road Plover, WI 54467	715-345-5310 Validated 2019	
United Emergency Medical Response (UEMR) 3530 Bohn Dr Wisconsin Rapids, WI 54494	715-423-7777 Validated 2019	

Source: Portage County Emergency Management Department

Map: Emergency Medical Service Areas (larger map can be downloaded here)
Source: *U.S. Census Bureau and Portage County Planning & Zoning*



Map: First Responders (larger map can be downloaded here)
Source: *U.S. Census Bureau and Portage County Planning & Zoning*

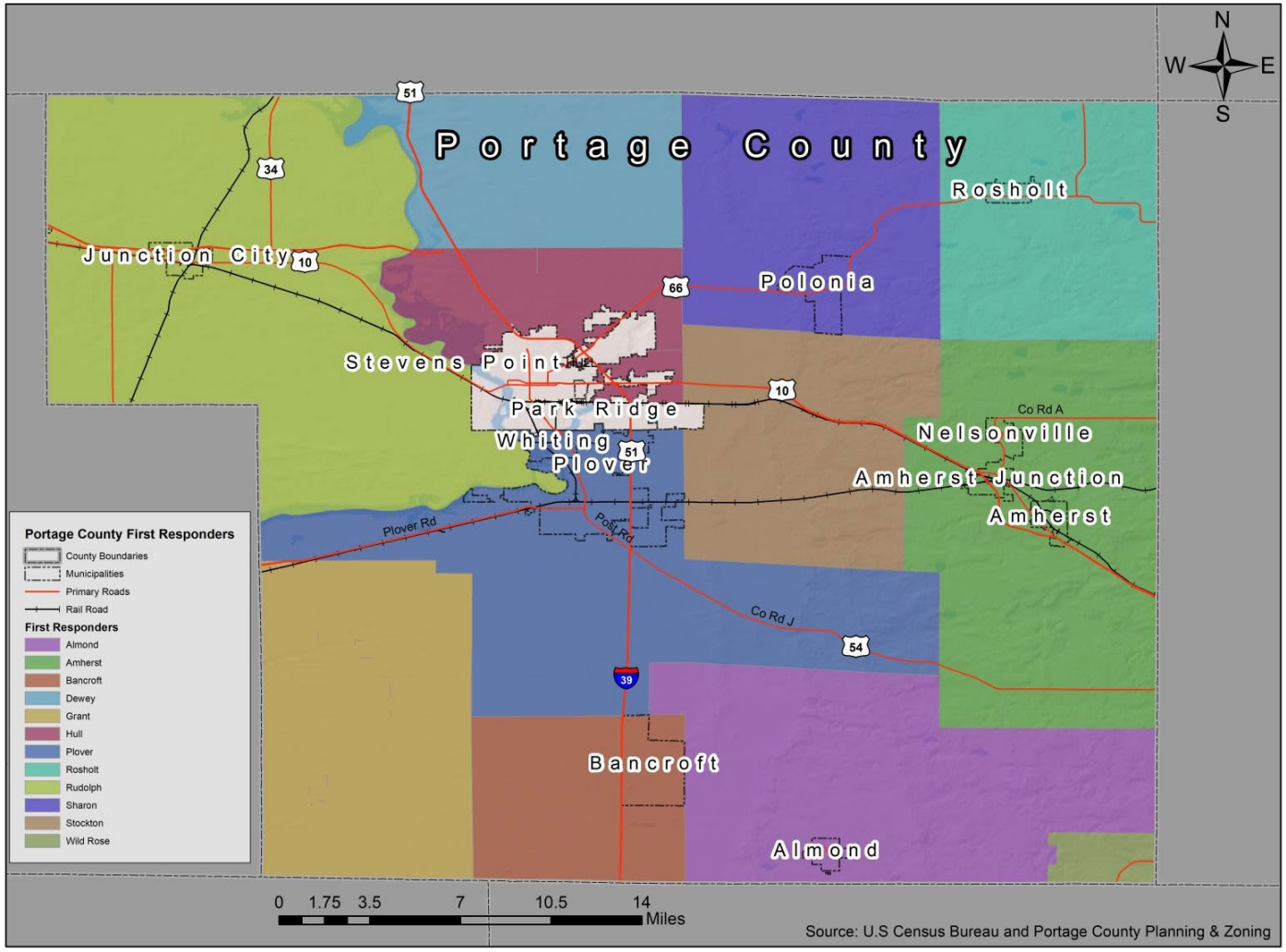
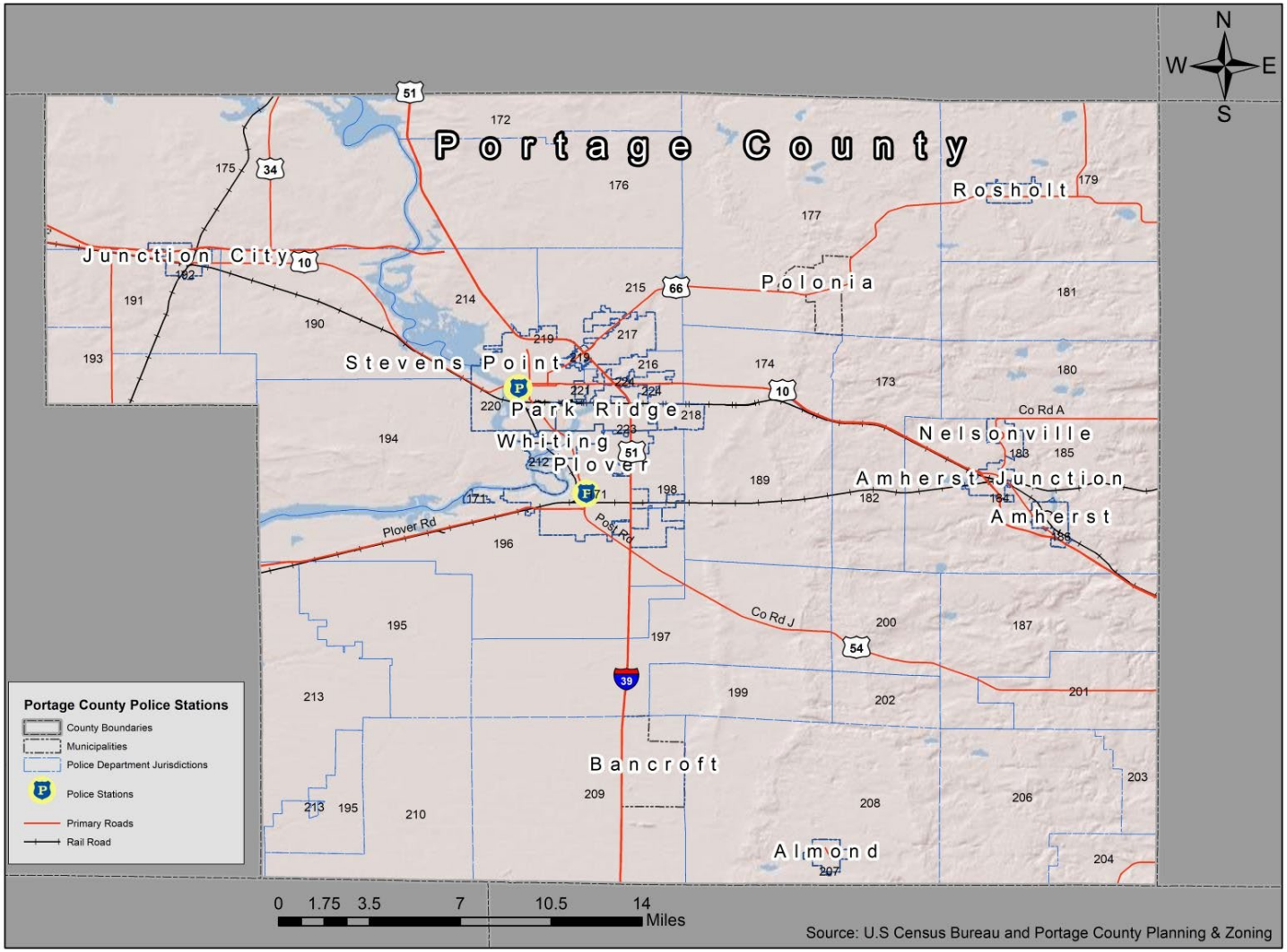


Table: Law Enforcement Validated 26 August 2019

Department	Phone	Notes
Portage County Sheriff's Office/Communications Center 1500 Strongs Ave Stevens Point, WI 54481	715-346-1400 Validated 2019	Dispatch Center
City of Stevens Point Police Department Communications Center 1515 Church St. Steven Point, WI 54481	715-346-1500 Validated 2019	Police Department
Village of Plover Police Department 2400 Post Road Plover, WI 54467	715-345-5255	Number for Plover Police Department
University of Wisconsin Stevens Point Police Department 1925 Maria Drive Stevens Point, WI 54481	715-346-3456	

Source: Portage County Emergency Management Department

Map: Police Stations (larger map can be downloaded here)
Source: *U.S. Census Bureau and Portage County Planning & Zoning*



The Portage County Sheriff's Office provides law enforcement services to all areas of Portage County. The City of Stevens Point and the Village of Plover also have police departments. The Law Enforcement agencies operate under a mutual aid provision of the State Statutes, which allows them to assist each other.

See Map 13 for law enforcement jurisdictional districts.

Portage County Emergency Management developed, and annually updates the County Emergency Operations Plan (EOP). The purpose of the EOP is to:

1. Facilitate the protection of lives, property, and the environment in significant disasters of any nature.
2. Coordinate response to disasters, assess damages, identify mitigation opportunities, and implement recovery efforts.
3. Describe the County's relationship in support of local units of government during the response and recovery phase.
4. Serves as a coordinating document for supporting Internal Agency Plans (IAPs)
5. Provide a link between the County and municipal plans.

Transportation Systems

The transportation network is a vital component of Portage County development. Efficient and economic growth depends on a transportation system capable of moving people, goods, and services to, from, and within Portage County. Portage County is well connected to the region through the existing roadway network and other facilities of freight rail.

Portage County is served by Interstate 39, US Highway 10, seven State Highways (66, 54, 34, 22, 49, 73, 161), and the Canadian National railroad system, all of which link Portage County to the surrounding region, state and beyond. Interstate 39 serves as the main north-south route through the center of Portage County, connecting the area to Madison, and the Northwoods. USH 10 runs east and west connecting Portage County to Appleton and Marshfield and beyond. State Highway 54 connects Portage County to Wisconsin Rapids and Waupaca, while State Highway 66 provides direct access for the northeast portion of the County into Stevens Point, as well as access to Wisconsin Rapids on the west side of the Wisconsin River.

Rail Transportation - Canadian National Railroad (CN) serves Portage County. CN operates 19,560 miles of track across North America, including approximately 65 miles of mainline track through Portage County, which is a vital link for traffic coming out of Canada through the Chicago gateway and beyond. Current rail activity through Portage County is 20-24 trains per day on the mainline; the number of trains is anticipated to continue to grow.

Stevens Point Municipal Airport - For the 12 months ending July 7, 2017, the airport had 36,750 aircraft operations, an average of 101 per day: 91% general aviation, 8% air taxi and less than 1% military. In August 2019, there were 45 aircraft based at this airport: 37 single-engine, two multi-engine, three jets, one helicopter, and two ultralights. Noel In 2019, Freight Runners Express was flying for Stevens Point cargo operations out of the airport. Local flight medical teams utilize the airport on average once per week in both emergency and non-emergency scenarios. The airport is a bustling charter hub for the Central Wisconsin region. The Piper/Cessna user group holds its annual fly-in at KSTE averaging 60

aircraft. The airport has one Fixed Base Operator (FBO), operated by the City of Stevens Point. Structures on the airfield include; airport terminal, large solar hanger, snow removal/maintenance hangar, 22 T-hangers, 12 individual hangers, and two large corporate hangers.

Central Wisconsin Airport (CWA), located 15 miles north of Stevens Point adjacent to I 39 in Mosinee, is currently served by three airlines (Delta Connection, United Express, and American Eagle). These airlines provide daily flights to Minneapolis/St. Paul, Chicago O' Hare, and Detroit. In 2018 CWA had more than 12,680 aircraft operations, and 2019 shows 23 aircraft based at the airport with 129,060 passengers for the 12 months ending May 2019.

Water Transportation - Public access to waterways is available throughout Portage County, including the Wisconsin River, Plover River, Little Plover River, Tomorrow River, and various County lakes and streams. These waterways are not used for transportation of goods and services, or as official public transportation.

Table: Portage County Transportation Systems

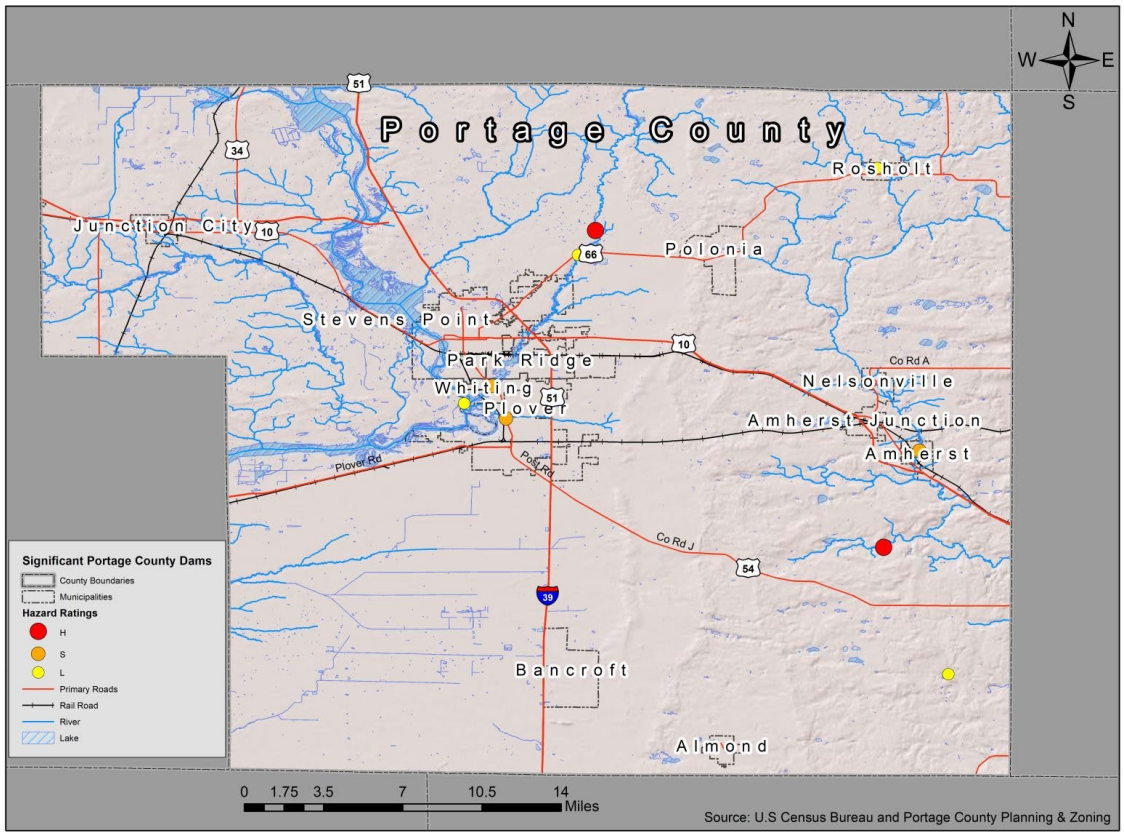
Type	Miles
Local Street, Rural	1,078
Local Street, Urban	265
County Road	427
State Trunk Highway	89.5
US Highway	35.5
Interstate	33
Total Miles of Roadway	**1,928**
Rail Road, Main Line	65

Source: Portage County Planning & Zoning Department Geographic Information System, January 2012

Section E - Critical Community Facilities

Section 201.5 44 CFR states that a Local Hazard Mitigation Plan risk assessment shall describe the jurisdiction's vulnerability to the identified hazards of concern. This vulnerability should be described in terms of the type and numbers of existing and future buildings, infrastructure, and Critical Facilities located in the identified hazard area. While no set definition exists for critical facilities, each planning process needs to review and identify those facilities specific to each County and jurisdiction. As part of this update, Portage County Planning and Zoning, and Emergency Management Departments, along with review and recommendation from the Hazard Mitigation Work Group, created a complete listing of facilities and then ranked them by type. The type rankings below are to identify the classifications of facilities, from those most important and if damaged would impair response times, to those that are critical to day to day operations for the general population, etc.

- **Type 1 - Highly Critical:** A facility that if damaged, would significantly impair Local and County response times. (Map symbols are identified in **Red**)
- **Type 2 - Critical for General Population:** A facility that if damaged, would affect the general population, but would not impair a local governmental response. (Map symbols are identified in **Yellow**)
- **Type 3 - Regional Facility:** A facility that if damaged, would significantly impact not only locally, but could cause greater damage beyond Portage County. (Map symbols are identified in **Green**)
- **Type 4 - Vulnerable Population Category:** A facility that primarily houses or caters to vulnerable populations within Portage County. (Map symbols are identified in **Orange**)



Critical Facilities				
Facility	**Type 1**	**Type 2**	**Type 3**	**Type 4**
Infrastructure/Communication				
Railroad			X	
Telephone Facilities	X			
Telecommunication Tower				
Cell Towers		X		
Radio Towers	X			
Other Emergency Response Communication Systems	X			
Public Water Facility (including wells, water towers, reservoirs)	X			
Wastewater Facilities	X			
Natural Gas & Petroleum Pipeline			X	
Substations			X	
High Capacity Transmission Lines (6 kV)	X		X	
Bridges/Culverts*	X			
Arterial	X			
Collector	X			
Local	X			
Airport	X			
Electric Cooperative	X			
Dams with Large Classification	X		X	
Government Facilities				
Police Stations	X			
Fire Departments	X			
Municipal Buildings	X			
Those with emergency response	X			
Those that contain and are the primary municipal building	X			
Other Government Building		X		
Libraries		X		
Post Offices		X		
Health Care Facilities				
Hospitals	X			
Health Care Clinics	X			
Vulnerable Populations				
Congregate Care Shelters				X
Senior Living/Nursing Homes				X
CBRF				X
Campgrounds				X

Manufactured Home Parks				X
Recreational/Educational Camps				X
Adult Daycares				X
Group Daycares				X
K-12 Schools				X
Post-Secondary Schools				X

**Bridges and culvert data are "best available* from County interpretation of 2010 aerial photography.*

Bridges

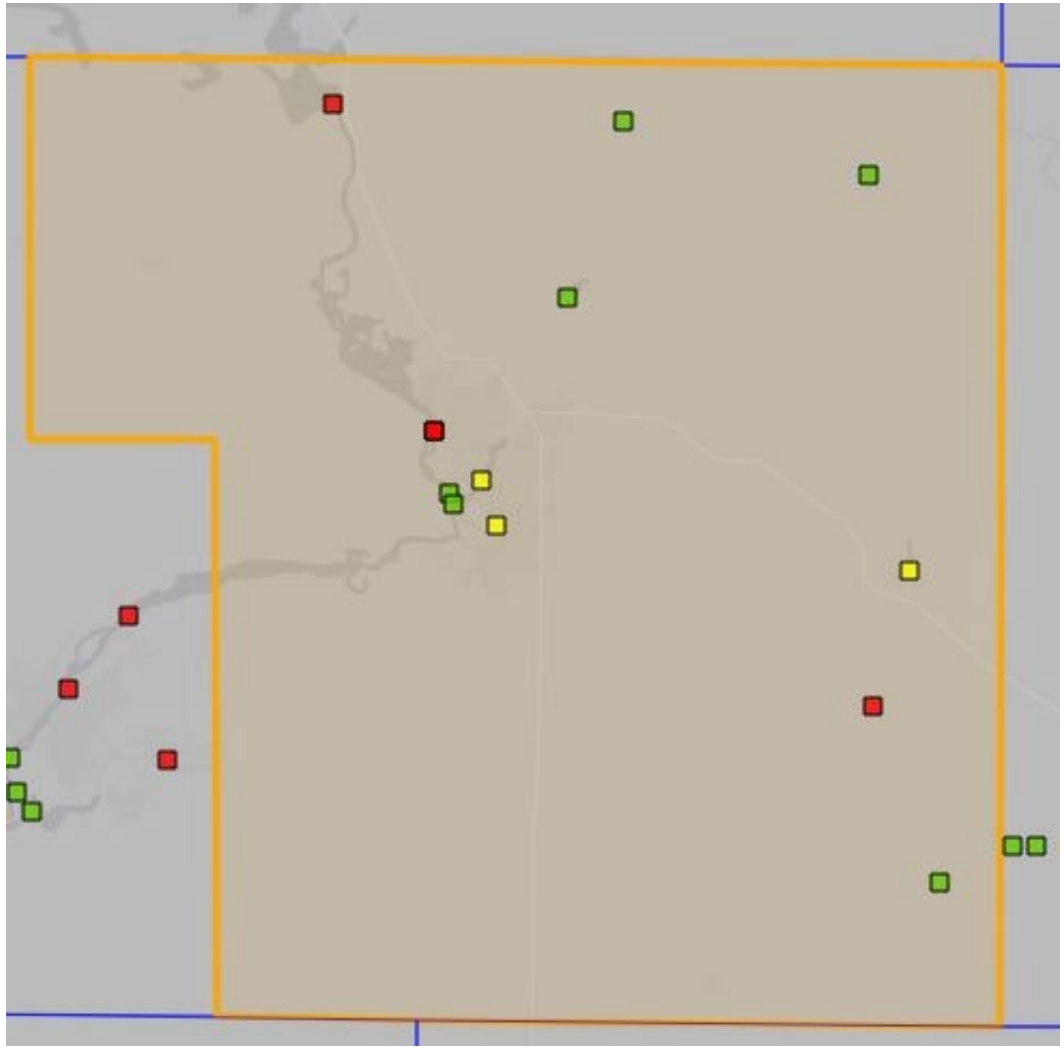
According to the National Bridge Inventory Data, Portage County has 191 bridges. 81 bridges have a good ranking, 83 bridges have a fair ranking, and 15 have a poor ranking. The reminder of the bridges are not ranked). A full listing of bridges and their location can be downloaded here or accessed at the National Bridge Inventory Data website.

Dams

According to the National Inventory of Dams (NID), 13 dams are in Portage County, with an average age of 140 years. 69% of the dams are regulated by a State Agency, 31% are regulated by a Federal Agency, and 38% of the dams have hydropower. Four of the dams are rated as having a high hazard potential, three have a significant hazard potential, and six have a low hazard potential. Utilizing data from the Wisconsin Department of Natural Resources Dam Classification Data, Portage County staff identified those dams classified as large to be included as part of the Critical Facilities list.

Map: Dams in Portage County (Red indicates high hazard potential, yellow indicates significant hazard potential, and green indicates low hazard potential)

Source: [National Inventory of Dams (NID)]



Public Water Facility

A total of 48 facilities were identified. The County inventoried those facilities that provide municipal/public water via wells, towers, reservoirs, and treatment plants.

Government Facilities

The primary government building is located at 1462 Strongs Avenue, Stevens Point, WI 54481. The County is governed by a County Executive and a 25-member Board of Supervisors, elected from one city, nine villages, and 17 townships, with an estimated population of 70,482 (2014 U.S. Census estimate). The County seat is in the City of Stevens Point. Primary services include active warrants, animal control programs, community alert, comparable sales, emergency management, emergency medical services, online mapping, fines and taxes, permit maintenance, sheriff's sales, land records, and well water quality (Portage County Website).

Chapter 4 - Risk Assessment

The goal of mitigation is to reduce the future impacts of a hazard including loss of life, injury or disability, property damage, disruption to local and regional economies, and the expenditure of public and private funds for recovery. Sound mitigation must be based on a sound risk assessment. A risk assessment involves quantifying the potential loss resulting from a disaster by assessing the vulnerability of buildings, infrastructure, and people.

This assessment identifies the characteristics and potential consequences of a disaster, how much of the community could be affected by a disaster, and the impact on community assets. A risk assessment consists of three steps: 1) identify/describe hazards, 2) assess vulnerability, and 3) analyze risk.

Section A - Hazard Analysis

The Steering Committee determined that the natural and technological hazards listed below would be a part of the HMP Update.

Note: There have been several changes to the hazard structure in this plan. They are outlined below

- Severe Storms (Summer Events), Tornadoes, and High Winds, Hail, Lightning have all been combined into "Severe Weather (Including Tornadoes, High Winds, Hail, and Lightning)."
- Dam Failure has been combined with Flooding.
- Extreme Cold has been combined with Winter Storms
- Fire (Wild Land) has been changed to Wildfire
- Agricultural/ Hydrological Drought has been combined with Extreme Heat
- Addition of two hazards:
    - Utility (Power Failure)
    - Major Transportation (Railroad) Incident

The 2019 hazard outline is:

1. Severe Weather (Including Tornadoes, High Winds, Hail, and Lightning)
2. Flooding (Including Dam Failure)
3. Wildfire
4. Drought and Extreme Heat
5. Winter Storms and Extreme Cold
6. Hazardous Materials
7. Utility (Power) Failure
8. Major Transportation (Railroad) Incident

Recent Hazard History Overview

In recent years, Portage County has experienced structural damage to roadways, bridges, and other public and private property due to storms and flooding. While the National Centers for Environmental Information (NCEI) data below highlights that flood events were not frequent from 1950-May 2019, the ones that occur are costly.

Additionally, flood events are happening more frequent. Also, storms have caused contamination of private water sources, power outages, and communication disruptions. While Portage County has not received Presidential Major Disaster Declarations since the 2012 HMP Update, the County has been affected by lower-level events and remains at risk for all hazards identified in this plan, specifically flooding. The County was affected by major flooding in the Spring of 2019 resulting in several municipalities receiving assistance through the Wisconsin Disaster Fund. At the time of this plan update, Portage County has received a Presidential Declaration for severe storms that occurred during July 2019. Anytime a Presidential Major Disaster Declaration is given, the County and its jurisdictions are eligible for federal assistance programs for individuals and public infrastructure, including funds for both emergency and permanent work (FEMA).

Hazard History Overview

Past experiences of hazards help identify the probability of occurrence. The National Centers for Environmental Information (formerly called National Climatic Data Center), the world's largest archive of weather data, publishes past weather events with reported total death, injury, property damage, and crop damage. Between 1950 and May 31, 2019, the NCDC reports 423 events within Portage County with events occurring on 309 days. Additional data sources were utilized to supplement the NCEI data, such as the National Inventory of Dams and National Inventory of Levee.

NCEI data limitations include only tornados being recorded from 1950-1954. From 1955 through 1992, only tornado, thunderstorm wind, and hail events were keyed from the paper publications into digital data. From 1993 to 1995, only tornado, thunderstorm wind, and hail events have been extracted (NCEI).

Table: NCEI Data Total (full details on each event can be downloaded in this Excel)

Summary Information	Count
Number of Days with Event	309
Number of Days with Event and Death	2
Number of days with Event and Death or Injury	4
Number of Days with Event and Property Damage	45
Number of Days with Event and Crop Damage	2
Number of Event Types Reported	22

Table: Property Damage over $100,000 (from NCEI Data January 1950-May 2019)

Date of Disaster	Type of Disaster	Property Damage Amount	Narrative
6/11/2001	Thunderstorm Wind	$4,060,000 (and $500,000 in crop damage)	Sustained winds caused more damage than a typical single severe wind gust. Power Outages for at least 100,000 customers occurred. Winds exceeded 70 mph across the area, resulting in thousands of downed trees and damage to homes and businesses.

5/22/2011	Tornado	$1,800,000	At least two dozen irrigation systems were overturned and damaged, along with hundreds of trees uprooted and damaged. The tornado was associated with severe thunderstorms.
6/22/2002	Flash Flood	$700,000	Heavy rain occurred due to thunderstorms with over 5 inches falling in a 3-hour period. Extensive damage to roads, bridges, and crops occurred. Lightning started a minor fire that damaged a factory.
6/12/2017	Flash Flood	$500,000	A thunderstorm caused flash flooding, damaging culverts, homes, and roads and knocking out power.
7/19/2011	Flash Flood	$300,000	Thunderstorms caused damaging winds, hail, and flash flooding.
9/26/1951, 4/3/1956, 3/30/1982, 4/27/1984, 5/16/1992 (two on this date), 10/8/1992	Tornado	$250,000 (for each of the seven events)	No narrative existed for these events; however, the tornado on 4/3/1956 caused two direct deaths and two direct injuries in addition to property damage
6/23/2004	Tornado	$200,000	Three tornados touched down in the County. Trees were knocked down and one irrigation system.
3/15/2019	Flood	$105,000	Runoff from rainfall and snowmelt combined to flood roads, homes, and low-lying areas.

Table: Events and Occurrence Rate Reported by NCEI Data (January 1950-May 2019)

*All events that have a count of 20 or more have been bolded and include Thunderstorm Wind (118), Hail (84), Winter Storm (38), Tornado (23), and Heavy Snow (21).

Event	Count
Blizzard	2
Cold/Wind Chill	7
Dense Fog	9
Drought	16
Excessive Heat	1
Extreme Cold/Wind Chill	4

Flash Flood	8
Flood	7
Frost/Freeze	1
Funnel Cloud	6
Hail	**84**
Heat	6
Heavy Rain	11
Heavy Snow	**21**
High Wind	6
Ice Storm	4
Lightning	11
Strong Wind	19
Thunderstorm Wind	**119**
Tornado	**23**
Winter Storm	**38**
Winter Weather	11

Table: Total Reported Property Damage by Hazard Reported by NCEI Data (January 1950-May 2019)

Event	Year(s) Occurred	Total
Flash Flood	2002, 2010, 2011, 2017	$2,200,000
Flood	2017, 2019	$106,000
Hail	1995	$200
High Wind	1997, 1998	$16,000
Lightning	2016	$10,000
Strong Wind	1997, 2015, 2017 (2), 2019	$12,500
Thunderstorm Wind	1996 (6), 1997 (6), 1998 (2), 2001 (2), 2005, 2009, 2011 (2), 2017	$4,776,000
Tornado	1957, 1964, 1970 (2), 1974, 1976 (4), 1982, 1981, 1992 (3), 1988, 2004, 2017	$3,892,500

There have been several disasters in Portage County that have received Presidential Disaster Declarations; they include:

Table: Presidential Disaster Declarations

Year	Type of Disaster
1971	Flood
1973	Flood
1975	Army Worm Infestation
1976	Drought
1993	Flooding
2001	Severe Storms and Flooding
2002	Severe Storms and Flooding
2002	Tornado, Severe Storms
2004	Flooding, Severe Storms, Tornados
2010	Severe Storms and Flooding
2019	Severe Storms

Table: Portage County Disaster Aid Recovery 1993 - 2019

Source: Wisconsin Emergency Management Department, and Portage County Emergency Management Department

Date of Disaster	Type of Disaster	Type of Grant	Total Grant Payment
July 2, 1993	Flooding	Individual Assistance	$2,452.00
July 2, 1993	Flooding	Public Assistance	$264,378.46
May 11, 2001	Severe Storms, Flooding	Public Assistance	$571,534.93
June 21-25, 2002	Severe Storms, Flooding	Public Assistance	$843.56
June 21-25, 2002	Severe Storms, Flooding	Public Assistance	$1,417,125.06
June 21-25, 2002	Severe Storms, Flooding	Public Assistance	$390,606.66
September 2-6, 2002	Tornado, Severe Storms	Hazard Mitigation	$11,900.00
July 2, 2004	Flooding, Severe Storms, Tornados	Individual Assistance	$32,617.07
September 24 - October 9, 2010	Severe Storms, Flooding	Public Assistance	$416,966.26
July 18-20, 2019	Severe Storms	Public Assistance	TBD
			Total: $2,944,228.29*

The table above identifies Disaster Aid between 1993 and 2019 and distinguishes between the three types of aid most available to communities. Throughout those 26 years, Portage County received $2,944,228.26 in disaster aid, averaging just under $114,000 in aid each year.

*The grant amount for the most recent disaster, which occurred from July 18-20,2019, is currently being determined and is not included in the total amount.

The Wisconsin Disaster Fund (WDF) was created by order of 2005 Wisconsin Act 269 enacted April 5, 2006, to provide state disaster assistance to local government units. This assistance is in the form of payments for damages and costs incurred as a result of a major catastrophe when the damages sustained are not of a significant nature to warrant a federal disaster proclamation. The Portage County 2019 Fiscal Year Damage Threshold for Disaster Assistance is $ 264,671.82.

Community Preparedness Survey

Public participation is a key element of HMPs. The Community Preparedness & Mitigation Survey provided useful data to complement the hazard analysis.

The top hazards survey takers indicated as "high risk" for impacting their household and place of business in Portage County are:

- Severe Winter Storm/Heavy Snowfall/Ice Storm (43.9%)
- Power Failure (39.1%)
- Tornado and High Winds (31%)
- Cybersecurity (30.2%)
- Extreme Cold Events (28.7%)
- Straight Line Wind (28.7%)

While the NCEI data only include natural hazards (e.g., **cybersecurity and power failure are not included**), the table in the previous section highlights these hazards as most frequently occurring from 1950-May 2019):

- Thunderstorm Wind (118)
- Hail (84)
- Winter Storm (38)
- Tornado (23)
- Heavy Snow (21)
    - **Of this list, Winter Storm, Tornado, and Heavy Snow were all highlighted by more than 25% of the survey takers as high-risk hazards. Thunderstorm Wind was not given as a category but could be linked to High Wind.**

According to the NCEI data, the most costly hazards were:

- Thunderstorm Wind - $4,776,000
- Tornado - $3,892,500
- Flash Flood - $2,200,000
- Flood - $106,000

When asked what degree of emphasis the survey takers would expect their jurisdiction to mitigate hazards, these hazards received the highest percentages of high priority:

- Severe Winter Storm/Heavy Snowfall/Ice Storm (44.1%)
- Power Failure (41.4%)
- Extreme Cold Events (38.7%)
- Tornado and High Wind (32.7%)
- Flash Flooding/Overland Flooding (30.6%)
- Infrastructure Failure (30%)
- Hazardous Materials Release (29.1%)
- Cybersecurity (28.8%)
- Structural Fire (22.6%)
- Extreme Heat Events (22.5%)
- Public Health Emergency (21.6%
- Dam Failure (20.9%)
    - **While not the highest-ranking, the survey indicates that the public recognizes that the hazards that have a high property damage impact, need mitigation actions (and are bolded in the list above).**

Survey Results relating to hazard and risk are highlighted below, and all results can be found in the Appendix: Community Preparedness & Mitigation Survey.

Survey results highlighted in the next three images for the question, "Do you believe that your household and/or place of business might ever be threatened by the following hazards? Please rate what hazards present the greatest risk."

Do you believe that your household and/or place of business might ever be threatened by the following hazards in regards to property damage? Please rate what hazards present the greatest risk.
Low Risk = Low impact on threat to life and property damage
Medium Risk = Medium impact on threat to life and property damage
High Risk = High impact on threat to life and property damage

	Low Risk		Medium Risk		High Risk		Not Applicable		Responses
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Civil Disorder/Riot	87	76.3%	19	16.7%	5	4.4%	3	2.6%	114
Crop Failure (Heat, Disease, Insects/Pests, etc.)	57	49.6%	36	31.3%	4	3.5%	18	15.7%	115
Cyber Security Threat	26	22.4%	52	44.8%	35	30.2%	3	2.6%	116
Dam Failure	66	57.9%	22	19.3%	13	11.4%	13	11.4%	114
Severe or Prolonged Drought	47	40.5%	49	42.2%	13	11.2%	7	6.0%	116
Extreme Cold Incident	18	15.7%	63	54.8%	33	28.7%	1	0.9%	115
Extreme Heat Incident	34	29.6%	64	55.7%	15	13.0%	2	1.7%	115
Flash Flooding/Overland Flooding	36	31.3%	57	49.6%	19	16.5%	3	2.6%	115
Riverine Flooding	58	51.3%	34	30.1%	9	8.0%	12	10.6%	113
Hail	32	27.8%	63	54.8%	19	16.5%	1	0.9%	115

	Low Risk		Medium Risk		High Risk		Not Applicable		Responses
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Hazardous Materials Release (example: Chemical Spill)	44	38.3%	51	44.3%	17	14.8%	3	2.6%	115
Infrastructure Failure (example: Bridge Collapse)	67	58.3%	35	30.4%	8	7.0%	5	4.3%	115
Lightning	30	25.9%	65	56.0%	20	17.2%	1	0.9%	116
Nuclear Event	79	69.3%	14	12.3%	12	10.5%	9	7.9%	114
Power Failure	14	12.2%	54	47.0%	45	39.1%	2	1.7%	115
Public Health Emergency (example: Pandemic)	45	39.1%	52	45.2%	16	13.9%	2	1.7%	115
Severe Winter Storm/Heavy Snowfall/Ice Storm	10	8.8%	53	46.5%	50	43.9%	1	0.9%	114
Straight Line Wind	26	22.6%	53	46.1%	33	28.7%	3	2.6%	115
Structural Fire	37	32.2%	50	43.5%	26	22.6%	2	1.7%	115
Terrorism Incident	80	69.6%	23	20.0%	9	7.8%	3	2.6%	115
Tornado and High Winds	16	13.8%	62	53.4%	36	31.0%	2	1.7%	116
Wildfires	66	57.9%	36	31.6%	7	6.1%	5	4.4%	114

Survey results highlighted in the next three images for the question, " Based on YOUR PERCEPTION of your jurisdiction's hazards, to what degree of emphasis would you expect your jurisdiction to mitigate the following hazards? Mitigation definition: The purpose of mitigation planning is to identify policies and actions that can be implemented over the long term to reduce risk and future losses. Mitigation forms the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage."

Based on YOUR PERCEPTION of your jurisdiction's hazards, to what degree of emphasis would you expect your jurisdiction to mitigate the following hazards? Mitigation definition: The purpose of mitigation planning is to identify policies and actions that can be implemented over the long term to reduce risk and future losses. Mitigation forms the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage.

No Mitigation Needed = No mitigation on this hazard is expected or needed
Low Priority = This hazard should be mitigated, but is not a high priority compared to other hazards
Medium Priority = It is important to mitigate this hazard
High Priority = It is a high priority to emphasize mitigation for this hazard

	No Mitigation Needed		Low Priority		Medium Priority		High Priority		Responses
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Civil Disorder/Riot	24	21.8%	53	48.2%	21	19.1%	12	10.9%	110
Crop Failure (Heat, Disease, Insects/Pests, etc.)	17	15.3%	44	39.6%	44	39.6%	6	5.4%	111
Cyber Security Threat	11	9.9%	22	19.8%	46	41.4%	32	28.8%	111
Dam Failure	10	9.1%	42	38.2%	35	31.8%	23	20.9%	110
Severe or Prolonged Drought	16	14.4%	43	38.7%	42	37.8%	10	9.0%	111
Extreme Cold Incident	6	5.4%	21	18.9%	41	36.9%	43	38.7%	111
Extreme Heat Incident	6	5.4%	35	31.5%	45	40.5%	25	22.5%	111

	No Mitigation Needed		Low Priority		Medium Priority		High Priority		Responses
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Flash Flooding/Overland Flooding	8	7.2%	14	12.6%	55	49.5%	34	30.6%	111
Riverine Flooding	17	15.6%	25	22.9%	51	46.8%	16	14.7%	109
Hail	20	18.0%	64	57.7%	23	20.7%	4	3.6%	111
Hazardous Materials Release (example: Chemical Spill)	8	7.3%	34	30.9%	36	32.7%	32	29.1%	110
Infrastructure Failure (example: Bridge Collapse)	12	10.9%	30	27.3%	35	31.8%	33	30.0%	110
Lightning	22	19.8%	60	54.1%	26	23.4%	3	2.7%	111
Nuclear Event	30	27.3%	48	43.6%	14	12.7%	18	16.4%	110
Power Failure	6	5.4%	14	12.6%	45	40.5%	46	41.4%	111
Public Health Emergency (example: Pandemic)	10	9.0%	29	26.1%	48	43.2%	24	21.6%	111

	No Mitigation Needed		Low Priority		Medium Priority		High Priority		Responses
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Severe Winter Storm/Heavy Snowfall/Ice Storm	7	6.3%	17	15.3%	38	34.2%	49	44.1%	111
Straight Line Wind	15	13.5%	36	32.4%	45	40.5%	15	13.5%	111
Structural Fire	17	15.3%	46	41.4%	33	29.7%	15	13.5%	111
Terrorism Incident	22	19.8%	49	44.1%	20	18.0%	20	18.0%	111
Tornado and High Winds	6	5.5%	20	18.2%	48	43.6%	36	32.7%	110
Wildfires	14	13.0%	45	41.7%	29	26.9%	20	18.5%	108

Population Vulnerability

The following populations are most vulnerable, face isolation and exposure, and could suffer more secondary effects of the hazards addressed in the plan. The following chart provides a breakdown of vulnerable populations by jurisdiction. The population deemed most susceptible to hazards present in Portage County are the elderly over 65 years old, which is further addressed by hazard in the coming hazard assessment section.

Town of Alban, Town of Belmont, Village of Park Ridge, and Village of Whiting all have at least 15% of their population members over 65. While by population size the number of elderly residents in City of Stevens Point is not over 15%, given the number of residents that are 65 or over in the city is important to note. The elderly is particularly vulnerable to severe temperatures and examples of past and probability for future events that can harm this population are addressed in the hazard assessments.

Town of Belmont, Town of Buena Vista, Town of Hull, Town of Pine Grove, Town of Plover, and Village of Junction City all have a high portion of their population residing in mobile homes. Additionally, Village of Plover has over 200 residents in mobile homes. The larger population offsets the number of mobile homes to be a smaller percentage of the population; however, this is the area with the highest number of mobile homes. Mobile homes are particularly vulnerable to wind destruction, which will be further discussed under the severe weather section.

Town of Pine Grove, Town of Plover, Town of Stockton, Village of Almond, Village of Amherst, Village of Junction City, Village of Park Ridge, Village of Plover, Village of Rosholt, Village of Whiting, and City of Stevens Point all have a significant portation of their population members with access and functional needs. While the County historically does not have many hazards that necessitate evacuation, shelters need to be accommodating to people with functional needs.

Town of Pine Grove and Village of Junction City both have a significant portation of their population members with no health insurance access. While Portage County is not prone to hazards that have significant health-related side effects, understanding the parts of the County that would need extra health support is important.

TABLE: VULNERABLE POPULATION BY JURISDICTION AND CATEGORY (American Fact Finder)

Municipality	Population 65 and over (2010 Census)	Access and Functional Needs (ACS 2017)	No Health Insurance (ACS 2017)	Occupants in Mobile Homes (ACS 2017)
Town of Alban	159	140	49	26
Town of Almond	91	44	81	0
Town of Amherst	186	67	64	5
Town of Belmont	107	74	34	69
Town of Buena Vista	128	88	42	77
Town of Carson	188	106	47	14

Town of Dewey	125	108	53	33
Town of Eau Pleine	57	87	34	17
Town of Grant	262	154	100	25
Town of Hull	713	590	166	228
Town of Lanark	166	156	85	85
Town of Linwood	161	115	27	6
Town of New Hope	120	67	34	2
Town of Pine Grove	101	84	121	107
Town of Plover	187	108	54	89
Town of Sharon	252	193	58	47
Town of Stockton	332	263	103	99
Village of Almond	63	66	52	10
Village of Amherst	136	128	54	0
Village of Amherst Jct.	34	39	18	4
Village of Junction City	51	43	68	34
Village of Nelsonville	23	7	0	0
Village of Park Ridge	134	66	10	0
Village of Plover	1,329	1,158	511	287
Village of Rosholt	61	77	22	6
Village of Whiting	525	276	86	0
City of Stevens Point	3,197	2,800	1,548	161

Section B - Hazard Assessment

Severe Weather (Including Tornadoes, High Winds, Hail, and Lightning)

Nature of the Hazard

Thunderstorm events are generated by an upward motion of unstable air (convection) that contains a high amount of moisture. They are characterized by heavy rain; high winds, downbursts, and tornadoes; hail; and lightning. Occasionally, thunderstorms occur in winter during heavy snow events. Typically, Wisconsin thunderstorms are approximately 15 miles across and last for about 30 minutes, but events of longer duration or with high rates of precipitation can lead to flooding.

The National Weather Service (NWS) classifies a thunderstorm as severe if the event meets one or more of the following conditions:

1. Winds reach or exceed 58 mph
2. The storm produces a tornado
3. The storm produces hail at least one inch in diameter
4. Flash flooding occurs

In thunderstorms, **straight-line winds** are winds without any rotation. This classification differentiates them from tornadic winds. In severe thunderstorms, **downbursts** are created by falling rain and associated sinking air, resulting in winds that can reach speeds of 125 mph. **Microbursts**, concentrated versions of downbursts, can have wind speeds up to 168 mph. A **derecho** consists of multiple downbursts and microbursts and is defined as a 240-mile-wide wind storm with gusts of at least 58 mph. Substantial damage can result from downbursts, microbursts, and derechos.

A **tornado** is a violently rotating column of air (vortex) extending from the base of a convective cloud (usually cumulonimbus) to the ground. Tornadoes form in many parts of the world under many types of conditions; however, the most common conditions in Wisconsin are intense squall lines and supercell thunderstorms. Tornadoes can be classified as **supercell** or **non-supercell**. Supercell tornadoes are derived from supercell thunderstorms of which a key component is a rotating updraft. These tornadoes can be devastating. Non-supercell tornadoes are formed by a spinning column of air near the ground and tend to be short-lived and weaker than supercell tornadoes. Non-supercell tornadoes include gustnadoes, land spouts, and water spouts.

Most tornadoes in the US last less than ten minutes but can exist for more than an hour. (NOAA, Storm Prediction Center) The path of a tornado can range from a few hundred feet to miles with widths ranging from tens of yards to a mile or two.

In 1971, researchers Tetsuya Fujita and Allen Pearson developed the **Fujita-Pearson Scale (F-Scale)** for measuring tornado intensity. In 2007, the US National Weather Service created the refined **Enhanced Fujita Tornado Scale (EF-Scale)** based on empirical data. Both scales indicate damage only – associated wind speeds are only estimations.

TABLE: Enhanced Fujita (EF) Scale for Estimation of Tornado Wind Speeds
Source: http://www.srh.noaa.gov/srh/jetstream/mesoscale/tornado.htm

EF scale	Class	Wind speed	Description	Description of Destruction

F0	weak	65-85	105-137	Gale	Light damage, some damage to chimneys, branches are broken, signboards damaged, shallow-rooted trees blown over.
F1	weak	86-110	138-177	Moderate	Moderate damage, roof surfaces peeled off, and mobile homes pushed off foundations, attached garages damaged.
F2	strong	111-135	178-217	Significant	Considerable damage, entire roofs torn from frame houses, mobile homes demolished, boxcars pushed over, and large trees snapped or uprooted.
F3	strong	136-165	218-266	Severe	Severe damage, walls torn from well-constructed houses, trains overturned, most trees in forests uprooted, heavy cars were thrown about.
F4	violent	166-200	267-322	Devastating	Complete damage, well-constructed houses leveled, structures with weak foundations blown off for some distance, large missiles generated.
F5	violent	> 200	> 322	Incredible	Foundations swept clean, automobiles become missiles and thrown for 100 yards or more, steel-reinforced concrete structures badly damaged.

The new EF-Scale keeps the previous numerical values of zero to five from the old F-Scale and maintains the same degree of damage associated with each rating value. However, the estimated wind speed values associated with the higher numerical ratings were lowered in the EF-Scale based on engineering studies and meteorological research. Consequently, the damage inflicted by an F-4 tornado will be comparable to that of an EF-4 tornado, even though the estimated wind speed of the EF-4 tornado is lower. Tornadoes occurring before 2007 were assigned F-Scale values while those after February 1, 2007, have been assigned EF-Scale values. A detailed description of the EF-Scale can be found online at the NWS Storm Prediction Center website.

Hail can also develop in thunderstorms when strong currents of rising air, known as updrafts, carry water droplets high within the storm, exposing these droplets to cold air and freezing them. As the frozen droplets begin to fall toward the ground, rising currents within the storm lift them again. The hailstones gain an ice layer and grow increasingly more significant with each ascent.

Eventually, the hailstones become too heavy for the updraft to support, and they fall to the ground.

Though hail typically accompanies severe thunderstorms, all strong thunderstorms have the potential to produce hailstones of small diameter (less than one inch). The size of hailstones varies and is a direct consequence of the severity and size of the thunderstorm; greater instability in the atmosphere causes stronger updrafts. Stronger updrafts can keep hailstones suspended for more extended periods, resulting in larger hailstones at ground level. Hailstones vary widely in size, as shown in Figure 3.2.1-3. Trained volunteer storm spotters and the National Weather Service (NWS) officially report severe hail, which are hailstones considered one inch in diameter or greater.

TABLE: Hail Size
Source: NOAA

Size	Inches in Diameter
Pea	0.25

Marble/mothball	0.50
Dime/Penny	0.75
Nickel	0.875
Quarter	1.0
Ping-pong Ball	1.5
Golf Ball	1.75
Tennis Ball	2.5
Baseball	2.75
Tea Cup	3.0
Grapefruit	4.0
Softball	4.5

Another byproduct of a thunderstorm is **lightning**. The action of rising and descending air in a thunderstorm separates positive and negative charges, with lightning the result of the buildup and discharge of energy between positive and negative charge areas. Water and ice particles may also affect the distribution of the electrical charge. In only a few millionths of a second, the air in a lightning strike is heated to 50,000°F, a temperature five times hotter than the surface of the sun. The heated air expands so rapidly that it causes a shock wave which can be heard as thunder.

Lightning can travel between clouds (cloud-to-cloud), from one point to another within one cloud (intra-cloud), from a cloud to the air surrounding the storm (cloud-to-air), from a cloud to the ground (cloud-to-ground), or from the ground to a cloud (ground-to-cloud). The first four types are considered natural lightning because they occur naturally in the environment. Ground-to-cloud lightning is deemed to be artificially-initiated or triggered lightning because it strikes human-made objects like airplanes, rockets, very tall structures, and structures on mountains.

According to the NWS, on average, about 25 million cloud-to-ground strikes are detected in the continental US annually, with nearly half of all flashes contacting more than one ground point. Also, there are roughly five to ten times as many cloud-to-cloud flashes as there are cloud-to-ground flashes.

Over 95% of cloud-to-ground lightning is **negative lightning**, which means the lightning transfers a negative charge from the lower portion of a cloud to the ground. However, **positive lighting** can occur too, transferring a net positive charge from the upper portion of a cloud to the ground. Although much less common, positive lightning can be more dangerous. Because it must travel a longer distance to reach the ground, the electrical field is stronger, which means the strike can have a longer duration with a charge ten times that of a negative lightning strike.

The hazard posed by lightning is significantly underrated. After floods, lightning kills most people on average each year. High winds, rainfall, and a darkening cloud cover are warning signs for possible cloud-to-ground lightning strikes. While many lightning casualties happen at the onset of a storm, more than half of lightning deaths occur after a thunderstorm has passed. The lightning threat diminishes after the last sound of thunder but may persist for more than 30 minutes. When thunderstorms are in the area, but not overhead, the lightning threat can exist when skies are clear. Lightning has been known to strike ten miles or more from the storm in an area with clear sky above. Large outdoor gatherings are particularly vulnerable to lightning strikes that could result in injuries and deaths. This vulnerability underscores the importance of developing site-specific emergency procedures for these types of events with particular emphasis on adequate early warning.

History

Severe storms occur regularly in Portage County throughout the year, with the highest frequency during the months of May through September. The majority of the storms occur between the hours of noon and midnight.

Thunderstorm frequency is measured in terms of incidents observed per day. Wisconsin averages between thirty and forty-five thunderstorms per year. In the County, there are typically seven severe thunderstorms per year.

Wisconsin averages two to three hail days per year. Hailstorms usually occur from May through August. Most of the hail damage is in the rural area in that these four months also correspond to the growing and harvesting seasons for most crops. The NCEI has identified 64 hail events in Portage County between 1950 and 2010 and 17 hail events from January 1, 2014-June 20, 2019, with hail ranging in sizes of 0.75 inches to three inches.

Nationwide, 45% of the persons killed by lightning have been outdoors, about 16% occur under trees, 6% on heavy road equipment, and 33% at various unknown locations. Less than 10% of the deaths involved individuals inside buildings. These are primarily due to lightning-caused fires. In 2016, Portage County had a lightning event in Plover, causing $10,000 in damages. A communications tower used by law enforcement was hit disrupting communications.

Wisconsin has a high frequency of property losses because of lightning. Insurance records show that annually one out of every 60 farms have been struck by lightning or have had a fire that may have been caused by lightning. Generally, rural fires are more destructive than urban fires because of limited protection devices, isolation, longer firefighting response times, and inadequate water supplies. Specific data on dates, locations, property damage, injuries, or deaths in Portage County from lightning are not available.

The following severe weather events were reported between 05/01/1950 and 05/31/2019. It is important to note that only tornado data was collected from 1950-1954, tornado, thunderstorm wind, and hail data was collected from 1955-1992, and all events were recorded from 1996 to present (Storm Events Database).

TABLE: Hail, High Wind, Lightning, Strong Wind, Thunderstorm Wind, and Tornado Events in Portage County, Wisconsin from 05/01/1950 to 05/31/2019

Source: www.ncdc.noaa.gov/stormevents

Number of County/Zone areas affected:	2
Number of Days with Event (differs from the number of the event which can happen concurrently on the same day)	173
Number of Days with Event and Death	2
Number of Days with Event and Death or Injury	4
Number of Days with Event and Property Damage	42
Number of Days with Event and Crop Damage	2
Number of Event Types reported	6

- Of the events reported, 85 were Hail events, five were High Wind events, 11 were Lightning events, 19 were Strong Wind events, 119 were Thunderstorm Wind events, and 23 were Tornado events. In total, all events amounted to $8,7078,000 in property damage and $502,000 in crop damage. Additionally, four people were injured, and three people died as a direct result of the event.
    - **Hail:** While hail was the second-highest reported event in this category, only $200 dollars in damage was caused by one event in 1995. The reported size of hail averaged 1.13 diameters with the largest size being three and the smallest being 0.75.
    - **High and Strong Winds**: The combination of these two types of events resulted in $28,500 with five strong wind and three high wind events causing the damage. The remaining events of these two types did not cause severe property damage.
    - **Thunderstorm Winds**: In total, this type of event caused $4,776,000 of property damage and was the only event type to cause reported crop damage.
        - An event in 2001 caused the most damage - $4,060,000 in property damage and $500,000 in crop damage. Winds reached over 70 mph, and the strong wind were sustained for longer periods than a typical severe wind gust.
        - The second highest damage event was in 2005 when the wind reached as high as 75 mph and downed power lines and trees including one tree falling on a house. The solar panels were damaged at the University of Wisconsin at Stevens Point. 10,000 customers lost power during the storm, including the Stevens Point Area YMCA where the power outage caused a check valve to malfunction, allowing 80,000 gallons of water from the swimming pool to flood the basement.
        - Of the 119 events, 20 events yielded $1,000 or more in property damage.
    - **Tornado:** Of the reported tornados, only four did not yield reported property damage. One F4 tornado (1951), seven EF2, eleven EF1, and five EF0 have touched down in the County.
        - The highest amount of property damage ($1.8 million) was from a 2011 F1 tornado that damaged several irrigation systems and caused damage to buildings in its path.
        - Seven tornados caused $250,000 in property damage (one of which killed two people and injured another two).
    - **Lightning:** One event in 2016 caused $10,000 of damage due to lightning striking a communication tower used by Portage County law enforcement.

Historic Jurisdiction-specific Hazard Impact/Vulnerability

The information below was drawn from both the NCEI event narratives. As indicated in the NCEI data above, numerous other events have impacted the County and the municipalities. The NCEI data, particularly prior to the 2000s, did not always include a narrative or exact location. The chart below should be viewed as a sampling of the impact on the County municipalities.

Table: Historic Jurisdiction-specific Hazard Impact/Vulnerability for High Wind, Tornado, Hail, and Lightning

Hazard Type	Affected Jurisdictions	Comment	Date
Thunderstorm / High Winds	Town of Almond	Wind gust 70 mph, damage to flag pole, swimming pools and willow trees	08/20/2009
Hail	Town of Almond	2-inch diameter hail	09/20/2017
Thunderstorm	Town of Amherst	High winds causing trees to fall	07/17/2011
Hail	Town of Eau Pleine	85 mph winds, one person was injured with a broken leg	05/1998
Thunderstorm	Town of Plover	Thunderstorm winds knocked over trees	06/02/1996
Lightning	Town of Plover	Lightning struck a home causing considerable damage. A window was blown out, siding was knocked off, and attic walls collapsed, and two fires started	04/04/1997
Thunderstorm	Town of Plover	Numerous trees and powerline were knocked down	06/24/1997
Lightning	Town of Plover	Lightning caused a fire in the maintenance shop of a fertilizer plant	07/15/2015
Hail	Town of Plover	Quarter sized hail	03/25/2007
Thunderstorm / Wind / Hail	Town of Plover	Thunderstorm produced strong winds causing tree fall and penny size hail. Two, tornados an EF0 and EF1 to briefly formed over a lake	05/04/2010
Hail	Town of Plover	Quarter sized hail	07/10/2010
Tornado	Town of Plover	Rotating wall cloud and funnel were spotted 6 miles southeast heading towards Plover	07/14/2010
Thunderstorm / Wind	Town of Plover	Thunderstorm winds estimated at 60 mph knocked down trees and caused power outages on the east side of Plover	09/02/2010
Hail	Town of Plover	Thunderstorm produced hail up to three inches in diameter	05/22/2011
Thunderstorm	Town of Plover	70 mph wind gust knocking over several trees and a short period of pea-sized hail	07/18/2011
Thunderstorm / Hail	Town of Plover	Thunderstorm winds knocked down several trees and produced penny-sized hail	05/24/2012
Thunderstorm / Wind	Town of Plover	Thunderstorm winds near 60 mph blew semi-trailer on its side on I-39. No one was injured	05/30/2013
Hail	Town of Plover	Thunderstorms produced a prolonged period of large hail, from quarter size to a little larger than a half dollar size. Wind gust reached 47 mph	06/18/2014
Hail	Town of Plover	Thunderstorm produced quarter size hail	07/31/2014
Hail	Town of Plover	Thunderstorm produced penny size hail and wind gust of 51 mph	06/08/2015
Hail	Town of Plover	Thunderstorm dropped half dollar size hail and wind gust of 41 mph	08/02/2015
Wind	Town of Plover	A gust of wind up to 43 mph was measured in Plover	12/23/2015
Wind	Town of Plover	59 mph thunderstorm winds were measured in Plover	06/10/2016

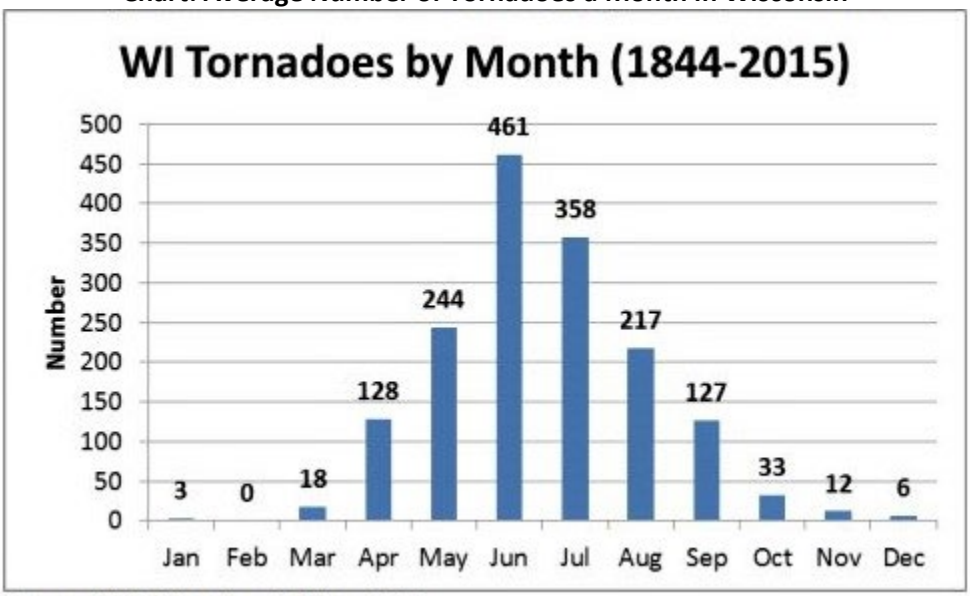
Wind	Town of Plover	A thunderstorm wind gust of 74 mph was measured as the storm moved over Plover	03/06/2017
Hail	Town of Plover	Nickle size hail fell in Plover	06/16/2017
Hail	Town of Plover	A thunderstorm dropped penny-sized hail as it passed over Plover	06/15/2018
Thunderstorm	Town of Sharon	Thunderstorm winds downed trees in the town of Sharon blocking traffic East of County Highway J	06/18/2012
Thunderstorm / Wind	Town of Stockton	A spotter estimated thunderstorm wind guest of 50 to 60 mph	07/10/2010
Thunderstorm	University of Wisconsin	Thunderstorm downed trees and powerlines	07/23/2005

Probability and Impacts

Thunderstorms and their associated severe weather can occur throughout the State of Wisconsin during any month of the year, but the highest frequency is from May through September. June has the highest frequency of tornadoes, followed by July, May, and August. February is the only month with no documented tornadoes in Wisconsin. Hail also materializes more often during the warmer months, with 85% occurring between May and September. Thunderstorms occur most frequently between noon and 10 pm with 75% of tornadoes occurring between 3 and 10 pm. The peak hour for severe thunderstorms and tornadoes is 6 to 7 pm.

The figure below shows the average number of thunderstorm days and the average number of severe weather days across the US, respectively. Severe weather days are days with storms producing tornadoes, high winds, and/or hail. The highest concentration for both figures is found in the southeast. In Wisconsin, the average is between 30 and 50 thunderstorm days and 10 and 30 severe weather days with more of each toward the southern portion of the state and fewer in the north. The number of thunderstorm and severe weather days will fluctuate from year to year.

Chart: Average Number of Tornadoes a Month in Wisconsin



Source: NWS, Milwaukee/Sullivan, 2016.

Table: Tornadoes in Portage County and Probability of Occurrence

Source: National Weather Service and Portage County Planning and Zoning Department

Tornado Scale	F0	F1	F2	F3	F4	F5
Number of Reported Tornadoes	3	11	7	0	1	0
Probability of Occurrence	13.6%	50.0%	31.8%	0.0%	4.5%	0.0%

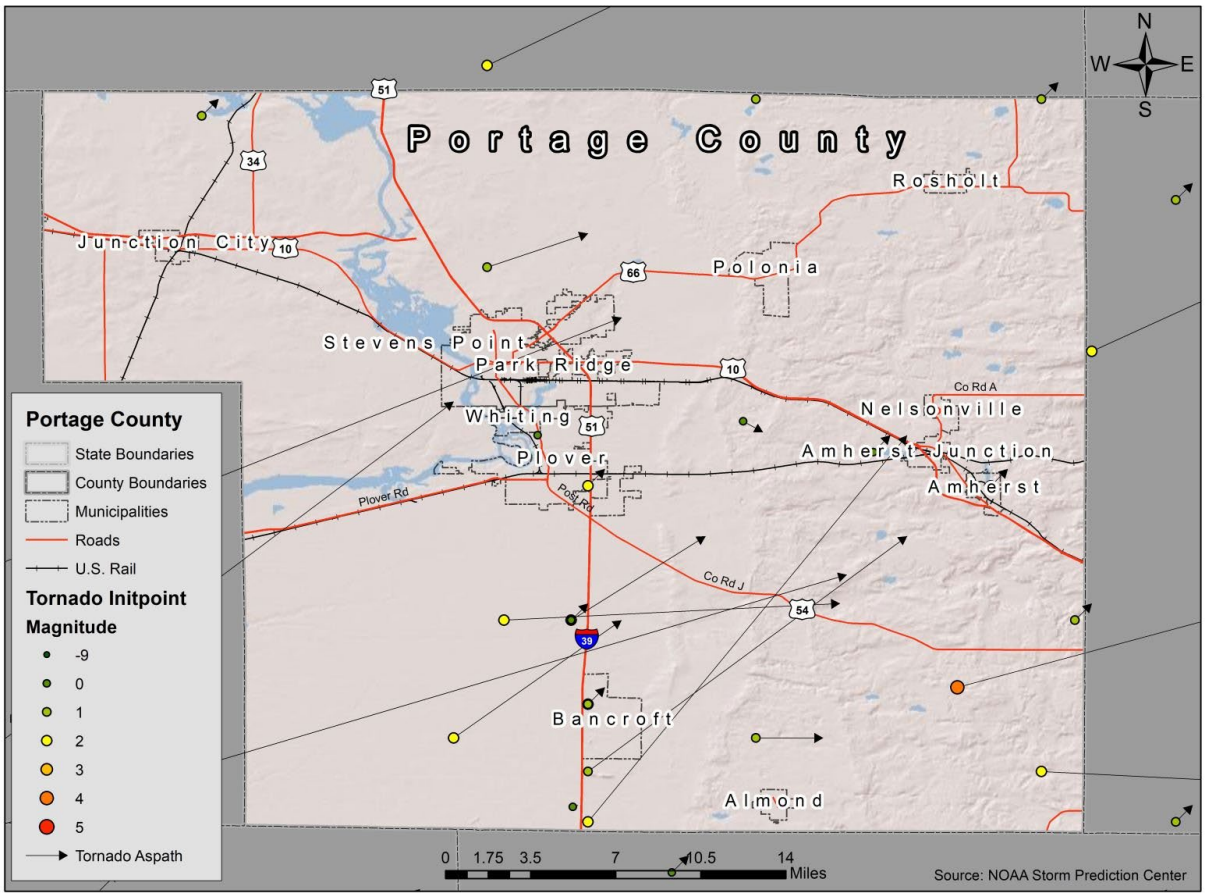
Between 1982 and 2010, when thunderstorms in Wisconsin became severe, short-fuse weather materialized in the form of damaging high winds 61% of the time, large hail 32% of the time, and tornadoes 7% of the time.

The probability, impacts, and mitigation potential of high winds and tornadoes, hail, and lightning will be discussed individually below. The overall impacts of severe storms can also include flooding, which is discussed at length in a separate section.

Tornadoes and High Winds

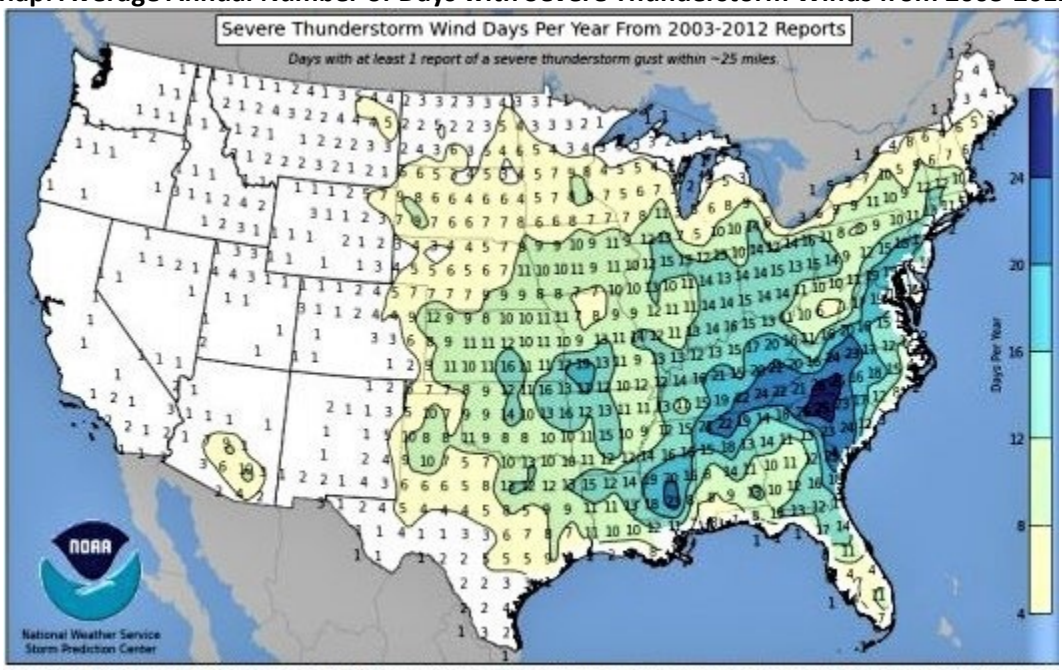
The figure (map) below depicts the number of tornadoes that touched down in Portage County and the path that the tornado took. The point size and its color categorize the tornado based upon the Fujita Tornado Damage Scale. From 1950-2017 Portage County had 19 tornadoes touchdown within the County. The County had two additional tornadoes that originated outside of the county and then traveled into Portage County.

Map: Number of Tornadoes and their Path, Portage County



The figure below depicts the annual number of days with severe thunderstorm winds that can be expected throughout the US. The highest concentration of annual thunderstorm wind days is in the southeastern part of the country. Parts of North and South Carolina, Tennessee, and Virginia experience upwards of 20 severe thunderstorm wind events per year on average. Portions of Wisconsin range from an average of three to 13 events per year.

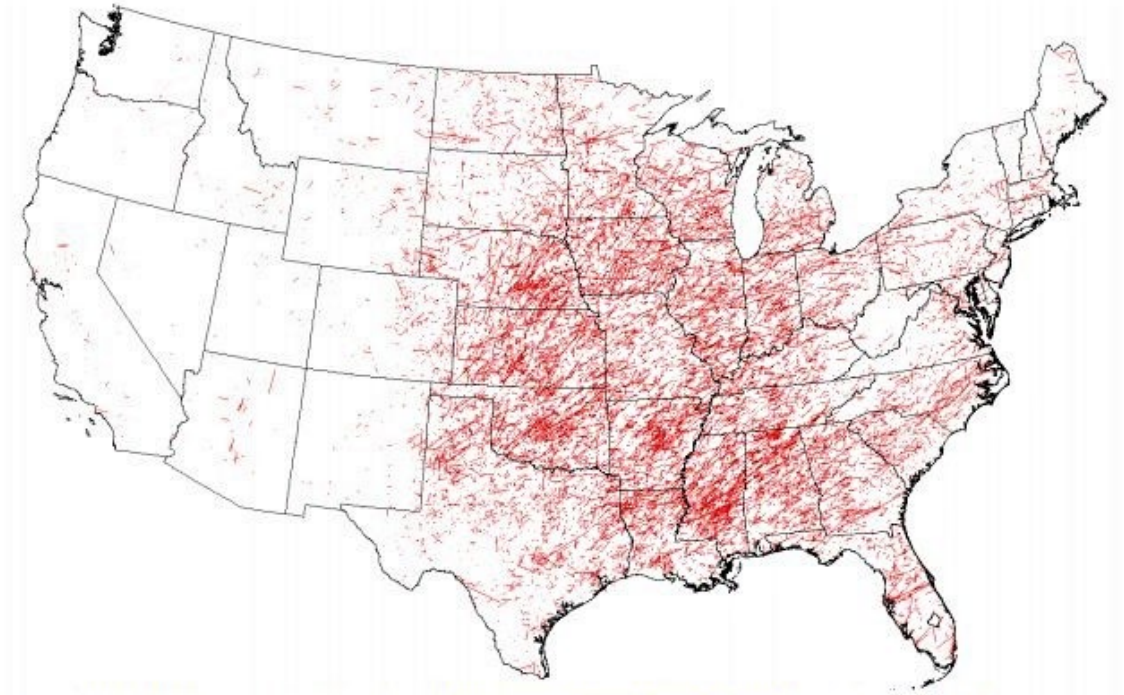
Map: Average Annual Number of Days with Severe Thunderstorm Winds from 2003-2012



Source: NOAA, NWS, Storm Prediction Center, http://www.spc.noaa.gov/wcm/, accessed 10/24/2016

With even higher wind speeds, tornadoes also occur regularly in Wisconsin. The state lies along the northern edge of the nation's maximum frequency belt for tornadoes, called "Tornado Alley" by some. Tracks of the tornadoes that occurred nationwide between 1950 and 2015 are shown below.

Map: US Tornado Tracks, 1950-2015



Source: NOAA, NWS, Storm Prediction Center, http://www.spc.noaa.gov/gis/svrgis/, accessed 2016.10.18.

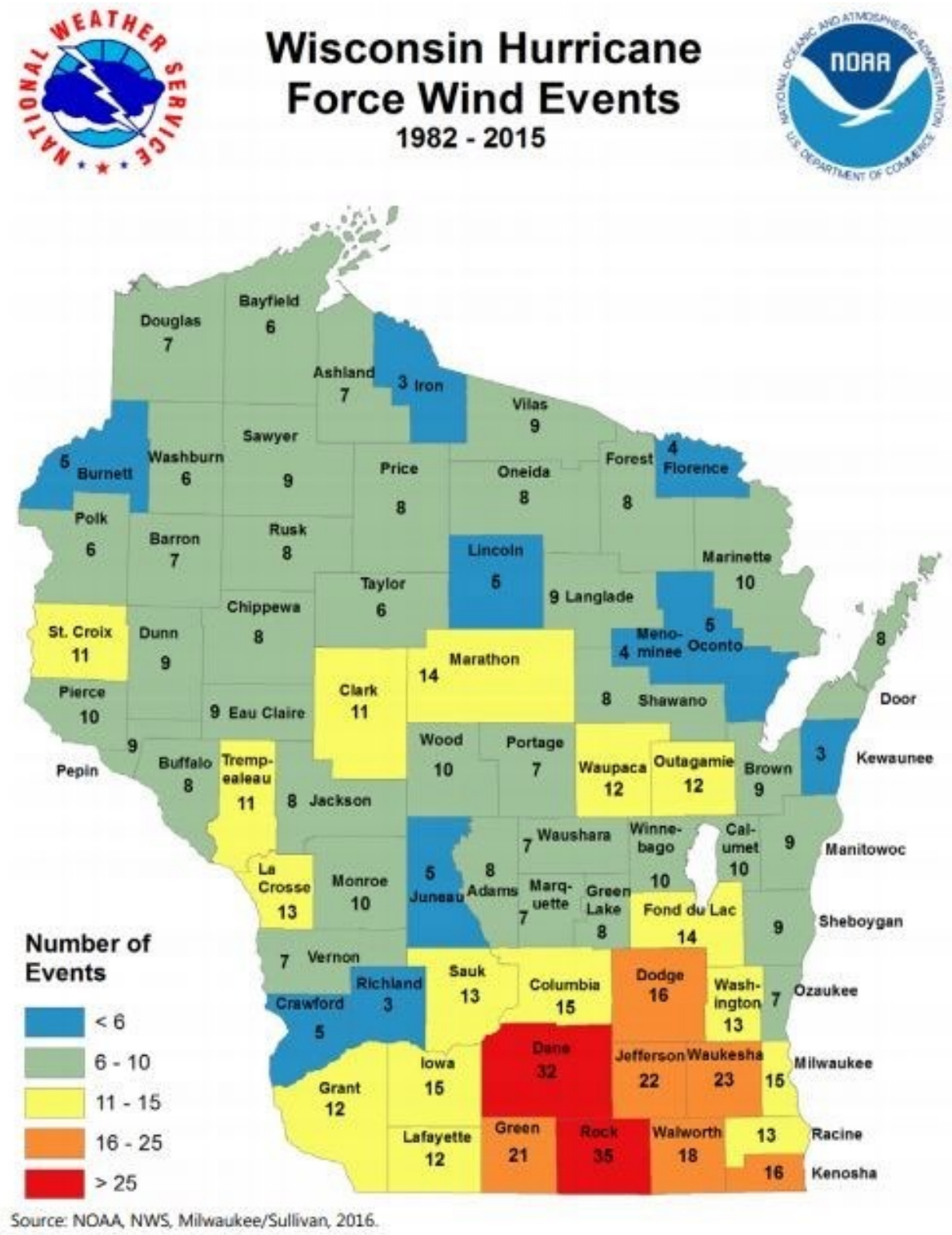
According to the NWS, between 1970 and 2015, Wisconsin has experienced 740 hurricane-force wind events (74 mph or higher). The first map, entitled Wisconsin Hurricane Force Wind Events by County, shows the number of these events by county.

Note that the concentration of events in southeastern Wisconsin. Rock, Dane, and Waukesha counties have had 35, 32, and 23 hurricane-force wind events, respectively, since 1970. This concentration around areas with higher population densities poses the threat of damages where land is most developed.

In the same time period, winds at or above 100 mph have been documented during 64 events, meaning that winds similar to a Category 2 hurricane are experienced about 1.4 times every year in Wisconsin. The second map, entitled Wisconsin 100 mph Wind Events by County, indicates the number of severe thunderstorm wind events with wind gusts of 100 mph or more by county. Since these extreme wind events are uncommon, the data do not lend themselves to meaningful conclusions. Generally, however, the central part of the state has experienced very few Category 2 hurricane wind gusts as a result of severe thunderstorm events.

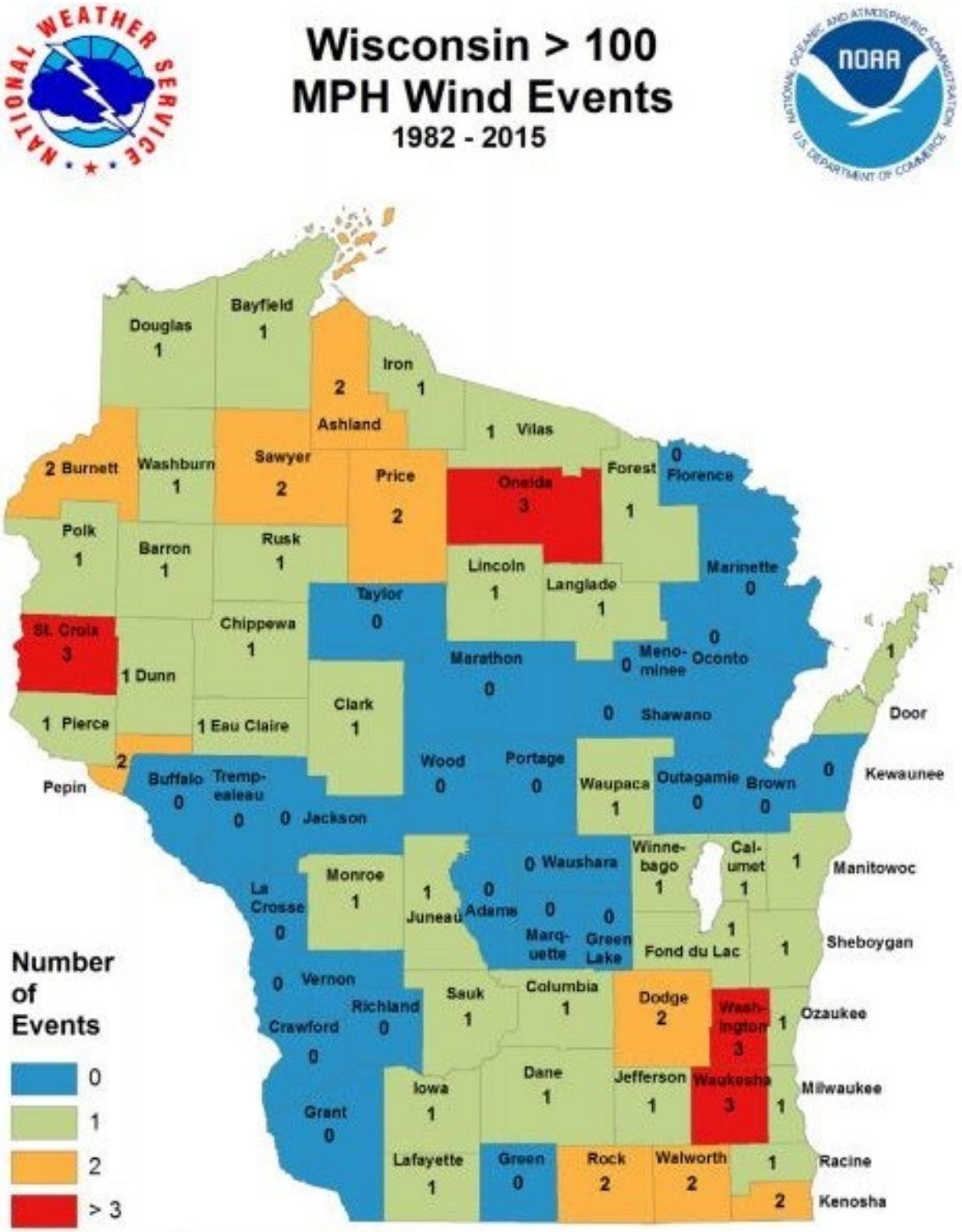
Map: Wisconsin Hurricane Force Wind Events by County

Source: [Wisconsin 2016 THIRA]



Map: Wisconsin 100 mph Wind Events by County

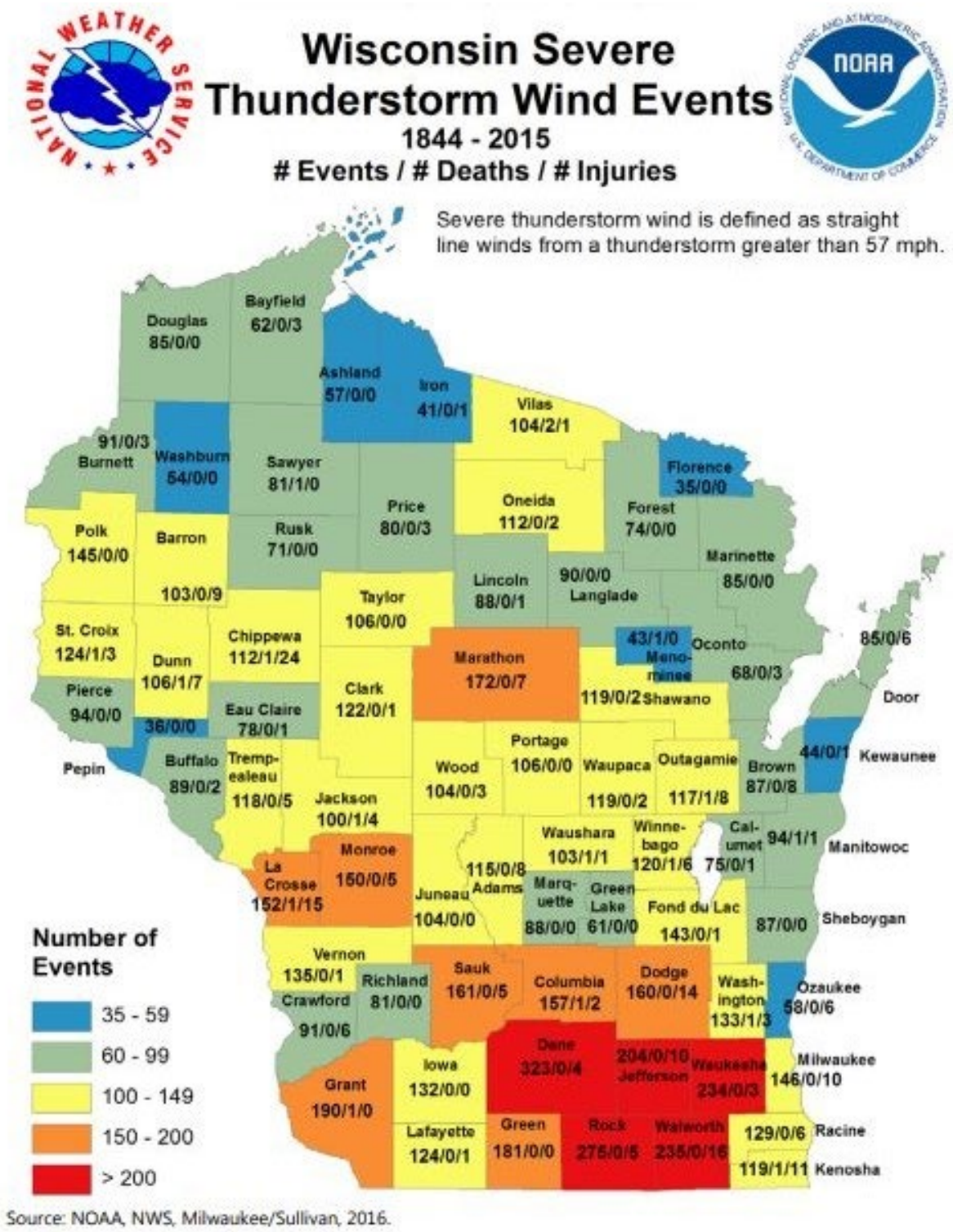
Source: [Wisconsin 2016 THIRA]



Source: NOAA, NWS, Milwaukee/Sullivan, 2016.

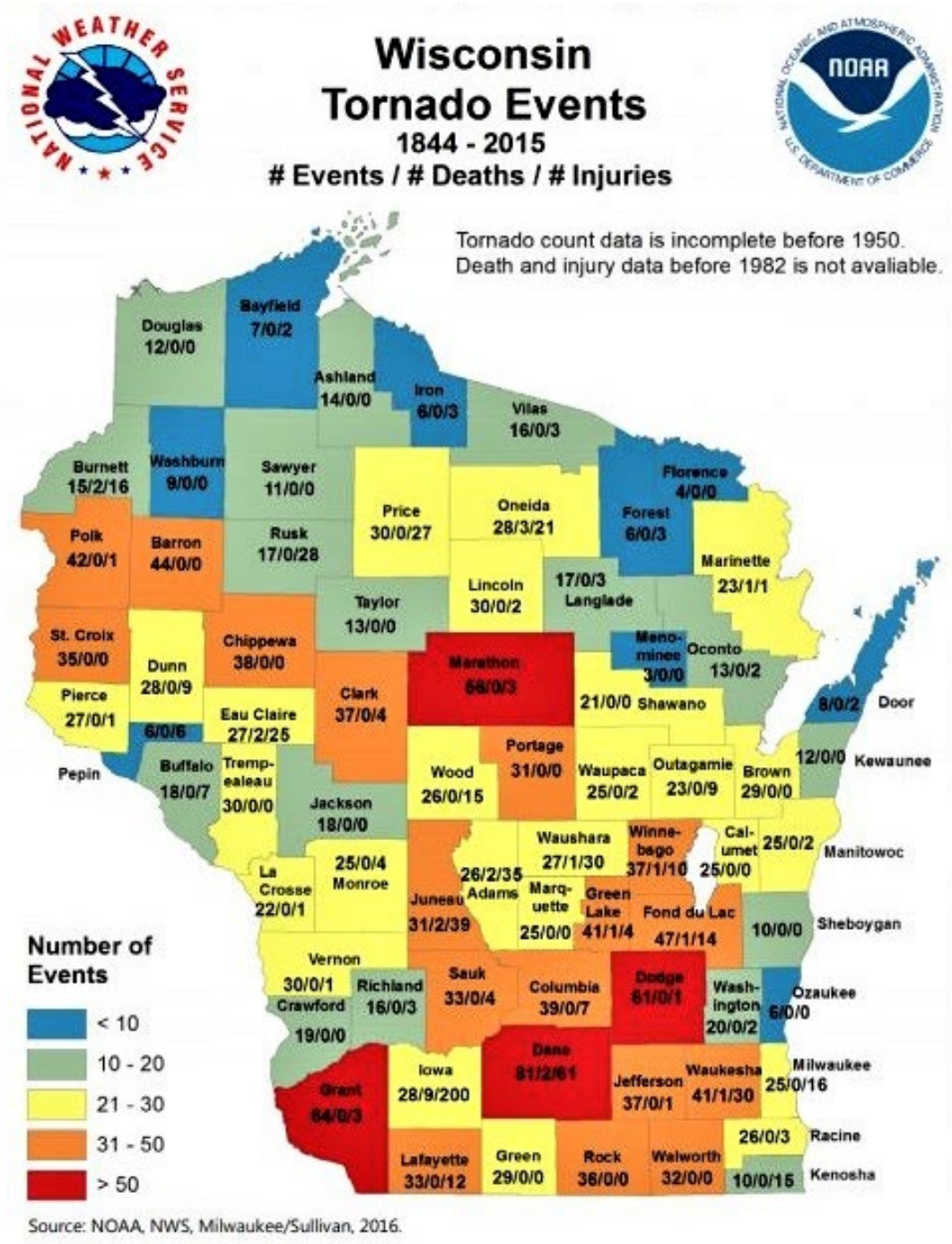
Map: Wisconsin Thunderstorm Wind Events by Number of Events, Deaths, and Injuries

Source: [Wisconsin 2016 THIRA]



Map: Wisconsin Tornado Events by Number of Events, Deaths, and Injuries

Source: [Wisconsin 2016 THIRA]



Both thunderstorm winds and tornadoes can lead to loss of life, injury, and damage to property, infrastructure, crops, and forested areas. Wind and tornadoes often create excessive amounts of debris that then needs to be cleaned up and managed properly. Securing the workforce to clean up after a significant event can be problematic and costly. Additionally, disposing of the debris requires knowledge of local disposal requirements and permitting, which may also be costly.

Table: Tornado Property/Crop Loss Estimates in Portage County (1950-2015)

Number of Tornadoes	23
Total Damages	$4,186,800
Avg. Damage per Tornado	$182,035
Estimated Annual Tornadoes	0.35
Estimated Future Annual Losses	$63,436

Source: State of Wisconsin Threat Hazard and Risk Assessment/ State Preparedness Report 2016

Table: Tornado Death/Injury Loss Estimates in Portage County (1950-2015)

Total # of Deaths	2
Estimated Annual Deaths	0.030
Estimated Annual Loss Due to Death	$209,091
Total # of Injuries	4
Estimated Annual Injuries	0.061
Estimated Annual Loss Due to Injury	$17,455

Source: State of Wisconsin Threat Hazard and Risk Assessment/ State Preparedness Report 2016

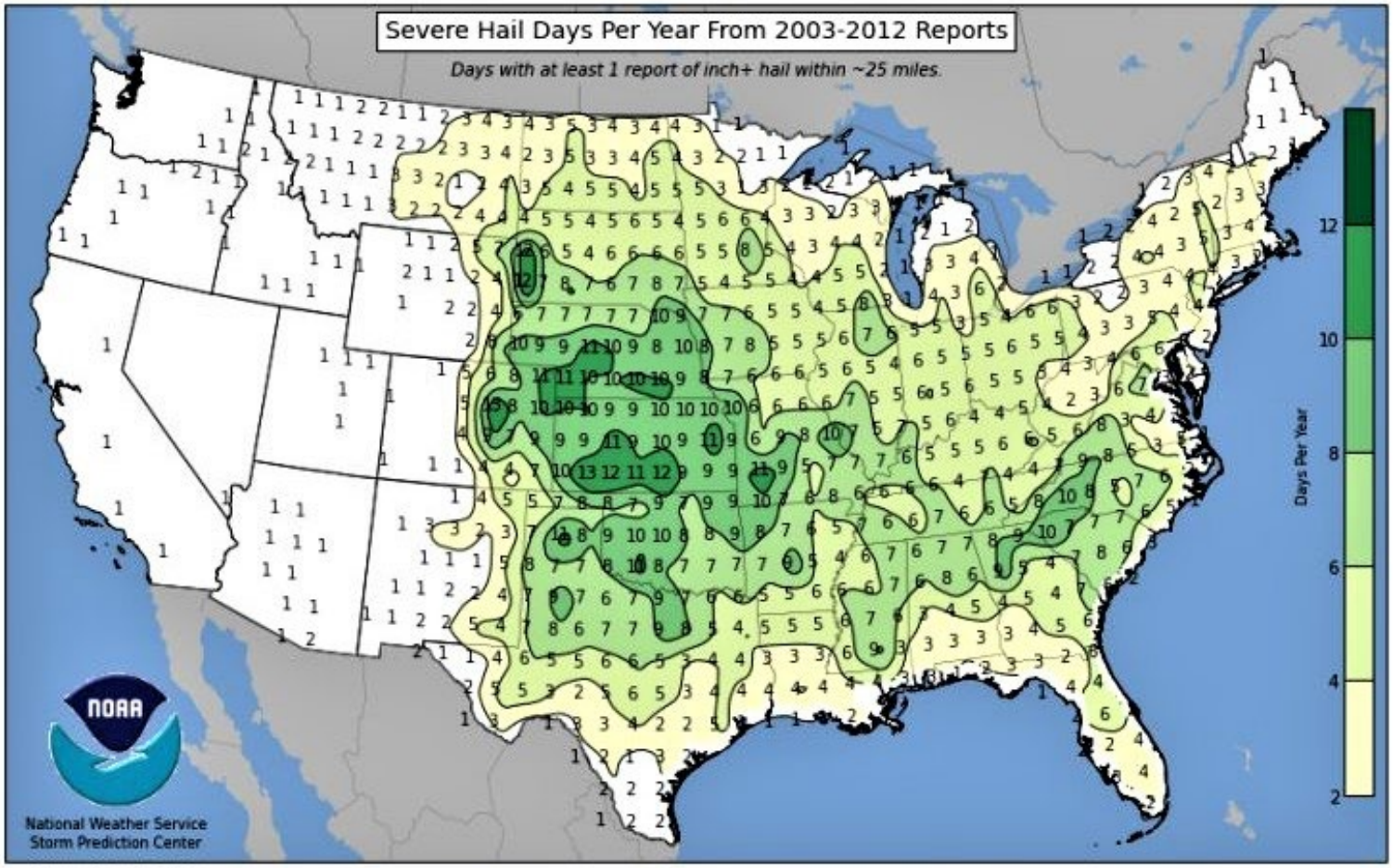
Hail

Hailstorms are relatively frequent across the US. Since 1986, nearly 3,000 individual hail events have been reported annually across the country. The map below, entitled US Average Number of Hail Days, depicts the annual number of days with severe hail (one inch in diameter or larger) reports per 100 square miles in the US. Although they can occur in any state in the mainland US, the states with the highest average number of annual hail days are in the Great Plains with Kansas, Oklahoma, Nebraska, South Dakota, and Texas leading. Southwestern Kansas sees the most severe hail days per year, over 12, while other Great Plains areas average only six or seven.

Compared to the Great Plains, during this nine-year period, Wisconsin experienced significantly fewer severe hail days per year, on average. In fact, most of Wisconsin's counties experienced an average of only two to five severe hail events annually from 2003 to 2012, with a higher average concentration of up to eight events in southeastern Wisconsin.

Though hail-related fatalities are rare, hail can cause tremendous amounts of crop and property damage. On average, hail causes $1 billion in damage to crops and property each year in the US. The costliest hailstorms in the US occurred in Dallas/Fort Worth, Texas, on May 5, 1995, and in St. Louis, Missouri, on April 10, 2001. Both storms had reported damages of over $2 billion. The largest hailstone ever recorded fell in Vivian, South Dakota, on July 23, 2010, with a diameter of eight inches and weighing almost two pounds.

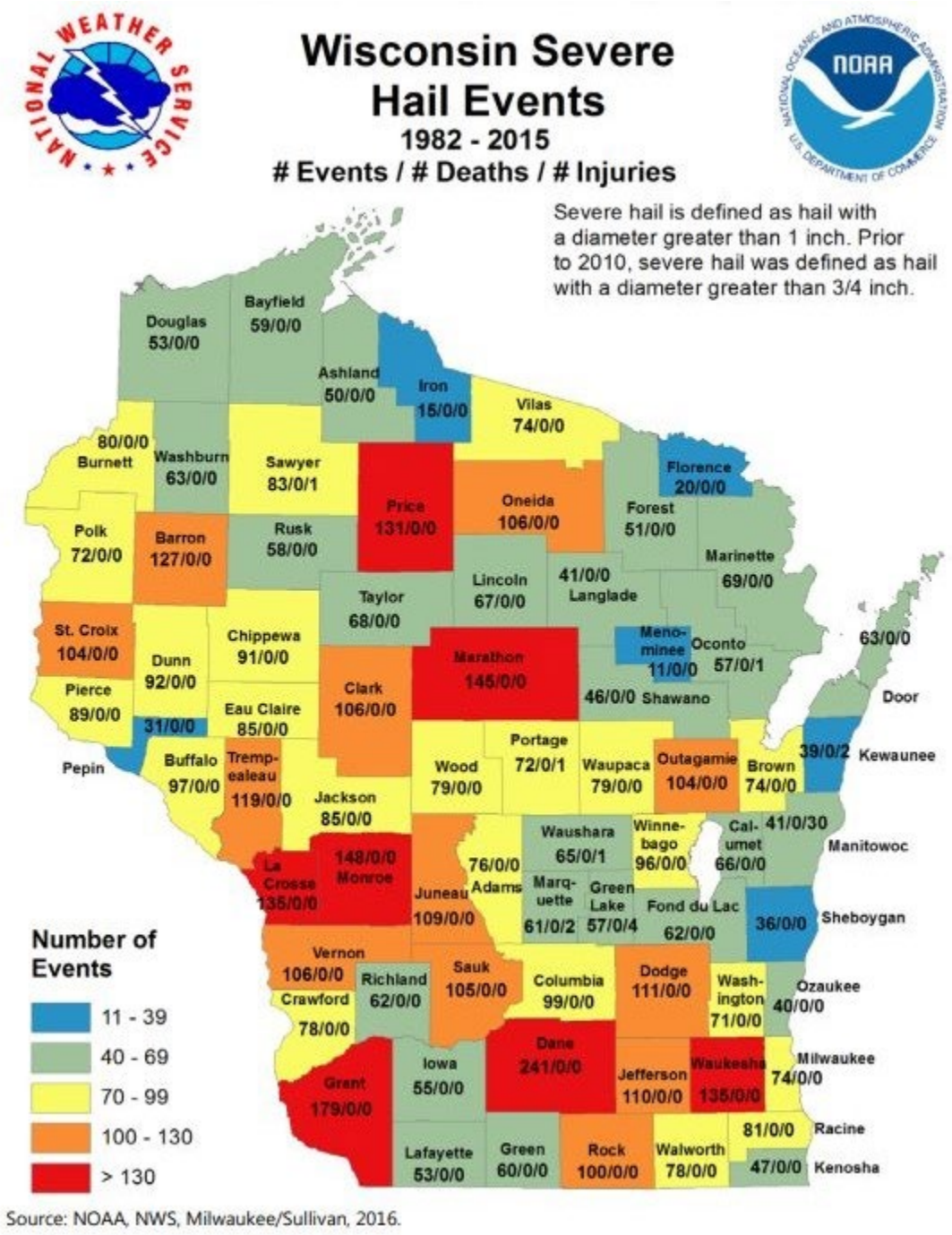
Map: US Average Number of Hail Days, 2003-2012



Source: NOAA, NWS, Storm Prediction Center, http://www.spc.noaa.gov/wcm/, accessed 10/24/2016.

Map: Wisconsin Severe Hail Events by County

Source: [Wisconsin 2016 THIRA]



Both agricultural and urban land uses are susceptible to costly hail damage. Many Wisconsin counties, such as Dane and Grant, have large proportions of their land area devoted to agricultural purposes. Accounting for 85% of Wisconsin's hailstorms, May through September are the months of maximum hailstorm frequency in Wisconsin. Unfortunately, those months also correspond to the growing and

harvesting season for most of the state's crops. Crop damage from hail can devastate an agricultural region's economy.

Counties like Milwaukee, Waukesha, Dane, and St. Croix, have high concentrations of development and dense population centers. Property damage to structures, vehicles, and occasionally infrastructure, from hail, is relatively standard.

Surprisingly, very few injuries resulting from hail have occurred in the more densely populated areas of the state. Manitowoc County has seen the highest number of reported injuries from hail, 30, all of which stemmed from a single severe hailstorm event on May 12, 2000. Between 1994 and 2015, there were a total of 41 injuries reported in the state as a result of hail. There have been no fatalities in Wisconsin due to hail, but there have been a few nationwide.

Table: Portage County Hail Event Damage

Number of Hail Events	71
Reported Injuries	1
Estimated Losses from Injuries	$60,500
Reported Property Damages	$312
Reported Crop Damages	$0
Total Reported Damages	$60,812
Average Damages per Hail Event	$857
Estimated Annual Hail Events	3.23
Estimated Future Annual Damages	$2,764

Source: State of Wisconsin Threat Hazard and Risk Assessment/ State Preparedness Report 2016

Lightning

According to the National Weather Service (NWS), on average, about 25 million cloud-to-ground lightning strikes are detected in the continental United States annually, with nearly half of all flashes contacting more than one ground point. In addition, there are roughly five to 10 times as many cloud-to-cloud flashes as there are cloud-to-ground flashes (NWS). Large outdoor gatherings (sporting events, concerts, campgrounds, etc.) are particularly vulnerable to lightning strikes that could result in injuries and deaths. This vulnerability underscores the importance of developing site-specific emergency procedures for these types of events, with particular emphasis on adequate early warning. Early warning of lightning hazards, combined with prudent protective actions, can significantly reduce the likelihood of lightning-related injuries and deaths.

In the 76-year period between 1940 and 2015, there were 9,311 fatalities in the US attributed to lightning strikes. That averages about 123 per year. However, in the 30-year period from 1986 to 2015, the average was 48 lightning fatalities per year, and in the 10-year period from 2006 through 2015, the average was only 31 deaths per year. Since 2010, there have never been more than 30 lightning deaths in one year. The pattern indicates the number of deaths from lightning in the US is declining over time. This could be caused by better education and information about the risks of lightning and improved forecasting and warning systems.

Lightning occurs with most severe thunderstorms but does not always produce damages. The probability of lightning happening in the state is quite high due to the high number of severe

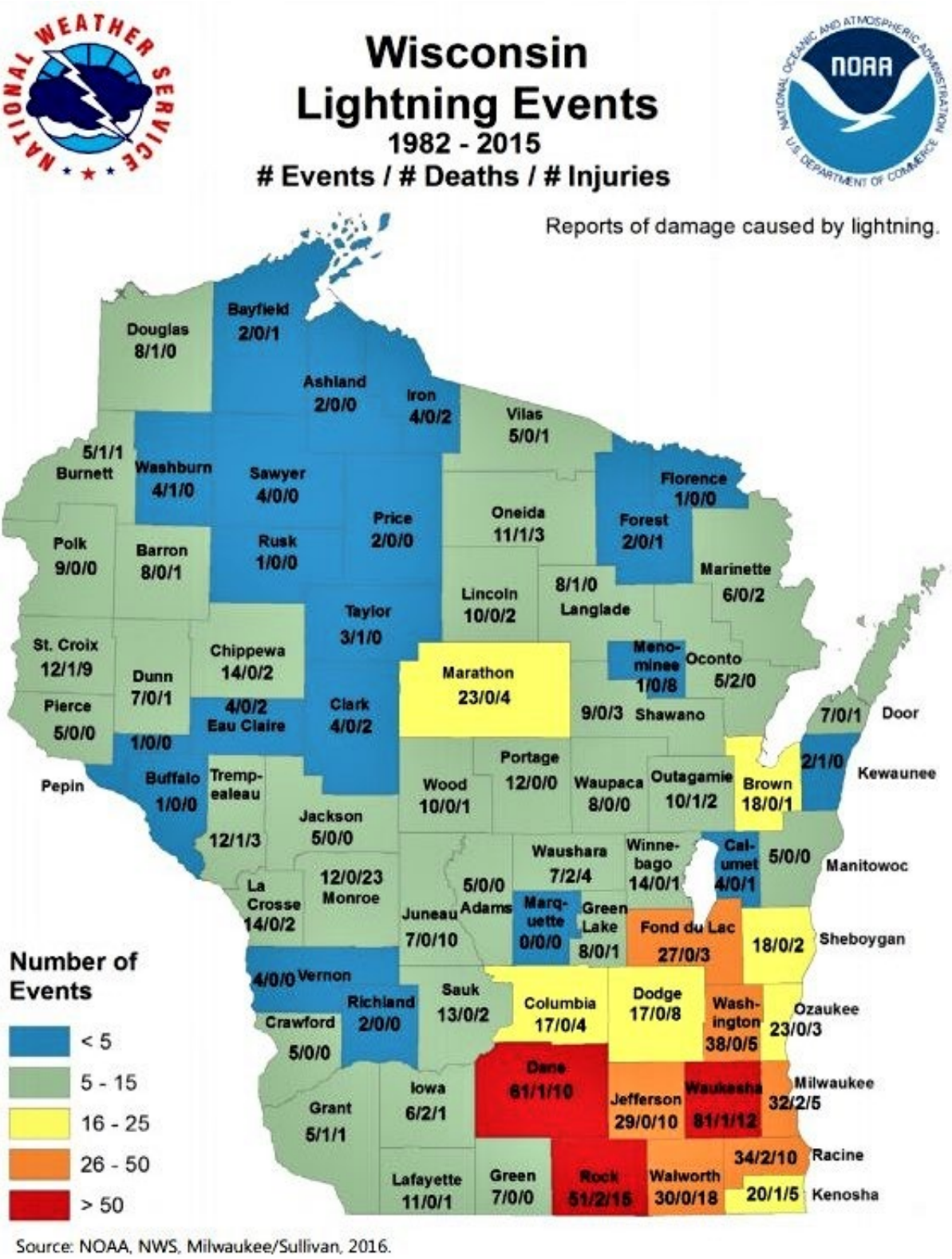
thunderstorms in the state; however, the site-specific incidence of lightning is considered low because of the extremely localized nature of the hazard.

In Wisconsin, there were 872 reported lightning events between 1982 and 2015. During this period, 26 deaths and 210 injuries from lightning were reported in the state. These numbers are likely underestimated because few people report suspected lightning deaths, injuries, and damages.

Wisconsin also has a high frequency of property loss due to lightning. During the 16-year period from 2000 to 2015, there was nearly $55 million in property and crop damages from lightning reported in Wisconsin (NWS, 2016). One of the most damaging lightning events occurred during a storm in Kenosha on August 24, 2006. Lightning was responsible for at least $14 million in damages.

Map: Wisconsin Severe Hail Events by County

Source: [Wisconsin 2016 THIRA]



Jurisdiction-specific Hazard Considerations and Impact/Vulnerability

The information in the table below was collected during the mitigation workshops and was submitted by a representative from the municipality. The table is not inclusive of impacts on all jurisdictions and strictly includes information directly provided by the municipality.

Table: Jurisdiction-specific Hazard Impact/Vulnerability for High Wind and Tornado

Jurisdiction	Affected Jurisdictions' Hazard Considerations and Impact/Vulnerability
Town of Eau Pleine	The flat open land allows high winds to knock over power lines.
Town of Linwood	The flat open land allows high winds to knock over power lines.
Town of New Hope	Year-round high winds carry debris onto roadways obstructing traffic.
Town of Plover	Year-round high winds create poor visibility and poor breathing conditions in the fall and spring due to dirt in the air.
Village of Park Ridge	High winds cause tree damage in the heavily wooded areas that result in road closures and power line outages.
Village of Plover	Straight-line winds can impact undeveloped farmlands surrounding the east and south boundaries of the village and power line outages can occur.

Catastrophic Scenario

The following chart, from the *2016 State of Wisconsin Homeland Security Council Threat and Hazard Identification and Risk Assessment* (THIRA), shows the most catastrophic severe weather events in the State. While the probability of severe weather varies throughout, these events demonstrate the most extreme possibilities of severe weather in Portage County.

Chart: Wisconsin Record-Breaking Storm Facts

Record	Location(s)	County/-ies	Date	Magnitude
Deadliest Tornado	New Richmond	St. Croix	June 12, 1899	117 killed
Longest-Track Tornado	River Falls to Van Buskirk	Pierce to Iron	April 5, 1929	187 miles
Most Tornadoes in One Day	Central Wisconsin	Dane, Jefferson, others	August 18, 2005	27 tornadoes
Costliest Tornado	Barneveld	Iowa	June 8, 1984	$40.4 m ($82.1 m adjusted)
Largest Hailstone	Wausau	Marathon	May 22, 1921	5.7 inch diameter
Costliest Hailstorm	Southern Wisconsin	Iowa to Milwaukee	April 13, 2006	$420 m

Source: WEM, 2016.

The table below highlights the minimum and maximum extent based on historical NOAA data of events that have impacted the County.

Table: Severe Weather Hazard Extent

Hazard Type	Affected Jurisdictions	Extent (based on historical events)		Comments
		Minimum	Maximum	
Hail	County-wide	0-inch hail	3-inch hail	
Lightning	County-wide	Strikes in an empty field	Strikes a Communication Tower	Striking a Critical Infrastructure Facility or Power Lines would cause extensive damage too
Thunderstorm Wind	County-wide	0 kts	90 kts	The most damaging event had speeds over 70 mph that was sustained for long periods over populated areas
High Wind	County-wide	0 kts	58 kts	
Tornado	County-wide	EF0	EF4	$250,000 in damages from the F4 tornado that hit in 2951. In 2011, an EF 1 caused $1.8 million in damages due to the impacting farm infrastructure.

Analysis

Probability for Severe Thunderstorm Hazard

Based on the Planning Area Risk Ranking, severe weather is given a "High" risk ranking summary because significant occurrences of this hazard have happened and impacted property. Of the event types that included in severe weather, thunderstorm winds are the most frequently occurring event followed by hail. According to NCEI data, over 100 thunderstorm wind events occurred from 1950 to May 2019, correlating to at least two of these events happening each year. The NCEI data indicate that over 80 hail events occurred in this same period, emphasizing that at least one of these events happens every year.

Geographic Location for Severe Thunderstorm Hazard

The entire county has the same risk for the occurrence of severe weather hazards.

Loss Estimates

The magnitude of economic losses is difficult to estimate. Government figures suggest annual national costs at around $30 million, but some researchers find evidence that losses may be in the billions of dollars. For example, in July 2018 at least 41 tornadoes and high wind damage from thunderstorms impacted numerous Central and Eastern states over a multi-day event resulting in an estimated cost of $1.6 billion and zero deaths (NCDC NOAA).

Combining the damage reported in Portage County for thunderstorm winds, strong winds, hail, lightning, tornados, and high wind, from the 1950s to May 2019, $8,707,200 in property damage has been reported (NCEI**)**. Thunderstorm winds accounted for $4,776,000 of the damage, and tornados accounted for $3,892,500. While hail only accounted for $200, economic loss can be extensive, especially to agricultural-based economies. Hail is very damaging to crops. Severe hail may cause extensive property damage, including damage to vehicle paint and bodywork, glass, shingles and roofs, plastic surfaces, etc. Hail loss nationally is estimated at over one billion dollars annually.

Only 23 tornado incidents have been reported in Portage County, making it the highest property damage hazard per event.

Hazard Extent for Severe Thunderstorm

The extent of the historical thunderstorms varies in terms of the severity of the storm, wind speed, and size of hailstones. Thunderstorms can occur at any location within the county. Often, thunderstorms are compounded by the impact of tornado damage. National Aeronautics and Space Administration (NASA) scientists suggest that the US will face more severe thunderstorms in the future, with lightning, damaging hail, and the potential for tornadoes in the event of climate change.

Additionally, thunderstorms can produce heavy rain that can cause road wash out. Further detail on heavy rain events is detailed under Flooding (Including Dam Failure).

Lighting strikes are of special concern for the wide-open fields and metal farm equipment.

Analysis of Community Development Trends

Preparing for severe storms will be enhanced if officials sponsor a wide range of programs and initiatives to address the overall safety of county residents. New structures need to be built with more-sturdy construction, and those structures already in place need to be hardened to lessen the potential impacts of severe weather. Community warning sirens to provide warning of approaching storms are also vital to preventing the loss of property and ensuring the safety of Portage County residents.

Vulnerability to Future Assets/Infrastructure for Severe Thunderstorm Hazard

All future development within the county and all communities will remain vulnerable to these events.

Vulnerability Analysis for Severe Thunderstorm Hazard

The only recorded natural hazard event to cause death and injury in Portage County was a tornado. The tornado touched down in 1956. The Portage County Community Preparedness and Mitigation Survey highlights that the majority of the individuals in the community have a basement or well-built tornado shelter. While advancements in buildings improve survival rates and can decrease property damage, new developments, especially new costly buildings, in the area can yield higher damage rates when not constructed to withstand hazard events.

Severe thunderstorms are an equally distributed threat across the entire jurisdiction; therefore, the entire County's population and all buildings are vulnerable to a severe thunderstorm, and the same impacts can be expected within the affected area. This plan will, therefore, consider all buildings within the county as vulnerable.

Historical records for severe thunderstorms are available and reliable, indicating that they occur at least twice a year in Portage County.

Conditions leading to wind events typically develop with days of warning, and like high wind events and thunderstorms, meteorologists can forecast the potential of hailstorms, often giving several hours of notice that hail may form.

Impact on Portage County Residents

Severe weather hazards, except tornados, are not usually life-threatening. The impact on Portage County residents will, likely, be limited to minor property damage to their homes or vehicles due to minor flooding or hail and greater damage from the wind portion of these events.

It is possible that lightning strikes could cause substantial damage or injury in Portage County directly or indirectly (i.e., trees or tree limbs have been known to fall onto property due to lightning or wind). Other impacts to residents include power outages, obscured and potentially dangerous driving conditions, or temporary roadway obstructions.

Impact on Essential Facilities and Other Property

All facilities are vulnerable to severe weather events, particularly properties in poor conditions. Properties at higher elevations are more prone to wind damage. An essential or critical facility will encounter many of the same impacts as any other building within the jurisdiction. These impacts can include structural failure, damaging debris (trees or limbs), roofs blown off, or windows were broken by hail or high winds, fires caused by lightning, and loss of building functionality (e.g., a damaged police station will no longer be able to serve the community).

Impact on Critical Infrastructure

During a severe weather event, the types of infrastructure that could be impacted include roadways, utility lines/pipes, railroads, and bridges. Because the County's entire infrastructure is equally vulnerable, it is important to emphasize that any number of these structures could become damaged during a severe thunderstorm. The impacts on these structures can include broken, failed, or impassable roadways or broken or failed utility lines (e.g., loss of power or gas to the community). Bridges could fail or become impassable, causing risk to traffic.

Impact on the Environment

Tornado and high wind events can destroy trees, buildings, and other important infrastructure. Tornados have been known to kill animals, damage farmland, and disrupt the food chain. Tornados can also cause water contamination, impacting local flora and fauna, not to mention humans. If a high wind or tornado hits power lines or causes gas leaks, fires, or contamination can also result. It is possible that numerous periods of heavy rainfall could cause or exacerbate flooding and erosion problems in some areas. Lightning and hail could damage trees and vegetation, but such damage is not likely to be severe. Major concerns are "dry thunderstorms" or "dry lightning storms," which can produce lightning and high winds with no rain to extinguish or mitigate resulting fires.

Impact on Operations

Vulnerabilities associated with tornadoes include the warning siren systems and police/fire/emergency medical facilities, including any staff active during the initial impact of a tornado. All personnel in vehicles are particularly vulnerable during severe weather events. These events can make roads impassable or disable communication lines, which means breakdowns or delays in all potential operations are possible. Private or public urban tree removal services are also vulnerable to tornadoes.

Flooding (Including Dam Failure)

Nature of the Hazard

The National Flood Insurance Program (NFIP) defines **flooding** as "a general and temporary condition where two or more acres of normally dry land, or two or more properties, are inundated by water or mudflow" (NFIP, 2016). Floods are natural events that provide many environmental benefits, such as enriching soils and recharging aquifers. Floods are only considered hazards when development occurs in the floodplain, exposing people and/or property to the risk of flood damages. Nationwide, hundreds of flood hazard events occur each year, making it one of the most common hazards in all 50 states and US territories (FEMA, 2011).

Floods specifically affect **floodplains**, lowland areas adjacent to lakes or rivers periodically covered with water. In Wisconsin, riverine floodplains range from narrow, confined channels in the steep valleys of hilly regions, to broad, flat areas in plains and coastal regions. The amount of water that inundates a floodplain is a function of the size and topography of the contributing watershed, the regional and local climate, geological characteristics, and land use attributes.

The US experiences many different types of floods, the most common of which is riverine flooding, also known as overbank flooding. Wisconsin is also prone to experiencing flash floods, ice jam floods, local drainage floods, and high groundwater floods. Flash floods, in particular, are notable for their rapid escalation, which typically occurs with little or no warning and tends to be accompanied by other problems.

By definition, **flash floods** occur within six hours of a causative event such as heavy rains, rain combined with snowmelt, ice jams, or dam failures. They usually involve a rapid rise in water level, high-velocity discharge, and large amounts of debris. Flash floods can cause significant damage, including the toppling of trees, undermining of buildings and bridges, scouring of channels, and the creation of sinkholes. The intensity of flash flooding is a function of the severity and duration of rainfall, steepness of the watershed, stream gradients, watershed vegetation, natural and artificial flood storage areas, and configuration of the streambed and floodplain.

Urban areas are progressively subject to flash flooding due to the removal of vegetation, installation of impermeable surfaces, and construction of manmade drainage systems. Much of the flooding on Wisconsin's larger rivers occurs more than six hours after a causative event. This kind of flooding can ultimately affect not only larger rivers but also small streams and low-lying areas outside of the floodplains of larger rivers. In Wisconsin, it is not uncommon for flash flooding on larger rivers to transition into general river flooding that persists for days.

Prolonged periods of rainfall from weather systems covering large areas represent the most common cause of flooding in Wisconsin's large rivers. These systems may saturate the ground and overload the rivers and/or reservoirs in numerous smaller basins that drain into larger rivers. Localized weather systems, such as thunderstorms, may cause intense rainfall over smaller areas, leading to flooding in smaller rivers and streams. These events may also lead to flooding in more extensive waterways, as smaller rivers and streams feed into larger systems. Annual spring floods caused by the melting of snowpack may affect both large and small rivers and areas.

Floodplain Regulation and Mapping

Humans have settled on the edges of lakes, rivers, and other waterbodies since the earliest civilizations. This innate attraction to water has unfortunately resulted in widespread, costly, and repetitive flood damages where development infringes upon the natural floodplain. Regulatory measures have thus been enacted to reduce flood risk, prevent loss of life and damage to property, and maintain the inherent value of undeveloped floodplains. The successful regulation of development in floodplains relies on collaboration between multiple levels of government.

At the Federal level, floodplain regulation primarily falls to FEMA and the National Flood Insurance Program (NFIP). The NFIP, established in 1968, administers the nationwide flood insurance program and sets standards for floodplain management as part of the requirements for participating in the program. NFIP requirements are outlined in 44 Code of Federal Regulations 59-72. Communities that participate in the NFIP ensure the availability of federally-backed flood insurance policies for the homeowners, renters, and businesses in their jurisdiction. As of August 2016, 547 Wisconsin communities participate in the NFIP; 65 additional communities have mapped floodplains but are not currently in good standing with the program (NFIP, 2016).

FEMA produces **Flood Insurance Rate Maps (FIRMs)**, which show areas at risk of flooding and provide a basis for regulatory decisions and insurance requirements. FIRMs are generated using data from Flood Insurance Studies (FISs), engineering studies that examine records of river flow, rainfall, hydrologic and hydraulic analyses, topographic surveys, and community information. FIRMs were first distributed as printed paper maps, but in recent years FEMA has switched to Digital Flood Insurance Rate Maps (DFIRMs).

FIRMs show the **Special Flood Hazard Area (SFHA)**, defined as the area that is inundated during the base flood, also known as the 1-percent-annual-chance or “100-year” flood. In Wisconsin, the base flood is also referred to as the regional flood. In areas where the Base Flood Elevation (BFE) has been calculated through engineering studies, it serves as the regulatory benchmark for structure elevation or floodproofing. Flood insurance premiums are determined by a structure’s elevation in relation to the BFE. State statutes refer to the BFE as the regional flood elevation; in Wisconsin, the flood protection elevation is two feet above the regional flood elevation.

Floodplain regulation activities in Wisconsin are administered by the Wisconsin Department of Natural Resources (DNR) Floodplain Management Section. The State of Wisconsin has required communities to regulate floodplains since 1968 through Chapter NR 116 of the Wisconsin Administrative Code. The standards established in ch. NR 116 exceeds the minimum requirements set by the NFIP to provide a higher level of protection to Wisconsin residents. Some of the higher standards set by Wisconsin include the prohibition of structures in the floodway, the requirement that elevated structures be at least two feet above the regional flood elevation, and the requirement that structures have dryland access even during flooding.

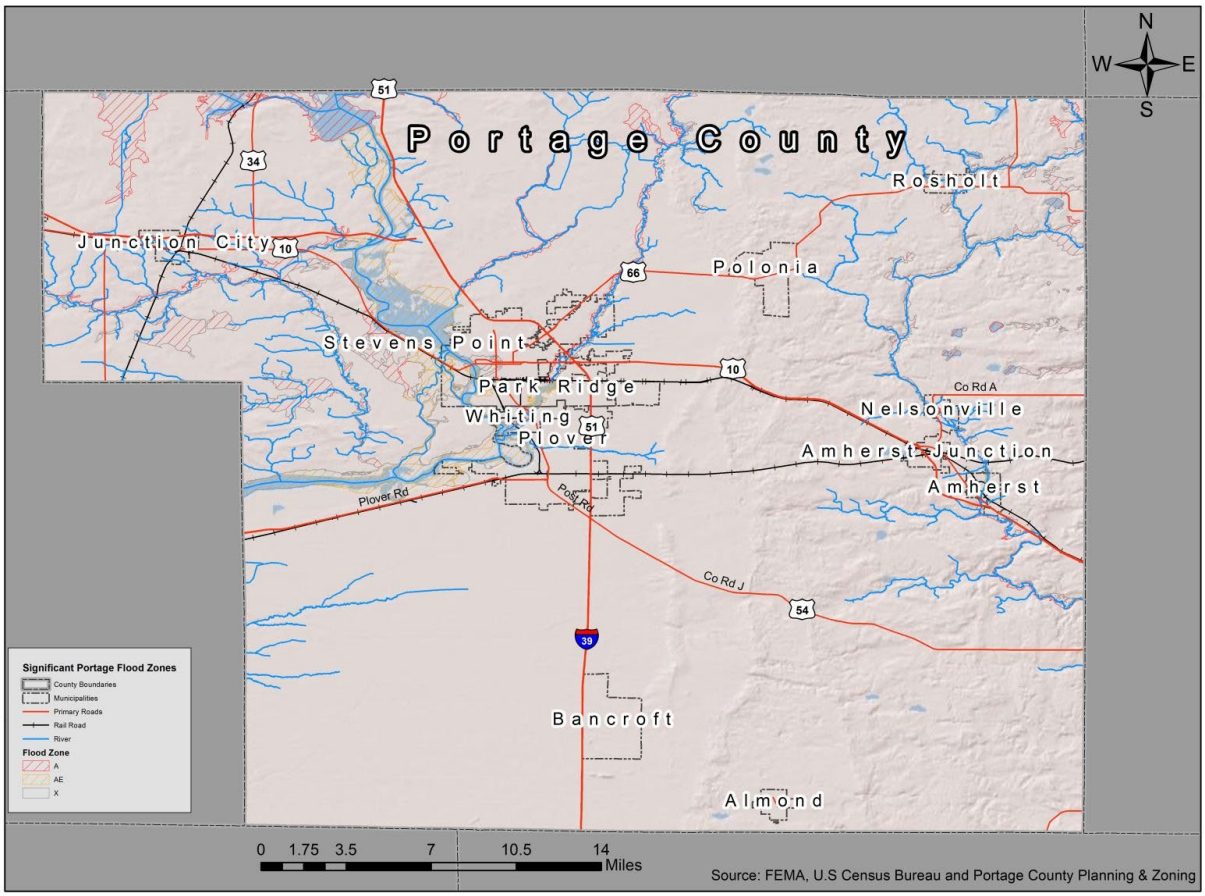
State floodplain managers also support FEMA’s flood mapping efforts. DNR engineers often conduct the engineering studies and hydraulic analyses used to create FISs and DFIRMs under FEMA’s Risk MAP program. DNR staff reviews and approves these studies to ensure compliance with ch. NR 116.

Local governments are responsible for regulating new construction in mapped flood hazard areas and are typically the first point of contact for community members regarding floodplain management issues. Communities manage floodplain development through their local floodplain ordinances. Wisconsin state statutes require communities to adopt a reasonable and effective floodplain ordinance if adequate

hydraulic and engineering data is available in their area. Local ordinances are necessary to comply with both ch. NR 116 and 44 CFR 59-72 if the community wishes to participate in the NFIP. The DNR provides two model ordinances that communities can use to achieve compliance.

Communities must enforce Federal, state, and local floodplain ordinances and make FIRMs and FISs available to the public to remain in good standing with the NFIP. FEMA can penalize communities that fail to meet these requirements through probation or suspension from the NFIP. The DNR can take enforcement action if communities violate the minimum requirements of NR 116.

Map: Flood Zones (larger map can be downloaded here)
Source: *FEMA NFHL*



Flood Mitigation

Attempts to reduce flood risk take one of two approaches: those that focus on controlling the flood through structural means, and those that aim to reduce vulnerabilities through smaller-scale projects such as elevations and acquisitions. Large structural projects may provide significant short-term benefits but tend to be costly and often have unpredictable secondary effects. In contrast, smaller projects tend to be more cost-effective, work with rather than against the system's natural tendency to flood, and often provide additional flood storage capacity.

Many historically flood-prone urban areas have been removed from the regulatory floodplain through the application of two structural flood mitigation measures: 1) flood control dams, which reduce peak discharges; and, 2) levees, which redirect floods away from areas that would otherwise be inundated. As Wisconsin develops, urbanization decreases the abilities of natural systems to absorb rainfall due to the increased amount of impervious surfaces and subsequent increase in runoff. Structural flood mitigation projects may not be able to protect increasingly severe flood events if they are designed based on pre-urbanization conditions.

Although flooding resulting from inadequate man-made or “gray” infrastructure presents serious issues that communities must address, the NFIP has not typically mapped this type of flooding. Because the NFIP only requires local governments to impose land use regulations in a mapped floodplain, there is little regulatory incentive for communities to take action. The NFIP standard flood insurance policy, however, often pays claims for flood losses in areas with inadequate infrastructure.

"Green infrastructure" is another type of mitigation that should be considered to reduce the impact of flooding on the community and the ecosystem. Green infrastructure spans from the use of open green space to divert water overflow to wetland restoration. Until the mid-twentieth century, wetlands were viewed as having low to no value, which consequently led to a lack of earlier wetland protection and mitigation policies. The momentum for protective wetland laws started with the foundational environmental protective laws, such as the Environmental Protection Policy Act, National Environmental Protection Act, and the Clean Water Act (CWA), which is the basis for wetland regulatory programs (Stapleford, 2007). Today, different entities run wetland mitigation and disaster mitigation. While this division allows for specialized attention on either disaster or wetland mitigation, the division creates a coordination barrier. Ultimately, future disaster and wetland mitigation (and additional green infrastructure) projects will only be successful when coordinated.

Dam Failure

A **dam** is a barrier, typically constructed of earth, rock, concrete, or mine tailings, used to store, control, or divert water. The water impounded behind a dam is referred to as the **reservoir** and its volume is measured in acre-feet, with one acre-foot being the volume of water that covers one acre of land to a depth of one foot. Due to topography, even a small dam may have a reservoir containing many acre-feet of water. The water (or other liquid) stored behind a dam can have catastrophic downstream impacts if released suddenly due to dam failure or misoperation.

A **dam failure** is a collapse, breach, or another failure of a dam that causes downstream flooding (FEMA, 1997). Dam failures usually occur when the spillway capacity is inadequate, and water overtops the dam or when internal erosion through the dam foundation occurs (also known as piping). During a dam failure, a high-velocity, debris-laden wall of water can be released and rush downstream, damaging or destroying whatever is in its path. Dam failures may result from one or more the following:

- Prolonged periods of rainfall and flooding (the cause of most failures)
- Inadequate spillway capacity which causes overtopping flows
- Landslides into reservoirs
- High winds
- Internal erosion
- Flood debris blocking gates
- Erosion due to embankment or foundation leakage or piping

- Improper design or maintenance
- Negligent operation
- Failure of upstream dams
- Earthquake

For emergency planning purposes, dam failures are categorized as either rainy day or sunny day failures. **Rainy day failures** involve periods of excessive precipitation leading to unusually high runoff. This high runoff increases the reservoir level, and if not controlled, the overtopping of the dam or extreme water pressure can lead to dam failure. Regular storm events can also lead to rainy day failures if water outlets are plugged with debris or otherwise made inoperable. **Sunny day failures** occur due to poor dam maintenance, damage/obstruction of outlet systems, or vandalism. This is the worst type of failure and can be catastrophic because the breach is unexpected, and there may be insufficient time to warn downstream residents adequately.

History

History of Flooding

The following are descriptions of major flooding events affecting Portage County 1973 - May 2019

1973

A major Flooding Event affected the following Counties: Adams, Brown, Buffalo, Chippewa, Clark, Crawford, Door, Dunn, Eau Claire, Green Lake, Jefferson, Kenosha, Kewaunee, La Crosse, Langlade, Lincoln, Manitowoc, Marathon, Marinette, Marquette, Milwaukee, Oconto, Outagamie, Ozaukee, Pepin, Portage, Racine, Rock, Rusk, Sheboygan, Walworth, Waukesha, Waupaca, Waushara, Wood

Fatalities: 0

Total Damages: $24,000,000

No additional data are available.

June - Aug. 1993

Major flooding impacted nine Midwestern states during the summer of 1993. Generating more than $15 billion in damages and resulting in 50 fatalities across the region, the 1993 flood remains one of the most severe and damaging floods in US history. The severe damages experienced during the 1993 floods, including the failure of hundreds of levees across the region, challenged traditional approaches to flood control first developed in the 1940s. The resulting shift in national policy focus toward non-structural mitigation strategies, such as reducing flood risk through acquisition and demolition of flood-prone properties and increasing natural flood storage capacity, continues today. In Wisconsin, extremely heavy rainfall resulted in a Presidential Disaster Declaration for 47 counties with total associated damage exceeding $740 million ($1.23 billion in 2016 dollars). Forty of the counties received both Public and Individual Assistance declarations, while the other seven were declared for Individual Assistance only. Though Wisconsin was not affected as severely as other states in the Midwest, the 1993 floods were one of the state's most significant disasters in terms of both damages and funds received through disaster relief programs. The total amount of disaster relief funds Wisconsin received from all declarations before 1993 was $352 million. Approximately $300 million ($480 million in 2012 dollars) in disaster relief was received for the 1993 Presidential Disaster Declaration alone.

April 2001

In 2001, flooding was the principal reason Wisconsin initially received Presidential Disaster Declaration DR-1369 although tornadoes and severe storms were also significant factors as the disaster progressed. Heavy winter snowfall combined with spring rain led to spring flooding. In mid-April, rain and rapid snowmelt caused the Mississippi River and many of its tributaries to flood. Floodwaters along the Mississippi River from Alma (Buffalo County) to Prairie du Chien (Crawford County) rose to their highest levels since 1965. Also, severe storms also struck northern Wisconsin in late April. Heavy rains mixed with freezing rain, snow, and strong winds caused widespread flooding and wind damage. The initial flooding affected 17 counties; eventually, 32 counties were declared for DR-1369 for a variety of storm-related damage, including tornadoes.

June 2002

Late in June 2002, a series of severe thunderstorms swept across central and northeastern Wisconsin. The storms produced up to 15 inches of rain in 24 hours in some locations with flooding on the Peshtigo, Wisconsin, and Yellow Rivers, flash flooding on smaller streams, and extensive ponding throughout many of the affected areas. There were reports of one to two feet of water in the streets of Marinette (Marinette County) and one foot of water in the streets of Wautoma (Waushara County). The high-velocity floodwaters destroyed or caused extensive damage to bridges, bridge approaches, culverts, and road surfaces, leaving impassable gaps on county and township roads throughout the disaster area. Erosion and scouring around culverts and bridges reached depths of up to eight feet. Marathon, Adams, Portage, and Marinette Counties were particularly hard hit. Nearly $4 million in damage was identified in these four counties, primarily to roads, bridges, drainage ditches, culverts, and sewer lines.

Sept. 2010

An extreme rainfall event, with amounts of three to six inches, occurred across parts of central and northeast Wisconsin starting on the evening of September 22 and lasting through the morning hours of September 23, 2010. The most torrential rain fell over the central part of the state where many locations received more than five inches. This led to flash flooding, as well as moderate to record river flooding across parts of central Wisconsin. A new record stage of 18.41 feet was established on the Yellow River at Babcock (Wood County). This is 6.41 feet above the flood stage. The Wisconsin River at Portage (Columbia County) set a new record crest of 20.66 feet on September 28, 2010, or 3.66 feet over flood stage.

June 2017:

Two rounds of severe storms hit north-central and northeast Wisconsin on June 11. High winds knocked down trees and caused some isolated structural damage. The first line of severe storms formed in the Dakotas the night before and moved across Minnesota and into western Wisconsin during the morning before racing across the central and northeast part of the state during the middle of the day. The second batch of storms formed in the late afternoon across northwest Wisconsin and pushed into the north-central and far northeast part of the state. The storms were a result of hot and humid air interacting with a stalled frontal system across the region.

March 2019:

A substantial area of low pressure moved across the Midwest and produced a large area of thunderstorms and heavy rain in central and northeast Wisconsin beginning late at night on March 15, 2019. A county-wide state of emergency was declared on March 14th, and the City of Park Ridge also declared a state of emergency that same day. The heavy rain resulted in rapid river rises, especially across the central part of the state. Rainfall totals of 1 to 2 inches were widespread across the region, with amounts around 3 inches in Marathon, Portage, Wood, and Waushara counties. As the storm system slowly moved away from the area, strong west winds gusting over 40 mph spread across the state, uprooting some trees in the saturated soil.

The following is Portage County's flood data from the NCDC:

The following flooding events were reported between 01/01/1996 and 05/31/2019. Important to note is that only tornado data was collected from 1950-1954, only tornado, thunderstorm wind, and hail data was collected from 1955-1992, and all events were recorded from 1996 to present (Storm Events Database).

TABLE: Flash Flood, Flooding, and Heavy Rain Events in Portage County, Wisconsin from 01/01/1996 to 05/31/2019

Source: www.ncdc.noaa.gov/stormevents

A number of County/Zone areas affected:	2
Number of Days with Event	20
Number of Days with Event and Death	0
Number of Days with Event and Death or Injury	0
Number of Days with Event and Property Damage	5
Number of Days with Event and Crop Damage	0
Number of Event Types reported	3

- In total, the events caused $2,206,000 in direct property damage. The damage was caused by only six events (4 flash flood and two flooding events) with all but one event occurring from 2010-2019. Of these six events, all but one was also labeled as a Heavy Rain event.
    - The highest damage event that occurred in this time frame occurred in 2017 and caused extensive urban flooding, including damage to roadways, homes, and power outages to more than 15,000 customers.

Map: Wisconsin Flood Events by County from 1982-2015

Source: [Wisconsin 2016 THIRA]

Source: NOAA National Weather Service, Milwaukee/Sullivan, WI, 2016.

History of Dam Failure

Between 1990 and 1995, more than 75 Wisconsin dams failed. Many of these dam failures were associated with the Great Midwest Flood of 1993. Though none of these failures resulted in any loss of life, injuries and extensive property damage occurred during several events.

Though it is a relevant hazard, Portage County has no direct history of flooding caused by the dam failure. The probability, impacts, and locations vulnerable to this hazard are discussed later in this section.

Historic Jurisdiction-specific Hazard Impact/Vulnerability

The information below was drawn from both the NCEI event narratives. As indicated in the NCEI (NOAA) data above, numerous other events have impacted the County and the municipalities. The NCEI data, particularly before the 2000s, did not always include a narrative or exact location. The chart below should be viewed as a sampling of impact on the County municipalities.

Table: Historic Jurisdiction-specific Hazard Impact/Vulnerability for Flooding

Hazard Type	Affected Jurisdictions	Comment	Date
Flooding	County Wide	Heavy rain caused street flooding.	06/28/1999
Flooding	City of Stevens Point	Heavy rain caused flooding of some underpasses in Stevens Point.	07/16/1999
Flash Flood	City of Stevens Point	Torrential rains caused many streets to flood.	06/13/2004
Flash Flood	City of Stevens Point	A report received from a person in Stevens Point indicated that about 4 inches of rain fell there in just one hour. Several roads became flooded and had to be closed, and a few basements also flooded.	06/16/2004
Flash Flood	Portage County	Heavy rain fell across Portage County, causing rivers and streams to overflow their banks, washing out roads and damaging homes and businesses. Much of the county had in excess of 4 inches of rain. The highest recorded total was 5.65 inches at Stevens Point. County crews sandbagged several roads in the northwest part of the county. The flooding caused minor damage to 36 homes and two businesses and major damage to one home.	09/23/2010
Flash Flood	City of Stevens Point	Heavy rain in Stevens Point caused flash flooding on the UW-Stevens Point campus, at St. Michaels Hospital and the County Courthouse and submerged cars on some streets. A low crossing under a railroad bridge in Stevens Point remained closed for much of the next day while the water slowly drained.	07/19/2011
Flood	City of Stevens Point	Heavy rain caused minor flooding to Stevens Point streets and low-lying areas.	07/28/2011
Flood	City of Stevens Point	Heavy rain caused urban flooding in the Stevens Point area.	09/06/2015
Flood	Junction City	The highest reported rainfall totals included: 5.10 inches near Junction City.	09/06/2015

Flood	City of Stevens Point	Several rounds of heavy rain moved across Portage County. More than three inches of rain fell near Plover (3.18 inches), and at Stevens Point (3.01 inches).	12/13/2016
Flash Flood	City of Stevens Point	Heavy rainfall caused significant urban flooding near downtown Stevens Point. Several underpasses were impassable. At least two roads were damaged when rain washed out culverts. There were at least 15 homes impacted by the heavy rain. Thunderstorm winds downed numerous trees and power lines. Power was knocked out to 15,000 to 18,000 customers. The storms also brought torrential rainfall that caused flash flooding in Stevens Point and street flooding at several other locations in central and east-central Wisconsin.	06/12/2017
Flood	County Wide	Runoff from rainfall and snowmelt combined to flood roads and low-lying areas, mainly in and around Park Ridge, Plover, Bancroft, and Almond. The runoff also caused flooding of other low-lying and poor drainage areas. The Village of Plover's wastewater system was inundated with water, and there was also considerable road and yard flooding in the village. Four homes sustained minor flood damage, and some roads were also damaged by the flooding and required repairs after the water receded. A county-wide state of emergency was declared on March 14th, and the Village of Park Ridge also declared a state of emergency that same day.	03/15/2019

Probability and Impacts

Floods are described in terms of their extent and the related probability of occurrence. Flood studies use historical records to determine the probability of occurrence for different extents of flooding. From these records, a probability of occurrence is determined and expressed in a percentage. The percentage describes the chance that the level of floodwater exceeds a certain height, on average in any given year.

The most widely adopted design and regulatory standard for floods in the US is the one percent annual chance flood (base flood), which has been formally adopted by FEMA. The base flood, or "100-year flood," has a one-percent chance of occurring in any particular year. This measure is a simple and general way to express the statistical likelihood of a flood; actual recurrence periods vary from place to place. The area that is inundated during the base flood is called the Special Flood Hazard Area (SFHA).

Smaller floods occur more often than larger, deeper, and more widespread floods. Thus, a "10- year" flood has a greater likelihood of occurring than a "100-year" flood. The table below shows a range of flood recurrence intervals and their probabilities of occurrence.

It is important to note that the risk of a flood event occurring changes over time. Since natural hazards do not affect a particular location every single year, the focus is on the overall probability of the event occurring over a selected time horizon. Assuming that most hazard events are independent outcomes, the probability of a 100-year flood occurring at any given time is 1/100 or 0.01 (one-percent annual chance). However, the probability of a 100-year flood occurring at least once over the next 100 years is 1-(0.99)^100=0.63 (63-percent chance).

Table: Flood Probability Terms

Source: FEMA, 2016

Flood Recurrence Intervals	Annual Percent Change of Occurrence
10-year	10%
25-year	4%
50-year	2%
100-year	1%
500-year	0.2%

Flood Zones are another way to describe flood risk. The National Flood Insurance Program (NFIP) utilizes Flood Zones to set insurance policy prices and convey risk to insurees. The NFIP uses Flood Insurance Rate Maps (FIRMs) to document flood zones across the country. FIRMs are

Flood hazard areas identified on the FIRM are identified as a Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded).

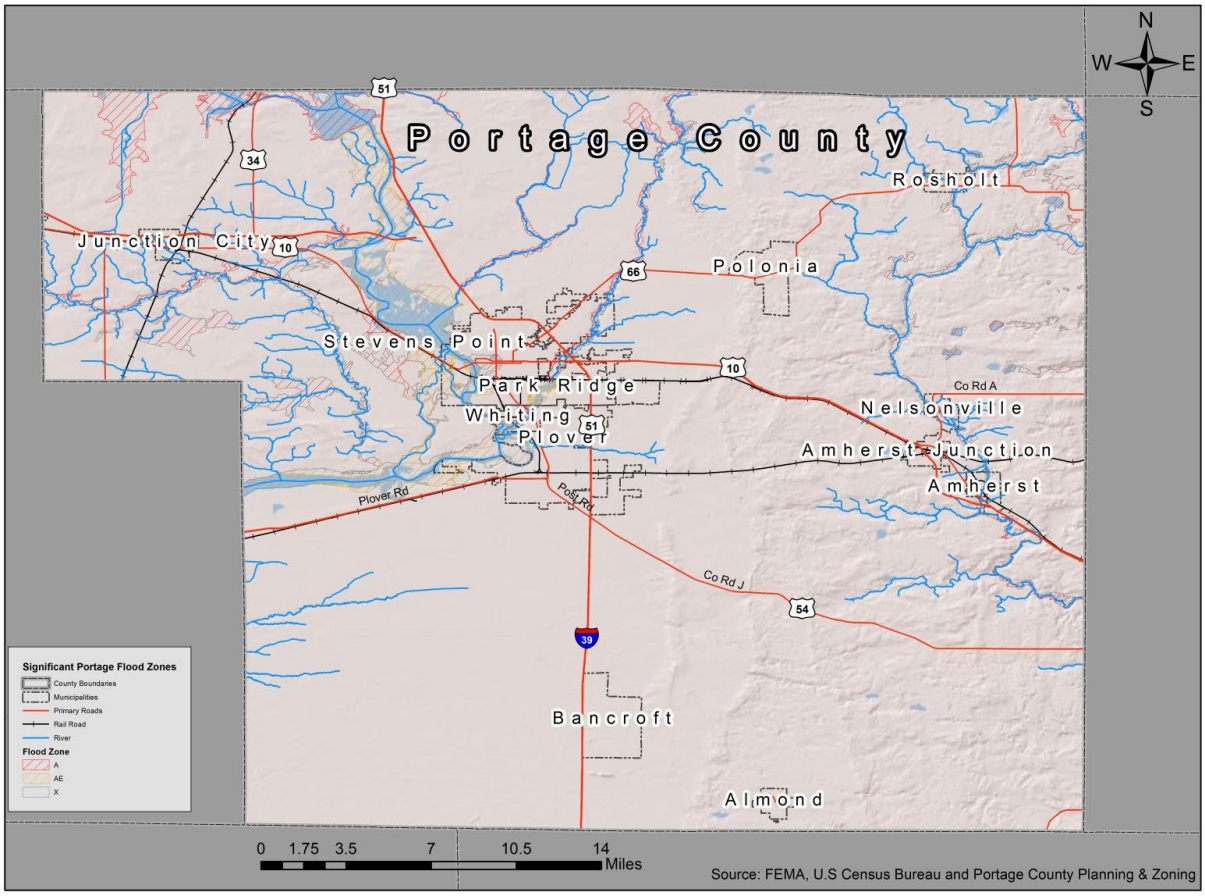
Below are descriptions of some of the most common Flood Zones.

Table: Flood Zone Descriptions
Source: FEMA, 2016

Flood Zone	Description of Risk
Zone C, Zone X	Areas determined to be outside 500-year floodplain determined to be outside the 1% and 0.2% annual chance floodplains.
Zone B, Zone X500	Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from a 100-year flood. An area inundated by 0.2% annual chance flooding.
Zone A	An area inundated by 1% annual chance flooding, for which no BFEs have been determined.
Zone AE	An area inundated by 1% annual chance flooding, for which BFEs have been determined.
Zone AH	An area inundated by 1% annual chance flooding (usually an area of ponding), for which BFEs have been determined; flood depths range from 1 to 3 feet.
Zone AO	An area inundated by 1% annual chance flooding (usually sheet flow on sloping terrain), for which average depths have been determined; flood depths range from 1 to 3 feet.
Zone AR	An area inundated by flooding, for which BFEs or average depths have been determined. This is an area that was previously, and will again, be protected from the 1% annual chance flood by a Federal flood protection system whose restoration is Federally funded and underway.
Zone A1-A30	An area inundated by 1% annual chance flooding, for which BFEs have been determined.

Portage County flood zones include Zone A, Zone AE, and Zone X. The map below shows the locations of each flood zone.

Map: Flood Zones (larger map can be downloaded here)
Source: FEMA NFHL



Repetitive Loss Properties

FEMA defines a repetitive loss structure as a structure covered by a contract of flood insurance issued under the NFIP, which has suffered flood loss damage on two occasions during a 10-year period that bends on the date of the second loss, in which the cost to repair the flood damage is 25% of the market value of the structure at the time of each flood loss. Currently, one property in Portage County is a repetitive loss structure.

Flooding Impacts

Human death and injury sometimes occur as a result of river flooding but are not common. Human hazards during flooding include drowning, electrocution due to downed power lines, leaking gas lines, fires and explosions, hazardous chemicals, and displaced wildlife. Economic loss and disruption of social systems are often enormous. Floods may destroy or damage structures, furnishings, business assets including records, crops, livestock, roads and highways, and railways. They often deprive large areas of electric service, potable water supplies, wastewater treatment, communications, and many other community services including medical care, and may do so for long periods.

Jurisdiction-specific Hazard Considerations and Impact/Vulnerability

The information in the table below was collected during the mitigation workshops and was submitted by a representative from the municipality. The table is not inclusive of impacts on all jurisdictions and strictly includes information directly provided by the municipality.

Table: Jurisdiction-specific Hazard Impact/Vulnerability for Flooding

Jurisdiction	Affected Jurisdictions' Hazard Considerations and Impact/Vulnerability
Town of Amherst	Tomorrow River Rd, Lake Emily Rd, Lake Meyers Rd, River Rd, and Lutz Lane are prone to riverine flooding
Town of Buena Vista	Shady Drive, between 54 and Old Amish are prone to urban / flash flooding. Spring melt and the corner of Shady Drive and Newby and Shady Drive south of Park Ridge are also prone to urban / flash flooding.
Town of Dewey	Dewey marsh area has road washouts. Haymeadow Drive, Oak Drive, and Birch Drive are prone to urban / flashing flooding.
Town of Eau Pleine	Recurring flooding along Wisconsin River and low lying areas.
Town of Grant	Spring flooding on the unimproved roads in the Buena Vista marsh areas and Two Mile Creek.
Town of Hull	Walkosh Road and Driftwood Drive always flood when spring runoff reaches peak levels.
Town of Linwood	Blue Heron, Hwy 66 at River view are prone to riverine flooding. HH bridge and Shoreland Drive to the north are prone to riverine flooding. 66 Rocky Run Road to West Gate Drive is also prone to riverine flooding. The businesses near HH, Marsh Road, Beut Creek, Old River Road, Sand Hill Lane, and Deer Lane South are prone to flash floods.
Town of New Hope	The town is prone to flash flooding.
Town of Pine Grove	The corner of Central Sand Road, 3rd Ave often floods as well as the southwest quarter of the township.
Town of Plover	Second dam failure. Annual spring flooding. The Bluebird subdivision and Cabernet Court homes are prone to flooding. Annual Flooding by Galecki Park
Village of Park Ridge	The village does not have storm sewers and few swales making the area prone to flash floods.
Village of Plover	As a result of two moraines in the Town of Plover, East of Pleasant Drive is prone to flooding. The old Tree Acres / re-developed area (County Hwy R and Pleasant Dr.) is prone to flooding.
City of Stevens Point	Lack of stormwater draining systems makes the city and the Village of Plover prone to flash floods.

Dam Failure:

According to the National Inventory of Dams, there are 13 dams located in Portage County. The average age of the dam is 140 years, and 69% of the dams are regulated by State agencies and 31% by federal agencies. 100% of the "high hazard potential" dams have an Emergency Action Plan. The tables below provide contextual information about these dams.

Table: Dams by Hazard Potential, Portage County 2019

Source: National Inventory of Dams

Dams by Hazard Potential	Number of Dams
High	4

Significant	3
Low	6
TOTAL	13

Hazard Rating Description

Hazard Ratings Hazard ratings are set for all large dams in the state. 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. A dam is assigned a rating of High Hazard when its failure would probably put lives at risk. (Source: Wisconsin DNR Dams Overview)

Hazard Rating: The hazard rating has been formally assigned for this dam.

Estimated Hazard Rating: The estimated hazard is based on an assessment of the existing land use downstream of the dam.

A dam may have a Hazard Rating of H and an Estimated Hazard Rating of L. In most cases this means that the existing development downstream is consistent with a Low Hazard Rating, but the dam was formally assigned a High Hazard Rating because there were not adequate land use controls in place to prevent development in the inundation area downstream of the dam. NR 333.06 requires consideration of land use and land use controls when setting a hazard rating.

Below are the available details on dams in Portage County (note - data is not available for one high hazard potential and one low hazard potential dam).

Table: Dams in Portage County, 2019

Source: National Inventory of Dams and Wisconsin Department of Natural Resources

Official Name	River	Owner	NID Height (feet)	Crest Length (from Wisconsin Department of Natural Resources)	NID Storage (acre-feet)	Max Discharge	Year Completed	Primary Type	Primary Purpose	Hazard Potential	EAP	Last Inspection Date	State Regulated	National ID#	City
DU BAY	Wisconsin River	Consolidated Water Power Company	40 Feet	8,000	128,800 acre-feet	150000	1942	Concrete	Flood Control	High	Yes	6/20/2018	No	WI00784	STEVENS POINT
NORTH DIKE AT STEVENS POINT	Wisconsin River	Consolidated Water Power Company	9.5 feet	4,000	27,000 acre-feet	140000	1846	Rockfill	Flood Control	High	Yes	6/19/2018	No	WI00781	STEVENS POINT
STEVENS POINT	Wisconsin River	Consolidated Water Power Company	26 feet	13,100	27,000 acre-feet	140000	1916	Gravity	Flood Control	High	Yes	08/05/2018	No	WI00781	STEVENS POINT
SPRING CREEK	Spring Creek	Private	13 feet	60	120 acre-feet	-	1854	Gravity	Recreation	High	Yes	6/14/2015	Yes	WI00177	-
MCDILL	Plover River	McDill Lake District	20.6 feet	450	2,160 acre-feet	3740	1855	Concrete	Other	Significant	Yes	8/24/2016	Yes	WI00176	WHITING

SPRING VILLE (ROLLER MILL)	Little Plover	Village of Plover	25 feet	276	200 acre-feet	167	1850	Other	Recreation	Significant	Yes	7/19/2017	Yes	WI00051	PLOVER
AMHERST	Tomorrow (Waupaca) River	Village of Amherst	14 feet	370	260 acre-feet	1960	1857	Gravity	Hydroelectric	Significant	Yes	12/1/2016	Yes	WI00286	AMHERST
BENTLEY SAWMILL (BENTLEY)	Plover River	Private	14 feet	250	550 acre-feet	1400	1850	Gravity	Recreation	Low	No	4/18/2007	Yes	WI00287	PLOVER
ROSHOLT (VILLAGE OF ROSHOLT)	Flume Creek	Village of Rosholt	12 feet	266	100 acre-feet	180	1885	Gravity	Recreation	Low	Yes	5/24/2011	Yes	WI10405	ROSHOLT
JORDAN (MCGREER'S MILL)	Big Plover	Portage County	17 feet	150	470 acre-feet	1850	1850	Gravity	Recreation	Low	Yes	5/9/2017	Yes	WI00025	PARK RIDGE
WHITING MILL DAM	Wisconsin River	Consolidated Water Power Company	24 feet	1,761	1,240 acre-feet	106500	1925	Concrete	Hydroelectric	Low	Not Required	7/18/2017	No	WI00783	PLOVER
WHITING PLOVER (LOWER PAPER MILL)	Wisconsin	Private	13 feet	896	600 acre-feet	49700	1850	Other	Recreation	Low	Yes	8/13/2013	Yes	WI00782	-

FOUNTAIN LAKE	Emmons Creek	Wisconsin Department of Natural Resources	8 feet	50	120 acre-feet	27	1938	Other	Recreation	Low	Yes	10/27/2011	Yes	WI01101	-

Dam Failure:

Map: Significant Dams (larger map can be downloaded here)
Source: *Wisconsin Department of Natrual Resoucres*

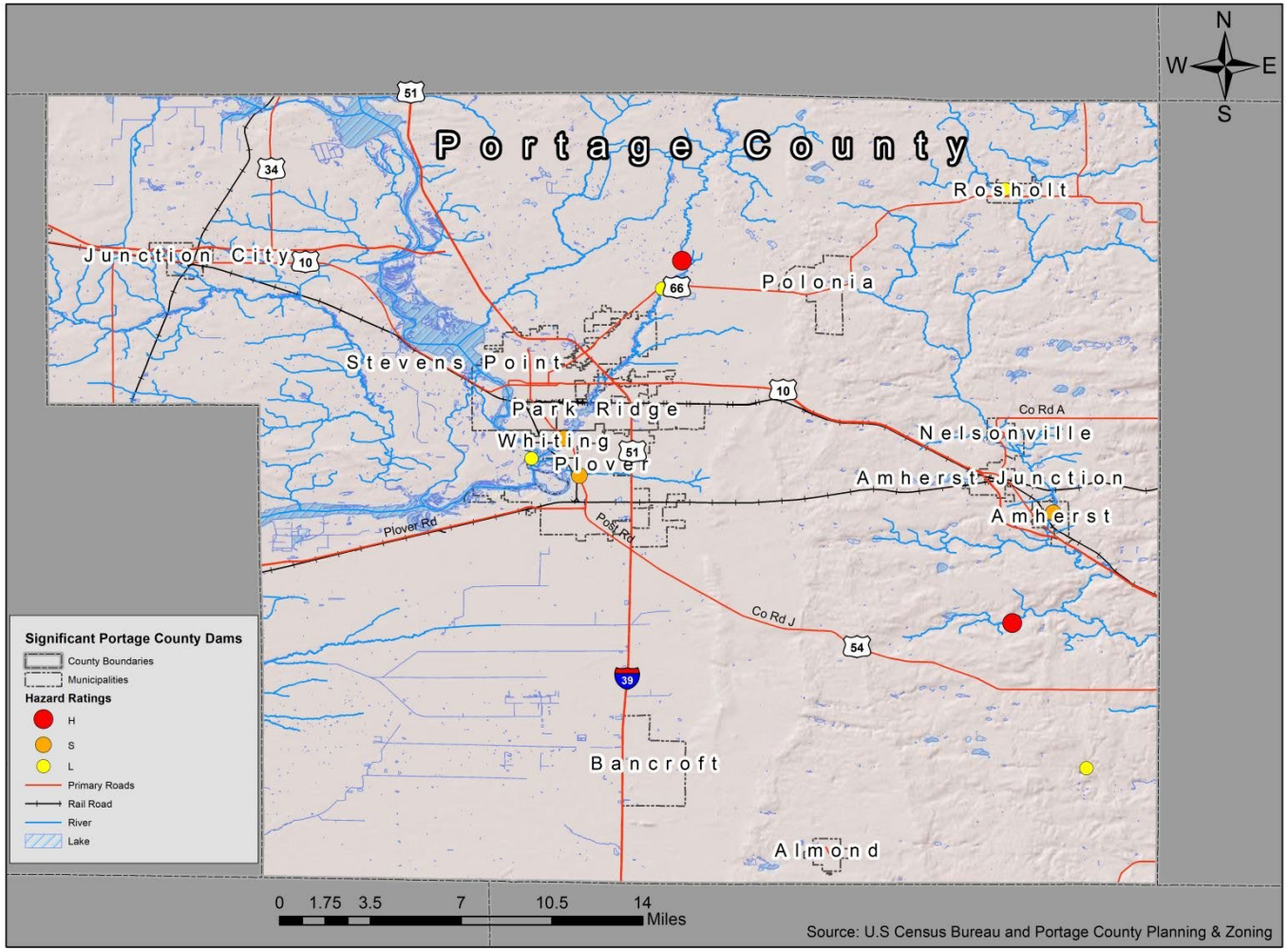


Table: Structures and Estimated Improvement in Inundation Areas

Source: Stevens Point Dam and DuBay Dam EPA Documents, including MEAD and Hunt Engineering Study

Municipalities	Structures in the Inundation Area	Residential	Commercial	Industrial	Other	Estimated Improvement Value
Stevens Point Hydroelectric Dam						
C. of Stevens Point	74	$6, 47,700	$624,700	$0	$0	$7,172,400
V. of Plover	1*					$0
V. of Whiting	5	$153,700	$219,700	$6,600,900	$0	$6,974,300
T. of Carson	0	$0	$0	$0	$0	$0
T. of Dewey	0	$0	$0	$0	$0	$0
T.of Eau Pleine	0	$0	$0	$0	$0	$0
T. of Hull	0	$0	$0	$0	$0	$0
T. of Linwood	36	$3,878,900	$277,700	$0	$0	$4,156,600
T. of Plover	18	$1,132,100	$0	$0	$0	$1,132,100
Total	**134**	**$11,712,400**	**$1,122,100**	**$6,600 900**	**$0**	**$19,435,400**
DuBay Hydroelectric Dam						
C.of Stevens Point	1,163	$78,603,200	$26,149,400	$64,200	$0	$105,401,800
V. of Plover	0	$0	$0	$0	$0	$0
V. of Whiting	1	$166,500	$0	$0	$0	$166,500
T. of Carson	117	$19,310,800	$696,200	$0	$403,900	$20,410,900
T. of Dewey	8	$1,636,500	$0	$0	$0	$1,636,500
T. of Eau Pleine	16	$1,783,00	$0	$0	$84,900	$1,867,900
T. of Hull	37	$3,249,400	$196,400	$0	$178,500	$3,624,300
T.of Linwood	155	$17,168,100	$543,900	$0	$273,600	$17,985,600
T.of Plover	23	$1,305,800	$0	$0	$0	$1, 05,800
Total	**1520**	**$123 223,300**	**$27,585,900**	**$649,200**	**$940,900**	**$152,399,300**

Catastrophic Scenario

This theoretical scenario occurs in early June. Two rounds of heavy rains cause widespread flooding in the southern part of the state. Thousands of homes, businesses, and farms are damaged or destroyed by the floodwaters. In some cases, rivers remain in flood stage into late July, and some low spots in farm fields still have standing water into September due to a high water table. In Portage County, the flooding is of the "100-year" magnitude. In other counties, there are some of the "200- or 300-year" magnitude damage. Wisconsin receives a Presidential Disaster Declaration that includes 31 counties with estimated damages totaling roughly $820 million.

Loss Estimates

The value of private property within the 100-year flood plain in Portage County as defined by FEMA's HAZUS Loss Estimate Model is as follows:

The geographical size of the region - 823 square miles
Population - 70,019
Buildings - 27,673
Number of Parcels – 4,226
Maximum Parcel Value – $8,292,906
Functional Down Time for Businesses – 30 Days
Displacement Time for Businesses – 230 Days

According to FEMA's HAZUS Flood Loss Estimate Model, the resulting losses would be expected.

1-10% Damage – 47 Buildings
11-20% Damage – 19 Buildings
21-30% Damage – 2 Buildings
31-40% Damage - 1 Building

Total Building-Related Losses could be $18.38 Million. Total Economic Loss due to Interruption is estimated to be $39.11 Million. Total loss due to the event is estimated at $57.49 Million.

255 ($819,608 million) Households would be displaced due to the flood. Of these, an estimated 766 people would require some temporary public shelter.

Table: Flooding Hazard Extent

Hazard Type	Affected Jurisdictions	Extent (based on historical events)		Comments
		Minimum	Maximum	
Flood (Riverine)	Jurisdictions near rivers, streams, and waterways	0-feet	river crested	state of emergency when rain accompanied warmer temperatures combined with runoff from rapidly melting snow causing flooding in streams, rivers, low-lying areas, and roads
Flood (Flash)	County-wide	0 inches of rain	6 inches	wastewater system back-up, roadway and culvert washout, damage to homes

Table: Dam Failure Hazard Extent

Hazard Type	Affected Jurisdictions	Extent (based on historical events)		Comments
		Minimum	Maximum	
Dam Failure	Inundation Area	Losses restricted mainly to the dam	Probable loss of life, a serious hazard to health, structural damage to high-value property (i.e., homes, industries, major public utilities)	hypothetical scenario

NFIP Participation

All of Portage County is mapped through the NFIP.

The following communities are shown as participating in the NFIP as detailed in the FEMA, Community Status Book Report for the State of Wisconsin, County of Portage. This data was drawn from https://www.fema.gov/cis/WI.html.

CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Reg Emer Date	Tribal
550338#	AMHERST, VILLAGE OF	PORTAGE COUNTY	1/9/1974	1/17/1991	7/20/2009	1/17/1991	No
550339#	NELSONVILLE, VILLAGE OF	PORTAGE COUNTY	1/23/1974	9/1/1986	07/20/09(M)	9/1/1986	No
550340#	PLOVER, VILLAGE OF	PORTAGE COUNTY	7/11/1975	3/1/1984	7/20/2009	3/1/1984	No
550572#	PORTAGE COUNTY *	PORTAGE COUNTY	12/23/1977	6/1/1983	7/20/2009	6/1/1983	No
550341#	ROSHOLT, VILLAGE OF	PORTAGE COUNTY	8/30/1974	9/1/1988	07/20/09(M)	9/1/1988	No
550342#	STEVENS POINT, CITY OF	PORTAGE COUNTY	12/28/1973	6/1/1983	7/20/2009	6/1/1983	No
550607#	WHITING, VILLAGE OF	PORTAGE COUNTY	10/9/1981	1/18/1984	7/20/2009	2/15/1984	No
550255#	PARK RIDGE, VILLAGE OF	PORTAGE COUNTY		7/20/2009	7/20/2009	7/20/2010	No

All participating jurisdictions not listed above are mapped but do not participate in the NFIP at this time. Portage County communities not participating in the NFIP have chosen not to participate due to fiscal or staffing limitations.

Neither Portage County nor the participating jurisdictions have chosen to participate in the NFIP'S Community Rating System (CRS) due to fiscal or staffing limitations. The CRS is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions, meeting the three goals of the CRS: 1) reduce flood losses; 2) facilitate accurate insurance ratings, and 3) promote the awareness of flood insurance (Wisconsin Hazard Mitigation Plan, 2016).

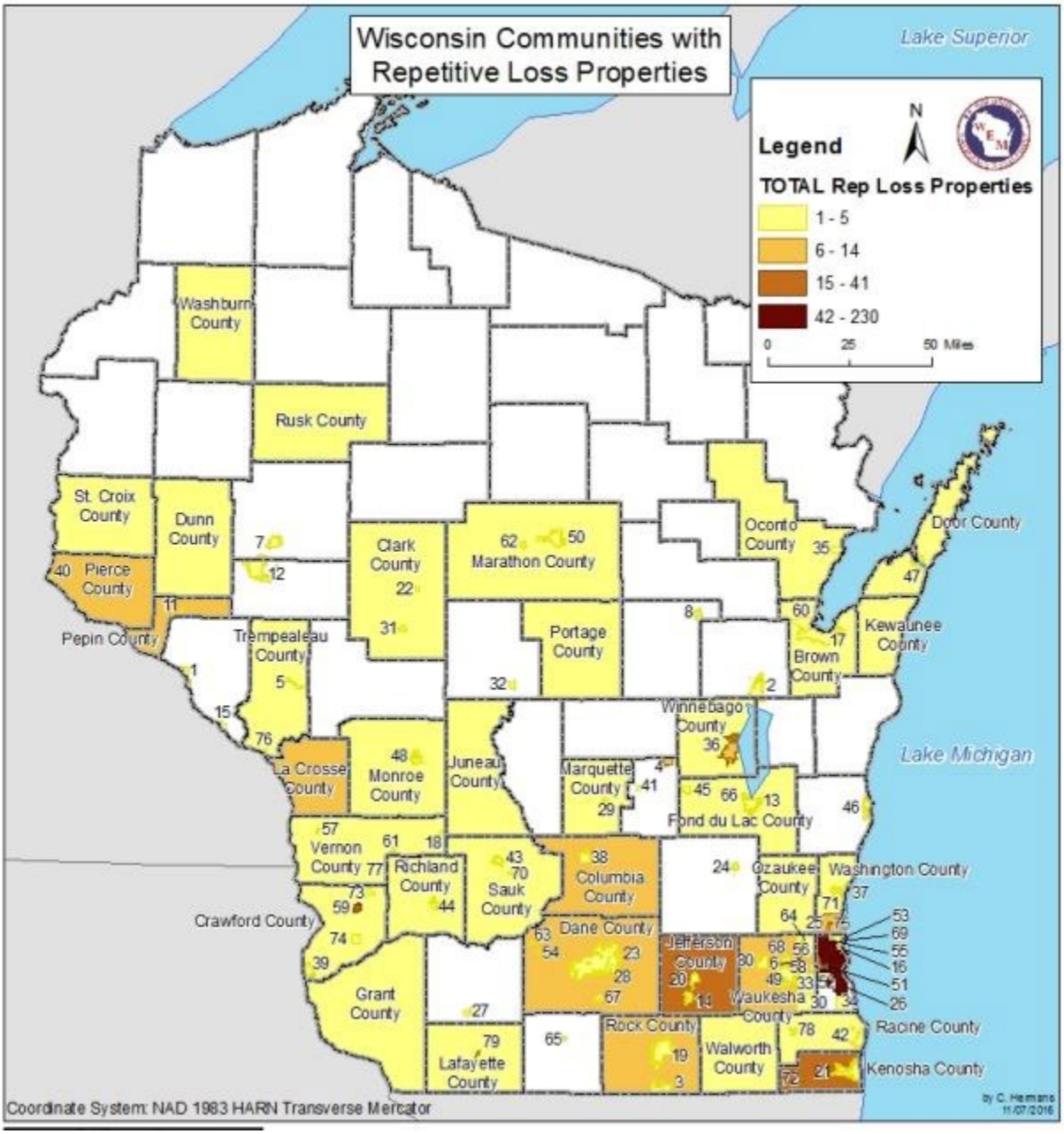
Repetitive Loss

As of 2016, no severe repetitive loss communities or properties exist in Portage County. Properties with at least two separate NFIP claim payments cumulatively totaling more than the market value of the property are considered severe repetitive loss properties under FEMA's FMA program.

Portage County does have one repetitive loss property in the Town of Carson and is a residential property.

Map: Communities with Repetitive Loss Properties

Source: [State of Wisconsin Repetitive Loss Report]



Analysis

Probability for Flood Hazard

Based on the Planning Area Risk Ranking, this hazard is given a "High" risk ranking summary because these events are likely to occur more than every 25 years and have a high impact on residents, the economy, and property. While less likely to occur than Severe Weather (Including Tornadoes, High Winds, Hail, and Lightning), the damaging impact from a flood is high. Additionally, of the 15 floods and flash floods included in the NCEI data, six have occurred since 2010, and this does not include the recent flooding from the July 2019 event that received a Presidential Declaration. Of the 10 Presidentially Declared Disasters in Portage County, nine are related to flooding. Given the increase in flooding events and the associated high damage, flooding is an increasing concern for the County.

Geographic Location for Flood Hazard

Flooding is a concern county-wide. Severe thunderstorms may cause flooding during the summer or fall but tend to be localized.

Flash flooding is typically characterized by high-velocity water, often carrying large amounts of debris. Urban flooding involves the overflow of storm drain systems and is usually the result of inadequate drainage following heavy rainfall or rapid snowmelt.

There are 13 dams located in the County, and a dam would locate the dam failure. To date, no dam failures have occurred. Currently, four dams have a high hazard ranking and three have a significant rating. While all dams should be maintained, the higher hazard dams must be well maintained.

Loss Estimates

Using historical data, loss estimates of life, livestock, and property are high for the failure of large dams and large floods. Additionally, many businesses and residents may not return for an extended time to permanently remain away or closed.

Analysis of Community Development Trends

Developments in the nearest vicinity to water sources are the most at risk of riverine flooding. However, all future developments may be vulnerable to urban flooding due to water control infrastructure that could back up or fail during extreme flood events.

Vulnerability to Future Assets/Infrastructure for Flood Hazard

Any future assets and/or infrastructure built in the floodplain will be susceptible to flooding.

Vulnerability Analysis for Flood Hazard

The consequences of flooding can vary greatly, however, depending on the location, depth, speed, value of the environment, and extent of flooding.

Impact on Portage County Residents

Damage to housing, vehicles, land, crops, or livestock from flood events can be very high during riverine or flash floods. It is possible that flooding can often cause deaths to occur if floodwaters become deep/swift enough to sweep away people or vehicles. It is possible that the sick, disabled, or elderly may not be mobile enough to escape rising floodwaters and may become trapped in their houses. During flooding events, residents may also be at an increased risk of waterborne diseases. For many, the psychological impact of major floods can be intense. Loss of loved ones, homes, and livelihoods can create severe psychological and social disruption. Public health risks are associated with dam failures. Particularly for Portage County is the concern of pesticides utilized in crop control and flooding.

Impact on Essential Facilities and Other Property

An essential facility will encounter many of the same effects as other buildings within the flood boundary. These impacts can include structural failure, extensive water damage to the facility, and loss of facility functionality (e.g., a damaged police station will no longer be able to serve the community).

Impact on Critical Infrastructure

Impacts on critical infrastructures, such as roads and bridges, may include structural failure and extensive water damage, resulting in a loss of functionality and costly repairs.

Impact on the Environment

Flooded fields can lead to the loss of topsoil as well as damage to crops. Intense flooding can create pollution and disease problems, as well as displace entire ecosystems of local flora and fauna. Hundreds of dam failures have occurred throughout U.S. history. These failures have caused immense property and environmental damages and have taken thousands of lives. As the nation's dams age and population increases, the potential for deadly dam failures can grow without proper and routine maintenance.

Impact on Operations

Flooding events can impact emergency personnel in Portage County in all the same ways as other residents. Also, flooding events can require a substantial amount of resources and assistance from multiple agencies and departments; these include local emergency response departments, as well as state, federal and non-governmental agencies such as the American Red Cross. A depth of 0.9-1.2m (2.9-3.9 ft) is the maximum depth for rapid access to large emergency vehicles. Flood depths exceeding this may result in first responders being unable to access areas in need of assistance quickly. If critical infrastructure or essential facilities are damaged, first responders may be unable to carry out emergency operations effectively. Dam failures have the potential to impact operations profoundly and to prevent failures, more coordination and communication are needed across agencies that regulate waterways, dams, and land use.

Wildfire

Nature of the Hazard

As recorded in the *2016 State of Wisconsin THIRA*, Chapter 26.01(2) of the Wisconsin State Statutes defines forest fires as "uncontrolled, wild, or running fires occurring on forest, marsh, field, cutover, or other lands involving farm, city, or village property and improvements incidental to the uncontrolled, wild, or running fires occurring on forest, marsh, field, cutover, or other lands." They often begin unnoticed, can spread quickly, and are usually signaled by dense smoke that can fill the air for miles around. Wildfires in Wisconsin are primarily human-caused by burning yard debris, arson, or campfires, for example. Natural events like lightning can also cause them.

Types of Wildfires in Wisconsin

- **Interface or intermix fires** (also known as a wildland-urban interface or WUI fires) occur in areas where both vegetation and structures provide fuel.
- **Firestorms** occur during extreme weather (i.e., high temperatures, low humidity, and high winds) with such intensity that fire suppression opportunities are limited. These events typically burn until the weather or fuel conditions change to reduce the fire spreading behavior.
- **Prescribed fires** occur with the intentional application of fire to wildland natural fuels, under specific environmental conditions, to accomplish planned land management objectives. They are a part of a fuel management strategy and one of the most complicated and complex operations to implement.

Factors Influencing Fire Behavior

- Fuels
- Weather
- Topography
- Interactions with other hazards

Table: Percent of Wisconsin Wildfires by Cause, 2011-2015

Source: Wisconsin 2016 THIRA

Cause	Percentage
Debris Burning	29.4%
Equipment	21.1%
Miscellaneous	13.9%
Power Line	8.9%
Incendiary	6.2%
Improper Ash Disposal	5.2%
Campfires	4.2%
Railroad	4.2%
Fireworks	3.6%
Lightning	1.9%
Smoking	1.4%

The forest fire season in Portage County begins in March and continues through November. Wildland fires can occur at any time of day during any month of the year. Generally, wildland fires are more likely to happen whenever vegetation is dry as a result of a winter with little snow or summer with sparse rainfall.

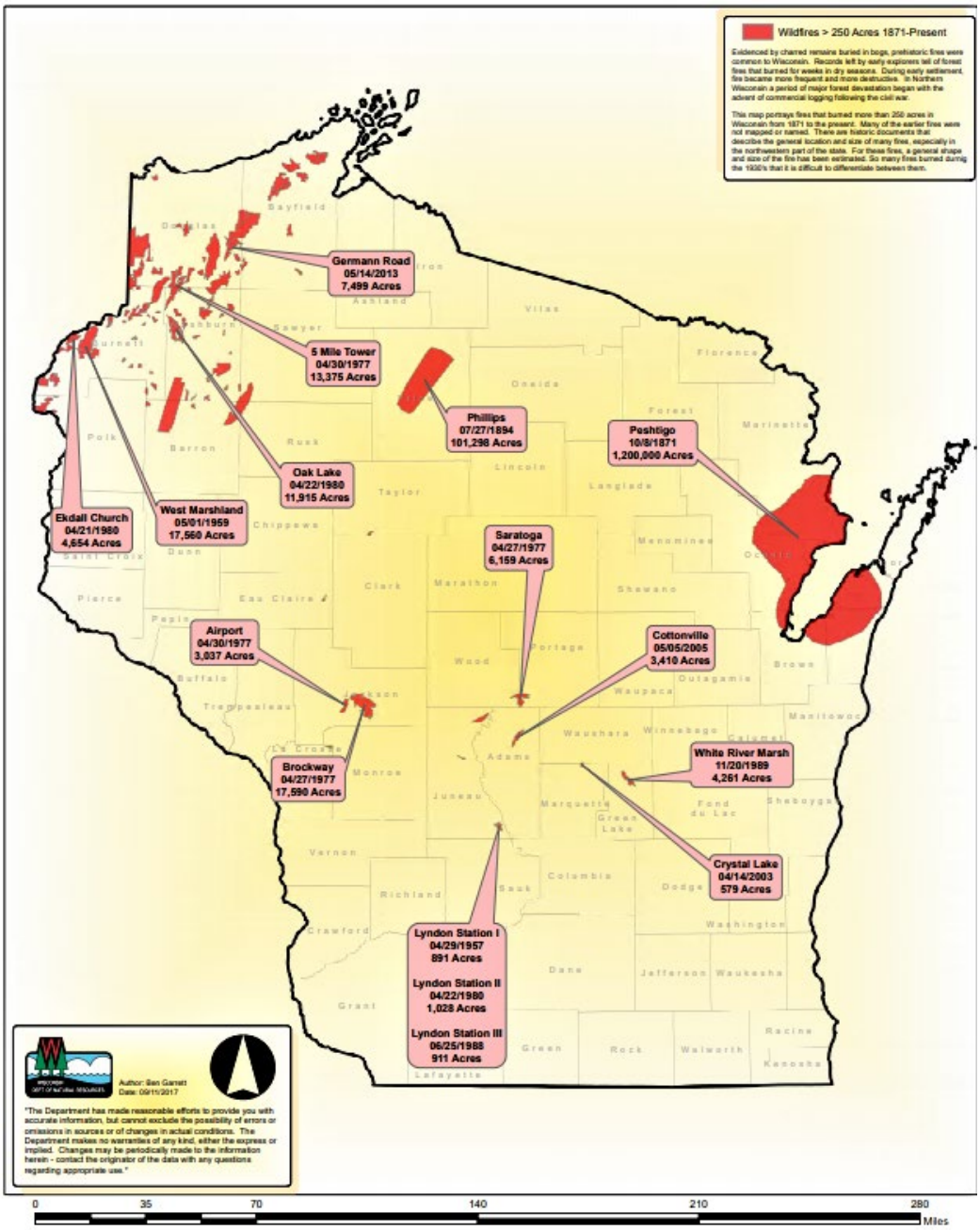
The Wisconsin DNR (WIDNR) is responsible for wildfire protection on approximately 18 million acres of forest and wildland in Wisconsin. The U.S. Forest Service maintains forest fire protection on two million acres of this land, while local fire departments retain responsibility for the remaining wooded acreage. According to the 2011 WIDNR Wisconsin Communities-at-Risk report (WIDNR CAR), every year an average of 1,500 wildfires burn more than 4,000 acres on lands within the WIDNR's jurisdiction (roughly half the state). Those numbers can be more than doubled when considering wildfires on lands where fire departments and other agencies (i.e., USFS, FWS, NPS, BIA) are responsible for fire suppression. Most fires occur between March and June, with April having the highest incident. Over 90% of wildfires are human-caused, with a majority of these related to debris burning. Each year, dozens of structures are destroyed by wildfires and hundreds more threatened.

History

Although no significant wildfires have recently been recorded as specifically impacting Portage County (except for a small impact area in the Southwest portion of the County in 1977, as can be seen in the map below), the State of Wisconsin has experienced severe wildfires throughout its history at various times. Many of these historical occurrences took place in the wake of extensive logging practices during the period from 1850 to 1910.

Map: Wisconsin Wildfires that burned 250 acres from 1871-present

Source: [Wisconsin 2016 THIRA]



1871

The most disastrous fire in Wisconsin's history was the Peshtigo Fire, when more than 1.5 million acres of forest burned in northeastern Wisconsin, mainly in Oconto, Marinette, Shawano, Brown, Kewaunee, Door, and Manitowoc counties. The fire was estimated to have displaced 3,000 people, killed 1,152 people, and left another 350 missing. This event was the most considerable single loss of human life by fire in American history; however, the Great Chicago Fire occurred at the same time and received much more publicity.

1930-1934

In the dust bowl era, severe droughts ravaged the state. During these four years, about 2,950 fires burned 336,000 acres annually in Wisconsin.

1976

Dewey Marsh Wildlife Area is a 6,005-acre property located 6 miles north of Stevens Point. Access to the property can be found off of Co. Highway X. Hay Meadow Road passes through the center of the property. The east edge is flanked by Torun Road and the north comes into contact with Oakwood Drive. In the year 1974 and 1976 there were two large wildfires on the property.

1977

The entire state suffered two years of severe drought. Nearly 49,000 acres burned in 1977 alone. Over 170 structures were destroyed or damaged. Jackson, Washburn, Douglas, and Wood Counties were the worst hit. The Saratoga Fire in Wisconsin Rapids (Wood County) burned 6,159 acres and destroyed 90 buildings; the Brockway Fire in the Black River Falls area (Jackson County) burned 17,590 acres, and the Five-Mile Fire in Washburn and Douglas Counties burned 13,375 acres and destroyed 83 buildings.

2005

On May 5, the Cottonville Fire burned a swath 1.5 miles wide and seven miles long through the Towns of Big Flats, Preston, and Colburn (Adams County). It took nearly 200 personnel to suppress the wildfire in about 11 hours. Over 100 people were evacuated for several days while crews extinguished smaller fires. There were nine year-round residences, 21 seasonal homes, and at least 60 outbuildings destroyed in the 3,410-acre fire. 300 buildings were saved due to firefighting efforts.

2013

In the afternoon of May 14, a logging crew accidentally started a fire when harvesting timber in the Town of Gordon in Douglas County. Over the next 30 hours, the Germann Road Fire spread to the towns of Highland and Barnes in Douglas and Bayfield counties, respectively, ultimately clearing a swath almost ten miles long and a mile and a half wide. Although 104 structures were destroyed (23 residential), fire control efforts saved an estimated 350 structures. Burning nearly 7,500 acres in 30 hours, this was the largest wildfire to impact Wisconsin in 33 years.

History and Probability Assessment

While the number of forest fires involving multiple agency response has decreased over the years, the potential for catastrophic fires has increased. Due to the rapid spread of permanent and seasonal homes and subdivisions into rural wooded areas of the County, the possibility of disastrous fires is rapidly climbing.

According to the Plover Ranger Station (formerly Whiting Ranger Station), over the last 57 years in Portage County, 22,321 acres have burned in 3,718 fires. Portage County can expect an average of 65 small fires a year with an average of 392 acres burned per event.

A closer review of the data from this period shows spikes in acreage burned to correspond with years of drought. The greatest loss from fire occurred during the drought years of 1976 and 1977 when a total of 8,400 acres burned. In 2003, we had the Portage County Fire Complex occur where on April 4th, 73 acres burned in 5 separate fires in one day. These fires corresponded with the highest reported Crystal Lake Fire in Waushara County.

Vulnerability Assessment

Portage County has 184,000 acres of forested land, 35% of the total land area, scattered across the County. While the acreage burned per fire has decreased over the years, the number of structures and single-family homes has increased in these wooded areas, leaving greater potential for structural damage due to forest fires.

The WIDNR's Community-at-Risk project identified areas of the State that are relatively high risk to multiple structure loss due to wildfire. Communities At Risk (CAR) were determined at the municipal civil division. For Portage County, 15 communities were identified as CAR - High, and two (Towns of Hull and Lanark) were identified as CAR - Very High. See maps below, and look to the WIDNR Community-at-Risk methodology for more detail information on how these maps were created.

Table: Portage County Wild Land Fire Summary

Source: Plover Ranger Station (formerly Whiting Ranger Station)

Year	Fires	Acres Burned	Year	Total # of Fires	Acres
1954	41	1,050	1983	60	78
1955	62	677	1984	54	327
1956	102	601	1985	48	62
1957	57	931	1986	26	33
1958	88	1,156	1987	53	262
1959	49	358	1988	130	150
1960	41	279	1989	91	187
1961	60	311	1990	85	237
1962	21	57	1991	26	19
1963	68	425	1992	44	130
1964	102	1,021	1996	27	23
1965	64	335	1994	88	109
1966	116	272	1995	87	79
1967	68	136	1996	69	65
1968	70	368	1997	73	382
1969	70	208	1998	64	85
1970	77	334	1999	57	70

1971	36	51	2000	71	197
1972	77	141	2001	39	40
1973	58	163	2002	36	45
1974	132	311	2003	98	212
1975	91	191	2004	38	141
1976	138	5,215	2005	68	227
1977	65	3,185	2006	46	37
1978	45	39	2007	57	31
1979	77	43	2008	25	40
1980	67	703	2009	48	103
1981	80	203	2010	32	46
1982	40	132	2011	16	8
Ave/per/yr	**76**	**456**	**TOTAL**	**3,718**	**22,321**

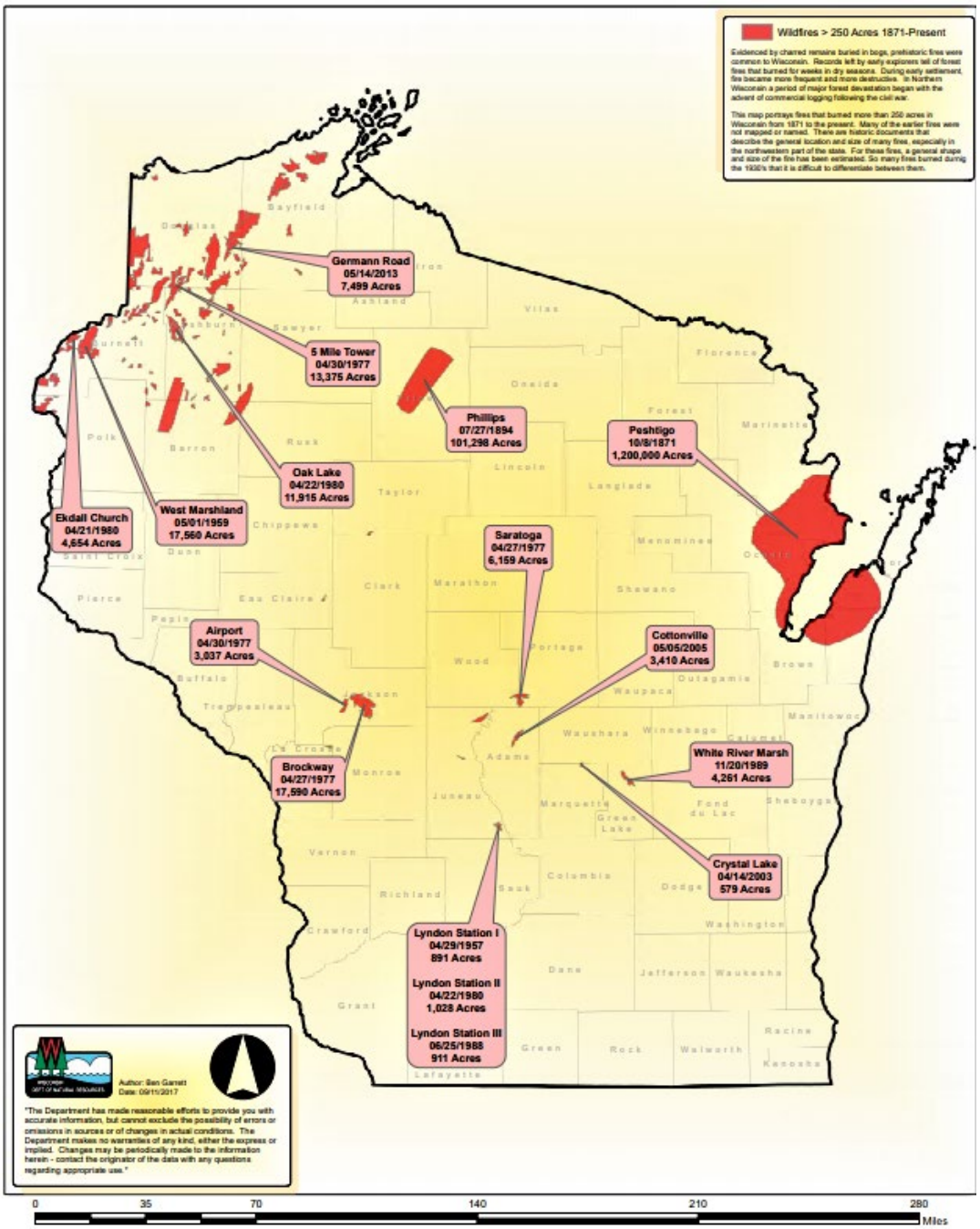
The WIDNR CAR report also discusses Wild Land-Urban Interface. Throughout much of the 20th century, housing was mainly concentrated in urban areas. By the latter part of the century, people began moving to the outer fringe of cities and villages. In increasing fashion, housing development continues to move deeper into formerly rural areas, sometimes in clustered subdivisions, and sometimes as scattered individual homes. Along with the increase in rural development for primarily homes, the affluence of recent generations affords people the ability to vacation and purchase seasonal "recreational" homes. All of this development in formerly agriculture, grassland, marshland, and forested areas is a natural resource management nightmare. For those involved in fire control, the addition of homes in these areas drastically changes the dynamic of suppression efforts. The bottom line is that fire is inevitable. It is not a matter of if a fire will occur, but when. With that knowledge, the task becomes teaching residents and visitors of wildland issues and identify ways to live and recreate without starting a wildfire, and how to keep people and property safe when a wildfire does occur.

Probability and Impacts

The Wisconsin Department of Natural Resources produced an assessment in 2016 that resulted in the fire risk analysis map below. The map highlights that the fire risk varies widely in the County. The two municipalities with the highest risk are the Town of Hull and the Town of Lanark. Further location detailed is provided in the Vulnerable Locations and Jurisdictions section.

Map: Wisconsin 2016 Fire Risk Analysis

Source: Wisconsin Department of Natural Resources

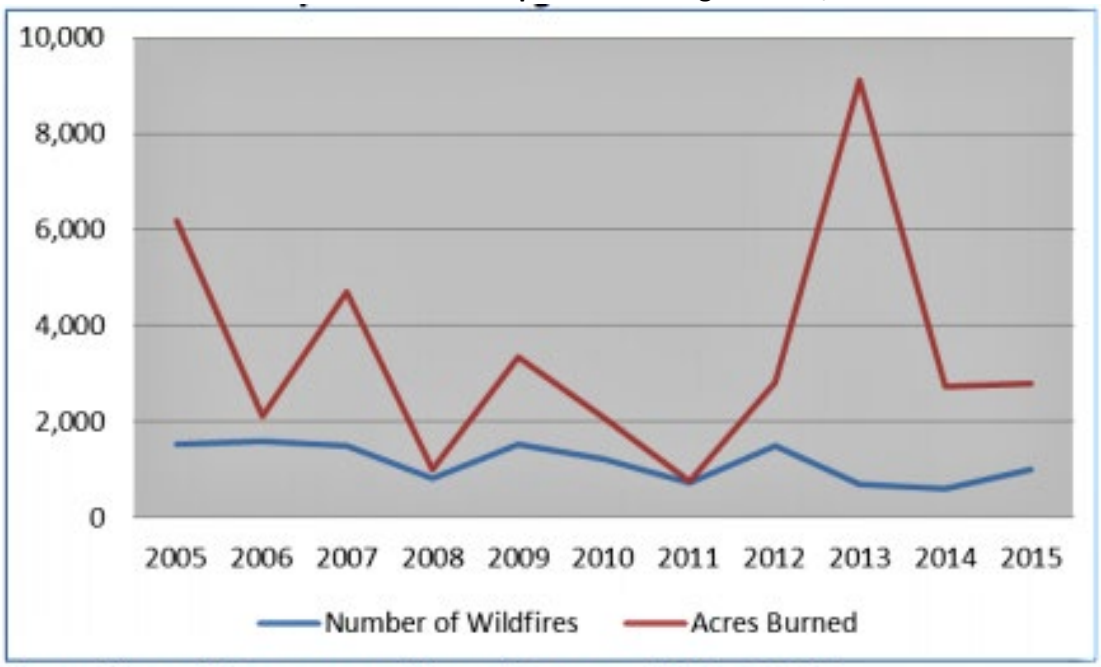


Wildfires are capable of causing significant injury, death, and damage to property. The potential for property damage from wildfires increases each year as additional properties are developed in woodland areas, and higher numbers of people use these areas recreationally. Fires can extensively impact the economy of an affected area, especially the logging, recreation, and tourism industries. Major direct costs associated with forest fires or wildfires are the expense of suppression, property loss, salvage and removal of downed timber and debris, and restoration of the burned area. Although precipitation totals are expected to increase overall, researchers predict that it will fall during fewer, more intense events. The periods in between heavy rain or snowfalls may, therefore, be marked by a greater number of dry days. This, coupled with longer summers, higher average temperatures, and concomitant increased evapotranspiration may result in droughts, which in turn raise the likelihood of wildfires.

As recorded in the 2016 State of Wisconsin THIRA, there is a 100% chance that wildfires will occur annually within the State. However, most of these events are somewhat localized and impact isolated areas. Most of Portage County is not at extremely high risk for significant wildfire events either. The overall, probably ranking given by the State is "Medium." This means that:

- The hazard impacts the state occasionally, but not annually *(not applicable in the case of wildfires, which do occur annually)*
- The hazard is somewhat localized, affecting only relatively small or isolated areas when it occurs
- The methodology for identifying events is not well-established or is not applied across the entire state

Chart: Number of Wildfires Compared to Acreage Burned, 2005-2015



Source: Wisconsin Department of Natural Resources, 2011 and 2016.

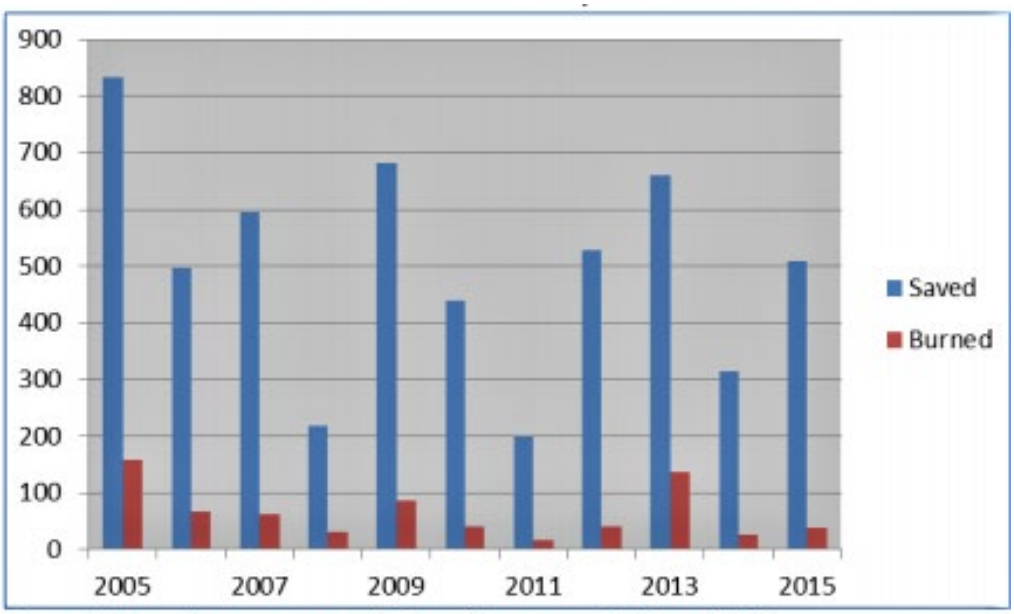
The same ranking of "Medium" is also given for Mitigation Potential. This means that:

- Mitigation methods are established

- The state or counties have limited experience with the kinds of measures that may be appropriate to mitigate the hazard
- Some mitigation measures are eligible for federal grants
- There is a limited range of effective mitigation measures for the hazard
- Mitigation measures are cost-effective only in limited circumstances
- Mitigation measures are effective for a reasonable period of time

Though dozens of structures in Wisconsin are destroyed by wildfire each year, hundreds more are saved through sound fire management techniques as depicted in the chart below.

Chart: Structures Burned and Saved in Wisconsin Wildfires, 2005-2015



Source: Wisconsin Department of Natural Resources, 2011 and 2016.

Jurisdiction-specific Hazard Considerations and Impact/Vulnerability

The information in the table below was collected during the mitigation workshops and was submitted by a representative from the municipality. The table is not inclusive of impacts on all jurisdictions and strictly includes information directly provided by the municipality.

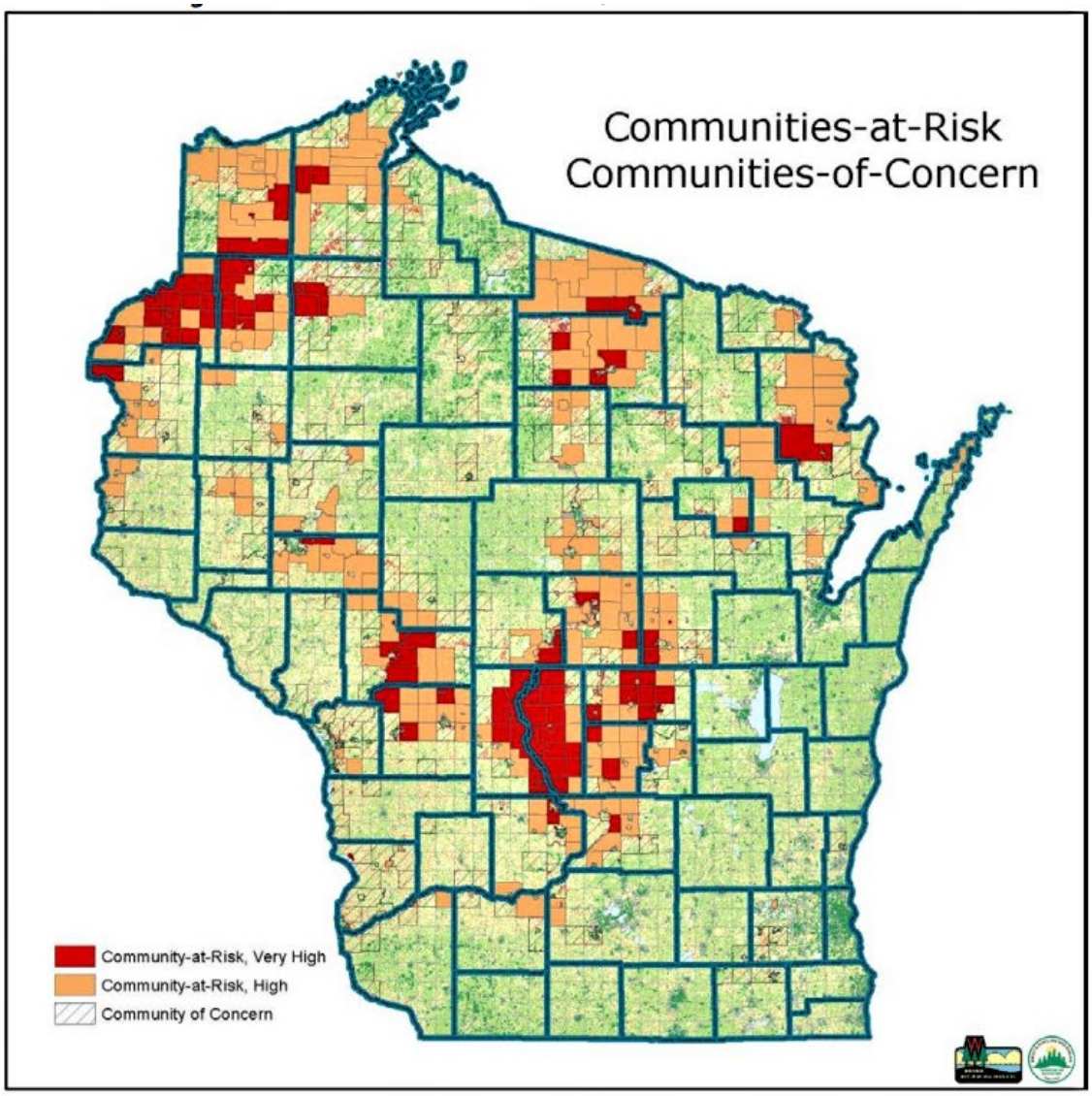
Table: Jurisdiction-specific Hazard Impact/Vulnerability for Wildfire

Jurisdiction	Affected Jurisdictions' Hazard Considerations and Impact/Vulnerability
Town of Amherst	Prone to wildfires due to the amount of pine tree forest surrounding the town.
Town of Buena Vista	Subdivisions are exposed to potentially being damage/impacted by a wildfire due to their proximity to the forest.
Town of Dewey	Dewey Marsh Wildlife Area is prone to wildfires.
Town of Hull	Town has a high concentration of pine trees around the developed areas that puts the populated areas at risk for wildfires.
Town of Linwood	Prone to wildfires.
Town of Plover	DNR prairies and chicken land areas are prone to wildfires.

Supplemental to the above table, as can be seen in the table and map below, the Wisconsin Department of Natural Resources has categorized communities within Portage County according to their wildfire risk.

Map: Communities-at-Risk and Communities-of-Concern for Wildfire Exposure

Source: Wisconsin Department of Natural Resources



Introduction to Communities-at-Risk

The purpose of this model is to identify broad areas of the state that are at relatively high exposure to resource damage due to wildfire.

As mandated by the NASF, Wisconsin's Communities-At-Risk are divided into three categories:

1) Very High
2) High
3) Community of Concern*

Defining Community

For Wisconsin, Communities-at-Risk are reported at the MCD (municipal civil division) level*. MCD was chosen due to its identifiable legal boundaries, ease in reporting, and usage in the development of Community Wildfire Protection Plans.

** Menominee County is an exception due to its lack of MCD's (civil townships). Therefore, Menominee county is reported by legal township.*

** 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.*

Source: Department of Natural Resources, 2011.

Portage	Alban (T)	High
Portage	Almond (T)	Concern
Portage	Amherst (T)	High
Portage	Belmont (T)	High
Portage	Buena Vista (T)	High
Portage	Carson (T)	Concern
Portage	Dewey (T)	Very High
Portage	Eau Pleine (T)	Concern
Portage	Grant (T)	High
Portage	Hull (T)	Very High
Portage	Lanark (T)	Very High
Portage	Linwood (T)	High
Portage	Nelsonville (V)	High
Portage	New Hope (T)	High
Portage	Pine Grove (T)	Concern
Portage	Plover (T)	Concern
Portage	Rosholt (V)	High
Portage	Sharon (T)	High
Portage	Stevens Point ©	High
Portage	Stockton (T)	High
Portage	Whiting (V)	High

Catastrophic Scenario

The 2016 Wisconsin THIRA describes a potentially catastrophic scenario that, although not focused on the Portage County area specifically, could have many similarities to a potentially high impact event occurring within or near the County as well. A potential scenario could look like a wildfire burning over 100,000 acres in the high-risk wildland-urban interface (WUI) areas to the Southwest of Portage County. The fire would quickly make its way through sparsely populated areas in and around the area's lakes, and forest as responders struggle to contain its spread. Winds may pick up and push the fire out of containment into nearby areas, potentially including Portage County, where the fire would continue unabated for many more hours before containment occurred. Tens of thousands of acres of standing timber could be destroyed, millions in property damage would be incurred, and thousands of residents would be forced to evacuate their homes.

Table: Wildfire Hazard Extent

Hazard Type	Affected Jurisdictions	Extent (based on historical events)		Comments
		Minimum	Maximum	
Wildfire	County-wide	0 acres	8,400 acres	Portage County can expect an average of 65 small fires a year with an average of 392 acres burned per event. A closer review of the data from this period shows spikes in acreage burned to correspond with years of drought. The most significant loss from fire occurred during the drought years of 1976 and 1977 when a total of 8,400 acres burned.

Analysis

Impact

Wildland fires threaten the lives of anyone in their path, including hikers, campers, and other recreational users and, where suppression efforts are made, firefighters. Enormous volumes of smoke and airborne particulate materials are produced that can affect the health of persons for many miles downwind. Nearer to the fire, smoke reduces visibility, disrupting traffic, and increasing the likelihood of highway accidents. As a result of wildland fire, there may be changes in water quality in the area and erosion rates may increase along with increased rainfall runoff and flash flood threat, and decreased rainfall interception and infiltration. Indirect impacts include losses to tourism, recreational and timber interests and loss of wildlife habitat. WUI fires have most or all the above impacts as well as those of structural fires including injury and loss of life, loss of structures and contents. Agricultural losses may also be sustained, including livestock, crops, fencing, and equipment.

Probability for Wildfire Hazard

Based on the Planning Area Risk Ranking, wildfires are given a “Low” risk ranking summary because while small wildfire events frequently happen in the County and two of the municipalities are at "very high" risk for a fire, no property has been impacted by fires.

Increasing temperatures and prolonged drought, along with the development of the urban Wildland Interface dramatically increase the probability of a wildfire that would impact property and people.

Geographic Location for Wildfire Hazard

Portage County does have some Wildland Urban Interface areas, which can be prone to wildfires. Wildfire risks vary widely across the County with the areas most susceptible, Town of Dewey's Dewey Marsh Wildlife Land, Town of Hull and Town of Lanark, to wildfire being the heavily wooded areas.

Hazard Extent for Wildfire

Wildfires can burn thousands of acres and damage or destroy all structures it encounters along the way. The hazard can also cause injuries (both directly and indirectly through smoke) and death.

Analysis of Community Development Trends

Any future development in or near the Wildland Urban Interface could be at risk for a wildfire. The latest Portage County Comprehensive Plan noted two key visions statements that link to Wildland Urban Interface:

- Rural areas have planned residential developments that are buffered from agricultural uses, preserve open space, and are in areas less suitable for farming or forestry.
- Development takes into consideration the protection of groundwater recharge areas, air quality, agricultural land, forested lands, wetlands, surface water, and fragile habitats/ecosystems.

While the Portage County Comprehensive Plan was completed in 2005, these vision statements are still relevant and utilized to ensure growth and development do not increase the potential for wildfires to spread to communities quickly.

The majority of the forested areas are owned by the Department of Natural Resources (DNR) for use as wildlife habitat and resource protection. This area is considered protected areas and is unlikely to be developed without permits.

Impact to Portage County Residents

The most obvious impacts of a wildfire would be property damage or complete loss, injury, or even death. Residents of the County could also be impacted by poor air quality due to smoke from wildfires in other areas. This is unlikely in Portage County given the low occurrence of wildfires in the County.

Impact on Essential Facilities and Other Property

Any essential facility in or near the Wildland Urban Interface could be at risk for a wildfire. Significant or complete structural damage could be expected should a wildfire overtake an essential facility.

Impact on Critical Infrastructure

Any infrastructure in or near the Wildland Urban Interface could be at risk for a wildfire. Significant or complete structural damage could be expected should a wildfire overtake any vulnerable and exposed infrastructure.

Impact on the Environment

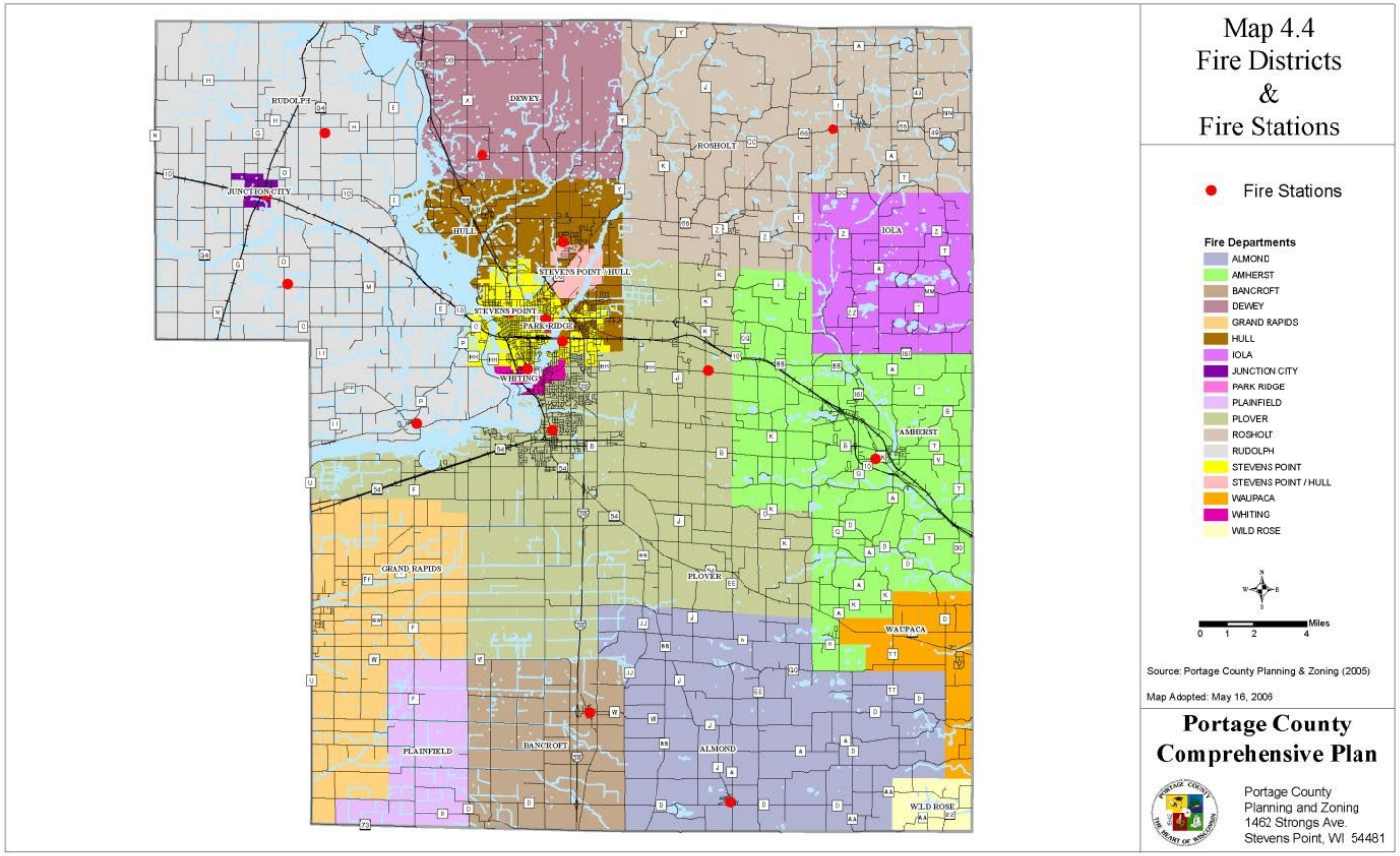
As one might expect, the effect of wildfires on the environment is typically devastating. Many trees and other vegetation will be killed off. Although many species of vegetation can flourish in the aftermath of wildfire due to increased sunlight exposure to the ground, the initial impact on the environment is severe. However, given the unlikely occurrence of wildfires in Portage County, the impact would be minimal and isolated.

Impact on Operations

Typically, the local fire department will simultaneously dispatch with WDNR during a wildfire event. Once dispatched, they operate under a unified command. Most departments have some wildfire equipment; however, during the unlikely event that a major wildfire was to threaten Portage County seriously and to depend on the location and extent, resources from a neighboring town or County department may be needed for wildfire suppression. A map of the fire departments in the County is highlighted below and can be downloaded here.

Map: Portage County Fire Districts

Source: [Portage County Planning and Zoning]



Drought and Extreme Heat

Nature of the Hazard

While drought and extreme heat are two separate hazards, when they coincide, their effects can be exacerbated. Accordingly, both are addressed in this section.

Drought

Drought is the result of a natural decline in expected precipitation over an extended period and occurs in virtually every climate on the planet, including areas of high and low precipitation. The severity of drought can be aggravated by other climatic factors such as prolonged high winds, low relative humidity, and extreme heat (FEMA). The following four definitions are commonly used to describe different types of drought and demonstrate the complexity of the hazard:

1. **Meteorological drought:** Degree of dryness, expressed as a departure of the actual precipitation from the expected average or normal precipitation amount, based on monthly, seasonal, or annual time scales.
2. **Hydrological drought:** Effects of precipitation shortfalls on streamflows, and reservoir, lake, and groundwater levels.
3. **Agricultural drought:** Soil moisture deficiencies relative to water demands of crops.
4. **Socioeconomic drought (or water management drought):** Shortage of water due to the demand for water exceeding the supply.

The severity of a drought depends on several factors:

- Duration
- Intensity
- Geographic extent
- Water supply demands for both human use and vegetation

The magnitude of drought is measured using the **Palmer Drought Severity Index**. Factors like temperature, soil moisture, and precipitation are entered into an algorithm that returns results between -4 (extreme drought) and 4 (extremely moist) with zero being normal conditions. The index is effective at determining drought over months but less effective over shorter timeframes. Droughts are rated by the US Drought Monitor into the following categories based on five indicators, including the Palmer Index and streamflow data:

- **D0: Abnormally Dry**
    - Going into drought:
        - Short-term dryness slowing planting and growth of crops or pastures
    - Coming out of drought:
        - Some lingering water deficits
        - Pastures or crops not fully recovered
- **D1: Moderate Drought**
    - Some damage to crops and pastures
    - Streams, reservoirs, or wells low, some water shortages developing or imminent
    - Voluntary water-use restrictions requested

- **D2: Severe Drought**
  - Crop or pasture losses likely
  - Water shortages common
  - Water restrictions imposed
- **D3: Extreme Drought**
  - Major crop and pasture losses
  - Widespread water shortages or restrictions
- **D4: Exceptional Drought**
  - Exceptional and widespread crop and pasture losses
  - Shortages of water in reservoirs, streams, and wells creating water emergencies

Table: Drought Categories

Source: https://droughtmonitor.unl.edu/AboutUSDM/AbouttheData/DroughtClassification.aspx

			Ranges				
Category	Description	Possible Impacts	Palmer Drought Severity Index (PDSI)	CPC Soil Moisture Model (Percentiles)	USGS Weekly Streamflow (Percentiles)	Standardized Precipitation Index (SPI)	Objective Drought Indicator Blends (Percentiles)
D0	Abnormally Dry	Going into drought: ▪ short-term dryness slowing planting, growth of crops or pastures Coming out of drought: ▪ some lingering water deficits ▪ pastures or crops not fully recovered	-1.0 to -1.9	21 to 30	21 to 30	-0.5 to -0.7	21 to 30
D1	Moderate Drought	▪ Some damage to crops, pastures ▪ Streams, reservoirs, or wells low, some water shortages developing or imminent ▪ Voluntary water-use restrictions requested	-2.0 to -2.9	11 to 20	11 to 20	-0.8 to -1.2	11 to 20
D2	Severe Drought	▪ Crop or pasture losses likely ▪ Water shortages common ▪ Water restrictions imposed	-3.0 to -3.9	6 to 10	6 to 10	-1.3 to -1.5	6 to 10
D3	Extreme Drought	▪ Major crop/pasture losses ▪ Widespread water shortages or restrictions	-4.0 to -4.9	3 to 5	3 to 5	-1.6 to -1.9	3 to 5
D4	Exceptional Drought	▪ Exceptional and widespread crop/pasture losses ▪ Shortages of water in reservoirs, streams, and wells creating water emergencies	-5.0 or less	0 to 2	0 to 2	-2.0 or less	0 to 2

Extreme Heat

Extreme summer heat is the combination of very high temperatures and exceptionally humid conditions. This heat is measured by the **heat index**, a scale that quantifies how hot it feels. At a heat index of 105°F or higher, the heat is extreme enough to cause disorders associated with exposure to heat and/or physical activity. If such conditions persist for an extended period, it is called a heatwave.

The chart below shows the National Oceanic and Atmospheric Administration (NOAA) NWS heat index values. As indicated, the heat index is a function of the actual temperature and the relative humidity. The categories in light orange, dark orange, and red indicate when the heat index values are of concern and precautions should be taken limiting sun exposure and physical activity.

Chart: NOAA's National Weather Service Heat Index

Temperature (°F)

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

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution | Extreme Caution | Danger | Extreme Danger

Source: NOAA, NWS Milwaukee/Sullivan, 2016.

History

The 2016 State of Wisconsin THIRA notes that eight notable droughts and several heatwaves have occurred in the state during the 20th century. Events and timetables specific to Portage County are recorded within NOAA data and can be seen in the tables below. As can be seen, no death, injury, or property damage has occurred within the county directly as a result of drought or heat events.

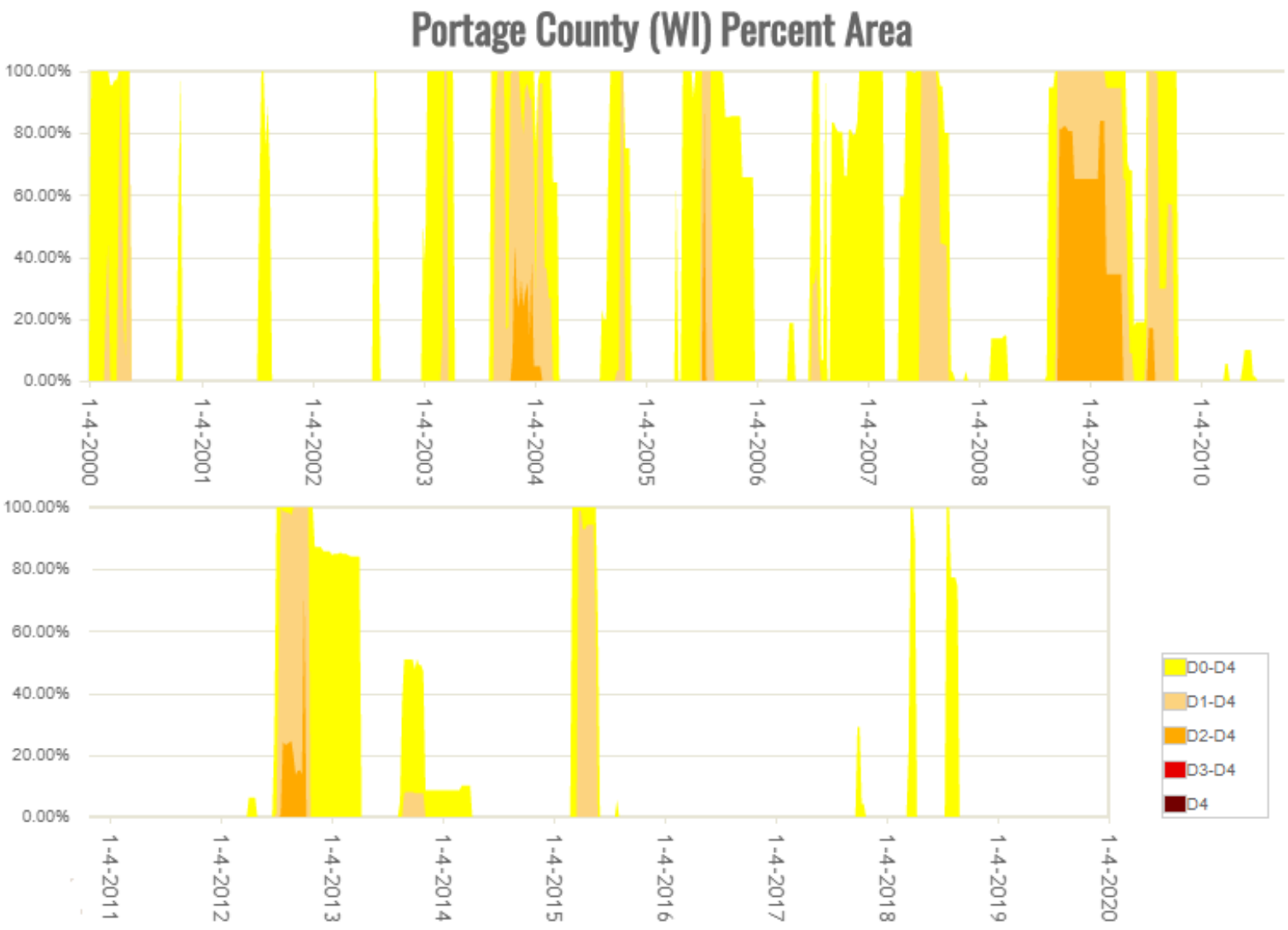
The following severe weather events were reported between 01/01/1996 and 05/31/2019. Important to note is that only tornado data was collected from 1950-1954, only tornado, thunderstorm wind, and hail data was collected from 1955-1992, and all events were recorded from 1996 to present (Storm Events Database).

TABLE: Drought, Extreme Heat, and Heat Events in Portage County, Wisconsin from 01/01/1996 to 05/31/2019

Source: www.ncdc.noaa.gov/stormevents

Number of County/Zone areas affected:	1
Number of Days with Event	23
Number of Days with Event and Death	0
Number of Days with Event and Death or Injury	0
Number of Days with Event and Property Damage	0
Number of Days with Event and Crop Damage	0
Number of Event Types reported	3

- Six events were extreme heat, one was extreme heat, and the remaining events were drought. Heat and drought events are often correlated and contribute to climatic conditions that enhance the chances of wildfires. Additionally, while no damages were reported, agricultural practices are hindered during a continued drought.
    - The elderly is particularly susceptible to heat, and during one event, a 71-year-old man already in poor health did pass away, and the hospital noted the causes were related to heat.



Source: https://droughtmonitor.unl.edu/Data/Timeseries.aspx

Historic Jurisdiction-specific Hazard Impact/Vulnerability

The information below was drawn from both the NCEI event narratives. As indicated in the NCEI data above, numerous other events have impacted the County and the municipalities. The NCEI data, particularly before the 2000s, did not always include a narrative or exact location. The chart below should be viewed as a sampling of impact on the County municipalities.

Table: Historic Jurisdiction-specific Hazard Impact/Vulnerability for Drought and Heat

Hazard Type	Affected Jurisdictions	Comment	Date
Drought	County Wide	Dry month across the state of Wisconsin affecting Portage County from March 1 - 17 the county remained abnormally dry with little rain.	03/01-03/17/1999
Drought	County Wide	Below-average rain for July in Portage County causing a moderate drought (D1)	07/19/2005
Drought	County Wide	Significant 60 to 90-day rainfall deficits, dry soil moisture, and low stream flow resulted in severe drought conditions (D2) across the county.	09/30/2008
Drought	County Wide	Below-average rainfall caused severe drought conditions (D2)	10/01/2008
Drought	County Wide	Below normal rainfall caused a moderate drought.	02/01/2009
Drought	South Portage County	Dry weather throughout the month caused severe drought conditions (D2) to reach the southern part of Portage County by July 31st. The severe drought (D2) conditions continued into August 2012.	07/31/2012
Drought	County Wide	Several bouts of hot weather in August and only near-normal precipitation helped to maintain severe drought (D2) conditions.	08/01/2012
Drought	South Portage County	Below normal rainfall caused severe drought conditions (D2) to persist into October 2012 across the southern part of the county.	09/01/2012
Drought	South Portage County	Below normal rainfall caused severe drought conditions (D2) to persist into October 2012 across the southern part of the county.	10/01/2012
Extreme Heat	City of Stevens Point	An abnormally high reading of 65 F in Stevens Point on both the 27th and 28th of November.	11/25/1998
Extreme Heat	County Wide	Over one week of hot and very humid conditions in Portage County, resulting in numerous heat-related illnesses and three deaths due to excessive heat. Deaths were not in Portage County but neighboring counties.	07/23/1999

Extreme Heat	County Wide	A hot air mass settled over Portage County in early July, bringing highs of 100 degrees or hotter from July 4th through July 6th. Relative humidity was relatively low, but heat indices still managed to reach the 100 and 110 range.	07/03/2012

*While 65 F does not meet the standard definition of extreme heat, typically meaning at least two to three days of high heat and humidity above 90 F, 65 F is seasonally an abnormally high temperature during the period of this event (DHS - Extreme Heat).

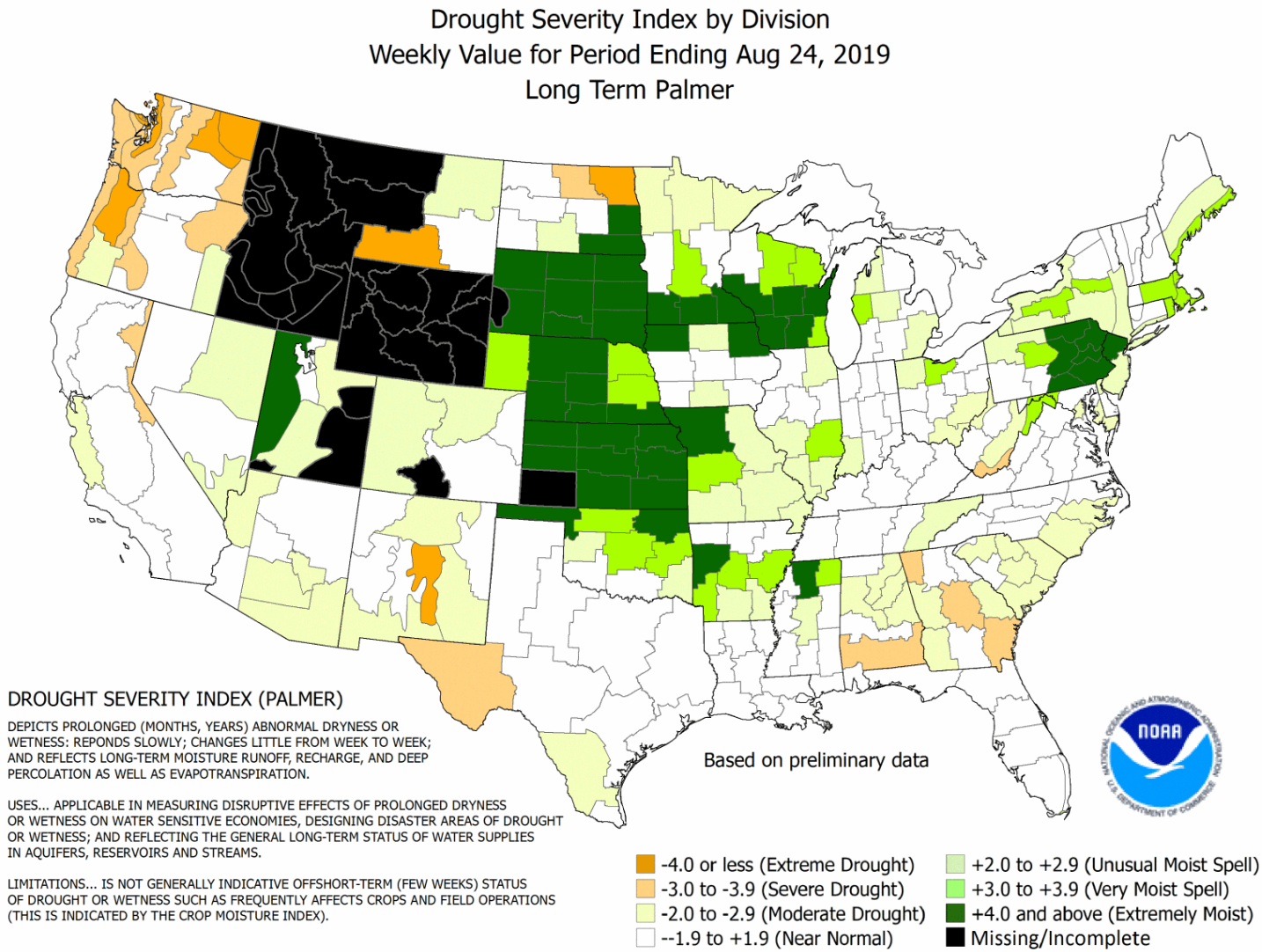
Probability and Impacts

Drought

The impacts of drought are varied and far-reaching. Droughts may cause a shortage of water for human and industrial consumption, hydroelectric power, recreation, and navigation. Water quality may decline, and the number and severity of wildfires may increase. As land is cleared by wildfire, loss of vegetation can result in flooding, even from average rainfall following drought conditions. Severe droughts may result in the loss of crops and forest products, undernourished wildlife and livestock, and lower land values.

The future incidence of drought is highly unpredictable, and may also be localized, making it difficult to determine the probability with any accuracy; however, the NWS and National Integrated Drought Information System (NIDIS) are improving methodologies for accurately forecasting drought conditions. Both organizations use a combination of current and historical precipitation, streamflow, groundwater levels, and crop data to perform short- and long-term forecasts.

The Palmer Drought Severity Index determines long-term drought forecasts, profiling several months at a time; however, it does not provide accurate short-term estimates (several weeks). It uses a rating of zero as normal with drought shown in negative numbers and excessive moisture in positive numbers. The scale and conditions from August 2019 are pictured below. The green shading over Wisconsin indicates the state experiencing very moist conditions. The NWS updates the Palmer Index weekly. Current Palmer Drought Severity Index information can be found online at the NWS Climate Prediction Center's Drought Monitoring website at http://www.cpc.ncep.noaa.gov/products/monitoring_and_data/drought.shtml.



Source: NOAA, Climate Prediction Center, 2019

Extreme Heat

Extreme heat is of great concern since exposure causes serious life-threatening conditions. The risk to humans is grave, as more people die from heat than any other extreme weather event. The danger categories and heat disorders associated with the heat index values are listed in the table in Figure 3.5.3-8. Note that caution should be taken when the heat index approaches 90°F.

Table: Heat Index and Associated Heat Disorder

Danger Category		Heat Disorder	Heat Index Value (How Hot It Feels)
IV	Extreme Danger	Heatstroke or sunstroke highly likely with continued exposure.	>130°F
III	Danger	Sunstroke, heat cramps, or heat exhaustion likely; heat stroke possible with prolonged exposure and/or physical activity.	105-130°F
II	Extreme Caution	Sunstroke, heat cramps, and heat exhaustion possible with prolonged exposure and/or physical activity.	90-105°F
I	Caution	Fatigue possible with prolonged exposure and/or physical activity.	80-90°F

Source: NWS, Green Bay, 2016.

There are different stages of heat disorders associated with exposure to heat:

- **Heatstroke:** An often fatal medical emergency occurring when the body's responses to heat stress are insufficient to prevent a substantial rise in the body's core temperature, typically exceeding 105°F. Even with rapid cooling and treatment, the average fatality rate is 15%
- **Heat Exhaustion:** A less serious medical condition characterized by dizziness, weakness, or fatigue. Body temperatures may be normal or slightly to moderately elevated. With fluid treatment, the prognosis is typically good.
- **Heat Syncope:** A sudden loss of consciousness typically associated with people exercising who are not acclimated to warm temperatures. It causes little or no harm to the individual.
- **Heat Cramps:** A condition that may occur in people unaccustomed to exercising in the heat.

In addition to affecting people, severe heat places significant stress on plant and animal life. Severe heat may reduce the yields of crops or contribute to crop loss.

The probability of exceeding 89°F in any given year is high, but temperatures are not the only determinant of the impacts of heat. Other factors include humidity, duration, and timing of the extreme heat event. Extreme heat is the deadliest type of severe weather in Wisconsin. Statewide there were 137 direct heat-related deaths between 1982 and 2015 and an additional 102 indirect heat-related deaths. Portage County has only incurred one death due to heat waves during that period, although this death is not recorded in the NOAA data.

The 2016 State THIRA ranks drought and heat hazards for the State as follows:

Evaluation Criteria	Description	Ranking
Probability: Drought	• The hazard impacts the state occasionally, but not annually • The hazard is somewhat localized, affecting only relatively small or isolated areas when it occurs • The methodology for identifying events is not well-established, or is not applied across the entire state	Medium
Probability: Extreme Heat	• The hazard has impacted the state annually, or more frequently • The hazard is widespread, generally affecting regions or multiple counties in each event • There is a reliable methodology for identifying events and locations	High
Mitigation Potential: Drought and Extreme Heat	• Methods for reducing risk from the hazard are not well-established, are not proven reliable, or are experimental • The state or counties have little or no experience in implementing mitigation measures, and/or no technical knowledge of them • Mitigation measures are ineligible under federal grant programs • There is a very limited range of mitigation measures for the hazard, usually only one feasible alternative • The mitigation measures have not been proven cost-effective and are likely to be very expensive compared to the magnitude of the hazard • The long-term effectiveness of the measure is not known, or is known to be relatively poor	Low

Jurisdiction-specific Hazard Considerations and Impact/Vulnerability

The information in the table below was collected during the mitigation workshops and was submitted by a representative from the municipality. The table is not inclusive of impacts on all jurisdictions and strictly includes information directly provided by the municipality.

Table: Jurisdiction-specific Hazard Impact/Vulnerability for Drought and Extreme Heat

Jurisdiction	Affected Jurisdictions' Hazard Considerations and Impact/Vulnerability
Town of Linwood	Drought and extreme heat impact the town/countywide.
Town of Plover	When the quantity of the groundwater is low, the quality lessens.
Village of Junction City	JFK school is impacted by extreme heat.

Catastrophic Scenario

The catastrophic scenario described in the 2016 State THIRA can easily be imagined to apply to Portage County, specifically.

> In this scenario, precipitation across Wisconsin is 15 inches below average since January 1st and the state ushers in the first day of summer after 39 consecutive days without rainfall. Unusually high temperatures and humidity cause the NWS to issue several Excessive Heat Warnings for the southern two-thirds of Wisconsin, with local coroners and medical examiners reporting six heat-related deaths across the region. A heat dome is stationary across the upper Midwest, with little or no precipitation in the forecast, and the NWS anticipates issuing an Excessive Heat Watch for five days for much of Wisconsin, including Portage County. As a result of the high use of residential and commercial air conditioning, Wisconsin utilities are experiencing electric record usage that is creating a burden on the electrical infrastructure. Fish kills are being reported due to low surface water levels and unusually high water temperatures. Higher than normal bacteria counts are also causing stress on wildlife and water quality. The extended drought is impacting aquifers.
>
> A number of rural drinking water and agricultural supply wells are experiencing difficulty meeting water needs. Some wells have gone completely dry. Half of the state's corn and hay crops are lost, impacting the food supply and economy of most regions of the State. Thousands of dairy cattle must be slaughtered due to lack of feed. The cull of dairy cattle decreases the milk supply and contributes to a milk shortage. Heat stress impacts weight gain, milk production, and reproductive efficiency for farm animals as well as wildlife. Even with burning restrictions issued throughout the state, there is an increase in massive wildfires due to dry vegetation. Wildlife viability is taxed due to a lack of vegetation for foraging. Burning bans are in place. It is anticipated that food prices will increase by 12% in the next year in Portage County and all surrounding areas.

Table: Drought Hazard Extent

Hazard Type	Affected Jurisdictions	Extent (based on historical events)		Comments
		Minimum	Maximum	
Drought	County-wide	0	D2	While no damage was attributed, wildfire chances greatly increase during a drought and agriculture is impacted

Table: Heat Hazard Extent

Hazard Type	Affected Jurisdictions	Extent (based on historical events)		Comments
		Minimum	Maximum	
Heat	County-wide	N/A	100°F (heat index value of 105)	A 71-year-old man in poor health became ill due to the heat and passed away

Analysis

Probability for Drought and Extreme Heat Hazard

Based on the Planning Area Risk Ranking, this hazard is given a “low” risk ranking summary because while these events are likely to occur within 100 years, property impact is low. Additionally, drought and extreme heat have a "medium" impact on people, meaning 15-29% of the population will likely be exposed to the hazard. Financially, these hazards have a "low" impact on both the property and the economy.

Of the two hazards, drought is the most likely hazard to impact the County. The NCEI demonstrated that only one Excessive Heat and six heat events had been recorded in the County, while 16 drought events have occurred. The only excessive heat event occurred within the last decade, July 2012, with temperatures reaching a little above 100 degrees. Only one of the 16 drought events were recorded before 2005. While the ability to record events has improved since NCEI data was first collected back in 1950, the growing trend of these events is a concern.

Geographic Location for Drought Hazard

Droughts are regional in nature. All areas of the United States are vulnerable to the risk of drought.

Hazard Extent for Drought

Droughts can be widespread or localized events. The extent of droughts varies both in terms of the extent of the heat and range of precipitation.

Analysis of Community Development Trends

Because droughts are regional in nature, future development will be impacted across the county. Although urban and rural areas are equally vulnerable to this hazard, those living in urban areas may have a greater risk from the effects of a prolonged heatwave, which may accompany prolonged drought conditions. According to FEMA, the atmospheric conditions that create extreme heat tend to trap pollutants in urban areas, adding contaminated air to the excessively hot temperatures and creating increased health problems. Furthermore, asphalt and concrete store heat longer, gradually releasing it at night and producing high nighttime temperatures. This phenomenon is known as the “urban heat island effect.” Local officials should address drought hazards by educating the public on steps to take before and during the event—for example, temporary window reflectors to direct heat back outside, staying indoors as much as possible, and avoiding strenuous work during the warmest part of the day.

Vulnerability to Future Assets/Infrastructure for Drought Hazard

Future development will remain vulnerable to these events. Typically, some urban and rural areas are more susceptible than others. For example, urban areas are subject to water shortages during periods of drought. Excessive demands of the populated area place a limit on water resources. In rural areas, crops and livestock may suffer from extended periods of heat and drought. Dry conditions can lead to the ignition of wildfires that could threaten residential, commercial, and recreational areas.

Vulnerability Analysis for Drought Hazard

Drought impacts can be an equally distributed threat across the entire jurisdiction; therefore, the county is vulnerable to this hazard and can expect similar impacts within the affected area. The entire population and all buildings have been identified as at risk.

Impact to Portage County Residents

Few, if any, serious injuries or deaths are expected as a direct result of drought. Possible loss of human life from a drought event is often largely due to secondary effects such as heat, fire, and other health-related problems such as increased pollutant concentrations in surface water. For most, there are months of warning lead time for serious drought events as well. Any residents working in or directly depending on the agriculture sector of the local economy may be impacted severely, however.

Impact on Essential Facilities and Other Property

All essential facilities are vulnerable to drought. An essential facility will encounter many of the same impacts as any other building within the jurisdiction, which should involve only minor damage. These impacts include water shortages, fires as a result of drought conditions, and residents in need of medical care from the heat and dry weather.

Impact on Critical Infrastructure

Critical infrastructure will be minimally impacted by drought. Most impacts, if any, would be secondary in nature.

Impact on the Environment

When no rain or only a very small amount of rain falls, soils can dry out, and plants can die. When rainfall is less than normal for several weeks, months, or years, the flow of streams and rivers decline, and the water levels in lakes, reservoirs, and wells fall. Reduced crop, rangeland, and forest productivity, as well as damage to wildlife and fish habitats, are all impacts of drought events. Droughts are also associated with increases in insect infestations, plant disease, and wind erosion. These can impact forests and reduce growth. The incidence of wildfires increases substantially during extended droughts, which in turn places both human and wildlife populations at higher levels of risk.

Impact on Operations

Most first responder operations should experience relatively little interruption during a drought event. Medical facilities may experience an increase in residents in need of medical care from the heat and dry weather, but this would only be true in extreme cases.

Relationships to Other Hazards

The incidence of wildfires increases substantially during extended droughts, which in turn, places both human and wildlife populations at higher levels of risk.

Winter Storms and Extreme Cold

Nature of the Hazard

Winter storms vary in size and strength and include heavy snowstorms, blizzards, freezing rain, sleet, ice storms, and considerable blowing and drifting snow conditions that can close roads. Additionally, the combination of frigid temperatures and strong winds can result in dangerous wind chills that cause bodily injuries like frostbite or even death due to exposure (hypothermia). Severe winter storms can cause unusually heavy rain or snowfall, high winds, extreme cold, and ice storms throughout the continental US.

Winter storms can be very disruptive to transportation and commerce. Trees, cars, roads, and other surfaces can develop a glaze of ice, making conditions extremely hazardous to motorists and pedestrians. The most prevalent impacts of heavy accumulations of ice and snow are slippery roads and walkways leading to vehicle and pedestrian accidents; collapsed roofs from fallen trees and limbs and heavy ice and snow loads; and felled trees, telephone poles and lines, electrical wires, and communications towers. As a result of severe winter storms, power and telecommunications can be disrupted for days. Such storms can also cause high rainfall which, combined with snowmelt, can cause flooding. See Section 3.3 for a discussion of flooding.

A variety of weather phenomena and conditions can occur during winter storms. The following are NWS approved descriptions of winter storm elements:

- **Heavy snowfall**: accumulation of four or more inches of snow in 12 hours or six or more inches in 24 hours.
- **Blizzard**: sustained wind or frequent wind gusts of at least 35 mph accompanied by considerable falling and/or blowing snow.
- **Ice storm:** freezing rain produces significant or damaging accumulations of ice, usually ¼" or thicker.
- **Freezing drizzle/freezing rain:** drizzle or rain that falls as a liquid but freezes into glaze upon contact with the ground or objects with a temperature of 32ºF or below.
- **Sleet**: pellets of ice composed of frozen or mostly frozen raindrops or refrozen partially melted snowflakes.
- **Wind chill:** a measure of accelerated heat loss from exposed skin due to increased wind speeds.

If the temperature is 0ºF with a 15-mph wind, the wind chill is -19ºF. At this wind chill, exposed skin can freeze in 30 minutes, as shown in the chart below. In general, the NWS regional offices will issue Wind Chill Advisories when wind chill values are expected to drop to -20 to -34ºF with winds at least 10 mph. Similarly, Wind Chill Warnings are issued in Wisconsin for wind chill values of -35ºF or lower with winds at least 10 mph.

Wind chill is calculated using the following formula, where T is the air temperature in degrees Fahrenheit and V is the wind speed in miles per hour:

Wind Chill (ºF) = 35.74 0.6215(T) – 35.75(V0.16) 0.4275(T) (V0.16)

Chart: NWS Wind Chill Chart

Wind (mph)	Temperature (°F)																	
Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes, 10 minutes, 5 minutes

Source: NOAA, NWS, http://www.nws.noaa.gov/om/winter/windchill.shtml, 2016.

NOAA's National Centers for Environmental Information is now producing the Regional Snowfall Index (RSI) for significant snowstorms that impact the eastern two-thirds of the U.S. The RSI ranks snowstorm impacts on a scale from 1 to 5 (similar to the Fujita scale for tornadoes or the Saffir-Simpson scale for hurricanes).

TABLE: Regional Snowfall Index (RSI)

CATEGORY	RSI VALUE	DESCRIPTION
1	1–3	Notable
2	3–6	Significant
3	6–10	Major
4	10–18	Crippling
5	18.0+	Extreme

Source: NOAA

According to NOAA, the majority of deaths from winter storms are not directly related to the storm itself.

- People die in traffic accidents on icy roads.
- People die of heart attacks while shoveling snow.
- People die of hypothermia from prolonged exposure to cold.

Of injuries related to ice and snow:

- About 70% occur in automobiles.
- About 25% are people caught out in the storm.
- The majority are males over 40 years old.

Of injuries related to exposure to cold:

- 50% are people over 60 years old.

- Over 75% are males.
- About 20% occur in the home.

Impacts of severe winter storms are numerous. Motorists may be stranded by road closures or may be trapped in their automobiles in heavy snow and/or low visibility conditions. Adverse road conditions cause automobiles to go out of control. People can be trapped in homes or buildings for long periods without food, heat, and utilities. Those who are ill may be deprived of medical care by being stranded or through the loss of utilities and lack of personnel at care facilities. The use of heaters in automobiles and buildings by those who are stranded may result in fires or carbon monoxide poisoning. Fires during winter storm conditions are a hazard because fire service response is hindered or prevented by road conditions and because water supplies may be frozen. Disaster Services may also not be available if telephone service is lost. People who attempt to walk to safety through winter storm conditions become disoriented and lost. Downed power lines not only deprive the community of electricity for heat and light but pose an electrocution hazard. Death and injury may also occur if heavy snow accumulation causes roofs to collapse.

History

History of Winter Storms and Extreme Cold

Wisconsin has had many winter storms, and record-breaking events are highlighted in the table below

Table: Wisconsin Record-Breaking Winter Event Facts
Source: Wisconsin 2016 THIRA

Record	Location	County	Date	Magnitude
24-hour snow accumulation	Neillsville	Clark	December 27-28, 1904	26 inches
Seasonal snow accumulation	Hurley	Iron	Winter 1996-97	301.8 inches/ 25.2 feet
Snowless streak	Milwaukee	Milwaukee	March 4-December 18, 2012	288 days
Coldest temperature	Couderay	Sawyer	February 4, 1996	-55°F

The following winter-related weather events were reported between 05/01/1950 and 05/31/2019. It is important to note that only tornado data was collected from 1950-1954, tornado, thunderstorm wind, and hail data was collected from 1955-1992, and all events were recorded from 1996 to present (Storm Events Database).

TABLE: Blizzard, Extreme Cold/Wind Chill, Frost/Freeze, Heavy Snow, Ice Storm, Winter Storm, and Winter Weather Events in Portage County, Wisconsin from 01/01/1996 to 05/31/2019

Source: www.ncdc.noaa.gov/stormevents

Number of County/Zone areas affected:	1
Number of Days with Event	84
Number of Days with Event and Death	0
Number of Days with Event and Death or Injury	0
Number of Days with Event and Property Damage	0
Number of Days with Event and Crop Damage	0
Number of Event Types reported	7

- None of the events resulted in severe property or crop damage or caused injuries or deaths. Of the events, in total, there were 85 winter-related weather events. 38 were winter storms, 21 were heavy snow events, 11 were winter weather events, four were ice storm events, four were extreme cold/wind chill events, and two were blizzard events.

Historic Jurisdiction-specific Hazard Impact/Vulnerability
The information below was drawn from both the NCEI event narratives. As indicated in the NCEI data above, numerous other events have impacted the County and the municipalities. The NCEI data, particularly before the 2000s, did not always include a narrative or exact location. The chart below should be viewed as a sampling of impact on the County municipalities.

Table: Historic Jurisdiction-specific Hazard Impact/Vulnerability for Winter Storms and Extreme Cold

Hazard Type	Affected Jurisdictions	Comment	Date
Heavy Snow	City of Stevens Point and Town of Lanark	Heavy snow fell up to 20 inches in Stevens Point, 21 inches at Boelter Lake.	03/13/1997
Winter Storm	Town of Amherst and Almond	An intense low-pressure system that moved from the Plains to southern Wisconsin produced heavy snow and strong winds across northeast Wisconsin. Thunder accompanied the snow showers early on the morning of the 25th in east-central Wisconsin. This lead to 18.5 inches at Amherst and 17.9 inches at Almond	02/24/2007
Winter Storm	Village of Plover	Heavy snow combined with west winds reaching up to 40 mph caused blizzard-like conditions and 14.8 inches of snow in Plover.	12/23/2007
Abnormal Seasonal Snowfall	Village of Whiting and the City of Stevens Point	Late season snowfall from a cold upper low caused 5.0 inches of snow in Whiting and Stevens Point.	04/28/2004
Winter Storm	Village of Plover	Strong winter storm produced heavy snowfall and blizzard conditions leading to 16.2 inches of snow in Plover.	12/11/2010
Heavy Snowfall	City of Stevens Point	A storm coming over the Rockies caused heavy snowfall in Stevens Point, 13.5 inches.	02/20/2011
Winter Storm	Town of Amherst	The largest winter storm in two years leads to higher than normal amounts of snowfall. Amherst received nearly 10.2 inches of snow from the storm.	12/20/2012
Winter Storm	Village of Plover and Village of Whiting	A low-pressure system developed along an Arctic front and moved northeast across northern Illinois. Snowfall across central and northeast Wisconsin was mostly in the 4 to 9-inch range, most of which fell in 12 hours. Plover received 8.3 inches, and Whiting received 9.1 inches of snow.	01/30/2013
Winter Storm	Village of Plover, Village of Rosholt, City of Stevens Point, Town of Amherst	Low pressure, which originated in Canada, intensified as it moved across Wisconsin. A swath of 6 to 12 inches of snow fell across central and northeast Wisconsin. A total of 9.4 inches of snow fell at Plover, 8.3 inches fell at Rosholt, 7.5 inches fell near Stevens Point, and 7.3 inches fell at Amherst.	01/14/2014
Winter Storm	City of Stevens Point	Rain changed to snow as a low-pressure system intensified northeast of Wisconsin. A total of 7.6 inches of snow was measured at Stevens Point.	11/24/2014
Winter Storm	City of Stevens Point and Village of Plover	The first major winter storm of the 2015-2016 winter season for the region produced a swath of 8 to 14 inches of snow across parts of central and northeast Wisconsin as a low-pressure system moved from Arkansas to southern Lake Michigan. Much of the snow fell in just eight hours. The storm left cars stranded. Storm total snowfall in Stevens Point was 8.9 inches, and winds gusted to 44 mph at Plover.	12/28/2015
Winter Storm	Village of Plover, Town of Amherst, City of Stevens Point	A winter storm impacted most of the area during the afternoon and evening hours of February 2nd as a strong low-pressure system. The highest snowfall totals from the storm in Portage County included 7.0 inches near Plover and 6.9 inches southeast of	02/02/2016

		Amherst. The 5.5 inches of snow that fell in Stevens Point broke the previous record of 4.0 inches that was set in 1934 and equaled in 2004	
Winter Storm	Town of Amherst	Low pressure moved from western Kansas to northeast Illinois and produced a large swath of heavy snow across central and northeast Wisconsin. Strong northerly winds, gusting over 35 mph at times, produced low visibilities and drifting of the heavy, wet snow. A storm total of 8.1 inches of snow fell southeast of Amherst.	03/23/2016
Winter Storm	City of Stevens Point and Village of Plover	Snow moved into the area on the night of January 9, ahead of a deepening low-pressure system, and continued to pile up as the low moved across northeast Wisconsin on the 10th. Strong west winds, with some gusts to near 50 mph in eastern Wisconsin, developed during the late afternoon and evening of the 10th behind the departing system. The highest measured snowfall total in Portage County was 11.0 inches at both Stevens Point and Polonia. A wind gust to 43 mph was measured near Plover as the storm system departed.	01/09/2017
Winter Storm	Village of Plover	Warm air moving into the area ahead of a low-pressure system brought near-freezing temperatures that resulted in a wintry mix of precipitation across central Wisconsin. Freezing rain caused icy roads across Portage County, and as much as 0.3 inches of ice accumulation was measured in Plover.	01/16/2017
Winter Storm	Town of Amherst, Village of Plover, Village of Rosholt, Village of Amherst	Low pressure that moved across northern Illinois combined with a passing upper-level disturbance to produce a wide swath of heavy snow across central and northeast Wisconsin. Some of the highest recorded snowfall totals in Portage County included 11.5 inches near Amherst, 11.3 inches near Rudolph, 10.9 inches in Plover, 10.0 inches at Rosholt, and 9.8 inches in Amherst.	04/03/2018
Winter Storm	City of Stevens Point, Village of Plover, Village of Almond, Junction City	A low-pressure system that moved from the Plains, across Illinois, to the Ohio Valley brought two periods of heavy precipitation and strong northeast winds to the area. The historic late-season winter storm pummeled northeast and north-central Wisconsin from the evening of April 13th through the afternoon of April 15th. The storm brought blizzard or near-blizzard conditions to much of the area and made roads impassable from time-to-time. Winds of 35 to 50 mph caused sporadic power outages and created waves of 10 to 16 feet on Lake Michigan. The persistent northeast wind caused shoreline erosion along the western shores of the lake. The highest reported snowfall totals in Portage County were 20.7 inches in Stevens Point, 19.8 inches in Plover, 17.9 inches near Rudolph, 15.7 inches near Almond, and 14.5 inches near Junction City.	04/13/2018
Winter Storm	Town of Amherst, Village Rosholt, Village of Plover	A low-pressure system that passed southeast of Wisconsin and an upper-level disturbance that moved across the state produced heavy snow and gusty winds across much of the area. The winds were strong enough to cause blowing and drifting of the newly fallen snow. Some of the highest snowfall totals in Portage County included 7.6 inches near Amherst, 6.9 inches in Rosholt, and 6.5 inches in Plover.	01/28/2019

Winter Storm	Village of Plover	A fierce, late-winter storm produced heavy snow, freezing rain, and high winds across much of central and northern Wisconsin on February 23-24 as an area of low pressure rapidly deepened across the Great Lakes. At the height of the storm on the 24th, travel was not recommended across parts of central and northern Wisconsin as blizzard conditions made travel nearly impossible. The storm produced a total of 7.7 inches of snow fell, and there was also 0.5 inch of ice accumulation in Plover. The combination of ice, snow, and wind caused power outages and tree damage.	02/23/2019
Winter Storms	County Wide	Snow and blowing snow produced whiteout conditions in Portage County for most of the afternoon, and strong winds caused power outages.	02/24/2019
Winter Storm	Town of Amherst	The highest measured snowfall totals in Portage County were 9.8 inches in the far western edge of the county near Rudolph, and 9.1 inches near Amherst. The 2.05 inches of precipitation that fell in Stevens Point breaks the previous precipitation record for April 11th of 1.26 inches that was set in 1922.	04/10/2019

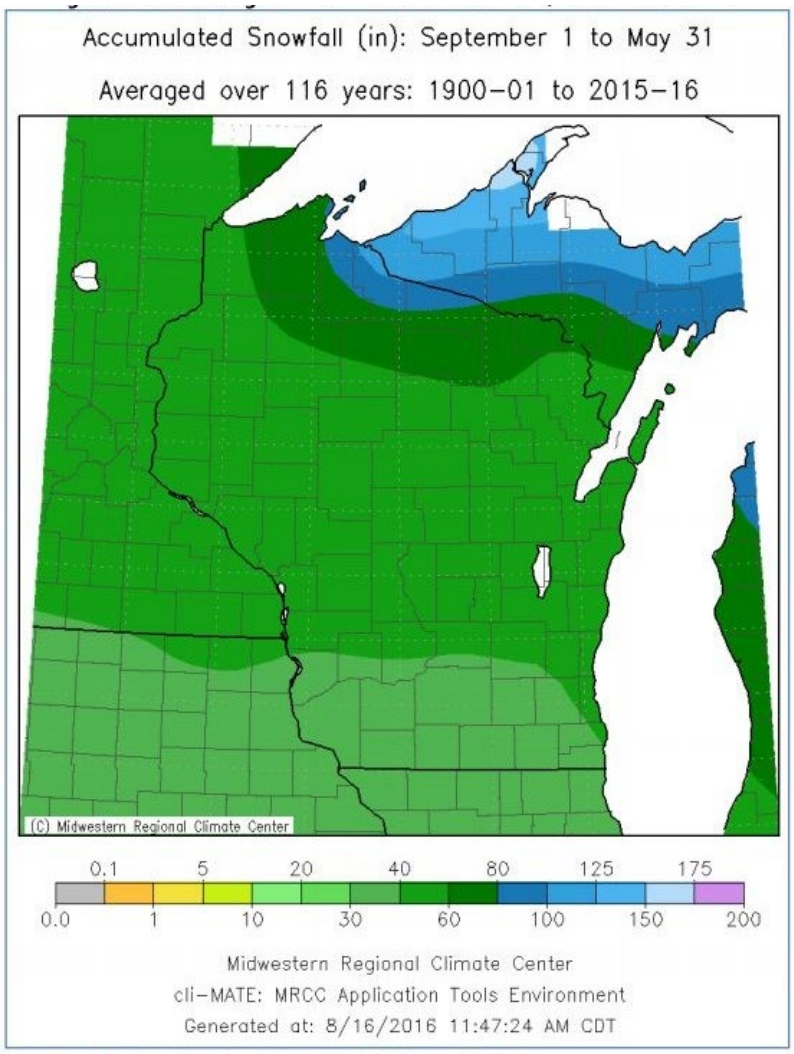
Probability and Impacts

The winter storm season in Wisconsin generally runs from October through March. Severe winter weather has occurred, however as early as September and as late as the latter half of April and into May in some locations.

Much of the snowfall in Wisconsin occur in small amounts of one to three inches per event. Heavy snowfalls that produce at least six inches of accumulation in one county happen on average about ten to 12 times per winter statewide. The northwestern and north-central parts of the state can experience early and late-season storms, while any part of Wisconsin can receive heavy mid-winter snows.

In the map below, the total number of Wisconsin blizzard events by county is shown for the winters from 1982-83 through 2015-16. Though the northern part of the state receives higher precipitation, more high-wind accumulations and drifting events occur in the southern half of the state, on average.

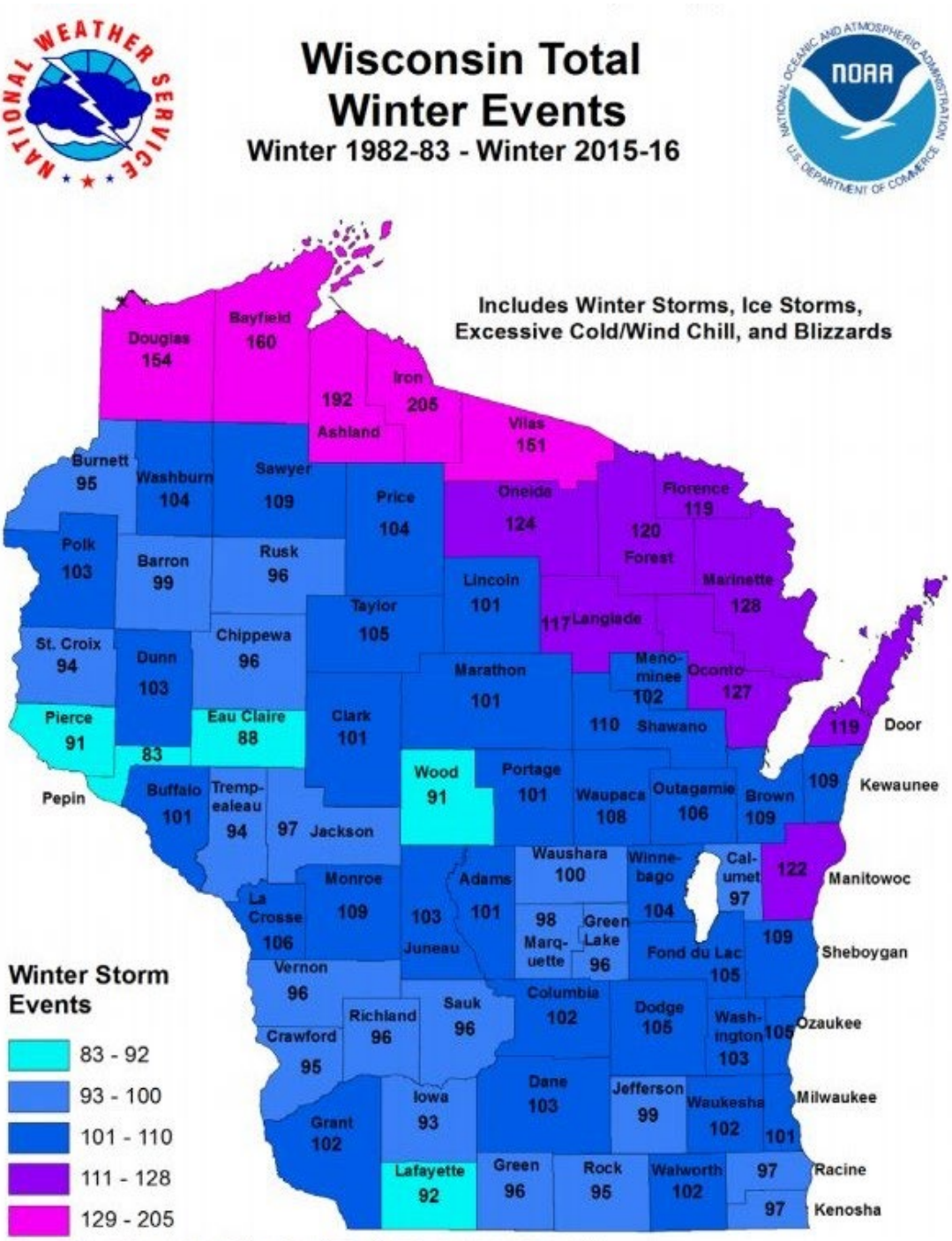
Map: Average Annual Snowfall in Wisconsin



Source: NOAA, National Weather Service, Milwaukee/Sullivan Office, 2016.

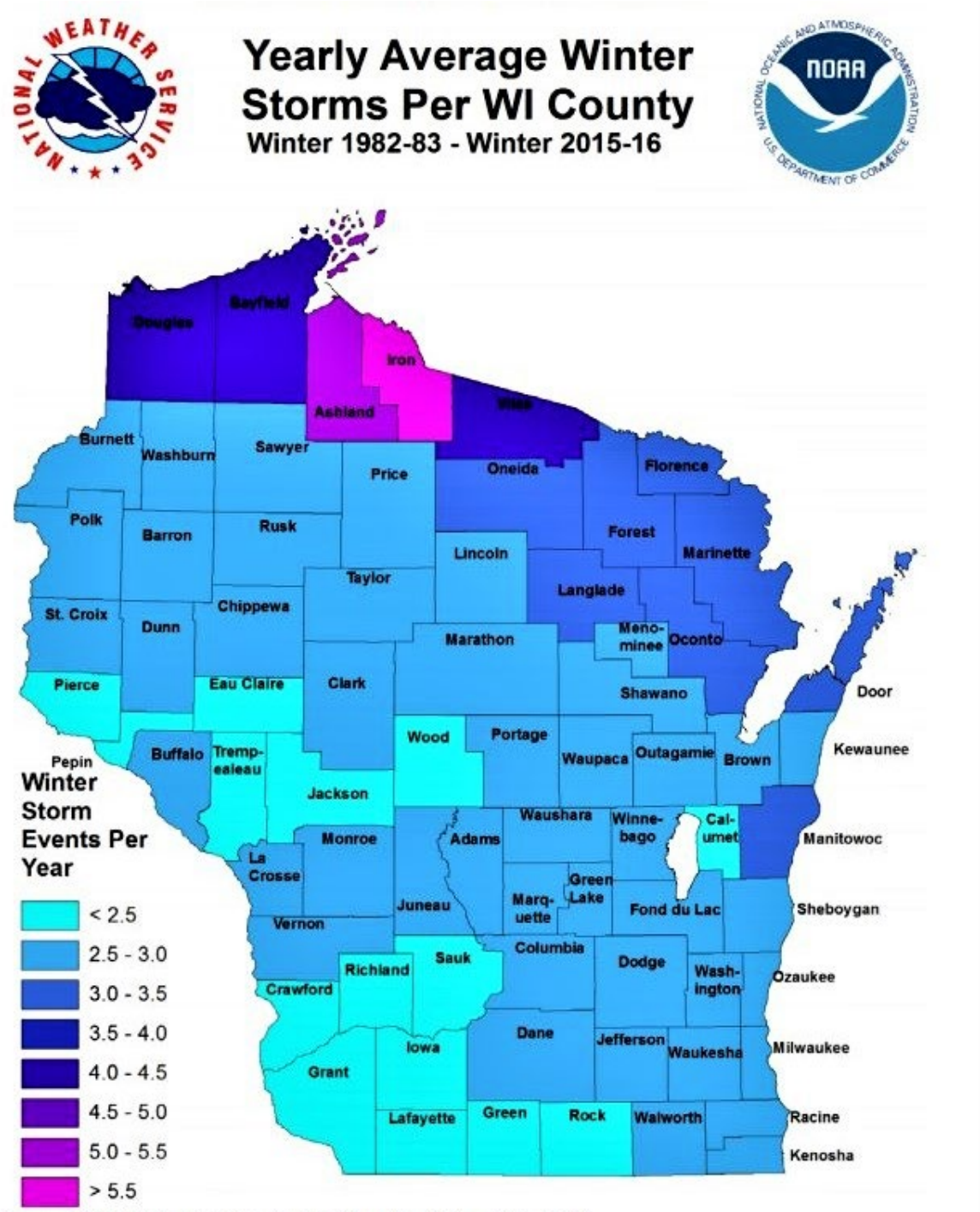
The map below shows that Portage County experienced 101 winter events between Winter 1982-83 and Winter 2015-16. This means that, on average, Portage County experiences just over three winter storm events per year.

Map: Wisconsin Total Winter Weather Events by County



Source: NOAA, National Weather Service, Milwaukee/Sullivan Office, 2016.

Map: Wisconsin Average Annual Winter Weather Events by County



Source: NOAA, National Weather Service, Milwaukee/Sullivan Office, 2016.

Jurisdiction-specific Hazard Considerations and Impact/Vulnerability

The information in the table below was collected during the mitigation workshops and was submitted by a representative from the municipality. The table is not inclusive of impacts on all jurisdictions and strictly includes information directly provided by the municipality.

Table: Jurisdiction-specific Hazard Impact/Vulnerability for Winter Storms and Extreme Cold

Jurisdiction	Affected Jurisdictions' Hazard Considerations and Impact/Vulnerability
Town of Linwood	Impacts roadways
Town of New Hope	Impacts roadways
Village of Junction City	Main water supply break, JFK school, and wastewater planet are impacted by extreme cold.

Catastrophic Scenario

Scenario presented in the 2016 State THIRA:

> A severe ice storm affects large portions of the state, followed by a period of bitter cold. Ice accumulations in the southwest and southeast regions range up to five inches in diameter on wires and limbs of trees. The excessive ice accumulations are in part caused by thunderstorms that rapidly built up the ice. High winds gusting to 60 mph make the situation even worse. Up to 600,000 residences are directly affected by the ice storm, and up to 100,000 people are without power during the height of the storm. Some rural areas are without power for over 10 days. There are major traffic back-ups on the major interstates that last up to 12-18 hours (2016 State THIRA).

Table: Extreme Cold Hazard Extent

Hazard Type	Affected Jurisdictions	Extent (based on historical events)		Comments
		Minimum	Maximum	
Extreme Cold	County-wide	N/A	-30-50°F	temperature lowered by wind gusts

Table: Severe Winter storm Hazard Extent

Hazard Type	Affected Jurisdictions	Extent (based on historical events)		Comments
		Minimum	Maximum	
Severe Winter Storm	County-wide	0 inches of snow	21 inches of snow	highest snowfall accumulation near Boelter Lake

Analysis

Probability

Based on the Planning Area Risk Ranking, severe weather is given a “medium” risk ranking summary. According to NCEI data,38 winter storm and 21 heavy snow events occurred from 1950 to May 2019. While the probability of the event was high, the **probability x impact score** was much lower for winter storms and extreme cold than Severe Weather (Including Tornadoes, High Winds, Hail, and Lightning) due to the minimal to lack of property damage caused by a winter storm and extreme cold events.

Loss Estimate

Economic impacts arise from numerous sources including hindered transportation of goods and services, flooding due to burst water pipes, forced closing of businesses, the inability of employees to reach the workplace, damage to homes and structures, automobiles and other belongings by downed trees and branches, loss of livestock and vegetation and many others.

Vulnerability Analysis

Analysis of Community Development Trends

While everyone is potentially at risk during winter storms, the actual threat depends on a person's specific situation. Specifically, a person's ability to find warmth and have basic needs provided during severely cold weather. The vulnerability to severe winter storms is like extreme temperatures.

Analysis of Community Development Trends

Because the winter storm events are regional, future development will be impacted equally across the county.

Vulnerability for Future Assets/Infrastructure for Severe Winter Storm Hazard

Any new development within the county will remain vulnerable to these events. However, because older structures are more likely to be susceptible to heavy snow or ice, more modern construction may be more resilient to this hazard.

Vulnerability Analysis for Severe Winter Storm Hazard

Winter storm impacts are equally distributed across the entire jurisdiction; therefore, the entire County is vulnerable to a winter storm and can expect the same impacts within the affected area.

Impact on Portage County Residents

Severe winter storm hazard events are not usually life-threatening. The impacts on residents will typically be limited to an increase in hazardous driving conditions due to ice, sleet, or snow. If driving conditions become too hazardous, residents are likely to be trapped in their homes

temporarily. Other potential impacts to residents include power outages due to downed lines. It is unlikely, but possible that residential roof collapse due to heavy buildups of snow could occur.

Impact on Essential Facilities and Other Property

All critical facilities are vulnerable to a winter storm. A critical facility will encounter many of the same impacts as other buildings within the jurisdiction. These impacts include loss of gas or electricity from broken or damaged utility lines, damaged or impassable roads and railways, broken water pipes, and roof collapse from heavy snow.

Building Inventory: The impacts on the general buildings within the County are similar to the damages expected to the critical facilities. These include loss of gas or electricity from broken or damaged utility lines, damaged or impassable roads and railways, broken water pipes, and roof collapse from heavy snow.

Impact on Critical Infrastructure

During a winter storm, the types of infrastructure that could be impacted include roadways, utility lines/pipes, railroads, bridges, and ports. Since the county's entire infrastructure is equally vulnerable, it is essential to emphasize that any number of these structures could become damaged during a winter storm. Potential impacts include broken gas and/or electricity lines or damaged utility lines, damaged or impassable roads and railways, and broken water pipes.

Impact on the Environment

Lots of snowfall can lead to flooding in the local ecosystems, impacting the local food chain and potentially spreading pollution. Extended periods of wet/damp conditions can encourage the spread of mold and fungi. It is also possible that frozen tree branches can break off under their weight and damage the tree. Winter conditions may make it harder for animals to obtain food and water, causing a drop off in local populations. Livestock may also be impacted.

Impact on Operations

Barring extremely hazardous driving conditions has implications for first responder operations is usually manageable. It is possible that intense ice, sleet, or snow may make it difficult for emergency and police personnel to respond promptly to emergencies. Outages due to downed power lines may also cause many critical to facilities to rely on backup power temporarily.

Hazardous Materials

Nature of the Hazard

Hazardous materials are any solid, liquid, or gas that can pose a threat to human health and/or the environment due to being radioactive, flammable, explosive, toxic, corrosive, a biohazard, an oxidizer, an asphyxiant, or capable of causing severe allergic reactions. The release of hazardous materials can lead to property damage, short- and long-term health effects, acute injuries, and even death. Emergency response to incidents involving the release of hazardous materials may require fire, law enforcement, search and rescue, and hazardous materials units

History

The vast majority of hazardous materials incidents reported resulted from the loading, unloading, and transportation of hazardous materials. The map in the figure below indicates that Wisconsin over the past 10 years ranks toward the bottom third of states in total hazardous materials incidents.

Map: 2007-2016 Hazardous Materials Incident Map

Source: Hazmat Intelligence Portal, U.S. Department of Transportation, Data as of 10/21/2016

Since 1971 Wisconsin has had a total of 10,958 reported hazardous materials transportation incidents. This total is comprised of 10,498 highway incidents (95.8%), 266 rail incidents (2.4%), 188 air incidents (1.7%), 2 other incidents (>0.1%), and zero water incidents (0.0%). The total cost for all reported incidents is approximately $57 million dollars. Approximately half of the amount ($26.6 million) is from the 1996 Weyauwega Train Derailment.

Portage County does not have any significant reported hazardous material response, spill, or problems from any of our fixed facilities, spill, or transportation-related incidents. Portage County has a number of smaller-scale activities: abandoned containers, leaking underground storage tanks, environmental repairs, and spills listed on the State of Wisconsin Department of Natural Resources Bureau for Remediation and Redevelopment Tracking System (BRRTS). BRRTS is the WIDNR's online database that provides information about contaminated properties and other activities related to the investigation and cleanup of contaminated soil or groundwater in Wisconsin.

Table: Portage County Remediation Sites

	Open	Closed	Historical
Total	**22**	**568**	**251**

Source: Wisconsin Department of Natural Resources, BERRTS data, date

The BRRTS database has identified 1,190 activities from February 1977 through August 2019, of which 22 are listed as Open Status.

Historic Jurisdiction-specific Hazard Impact/Vulnerability

Table: Historic Jurisdiction-specific Hazard Impact/Vulnerability for Hazardous Materials

Hazard Type	Affected Jurisdictions	Comment	Date
Unloading Hazardous Spill - Road	Village of Plover	Incident occurred at, 2920 Twin Towers Dr. by XPO Logistics Freight, Inc. while unloading the materials.	03/28/2014
Unloading Hazardous Spill - Road	Village of Plover	Incident occurred at, 3020 Grant Ave by Fedex Freight, Inc. while unloading the materials.	04/14/2014
Unloading Hazardous Spill - Road	Village of Plover	Incident occurred at, 3020 Grant Ave by Fedex Freight, Inc while unloading the materials.	07/23/2014
Unloading Hazardous Spill - Road	Village of Plover	Incident occurred at, 3020 Grant Ave by Fedex Freight, Inc while unloading the materials.	09/18/2014
In Transit Hazardous Spill - Road	Village of Plover	Incident occurred at, 2920 Twin Towns Rd by XPO Logistics Freight, Inc while in transit to drop off location.	10/15/2014
Loading Hazardous Spill - Road	City of Stevens Point	Incident occurred at, 3332 Minnesota Ave by United Parcels Service while loading the materials.	04/30/2014
In Transit Hazardous Spill - Railway	City of Stevens Point	While in transit on FRA-Railway, a Wisconsin Central LTD hazardous spill occurred in Stevens Point.	10/15/2014
In Transit Hazardous Spill - Road	City of Stevens Point	While in transit on 707 Arlington Place, Quality Carriers, Inc had a hazardous spill occur.	11/14/2014
In Transit Hazardous Spill - Railway	City of Stevens Point	While in transit on FRA-Railway a Wisconsin Central LTD, a hazardous spill occurred.	10/15/2014
In Transit Hazardous Spill - Railway	Village of Junction City	While in transit on FRA-Railway a Wisconsin Central LTD, a hazardous spill occurred.	10/15/2014
Unloading Hazardous Spill - Road	Village of Plover	While unloading on 3020 Grant Ave a Fedex Freight, Inc had a hazardous spill occur.	06/27/2015
Unloading Hazardous Spill - Road	Village of Plover	While unloading on 3020 Grant Ave a Fedex Freight, Inc had a hazardous spill occur.	07/10/2015
Unloading Hazardous Spill - Road	Village of Plover	While unloading on 3020 Grant Ave a Fedex Freight, Inc had a hazardous spill occur.	09/08/2015
In Transit Hazardous Spill - Road	Village of Plover	While in transit an XPO Logistics Freight, Inc had a hazardous spill occur on 2920 Twin Towers Dr.	09/18/2015
Unloading Hazardous Spill - Road	City of Stevens Point	While unloading a hazardous spill occurring on 3332 Minnesota Ave by the United Parcels Service Co.	08/29/2015
Unloading Hazardous Spill - Road	City of Stevens Point	While unloading a hazardous spill occurred on 3332 Minnesota Ave by the United Parcel Service Co.	08/29/2015

Unloading Hazardous Spill - Road	City of Stevens Point	While unloading a hazardous spill occurred on 3332 Minnesota Ave by United Parcel Service Co.	08/24/2015
In Transit Hazardous Spill - Railway	City of Stevens Point	While in transit a Wisconsin Central LTD had a hazardous spill on the FRA-Railway.	10/25/2015
In Transit Hazardous Spill - Road	Village of Plover	While in transit an XPO Logistic Freight, Inc had a hazardous spill on 2920 Twin Towers Dr.	03/31/2016
Unloading Hazardous Spill - Road	Village of Plover	While unloading a Fedex Freight, Inc on the roadway a hazardous spill occurred.	06/28/2016
Unloading Hazardous Spill - Road	Village of Plover	While unloading on 3020 Grant Ave, FedEx Freight had a hazardous spill occur.	07/12/2016
In Transit Hazardous Spill - Railway	City of Stevens Point	While in transit on FRA-Railway, a hazardous spill occurred.	06/16/2016
Unloading Hazardous Spill - Road	City of Stevens Point	While unloading a hazardous spill occurred on 3332 Minnesota Ave by United Parcel Service Co.	09/06/2016
Unloading Hazardous Spill - Road	Village of Plover	While unloading on FMCSA-highway XPO Logistics Freight, Inc had a hazardous spill.	05/27/2017
Unloading Hazardous Spill - Road	Village of Plover	While unloading on 2920 Twin Towers Dr. XPO Logistics Freight, Inc had a hazardous spill.	05/26/2017
Unloading Hazardous Spill - Road	Village of Plover	While unloading on FMCSA-highway, a hazardous spill occurred by FedEx Freight, Inc.	05/23/2017
Unloading Hazardous Spill - Road	Village of Plover	While unloading a hazardous spill occurred on FMCSA- highway by FedEx Freight, Inc.	06/21/2017
Unloading Hazardous Spill - Road	Village of Plover	While unloading a hazardous spill occurred on 3020 Grant Ave by Fedex Freight, Inc.	07/26/2017
Unloading Hazardous Spill - Road	Village of Plover	While unloading a hazardous spill occurred on 3020 Grant Ave by Fedex Freight, Inc.	08/02/2017
In Transit Hazardous Spill - Road	Village of Plover	While in transit a hazardous spill occurred on 2020 Twin Towers Dr by XPO Logistics Freight, Inc.	01/25/2018
Unloading Hazardous Spill - Road	Village of Plover	While unloading a hazardous spill occurred on 3020 Grant Ave by Fedex Freight, Inc.	01/26/2018
Unloading Hazardous Spill - Road	Village of Plover	While unloading a hazardous spill occurred on 2920 Twin Towers Dr by XPO Logistic Freight, Inc.	07/03/2018
Unloading Hazardous Spill - Road	Village of Plover	While unloading a hazardous spill occurred on 2920 Twin Towers Dr by Fedex Freight, Inc.,	07/16/2018
Unloading Hazardous Spill - Road	Village of Plover	While unloading a hazardous spill occurred on a highway by Fedex Freight, Inc.	08/06/2018

Unloading Hazardous Spill - Road	Village of Plover	While unloading a hazardous spill occurred on 3020 Grant Ave by Fedex Freight, Inc.	12/26/2018
Loading Hazardous Spill - Road	City of Stevens Point	While loading on 3332 Minnesota Ave, a hazardous spill occurred by United Parcel Service Co.	06/14/2018
In Transit Hazardous Spill - Railway	City of Stevens Point	While in transit a hazardous spill occurred on a rail cart near 2125 Monroe street by Wisconsin Central LTD.	08/22/2018
In Transit Hazardous Spill - Railway	City of Stevens Point	While in transit near 2617 Wayne Street a rail cart had a hazardous spill by Illinois Central Railway Company.	08/30/2018
In Transit Hazardous Spill - Railway	City of Stevens Point	While in transit near 2617 Wayne Street a rail cart had a hazardous spill by Wisconsin Central LTD.	10/21/2018
In Transit Hazardous Spill - Road	Village of Plover	While in transit, a hazardous spill occurred on 2920 Twin Towers Dr by XPO Logistic, LLC.	01/25/2018

Probability and Impacts

Predicting future hazardous materials incidents in Portage County is difficult.

A hazardous material is any item or agent (biological, chemical, radiological, and physical), which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors. Hazardous materials professionals are responsible for and adequately qualified to manage such materials. This includes managing and/or advising other managers on hazardous materials at any point in their life-cycle, from process planning and development of new products; through manufacture, distribution, and use; and to disposal, cleanup and remediation.

Hazardous materials are defined and regulated in the US primarily by laws and regulations administered by the U.S. Environmental Protection Agency (EPA), the US Occupational Safety and Health Administration (OSHA), the US Department of Transportation (DOT), and the US Nuclear Regulatory Commission (NRC). Each has its definition of "hazardous material."

OSHA's definition includes any substance or chemical which is a "health hazard" or "physical hazard," including: chemicals which are carcinogens, toxic agents, irritants, corrosives, sensitizers; agents which act on the hematopoietic system; agents which damage the lungs, skin, eyes, or mucous membranes; chemicals which are combustible, explosive, flammable, oxidizers, pyrophoric, unstable-reactive or water-reactive; and chemicals which in the course of normal handling, use, or storage may produce or release dusts, gases, fumes, vapors, mists or smoke which may have any of the previously mentioned characteristics. (Full definitions can be found at 29 Code of Federal Regulations (CFR) 1910.1200.)

The Environmental Protection Agency (EPA) incorporates the OSHA definition, and adds any item or chemical which can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment. (40 CFR 355 contains a list of over 350 hazardous and extremely hazardous substances.)

DOT defines a hazardous material as any item or chemical which, when being transported or moved in commerce, is a risk to public safety or the environment, and is regulated as such under its Pipeline and Hazardous Materials Safety Administration regulations (49 CFR 100-199), which includes the Hazardous Materials Regulations (49 CFR 171-180). Also, hazardous materials in transport are regulated by the International Maritime Dangerous Goods Code; Dangerous Goods Regulations of the International Air Transport Association; Technical Instructions of the International Civil Aviation Organization; and U.S. Air Force Joint Manual, Preparing Hazardous Materials for Military Air Shipments.

The NRC regulates materials that are considered hazardous because they produce ionizing radiation, which means those materials that produce alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. This includes” special nuclear material," by-product material, and radioactive substances. (See 10 CFR 20).

Portage County has 26 Tier II EPA planning facilities that use, store, or produce extremely hazardous substances, as defined by the EPA. The most common of these chemicals is Sulfuric Acid. Chlorine, Anhydrous Ammonia, and Nitric Acid are also common chemicals used throughout Portage County. In addition to these twenty-six (26) planning facilities, there are an additional 50 facilities that report

hazardous chemical use or storage throughout the year. With the increase in the number of facilities that house hazardous materials the potential for a release increases, the impact of such a release would be determined based upon factors that include the type of hazardous materials released (Chemical, Biological, Radiological, Nuclear, Explosive), the amount of material released, the state of the hazardous material (solid, liquid or gas), the volatility of the material released, the weather conditions at the time of release, the population density in the area of the release, and the time of day (population density-vs-facility-vs-occupancy time).

Jurisdiction-specific Hazard Considerations and Impact/Vulnerability

The information in the table below was collected during the mitigation workshops and was submitted by a representative from the municipality. The table is not inclusive of impacts on all jurisdictions and strictly includes information directly provided by the municipality.

Table: Jurisdiction-specific Hazard Impact/Vulnerability for Hazardous Materials

Jurisdiction	Affected Jurisdictions' Hazard Considerations and Impact/Vulnerability
Town of Amherst	Canadian National railroad could pose a threat to the town for a hazardous spill. Several overpasses in Amherst (Amherst Junction) need repairs to ensure the safety of hazardous materials traveling over them to prevent a potential accident leading to a spill. Reports of rail cars raising off the tracks pose a dangerous threat to a potential spill.
Town of Buena Vista	Gases from Manure pits pose a hazardous materials threat to the town.
Town of Pine Grove	Potatoes farms in the town pose a threat to fertilizer spills/leaks into water and homes.
Town of Plover	Town is susceptible to hazardous leaks by railway, roads, and air.
Village of Junction City	Farms oil and gas tanks and propane fill tanks pose a hazardous threat.
Village of Plover	Industrial users pose a threat of a hazardous release to the village.
City of Stevens Point	According to data collected, the City of Stevens Point is at risk for both the railway and hazardous road spills.

The maps below indicate each activity type separately and include open-closed, historical, and conditional categories.

Catastrophic Scenario

The scenario below, from the 2016 State of Wisconsin THIRA, highlights a Hazardous Materials catastrophic event (2016 State of Wisconsin THIRA):

> During a weekday at approximately 9:00 a.m., a delivery truck driver is filling a 49,000 lb. tank with a hazardous chemical at a major chemical company facility when he receives an important family emergency phone call. The driver rushes back into the truck and drives off, forgetting that the truck is still connected to the pump.
>
> As the truck drives off, the emergency stop valve on the delivery truck is damaged due to the nozzle still being engaged in the tank. The truck driver realizes that the damage is causing a chemical release, and runs to the back of the truck to try to stop the leak; he is overcome by fumes and falls to the ground.
>
> The chemical company employee assisting with the transfer is splashed by the chemical (especially on his gloved hands). He has no skin contact with the acid but does inhale some fumes. The contaminated employee runs in and grabs the manager on his bare arm to have him call the E-Team. The manager then runs outside and finds the truck driver lying on the ground. The manager attempts to rescue the driver but realizes that there are too many fumes and retreats back into the facility.
>
> There is a release of 9,000 lbs. of the chemical over a two-hour period, in addition to 4,500 lbs. of gas released into the ambient air. The winds are out of ESE at 3 miles per hour. The temperature is 72 degrees, with 80% cloud cover.
>
> The facility sits adjacent to a major freeway running through a large metropolitan area. Directly across from the freeway is a university, which is in session. There are various public and private facilities within the projected plume area, where serious health problems could occur.
>
> Approximately 20,000 individuals will need to be evacuated with sheltering space required for 30% of the evacuees. There is a possibility that another 60,000 individuals may need to be evacuated in the event the hazardous material cannot be contained due to changing atmospheric conditions.

Table: Hazardous Materials Incident Hazard Extent

Hazard Type	Affected Jurisdictions	Extent (based on historical events)		Comments
		Minimum	Maximum	
Hazardous Materials Incident	County-wide	Minor spill/release	Rail tanker(s) explosion or explosion at fixed facility releasing heavy plumes of toxic chemicals	The maximum extent represents a hypothetical but realistic scenario.

Analysis

Probability for Hazardous Materials Incident Hazard

Based on the Planning Area Risk Ranking, this hazard is given a "Medium" risk ranking summary because these events are likely to occur every 25 years. However, the exact socioeconomic impact of this hazard requires further investigation to determine the full extent of the impact. Assessing the impact on humans requires further research and a better understanding of the toxic release impact.

Wisconsin ranks 28 of 56 of state and territories nationwide for total toxic releases per square mile (EPA).

Hazard Extent for Hazardous Materials Incident

The extent of the hazardous material incident hazard varies in terms of the quantity of material being transported as well as the specific content of the container. The Toxics Release Inventory (TRI) records the toxic chemical releases and pollution prevention activities reported by industrial and federal facilities. In 2017, there was 12 TRI facility in County (EPA). The following charts are from the EPA 2017 TRI report.

Quick Facts for 2017	Portage County, WI
Number of TRI Facilities:	12
Total Production-Related Waste Managed:	3.8 million lbs
Total On-site and Off-site Disposal or Other Releases:	1.2 million lbs
Total On-site:	1.2 million lbs
Air:	29.5 thousand lbs
Water:	1.2 million lbs
Land:	1.8 thousand lbs
Total Off-Site:	5.1 thousand lbs

Utility (Power) Failure

Nature of the Hazard

Lifeline Disruptions must be considered when planning for disaster survival and recovery. According to the State of Wisconsin THIRA/SPR, disruption of lifelines (including electric, fuel, water, and wastewater) can be described as the failure of a critical public or private utility infrastructure that results in a loss of essential functions and/or services.

Utility failure can refer to the loss of power, communications, or other basic utility. The most common concern is **power outage**. Power outages are typically caused when damages occur to the electrical infrastructure. Those damages can be caused by high winds, traffic accidents, flooding, and more. Power outages can be an inconvenience for many, but life-threatening to those who rely on power for medically necessary services. Downed power lines also pose an additional threat; they can cause fires, injury, and death. If the power outage is caused by an event at the power generating plant, the outage can be far more widespread than if the infrastructure is damaged.

A **blackout** is generally defined as a period of disrupted delivery of electricity due to the failure of some components of the electric power system. The most severe utility interruptions are regional power outages. In general, utilities that employ aboveground wiring (e.g., power and data/telecommunications) are vulnerable to the effects of hazards such as high wind, heavy snow, ice, rain, and vehicular accidents. Electric power is a critical resource for the operations of diverse infrastructure and the provision of services.

Most often, power disruption results from damage to or electrical hazards within an electric power system and is often a cascading side effect of natural hazards, particularly Severe Weather (including Tornadoes, High Winds, Hail, and Lightning). System components include power generation plants, substations, circuits, switches, transformers, power lines, and power poles. Because of the variation in causes of power outages that range from vehicle accidents to severe weather, utility interruptions can occur at any time.

Uncontrolled blackouts result from imbalances among load, generation, and transmission system flows and can occur when one or more elements of the electrical grid (generator or transmission line) fails or trips out of service. If a blackout remains within a localized area, it is considered an “unplanned interruption.” However, sometimes an unplanned interruption in one area can lead to successive power disruptions over a wide area of the grid. This disruption is known as a “cascading blackout” and cannot be restrained, resulting in massive power outages over an entire region. An example of a cascading blackout is the blackout of 2003, during which large portions of the eastern United States and Canada experienced power disruptions for several days.

A qualitative analysis was conducted as part of the IL-IN-WI Combined Statistical Area Regional Catastrophic Grant Program’s Regional Risk Assessment to determine potential dollar losses, impacts, and historical occurrence intervals within areas of the United States. Data sources included NOAA, the NRC, the US DOT, and the US Energy Information Administration.

Cascading events caused by a widespread blackout can impact health and safety and lead to service disruptions, transportation disruptions (air, water, and roadways), communication disruptions, water distribution disruptions, sewer disruptions, vandalism, looting, arson, psychological impacts, loss of

productivity, and economic loss. Economic impacts resulting from a power outage can be severe. All facilities considered critical infrastructure are vulnerable to utility interruptions, especially loss of power. The establishment of reliable backup power at these facilities is extremely important to continue to provide for the health, safety, and well-being of the population.

According to the DHS, a power outage may:

- Disrupt communications, water, and transportation.
- Close retail businesses, grocery stores, gas stations, ATMs, banks, and other services.
- Cause food spoilage and water contamination.
- Prevent the use of medical devices.

Investor-owned utilities supply the vast majority of power to Wisconsin electricity customers. Other suppliers include municipal utilities and power cooperatives. The relative amounts of power provided by the three types of services have changed very little over the past 20 years. The table in Figure 3.10.1-1 lists kilowatt-hour (kWh) and the percentage of electricity supply by type of utility (State of Wisconsin THIRA/SPR).

Chart: Electricity Supply by Utility Type

Year	Private Utilities		Municipal Utilities		Power Cooperatives		TOTAL
	kWh	%	kWh	%	kWh	%	
1970	21,515	87.1	2,160	8.7	1,040	4.2	24,715
1980	32,335	85.7	3,547	9.4	1,864	4.9	37,746
1990	41,653	84.7	5,263	10.7	2,282	4.6	49,198
2000	54,404	84.1	7,375	11.4	2,910	4.5	64,689
2010	57,183	83.2	7,759	11.3	3,810	5.5	68,752
2012	57,128	83.0	7,856	11.4	3,836	506	68,820
kWh in listed in millions							

Source: 2013 Wisconsin Energy Statistics, State Energy Office.

Portage County has four **natural gas supply pipelines** that come into the County. Disruption of any one of these could impact the flow and availability of natural gas into the County impacting heating and other commodities that rely on natural gas. The Four companies are represented as:

Pipeline Operator ID & Name	Contact Address	Phone / Fax / Email
22784 - ALLIANT ENERGY - WISCONSIN POWER & LIGHT CO	4902 North Biltmore Lane, Madison, WI 53718-2148	Phone: (608) 458-4467 Email: andrewhesselink@alliantenergy.com
22791 - WISCONSIN PUBLIC SERVICE CORP	700 N Adams St, Green Bay, WI 54307-9001	Phone: (920) 433-1099 Fax: (920) 433-1360 Email: philip.mauermann@wisconsinpublicservice.com
22855 - FLINT HILLS RESOURCES, LC	4111 East 37th St. North, Wichita, KS 67220	Phone: (316) 828-7082 Fax: (316) 828-5739 Email: info@kochpipeline.com
405 - ANR PIPELINE CO	450 - 1 Street SW, Calgary, AB T2P5H1	Phone: (855) 458-6715 Email: Public_awareness@transcanada.com

History

The Federal Energy Regulatory Commission (FERC) passed mandatory reliability rules in 2005, which resulted in a series of new mandates including requirements for redundancy, reliability, and rigorous right-of-way maintenance. Even with regulations, outages still occur.

In the Portage County Community Preparedness and Mitigation Survey, over 85% of survey takers viewed power failure as medium or high-risk events that threaten their home or place of business. 39.1% survey takers ranked power failure as high and 47% indicating that power failure as a medium risk. The concerns of the citizens in Portage County are in line with the findings of the State of Wisconsin THIRA/SPR. According to the THIRA/SPR, "The disruption of lifelines has and likely will again occur as a secondary hazard resulting from the impacts of a natural, technological, or human-caused hazard."

2019 Examples

According to the State of Wisconsin THIRA/SPR, the Wisconsin transmission system can become congested under normal power flow conditions. Also, many transmission lines in Wisconsin are more than 60 years old, requiring upgrades or replacement. Multiple failures in one location can quickly affect the entire system, producing a large scale blackout. Fortunately, this does not happen very often.

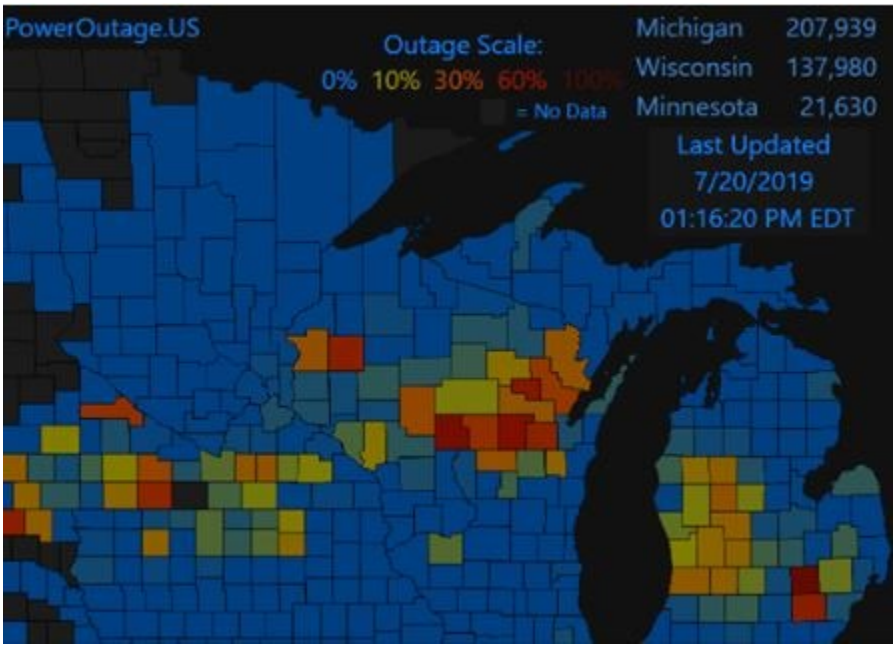
- The hazard impact was rated as medium.
- The hazard is somewhat localized, affecting only relatively small or isolated areas when it occurs.

In February 2019, temperatures fellow below zero due to severe winter weather and many residents were without power for more than a day. The County prepared to evacuate citizens that had no way of warming there homes (Stevens Point Journal).

As recently as July 2019, extensive power outages occurred in the County and were correlated with the Presidentially-declared disaster severe weather events and resulted in multi-day outages.

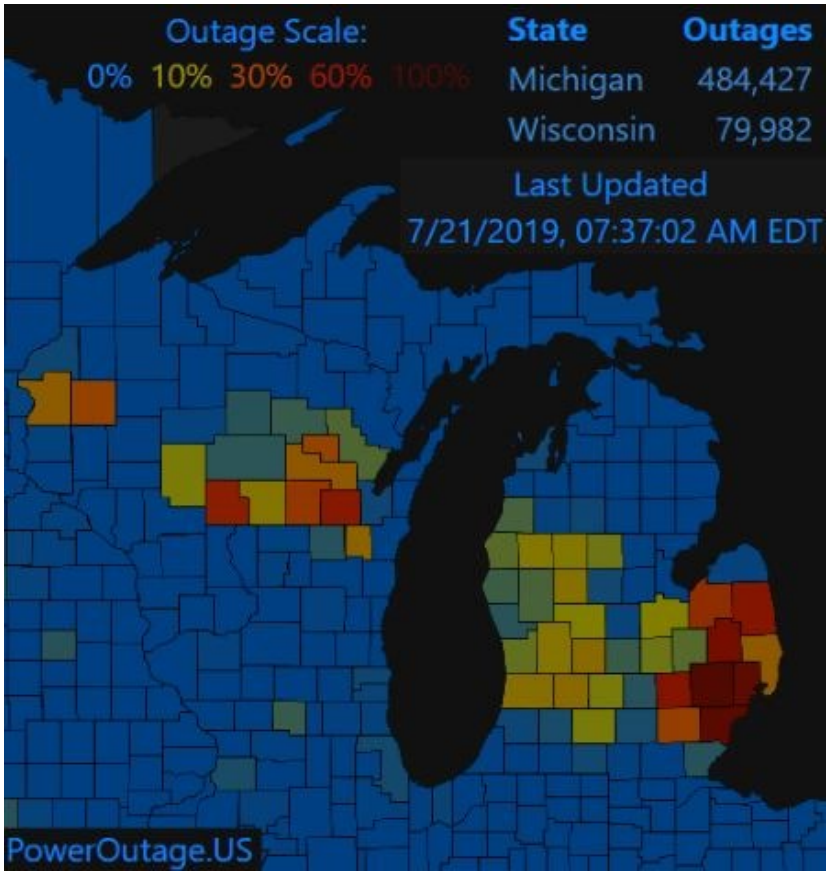
Map: July 20, 2019, Power Outages

Source: Power Outage.US



Map: July 21, 2019, Power Outages

Source: Power Outage.US



While outages can occur for various reasons, the table below highlights NCEI data that connected an outage with a natural hazard event.

Table: Historic Jurisdiction-specific Hazard Impact/Vulnerability for Utility (Power) Failure

Hazard Type	Affected Jurisdictions	Comment	Date
Power Outage	City of Stevens Point	A thunderstorm caused power lines to go down in Stevens Point.	05/19/1996
Power Outage	Town of Almond	Severe storms and a tornado in Almond caused power outages in Portage County.	06/23/2004
Power Outage	Village of Plover	Severe storms and wind caused a power outage in the Village of Plover.	05/24/2012
Power Outage	Town of Sharon	A thunderstorm in Sharon caused a power outage.	06/18/2012
Power Outage	Village of Plover	A thunderstorm caused winds in Plover to knock down power lines causing a power outage.	05/30/2013
Power Outage	Village of Plover	High winds in Plover reaching up to 60 mph to cause power outages.	03/08/2017
Power Outage	Portage County	A blizzard in Portage County caused a power outage.	02/24/2019

Probability and Impacts

Deteriorating infrastructure is a current nationwide problem that is likely to be exacerbated by changing future conditions. Higher future temperatures will increase the demand for cooling buildings, which would place more significant stress on power systems. Portage County must prepare for even higher pressure on infrastructure systems. Although declining infrastructure is a serious problem, it also presents an opportunity to improve and integrate existing systems so that they serve communities better and more efficiently.

Demand for electricity varies throughout the year and during peak times (hottest and coldest times), more power is demanded. Utility demands must be anticipated, and the balancing of supply and demand is required to maintain a reliable electric system.

Utility disruption can happen with relatively little to no warning time. While these events are more likely to occur as a secondary impact of a hazard event like Severe Weather (including Tornadoes, High Winds, Hail, and Lightning), these events can occur for other technological reasons, and even cybersecurity threats can cause a power outage.

Power failures have an almost limitless potential to impact all of the human-caused hazards in both numerous and unforeseen ways. Critical to the hazard mitigation plan is ensuring the community will be safe during these events. A critical need is providing emergency power will be available when standard control is done. Highlighted under mitigation actions, are the need and access of emergency generators for the County and its jurisdictions. Below is a list from the IL-IN-WI CSA Regional Mass Care and Sheltering Annex that highlights the importance of pre-event planning for back-up power options.

Extended power outages can have negative health impacts during periods of extended heat or cold. Critical facilities, such as hospitals, shelters, nursing homes and assisted living facilities, and the Emergency Operations Center (EOC), must remain operational during a power outage. An example is that Portage County operates temporary emergency locations during heat or cold weather emergencies (locations updated and posted on their website). Locations, like the warming and cooling center, need back-up power sources to ensure operations can continue in the event of a power outage.

Table: Suggested Checklist for Facility Operating Systems

Source: IL-IN-WI CSA Regional Mass Care and Sheltering Annex

	Facility's Operational Systems
1.	Emergency Power
	Is facility pre-wired for generator support?
	Does the facility have a generator? Is the generator on-site or off-site?
	Type and size of generator
	Location of generator
	Amount and type of fuel generator requires
	Amount of fuel typically maintained in generator (during non-emergency times)
	Length of time generator can operate before requiring refueling
	Existing emergency contracts for fueling
	Frequency of generator testing (daily, weekly, monthly)
	List of resources that can be powered with generator (for example, lighting, water pumps, HVAC, refrigeration, kitchen facilities)
	List of rooms or areas of the building supported by generator power
	Are emergency power outlets easily identifiable?

Catastrophic Scenario

The State of Wisconsin THIRA highlights that deteriorating infrastructure is a current national crisis that is exacerbated by changing future conditions, such as higher future temperatures. While the State THIRA did not present a catastrophic scenario strictly based on utility failures, the state plan highlighted the importance of lifelines. Lifeline disruption and loss have been correlated to impacting recovery rates for businesses, specifically small businesses. Lifeline disruption includes the loss of electricity, water, natural gas, wastewater treatment, and telephone (Tierney and Dahlhamer, 1995). The loss of power is typically regarded as an immediate loss of operation and has long term impacts. For example, following the Terrorist Attacks on September 11, 2001, failure of electrical power and communication services had a significant long-term impact on businesses in the financial sector (Tierney, 2006 and 2001).

The demand for electricity changes daily and seasonally. During peak times, the most significant amount of electricity known as "peak load" is needed, but a "baseload" of electricity is required year-round. During a peak load time, if a power failure were to occur, hundreds of thousands of houses could be without power. Given the likelihood of continued impact from severe thunderstorms and severe winter storms in the area,

Table: Utility Failure Hazard Extent

Hazard Type	Affected Jurisdictions	Extent (based on historical events)		Comments
		Minimum	Maximum	
Utility Failure	County-wide	0 affected people	25,000 customers without power for more than 24 hours	Power Outages lasting more than two-days would necessitate the need to save shelters or evacuation of vulnerable population members

Analysis

Probability for Utility Failure Hazard

Based on the Planning Area Risk Ranking, this hazard is considered to be "Medium" because these events are likely to occur on a large scale more than every 25 years and have a high impact on residents but are typically anticipated to have a minimal impact on the economy and property.

Geographic Extent for Utility Failure Hazard

Utility failure can occur in any location where the utility is located. As these utilities are available countywide, the risk is countywide.

Hazard Extent for Utility Failure

Utility failure generally impacts thousands of structures, homes, and people at once. However, it is possible for a utility failure to impact a smaller, targeted area or to impact a much larger population. Power outages can be especially dangerous for people or facilities that rely on power for medical needs.

Analysis of Community Development Trends

As the population continues to grow in Portage County, this will place increasing strain on utilities.

> **Vulnerability to Future Assets/Infrastructure for Utility Failure Hazard**
>
> Many new developments incorporate the practice of burying utilities, which will reduce the occurrence of outages/disruptions.

Vulnerability Analysis for Utility Failure Hazard

Most utility failures are brief but have the potential to cause other problems if they remain unresolved too long. For example, typically, power outages are short-lived. If the power grid was significantly damaged, however, the risk for additional hazards grows (such as riots, fires due to candle use, etc.).

> **Impact to Portage County Residents**
>
> The impact on Portage County residents is likely to be limited to short inconveniences, with the most likely scenario being a temporary power failure. Continued electrical service, however, is incredibly important in maintaining the health and safety of the public. Electricity is required to heat and cool homes, operate traffic signals and operate hospitals and emergency services. Power outages can be particularly dangerous during times of extreme heat or cold. Also, power outages can harm the infirm. The number of people impacted by a power outage is highly variable with each event. It is also possible that water or sewage failure can foster unsanitary conditions that may increase the risk of sickness.
>
> **Impact on Essential Facilities and Other Property**

Any essential facility that relies on a utility can be impacted by utility failure and should invest in backup generators and other supplies to respond accordingly. Populations in schools, hospitals, and elderly care facilities have been identified as being at increased vulnerability to this hazard.

Building Inventory: Secondary impacts of utility failure may result in property damage. Most buildings will not be directly impacted by this hazard.

Impact on Critical Infrastructure

Many key systems, such as water treatment facilities, stormwater/wastewater, and transportation, rely on electricity. Disruption in these systems can result in loss of life, property damage, and economic losses.

Impact on the Environment

Utility failure is unlikely to impact the environment except in the unlikely circumstance that such an incident resulted in a hazardous material being inadvertently released into the environment (i.e., waterways).

Impact on Operations

Law enforcement, fire, and emergency medical services will be impacted indirectly by a loss of systems (e.g., data and communications, street and traffic lighting, alarm) and directly by increased calls for service. Power outages can also interrupt the operation of the 9-1-1 PSAP. Electricity is a vital component of operating businesses and County services.

Major Transportation (Railroad) Incident

Nature of the Hazard

The nation's transportation system is an extensive, open, interdependent networked system that moves people and goods throughout the country. This safe, efficient, and secure movement of people and goods through transportation is critical to the County. Every day, the transportation system connects cities, producers, manufacturers, and retailers, moving substantial quantities of people and goods through six different subsections, or modes. A significant disruption to the following modes would be considered a major transportation incident:

- **Aviation/Air**: Incorporates aircraft, air traffic control systems, and commercial airports.
    - Airways that serve the County include Central Wisconsin Airport and Stevens Point Municipal Airport.
- **Highway**: Encompasses roadways and supporting infrastructure. Vehicles include automobiles, buses, motorcycles, and all types of trucks.
    - The Portage County Highway Department maintains 434 miles of county and 156 miles of state roads with 51 employees. They will continue to provide a safe, efficient, and cost-effective road and bridge system to enhance the quality of life for its residents and visitors (Portage County Highway Department).
    - Portage County is served by Interstate 39, US Highway 10 and seven State Highways (66, 54, 34, 22, 49, 73 and 161), all of which link Portage County to the surrounding region. As of October 2005, Portage County contained approximately 1,919 miles of public roadway of which 1,642 miles were contained in the rural area, and approximately 276 miles were contained in the Urban Area (Portage Comprehensive Plan)
- **Rail**: Consists of railroads, freight cars, and locomotives.
    - Canadian National Railroad (CN) serves Portage County. CN operates 19,560 miles of track, across North America, including approximately 68 miles of mainline track through Portage County, which is a vital link for traffic coming out of Canada through the Chicago gateway and beyond. Current rail activity through Portage County is 16 to 20 trains per day on the mainline; this number of trains is anticipated to grow at the same rate as the US economy (Portage Comprehensive Plan).

History

Airline

No airline incident has occurred in Portage County.

Railroad

The National Transportation Safety Board provides a full listing of all railroad accident reports. To date, the only crash that has occurred in Wisconsin was not in Portage County. The incident happened in Fall River and report summary details:

> **Executive Summary**
>
> On October 9, 1986, eastbound Amtrak passenger train eight derailed in Fall River, Wisconsin. The train was to cross over from the eastward to the westward track in the town of Fall River. Train 8 entered the crossover at 70 mph and the locomotive units overturned. The authorized speed for the crossover was 10 mph. Two locomotive units and 10 passenger cars derailed, the fireman was killed, two crew members were injured seriously, and two received moderate injuries. Of the 215 passengers on board, 26 were wounded.
>
> **Probable Cause**
>
> The National Transportation Safety Board determines that the likely cause of this accident was the Soo Line Railroad's procedures for crossing trains over on mainline tracks which defeated the protection of the signal system. Contributing to the accident was the heavy workload of the dispatcher and operator. Also contributing to the accident was the lack of adequate industry and Federal rules regarding the functioning and testing of radio systems used in dispatching trains

The Fall River Derailment occurred over 30 years ago and highlighted the severe impact one crash event can have. While no crashes have occurred in Portage County, multiple spills happened from 2014-2018 in Portage County.

Table: Historic Jurisdiction-specific Hazard Impact/Vulnerability for Major Transportation (Railroad) Incident

Hazard Type	Affected Jurisdictions	Comment	Date
In Transit Hazardous Spill - Railway	City of Stevens Point	While in transit on FRA-Railway, a Wisconsin Central LTD hazardous spill occurred in Stevens Point.	10/15/2014
In Transit Hazardous Spill - Railway	City of Stevens Point	While in transit on FRA-Railway a Wisconsin Central LTD, a hazardous spill occurred.	10/15/2014
In Transit Hazardous Spill - Railway	Village of Junction City	While in transit on FRA-Railway a Wisconsin Central LTD, a hazardous spill occurred.	10/15/2014
In Transit Hazardous Spill - Railway	City of Stevens Point	While in transit a Wisconsin Central LTD had a hazardous spill on the FRA-Railway.	10/25/2015
In Transit Hazardous Spill - Railway	City of Stevens Point	While in transit on FRA-Railway, a hazardous spill occurred.	06/16/2016

In Transit Hazardous Spill - Railway	City of Stevens Point	While in transit a hazardous spill occurred on a rail cart near 2125 Monroe street by Wisconsin Central LTD.	08/22/2018
In Transit Hazardous Spill - Railway	City of Stevens Point	While in transit near 2617 Wayne Street a rail cart had a hazardous spill by Illinois Central Railway Company.	08/30/2018
In Transit Hazardous Spill - Railway	City of Stevens Point	While in transit near 2617 Wayne Street a rail cart had a hazardous spill by Wisconsin Central LTD.	10/21/2018

Highway

State of Wisconsin Department of Transportation Final Year-End Crash Statistics

Source: State of Wisconsin Department of Transportation

2011	2012	2013	2014	2015	2016	11-15 average
1,432	1,394	1,396	1,461	1,262	1,376	1,389

Portage County Crash Investigation Team History: Starting in the mid to late 1980s, two deputies with the Portage County Sheriff's Office noticed a need for seeking more advanced training in the field of post-crash technical accident investigation and reconstruction. The science of specialized crash investigation is ever-changing as is technology. Changes in vehicles, restraint systems, and on-board data recorders brought about new and different investigative techniques and resources. Differences in computer technology, operating systems, and data acquisition also changed.

Hazardous Materials incidents related to transportation accidents:

Since 1971, Wisconsin has had a total of 10,958 reported hazardous materials transportation incidents. This total is comprised of 10,498 highway incidents (95.8%), 266 rail incidents (2.4%), 188 air incidents (1.7%), two other incidents (>0.1%), and zero water incidents (0.0%). The total cost for all reported incidents is approximately $57 million. Approximately half of the amount ($26.6 million) is from the 1996 Weyauwega Train Derailment. These incidents included 175 involving a crash or derailment, 68 causing or contributing to personal injury, 59 causing or contributing to an evacuation, 38 closing a major transportation artery or facility, and seven causing or contributing to a fatality.

Car accidents occur with relative frequency each year, and highway design and maintenance is an essential preventative measure. The reduction and ability to respond to Hazardous Materials events resulting from accidents are imperative components of hazard mitigation for critical transportation (*State of Wisconsin Department of Transportation*).

Probability and Impacts

Despite regulations and precautions, transportation incidents can occur. Most are the result of human error or mechanical malfunction.

Jurisdiction-specific Hazard Considerations and Impact/Vulnerability

The information in the table below was collected during the mitigation workshops and was submitted by a representative from the municipality. The table is not inclusive of impacts on all jurisdictions and strictly includes information directly provided by the municipality.

Table: Jurisdiction-specific Hazard Impact/Vulnerability for Major Transportation (Railroad) Incident

Jurisdiction	Affected Jurisdictions' Hazard Considerations and Impact/Vulnerability
Town of Amherst	Is at risk for a railroad incident.
Town of Plover	Is at risk for a railroad incident.
Village of Junction City	Is at risk for a railroad incident.
Village of Plover	Is at risk for railroad incident.
City of Stevens Point	Is at risk for a railroad incident.
Village of Amherst	Is at risk for a railroad incident. The train is elevated and runs at high speed directly through backyards of residential homes. A derailment could also cut off responses by the local authorities due to the nature of the tracks.

Hazardous Materials Transportation

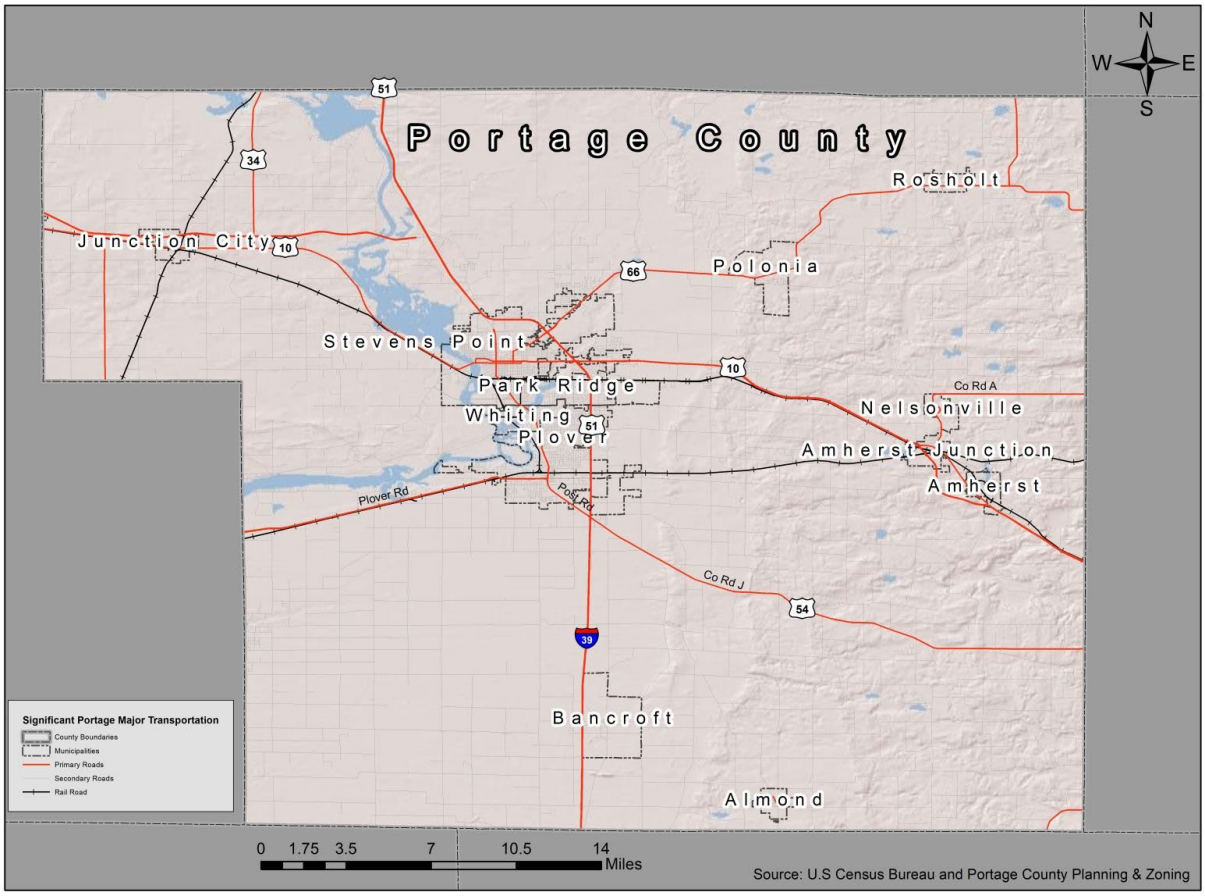
There are at a minimum approximately 13 different EHS transported annually throughout Portage County because of their storage at fixed facilities, but the potential exists for the transport of any EHS listed on the United States Environmental Protection Agency's List of Lists or the Department of Labor's Occupational Safety and Health Administration's Toxic and Hazardous Substances List. These substances are transported in containers that range from 10-ounce agricultural packages to 225,000-pound rail car quantities. For Portage County, transportation accidents and fixed facilities present the highest risk for a hazardous materials incident. See Subsection A of Section III- Hazard Analysis of the Countywide Hazmat Plan for more information.

The major transportation systems include Interstate and other highways, railroads and pipelines. The County contains approximately 36 miles of Interstate, 155 miles of State Highways, 438 miles of County Roads and 1,242 miles of local roads. The Canadian National LTD Railroad operates two main lines; 35 miles of the line east/west from Junction City through the City of Stevens Point to Amherst, and 12.5 miles of line that run north/ south along Highway 34 corridor from the Wood County line to the Marathon County line. They also operate 9 miles of line from Wood County line to the Village of Plover along the Highway 54 corridor, and 4,4 miles connecting from the Village of Plover to the mainline and railroad yard in the City of Stevens Point.

Major transportation routes and the airport are highlighted on Map 24.

The Koch Pipeline (operated by Flint Hills Resources, Junction City, Wisconsin) delivers refined products including gasoline, diesel fuels, and propane throughout Wisconsin. The Wisconsin Pipeline system provides products to bulk terminals located in Junction City. It runs 42.5 miles through Portage County. The TransCanada Pipeline/ ANR Natural Gas Pipeline runs 47 miles through Portage County. Between 1990 and 1997, Portage County experienced three pipeline leaks.

Map: Major Transportation Routes (larger map can be downloaded here)
Source: *U.S. Census Bureau and Portage County Planning & Zoning*



Catastrophic Scenario

The scenario below highlights was highlighted under the Hazardous Materials section and is relevant to a catastrophic transportation event (2016 State THIRA):

> During a weekday at approximately 9:00 a.m., a delivery truck driver is filling a 49,000 lb. tank with a hazardous chemical at a major chemical company facility when he receives an important family emergency phone call. The driver rushes back into the truck and drives off, forgetting that the truck is still connected to the pump.
>
> As the truck drives off, the emergency stop valve on the delivery truck is damaged due to the nozzle still being engaged in the tank. The truck driver quickly realizes that the damage is causing a major chemical release, and runs to the back of the truck to try to stop the leak; he is overcome by fumes and falls to the ground.
>
> The chemical company employee assisting with the transfer is splashed by the chemical (especially on his gloved hands). He has no skin contact with the acid but does inhale some fumes. The contaminated employee runs in and grabs the manager on his bare arm to have him call the E-Team. The manager then runs outside and finds the truck driver lying on the ground. The manager attempts to rescue the driver but realizes that there are too many fumes and retreats back into the facility.
>
> There is a release of 9,000 lbs. of the chemical over a two-hour period, in addition to 4,500 lbs. of gas released into the ambient air. The winds are out of ESE at 3 miles per hour. The temperature is 72 degrees, with 80% cloud cover.
>
> The facility sits adjacent to a major freeway running through a large metropolitan area. Directly across from the freeway is a university, which is in session. There are various public and private facilities within the projected plume area, where serious health problems could occur.
>
> Approximately 20,000 individuals will need to be evacuated with sheltering space required for 30% of the evacuees. There is a possibility that another 60,000 individuals may need to be evacuated in the event the hazardous material cannot be contained due to changing atmospheric conditions.

Table: Major Transportation Incident Hazard Extent

Hazard Type	Affected Jurisdictions	Extent (based on historical events)		Comments
		Minimum	Maximum	
Major Transportation Incident	County-wide	Single-vehicle accident	Train Derailment or Commercial airline crash	The maximum extent represents a hypothetical but realistic scenario.

Analysis

Probability for Major Transportation Hazard

Based on the Planning Area Risk Ranking, this hazard is given a "Medium" risk ranking summary because these events are likely to occur every 25 years; however, the exact socioeconomic impact of this hazard requires further investigation to determine the full extent of the impact.

Geographic Extent for Transportation Hazard

The majority of the County is at risk for transportation incidents regarding hazmat incidents (such as spills); however, certain municipalities (Town of Amherst, Town of Plover, Village of Junction City, Village of Plover, and City of Stevens Point) have a higher vulnerability rating for rail incidents due to the railway route. Airline incidents would occur near the airport.

The extent of an incident can impact more significant than the area immediately impact, especially as pollutants carry in the air or water or impact the soil.

Analysis of Community Development Trends

As the County's population increases, the likelihood of more significant transportation incidents is likely to increase. Additionally, any new industry that develops in the areas that would require the transportation of hazardous materials either to or through the County would increase the chances of an incident occurring.

Vulnerability to Future Assets/Infrastructure for Major Transportation Incident Hazard

While direct structural damages may be limited, secondary impacts are a possibility.

Vulnerability Analysis for Major Transportation Incident Hazard

The main concern during a release or spill caused by a transportation accident is the population affected. This plan will, therefore, consider all buildings located within the county as vulnerable.

Impact to Portage County Residents

It is highly likely that a major transportation incident would cause significant injury or even death, although it is unlikely to be widespread. An event like this would most likely occur in the County roads and highways, but it is possible that bus accidents, train derailments, or other mass transportation issues could impact Portage County residents as well. The likelihood of an airplane transportation incident is also low, but likely to have a significant impact if it did occur.

Impact on Essential Facilities and Other Property

Essential facilities near transportation routes may be at risk, but the risk of a catastrophic transportation event disabling an essential facility is low.

Impact on Critical Infrastructure

Major transportation incidents may impact the medium used for travel (such as roads, railways, and airports). These events may also damage nearby infrastructure.

Impact on the Environment

Impact on the environment is likely to be low unless a transportation incident results in the release of hazardous materials into the water, land, or atmosphere, at which point impact would be high and likely have a long-term effect.

Impact on Operations

Road-related transportation incidents usually impact the capacity of first responders only minimally. Of course, all first responder operations are vulnerable to transportation-related incidents themselves. Should a significant air transportation incident occur, the resources of local medical, fire, and police departments would likely be drawn upon substantially.

Community Capability Assessment

The jurisdiction maintains a full-time staff of 467 number of individuals and part-time staff of 188 number of individuals. The position of Emergency Management Coordinator is the jurisdiction's designated Emergency Manager. The Emergency Management Coordinator position leads hazard mitigation planning efforts and is supported by the Deputy Emergency Management Coordinator positions.

The Legal and Regulatory Capability Table below details the assessment of the jurisdiction's legal and regulatory capabilities. The Fiscal Capability Table below presents an assessment of the jurisdiction's fiscal capabilities. The Administrative and Technical Capability Table below illustrates the assessment of the jurisdiction's administrative and technical capabilities. The NFIP Compliance Table below presents Information on the community's NFIP compliance. Finally, The Community Classifications Table below provides classifications under various community mitigation programs.

TABLE: LEGAL AND REGULATORY CAPABILITY			
	Local Authority Exists to Develop and Implement/ Enforce? [Yes/No]	**The Code, Ordinance, and/or Requirement Currently Exists? [Yes/No]**	**State Mandated [Yes/No]**
Codes, Ordinances & Requirements			
Zoning Ordinance(s)	Yes	Yes	Yes
Subdivisions	Yes	Yes	Yes
Stormwater Management	Yes	Yes	TBD
Growth Management	Yes	Yes	Yes
Site Plan Review	Yes	Yes	Yes
Public Health and Safety	Yes	Yes	Yes
Planning Documents			
General or Comprehensive Plan	Yes	Yes	Yes
Capital Improvement Plan	Yes	Yes	Yes
Response/Recovery Planning			
Comprehensive Emergency Management Plan	Yes	Yes	Yes
Continuity of Operations Plan	Yes	Yes	Yes
Public Health Plans	Yes	Yes	No

TABLE: FISCAL CAPABILITY	
Financial Resources	**Accessible or Eligible to Use?**
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No

State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

TABLE: ADMINISTRATIVE AND TECHNICAL CAPABILITY			
Staff/Personnel Resources	**Available?**	**Full Time/ Part Time/ Other**	**Department/Agency/Position**
Planners or engineers with knowledge of land development and land management practices	Yes	Full	Planning & Zoning Department
Planners or engineers with an understanding of natural hazards	Yes	Full	Planning & Zoning Department
Surveyors	Yes	Other	Register of Deeds
Personnel skilled or trained in GIS applications	Yes	Full	Planning & Zoning Department
Emergency manager	Yes	Full	Emergency Management Division
Grant writers	No	N/A	N/A

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Planning & Zoning Department
Who is your jurisdiction's floodplain administrator? (department/position)	Planning & Zoning Department
Are any certified floodplain managers on staff in your jurisdiction?	No
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	No - The current flood hazard maps (FIRM) do not utilize the County's most recent LIDAR data and elevation data to represent where the floodplain is. Therefore the 100-year flood areas are not accurately portrayed on the maps.
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No
Does your jurisdiction participate in the Community Rating System (CRS)? If so, is your jurisdiction seeking to improve its CRS Classification? If not, is your jurisdiction interested in joining the CRS program?	No; No

TABLE: COMMUNITY CLASSIFICATIONS			
	Participating?	**Classification**	**Date Classified**
Community Rating System	No	N/A	N/A
Public Protection/ISO	No	N/A	N/A
NWS StormReady	No	N/A	N/A

Plans and Ordinances

Relevant Portage County Codes to Mitigation are included and linked below:

Chapter 18 - CIVIL EMERGENCIES[1] - ARTICLE I. - IN GENERAL - ARTICLE II. - EMERGENCY MANAGEMENT[2]

Sec. 18-31. - Emergency government defined.

Emergency government means the preparation for and the carrying out of all emergency functions other than functions for which the military forces are primarily responsible, to minimize and repair injury and damage resulting from disaster caused by an enemy attack, sabotage or other hostile action or by fire, flood or other natural causes.

(Code 1990, § 5-5-1)

Cross-reference— Definitions generally, § 1-2.

Sec. 18-32. - Emergency government planning committee.
modified

(a)Created; membership. An emergency government planning committee is hereby created consisting of the mayor, fire chief (who shall act as chairperson of the committee), police chief, city administrator, director of public works/utilities manager, member of the fire department (to be designated by fire chief), member of police department (to be designated by police chief), hospital emergency medical services coordinator, county emergency management director or designee appointed by county emergency management director. Additional agency representatives may be invited to participate by the chairperson; such additional participants shall not be members of the committee.

(b)Duties. The duties of the emergency government planning committee are to establish the appropriate procedures relating to disaster preparedness for the purpose of providing continuity of city government following any disaster situation and to outline the responsibilities of each public official in the event a community disaster of any nature strikes the city. It shall be up to the emergency government planning committee to formulate such disaster preparedness plans as are necessary to protect citizens of the city and to comply with all federal and state regulations.

(Code 1990, § 5-5-2; Ord. No. 02-004, 2-14-2002; Ord. No. 02-011, 5-23-2002; Ord. No. 04-007, 2-12-2004; Ord. No. 04-011, 5-27-2004; Ord. No. 07-004, 5-24-2007; Ord. No. 17-007, § II, 9-14-2017)

Cross-reference— Boards, committees, commissions, § 2-141 et seq.

Sec. 18-33. - Emergency government director.

(a)Appointment.

(1)The emergency government director shall be appointed by the mayor, subject to confirmation by the common council.

(2)Deputy directors may be appointed by the mayor, subject to confirmation by the common council.

(b)Duties and authority of director.

(1)The emergency government director shall be the executive head of the emergency government organization and shall have direct responsibility for the organization and administration and operation of the organization, subject to the direction and control of the mayor and common council.
The emergency government director shall coordinate all activities for emergency government within the city, maintain liaison and cooperate with emergency government agencies and organizations of other political subdivisions and of the state and federal government and have such additional authority, duties and responsibility as are authorized by this article and may, from time to time, be required by the common council.

(2)The emergency government director shall prepare a comprehensive general plan for the emergency government of the city and shall present such plan to the common council for its approval. When the common council has approved the plan by resolution, all municipal agencies and all emergency government forces of the city shall perform the duties and functions assigned by the plan as approved. The plan may be modified in like manner.

(3)The emergency government director shall annually prepare a budget and present a financial report to the finance/administration committee.

(Code 1990, § 5-5-3)

Sec. 18-34. - Utilization of existing services and facilities.

In preparing and executing the emergency government plan, the emergency government director shall utilize the services, equipment, supplies, and facilities of the existing departments and agencies of the city to the maximum extent practicable. When the common council has approved of the plan, it shall be the duty of all municipal agencies and departments of the city to perform the duties and functions assigned by the approved plan.

(Code 1990, § 5-5-4)

Sec. 18-35. - Mutual aid agreements.

The director of the emergency government, subject to the approval of the common council, may enter into mutual aid agreements with other political subdivisions. Copies of such agreements shall be filed with the state director of emergency government.

(Code 1990, § 5-5-6)

Sec. 18-36. - Declaration of emergencies.

(a)Upon the declaration of a state of emergency by the governor, the mayor or, in the absence of the mayor, the common council; the emergency government director shall issue all necessary proclamations

as to the existence of such state of emergency and shall issue such disaster warnings or alerts as shall be required in the emergency government plan.

(b)The emergency government organization shall take action in accordance with the emergency government plan only after the declaration of an emergency and the issuance of official disaster warnings. Such a state of emergency shall continue until terminated by the issuing authority, provided that any such declaration not issued by the governor may be terminated at the discretion of the common council.

(c)Whenever necessary to meet an emergency, rules, and regulations relating to the conduct of persons and the use of property which are necessary to protect the public peace, health, and safety, and preserve lives and property, and to ensure the cooperation in emergency government activities may be proclaimed, promulgated and enforced. Such proclamation shall be posted in three public places and may be rescinded by the resolution of the common council.

(Code 1990, §§ 5-5-5, 5-5-7)

Sec. 18-37. - Obstruction of emergency government organization.

No person shall willfully obstruct, hinder or delay any member of the emergency government organization in the enforcement of any order, rule, regulation or plan issued pursuant to this section or violate any order, rule, regulation or plan issued pursuant to the authority contained in this section. Any person who shall violate any provision of this section shall, upon conviction thereof, be subject to a penalty as provided in section 1-15.

ARTICLE III. - LAND USE REGULATIONS

ESP: Sec. 90-63. - Temporary land uses.

(1)Clear cutting. The one-time, continuing, or cumulative clearing, cutting, harvesting, or other destruction (including by fire) of trees in an area (or combined areas) of more than 30 percent of the woodlands on a property (or up to 100 percent for developments approved prior to the effective date of this chapter). Any owner of property who intentionally clear cuts any area of his/her property or who intentionally solicits or causes another to intentionally clear cut any area of his/her property without first having secured a conditional use permit for such activity shall be subject to a forfeiture for such wrongful conduct and shall be required to implement the mitigation standards required for the destruction of woodlands solely at his/her expense, including costs associated with site inspection to confirm the satisfaction of mitigation requirements. Areas had been clear cut unintentionally as a result of fire shall not subject the owner of the property to forfeiture for such non-approved clear-cutting activity, but shall require the satisfaction of mitigation requirements at the owner's expense, including the cost associated with a site inspection to confirm the satisfaction of mitigation requirements.

(a)Clear cutting requires a conditional use permit.

(b)Applicant shall demonstrate that clear-cutting will improve the level of environmental protection on the subject property.

(c)Areas of the subject property which are clear cut beyond the limitations established above shall be replanted.

(d)Clear-cutting shall not be permitted within required landscaped areas or within an area within the C-1 resource conservation overlay district.

ARTICLE IX. - FLOODPLAIN ZONING
DIVISION 1. - STATUTORY AUTHORIZATION, FINDING OF FACT, STATEMENT OF PURPOSE, TITLE AND GENERAL PROVISIONS

ESP:

Sec. 90-272. - Finding of fact.

Uncontrolled development and use of the floodplains and rivers of this municipality would impair the public health, safety, convenience, general welfare, and tax base.

(Ord. No. 13-005, § 1, 3-28-2013)

Sec. 90-273. - Statement of purpose.

This article is intended to regulate floodplain development to:

(1)Protect life, health, and property;

(2)Minimize expenditures of public funds for flood control projects;

(3)Minimize rescue and relief efforts undertaken at the expense of the taxpayers;

(4)Minimize business interruptions and other economic disruptions;

(5)Minimize damage to public facilities in the floodplain;

(6)Minimize the occurrence of future flood blight areas in the floodplain;

(7)Discourage the victimization of unwary land and homebuyers;

(8)Prevent increases in flood heights that could increase flood damage and result in conflicts between property owners; and

(9)Discourage development in a floodplain if there is any practicable alternative to locate the activity, use, or structure outside of the floodplain.

Planning Area Risk Ranking

A risk ranking was performed to compare the probable impacts of the identified hazards of concern on each planning partner. The risk ranking assessed the probability of each hazard's occurrence. It also assessed each hazard's likely impact on people, property, and the economy. This process was a critical component in selecting mitigation actions for this plan update. The ranking is not intended to focus all actions on the single hazard with the highest rank, but to ensure that attention is given to all hazards that have a significant impact. At the same time, the ranking allows communities to identify hazards with little or no impact so that those hazards can be eliminated from consideration for actions.

Assessments of risk were generated with data from Hazus-MH using methodologies promoted by FEMA, and jurisdictional highlights were included in each hazard profile in Section B - Hazard Assessment. A separate ranking to assess probable impacts countywide was approved by the Steering Committee. The results of the countywide ranking, presented in this chapter, are used in establishing mitigation action and priorities.

Probability of Occurrence

The probability of occurrence of a hazard is indicated by a probability factor based on the likelihood of annual occurrence:

1. High—Hazard event is likely to occur within 25 years (Probability Factor = 3)
2. Medium—Hazard event is likely to occur within 100 years (Probability Factor = 2)
3. Low—Hazard event is not likely to occur within 100 years (Probability Factor = 1)
4. No exposure—There is no probability of occurrence (Probability Factor = 0)

The assessment of hazard frequency is generally based on past hazard events in the area. Table: Probability of Hazards summarizes the probability assessment for each hazard of concern for this plan.

Table: Probability of Hazards

Hazard Event	Probability (High, Medium, Low, No Exposure)	Probability Factor (0-3)
Severe Weather (Including Tornadoes, High Winds, Hail, and Lightning)	High	3
Flooding (Including Dam Failure)	High	3
Wildfire	Low	1
Drought and Extreme Heat	Medium	2
Winter Storms and Extreme Cold	High	3
Hazardous Materials	High	3
Utility (Power) Failure	High	3
Major Transportation (Railroad) Incident	High	3

Impact

Hazard impacts were assessed in three categories - impacts on people, impacts on property, and impacts on the local economy - using historical data. Numerical impact factors were assigned as follows:

- **People**—Values were assigned based on the percentage of the total population exposed to the hazard event. The degree of impact on individuals will vary and is immeasurable. That means that, for simplicity, the calculation assumes consistency that all people exposed to a hazard because they live in a hazard zone will experience an equal impact. It is important to note that planners can use an element of subjectivity when assigning values for impacts on people. Impact factors were attributed as follows:
    - High—30 percent or more of the population is exposed to a hazard (Impact Factor = 3)
    - Medium—15 percent to 29 percent of the population is exposed to a hazard (Impact Factor = 2)
    - Low—14 percent or less of the population is exposed to the hazard (Impact Factor = 1)
    - No impact—None of the population is exposed to a hazard (Impact Factor = 0)
- **Property**—Values were assigned based on the percentage of the total property value exposed to the hazard event:
    - High—25 percent or more of the total assessed property value is exposed to a hazard (Impact Factor = 3)
    - Medium—10 percent to 24 percent of the total assessed property value is exposed to a hazard (Impact Factor = 2)
    - Low—9 percent or less of the total assessed property value is exposed to the hazard (Impact Factor = 1)
    - No impact—None of the total assessed property value is exposed to a hazard (Impact Factor = 0)
- **Economy**—Values were assigned based on the percentage of the entire property value vulnerable to the hazard event. Values represent estimates of the loss from a major event of each hazard in comparison to the total assessed value of the property exposed to the hazard. For some hazards, such as severe weather, the vulnerability was considered to be the same as exposure. This is because of the lack of loss estimation tools specific to those hazards.
    - High—Estimated loss from the hazard is 15 percent or more of the total assessed property value (Impact Factor = 3)
    - Medium—Estimated loss from the hazard is 5 percent to 14 percent of the total assessed property value (Impact Factor = 2)
    - Low—Estimated loss from the hazard is 4 percent or less of the total assessed property value (Impact Factor = 1)
    - No impact—No loss is estimated from the hazard (Impact Factor = 0)

Each category was assigned a weighting factor to reflect its significance, consistent with those typically used for measuring the benefits of hazard mitigation actions: a weighting factor of 3 for impact on people; a weighting factor of 2 for impact on the property; and a weighting factor of 1 for impact on the economy. The tables below summarize the impacts of each hazard.

Table: IMPACT ON PEOPLE FROM HAZARDS

Hazard Event	Impact (High, Medium, Low, No Exposure)	Impact Factor (0-3)	Multiplied by Weighting Factor (3)
Severe Weather (Including Tornadoes, High Winds, Hail, and Lightning)	High	3	9
Flooding (Including Dam Failure)	High	3	9
Wildfire	Low	1	3
Drought and Extreme Heat	Medium	2	6
Winter Storms and Extreme Cold	High	3	9
Hazardous Materials	Medium	2	6
Utility (Power) Failure	High	3	9
Major Transportation (Railroad) Incident	Medium	1	6

Table: IMPACT ON PROPERTY FROM HAZARDS

Hazard Event	Impact (High, Medium, Low, No Exposure)	Impact Factor (0-3)	Multiplied by Weighting Factor (2)
Severe Weather (Including Tornadoes, High Winds, Hail, and Lightning)	High	3	6
Flooding (Including Dam Failure)	High	3	6
Wildfire	Low	1	2
Drought and Extreme Heat	Low	1	2
Winter Storms and Extreme Cold	Low	1	2
Hazardous Materials	Low	1	2
Utility (Power) Failure	Low	1	2
Major Transportation (Railroad) Incident	Low	1	2

Table: IMPACT ON ECONOMY FROM HAZARDS

Hazard Event	Impact (High, Medium, Low, No Exposure)	Impact Factor (0-3)	Multiplied by Weighting Factor (1)
Severe Weather (Including Tornadoes, High Winds, Hail, and Lightning)	High	3	3
Flooding (Including Dam Failure)	High	3	3
Wildfire	Low	1	1
Drought and Extreme Heat	Low	1	1
Winter Storms and Extreme Cold	Low	1	1
Hazardous Materials	Low	1	1
Utility (Power) Failure	High	3	3
Major Transportation (Railroad) Incident	Low	1	1

Risk Rating and Ranking

The risk rating for each hazard was determined by multiplying the probability factor by the sum of the weighted impact factors for people, property, and the economy, as summarized in ***Table: Hazard Risk Ranking Analysis.***

Based on these ratings, a priority of *high*, *medium*, or *low* overall risk ranking summary score was assigned to each hazard. The hazards ranked as being of greatest concern for Portage County are Severe Weather (Including Tornadoes, High Winds, Hail, and Lightning) and Flooding (Including Dam Failure). Winter Storms and Extreme Cold, Major Transportation (Railroad) Incident, Utility (Power) Failure, and Hazardous Materials received a medium ranking with Winter Storms and Extreme Cold being the highest-ranked of the hazards that scored *medium* in the risk ranking summary. The hazards ranked as being of lowest concern are Drought and Extreme Heat and Wildfire with Wildfire scoring the lowest. ***Table: Hazard Risk Ranking Summary*** shows the final hazard risk ranking for the 2019 HMP update.

Below this data is a highlight of the hazard rankings from the 2012 HMP and the public survey {Insert analysis of variance}

Table: Hazard Risk Ranking Analysis

Hazard Event	Probability Factor	Sum of Weighted Impact Factors	Total (Probability x Impact)
Severe Weather (Including Tornadoes, High Winds, Hail, and Lightning)	3	9 6 3=18	18x3=54
Flooding (Including Dam Failure)	3	9 6 3=18	18x3=54
Wildfire	1	3 2 1=6	6x1=6
Drought and Extreme Heat	2	6 2 1=9	9x2=18
Winter Storms and Extreme Cold	3	9 2 1=12	12x3=36
Hazardous Materials	3	6 2 1=9	9x3=27
Utility (Power) Failure	3	9 2 3=14	14x3=42
Major Transportation (Railroad) Incident	3	6 2 1=9	9x3=27

Table: Hazard Risk Ranking Summary

Score:
60-41 - High
21-40- Medium
1-20 - Low
0- No Exposure

Hazard Ranking	Hazard Event (reorder by ranking)	Category (High, Medium, Low, No Exposure)
1 (tie)	Severe Weather (Including Tornadoes, High Winds, Hail, and Lightning)	High
1 (tie)	Flooding (Including Dam Failure)	High
3	Winter Storms and Extreme Cold	Medium
4 (tie)	Hazardous Materials	Medium

2	Utility (Power) Failure	High
4 (tie)	Major Transportation (Railroad) Incident	Medium
5	Drought and Extreme Heat	Low
6	Wildfire	Low

Chapter 5 - Mitigation Strategies

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation goals and objectives were reevaluated and updated; and mitigation actions/projects were updated/amended, identified, evaluated, and prioritized.

One definition of hazard mitigation is any cost-effective action(s) that has the effect of reducing, limiting, or preventing vulnerability of people, culture, property, and the environment to potentially damaging, harmful, or costly hazards. Hazard mitigation measures which can be used to eliminate or minimize the risk to life, culture, and property, fall into three categories:

- Those that keep the hazard away from people, property, and structures
- Those that keep people, property, or structures away from the hazard, and
- Those that reduce the impact of the hazard on victims/property, i.e., insurance.

This mitigation plan identifies key strategies that fall into all three categories.

Hazard mitigation measures must be practical, cost-effective, and culturally, environmentally, and politically acceptable. Actions taken to limit the vulnerability of society to hazards must not in themselves be more costly than the anticipated damages.

The primary focus of this Plan is on decision making for land use and capital investment. Mitigation projects are made and prioritized based on a risk assessment that considers the magnitude of hazards, their frequency of occurrence, and the vulnerabilities of the community to them. This helps to assure that risk reduction effort, whether for homes, roads, public utilities, pipelines, public works, or other projects, are both necessary and cost-effective.

Mitigation Goals

During the creation of the 2007 HMP, one main goal was present for all natural hazards to **protect the health and safety of Portage County residents and visitors by lessening the negative impacts of natural hazards**.

As we reviewed and worked through the 2012-2017 HMP Updates, other goals were discussed and established by the Hazard Mitigation Work Group. These goals helped direct us as we continued to discuss mitigation strategies to reduce and if possible, to avoid long-term vulnerability to the natural and technological hazards addressed as part of this plan.

These goals have remained the same for the 2019 Plan.

Mitigation Goals for Portage County

1. To protect the health and safety of Portage County residents and visitors by lessening the negative impacts of natural and technological hazards. (Health and Safety)
2. To continue and to enhance public education and awareness for disaster preparedness and expand public awareness of both natural and technological hazards. (Public Education)
3. To lessen the impacts, natural and technological hazards have on the property and the environment. (Property and Environment)
4. To encourage hazard mitigation planning and incorporation of mitigation strategies into local comprehensive plans and other planning related documents and policies. (Plan Integration)
5. To continue and to encourage additional intergovernmental relationships regarding hazard mitigation and preparedness activities. (Intergovernmental Relationships)

Mitigation Methodology

Plan participants assessed hazard mitigation strategies/actions, including strategies from FEMA documents, strategies from the 2019 Portage County HMP Update and suggestions from participating communities and their respective stakeholders during a series of workshops and interviews. Highlights include:

- All jurisdictions identified at least one new action
- Priority and benefit levels were previously not assigned in the 2007 or 2012 plan. Benefit and priority levels were added for all new and ongoing actions
- The County identified four new mitigation actions and revised the list of ongoing actions.

Each entities' Mitigation Strategies an Actions are organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - These ongoing actions were included in the previous update and have yet to be completed. Some of these actions have no definitive end. During the 2019 update, these "ongoing" mitigation strategies/actions were modified and/or amended, as needed, to better define the strategy/action.
- **Completed Mitigation Actions** - Completed actions since 2008. Completed actions also included a brief description of the "Resulting Reduction or Limitation of Hazard Impact(s) Achieved" to show the resulting benefits of implementing the mitigation initiative.
- **Removed Mitigation Actions** - Actions that were previously identified and no longer actionable.

Mitigation Strategy/Action Timeline Parameters

While the preference is to provide definitive project completion dates, this is not possible for every mitigation strategy/action. Therefore, the parameters for the timeline (Projected Completion Date) are as follows:

- **Short Term** = to be completed in one to five years
- **Long Term** = to be completed in greater than five years
- **Ongoing** = currently being funded and implemented under existing programs, and/or is seeking funding and necessary approvals.

Mitigation Strategy/Action Estimated Cost

While the preference is to provide definitive costs (dollar figures) for each mitigation strategy/action, this is not possible for every mitigation strategy/action. Therefore, where exact dollar amounts were unavailable, the estimated costs for the mitigation initiatives identified in this Plan were identified as high, medium, or low, using the following ranges:

- **Low** – less than $10,000
- **Medium** – from $10,000 to $100,000
- **High** – greater than $100,000

Benefit ratings were defined as follows:

- **High**—Project will provide an immediate reduction of risk exposure for life and property.
- **Medium**—Project will have a long-term impact on the reduction of risk exposure for life and property, or the project will provide an immediate reduction in the risk exposure for property.
- **Low**—Long-term benefits of the project are difficult to quantify in the short term.

Mitigation Strategy/Action Prioritization Process

The action plan must be prioritized according to a benefit/cost analysis of the proposed projects and their associated costs (44 CFR, Section 201.6(c)(3)(iii)). The benefits of proposed projects were weighed against estimated costs as part of the project prioritization process. The benefit/cost analysis was not of the detailed variety required by FEMA for project grant eligibility under the Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) grant program. A less formal approach was used because some projects may not be implemented for up to 10 years, and associated costs and benefits could change dramatically in that time. Therefore, a review of the apparent benefits versus the apparent cost of each project was performed. Parameters were established for assigning subjective ratings (high, medium, and low) to the costs and benefits of these projects.

The priorities are defined as follows:

- **High Priority**—A project that meets multiple objectives (i.e., multiple hazards), has benefits that exceed the cost, has funding secured or is an ongoing project and meets eligibility requirements for the HMGP or PDM grant program. High priority projects can be completed in the short term (1 to 5 years).
- **Medium Priority**—A project that meets goals and objectives, that has benefits that exceed costs, and for which funding has not been secured, but that is grant eligible under HMGP, PDM or other grant programs. The project can be completed in the short term, once funding is secured. Medium priority projects will become high priority projects once funding is secured.
- **Low Priority**—A project that will mitigate the risk of a hazard, that has benefits that do not exceed the costs or are difficult to quantify, for which funding has not been secured, that is not eligible for HMGP or PDM grant funding, and for which the timeline for completion is long term (1 to 10 years). Low priority projects may be eligible for other sources of grant funding from other programs.

For many of the strategies identified in this action plan, the partners may seek financial assistance under the HMGP or HMA programs, both of which require detailed benefit/cost analyses. These analyses will be performed on projects at the time of application using the FEMA benefit-cost model. For projects not seeking financial assistance from grant programs that require detailed analysis, the partners reserve the right to define “benefits” according to parameters that meet the goals and objectives of this plan.

Mitigation Action Plan

The Action Plan for each mitigation project is presented in a table format. The table is designed to capture important details intended to support the implementation of the strategy/action. It is also designed to facilitate and encourage the annual review and maintenance of each mitigation strategy/action by allowing the Lead Agency/Organization to document the yearly status of the project before and/or during the Annual Steering Committee meeting.

Table: Mitigation Action Plan Form

Mitigation Action	
Year Initiated	2019
Applicable Jurisdiction	
Lead Agency/Organization	
Supporting Agencies/Organizations	
Applicable Goal	
Potential Funding Source	
Estimated Cost	
Benefits (loss avoided)	
Projected Completion Date	
Priority and Level of Importance (Low, Medium, High)	
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New, Ongoing, Revised, Complete	
2020		
2021		
2022		
2023		

County Mitigation Strategies and Projects

Mitigation Project	Year Initiated	2019 Status	Lead/ Coordinating Organizations	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date/Timeline	Priority (High, Medium, Low)	Benefit Parameter (High, Medium, Low)	Applicable Hazard
Portage County										
Evaluate Roadways to Prevent Repeat Flooding	2019	New	County Emergency Management and Highway Department	1 - Health and Safety and 3- Property and Environment	Grants - state and federal, HMA, Public Assistance	High- more than $100,000	2023	Medium	Medium	Dam/Levee Failure, Flooding, Severe Thunderstorms, Major Transportation Accident
Establish Locations and Develop Storm Shelters	2019	New	County Emergency Management and County Health and Human Services	1 - Health and Safety	Grants - state and federal, HMA, Public Assistance	High- more than $100,000	2023	Medium	Medium	Severe Weather, Utility Failure, Extreme Cold, Extreme Heat, Flooding, Utility Failure, Severe Winter Weather, Tornado and High Winds
Identify and create a listing of Hazardous	2019	New	Portage County and Applicable	1 - Health and Safety	Grant - EMPG, Municipal Budget	Low- less than $10,000	2023	Medium	Medium	Hazardous Materials, Major

Material Dangers in the County			Jurisdictions							Transportation (Railroad) Incident
Install a visual Alert System for Roadways	2019	New	Portage County and Applicable Jurisdictions	1 - Health and Safety and 2 - Public Education	Grant - EMPG, Municipal Budget	High- more than $100,000	2023	Medium	Medium	All Hazards
Public Education and Awareness (Revised in 2012)	2007	Ongoing	County Emergency Management	2- Public Education	HMA, County and Municipal Budgets	Low- less than $10,000	Ongoing (no completion date)	Low	Medium	All Hazards
Continue Mutual Aid/ Interagency Agreements	2007	Ongoing	County Emergency Management	5- Intergovernmental Relationships	No Funding Needed	Low- less than $10,000	Ongoing (no completion date)	Low	Medium	All Hazards
Education and Training of County and municipal staff on roles and responsibilities related to emergency management	2007	Ongoing	County Emergency Management	5- Intergovernmental Relationships	LEMPG	Low- less than $10,000	Ongoing (no completion date)	Low	Low	All Hazards
Recommended that Goals and mitigation strategies be incorporated as part of municipal and County comprehensive planning efforts where appropriate.	2012 (Updated 2019)	Ongoing	County Emergency Management	4-Plan Integration	No Funding Needed	Low- less than $10,000	Ongoing (no completion date)	Low	Medium	All Hazards

Continue to promote information campaigns about severe weather	2007 (Revised in 2012)	Ongoing	County Emergency Management	2- Public Education	County and Municipal Budgets	Low- less than $10,000	Ongoing (no completion date)	Low	Medium	Severe Weather
Identify ways to reduce power outages throughout the County.	2012	Ongoing	County Emergency Management, Municipalities, External Partners	1- Health and Safety	Utilize existing budget - implementation of identified projects will require further funding	Low- less than $10,000 (identification) and High for project execution	Long Term	High	High	All Hazards
Identify and pursue funding opportunities to develop and implement local and county mitigation activities.	2012	Ongoing	County Emergency Management and Municipalities	4- Plan Integration	Utilize existing budget (pursue HMA, Public Assistance grants for the projects)	Low- less than $10,000	Long term	Low	Low	All Hazards
Continue to provide periodic emergency response training exercises.	2007 (Revised in 2012)	Ongoing	County Emergency Management	5- Intergovernmental Relationships	EMPG	Medium – from $10,000 to $100,000	Ongoing (no completion date)	Low	High	All Hazards
Create additional severe weather shelter locations around higher risk areas such as: manufactured home parks and campgrounds	2007	Ongoing	County Emergency Management, Municipalities, County Parks Department, County Planning & Zoning	1 - Health and Safety	HMA, Public Assistance grants, other State and federal grants	High - Greater than $100,000	Long Term	Low	High	All Hazards

Continue to host severe weather spotter classes and maintain network of spotters throughout the County	2007	Ongoing	County Emergency Management	2- Public Education	EMPG	Low- less than $10,000	Ongoing (no completion date)	Low	High	Severe Weather
Encourage all areas to participate or prepare own Emergency Action Plan.	2012	Ongoing	County Parks Department, Planning and Zoning, County Emergency Management, UWSP, Municipalities	4- Plan Integration and 5- Intergovernmental Relationships	EMPG, HMA, County and Municipal Budgets	Low- less than $10,000	TBD; Ongoing	High	Medium	All Hazards
Increase available public education about severe storms by evaluating current severe storm weather safety information and update as needed.	2007 (Revised in 2012)	Ongoing	County Emergency Management	2 - Public Education	EMPG, HMA	Medium – from $10,000 to $100,000	Ongoing (no completion date)	Low	Medium	Severe Weather, Winter Storms
Evaluate signage at public places such as parks campgrounds, beaches, sport facilities etc. to direct public in case of an	2007 (Revised in 2019)	Ongoing	County Parks Department, Planning and Zoning, County Emergency	1 - Health and Safety 2 - Public Education	EMPG, HMA, County and Municipal Budgets	Low- less than $10,000	Short Term	Medium	High	All Hazards

emergency and make improvements/ recommendations			Management, UWSP, Municipalities							
Promote backup power systems for critical infrastructure facilities	2007	Ongoing	County Emergency Management, Municipalities, External Partners	1 - Health and Safety	HMA	Medium – from $10,000 to $100,000	Long Term	High	High	All Hazards
Work to identify local roads, by municipality, that are prone to flooding, culvert issues and other flooding effects that close local roads.	2011	Ongoing	County Highway Department, County Planning & Zoning, Municipal Public Works	1 - Health and Safety and 3 - Property and Environment	County and Municipal Budgets	Low- less than $10,000	Ongoing	Low	Medium	Flooding, Severe Weather
Identify a more effective way to communicate road closures to all areas of Portage County. Especially when power outages accompany these closures.	2012	Ongoing	County Highway Department, Sheriff's Office Dispatch, Municipalities	1 - Health and Safety	County and Municipal Budgets	Low- less than $10,000	Long Term	Low	Low	Utility (Power) Failure
Coordinate severe weather alerts with additional local agencies and elderly care facilities. Coordinate better	2007	Ongoing	Sheriff's Office Dispatch, Aging and Disability Resource Center	1 - Health and Safety, 3 - Property and Environment, and 5 - Intergovernm	EMPG, HMA, County and Municipal Budgets	Medium – from $10,000 to $100,000	Long Term	Low	High	All Hazards

linkage between regular business hours and weekends to disseminate severe weather information.				ental Relationships						
Work with local municipalities to identify and designate structures as shelters from extreme temperatures.	2007	Ongoing	County Human Services Department, Municipalities, Aging and Disability Resource Center, County Public Health	1 - Health and Safety, 3 - Property and Environment, and 5 - Intergovernmental Relationships	County and Municipal Budgets	Low- less than $10,000	Ongoing	Low	Medium	Extreme Heat and Extreme Cold
Off-site plan updates	2012	Ongoing	LEPC/County Emergency Management	1 - Health and Safety, 4- Plan Integration, and 5 - Intergovernmental Relationships	EPCRA	Low- less than $10,000	Ongoing	Medium	Medium	All Hazards
Continue County Hazmat Team	2012	Ongoing	LEPC/County Emergency Management	1 - Health and Safety and 3 - Property and Environment	EMPG/EPCRA/CHREG	Medium – from $10,000 to $100,000	Ongoing	High	Medium	Hazardous Materials, Major Transportation (Railroad) Incident

Completed and Removed Mitigation Actions

Completed/Removed/Revised Mitigation Actions Table - These actions that were previously identified, and during the 2019 update, these actions were identified as no longer being pursued or have been completed (with a few being revised and highlighted under new mitigation actions).

Mitigation Project	Year	Removed/Completed	Notes
Emergency Notification Systems (NOAA, Sirens, Park Warning Systems). Other forms of notifications systems to be identified.	2007	Completed/Revised	No longer in need of new notification systems. New Mitigation action focuses on a new alert system for the roadways: Install a visual Alert System for Roadways
Continue to review and update communication systems	2007	Completed/Revised	No longer need new communication systems. If new systems are needed, Portage EM will work with IT and Communication Department. New Mitigation action focuses on a new alert system for the roadways: Install a visual Alert System for Roadways
Work to find ways to have more consistent communication devices for local fire departments.	2012	Completed	Fire Departments in the County now have mutual aid and joint agreements and work with Portage EM during emergency events.
Identify evacuation and alternative transportation routes in case of road closures, specifically I-39.	2012	Removed	No longer a viable evacuation route.
Work to create Mutual Aid with northern Towns and Marathon County - Fire Protection	2012	Removed	Given the available resources in the County, mutual aid is not needed.
Develop and Maintain a Geographic Information database of hazard events that have occurred in the County, including location, event conditions, and resulting damage, and costs. (Revised in 2012)	2007	Completed	Portage now has its own GIS department
Add local websites for jurisdictions to the County's EM website to provide easy	2012	Removed	Will continue to host municipality mitigation actions and as available, comprehensive plans on the

access to individual municipal information.			Portage website but not host all websites through the County.
Explore alternative to increase public warning options for all hazards	2012	Completed/Revised	The County is content with current public warning options. New Mitigation action focuses on a new alert system for the roadways: Install a visual Alert System for Roadways
Continue to apply for federal funding to purchase NOAA weather radios for County residents	2007	Removed	Given the access to NOAA information via the Internet, the purchase of radios for the public is no longer needed.
Bury overhead power and utility lines, where feasible, as a way to improve emergency response times, improve safety, and reduce power outages. (Revised in 2012)	2007	Removed	This action is still viable for certain jurisdictions but not the County as a whole.
Continue to ensure that new development meets applicable development standards: zoning, subdivision, building codes, etc. (Revised in 2012)	2007	Completed	Coding and zoning will still be enforced by the Planning and Zoning Department but the County deemed this as not an actionable mitigation action.
Offer information regarding insurance to farm operators due to potential crop loss due to weather-related damage. (Revised in 2012)	2007	Removed	The County provides information on all hazards to the community.
Identification of areas where residents can become landlocked due to transportation infrastructure or related to flooding.	2012	Removed	This action is still viable for certain jurisdictions but not the County as a whole.
Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan.	2012	Removed	This program is no longer supported by the County.
Continue to support the neighbors helping neighbor group that has been started. Encourage similar neighborhood groups throughout the County.	2012	Removed	This program is no longer supported by the County.
Create a Village of Junction City Emergency Action Plan	2012	Removed	This action belongs as a municipality action.

Continue to review current coverage of outdoor sirens and prepare a schedule for new locations as development happens (Revised in 2012)	2007	Completed/Revised	The County finds the current location of sirens to be sufficient and instead works to maintain the existing sirens. New Mitigation action focuses on a new alert system for the roadways: Install a visual Alert System for Roadways
Work with local municipalities to maintain and keep sirens in working order.	2012	Completed	This County has worked with municipalities and the municipalities now maintain their sirens.
Investigate a countywide (Towns, Villages, and City) standards for manufactured homes (Revised in 2012)	2007	Completed	Codes have passed.
Designate signage at public places to direct people to shelters.	2007	Completed	Signs have been posted. See action: Evaluate signage at public places such as parks campgrounds, beaches, sport facilities etc. to direct public in case of an emergency and make improvements/ recommendations
Right of Way/ Easements (trees) (Revised in 2012)	2007	Removed	Not enough detail was provided on this project for the County to identify the hazards mitigated and the purpose of this project.
The Town of Belmont specifically identified that they are most vulnerable to high wind events. Further discussion and information on possible strategies should be brought to all Towns attention to reduce the effects of such events.	2012	Removed	This action belongs as a municipality action.
Continue to maintain and evaluate the providing services, such as plowing, to areas as development patterns change.	2007	Removed	This action is too vague on the services provided and their relation to hazard mitigation
Adhere to standards for ice and snow load bearing through building code enforcement.	2007	Completed	Codes have passed.
Recommend local municipalities to increase	2007	Completed	Postage County maintains a relationship with

the amount of brush and vegetation cleared in the right-of-way.			jurisdictions and fire departments. Municipalities have codes and enforcement regarding wildfire reduction due to vegetation.
Work to identify locations for "living" snow fence.	2012	Removed	Not enough detail was provided on this project for the County to identify the purpose of this project.
Include in weather radios and EAS warnings when hail is possible to put vehicles/ pets in covered locations. (Revised in 2012)	2007	Removed	With technological advancements, the community is able to access weather announcements via cell phones.
Creation and update of stormwater management ordinances for all incorporated municipalities	2012	Removed	This action belongs as a municipality action.
Stronger enforcement/ oversight in erosion and sediment control ordinances. To control Construction site erosion from construction sites, WI Department of Commerce has adopted construction site erosion control regulations through the state building code. State erosion control regulations are enforced through the local building inspectors. It has come up in discussions that these need stronger review and enforcement throughout the County.	2012	Completed	Codes have passed and the Planning and Zoning Department oversees.
Continue to review County's shoreland Zoning Ordinance and encourage all incorporated municipalities with shoreland to develop and adopt shoreland ordinances. (Revised in 2012)	2007	Completed	Codes have passed and the Planning and Zoning Department oversees.
Continue to enforce flood plan ordinances	2012	Removed	While the EM office can recommend ordinances, enforcement is not viewed as an actionable mitigation project (viewed as a role of the Planning and Zoning Department, as is the

			enforcement of all codes and ordinances.
Support land acquisition and management strategies to preserve open space for flood mitigation purposes.	2012	Completed	Codes have passed and the Planning and Zoning Department oversees.
Locate public infrastructure outside of the flood plain.	2012	Removed	Not viewed as actionable or beneficial. The primary focus is on public infrastructure within the floodplain.
Work with local municipalities to prepare a strategy to prioritize road improvement for public roadways that are susceptible to flooding. (Revised in 2012 and 2019)	2007	Removed	See new action: Evaluate Roadways to Prevent Repeat Flooding
Review Dam Hazard Classifications with WI Department of Natural Resources	2012	Removed	The County supports the regulation and the authority of the agencies assigning dam hazard classification.
Review becoming a part of the Community Rating System (CRS) to lower flood insurance premiums for property owners.	2012	Completed	At this time, the County is not actively pursuing participation in the CRS program.
Continue to work with Consolidated Water and Paper Company and Wisconsin Valley Improvement Corporation to develop early warning and strategies to minimize damage from flooding.	2007	Removed	Action taken over by private companies.
Identify and perform cost analysis of removing homes/structures within the floodplain and floodway.	2007	Removed	At this time, the County is not looking to remove structures.
Continued Compliance in NFIP	2012	Completed	While the County continues to participate in the NFIP, this mitigation action was not viewed as an actionable item.
Review participation in NFIP	2012	Removed	The County will continue to participate in the NFIP.
Continue to identify groundwater contamination issues that result from high groundwater/ flooding.	2012	Removed	At the time, the County does not deem this action a priority and has decided to remove the action.
Contact local internet providers to see if they	2007	Removed	Not enough detail was provided on this project for

could disseminate information via email.			the County to identify the hazards mitigated and the purpose of this project.
Designate and open buildings (with air conditioning) for those residents that do not have such amenities during extreme heat advisories.	2007	Completed	Cooling shelters have been opened.
Adhere to standards for clearing trees around new or existing residential developments.	2007	Removed	Not enough detail was provided on this project for the County to identify the hazards mitigated and the purpose of this project.
Provide more information to new homeowners regarding "clear zones" for fire protection.	2007	Removed	Not enough detail was provided on this project for the County to identify the hazards mitigated and the purpose of this project.
Create and maintain a map that identifies high-risk areas.	2007	Removed	Not enough detail was provided on this project for the County to identify the hazards mitigated and the purpose of this project.
Develop a map of high capacity wells for use, and expand programs to allow fire vehicles access to wells.	2007	Removed	No longer a priority project.
Identify and create additional education efforts for public wildfire education	2012	Removed	At this time, additional public outreach on wildfire education is not viewed as a priority.
Work with railroads and other utilities to maintain right-of-ways to prevent fires.	2007	Removed	At this time, this project is not viewed as needed given the lack of fires caused by right-of-way incidents.
Encourage the adoption of water usage regulations throughout the County.	2007	Removed	At this time, water usage is not a concern.
Encourage farmers that irrigate to use irrigation scheduling programs and drip/misting systems	2012	Removed	Not an actionable or needed project.
County should be prepared to inform farmers during times of drought	2012	Completed	The County has systems in place to inform the community of all hazards.
Inform Farmers on purchasing crop insurance	2012	Removed	Not a priority project.
Identify funding opportunities for municipalities to complete flood shadow information	2012	Removed	The County does not view the study of dam classification as a priority or cost-effective project.

on dams that have not had studies completed. To determine if the dam classification and hazard rating are correct.			
Village of Rosholt to review zoning of property located in flood shadow, to limit development.	2012	Removed	Action belongs to the municipality

Jurisdiction Mitigation Strategies and Projects

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Alban											
Work to identify roads prone to flooding and develop and implement projects to reduce flooding	2012	Ongoing	Town of Alban, Carson, Linwood, Eau Pleine, Hull, and Grant	Local EM, Portage County Emergency Management, and Planning and Zoning Department	1- Health and Safety 3 - Property and Environment	HMA, Public Assistance, other federal and state grants	High	Ongoing	High	High	Flooding, Severe Weather
Identify and create additional education efforts that local municipality fire departments can use for education	2012	Ongoing	Town of Dewey, Alban, and Grant	Local Municipalities and Fire Departments	2 - Public Education 5 - Intergovernmental Relationships	Local funding and StateGrants	Low	Ongoing	Medium	Medium	Wildfire
Develop a Stormwater Management Plan and integrate with	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather

Community Plans, Zones, and Ordinances					Integration 5 - Intergovernmental Relationships						
Develop a Community Wildfire Protection Plan (CWPP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton,	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	1- Health and Safety 3 - Property and Environment	Seek funding advice from the Wisconsin Department of Natural Resources	Medium	2023	Medium	Medium	Wildfire

			and Village of Whiting								
Procure and install an emergency generator	2019	New	Town of Alban	Town of Alban Garage	1- Health and Safety	Town funding	Low	TBD	Medium	High	Extreme Cold, Extreme Heat, Flood (Urban/Flash Flooding), Severe Thunderstorms, Severe Winter Weather, Tornado, Wildfire

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Almond											
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Amherst											

Raise Town Roads to reduce flooding	2019	New	Town of Amherst	Department of Transportation	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Medium	Long Term	Medium	Medium	Flooding, Severe Weather
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather
Develop a Community Wildfire Protection Plan (CWPP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville,	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	1- Health and Safety 3 - Property and Environment	Seek funding advice from the Wisconsin Department of Natural Resources	Medium	2023	Medium	Medium	Wildfire

			Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting								
Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan	2012	Ongoing	Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst	Amherst Fire District, Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst	4 - Plan Integration	Local funds	Low	Ongoing	High	High	All-Hazards
Continue to support the neighbors helping neighbor group that has been started. Encourage similar neighborhood groups throughout the County	2012	Ongoing	Town of Amherst	Town of Amherst EM lead and Neighborhood Group	1- Health and Safety 2 - Public Education	Local Funds	Low	Ongoing	Low	Medium	All-Hazards

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Belmont											
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather
Develop a Community Wildfire Protection Plan (CWPP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope,	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	1- Health and Safety 3 - Property and Environment	Seek funding advice from the Wisconsin Department of Natural Resources	Medium	2023	Medium	Medium	Wildfire

			Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting								
Strategize and develop a plan to reduce the effects of high winds and implement wind reduction projects	2012	Ongoing	Town of Belmont	Emergency Management	3 - Property and Environment 4 - Plan Integration	HMA, Public Assistance, other federal and state grants	High	TBD	Medium	Medium	Severe Weather. Tornado and High Winds

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Buena Vista											
Procure, Install, and Update Generator / Warning Sirens	2019	New	Town of Buena Vista	Town Board	1- Health and Safety 2 - Public Education	Local funds and as needed, seek state or federal grant	Low	Short Term	High	High	All-Hazards
Develop a Community Wildfire	2019	New	Town of Hull, Town of Lanark,	Portage County EM, Municipal EM, County and Local	1- Health and Safety	Seek funding advice	Medium	2023	Medium	Medium	Wildfire

Protection Plan (CWPP)			Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting	Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	3 - Property and Environment	from the Wisconsin Department of Natural Resources					
Develop a Stormwater Management Plan and integrate with Community Plans,	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 -	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather

Zones, and Ordinances					Intergovernmental Relationships						

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Carson											
Installation of Road Rock to reduce roadway flooding	2019	New	Town of Carson	Town of Carson	1- Health and Safety 3 - Property and Environment	Grant	High	Short Term	High	High	Flooding, Severe Weather
Work to identify roads prone to flooding and develop and implement projects to reduce flooding	2012	Ongoing	Town of Alban, Town of Carson, Town of Linwood, Eau Pleine, Hull, Grant Specifically	Local EM, Portage County Emergency Management, and Planning and Zoning Department	1- Health and Safety 3 - Property and Environment	HMA, Public Assistance, other federal and state grants	High	Ongoing	High	High	Flooding, Severe Weather
Identification of areas where residents can become landlocked and develop evacuation strategies	2012	Ongoing	Town of Carson	Emergency response agencies and Town of Carson EM lead	1- Health and Safety	Local Budget	Low	Ongoing	Medium	Medium	All-Hazards
Develop a Stormwater Management Plan and integrate with Community Plans, Zones,	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather

and Ordinances					Integration 5 - Intergovernmental Relationships						
Identify and perform cost analysis of removing homes/structures within the floodplain and floodway	2007	Ongoing	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point	Town of Carson EM lead and Portage County EM	1- Health and Safety 3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Low	Ongoing	Medium	Medium	Flooding, Severe Weather

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Dewey											
Conduct Road Maintenance to reduce flooding	2019	New	Town of Dewey	Town Board	3 - Property and Environment	Local Funds	High	Short Term	High	High	Flooding, Severe Weather
Develop a Community Wildfire Protection Plan (CWPP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	1- Health and Safety 3 - Property and Environment	Seek funding advice from the Wisconsin Department of Natural Resources	Medium	2023	Medium	Medium	Wildfire

			Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting								
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather
Work to create Mutual Aid with northern Towns and Marathon County -	2012	Ongoing	Town of Dewey	Fire Department	5 - Intergovernmental Relationships	No funding needed	Low	Ongoing	Medium	Medium	Wildfire

Fire Protection											
Seek funding to complete flood shadow information on dams	2012	Ongoing	Village of Amherst, Town of Dewey	Portage County Emergency Management and Local EM	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	High	Ongoing	Low	Medium	Dam Failure
Identify and create additional education efforts that local municipality fire departments can use for education	2012	Ongoing	Towns of Dewey, Alban, and Grant	Portage County Emergency Management and WI DNR - Plover Ranger Station (formerly Whiting Ranger Station)	2 - Public Education 5 - Intergovernmental Relationships	Local and State Grants	Low	Ongoing	Medium	Medium	Wildfire

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Eau Pleine											
Procure and install a generator for emergency events	2019	New	Town of Eau Pleine	Town Board	1- Health and Safety	Grant - seek local and state funding	Medium	Short Term	Medium	Medium	All-Hazards
Work to identify roads prone to flooding and develop and implement	2012	Ongoing	Town of Alban, Town of Carson, Town of Linwood,	Local EM, Portage County Emergency Management, and Planning and	1- Health and Safety 3 - Property and Environment	HMA, Public Assistance, other federal	High	Ongoing	High	High	Flooding, Severe Weather

projects to reduce flooding			Town of Eau Pleine, Town of Hull, and Town of Grant	Zoning Department		and state grants					
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather
Identification of areas where residents can become landlocked and developing evacuation strategies	2012	Ongoing	Town of Eau Pleine	Emergency response agencies and Town of Eau Pleine EM	1- Health and Safety	Local Budget	Low	Ongoing	Medium	Medium	All-Hazards
Identify and perform cost analysis of removing homes/structures within the floodplain and floodway	2007	Ongoing	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point	Town of Eau Pleine EM lead and Portage County EM	1- Health and Safety 3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Low	Ongoing	Medium	Medium	Flooding, Severe Weather

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Grant											
Raise and repair the town roads that experience repeated flooding	2019	New	Town of Grant	Town Board	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	High	Long Term	High	High	Flooding, Severe Weather
Develop a Home Flooding Prevention Plan and Create Runoff Culverts	2019	New	Town of Grant	DNR, Army Corp. of Engineers	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	High	Short Term	High	High	Flooding, Severe Weather
Work to identify roads prone to flooding and develop and implement projects to reduce flooding	2012	Ongoing	Town of Alban, Town of Carson, Town of Linwood, Town of Eau Pleine, Town of Hull, and Town of Grant	Local EM, Portage County Emergency Management, and Planning and Zoning Department	1- Health and Safety 3 - Property and Environment	HMA, Public Assistance, other federal and state grants	High	Ongoing	High	High	Flooding, Severe Weather
Develop a Community Wildfire Protection Plan (CWPP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst,	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin	1- Health and Safety 3 - Property and Environment	Seek funding advice from the Wisconsin Department of	Medium	2023	Medium	Medium	Wildfire

			Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting	Department of Natural Resources and Planning and Zoning)		Natural Resources					
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather

Identification of areas where residents can become landlocked and developing evacuation strategies	2012	Ongoing	Town of Grant	Emergency response agencies and Town of Grant EM	1- Health and Safety	Local Budget	Low	Ongoing	Medium	Medium	All-Hazards
Continue to identify groundwater contamination issues that result from high groundwater/ flooding	2012	Ongoing	Town of Grant, Town of Hull	Town of Grant and Portage County Groundwater Specialist	3 - Property and Environment	Local and State Grants	High	Ongoing	High	High	Flooding, Severe Weather, Hazardous Materials
Identify and create additional education efforts that local municipality fire departments can use for education	2012	Ongoing	Towns of Dewey, Alban, and Grant	Portage County Emergency Management and WI DNR - Plover Ranger Station (formerly Whiting Ranger Station)	2 - Public Education 5 - Intergovernmental Relationships	Local and State Grants	Low	Ongoing	Medium	Medium	Wildfire

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Hull											
Develop a Community	2019	New	Town of Hull, Town	Portage County EM, Municipal	1- Health and Safety	Seek funding	Medium	2023	Medium	Medium	Wildfire

Wildfire Protection Plan (CWPP)			of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting	EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	3 - Property and Environment	advice from the Wisconsin Departme nt of Natural Resources					
Work to identify roads prone to flooding and develop and implement	2012	Ongoi ng	Town of Alban, Town of Carson, Town of Linwood,	Local EM, Portage County Emergency Management, and Planning and	1- Health and Safety 3 - Property and Environment	HMA, Public Assistanc e, other federal	High	Ongoing	High	High	Flooding , Severe Weather

projects to reduce flooding			Town of Eau Pleine, Town of Hull, and Town of Grant	Zoning Department		and state grants					
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather
Continue to identify groundwater contamination issues that result from high groundwater/ flooding	2012	Ongoing	Town of Grant, Town of Hull	Town of Hull and Portage County Groundwater Specialist	3 - Property and Environment	Local and State Grants	High	Ongoing	High	High	Flooding, Severe Weather, Hazardous Materials
Identify and perform cost analysis of removing homes/structures within the floodplain and floodway	2007	Ongoing	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point	Town of Hull EM lead and Portage County EM	1- Health and Safety 3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Low	Ongoing	Medium	Medium	Flooding, Severe Weather

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Lanark											
Research and implement ways to relieve flooding on roadways	2019	New	Town of Lanark	Town of Lanark EM and Roads/Bridges Specialists	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Low	Short Term	High	High	Flood, Severe Weather
Fix culverts to reduce flooding	2019	New	Town of Lanark	Town of Lanark EM and Roads/Bridges Specialists	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Medium	Short Term	High	Medium	Flood, Severe Weather
Develop a Community Wildfire Protection Plan (CWPP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	1- Health and Safety 3 - Property and Environment	Seek funding advice from the Wisconsin Department of Natural Resources	Medium	2023	Medium	Medium	Wildfire

			New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting								
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather
Work to identify locations for "living" snow fence	2012	Ongoing	Town of Lanark	Town of Lanark EM and Planner	3 - Property and Environment	Grants - Local and State Funding	Low	Ongoing	Low	Low	Severe Winter Storm

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Linwood											
Raise Roadways to reduce flooding	2019	New	Town of Linwood	Department of Transportation	3 - Property and Environment	HMA, Public Assistance, other	High	Long Term	Low	High	Flood, Severe Weather

						federal and state grants					
Work to identify roads prone to flooding and develop and implement projects to reduce flooding	2012	Ongoing	Town of Alban, Town of Carson, Town of Linwood, Eau Pleine, Hull, Grant Specifically	Local EM, Portage County Emergency Management, and Planning and Zoning Department	1- Health and Safety 2 - Public Education 3 - Property and Environment	HMA, Public Assistance, other federal and state grants	High	Ongoing	High	High	Flooding, Severe Weather
Develop a Community Wildfire Protection Plan (CWPP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	1- Health and Safety 2 - Public Education 3 - Property and Environment	Seek funding advice from the Wisconsin Department of Natural Resources	Medium	2023	Medium	Medium	Wildfire

			Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting								
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather
Identify and perform cost analysis of removing homes/structures within the floodplain and floodway	2007	Ongoing	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point	Town of Linwood EM lead and Portage County Em	1- Health and Safety 3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Low	Ongoing	Medium	Medium	Flooding, Severe Weather
Identification of areas where residents can become landlocked and developing evacuation strategies	2012	Ongoing	Town of Linwood	Emergency response agencies and Town of Linwood EM lead	1- Health and Safety	Local Budget	Low	Ongoing	Medium	Medium	All-Hazards

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of New Hope											
Winter weather road cleaning to reduce snow build up/debris to reduce roadway hazards	2019	New	Town of New Hope	Portage County	3 - Property and Environment	Grant - seek local, state, and federal grants	High	Short Term	High	High	Extreme Cold, Transportation Accidents, Winter Weather
Develop a Community Wildfire Protection Plan (CWPP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover,	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	1- Health and Safety 3 - Property and Environment	Seek funding advice from the Wisconsin Department of Natural Resources	Medium	2023	Medium	Medium	Wildfire

			Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting								
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Pine Grove											
Develop a listing of roads prone to flooding and design and implement flood	2019	New	Town of Pine Grove	Department of Transportation	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	High	Long Term	Medium	High	Flooding, Severe Weather

reduction projects											
Develop a Severe Weather Relocation Plan for Elderly and Vulnerable Communities	2019	New	Town of Pine Grove	Town of Pine Grove	2 - Public Education	Local	Low	Short Term	High	High	Severe Weather
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Plover											
Develop a listing of roads prone to flooding and design and implement flood reduction projects	2019	New	Town of Plover	Department of Transportation	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	High	Long Term	High	High	Dam Failure, Flooding, Severe Weather

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Sharon											
Develop a Community Wildfire Protection Plan (CWPP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope,	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	1 - Health and Safety and 3 - Property and Environment	Seek funding advice from the Wisconsin Department of Natural Resources	Medium	2023	Medium	Medium	Wildfire

			Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting								
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Town of Stockton											
Develop a Community Wildfire Protection Plan (CWPP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	1- Health and Safety 3 - Property and Environment	Seek funding advice from the Wisconsin Department of Natural Resources	Medium	2023	Medium	Medium	Wildfire

			Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting								
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather
Mitigate potential flooding in areas previously impacted	2019	New	Town of Stockton	Town of Stockton EM and Public Works	3 - Property and Environment	Local Budget	Low	Ongoing	Medium	Medium	Flooding, Severe Weather

by flooding through a culvert maintenance program											

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Village of Almond											
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Village of Amherst											
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather

Seek Funding to complete flood shadow information on dams	2012	Ongoing	Village of Amherst, Town of Dewey	Portage County Emergency Management and Local EM	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	High	Ongoing	Low	Medium	Dam Failure
Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan	2012	Ongoing	Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst	Amherst Fire District, Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst	4 - Plan Integration	Local funds	Low	Ongoing	High	High	All-Hazards
Continued Compliance with NFIP	2012	Ongoing	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, and City of Stevens Point	Local EM and Floodplain Specialist	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Low	Ongoing	High	High	Flooding, Severe Weather

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Village of Amherst Junction											
Develop a Stormwater Management Plan and integrate	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and	1- Health and Safety 2 - Public Education 3 - Property and Environment	HMA, Public Assistance, other federal	Medium	2025	High	High	Flooding, Severe Weather

with Community Plans, Zones, and Ordinances				Municipality EM and Planner	4 - Plan Integration 5 - Intergovernmental Relationships	and state grants					
Provide HAZMAT Awareness and Operations Level training to first responders	2019	New	Village of Amherst Junction	Fire Department	1- Health and Safety	Fire grant	Low	Ongoing	High	High	Wildfire, Hazardous Materials, Transportation (Rail) Incident
Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan	2012	Ongoing	Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst	Amherst Fire District, Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst	4 - Plan Integration	Local Funds	Low	Ongoing	High	High	All-Hazards

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Village of Junction City											
Designate an alternate building outside the village to be a	2019	New	Village of Junction City	Village of Junction City	1- Health and Safety 4 - Plan Integration	Grant - seek local, state, and federal	High	Long Term	High	High	Transportation (Rail) Incidents

shelter from the railroad.											
Procure and install wastewater and village hall generators	2019	New	Village of Junction City and Town of Hull	Village of Junction City and Town of Hull	1- Health and Safety	Grant - seek local, state, and federal	Medium	Short Term	High	High	All-Hazards
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather
Create a Village of Junction City Emergency Action Plan	2012	Ongoing	Village of Junction City	Village's Public Protection Committee	1- Health and Safety	Grant - seek local, state, and federal	Medium	Ongoing	Medium	High	All-Hazards

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Village of Nelsonville											
Develop a Community Wildfire Protection	2019	New	Town of Hull, Town of Lanark, Town of	Portage County EM, Municipal EM, County and Local Fire	1- Health and Safety 3 - Property and Environment	Seek funding advice from the	Medium	2023	Medium	Medium	Wildfire

Plan (CWPP)			Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting	Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)		Wisconsin Departme nt of Natural Resources					
Develop a Stormwate r Manageme nt Plan and integrate with Community Plans,	2019	New	All Portage County Municipaliti es	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmen	HMA, Public Assistance , other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather

Zones, and Ordinances					tal Relationships						
Continued Compliance with NFIP	2012	Ongoing	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point	Local EM and Floodplain Specialist	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Low	Ongoing	High	High	Flooding, Severe Weather
Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan	2012	Ongoing	Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst	Amherst Fire District, Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst	4 - Plan Integration	Local funds	Low	Ongoing	High	High	All-Hazards

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Village of Park Ridge											
Reconstruct all village streets to include the addition of swales.	2019	Ongoing	Village of Park Ridge	Village of Park Ridge	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Medium	Ongoing	High	High	Flooding, Severe Weather
Develop a Stormwater	2019	New	All Portage County	Portage County Emergency Management,	1- Health and Safety 2 - Public	HMA, Public Assistanc	Medium	2025	High	High	Flooding, Severe Weather

Management Plan and integrate with Community Plans, Zones, and Ordinances			Municipalities	Floodplain Manager, and Municipality EM and Planner	Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	e, other federal and state grants					
Continued Compliance with NFIP	2012	Ongoing	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point	Local EM and Floodplain Specialist	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Low	Ongoing	High	High	Flooding, Severe Weather

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Village of Plover											
Develop a Storm / Surface Water Plan	2019	New	Village of Plover and City of Stevens Point	Village of Plover	3 - Property and Environment 4 - Plan Integration	Grant - seek local, state, and federal	Medium	Ongoing	High	High	Flooding, Severe Weather
Upgrade the municipal sewer stations - upgrade the pumps, generators and	2019	New	Village of Plover	Village of Plover	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	High	Ongoing	High	High	Flooding, Severe Weather, Severe Winter Weather, Utility Failure

electrical system											
Local Flood Mitigation Planning and Project Development and Implementation	2019	New	Village of Plover	Village of Plover and Portage County	3 - Property and Environment 4 - Plan Integration	Grant - seek local, state, and federal	Low	Short Term	Medium	Medium	Flooding, Severe Weather
Develop a Community Wildfire Protection Plan (CWPP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	1- Health and Safety 3 - Property and Environment	Seek funding advice from the Wisconsin Department of Natural Resources	Medium	2023	Medium	Medium	Wildfire

			Sevens Point, Town of Stockton, and Village of Whiting								
Develop a Stormwater Managemen t Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipaliti es	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernme ntal Relationships	HMA, Public Assistanc e, other federal and state grants	Mediu m	2025	High	High	Flooding, Severe Weather
Bury overhead power and utility lines, where feasible, as a way to improve emergency response times, improve safety, and reduce power outages	2007	Ongoi ng	Village of Plover and City of Stevens Point	Utilities and Village of Plover EM	3 - Property and Environment	Grant - seek local, state, and federal grants	High	Ongoing	Low	Mediu m	Utility/Power Failure
Continued Compliance in NFIP	2012	Ongoi ng	Villages of Amherst, Nelsonville,	Local EM and Floodplain Specialist	3 - Property and Environment	HMA, Public Assistanc	Low	Ongoing	High	High	Flooding, Severe Weather

			Plover, Rosholt, Whiting, City of Stevens Point			e, other federal and state grants					
Continue to review current coverage of outdoor sirens and prepare a schedule for new locations as development happens	2007	Ongoing	Village of Plover (can apply to all incorporated municipalities)	Individual MCD	1- Health and Safety	Local budget	Low	Ongoing	Low	Medium	All-Hazards

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Village of Rosholt											
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather
Develop a Community	2019	New	Town of Hull, Town	Portage County EM, Municipal	1- Health and Safety	Seek funding	Medium	2023	Medium	Medium	Wildfire

Wildfire Protection Plan (CWPP)			of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting	EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	3 - Property and Environment	advice from the Wisconsin Departme nt of Natural Resources					
Village of Rosholt to review zoning of property located in flood shadow to	2012	Ongoin g	Village of Rosholt	Planning and Zoning	3 - Property and Environment	HMA, Public Assistance , other federal and state grants	High	Ongoing	Low	Mediu m	Flooding, Severe Weather

limit development											
Continued Compliance in NFIP	2012	Ongoing	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point	Local EM and Floodplain Specialist	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Low	Ongoing	High	High	Flooding, Severe Weather

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
Village of Whiting											
Develop a Community Wildfire Protection Plan (CWPP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	1- Health and Safety 3 - Property and Environment	Seek funding advice from the Wisconsin Department of Natural Resources	Medium	2023	Medium	Medium	Wildfire

			Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting								
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather
Purchase a trailer higher capacity water pump and	2019	New	Village of Whiting	Village of Whiting	3 - Property and Environment	Local funds and HMA, Public Assistanc	High	Ongoing	Medium	Medium	Flooding, Severe Weather

associated hoses to remove localized flooding in areas by pumping to areas with storm sewer and/or bodies of water						e, other federal and state grants					
Purchase a trailer-mounted generator to service sewage lift stations and/or other remote sites to avoid potential basement backups and/or sanitary sewer overflows during a power outage	2019	New	Village of Whiting	Village of Whiting	3 - Property and Environment	Local funds and HMA, Public Assistance, other federal and state grants	High	Ongoing	High	High	Flooding, Severe Weather, Power/ Utility Failure, Tornado

Continued Compliance in NFIP	2012	Ongoing	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point	Local EM and Floodplain Specialist	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Low	Ongoing	High	High	Flooding, Severe Weather

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
City of Stevens Point											
Develop a Storm Water Management Plan for the municipality	2019	New	City of Stevens Point and Plover	City of Stevens Point	3 - Property and Environment 4 - Plan Integration	Grant - seek local, state, and federal	Medium	Ongoing	High	High	Flooding, Severe Weather
Develop a Community Wildfire Protection Plan (CWPP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood,	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	1- Health and Safety 3 - Property and Environment	Seek funding advice from the Wisconsin Department of Natural Resources	Medium	2023	Medium	Medium	Wildfire

			Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting								
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships	HMA, Public Assistance, other federal and state grants	Medium	2025	High	High	Flooding, Severe Weather
Bury overhead power and utility lines, where feasible, as a way to improve emergency	2007	Ongoing	City of Stevens Point	City of Stevens Point EM and Utilities	3 - Property and Environment	Grant - seek local, state, and federal grants	High	Ongoing	Low	Medium	Utility/Power Failure

response times, improve safety, and reduce power outages											
Identify and perform cost analysis of removing homes/structures within the floodplain and floodway	2007	Ongoing	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point	City of Stevens Point EM and Portage County EM	1- Health and Safety 3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Low	Ongoing	Medium	Medium	Flooding, Severe Weather
Continued Compliance in NFIP	2012	Ongoing	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point	Local EM and Floodplain Specialist	3 - Property and Environment	HMA, Public Assistance, other federal and state grants	Low	Ongoing	High	High	Flooding, Severe Weather
Maintain and keep warning sirens in working order	2012	Ongoing	City of Stevens Point	City of Stevens Point EM	1- Health and Safety	Local	Low	Ongoing	Low	Medium	All-Hazards

Mitigation Project	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Applicable Goals	Potential Funding Source	Estimated Cost	Projected Completion Date	Priority	Benefit	Applicable Hazard
University of Wisconsin - Stevens Point											

Procure and Install New Camera System - Treehaven to enhance school security	2019	New	University of Wisconsin Stevens Point	University of Wisconsin Stevens Point	1 - Health and Safety	Grant (university, local, state, or federal)	Medium	Short Term	Medium	Medium	All-Hazards (Campus Safety)
Procure and Install New Camera Systems - CWE to enhance school security	2019	New	University of Wisconsin Stevens Point	University of Wisconsin Stevens Point	1 - Health and Safety	Grant (university, local, state, or federal)	Medium	Short Term	Medium	Medium	All-Hazards (Campus Safety)
Develop Emergency Information Webpage and Guidebooks	2019	New	University of Wisconsin Stevens Point	University of Wisconsin Stevens Point	4 - Plan Integration	Grant (university, local, state, or federal)	Low	Short Term	Medium	High	All-Hazards
Develop Continuity of Operations Plan	2019	New	University of Wisconsin Stevens Point	University of Wisconsin Stevens Point	4 - Plan Integration	Local Funds	High	Long Term	Medium	High	All-Hazards
Develop an Emergency Operations Plan	1990	On-going	University of Wisconsin Stevens Point	University of Wisconsin Stevens Point	4 - Plan Integration	Local Funds	High	Long Term	Medium	High	All-Hazards
Utilize StormReady Community to Notify Students of Hazards	2015	On-going	University of Wisconsin Stevens Point	University of Wisconsin Stevens Point	1 - Health and Safety 2 - Public Education	HMA, other federal and state grant and local funds	Medium	07/09/2019	Medium	High	All-Hazards
Procure and Install New Camera to enhance school security	2019	New	University of Wisconsin Stevens Point	University of Wisconsin Stevens Point	1 - Health and Safety 2 - Public Education	Grant (university, local, state, or federal)	Medium 1-5 Years: $30,000	July 2012	Medium	Medium	All-Hazards (Campus Safety)

							5 Years: $25,000				
Conduct a Drainage Study	2019	New	University of Wisconsin Steven Point	University of Wisconsin Stevens Point	3 - Property and Environment	HMA, other federal and state grant	Medium	Short Term	Medium	Medium	Flooding, Severe Weather
Procure and Utilize Interoperable Campus Radio System	2019	New	University of Wisconsin Steven Point	University of Wisconsin Stevens Point	1 -Health and Safety 2 - Public Education	HMA, other federal and state grant	High	Short Term	Medium	High	All-Hazards (Campus Safety)
Procure and Install the thumb turn deadbolt locking mechanism on each door to enhance school security	2019	New	University of Wisconsin Stevens point	University of Wisconsin Stevens Point	1 - Health and Saftey 3 - Property and Environment	Grant (university, local, state, or federal)	High	Long Term	Medium	High	All-Hazards (Campus Safety)

County Plan Integration Strategy

Plan integration is the process by which communities look critically at their existing planning framework and align efforts with the goal of building a safer, smarter community. Plan integration involves a two-way exchange of information and incorporation of ideas and concepts between the Portage County Hazard Mitigation Plan and other community plans. Specifically, plan integration involves the incorporation of hazard mitigation principles and actions into community plans and community planning mechanisms.

- All mitigation actions should be reviewed and incorporated when the County and City Comprehensive Plans and Comprehensive Emergency Management Plan (CEMP) are updated.
- County and cities should consider mitigation actions, especially high priority projects, in budget plans.

The following demonstrates Portage County's and its participating jurisdictions' continued effort to integrate mitigation into other community plans and efforts:

Table: Plan Integration Mitigation Actions

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Lead/ Coordinating Organizations	Priority (High, Medium, Low)	Benefit Parameter (High, Medium, Low)	Applicable Hazard
Portage County							
Evaluate Roadways to Prevent Repeat Flooding	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	County Emergency Management and Highway Department	Medium	Medium	Dam/Levee Failure, Flooding, Severe Weather, Major Transportation Accident
Establish Locations and Develop Storm Shelters	• Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP) • Emergency Action Plan (EAP)	2019	New	County Emergency Management and County Health and	Medium	Medium	Severe Weather, Utility Failure, Extreme

				Human Services			Winter Cold, Flooding
Identify and create a listing of Hazardous Material Dangers in the County	• HAZMAT Plan • Emergency Action Plan (EAP)	2019	New	Portage County and Applicable Jurisdictions	Medium	Medium	Hazardous Materials, Major Transportation (Railroad) Incident
Install a visual Alert System for Roadways	• Transportation/Roads/Bridge Plans • Emergency Action Plan (EAP)	2019	New	Portage County and Applicable Jurisdictions	Medium	Medium	All Hazards
Public Education and Awareness (Revised in 2012)	• Communication/Public Outreach Plan	2007	Ongoing	County Emergency Management	Low	Medium	All Hazards
Continue Mutual Aid/ Interagency Agreements	• Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP) • Emergency Action Plan (EAP)	2007	Ongoing	County Emergency Management	Low	Medium	All Hazards
Education and Training of County and municipal staff on roles and responsibilities related to emergency managmeent	• Comprehensive Emergency Management Plan (CEMP) • Employee Training • Emergency Action Plan (EAP)	2007	Ongoing	County Emergency Management	Low	Low	All Hazards
Recommended that Goals and mitigation strategies be incorporated as part of municipal and County comprehensive planning efforts where appropriate.	• Comprehensive Plan	2012 (Updated 2019)	Ongoing	County Emergency Management	Low	Medium	All Hazards
Continue to promote information campaigns about severe weather	• Communication/Public Outreach Plan	2007 (Revised in 2012)	Ongoing	County Emergency Management	Low	Medium	Severe Weather

Identify ways to reduce power outages throughout the County.	• Electrical/Utility Plans • Emergency Action Plan (EAP)	2012	Ongoing	County Emergency Management, Municipalities, External Partners	High	High	All Hazards
Identify and pursue funding opportunities to develop and implement local and county mitigation activities.	• County Budget Plans • Comprehensive Plan	2012	Ongoing	County Emergency Management and Municipalities	Low	Low	All Hazards
Continue to provide periodic emergency response training exercises.	• Comprehensive Emergency Management Plan (CEMP)	2007 (Revised in 2012)	Ongoing	County Emergency Management	Low	High	All Hazards
Create additional severe weather shelter locations around higher risk areas such as: manufactured home parks and campgrounds	• Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2007	Ongoing	County Emergency Management, Municipalities, County Parks Department, County Planning & Zoning	Low	High	All Hazards
Continue to host severe weather spotter classes and maintain network of spotters throughout the County	• Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP) • Communication/Public Outreach Plan	2007	Ongoing	County Emergency Management	Low	High	Severe Weather
Encourage all areas to participate or prepare own Emergency Action Plan.	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2012	Ongoing	County Parks Department, Planning and Zoning, County Emergency Management,	High	Medium	All Hazards

				UWSP, Municipalities			
Increase available public education about severe storms by evaluating current severe storm weather safety information and update as needed.	• Communication/Public Outreach Plan	(Revised in 2012)	Ongoing	County Emergency Management	Low	Medium	Severe Weather, Winter Storms
Evaluate signage at public places such as parks campgrounds, beaches, sport facilities etc. to direct public in case of an emergency and make improvements/ recommendations	• Communication/Public Outreach Plan	(Revised in 2019)	Ongoing	County Parks Department, Planning and Zoning, County Emergency Management, UWSP, Municipalities	Medium	High	All Hazards
Promote backup power systems for critical infrastructure facilities	• Electrical/Utility Plans • Emergency Action Plan (EAP)	2007	Ongoing	County Emergency Management, Municipalities, External Partners	Low	High	All Hazards
Work to identify local roads, by municipality, that are prone to flooding, culvert issues and other flooding affects that close local roads.	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2011	Ongoing	County Highway Department, County Planning & Zoning, Municipal Public Works	Low	Medium	Flooding, Severe Weather
Identify a more effective way to communicate road closures to all areas of Portage County. Especially when power outages accompany these closures.	• Communication/Public Outreach Plan • Emergency Action Plan (EAP)	2012	Ongoing	County Highway Department, Sheriff's Office Dispatch, Municipalities	Low	Low	Utility (Power) Failure, All Hazards

Coordinate severe weather alerts with additional local agencies and elderly care facilities. Coordinate better linkage between regular business hours and weekends to disseminate severe weather information.	• Business Continuity Plan • Communication/Public Outreach Plan	2007	Ongoing	Sheriff's Office Dispatch, Aging and Disability Resource Center	Low	High	All Hazards
Work with local municipalities to identify and designate structures as shelters from extreme temperatures.	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2007	Ongoing	County Human Services Department, Municipalities, Aging and Disability Resource Center, County Public Health	Low	Medium	Extreme Heat and Extreme Cold
Off-site plan updates	• Emergency Action Plan (EAP)	2012	Ongoing	LEPC/County Emergency Management	Medium	Medium	All Hazards
Continue County Hazmat Team	• HAZMAT Plan • Emergency Action Plan (EAP)	2012	Ongoing	LEPC/County Emergency Management	High	Medium	Hazardous Materials, Major Transportation (Railroad) Incident

County Emergency Preparedness and Communication Activities/Plans

Portage County Hazard Analysis

The Portage County Hazard Analysis identifies hazards that have or could occur. It includes a description of each hazard, its frequency of occurrence, identifying potential mitigation actions, and current actions taken to mitigate the hazard. These hazards are the basis for the development of all county emergency management plans.

Communications

Portage County has two Public Safety Answering Points (PSAPs); the Portage County Communications Center located in the Portage County Law Enforcement Center (1500 Strongs Ave, Stevens Point) and the City of Stevens Point Dispatch Center located in the Stevens Point Police Department (1516 Church St, Stevens Point). A landline call placed within the county is selectively routed to the correct PSAP. Wireless calls are answered jointly by both PSAPs. Each PSAP develops and maintains internal SOPs/SOGs, policies, and procedures.

The Village of Plover has a mobile command post with limited communication capabilities.

- Integration of previous county mitigation actions include:
    - Public Education and Awareness (Revised in 2012)
    - Continue to promote information campaigns about severe weather
    - Identify a more effective way to communicate road closures to all areas of Portage County. Especially when power outages accompany these closures
    - Coordinate severe weather alerts with additional local agencies and elderly care facilities. Coordinate better linkage between regular business hours and weekends to disseminate severe weather information

Emergency Response and Operations Plans (ERP /EOP)

Within Portage County, the City of Stevens Point, the Amherst Fire District and the Village of Plover have adopted a municipal emergency operations plan.

- Integration of previous county mitigation actions include:
    - Continue Mutual Aid/ Interagency Agreements

Portage County Emergency Operation Plan

The purpose of the Portage County EOP is to:

1. Facilitate the protection of lives, property, and the environment in major disasters of any nature.

2. Coordinate response to disasters, assess damages, identify mitigation opportunities, and implement recovery efforts.

3. Describe the County's relationship in support of local units of governments during response and recovery.

4. Serve as a coordinating document for supporting Internal Agency Plans (IAP) (i.e., Policy and Procedures.)

5. Reflect information collected, decisions made, and procedures developed in the planning process and during a response.

6. Provide a link between the County and municipal plans.

- Integration of previous county mitigation actions include:
    - Continue Mutual Aid/ Interagency Agreements

Incident Response Exercises

Portage County plans, coordinates, and exercises disaster drills with local responding agencies.

The Central Wisconsin Disaster Management Group consists of hospitals from Marshfield, Neillsville, Stevens Point, Wausau, and Wisconsin Rapids.

- Integration of previous county mitigation actions include:
    - Education and Training of County and municipal staff on roles and responsibilities related to emergency management
    - Continue to provide periodic emergency response training exercises.

Pandemic Influenza Response Plan

On August 1, 2007, Portage County adopted the Pandemic Influenza Response Plan. This plan outlines planning considerations, concepts of operations, operational functions, and tasks required by the Local Health Department/Tribe (LHD/T) during planning, operations, and recovery of a pandemic. The tasks outlined for each operational function are based on the Centers for Disease Control and Prevention (CDC) levels of response in tandem with levels of pandemic severity (mild, moderate, and severe). CDC levels of response were developed by a wide variety of federal, state, and local partners. The plan does not address outbreaks of avian influenza virus in birds or other animal populations within the jurisdiction. Federal and State Departments of Agriculture are primarily responsible for surveillance and control of influenza outbreaks in domestic animals, although agricultural control measures interface with public health actions to prevent transmission to humans. The Pandemic Influenza Response Plan is an annex to the Public Health Emergency Plan (PHEP) and will be implemented in tandem with other plans found within the PHEP.

It is expected that health care facilities and health care professionals, essential services providers, local governmental officials, and business leaders will develop and incorporate procedures and protocols addressing influenza preparedness and response activities into their emergency response plans.

- Integration of previous county mitigation actions include:
    - Continue Mutual Aid/ Interagency Agreements

Heat Emergency Plan

Updated yearly, this plan provides a coordinated response for sustained heat events to minimize morbidity and mortality by facilitating the protection of lives in the event of a heat emergency, providing a link between Portage County government agencies and other community emergency resources, and providing public education and information prior to and during a heat emergency. In June of each year, the Emergency Management Director will review and update the plan, issue a press release on Wisconsin's Heat Awareness Day, and test broadcast fax capability to related agencies and organizations.

During warm weather season, Emergency Management will monitor the weather through the NWS and initiate the plan for any level of announced heat advisory as follows:

Upon notice from the National Weather Service, Emergency Management will fax a Hazardous Weather Outlook for the following conditions: Heat Advisory, Excessive Heat Watch, and Excessive Heat Warning.

Portage County Emergency Management may issue a press release related to the potential heat emergency. The release will include strategies for coping with extreme heat and public locations that are air-conditioned and could be considered as cooling centers. The EM may issue a press release as appropriate for Heat Advisory, Excessive Heat Watch, and Excessive Heat Warning.

- Integration of previous county mitigation actions include:
    - Public Education and Awareness (Revised in 2012)
    - Work with local municipalities to identify and designate structures as shelters from extreme temperatures.

Municipality Plan Integration Strategies

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Alban								
Work to identify roads prone to flooding and develop and implement projects to reduce flooding	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2012	Ongoing	Town of Alban, Town of Carson, Town of Linwood, Eau Pleine, Hull, Grant Specifically	Local EM, Portage County Emergency Management, and Planning and Zoning Department	High	High	Flooding, Severe Weather
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Develop a Community Wildfire Protection Plan (CWPP)	• Wildfire/WUI Plan • Preparedness Plans • Comprehensive Emergency Management Plan (CEMP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire

				of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting				
Procure and install an emergency generator	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2019	New	Town of Alban	Town of Alban Garage	Medium	High	Extreme Cold, Extreme Heat, Flood (Urban/Flash Flooding), Severe Thunderstorms, Severe Winter Weather, Tornado, Wildfire

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Almond								
Develop a Stormwater Management Plan and integrate with	• NFIP/Floodplain • Comprehensive Plan	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager,	High	High	Flooding, Severe Weather

Community Plans, Zones, and Ordinances	• City Codes and Ordinances/Planning and Zoning				and Municipality EM and Planner			

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Amherst								
Raise Town Roads to reduce flooding	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Amherst	Department of Transportation	Medium	Medium	Flooding, Severe Weather
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Develop a Community Wildfire Protection Plan (CWPP)	• Wildfire/WUI Plan • Preparedness Plans • Comprehensive Emergency Management Plan (CEMP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover,	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire

				Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting				
Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2012	Ongoing	Town of Amherst	Amherst Fire District, Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst	High	High	All Hazards
Continue to support the neighbors helping neighbor group that has been started. Encourage similar neighborhood groups throughout the County	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2012	Ongoing	Town of Amherst	Town of Amherst EM lead and Neighborhood Group	Low	Medium	All Hazards

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Belmont								
Develop a Stormwater Management Plan and	• NFIP/Floodplain • Comprehensive Plan	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager,	High	High	Flooding, Severe Weather

integrate with Community Plans, Zones, and Ordinances	• City Codes and Ordinances/Planning and Zoning				and Municipality EM and Planner			
Develop a Community Wildfire Protection Plan (CWPP)	• Wildfire/WUI Plan • Preparedness Plans • Comprehensive Emergency Management Plan (CEMP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire
Strategize and develop a plan to reduce the effects of high winds and implement wind reduction projects	• Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Town of Belmont	Emergency Management	Medium	Medium	Severe Weather

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Buena Vista								
Precure, Install, and Update Generator / Warning Sirens	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2019	New	Town of Buena Vista	Town Board	High	High	All Hazards
Develop a Community Wildfire Protection Plan (CWPP)	• Wildfire/WUI Plan • Preparedness Plans • Comprehensive Emergency Management Plan (CEMP)	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire
Develop a Stormwater Management Plan and integrate with Community Plans, Zones,	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather

and Ordinances								

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Carson								
Installation of Road Rock to reduce roadway flooding	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Carson	Town of Carson	High	High	Flooding, Severe Weather
Work to identify roads prone to flooding and develop and implement projects to reduce flooding	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2012	Ongoing	Town of Alban, Town of Carson, Town of Linwood, Eau Pleine, Hull, Grant Specifically	Local EM, Portage County Emergency Management, and Planning and Zoning Department	High	High	Flooding, Severe Weather
Identification of areas where residents can become landlocked and developing evacuation strategies	• Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Town of Carson	Emergency response agencies and Town of Carson EM lead	Medium	Medium	All Hazards
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather

Identify and perform cost analysis of removing homes/structures within the floodplain and floodway	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2007	Ongoing	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point	Town of Carson EM lead and Portage County EM	Medium	Medium	Flooding, Severe Weather

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Dewey								
Conduct Road Maintenance to reduce flooding	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	Town of Dewey	Town Board	High	High	Flooding, Severe Weather
Develop a Community Wildfire Protection Plan (CWPP)	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire

				Sevens Point, Town of Stockton, and Village of Whiting				
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Work to create Mutual Aid with northern Towns and Marathon County - Fire Protection	• Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2012	Ongoing	Town of Dewey	Fire Department	Medium	Medium	Wildfire
Identify and create additional education efforts that local municipality fire departments can use for education	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2012	Ongoing	Town of Dewey	WI DNR - Whiting Ranger Station	Low	Medium	Wildfire
Seek Funding to complete flood shadow	• NFIP/Floodplain • Comprehensive Plan	2012	Ongoing	Village of Amherst, Town of Dewey	Portage County Emergency Management and Local EM	Low	Medium	Flooding

information on dams	• City Codes and Ordinances/Planning and Zoning							

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Eau Pleine								
Procure and install a generator for emergency events	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2019	New	Town of Eau Pleine	Town Board	Medium	Medium	All Hazards
Work to identify roads prone to flooding and develop and implement projects to reduce flooding	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2012	Ongoing	Town of Alban, Town of Carson, Town of Linwood, Town of Eau Pleine, Town of Hull, and Town of Grant	Local EM, Portage County Emergency Management, and Planning and Zoning Department	High	High	Flooding, Severe Weather
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Identification of areas where residents can become landlocked and developing	• Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Town of Eau Pleine	Emergency response agencies and Town of Eau Pleine EM	Medium	Medium	All Hazards

evacuation strategies								
Identify and perform cost analysis of removing homes/structures within the floodplain and floodway	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2007	Ongoing	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point	Town of Eau Pleine EM lead and Portage County EM	Medium	Medium	Flooding, Severe Weather

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Grant								
Raise and repair the town roads that experience repeated flooding	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Grant	Town Board	High	High	Flooding, Severe Weather
Develop a Home Flooding Prevention Plan and Create Runoff Culverts	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	Town of Grant	DNR, Army Corp. of Engineers	High	High	Flooding, Severe Weather
Work to identify roads prone to flooding and develop and implement projects to reduce flooding	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2012	Ongoing	Town of Alban, Town of Carson, Town of Linwood, Town of Eau Pleine, Town of Hull, and	Local EM, Portage County Emergency Management, and Planning and Zoning Department	High	High	Flooding, Severe Weather

				Town of Grant				
Develop a Community Wildfire Protection Plan (CWPP)	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire
Develop a Stormwater Management Plan and integrate with Community Plans, Zones,	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather

and Ordinances								
Identification of areas where residents can become landlocked and developing evacuation strategies	• Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Town of Grant	Emergency response agencies and Town of Grant EM	Medium	Medium	All Hazards
Identify and create additional education efforts that local municipality fire departments can use for education	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2012	Ongoing	Town of Grant, Dewey, and Alban	WI DNR - Whiting Ranger Station	Low	Medium	Wildfire
Continue to identify ground water contamination issues that result from high ground water/ flooding	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Town of Grant, Town of Hull	Town of Grant and Portage County Groundwater Specialist	High	High	Flooding, Severe Weather, Hazardous Materials

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Hull								

Develop a Community Wildfire Protection Plan (CWPP)	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire
Work to identify roads prone to flooding and develop and implement projects to reduce flooding	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2012	Ongoing	Town of Alban, Town of Carson, Town of Linwood, Town of Eau Pleine, Town of Hull, and	Local EM, Portage County Emergency Management, and Planning and Zoning Department	High	High	Flooding, Severe Weather

				Town of Grant				
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Continue to identify ground water contamination issues that result from high ground water/ flooding	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Town of Grant, Town of Hull	Town of Hull and Portage County Groundwater Specialist	High	High	Flooding, Severe Weather, Hazardous Materials
Identify and perform cost analysis of removing homes/structures within the floodplain and floodway	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2007	Ongoing	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point	Town of Hull EM lead and Portage County EM	Medium	Medium	Flooding, Severe Weather

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Lanark								
Research and implement ways to relieve flooding on roadways	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Lanark	Town of Lanark EM and Roads/Bridges Specialists	High	High	Flood, Severe Weather

Fix Culverts to reduce flooding	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	Town of Lanark	Town of Lanark EM and Roads/Bridges Specialists	High	Medium	Flood, Severe Weather
Develop a Community Wildfire Protection Plan (CWPP)	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire
Develop a Stormwater Management Plan and integrate	• NFIP/Floodplain • Comprehensive Plan	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager,	High	High	Flooding, Severe Weather

with Community Plans, Zones, and Ordinances	• City Codes and Ordinances/Planning and Zoning				and Municipality EM and Planner			
Work to identify locations for "living" snow fence	• Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Town of Lanark	Town of Lanark EM and Planner	Low	Low	Severe Winter Storm

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Linwood								
Raise Roadways to reduce flooding	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Linwood	Department of Transportation	Low	High	Dam Failure, Flooding
Work to identify roads prone to flooding and develop and implement projects to reduce flooding	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2012	Ongoing	Town of Alban, Town of Carson, Town of Linwood, Eau Pleine, Hull, Grant Specifically	Local EM, Portage County Emergency Management, and Planning and Zoning Department	High	High	Flooding, Severe Weather
Develop a Community Wildfire Protection Plan (CWPP)	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista,	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire

				Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting				
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Identify and perform cost analysis of removing homes/structures within the floodplain and floodway	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2007	Ongoing	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point	Town of Linwood EM lead and Portage County Em	Medium	Medium	Flooding, Severe Weather
Identification of areas where residents can	• Comprehensive Plan	2012	Ongoing	Town of Linwood	Emergency response agencies and Town of Linwood EM lead	Medium	Medium	All Hazards

become landlocked and developing evacuation strategies	• City Codes and Ordinances/Planning and Zoning							

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of New Hope								
Winter Weather Road Cleaning to reduce snow build up/debris to reduce roadway hazards	• Transportation/Roads/Bridge Plans • Comprehensive Plan	2019	New	Town of New Hope	Portage County	High	High	Extreme Cold, Severe Winter Storms, Transportation Accidents
Develop a Community Wildfire Protection Plan (CWPP)	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire

				of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting				
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Pine Grove								
Develop a listing of roads prone to flooding and design and implement flood reduction projects	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Pine Grove	Department of Transportation	Medium	High	Flooding, Severe Weather
Develop a Severe Weather Relocation	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP)	2019	New	Town of Pine Grove	Town of Pine Grove	High	High	Severe Weather

Plan for Elderly and Vulnerable Communities	• Emergency Operations Plan (EOP)							
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Plover								
Develop a listing of roads prone to flooding and design and implement flood reduction projects	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Plover	Department of Transportation	High	High	Dam Failure, Flooding, Severe Weather
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather

Bury overhead power and utility lines, where feasible, as a way to improve emergency response times, improve safety, and reduce power outages	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2007	Ongoing	Town of Plover	Utilities and Town of Plover EM	Low	Medium	Utility/Power Failure

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Sharon								
Develop a Community Wildfire Protection Plan (CWPP)	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire

				Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting				
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Town of Stockton								
Develop a Community Wildfire Protection Plan (CWPP)	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire

				Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting				
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Mitigate potential flooding in areas previously impacted by flooding through a culvert maintenance program	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	Town of Stockton	Town of Stockton EM and Public Works	Medium	Medium	Flooding, Severe Weather

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard

Village of Almond								
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Village of Amherst								
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Seek Funding to complete flood shadow information on dams	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Village of Amherst, Town of Dewey	Portage County Emergency Management and Local EM	Low	Medium	Flooding
Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2012	Ongoing	Village of Amherst	Amherst Fire District, Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst	High	High	All Hazards

Continued Compliance with NFIP	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, and City of Stevens Point	Local EM and Floodplain Specialist	High	High	Flooding, Severe Weather

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Village of Amherst Junction								
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Provide HAZMAT Awareness and Operations Level training to first responders	• Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2019	New	Village of Amherst Junction	Fire Department	High	High	Wildfire, Hazardous Materials, Transportation (Rail) Incident
Continue to review, update and practice the Greater Tomorrow Emergency	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP)	2012	Ongoing	Village of Amherst Junction	Amherst Fire District, Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst	High	High	All Hazards

Management District Plan	• Emergency Operations Plan (EOP)							

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Village of Junction City								
Designate an alternate building outside the village to be a shelter from the railroad.	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Village of Junction City	Village of Junction City	High	High	Transportation (Rail) Incidents
Procure and install Waste Water and Village Hall Generators	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2019	New	Village of Junction City and Town of Hull	Village of Junction City and Town of Hull	High	High	All Hazards
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Create a Village of Junction City Emergency Action Plan	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2012	Ongoing	Village of Junction City	Village's Public Protection Committee	Medium	High	All HAzards

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard

Village of Nelsonville								
Develop a Community Wildfire Protection Plan (CWPP)	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire
Develop a Stormwater Management Plan and integrate with Community Plans, Zones,	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather

and Ordinances								
Continued Compliance with NFIP	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point	Local EM and Floodplain Specialist	High	High	Flooding, Severe Weather
Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2012	Ongoing	Village of Nelsonville	Amherst Fire District, Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst	High	High	All Hazards

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Village of Park Ridge								
Reconstruct all village streets to include the addition of swales.	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	Village of Park Ridge	Village of Park Ridge	High	High	All Hazard
Develop a Stormwater Management Plan and integrate with Community Plans, Zones,	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather

and Ordinances								
Continued Compliance with NFIP	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point	Local EM and Floodplain Specialist	High	High	Flooding, Severe Weather

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Village of Plover								
Develop a Storm Water Management Plan for the municipality	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	Village of Plover and City of Stevens Point	Village of Plover	High	High	Flooding, Severe Weather
Upgrade the municipal sewer stations - upgrade the pumps, generators and electrical system	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	Village of Plover	Village of Plover	High	High	Flooding, Severe Weather, Severe Winter Weather, Utility Failure
Local Flood Mitigation Planning and Project Development and Implementation	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	Village of Plover	Village of Plover and Portage County	Medium	Medium	Flooding, Severe Weather

Develop a Community Wildfire Protection Plan (CWPP)	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather

Bury overhead power and utility lines, where feasible, as a way to improve emergency response times, improve safety, and reduce power outages	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2007	Ongoing	Town of Plover	Utilities and Town of Plover EM	Low	Medium	Utility/Power Failure

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Village of Rosholt								
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Seek Funding to complete flood shadow information on dams	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Village of Rosholt	Portage County Emergency Management and Local EM	Low	Medium	Flooding
Continued Compliance in NFIP	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of	Local EM and Floodplain Specialist	High	High	Flooding, Severe Weather

				Stevens Point and Portage County				

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
Village of Whiting								
Develop a Community Wildfire Protection Plan (CWPP)	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)	Medium	Medium	Wildfire

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Purchase a trailer higher capacity water pump and associated hoses to remove localized flooding in areas by pumping to areas with storm sewer and/or bodies of water	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	Village of Whiting	Village of Whiting	Medium	Medium	Flooding, Severe Weather
Purchase a trailer mounted generator to service sewage lift stations and/or other remote sites to avoid potential	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2019	New	Village of Whiting	Village of Whiting	High	High	Power/Utility Failure

basement backups and/or sanitary sewer overflows during a power outage								
Continued Compliance in NFIP	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point and Portage County	Local EM and Floodplain Specialist	High	High	Flooding, Severe Weather

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
City of Stevens Point								
Develop a Storm Water Management Plan for the municipality	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	City of Stevens Point and Plover	City of Stevens Point	High	High	Flooding, Severe Weather
Develop a Community Wildfire Protection Plan (CWPP)	• Transportation/Roads/Bridge Plans • NFIP/Floodplain • Comprehensive Plan	2019	New	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources	Medium	Medium	Wildfire

				Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting	and Planning and Zoning)			
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Bury overhead power and utility lines, where feasible, as a way to improve emergency response times, improve safety,	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2007	Ongoing	City of Stevens Point	City of Stevens Point EM and Utilities	Low	Medium	Utility/Power Failure

and reduce power outages								
Identify and perform cost analysis of removing homes/structures within the floodplain and floodway	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2007	Ongoing	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point	City of Stevens Point EM and Portage County EM	Medium	Medium	Flooding, Severe Weather
Continued Compliance in NFIP	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2012	Ongoing	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point and Portage County	Local EM and Floodplain Specialist	High	High	Flooding, Severe Weather
Maintain and keep warning sirens in working order	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2012	Ongoing	City of Stevens Point	City of Stevens Point EM	Low	Medium	All Hazards

Mitigation Project	Plan Integration	Year Initiated	2019 Status	Applicable Jurisdictions	Lead Agency/Organization	Priority	Benefit	Applicable Hazard
University of Wisconsin - Stevens Point								
Install New Camera System - Treehaven to enhance school security	• Safety Plan • Emergency Action Plan (EAP)	2019	New	University of Wisconsin Stevens Point	University of Wisconsin Stevens Point	Medium	Medium	All Hazards; Campus Safety

	• Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)							
Install New Camera Systems - CWE to enhance school security	• Safety Plan • Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2019	New	University of Wisconsin Stevens Point	University of Wisconsin Stevens Point	Medium	Medium	All Hazards; Campus Safety
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	All Portage County Municipalities	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Develop Emergency Information Webpage and Guidebooks	• Safety Plan • Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2019	New	University of Wisconsin Stevens Point	University of Wisconsin Stevens Point	Medium	High	All Hazards
Develop Continuity of Operations Plan	• Continuity of Operations Plan (COOP) • Emergency Action Plan (EAP) • Comprehensive Emergency	2019	New	University of Wisconsin Stevens Point	University of Wisconsin Stevens Point	Medium	High	All Hazards

	Management Plan (CEMP) • Emergency Operations Plan (EOP)							
Develop an Emergency Operations Plan	• Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	1990	On-going	University of Wisconsin Stevens Point	University of Wisconsin Stevens Point	Medium	High	All Hazards
Utilize StormReady Community to Notify Students of Hazards	• Safety Plan • Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2015	On-going	University of Wisconsin Stevens Point	University of Wisconsin Stevens Point	Medium	High	All Hazards
Install New Camera to enhance school security	• Safety Plan • Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2019	New	University of Wisconsin Stevens Point	University of Wisconsin Stevens Point	Medium	Medium	All Hazards; Campus Safety
Conduct a Drainage Study	• NFIP/Floodplain • Comprehensive Plan • City Codes and Ordinances/Planning and Zoning	2019	New	University of Wisconsin Steven Point	University of Wisconsin Stevens Point	Medium	Medium	Flooding, Severe Weather

Interoperable Campus Radio System	• Safety Plan • Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2019	New	University of Wisconsin Steven Point	University of Wisconsin Stevens Point	Medium	High	All Hazard
Install the thumb turn deadbolt locking mechanism on each door to enhance school security	• Safety Plan • Emergency Action Plan (EAP) • Comprehensive Emergency Management Plan (CEMP) • Emergency Operations Plan (EOP)	2019	New	University of Wisconsin Stevens point	University of Wisconsin Stevens Point	Medium	High	All Hazards; Campus Safety

NFIP Mitigation Actions

The following mitigation strategies and actions demonstrate Portage County and its participating jurisdictions' continued support and compliance with NFIP requirements, as appropriate. Only those actions that demonstrate specific support and compliance with the program are included.

Table: NFIP-Specific Mitigation Actions

Mitigation Project	Year Initiated	2019 Status	Lead/ Coordinating Organizations	Priority (High, Medium, Low)	Benefit Parameter (High, Medium, Low)	Applicable Hazard
Portage County						
Evaluate Roadways to Prevent Repeat Flooding	2019	New	County Emergency Management and Highway Department	Medium	Medium	Dam/Levee Failure, Flooding, Severe Weather, Major Transportation Accident
Work to identify local roads, by municipality, that are prone to flooding, culvert issues and other flooding effects that close local roads.	2011	Ongoing	County Highway Department, County Planning & Zoning, Municipal Public Works	Low	Medium	Flooding, Severe Weather
All Municipalities						
Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances	2019	New	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner	High	High	Flooding, Severe Weather
Town of Alban, Town of Carson, Town of Linwood, Eau Pleine, Hull, Grant						
Work to identify roads prone to flooding and develop and implement projects to reduce flooding	2012	Ongoing	Local EM, Portage County Emergency Management, and Planning and Zoning Department	High	High	Flooding, Severe Weather
Towns of Linwood, Carson, Eau Pleine, Hull, and City of Stevens Point						
Identify and perform cost analysis of removing homes/structures within the floodplain and floodway	2007	Ongoing	Town/City EM lead and Portage County EM	Medium	Medium	Flooding, Severe Weather
Village of Amherst, Town of Dewey						
Seek Funding to complete flood shadow information on dams	2012	Ongoing	Portage County Emergency	Low	Medium	Flooding

			Management and Local EM			
Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, and City of Stevens Point						
Continued Compliance with NFIP	2012	Ongoing	Local EM and Floodplain Specialist	High	High	Flooding, Severe Weather
City of Stevens Point and Village of Plover						
Develop a Storm Water Management Plan for the municipality	2019	New	City of Stevens Point and Plover	High	High	Flooding, Severe Weather
Town of Amherst						
Raise Town Roads to reduce flooding	2019	New	Department of Transportation	Medium	Medium	Flooding, Severe Weather
Town of Carson						
Installation of Road Rock to reduce roadway flooding	2019	New	Town of Carson	High	High	Flooding, Severe Weather
Town of Dewey						
Conduct Road Maintenance to reduce flooding	2019	New	Town of Dewey	High	High	Flooding, Severe Weather
Town of Grant						
Raise and repair the town roads that experience repeated flooding	2019	New	Town Board	High	High	Flooding, Severe Weather
Develop a Home Flooding Prevention Plan and Create Runoff Culverts	2019	New	DNR, Army Corp. of Engineers	High	High	Flooding, Severe Weather
Town of Lanark						
Research and implement ways to relieve flooding on roadways	2019	New	Town of Lanark EM and Roads/Bridges Specialists	High	High	Flooding, Severe Weather
Fix Culverts to reduce flooding	2019	New	Town of Lanark EM and Roads/Bridges Specialists	High	Medium	Flooding, Severe Weather
Town of Linwood						
Raise Roadways to reduce flooding	2019	New	Department of Transportation	Low	High	Flooding, Severe Weather
Town of Pine Grove						
Develop a listing of roads prone to flooding and design and implement flood reduction projects Flooding	2019	New	Department of Transportation	Medium	High	Flooding, Severe Weather
Town of Plover						
Develop a listing of roads prone to flooding	2019	New	Department of Transportation	High	High	Flooding, Severe Weather

and design and implement flood reduction projects Flooding						
Town of Stockton						
Mitigate potential flooding in areas previously impacted by flooding through a culvert maintenance program	2019	New	Town of Stockton EM and Public Works	Medium	Medium	Flooding, Severe Weather
Village of Plover						
Develop a Storm Water Management Plan for the municipality	2019	New	Village of Plover	High	High	Flooding, Severe Weather
Upgrade the municipal sewer stations - upgrade the pumps, generators and electrical system	2019	New	Village of Plover	High	High	Flooding, Severe Weather, Severe Winter Weather, Utility Failure
Local Flood Mitigation Planning and Project Development and Implementation	2019	New	Village of Plover and Portage County	Medium	Medium	Flooding, Severe Weather
Village of Whiting						
Purchase a trailer higher capacity water pump and associated hoses to remove localized flooding in areas by pumping to areas with storm sewer and/or bodies of water	2019	New	Village of Whiting	Medium	Medium	Flooding, Severe Weather
University of Wisconsin - Stevens Point						
Conduct a Drainage Study	2019	New	University of Wisconsin Stevens Point	Medium	Medium	Flooding, Severe Weather

Infrastructure Mitigation Actions

The following mitigation strategies and actions demonstrate Portage County and its participating jurisdictions' continued support of strengthening infrastructure systems.

Mitigation Project	Year Initiated	2019 Status	Lead/ Coordinating Organizations	Priority (High, Medium, Low)	Benefit Parameter (High, Medium, Low)	Applicable Hazard
Portage County						
Evaluate Roadways to Prevent Repeat Flooding	2019	New	County Emergency Management and Highway Department	Medium	Medium	Dam/Levee Failure, Flooding, Severe Thunderstorms, Major Transportation Accident
Identify ways to reduce power outages throughout the County.	2012	Ongoing	County Emergency Management, Municipalities, External Partners	Low	High	All Hazards
Promote backup power systems for critical infrastructure facilities	2007	Ongoing	County Emergency Management, Municipalities, External Partners	Low	High	All Hazards
Work to identify local roads, by municipality, that are prone to flooding, culvert issues and other flooding effects that close local roads.	2011	Ongoing	County Highway Department, County Planning & Zoning, Municipal Public Works	Low	Medium	Flooding, Severe Weather
Identify a more effective way to communicate road closures to all areas of Portage County. Especially when power outages accompany these closures.	2012	Ongoing	County Highway Department, Sheriff's Office Dispatch, Municipalities	Low	Low	Utility (Power) Failure
Continue County Hazmat Team	2012	Ongoing	LEPC/County Emergency Management	High	Medium	Hazardous Materials, Major Transportation (Railroad) Incident

Town of Alban, Carson, Linwood, Eau Pleine, Hull, and Grant						
Work to identify roads prone to flooding and develop and implement projects to reduce flooding	2012	Ongoing	Local EM, Portage County Emergency Management, and Planning and Zoning Department	High	High	Flooding, Severe Weather
Town of Amherst						
Raise Town Roads to reduce flooding	2019	New	Department of Transportation	Medium	Medium	Flooding, Severe Weather
Town of Carson						
Installation of Road Rock to reduce roadway flooding	2019	New	Town of Carson	High	High	Flooding, Severe Weather
Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point						
Identify and perform cost analysis of removing homes/structures within the floodplain and floodway	2007	Ongoing	Town/City EM lead and Portage County EM	Medium	Medium	Flooding, Severe Weather
Town of Dewey						
Conduct Road Maintenance to reduce flooding	2019	New	Town of Dewey Board	High	High	Flooding, Severe Weather
Town of Grant						
Raise and repair the town roads that experience repeated flooding	2019	New	Town Board	High	High	Flooding, Severe Weather
Develop a Home Flooding Prevention Plan and Create Runoff Culverts	2019	New	DNR, Army Corp. of Engineers	High	High	Flooding, Severe Weather
Town of Lanark						
Research and implement ways to relieve flooding on roadways	2019	New	Town of Lanark EM and Roads/Bridges Specialists	High	High	Flooding, Severe Weather
Fix Culverts to reduce flooding	2019	New	Town of Lanark EM and Roads/Bridges Specialists	High	Medium	Flooding, Severe Weather
Work to identify locations for "living" snow fence	2012	Ongoing	Town of Lanark EM and Planner	Low	Low	Severe Winter Storm
Town of Linwood						
Raise Roadways to reduce flooding	2019	New	Department of Transportation	Low	High	Dam Failure, Flooding
Town of New Hope						
Winter Weather Road Cleaning to reduce snow	2019	New	Portage County	High	High	Extreme Cold, Severe Winter Storms,

build up/debris to reduce roadway hazards						Transportation Accidents
Town of Pine Grove						
Develop a listing of roads prone to flooding and design and implement flood reduction projects	2019	New	Department of Transportation	Medium	High	Flooding, Severe Weather
Town of Plover						
Develop a listing of roads prone to flooding and design and implement flood reduction projects	2019	New	Department of Transportation	High	High	Dam Failure, Flooding, Severe Weather
Town of Stockton						
Mitigate potential flooding in areas previously impacted by flooding through a culvert maintenance program	2019	New	Town of Stockton EM and Public Work	Medium	Medium	Flooding, Severe Weather
Village of Park Ridge						
Reconstruct all village streets to include the addition of swales.	2019	New	Village of Park Ridge	High	High	All-Hazards
Village of Plover						
Upgrade the municipal sewer stations - upgrade the pumps, generators and electrical system	2019	New	Village of Plover	High	High	Flooding, Severe Weather, Severe Winter Weather, Utility Failure
Bury overhead power and utility lines, where feasible, as a way to improve emergency response times, improve safety, and reduce power outages	2007	Ongoing	Utilities and Town of Plover EM	Low	Medium	Utility/Power Failure
Village of Whiting						
Purchase a trailer higher capacity water pump and associated hoses to remove localized flooding in areas by pumping to areas with storm sewer and/or bodies of water	2019	New	Village of Whiting	Medium	Medium	Flooding, Severe Weather
Purchase a trailer mounted generator to service sewage lift stations and/or other remote sites to avoid potential basement backups and/or sanitary sewer overflows during a power outage	2019	New	Village of Whiting	High	High	Power/Utility Failure
City of Stevens Point						

Bury overhead power and utility lines, where feasible, as a way to improve emergency response times, improve safety, and reduce power outages	2007	Ongoing	City of Stevens Point EM and Utilities	Low	Medium	Utility/Power Failure
University of Wisconsin Stevens Point						
Conduct a Drainage Study	2019	New	University of Wisconsin Stevens Point	Medium	Medium	Flooding, Severe Weather

Chapter 6 - Plan Maintenance, Implementation, and Adoption Process

This chapter describes the process for approval, evaluation, and maintenance of the Portage County HMP Update. The HMP should be regarded as a "living" document, subject to change as conditions, information, and technology change over time. Indeed, the *Disaster Mitigation Act of 2000* requires that this plan be updated at least every **five** years.

Plan Approval Process

Before the formal adoption of the Portage County HMP Update, a draft of the Plan was submitted to each municipality in Portage County for review and comment. The Plan was also posted on the County Website at November 15, 2019. Notifications to the public were made for review and comment.

The plan was then formally submitted to the Wisconsin Emergency Management Department for review and comment on October 21, 2019. On November 4, 2019, the County received comments from the State. Wisconsin Emergency Management submitted the plan to appropriate federal agencies on November 5, 2019 to ensure compliance with the Disaster Mitigation Act of 2000 requirements. Portage County received formal "**Approval Pending Adoption**" (APA) on November 8, 2019.

The plan was then sent out to each municipality in Portage County for adoption by resolution. See Appendix D for each municipality's resolution to adopt the Portage County HMP Update.

This adopted plan serves as a guide for Portage County and local units of government to use to formulate programs and policies to aid in reducing losses from natural and technological hazards before they occur. Intergovernmental cooperation is stressed to maximize efficiency in these programs and policies.

Formal Review Process

Throughout the past five-year planning cycle, Portage County Emergency Management Division and the steering committee (Hazard Mitigation Work Group and/or Public Safety/Emergency Management Committee) continued to monitor, evaluate, and update the HMP Update. The monitoring, evaluating, and updating process will continue throughout the next five years.

The HMP will be reviewed on an annual basis by the core planning team, specifically led by the Portage County Emergency Management Coordinator, and reviewed and revised every five years by the steering committee to determine the effectiveness of programs and to reflect changes that may affect mitigation priorities. Portage County Emergency Management Division will be responsible for contacting the steering committee members and organizing the review. Committee members will be responsible for monitoring and evaluating the progress of the mitigation strategies in the HMP Update. The steering committee will review the goals and action items to determine their relevance to changing situations in the County, as well as changes in Federal policy, and to ensure they are addressing current and expected conditions. The steering committee will also review the risk assessment portion of the HMP to determine if this information should be updated or modified, given any newly available data. The organizations responsible for the various action items will report on the status of the projects, the success of various implementation processes, difficulties encountered, the success of coordination efforts, and which strategies should be revised or removed.

Portage County Emergency Management Division will be responsible for ensuring the updating of the Plan. Portage County Emergency Management Division and the steering committee will also notify all holders of the Plan and affected stakeholders when changes have been made. The updated HMP will be submitted to the WEM and to the FEMA for review and approval.

Monitoring, Evaluating, and Updating the Plan

In order to ensure the HMP continues to provide an appropriate path for risk reduction throughout the County, it is necessary to evaluate and update it regularly. The core planning team will be responsible for monitoring the status of the Plan and gathering appropriate parties to report the status of mitigation actions. The Steering Committee will convene on an annual basis to determine the progress of the identified mitigation actions. The Steering Committee will also be an active participant in the next plan update. As the HMP Updates matures, new stakeholders will be identified and encouraged to join the existing Steering Committee.

Portage County Emergency Management Division is responsible for contacting Steering Committee members and organizing the annual meeting. The Steering Committee's responsibilities include:

- Members of the Steering Committee will be readily available to engage via meetings or e-mail correspondence between annual meetings. If the need for a special meeting (due to new developments or a declared disaster) occurs in the County, the Steering Committee will meet to update mitigation strategies. Depending on grant opportunities and fiscal resources, mitigation projects may be implemented independently by individual communities or through local partnerships.
    - Reassess the HMP considering any major hazard event. The committee will convene within 90 days of any major event to review all applicable data and to consider the risk assessment, plan goals, objectives, and action items given the impact of the hazard event.
- Annually reviewing each goal and objective to determine its relevance and appropriateness.
- Monitor and evaluate the mitigation strategies in this Plan to ensure the document reflects current hazard analyses, development trends, code changes, and risk analyses and perceptions.
- Ensure the appropriate implementation of annual status reports and regular maintenance of the Plan. The Steering Committee will hear progress reports from the parties responsible for the various implementation actions to monitor progress.
- Create future action plans and mitigation strategies. These should be carefully assessed and prioritized using FEMA's benefit-cost analysis (BCA) methodology.
- Ensure the public is invited to comment and be involved in HMP Updates.
- Ensure that the County complies with all applicable Federal statutes and regulations during the periods for which it receives grant funding, in compliance with 44 CFR.
- Review the HMP connection with other plans, projects, developments, and other significant initiatives.
    - Significant updates or modifications to the Plan during the five-year planning process will require a public notice and a meeting prior to submitting revisions to the individual jurisdictions for approval.
- Coordinate with appropriate municipalities and authorities to incorporate regional initiatives that transcend the boundaries of the County.
- Update the plan every five years and submit for FEMA approval.
- Amend the plan whenever necessary to reflect changes in State or Federal laws and statutes required in 44 CFR.

The Five-Year Action Plan

This section outlines the implementation agenda that the Steering Committee should follow five years following the adoption of this HMP Update, and then every five years thereafter. The Steering Committee, led by Portage County Emergency Management Division, is responsible for ensuring the Multi-Hazard Mitigation Plan is updated every five years.

The Steering Committee will consider the following an action plan for the first 5-year planning cycle. It should be noted that the schedule below can be modified as necessary and does not include any meetings and/or activities that would be necessary following a disaster event (which would include reconvening the Steering Committee within 90 days of a disaster or emergency to determine what mitigation projects should be prioritized during the community recovery). If an emergency meeting of the Steering Committee occurs, this proposed schedule may be altered to fit any new needs.

Year 0:

- 2019: Update the HMP, including a series of Steering Committee meetings & public meetings. Submit 2019 HMP for WEM and FEMA approval.
- September 2019 – December 2019: Work on mitigation actions. The core planning team will stay in contact with lead departments/municipalities to keep tabs on mitigation project status and progress.
- Participating jurisdictions will formally adopt the 2019 Multi-Hazard Mitigation Plan upon State and FEMA approval.

Year 1:

- January 2020 - February 2020: Prepare for and promote the first annual Plan Review and Public meetings. County departments and participating jurisdictions will provide a status update for each mitigation action/project.
- March 2020: Reconvene Steering Committee for the first annual Mitigation Steering Committee meeting. Introduce the concept of mitigation plan integration with other planning documents — host the first annual public meeting.
- April 2020 – December 2020: Work on mitigation actions. The core planning team will stay in contact with lead departments/municipalities to keep tabs on mitigation project status and progress. Encourage plan integration efforts.

Year 2:

- January 2021 - February 2021: Prepare for and promote the second annual Plan Review and Public meetings. County departments and participating jurisdictions will provide a status update for each mitigation action/project.
- March 2021: Reconvene Steering Committee for the second annual Mitigation Steering Committee meeting. Review plan integration efforts. Host the second annual public meeting.
- April 2021 – December 2021: Work on mitigation actions. The core planning team will stay in contact with lead departments/municipalities to keep tabs on mitigation project status and progress. Encourage plan integration efforts.

Year 3:

- January 2022 - February 2022: Prepare for and promote the third annual Plan Review and Public meetings. County departments and participating jurisdictions will provide a status update for each mitigation action/project.
- March 2022: Reconvene Steering Committee for the third annual Mitigation Steering Committee meeting. Review plan integration efforts. Host the second annual public meeting.
- April 2022 – December 2022: Work on mitigation actions. The core planning team will stay in contact with lead departments/municipalities to keep tabs on mitigation project status and progress. Encourage plan integration efforts.
- Portage County Emergency Management Division will ask Steering Committee members to volunteer for the Contractor Sub-committee to begin the process of bringing in a contractor to make plan updates for 2023 completion.

Year 4:

- January 2023 - February 2023: Prepare for and promote the fourth annual Plan Review and Public meetings. County departments and participating jurisdictions will provide a status update for each mitigation action/project.
- March 2023: Reconvene Steering Committee for the fourth annual Mitigation Steering Committee meeting. Review plan integration efforts. Host fourth annual public meeting.
- April 2023 – December 2023: Work on mitigation actions. The core planning team will stay in contact with lead departments/municipalities to keep tabs on mitigation project status and progress. Encourage plan integration efforts.

Year 5:

- January 2024 - December 2024: Update 2019 Multi-Hazard Mitigation Plan, including a series of Mitigation Steering Committee meetings & Public meetings.
- 2024: Submit 2024 Multi-Hazard Mitigation Plan for State and FEMA approval. Repeat.

Annual Mitigation Steering Committee Meetings

During each annual Mitigation Steering Committee meeting, the Steering Committee will be responsible for a brief evaluation of the 2019 Plan and to review the progress on mitigation actions.

Plan Evaluation

To evaluate the plan, the mitigation Steering Committee should answer the following questions:

- Are the goals and objectives still relevant?
- Is the risk assessment still appropriate, or has the nature of the hazard and/or vulnerability changed over time?
- Are current resources appropriate for implementing the HMP Update?
- Have lead agencies participated as originally proposed?
- Has the public been adequately involved in the process? Are their comments being heard?
- Have departments been integrating mitigation into their planning documents?

If the answer to each of the above questions is "yes," the plan evaluation is complete. If any questions are answered with a "no," the identified gap must be addressed.

Review of Mitigation Actions

Once the plan evaluation is complete, the Steering Committee must review the status of the mitigation actions. To do so, the mitigation Steering Committee should answer the following questions:

- Have the Mitigation Actions been implemented as planned?
- Have the outcomes been adequate?
- What problems have occurred in the implementation process?

Each mitigation action/strategy includes the following table to track annual updates and progress for each mitigation action. Lead agencies/organizations will be tasked to provide an annual status update for each action.

Table: Mitigation Action and Project Maintenance Form

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New, Ongoing, Revised, Complete	
2020		
2021		
2022		
2023		

Meeting Documentation

Each annual Mitigation Steering Committee meeting must be documented, including the plan evaluation and review of Mitigation Actions. Mitigation Actions have been formatted to facilitate the annual review process.

Continued Public Involvement

The Portage County Emergency Management Division is dedicated to directly involving the public in the review and updates of the Plan. The committee is responsible for the review and update of the Plan. The public will also provide input into Plan revisions and updates. Appropriate County departments and municipalities will keep copies of the Plan. After formal adoption by the County Board and municipalities, the HMP Update will be posted on Portage County's web site under the Emergency Management Division, and hard copies will be made available at libraries and municipal buildings throughout the County.

The Committee will determine when it is necessary to hold public meetings. The meetings will provide a forum where the public can express concerns, opinions, or new alternatives that can then be included in the HMP Update. Portage County Emergency Management Division will be responsible for using County resources to publicize the public meetings and maintain public involvement.

To further facilitate continued public involvement in the planning process, the Portage County Emergency Management Division will ensure that:

- Once adopted, a digital copy of this plan will be maintained in each jurisdiction and the Portage County Emergency Management Division. The County will keep a hard copy and digital copy of the Plan at the Portage County Emergency Management Division building for review and comment by the public.
- The County will conduct outreach after a disaster incident to remind members of the importance of mitigation and to solicit mitigation ideas to be included in the Plan.
- Education efforts for hazard mitigation will be ongoing through the Portage County Emergency Management Division. The public will be notified of periodic planning meetings through notices in the local newspaper or press releases. Portage County Emergency Management Division Public Education campaign will include mitigation actions for residents to undertake, such as raising appliances in the lower level of homes and buying the proper insurance
- Public meetings will be held immediately following Steering Committee meetings annually to allow the public to receive information on plan updates and offer input on plan improvements.
- As the HMP is updated annually, a summary of the changes will be added to Portage County Emergency Management Division's public-facing website with an updated version of the plan (to include 2020 action updates, etc.) for the public to monitor progress on specific actions and remain engaged.
- Comments from the public on the Plan will be received by Portage County Emergency Management Division and forwarded to the committee for discussion, as appropriate and as needed.

Implementation and Integration through Existing Plans and Programs

Recommendations from this plan should be incorporated into response plans, comprehensive plans, and other appropriate plans as agencies and organizations review and update these documents. This will be a new effort from our last approved Plan. It was identified to include recommendations into such plans, but this has not been done to date. It is still recommended to be done in this upcoming five-year period.

Hazard mitigation practices must be incorporated into existing plans, projects, and programs. Therefore, the involvement of all departments, private non-profits, private industry, and appropriate jurisdictions is necessary to find mitigation opportunities within existing or planned projects and programs. To execute this, the Steering Committee will assist and coordinate resources for the mitigation actions and provide strategic outreach to implement mitigation actions that meet the goals and objectives identified in this plan.

The results of the HMP Update will be incorporated into ongoing planning efforts throughout the County. Portage County and its incorporated jurisdictions will update zoning plans and related ordinances, as necessary, and as part of regularly scheduled updates. Each community will be responsible for updating and integrating elements of the HMP Update into the community's own respective community plans and ordinances.

Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies

Portage County Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Email Address	Phone	Title	Organization
Weinert	Bob	weinertr@co.portage.wi.us	(715) 346-1437	Portage County Emergency Management Coordinator	Portage County Emergency Management Division
Williams	James	williaja@co.portage.wi.us	(715) 346-1397	Deputy Emergency Management Coordinator	Portage County Emergency Management Division

County-Specific (County-led) Mitigation Strategies and Actions

The following mitigation strategies in this section represent those mitigation initiatives that will be led by the County. In some cases, while the County is leading the effort, other jurisdictions may still be listed as participating entities.

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions (County-Specific)

Evaluate Roadways to Prevent Repeat Flooding

Mitigation Action	**Evaluate Roadways to Prevent Repeat Flooding**
Year Initiated	2019
Applicable Jurisdiction	Portage County and Applicable Jurisdictions
Lead Agency/Organization	Portage County EM and Highway Department
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 3 - Property and Environment
Potential Funding Source	Grants - State and Federal, HMA, Public Assistance
Estimated Cost	Project Dependent - likely High
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Identify roadways in Portage County that have repeatedly flooded. Identify culverts and bridges that are inadequate in size. Determine potential mitigation actions that can reduce or eliminate flood events. Repair roads already identified as having repeated flooding events including but not limited to Business Route 51 north of Patch Street and Michigan St. north of Patch St. Attempt to secure funding to complete mitigation actions. Increase safety and security within Portage County as well as decrease repeated costs associated with road closures and washouts of roadways.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
X	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire

	Hazardous Materials Release
X	Major Transportation Accident/Incident
	Utility Failure

Storm Shelters

Mitigation Action	Establish Locations and Develop Storm Shelters
Year Initiated	2019
Applicable Jurisdiction	Portage County and Applicable Jurisdictions
Lead Agency/Organization	Portage County Health & Human Services & EM
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety
Potential Funding Source	Grant- state and federal, HMA, Public Assistance
Estimated Cost	Project Dependent likely High
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Identify locations in Portage County that could benefit from establishing a severe weather shelter. Attempt to secure funding to provide storm shelters/storm rooms. Increase the safety of residents in the event of severe weather by providing storm shelters.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
X	Extreme Cold
X	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
X	Severe Winter Weather/Heavy Snowfall/Ice Storm
X	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
X	Utility Failure

Identify Hazardous Material Dangers in the County

Mitigation Action	Identify and create a listing of Hazardous Material Dangers in the County
Year Initiated	2019
Applicable Jurisdiction	Portage County and Applicable Jurisdictions
Lead Agency/Organization	Portage County EM
Supporting Agencies/Organizations	Local Emergency Planning Committee
Applicable Goal	1 - Health and Safety
Potential Funding Source	Grants
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Obtain funding to conduct a commodity study identifying Hazardous Materials currently in the County as well as those transported through the County. Increase the understanding of Hazardous Materials currently located in Portage County as well as those transported through the County.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
X	Hazardous Materials Release
X	Major Transportation Accident/Incident
	Utility Failure

Visual Alerting System for the Roadways

Mitigation Action	Install a visual Alert System for Roadways
Year Initiated	2019
Applicable Jurisdiction	Portage County and Applicable Jurisdictions
Lead Agency/Organization	Portage County Sheriff's Office
Supporting Agencies/Organizations	Portage County Highway Department and EM
Applicable Goal	1 - Health and Safety 2 - Public Education
Potential Funding Source	Grant- EMPG, Municipal Budget
Estimated Cost	Medium
Benefits (loss avoided)	Increased safety for residents
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Determine the benefits of obtaining a visual warning system that could relay safety and other important information to residents and travelers on roadways throughout the County. Obtain funding to procure the traffic messaging boards. Increase roadway safety as well as resident situational awareness by obtaining programmable signs to display safety alerts along major thoroughfares.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions (County-Specific)

The following are ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.

Public Education and Awareness

Mitigation Action	Increase Public Education and Awareness for Preparing for All Hazards through Continual Community Outreach Campaign
Year Initiated	2007
Applicable Jurisdiction	Portage County and All Participating Jurisdictions
Lead Agency/Organization	Portage County Emergency Management
Supporting Agencies/Organizations	Primary Emergency Response Agencies, Municipalities, Media Resources
Applicable Goal	2- Public Education
Potential Funding Source	Grant - HMA, County and Municipal Budgets
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	**Ongoing**
Actual Completion Date	**Ongoing with no completion date**
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Mutual Aid / Interagency Agreements

Mitigation Action	Sustain and Build Mutual Aid / Interagency Agreements to Ensure Resources are Readily Available for Emergencies
Year Initiated	
Applicable Jurisdiction	Portage County and All Participating Jurisdictions
Lead Agency/Organization	Emergency Medical Service, Law Enforcement, Fire, Dept. of Public Works
Supporting Agencies/Organizations	Dept. of Public Works, Emergency Medical Service, Fire, Law Enforcement, Municipalities
Applicable Goal	5- Intergovernmental Relationships
Potential Funding Source	No funding needed
Estimated Cost	Low- less than $10,000
Benefits (loss avoided)	Medium
Projected Completion Date	**Ongoing**
Actual Completion Date	**Ongoing (no completion date)**
Priority	Low

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Education and Training of County and municipal staff

Mitigation Action	Provide At Least Yearly Education and Training for County and Municipal Staff on roles and responsibilities related to emergency management
Year Initiated	2007
Applicable Jurisdiction	Portage County and All Participating Jurisdictions
Lead Agency/Organization	Emergency Management
Supporting Agencies/Organizations	Corresponding County Departments and Municipalities
Applicable Goal	5- Intergovernmental Relationships
Potential Funding Source	EMPG
Estimated Cost	Low
Benefits (loss avoided)	Low
Projected Completion Date	**Ongoing**
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Training should be updated yearly to reflect evolving roles and responsibilities. Staff must clearly understand their role in an emergency. Incident Command, along with the County CEMP and EOP, should be components of the training.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Recommended that Goals and mitigation strategies be incorporated as part of local and County comprehensive planning efforts where appropriate

Mitigation Action	Recommended that Goals and mitigation strategies be incorporated as part of local and County comprehensive planning efforts where appropriate
Year Initiated	2012
Applicable Jurisdiction	Portage County and All Participating Jurisdictions
Lead Agency/Organization	Portage County Planning and Zoning
Supporting Agencies/Organizations	All Municipalities
Applicable Goal	4-Plan Integration
Potential Funding Source	No Funding Needed
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	**Ongoing**
Actual Completion Date	
Priority	Low

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Continue to promote information campaigns about severe weather

Mitigation Action	Continue to promote information campaigns about severe weather
Year Initiated	2007
Applicable Jurisdiction	Portage County and All Participating Jurisdictions
Lead Agency/Organization	Portage County Emergency Management All Public Safety
Supporting Agencies/Organizations	All Municipalities
Applicable Goal	
Potential Funding Source	
Estimated Cost	
Benefits (loss avoided)	
Projected Completion Date	**Ongoing**
Actual Completion Date	
Priority	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Identify ways to reduce power outages throughout the County

Mitigation Action	Identify ways to reduce power outages throughout the County
Year Initiated	2012
Applicable Jurisdiction	Portage County and All Participating Jurisdictions
Lead Agency/Organization	Utilities
Supporting Agencies/Organizations	Local Municipalities
Applicable Goal	1- Health and Safety
Potential Funding Source	Utilize existing budget - implementation of identified projects will require further funding
Estimated Cost	Low- less than $10,000
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	Long Term
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Identify and pursue funding opportunities

Mitigation Action	Identify and pursue funding opportunities to develop and implement local and county mitigation activities
Year Initiated	2012
Applicable Jurisdiction	Portage County and All Participating Jurisdictions
Lead Agency/Organization	Individual municipality
Supporting Agencies/Organizations	Portage County Emergency Management, and Public Safety
Applicable Goal	4- Plan Integration
Potential Funding Source	Utilize existing budget (pursue HMA, Public Assistance grants for the projects)
Estimated Cost	Low- less than $10,000
Benefits (loss avoided)	Low
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Continue to provide periodic emergency response training exercises

Mitigation Action	Continue to provide periodic emergency response training exercises
Year Initiated	2007 (Revised in 2012)
Applicable Jurisdiction	Portage County and All Participating Jurisdictions
Lead Agency/Organization	Portage County Emergency Management and Public Safety
Supporting Agencies/Organizations	Individual Municipalities
Applicable Goal	5- Intergovernmental Relationships
Potential Funding Source	EMPG
Estimated Cost	Medium – from $10,000 to $100,000
Benefits (loss avoided)	High
Projected Completion Date	Ongoing (no completion date)
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Identify shelters from extreme temperatures

Mitigation Action	Work with local municipalities to identify and designate structures as shelters from extreme temperatures
Year Initiated	2007
Applicable Jurisdiction	All municipalities
Lead Agency/Organization	County Human Services Department, Municipalities, Aging and Disability Resource Center, County Public Health
Supporting Agencies/Organizations	Municipalities
Applicable Goal	1 - Health and Safety 3 -Property and Environment 5 - Intergovernmental Relationships
Potential Funding Source	County and Municipal Budgets
Estimated Cost	Low- less than $10,000
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
X	Extreme Cold
X	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Continue to host severe weather spotter classes

Mitigation Action	Continue to host severe weather spotter classes and maintain network of spotters throughout the County
Year Initiated	2007
Applicable Jurisdiction	Portage County and All Participating Jurisdictions
Lead Agency/Organization	Emergency Management & National Weather Service
Supporting Agencies/Organizations	All citizens and emergency response agencies
Applicable Goal	2- Public Education
Potential Funding Source	EMPG
Estimated Cost	Low- less than $10,000
Benefits (loss avoided)	High
Projected Completion Date	Ongoing (no completion date)
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Maintain network of spotters throughout the County

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Encourage all areas to participate or prepare own Emergency Action Plan

Mitigation Action	Encourage all areas to participate or prepare own Emergency Action Plan
Year Initiated	2012
Applicable Jurisdiction	Portage County and All Participating Jurisdictions
Lead Agency/Organization	County Parks Department, Planning and Zoning, County Emergency Management, UWSP, Municipalities
Supporting Agencies/Organizations	Local Fire/Police Departments
Applicable Goal	4- Plan Integration 5- Intergovernmental Relationships
Potential Funding Source	EMPG, HMA, County and Municipal Budgets
Estimated Cost	Low- less than $10,000
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Increase available public education about severe storms by evaluating current severe storm weather safety information and update as needed

Mitigation Action	Increase available public education about severe storms by evaluating current severe storm weather safety information and update as needed
Year Initiated	2007
Applicable Jurisdiction	All municipalities
Lead Agency/Organization	Emergency Management and Local Municipality
Supporting Agencies/Organizations	Primary Emergency Response Agencies, Municipalities, Media Resources
Applicable Goal	2 - Public Education
Potential Funding Source	EMPG, HMA
Estimated Cost	Medium – from $10,000 to $100,000
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing (no completion date)
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
X	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Expand signage at public places such as; parks campgrounds, beaches, sport facilities etc. to direct public in case of an emergency.

Mitigation Action	Evaluate signage at public places such as parks campgrounds, beaches, sport facilities etc. to direct public in case of an emergency and make improvements/ recommendations
Year Initiated	2007 (Revised in 2019)
Applicable Jurisdiction	All municipalities
Lead Agency/Organization	Emergency Management
Supporting Agencies/Organizations	Emergency Response Agencies, Municipalities
Applicable Goal	1 - Health and Safety 2 - Public Education
Potential Funding Source	EMPG, HMA, County and Municipal Budgets
Estimated Cost	Low- less than $10,000
Benefits (loss avoided)	High
Projected Completion Date	Short Term
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Promote backup power systems for critical infrastructure facilities

Mitigation Action	Promote backup power systems for critical infrastructure facilities
Year Initiated	2007
Applicable Jurisdiction	All municipalities
Lead Agency/Organization	County Emergency Management, Municipalities, External Partners
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety
Potential Funding Source	HMA
Estimated Cost	Medium – from $10,000 to $100,000
Benefits (loss avoided)	High
Projected Completion Date	Long Term
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Prepare a strategy to prioritize road improvement for public roadways that are susceptible to flooding

Mitigation Action	Work to identify local roads, by municipality, that are prone to flooding, culvert issues and other flooding effects that close local roads.
Year Initiated	2011
Applicable Jurisdiction	All municipalities
Lead Agency/Organization	County Highway Department, County Planning & Zoning, Municipal Public Works
Supporting Agencies/Organizations	Local municipalities
Applicable Goal	1 - Health and Safety 3 -Property and Environment
Potential Funding Source	County and Municipal Budgets
Estimated Cost	Low- less than $10,000
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Identify an effective way to communicate road closures

Mitigation Action	Identify a more effective way to communicate road closures to all areas of Portage County. Especially when power outages accompany these closures.
Year Initiated	2012
Applicable Jurisdiction	All municipalities
Lead Agency/Organization	Local Municipality and Portage County Emergency Management
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety
Potential Funding Source	County and Municipal Budgets
Estimated Cost	Low- less than $10,000
Benefits (loss avoided)	Low
Projected Completion Date	Long Term
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
X	Utility Failure

Coordinate severe weather alerts

Mitigation Action	Coordinate severe weather alerts with additional local agencies and elderly care facilities. Coordinate better linkage between regular business hours and weekends to disseminate severe weather information.
Year Initiated	2007
Applicable Jurisdiction	All municipalities
Lead Agency/Organization	EM,HHS
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety 3 -Property and Environment 5 - Intergovernmental Relationships
Potential Funding Source	EMPG, HMA, County and Municipal Budgets
Estimated Cost	Medium – from $10,000 to $100,000
Benefits (loss avoided)	High
Projected Completion Date	Long Term
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Create additional severe weather shelter

Mitigation Action	Create additional severe weather shelter locations around higher risk areas such as: manufactured home parks and campgrounds
Year Initiated	2007
Applicable Jurisdiction	Portage County and All Participating Jurisdictions
Lead Agency/Organization	Individual Municipality
Supporting Agencies/Organizations	Owners of Campgrounds and Manufactured Home Parks
Applicable Goal	1 - Health and Safety
Potential Funding Source	HMA, Public Assistance grants, other State and federal grants
Estimated Cost	High - Greater than $100,000
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Off-site plan updates

Mitigation Action	Off-site plan updates
Year Initiated	2012
Applicable Jurisdiction	All facilities
Lead Agency/Organization	LEPC/County Emergency Management
Supporting Agencies/Organizations	Facilities
Applicable Goal	1 - Health and Safety 4- Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	EPCRA
Estimated Cost	Low- less than $10,000
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
X	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Continue County Hazmat team

Mitigation Action	Continue and grow the County Hazmat team
Year Initiated	2012
Applicable Jurisdiction	Portage County
Lead Agency/Organization	LEPC/County Emergency Management
Supporting Agencies/Organizations	Participating Public Safety Organizations
Applicable Goal	5- Intergovernmental Relationships
Potential Funding Source	Grant - EMPG, Municipal Budget
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	Ongoing (with no completion date)
Priority	Low

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Completed Mitigation Actions (County-Specific)

Completed/Revised Mitigation Actions Table - These actions were previously identified, and during the 2019 update, these actions were identified as completed with a few being revised and highlighted under new mitigation actions.

Mitigation Project	Year	Completed	Notes
Emergency Notification Systems (NOAA, Sirens, Park Warning Systems). Other forms of notifications systems to be identified.	2007	Completed/Revised	No longer in need of new notification systems. New Mitigation action focuses on a new alert system for the roadways: Install a visual Alert System for Roadways
Continue to review and update communication systems	2007	Completed/Revised	No longer need new communication systems. If new systems are needed, Portage EM will work with IT and Communication Department. New Mitigation action focuses on a new alert system for the roadways: Install a visual Alert System for Roadways
Work to find ways to have more consistent communication devices for local fire departments.	2012	Completed	Fire Departments in the County now have mutual aid and joint agreements and work with Portage EM during emergency events.
Develop and Maintain a Geographic Information database of hazard events that have occurred in the County, including location, event conditions, and resulting damage, and costs. (Revised in 2012)	2007	Completed	Portage now has its own GIS department
Explore alternative to increase public warning options for all hazards	2012	Completed/Revised	The County is content with current public warning options. New Mitigation action focuses on a new alert system for the roadways: Install a visual Alert System for Roadways
Continue to ensure that new development meets applicable development standards: zoning, subdivision, building codes, etc. (Revised in 2012)	2007	Completed	Coding and zoning will still be enforced by the Planning and Zoning Department but the County deemed this as not an actionable mitigation action.

Continue to review current coverage of outdoor sirens and prepare a schedule for new locations as development happens (Revised in 2012)	2007	Completed/Revised	The County finds the current location of sirens to be sufficient and instead works to maintain the existing sirens. New Mitigation action focuses on a new alert system for the roadways: Install a visual Alert System for Roadways
Work with local municipalities to maintain and keep sirens in working order.	2012	Completed	This County has worked with municipalities and the municipalities now maintain their sirens.
Investigate a countywide (Towns, Villages, and City) standards for manufactured homes (Revised in 2012)	2007	Completed	Codes have passed.
Designate signage at public places to direct people to shelters.	2007	Completed/Revised	Signs have been posted. See action: Evaluate signage at public places such as parks campgrounds, beaches, sport facilities etc. to direct public in case of an emergency and make improvements/ recommendations
Adhere to standards for ice and snow load bearing through building code enforcement.	2007	Completed	Codes have passed.
Recommend local municipalities to increase the amount of brush and vegetation cleared in the right-of-way.	2007	Completed	Postage County maintains a relationship with jurisdictions and fire departments. Municipalities have codes and enforcement regarding wildfire reduction due to vegetation.
Stronger enforcement/ oversight in erosion and sediment control ordinances. To control Construction site erosion from construction sites, WI Department of Commerce has adopted construction site erosion control regulations through the state building code. State erosion control regulations are enforced through the local building inspectors. It has come up in discussions	2012	Completed	Codes have passed and the Planning and Zoning Department oversees.

that these need stronger review and enforcement throughout the County.			
Continue to review County's shoreland Zoning Ordinance and encourage all incorporated municipalities with shoreland to develop and adopt shoreland ordinances. (Revised in 2012)	2007	Completed	Codes have passed and the Planning and Zoning Department oversees.
Support land acquisition and management strategies to preserve open space for flood mitigation purposes.	2012	Completed	Codes have passed and the Planning and Zoning Department oversees.
Review becoming a part of the Community Rating System (CRS) to lower flood insurance premiums for property owners.	2012	Completed	At this time, the County is not actively pursuing participation in the CRS program.
Continued Compliance in NFIP	2012	Completed	While the County continues to participate in the NFIP, this mitigation action was not viewed as an actionable item.
Designate and open buildings (with air conditioning) for those residents that do not have such amenities during extreme heat advisories.	2007	Completed	Cooling shelters have been opened.
County should be prepared to inform farmers during times of drought	2012	Completed	The County has systems in place to inform the community of all hazards.

Removed Mitigation Actions (County-Specific)

Removed Mitigation Actions Table - These actions that were previously identified, and during the 2019 update, these actions were identified as no longer being pursued.

Mitigation Project	Year	Removed	Reason for Removal
Identify evacuation and alternative transportation routes in case of road closures, specifically I-39.	2012	Removed	No longer a viable evacuation route.
Work to create Mutual Aid with northern Towns and Marathon County - Fire Protection	2012	Removed	Given the available resources in the County, mutual aid is not needed.
Add local websites for jurisdictions to the County's EM website to provide easy access to individual municipal information.	2012	Removed	Will continue to host municipality mitigation actions and as available, comprehensive plans on the Portage website but not host all websites through the County.
Continue to apply for federal funding to purchase NOAA weather radios for County residents	2007	Removed	Given the access to NOAA information via the Internet, the purchase of radios for the public is no longer needed.
Bury overhead power and utility lines, where feasible, as a way to improve emergency response times, improve safety, and reduce power outages. (Revised in 2012)	2007	Removed	This action is still viable for certain jurisdictions but not the County as a whole.
Offer information regarding insurance to farm operators due to potential crop loss due to weather-related damage. (Revised in 2012)	2007	Removed	The County provides information on all hazards to the community.
Identification of areas where residents can become landlocked due to transportation infrastructure or related to flooding.	2012	Removed	This action is still viable for certain jurisdictions but not the County as a whole.
Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan.	2012	Removed	This program is no longer supported by the County.
Continue to support the neighbors helping neighbor group that has been started. Encourage similar	2012	Removed	This program is no longer supported by the County.

neighborhood groups throughout the County.			
Create a Village of Junction City Emergency Action Plan	2012	Removed	This action belongs as a municipality action.
Right of Way/ Easements (trees) (Revised in 2012)	2007	Removed	Not enough detail was provided on this project for the County to identify the hazards mitigated and the purpose of this project.
The Town of Belmont specifically identified that they are most vulnerable to high wind events. Further discussion and information on possible strategies should be brought to all Towns attention to reduce the effects of such events.	2012	Removed	This action belongs as a municipality action.
Continue to maintain and evaluate the providing services, such as plowing, to areas as development patterns change.	2007	Removed	This action is too vague on the services provided and their relation to hazard mitigation
Work to identify locations for "living" snow fence.	2012	Removed	Not enough detail was provided on this project for the County to identify the purpose of this project.
Include in weather radios and EAS warnings when hail is possible to put vehicles/ pets in covered locations. (Revised in 2012)	2007	Removed	With technological advancements, the community is able to access weather announcements via cell phones.
Creation and update of stormwater management ordinances for all incorporated municipalities	2012	Removed	This action belongs as a municipality action.
Continue to enforce flood plan ordinances	2012	Removed	While the EM office can recommend ordinances, enforcement is not viewed as an actionable mitigation project (viewed as a role of the Planning and Zoning Department, as is the enforcement of all codes and ordinances.
Locate public infrastructure outside of the flood plain.	2012	Removed	Not viewed as actionable or beneficial. The primary focus is on public infrastructure within the floodplain.
Work with local municipalities to prepare a strategy to prioritize road improvement	2007	Removed	See new action: Evaluate Roadways to Prevent Repeat Flooding

for public roadways that are susceptible to flooding. (Revised in 2012 and 2019)			
Review Dam Hazard Classifications with WI Department of Natural Resources	2012	Removed	The County supports the regulation and the authority of the agencies assigning dam hazard classification.
Continue to work with Consolidated Water and Paper Company and Wisconsin Valley Improvement Corporation to develop early warning and strategies to minimize damage from flooding.	2007	Removed	Action taken over by private companies.
Identify and perform cost analysis of removing homes/structures within the floodplain and floodway.	2007	Removed	At this time, the County is not looking to remove structures.
Review participation in NFIP	2012	Removed	The County will continue to participate in the NFIP.
Continue to identify groundwater contamination issues that result from high groundwater/ flooding.	2012	Removed	At the time, the County does not deem this action a priority and has decided to remove the action.
Contact local internet providers to see if they could disseminate information via email.	2007	Removed	Not enough detail was provided on this project for the County to identify the hazards mitigated and the purpose of this project.
Adhere to standards for clearing trees around new or existing residential developments.	2007	Removed	Not enough detail was provided on this project for the County to identify the hazards mitigated and the purpose of this project.
Provide more information to new homeowners regarding "clear zones" for fire protection.	2007	Removed	Not enough detail was provided on this project for the County to identify the hazards mitigated and the purpose of this project.
Create and maintain a map that identifies high-risk areas.	2007	Removed	Not enough detail was provided on this project for the County to identify the hazards mitigated and the purpose of this project.
Develop a map of high capacity wells for use, and expand programs to allow fire vehicles access to wells.	2007	Removed	No longer a priority project.
Identify and create additional education efforts for public wildfire education	2012	Removed	At this time, additional public outreach on wildfire education is not viewed as a priority.

Work with railroads and other utilities to maintain right-of-ways to prevent fires.	2007	Removed	At this time, this project is not viewed as needed given the lack of fires caused by right-of-way incidents.
Encourage the adoption of water usage regulations throughout the County.	2007	Removed	At this time, water usage is not a concern.
Encourage farmers that irrigate to use irrigation scheduling programs and drip/misting systems	2012	Removed	Not an actionable or needed project.
Inform Farmers on purchasing crop insurance	2012	Removed	Not a priority project.
Identify funding opportunities for municipalities to complete flood shadow information on dams that have not had studies completed. To determine if the dam classification and hazard rating are correct.	2012	Removed	The County does not view the study of dam classification as a priority or cost-effective project.
Village of Rosholt to review zoning of property located in flood shadow, to limit development.	2012	Removed	Action belongs to the municipality

Town of Alban Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	**First Name**	**Title/Position**	**Organization**	**Phone Number**	**E-mail**
Oksuita	Raymond	Chairperson	Town of Alban	715-581-7208	ray.oksuita@gmail.com

Community Profile and Description

Date of Incorporation: 1856

Current Population: The population of Alban in the 2010 Census was 885.

Population Growth: Between the 2000 and 2010 Census, the population decreased by 1.3%.

Location and Description: The Town of Alban comprises approximately 23,190 acres, or 36.2 square miles, of land and water located in the northeast corner of Portage County. It is bounded to the west by the Town of Sharon and the south by the Town of New Hope. The Village of Rosholt, located in the center of Alban, is about 15 miles northeast of the City of Stevens Point.

The major surface water bodies that are present in the Town of Alban are: Collins Lake, Lake Helen, Lions Lake, Penny Lake, Tree Lake, Windorf Lake, Mud Lake, Mud Lake (upper), and Mud Lake (lower). The three largest lakes in the Town are Helen Lake, Tree Lake, and Lions Lake. Lions Lake is the property of the Lions Club Foundation, a regional provider of summer camp activities for services for children and adults with special needs.

The four rivers/streams in the Town include: Little Wolf River, Bradley Creek, Flume Creek, and Klondike Creek. The Flume Creek transects the Town from north to south. All four of these rivers are listed as Class 1 trout streams by the Wisconsin Department of Natural Resources.

There are two drainage basins in the Town of Alban, the Upper Little Wolf River Watershed and the Waupaca River Watershed. Both watersheds eventually flow into the Wolf River Watershed that enters the bay of Green Bay via the Fox River.

Brief History: Before its establishment in 1856, Alban was part of the Town of New Hope. It is situated in an area covered by the last phase of the Wisconsin glaciation. The largest water body is Flume Creek, crossing the whole town, from Marathon County and going to Waupaca County.

Up until 1970, the Town of Alban was a typical rural agriculture-based community with a steadily declining population, due mostly to the changes in the agricultural economy. However, during the 1970s, the population of the Town increased by over 25%. The Town has experienced continued growth, but not at the rate witnessed during the ’70s. This growth has reversed a seventy-year trend of declining population, and population projections for 2025 portray a modest growth pattern.

Climate: Along with the majority of Portage County, the Town of Alban has a humid continental climate with warm summers and cold winters. It has a subtype warm-summer (Köppen climate classification Dfb). Alban gets 33 inches of rain and 52 inches of snow, on average, per year. Alban gets some kind of precipitation, on average, 118 days per year. The July high is around 80 degrees, and the January low is around 5 degrees.

Public Services: The town of Alban offers services to residents, including liquor licensing, dog licensing, bartender licensing, garbage and recycling, and voter registration. Police protection and ambulance service are provided by Portage County. The Portage County Sheriff’s Department provides protective services through random patrols and on a “call-out” basis. The Rosholt Fire District includes the Town of

Alban, the Village of Rosholt, and the Town of Sharon. The fire station for the district is located in the Town of Alban on State Highway 66 west of the Village of Rosholt.

Governing Body Format: The Town of Alban is governed by a Town Board. The Town Board is comprised of a Chairman, Supervisors, and a Clerk/Treasurer. Meetings of the Town Board are held monthly.

Development Trends: To accommodate growth, tracts of land that are now void of development will see homes, farms, and some businesses. If new development is not properly managed, the Town may find itself faced with unnecessarily inflated expenditure requirements for the provision of its limited services to the new areas. This Comprehensive Plan will analyze all of the lands within the Town of Alban corporate boundary and include short and long-range recommendations for residential, commercial and industrial development, as well as the protection of important farmlands and other natural resources as determined by the residents of the Town of Alban.

Hazard Considerations Specific to the Town of Alban:

Tornado activity: Alban-area historical tornado activity is near Wisconsin state average. It is 16% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 21.1 miles away from the Alban town center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/27/1984, a category F3 (max. wind speeds 158-206 mph) tornado 19.0 miles away from the town center caused between $500,000 and $5,000,000 in damages.
Flood Risk: Map 5.5 shows the locations of the 100-year floodplain within the Town of Alban.
Natural disasters: The number of natural disasters in Portage County (9) is smaller than the US average (13).
Major Disasters (Presidential) Declared: 7 Emergencies Declared: 2 Causes of natural disasters: Floods: 7, Storms: 6, Tornadoes: 2, Drought: 1, Hurricane: 1 (Note: some incidents may be assigned to more than one category)

Maps:

Maps utilized in this evaluation include the following maps from the Town of Alban Comprehensive Plan Document:

Map 4.1: Town of Alban Facilities
Map 5.4: Wetlands & Watersheds Map
Map 5.5: Floodplains Map
Map 5.6: Groundwater Flow Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Alban Adopted Comprehensive Plan Document
- BestPlaces.net
- TownofAlban.com
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Action

Procure and install an emergency generator

Mitigation Action	Procure and install an emergency generator
Year Initiated	2019
Applicable Jurisdiction	Town of Alban
Lead Agency/Organization	Town of Alban Garage
Supporting Agencies/Organizations	N/A
Applicable Goal	1- Health and Safety
Potential Funding Source	Town funding
Estimated Cost	Low - $3000
Benefits (loss avoided)	High
Projected Completion Date	TBD
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Supply emergency power to the garage to support vehicle operations, showers, running water, etc.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
x	Extreme Cold
x	Extreme Heat
	Flood (Riverine)
x	Flood (Urban/Flash Flooding)
x	Severe Thunderstorms
x	Severe Winter Weather/Heavy Snowfall/Ice Storm
x	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Ongoing Mitigation Actions

Identify and create additional education efforts that local municipality fire departments can use for education

Mitigation Action	Identify and create additional education efforts that local municipality fire departments can use for education
Year Initiated	2012
Applicable Jurisdiction	Towns of Dewey, Alban, and Grant
Lead Agency/Organization	Portage County Emergency Management and WI DNR - Plover Ranger Station (formerly Whiting Ranger Station)
Supporting Agencies/Organizations	Local Municipalities and Fire Departments
Applicable Goal	2 - Public Education 5 - Intergovernmental Relationships
Potential Funding Source	Local and State Grants
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	TBD
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
X	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Work to identify roads prone to flooding

Mitigation Action	Work to identify roads prone to flooding and implement projects to reduce flooding
Year Initiated	2012
Applicable Jurisdiction	Town of Alban, Town of Carson, Town of Linwood, Eau Pleine, Hull, Grant Specifically
Lead Agency/Organization	Local Municipality
Supporting Agencies/Organizations	Portage County Emergency Management, and Planning and Zoning Department
Applicable Goal	1- Health and Safety 3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Culvert issues and flooding can close local roads. (New 2011) Create and maintain a database of bridges and culverts on all roads within the County to include the size of culverts and other valuable data. Find ways to identify which culverts and bridges are undersized or unable to handle expected floodwater flows

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Town of Almond Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Hetzel	Roger	Supervisor	Town of Almond	715-366-2586	

Community Profile and Description

Date of Incorporation: 1851

Current Population: The estimated population in 2010 was 731.

Population Growth: The 2000 population census showed the Town with a population of 679, meaning the population increased by 7.6% between 2000 and 2010.

Location and Description: The Town of Almond is located in the south-central part of Portage County and is bordered on the south by Waushara County, and by the Portage County Towns of Buena Vista on the north, Belmont on the east and Pine Grove on the west. Almond is the 9th largest municipality (out of 17 towns) in Portage County in terms of geographic size, encompassing an area of approximately 27,642 acres or 43.19 square miles.

Brief History: The Town of Almond includes some flat land, outwash plains of the last glaciation and some low hills at the end of the Arnott moraine, as well as parts of the Wisconsin terminal and ground moraines. Much of it was a prairie with good soil for agriculture, and it became the first area where some pioneer farmers, at first Yankees, followed by Germans and Irish, settled before 1850. By 1850 there was a village named Almond (after a town in Allegany County, State of New York from where some families had come), and a post office was opened. The place developed more rapidly after 1901, when the tracks of the Chicago & Northwestern Railroad reached the town, providing good shipping for potatoes and other agricultural products. The Village of Almond was not incorporated until 1905, but it became the center for southern Portage County with stores, shops, a bank, its own telephone company, and taverns.

The Town has no streams but has several lakes: Wolf Lake in a pleasant surrounding has a beach and boat landing, the Two Lakes (Washburn and Bass Lakes) and Patterson Lake. These last three, clearly indicated on old maps, dried almost completely in the 1950-1960s. About 1965 Patterson Lake seemed to have completely disappeared, replaced by brush, but in the woods near what might have been ashore was an abandoned boat showing that not only had there been a lake but that it had fish. The condition was blamed on the extensive irrigation of the farming land that had lowered the water table and dried up the lakes, but in the 1970s water reappeared and the lakes are present again, the result of a series of years with abundant rainfall.

Climate: Along with the majority of Portage County, the Town of Almond has a humid continental climate with warm summers and cold winters. It has a subtype warm-summer (Köppen climate classification Dfb). Almond gets 33 inches of rain and 46 inches of snow, on average, per year. Almond gets some kind of precipitation, on average, 118 days per year. The July high is around 81 degrees, and the January low is around 6 degrees.

Public Services: Police protection and ambulance service are provided by Portage County. The Portage County Sheriff's Department provides protective services through random patrols and on a "call-out" basis. Fire, rescue, and first responder services are shared with the adjoining Village of Almond and parts of the Towns of Belmont and Buena Vista. The fire station, located within the Village of Almond on Main Street, was built in 1992. As of 2003, there were eight vehicles within the 6,400 square foot fire station.

Governing Body Format: The Town of Almond is governed by a Town Board.

Development Trends: To accommodate the growth that may occur in the Town, tracts of land that are now void of development will see homes, farms, and businesses. If new development is not properly managed, the Town may find itself faced with unnecessarily inflated expenditure requirements for the provision of its limited services to the new areas.

Hazard Considerations Specific to the Town of Almond:

- Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.
- Tornado Activity: Almond-area historical tornado activity is slightly above Wisconsin state average. It is 40% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 7.2 miles away from the Almond village center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/3/1956, a category F4 tornado 31.6 miles away from the village center killed seven people and injured 50 people and caused between $500,000 and $5,000,000 in damages.
- Flood Risk: There are no floodplains within the Town of Almond.

Maps:

Maps utilized in this evaluation include the following maps from the Town of Almond Comprehensive Plan Document:

Map 4.1: Town of Almond Facilities
Map 5.4: Wetlands & Watersheds Map
Map 5.5: Groundwater Flow Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Almond Adopted Comprehensive Plan Document
- BestPlaces.net
- VillageofAlmond.com
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	**Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances**
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire

	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Town of Amherst Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	**First Name**	**Title/Position**	**Organization**	**Phone Number**	**E-mail**
Spierings	Don	Chairperson	Town of Amherst	715-340-1230	Bigfoot-17@hotmail.com
Bachhuber	Marj	Chairperson	Town of Amherst	715-824-2938	townofamherst@wi-net.com

Community Profile and Description

Date of Incorporation: 1852

Current Population: The population as of the 2010 Census was 1,325.

Population Growth: The Town experienced a more modest growth rate of 7.5% during the 1990-2000 period and a declining rate of growth of -7.7% during the 2000-2010 period. In population, the Town of Amherst currently ranks 7th out of 17 towns in Portage County.

Location and Description: The Town of Amherst is located on the eastern side of Portage County and is bordered by the Towns of New Hope and Stockton on the north, Town of Stockton on the west, Towns of Lanark and Buena Vista on the south, and Waupaca County on the east. Amherst is the 10th largest of Portage County's 17 towns in terms of geographic size, encompassing an area of approximately 24,497 acres or 38.28 square miles. There are three villages within the geographic boundary of the Town of Amherst, each of which has its community profile within this plan. Those villages are: Village of Amherst, Village of Amherst Junction, and Village of Nelsonville.

The Town of Amherst lies entirely in the glaciated area and is divided by the Tomorrow River, which has its source in the Town of Sharon, then passes through Amherst, the corner of Lanark, to flow into Waupaca County. The name of Tomorrow is the translation of an Indian name transcribed as Waupaca, a name that it takes after passing the village of Amherst. The town is hilly with traces of recessional moraines and some flats representing outwash plains formed when the glacier receded. There are a few lakes, the largest being Lake Emily on which is a public park. It is a favorite lake for boating, fishing and swimming, and on its shores are a number of cottages.

Brief History: It is not exactly recorded when the Town of Amherst was established, but that was probably in 1852, making it one of the earliest towns in the county. At the time it included the present Town of Lanark which in 1856 was annexed to the Town of Belmont and soon after became independent.

Climate: Along with the majority of Portage County, the Town of Amherst has a humid continental climate with warm summers and cold winters. It has a subtype warm-summer (Köppen climate classification Dfb). The Town of Amherst gets 33 inches of rain and 46 inches of snow, on average, per year. Amherst gets some kind of precipitation, on average, 115 days per year. The July high is around 81 degrees, and the January low is around 6 degrees.

Public Services: The Town of Amherst provides garbage and recycling services and sets ordinances and regulations. The Portage County Sheriff's Department provides protective services for the Town of Amherst through random patrols and on a "call-out" basis. An agreement to create the Amherst Fire District was signed January l, l993 by representatives of the villages of Amherst, Nelsonville, and Amherst Junction, and the Town of Amherst. In addition to serving these areas, the District also contracts with parts of Lanark and Stockton for fire services. Volunteer firefighters, recruited from the area served, are dispatched via pagers by Portage County 9ll. The Amherst Fire Department (AFD) is comprised of 3 distinct branches of service, Fire/Rescue, First Responders, and Ambulance. All branches of the AFD are staffed by local members working as Paid on Call and Paid on Site employees. The Amherst Fire District strives to keep pace with the anticipated needs of the local emergency responders

and is continually working towards the future through advanced training, planned capital improvements, and member retention and recruitment.

Governing Body Format: The Town of Amherst is governed by a Town Board, which is comprised of a Chairman, Supervisor, Road Supervisor, Clerk, and Treasurer.

Development Trends: The Town of Amherst recognizes change will occur over the next twenty years that may alter the character of the community. Due to this anticipated change, the Town offers the following statement of how it envisions a future based on community values over this period: The Town will continue to work to maintain the rural character of the community, preserving, protecting and enhancing natural resources and open spaces. Growth is to be managed in a financially sound manner that does not negatively impact the Town's ability to provide services. While agriculture continues to be the predominant land use and the cornerstone of our Town's economy, thoughtfully planned residential areas and small commercial development are encouraged to maintain the tax base. Higher intensity uses are to be carefully planned to contribute to our rural lifestyle.

Hazard Considerations Specific to the Town of Amherst:

- Tornado activity: Amherst-area historical tornado activity is slightly above Wisconsin state average. It is 28% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 8.4 miles away from the Amherst village center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/27/1984, a category F4 tornado 36.9 miles away from the village center killed one person and injured 19 people and caused between $500,000 and $5,000,000 in damages.
- Flood Risk: Map 5.5 shows the locations of the 100-year floodplain within the Town of Amherst.
- Natural disasters: The number of natural disasters in Portage County (9) is smaller than the US average (13).
- Major Disasters (Presidential) Declared: 7 Emergencies Declared: 2 Causes of natural disasters: Floods: 7, Storms: 6, Tornadoes: 2, Drought: 1, Hurricane: 1 (Note: some incidents may be assigned to more than one category).

Maps:

Maps utilized in this evaluation include the following maps from the Town of Amherst Comprehensive Plan Document:

Map 4.1: Town of Amherst Facilities
Map 5.4: Wetlands Map
Map 5.5: Floodplains Map
Map 5.6: Groundwater Flow Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Amherst Adopted Comprehensive Plan Document
- BestPlaces.net

- TownofAmherst.org
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Raising Town Roads

Mitigation Action	Raising Town Roads to Reduce Flooding
Year Initiated	2019
Applicable Jurisdiction	Town of Amherst
Lead Agency/Organization	Department of Transportation
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	Long Term
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Raising town roads which routinely flood for public safety and transportation and emergency services: Tomorrow River Road, River Road, Lake Emily Road, Lake Meyers Road and Lutz Lane.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Continue to support the neighbors helping neighbor group that has been started. Encourage similar neighborhood groups throughout the County

Mitigation Action	Continue to support the neighbors helping neighbor group that has been started. Encourage similar neighborhood groups throughout the County
Year Initiated	2012
Applicable Jurisdiction	Town of Amherst
Lead Agency/Organization	Town of Amherst EM lead and Neighborhood Group
Supporting Agencies/Organizations	Portage County Emergency Management, and Local Fire/Police Departments
Applicable Goal	1- Health and Safety 2 - Public Education
Potential Funding Source	Local funds
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan

Mitigation Action	Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan
Year Initiated	2012
Applicable Jurisdiction	Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst
Lead Agency/Organization	Amherst Fire District, Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst
Supporting Agencies/Organizations	Portage County Emergency Management
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Low
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Town of Belmont Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Walkowicz	David	Town Chairman	Town of Belmont	None Provided	belmont@uniontell.net

Community Profile and Description

Date of Incorporation: 1856

Current Population: Belmont's population is 510 people.

Population Growth: Since 2010, Belmont has had a population decline of 15.6%.

Location and Description: The Town of Belmont encompasses approximately 23,230 acres in southeast Portage County. It is bordered on the south by Waushara County, on the east by Waupaca County, on the north by the Town of Lanark, and on the west by the Town of Almond.

Brief History: Belmont is one of the oldest towns in the County. A post office was opened there on September 25, 1856, and it is stated that it was named Belmont at the suggestion of the wife of the first postmaster. All the early settlers were farmers coming from New England, New York state, or Canada or the British Isles. The 1870 census documents almost 300 residents. The Town of Belmont also lies on the terminal moraine of the last Wisconsin glaciation. It is rolling with a few lakes and wooded areas, and it has remained rural to the present day.

Climate: Along with the majority of Portage County, the Town of Belmont has a humid continental climate with warm summers and cold winters. It has a subtype warm-summer (Köppen climate classification Dfb). Belmont gets 33 inches of rain and 46 inches of snow, on average, per year. Belmont gets some kind of precipitation, on average, 113 days per year. The July high is around 81 degrees, and the January low is around 7 degrees.

Public Services: The town of Belmont offers services to residents, including dog licensing and garbage collection. Portage County provides police protection and ambulance service. The Portage County Sheriff's Department provides protective services through random patrols and on a "call-out" basis. The Town currently contracts with Almond, Waupaca, and Wild Rose for fire protection. The Almond Fire Station was built in 1992 and is located within the Village of Almond on Main Street. This department serves the Town of Almond and parts of the Towns of Belmont and Buena Vista with fire, rescue, and first responder services. As of 2003, there were eight vehicles within the 6,400 square foot fire station.

Governing Body Format: The Town of Belmont is governed by a Town Board. The Town Board is comprised of a Chairman, Supervisors, Clerk, Treasurer, and a Building Permit Administrator. Meetings of the Town Board are held monthly.

Development Trends: Belmont was a typical rural agriculture-based community with a steadily declining population, due mostly to the changes in the agricultural economy. Since 1970, however, the Town has experienced continued growth, and this pattern has reversed a sixty-year trend of declining population. Population estimates for 2025 portray a continued upward growth pattern. To accommodate this growth, tracts of land that are now vacant will need to be considered for development (homes, farms, and some businesses). If new development is not properly managed, the Town may find itself facing unnecessarily inflated expenditures for the provision of its limited services to the new areas. This Comprehensive Plan will analyze all of the lands within the Town of Belmont corporate boundary and include the short and long-range recommendations for residential, commercial and industrial

development, as well as the protection of important farmlands and other natural resources as determined by the residents of the Town of Belmont.

Hazard Considerations Specific to the Town of Belmont:

- Tornado activity: Belmont-area historical tornado activity is above Wisconsin state average. It is 62% greater than the overall U.S. average. On 6/7/1984, a category F5 (max. wind speeds 261-318 mph) tornado 24.1 miles away from the Belmont village center killed nine people and injured 200 people and caused between $50,000 and $500,000 in damages. On 7/3/1983, a category F4 (max. wind speeds 207-260 mph) tornado 19.1 miles away from the village center caused between $5000 and $50,000 in damages.
- Flood Risk: There are no floodplains within the Town of Belmont.
- Natural disasters: The number of natural disasters in Lafayette County (11) is near the US average (13).
- Major Disasters (Presidential) Declared: 9 Emergencies Declared: 2 Causes of natural disasters: Floods: 8, Storms: 8, Tornadoes: 5, Drought: 1, Hurricane: 1, Snowstorm: 1, Wind: 1, Winter Storm: 1 (Note: some incidents may be assigned to more than one category).

Maps:

Maps utilized in this evaluation include the following maps from the Town of Belmont Comprehensive Plan Document:

Map 4.1: Town of Belmont Facilities
Map 5.4: Wetlands Map
Map 5.5: Groundwater Flow Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Belmont Adopted Comprehensive Plan Document
- BestPlaces.net
- Town of Belmont's Website
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	**Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances**
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire

	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Strategize to reduce the effects of high winds

Mitigation Action	Strategize and develop a plan to reduce the effects of high winds and implement wind reduction projects
Year Initiated	2012
Applicable Jurisdiction	Town of Belmont
Lead Agency/Organization	Emergency Management
Supporting Agencies/Organizations	Town of Belmont Wind Shed Partners
Applicable Goal	3 - Property and Environment 4 - Plan Integration
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	Medium
Projected Completion Date	TBD
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	The Town of Belmont specifically identified that they are most vulnerable to high wind events. Further discussion and information on possible strategies should be brought to all Town's attention to reduce the effects of such events

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
X	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Town of Buena Vista Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	**First Name**	**Title/Position**	**Organization**	**Phone Number**	**E-mail**
Clark	Duane	Town Supervisor	Town of Buena Vista	715-366-2331	townofbuenavista@gmail.com

Community Profile and Description

Date of Incorporation: 1854

Current Population: Buena Vista's population is 1,127 people.

Population Growth: Since 2010, Buena Vista has had a population decline of 5.8%.

Location and Description: Buena Vista is the 3rd largest of the 17 Portage County towns in terms of geographic size, encompassing an area of approximately 39,289 acres. The Town (political unit) includes all of the congressional township T22N-R9E and part of R8E. The Town of Buena Vista is located in the south-central area of Portage County and is surrounded (clockwise from north to west) by the Towns of Plover, Stockton, Amherst, Lanark, Buena Vista, Almond, Pine Grove, and Grant. The Town of Buena Vista is in the outwash plain of the last Wisconsin glaciation, and the western part was at the northern end of the glacial lake. It is crossed by a low hill range which is the terminal moraine of a glaciation.

Brief History: In 1863 the village of Buena Vista was destroyed by a tornado and was not rebuilt. In its place, at the gap in the range, a new center developed under the name of Keen or Keene. It had a post office, a school, a church, a general store, a hotel, a blacksmith shop, and even a jewelry and photograph gallery, but when the main road from the South was relocated (the present Highway 51), and automobiles replaced horses, Keene declined and at present consists of only a tavern.

Climate: Along with the majority of Portage County, the Town of Buena Vista has a humid continental climate with warm summers and cold winters. It has a subtype warm-summer (Köppen climate classification Dfb). Buena Vista gets 33 inches of rain and 46 inches of snow, on average, per year. Buena Vista gets some kind of precipitation, on average, 117 days per year. The July high is around 81 degrees, and the January low is around 7 degrees.

Public Services: Responsibility for stormwater management within the Town of Buena Vista is split between Portage County and the Town. Management mainly consists of ditches along with the road network. Portage County maintains the ditches along the portions of county highways within Buena Vista, while the Town maintains any ditches along Town roads. Fire, rescue, and first responder services are provided by two fire districts: The Village of Plover Fire Department and the Almond Fire Department/District. The Village of Plover Fire Department consists of a 40 person paid, on-call fire department, including a full-time Fire Chief and Captain. Police protection and ambulance service are provided by Portage County. The Portage County Sheriff's Department provides protective services through random patrols and on a "call-out" basis.

Governing Body Format: The Town of Buena Vista is governed by a Town Board.

Development Trends: The Town of Buena Vista was an agricultural-based, rural community that experienced a population peak around 1920, declining through the 1960s, then rising to the present (see Figure 1.2). Population projections for 2025 indicate a continued growth trend. To accommodate this growth, tracts of land that are now void of development will see homes, farms, and some businesses. If new development is not properly managed, the Town may find itself faced with unnecessarily inflated expenditure requirements for the provision of its limited services to the new areas. This Comprehensive Plan will analyze all of the lands within the Town of Buena Vista corporate boundary and include the

short and long-range recommendations for residential, commercial and industrial development, as well as the protection of important farmlands and other natural resources as determined by the residents of the Town of Buena Vista.

Hazard Considerations Specific to the Town of Buena Vista:

- Tornado activity: Belmont-area historical tornado activity is above Wisconsin state average. It is 62% greater than the overall U.S. average. On 6/7/1984, a category F5 (max. wind speeds 261-318 mph) tornado 24.1 miles away from the Belmont village center killed nine people and injured 200 people and caused between $50,000 and $500,000 in damages. On 7/3/1983, a category F4 (max. wind speeds 207-260 mph) tornado 19.1 miles away from the village center caused between $5000 and $50,000 in damages.
- Flood Risk: There are no floodplains within the Town of Buena Vista.
- Natural disasters: The number of natural disasters in Lafayette County (11) is near the US average (13).
- Major Disasters (Presidential) Declared: 9 Emergencies Declared: 2 Causes of natural disasters: Floods: 8, Storms: 8, Tornadoes: 5, Drought: 1, Hurricane: 1, Snowstorm: 1, Wind: 1, Winter Storm: 1 (Note: some incidents may be assigned to more than one category).

Maps:

Maps utilized in this evaluation include the following maps from the Town of Buena Vista Comprehensive Plan Document:

Map 4.1: Town of Buena Vista Facilities
Map 5.4: Wetlands & Watersheds Map
Map 5.5: Groundwater Flow Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Buena Vista Adopted Comprehensive Plan Document
- BestPlaces.net
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Generator / Warning Shelter

Mitigation Action	**Procure, Install, and Update Generator / Warning Sires**
Year Initiated	2019
Applicable Jurisdiction	Town of Buena Vista
Lead Agency/Organization	Town Board
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education
Potential Funding Source	Local funds and as needed, seek state or federal grant
Estimated Cost	Low - $2,000
Benefits (loss avoided)	High
Projected Completion Date	Fall 2019
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Avoid power and heat outage, prevent injuries, opening overhead doors

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Town of Carson Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Zywicki	Wallace	Chairperson	Town of Carson	715-341-1190	wzywicki@tds.net

Community Profile and Description

Date of Incorporation: 1917

Current Population: 1,305

Population Growth: Since the 2000 Census, the population of the Town of Carson has increased by 0.5%.

Location and Description: The Town is located in the northwest part of the County and is bordered on the west by Wood County and the east by the Wisconsin River. The Town of Carson shares a common border with the Town of Eau Pleine to the north and with the Town of Linwood to the south. The Town of Carson ranks as the 8th largest (out of 17 towns) in Portage County, encompassing a total area of approximately 35,332 acres.

Brief History: One of the county's premier agricultural lands, Carson's farmers are devoted chiefly to dairy, with a smattering of potato growers. Small farmers dominated Carson's land for decades, but many have had to make way for an unforgiving economy. Bigger farms now lay claim to the land. Carson probably was named after Samuel Carson, an Irish pioneer who entered the U.S. at Portland, Maine, in 1865 and applied for naturalization in Stevens Point in 1872. The Town formerly was part of the town of Scott, but when Wood County was set off from Portage County, Carson was formed.

Climate: Along with the majority of Portage County, the Town of Carson has a humid continental climate with warm summers and cold winters. It has a subtype warm-summer (Köppen climate classification Dfb). Carson gets 32 inches of rain and 46 inches of snow, on average, per year. Carson receives some kind of precipitation, on average, 121 days per year. The July high is around 82 degrees, and the January low is around 7 degrees.

Public Services: The Town of Carson provides garbage and recycling services. The Portage County Sheriff's Department provides protective services for the Town of Carson through random patrols and on a "call-out" basis. Fire services for the Town of Carson come from the Rudolph Volunteer Fire Department (RVFD). This volunteer fire department is based out of the Village of Rudolph (located in Wood County). The RVFD is a private corporation that provides fire protection to the Village of Rudolph, Town of Carson, Town of Linwood, Town of Carson, the Village of Junction City, the Town of Rudolph, and one-half of the Town of Sigel. The Town of Carson is pleased with the RVFD and has a good working relationship with them. Recent emergencies have been viewed positively for the effectiveness and rapid response of the RVFD. There are 103 members of the fire and emergency services. Many of the volunteer members live or work in the Town and are available on short notice when emergencies occur.

Governing Body Format: The Town of Carson is governed by a Town Board consisting of a Chairperson, Town Treasurer, Town Supervisors, and a Town Clerk.

Development Trends: Since 1970, the population of Carson has remained relatively stable. However, as the Stevens Point urban area expands, outlying communities could see increased growth pressure. To accommodate this growth, tracts of land that are now void of development may see homes, farms, and some businesses. If new development is not managed correctly, the Town may find itself faced with unnecessarily inflated expenditure requirements for the provision of its limited services to the new

areas. This Comprehensive Plan will analyze all of the lands within the Town of Carson corporate boundary and include the short and long-range recommendations for residential, commercial and industrial development, as well as the protection of important farmlands and other natural resources as determined by the residents of the Town of Carson.

Hazard Considerations Specific to the Town of Carson:

- Tornado activity: Carson-area historical tornado activity is near Wisconsin state average. It is 19% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 26.9 miles away from the Carson town center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 6/4/1958, a category F4 tornado 28.6 miles away from the town center killed four people and injured three people and caused between $500,000 and $5,000,000 in damages.
- Flood Risk: Map 5.5 shows the locations of the 100-year floodplain within the Town of Carson.
- Natural disasters: The number of natural disasters in Portage County (9) is smaller than the US average (13).
- Major Disasters (Presidential) Declared: 7 Emergencies Declared: 2 Causes of natural disasters: Floods: 7, Storms: 6, Tornadoes: 2, Drought: 1, Hurricane: 1 (Note: some incidents may be assigned to more than one category).

Maps:

Maps utilized in this evaluation include the following maps from the Town of Carson Comprehensive Plan Document:

Map 4.1: Town of Carson Facilities
Map 5.4: Wetlands & Watersheds Map
Map 5.5: Groundwater Flow Map (Displays Floodplains)
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Carson Adopted Comprehensive Plan Document
- BestPlaces.net
- townofcarson.com
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	**Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances**
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire

	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Installation of Road Rock to reduce roadway flooding

Mitigation Action	Installation of Road Rock to reduce roadway flooding
Year Initiated	2019
Applicable Jurisdiction	Town of Carson
Lead Agency/Organization	Town of Carson
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety 3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	TBD
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Identification of areas where residents can become land- locked

Mitigation Action	**Identification of areas where residents can become landlocked and develop evacuation strategies**
Year Initiated	2012
Applicable Jurisdiction	Town of Carson
Lead Agency/Organization	Individual Municipality Emergency response agencies and Town of Carson EM lead
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety
Potential Funding Source	Local Budget
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Work to identify roads prone to flooding

Mitigation Action	Work to identify roads prone to flooding and implement projects to reduce flooding
Year Initiated	2012
Applicable Jurisdiction	Town of Alban, Town of Carson, Town of Linwood, Eau Pleine, Hull, Grant Specifically
Lead Agency/Organization	Local Municipality
Supporting Agencies/Organizations	Portage County Emergency Management, and Planning and Zoning Department
Applicable Goal	1- Health and Safety 3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Culvert issues and flooding can close local roads. (New 2011) Create and maintain a database of bridges and culverts on all roads within the County to include the size of culverts and other valuable data. Find ways to identify which culverts and bridges are undersized or unable to handle expected floodwater flows

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Identify and perform cost analysis of removing homes/structures within the floodplain and floodway

Mitigation Action	Identify and perform cost analysis of removing homes/structures within the floodplain and floodway
Year Initiated	2007
Applicable Jurisdiction	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point
Lead Agency/Organization	Local EM, Portage County Emergency Management, and Planning and Zoning Department
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Town of Dewey Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Lochinger	Angela	Town Clerk	Town of Dewey	715-254-5584	Townofdewey@yahoo.com
King	Maurice	Chairperson	Town of Dewey	715-572-1835	Chairtownofdewey@gmail.com

Community Profile and Description

Date of Incorporation: 1898

Current Population: The Population of Dewey as of the 2010 Census was 932.

Population Growth: Between the 2000 Census and the 2010 Census, the Town of Dewey's population decreased by 4.4%

Location and Description: Dewey is the 7th largest Town (out of 17 Towns) in Portage County in terms of geographic size, encompassing an area of approximately 30,100 acres. The Town of Dewey is located in north-central Portage County and is bordered on the north by Marathon County, on the south by the Town of Hull, on the east by the Town of Sharon and the west by the Wisconsin River.

Brief History: The Town of Dewey was created in November 1898; however the white man stepped foot in the area more than 100 years earlier. Dewey was the place where John DuBay spent the winter of 1790 trading with the Indians. DuBay's Trading Post was located near Dewey just 12 miles north of Stevens Point. His father, Louis DuBay, traded with the Indians at the site in earlier years.

A prominent feature of the Town of Dewey is the Dewey Marsh State Wildlife Area. Owned by the Department of Natural Resources since 1973, the marsh encompasses about 5,716 acres. The marsh fell victim to fire in 1976 but quickly began its re-growth by the following year. The marsh now is re-generating, and many aspens have come back. The area is mainly used as a hunting ground, Paul Lochner (State Forester) said. Deer hunting, with both bow and gun, along with trapping of beaver, otter and fox are popular activities there. Some squirrel, grouse, and turkey hunting is also done there. Both the Town and marsh were named after Admiral George Dewey, who destroyed the Spanish fleet at Manila Bay and became a national hero overnight.

Climate: Along with the majority of Portage County, the Town of Dewey has a humid continental climate with warm summers and cold winters. It has a subtype warm-summer (Köppen climate classification Dfb). Dewey gets 33 inches of rain and 51 inches of snow, on average, per year. Dewey gets some kind of precipitation, on average, 124 days per year. The July high is around 81 degrees, and the January low is around 6 degrees.

Public Services: Police protection and ambulance service are provided by Portage County. The Portage County Sheriff's Department provides protective services through random patrols and on a "call-out" basis. Fire services for Dewey come from the Dewey Fire Department. The volunteer/paid fire department is based out of the Town of Dewey and serves mainly residential areas and the Interstate Hwy 39. There are 14 volunteer firefighters and five first responders, the number of which can change at any time. In 1998/1999 the department added a large area to the fire protection district, creating their current 226 square mile service district. They also provide and receive mutual aid with many other departments in Wood, Portage, and Marathon Counties through the Mutual Aid Box Alarm System (MABAS).

Governing Body Format: The Town of Dewey is governed by a Town Board. The Board consists of a Chairperson, Supervisors, Clerk, Treasurer, Fire Chief, First Responder Committee Chair, and an Assessor.

Development Trends: From 1920 to 1960, the Town of Dewey was a typical rural agriculture-based community with a steadily declining population, due mostly to the changes in the agricultural economy. However, during the 1970s, the population of the Town started growing again, with a significant jump in the 1970s (see Figure 1.2). The Town has experienced continued growth, but not at the rate witnessed during that decade and estimates for 2025 portray a continued growth pattern. To accommodate this growth, tracts of land that are now void of development may see homes, farms, and some businesses. If new development is not properly managed, the Town may find itself faced with unnecessarily inflated expenditure requirements for the provision of its limited services to the new areas. This Comprehensive Plan will analyze all of the lands within the Town of Dewey corporate boundary and include the short and long-range recommendations for residential, commercial and industrial development, as well as the protection of important farmlands and other natural resources as determined by the residents of the Town of Dewey.

Hazard Considerations Specific to the Town of Dewey:

- Tornado activity: Dewey-area historical tornado activity is near Wisconsin state average. It is 16% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 25.3 miles away from the Dewey town center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 6/4/1958, a category F4 tornado 30.3 miles away from the town center killed four people and injured three people and caused between $500,000 and $5,000,000 in damages.
- Flood Risk: Map 5.4 shows the locations of the 100-year floodplain within the Town of Dewey.
- Natural disasters: The number of natural disasters in Portage County (9) is smaller than the US average (13).
- Major Disasters (Presidential) Declared: 7 Emergencies Declared: 2 Causes of natural disasters: Floods: 7, Storms: 6, Tornadoes: 2, Drought: 1, Hurricane: 1 (Note: some incidents may be assigned to more than one category).

Maps:

Maps utilized in this evaluation include the following maps from the Town of Dewey Comprehensive Plan Document:

Map 4.1: Town of Dewey Facilities
Map 5.4: Surface Water & Floodplains Map
Map 5.5 Wetlands & Watersheds
Map 5.6: Groundwater Flow Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Dewey Adopted Comprehensive Plan Document
- BestPlaces.net
- http://townofdeweywi.com/
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Repair Roads

Mitigation Action	Conduct Road Maintenance to reduce flooding
Year Initiated	2019
Applicable Jurisdiction	Town of Dewey
Lead Agency/Organization	Town Board
Supporting Agencies/Organizations	Portage County
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High - over $100,000
Benefits (loss avoided)	High
Projected Completion Date	Short Term
Actual Completion Date	2022
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Perform road maintenance to repair roads with damage due to ice, snow, rain, and flooding.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Work to create Mutual Aid with northern Towns and Marathon County - Fire Protection

Mitigation Action	**Work to create Mutual Aid with northern Towns and Marathon County - Fire Protection**
Year Initiated	2012
Applicable Jurisdiction	Town of Dewey
Lead Agency/Organization	Local Fire Departments
Supporting Agencies/Organizations	Local Municipalities, Marathon County and Municipalities
Applicable Goal	5 - Intergovernmental Relationships
Potential Funding Source	None needed
Estimated Cost	Low - none needed
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
X	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Funding to complete flood shadow information on dams

Mitigation Action	Seek funding to complete flood shadow information on dams
Year Initiated	2012
Applicable Jurisdiction	Village of Amherst and Town of Dewey
Lead Agency/Organization	Portage County Emergency Management and Local EM
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	For dams with no completed studies completed to determine if the dam classification and hazard rating are correct

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
X	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Identify and create additional education efforts that local municipality fire departments can use for education

Mitigation Action	Identify and create additional education efforts that local municipality fire departments can use for education
Year Initiated	2012
Applicable Jurisdiction	Towns of Dewey, Alban, and Grant
Lead Agency/Organization	Portage County Emergency Management and WI DNR - Plover Ranger Station (formerly Whiting Ranger Station)
Supporting Agencies/Organizations	Local Municipalities and Fire Departments
Applicable Goal	2 - Public Education 5 - Intergovernmental Relationships
Potential Funding Source	Local and State Grants
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	TBD
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
X	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Town of Eau Pleine Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	**First Name**	**Title/Position**	**Organization**	**Phone Number**	**E-mail**
Anderson	Roy	Chairperson	Town of Eau Pleine	312-961-2284	daxx53@gmail.com

Community Profile and Description

Date of Incorporation: 1851

Current Population: The population of Eau Pleine as of the 2010 Census was 908.

Population Growth: Between the 2000 and 2010 Census, Eau Pleine's population declines by 2.5%

Location and Description: The Town of Eau Pleine is located in the northwest corner of Portage County. As a result, the Town of Eau Pleine ranks as the 5th largest in the County, encompassing a total area of approximately 36,726 acres or 57.38 square miles. The Town is bordered on the north by Marathon County, on the south by the Town of Carson and the Village of Junction City, on the west by Wood County, and the east by the Wisconsin River and Lake DuBay.

Brief History: A substantial community started up after the arrival of the Wisconsin Valley Railroad north of one mill. The community contained a planing mill, two stores, a dance hall, a boarding house, horse barns, and more than 20 permanent residences. Eau Pleine was formed in l851, and finally attained its present size in 1899.

Climate: Along with the majority of Portage County, the Town of Eau Pleine has a humid continental climate with warm summers and cold winters. It has a subtype warm-summer (Köppen climate classification Dfb). Eau Pleine gets 33 inches of rain and 47 inches of snow, on average, per year. Eau Pleine gets some kind of precipitation, on average, 118 days per year. The July high is around 82 degrees, and the January low is around 7 degrees

Public Services: The Town of Eau Pleine has a Planning Commission, Building Inspector, Town Assessor, and Recycling Program. The Portage County Sheriff's Office provides protective services for the Town of Eau Pleine through random patrols and on a "call-out" basis. Fire services for the Town of Eau Pleine come from the Village of Rudolph Volunteer Fire Department (RVFD). The combination volunteer/paid fire department is based out of the Village of Rudolph (located in Wood County). The RVFD is a private corporation that provides fire protection to the Village of Rudolph, Town of Eau Pleine, Town of Linwood, Town of Carson, Village of Junction City, Town of Rudolph, one-half of the Town of Sigel, and one-half of the Town of Milladore. The Town of Eau Pleine is very happy with the RVFD and has a good working relationship with them. Recent emergencies have been viewed positively for the effectiveness and rapid response of the RVFD. There are 103 members of the fire and emergency services. Many of the volunteer members live or work in the Town and are available on short notice when emergencies occur.

Governing Body Format: The Town of Eau Pleine is governed by a Town Board. The Board consists of a Chairman, Supervisors, a Town Clerk, and a Treasurer.

Development Trends: Up until 1970, the Town of Eau Pleine was a typical rural agriculture-based community with a steadily declining population, due mostly to the changes in the agricultural economy. However, during the 1970s, the population of the Town experienced a 23% increase. Since 1990, the Town has again undergone a slow decline in the number of inhabitants. To accommodate the growth that may occur, tracts of land that are now void of development may see homes, farms, and some businesses. If new development is not properly managed, the Town may find itself faced with

unnecessarily inflated expenditure requirements for the provision of its limited services to the new areas. This Comprehensive Plan will analyze all of the lands within the Town of Eau Pleine corporate boundary and include short and long-range recommendations for residential, commercial and industrial development, as well as the protection of important farmlands and other natural resources as determined by the residents of the Town of Eau Pleine.

Hazard Considerations Specific to the town of Eau Pleine:

- Tornado activity: Eau Pleine-area historical tornado activity is near Wisconsin state average. It is 15% greater than the overall U.S. average. On 6/4/1958, a category F4 (max. wind speeds 207-260 mph) tornado 24.4 miles away from the Eau Pleine town center killed four people and injured three people and caused between $500,000 and $5,000,000 in damages. On 9/26/1951, a category F4 tornado 30.3 miles away from the town center killed six people and injured three people and caused between $50,000 and $500,000 in damages.
- Flood Risk: Map 5.5 shows the locations of the 100-year floodplain within the Town of Eau Pleine.
- Natural disasters: The number of natural disasters in Portage County (9) is smaller than the US average (13).
- Major Disasters (Presidential) Declared: 7 Emergencies Declared: 2 Causes of natural disasters: Floods: 7, Storms: 6, Tornadoes: 2, Drought: 1, Hurricane: 1 (Note: some incidents may be assigned to more than one category).

Maps:

Maps utilized in this evaluation include the following maps from the Town of Eau Pleine Comprehensive Plan Document:

Map 4.1: Town of Eau Pleine Facilities
Map 5.4: Wetlands & Watersheds Map
Map 5.5: Floodplains Map
Map 5.6: Groundwater Flow Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Eau Pleine Adopted Comprehensive Plan Document
- BestPlaces.net
- https://townofeaupleine.com/
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Install Generator

Mitigation Action	Procure and install a generator for emergency events
Year Initiated	2019
Applicable Jurisdiction	Town of Eau Pleine
Lead Agency/Organization	Town of Eau Pleine
Supporting Agencies/Organizations	Portage County
Applicable Goal	1 - Public Health and Safety
Potential Funding Source	Grant - seek local and state funding
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2020 - Short term
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Install generators at health care facilities, assisted living facilities, and shelters.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Ongoing Mitigation Actions

Identification of areas where residents can become land- locked

Mitigation Action	**Identification of areas where residents can become landlocked and developing evacuation strategies**
Year Initiated	2012
Applicable Jurisdiction	Eau Pleine
Lead Agency/Organization	Emergency response agencies and Town of Eau Pleine EM
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety
Potential Funding Source	Local Budget
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Identify and perform cost analysis of removing homes/structures within the floodplain and floodway

Mitigation Action	Identify and perform cost analysis of removing homes/structures within the floodplain and floodway
Year Initiated	2007
Applicable Jurisdiction	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point
Lead Agency/Organization	Local EM, Portage County Emergency Management, and Planning and Zoning Department
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Work to identify roads prone to flooding

Mitigation Action	Work to identify roads prone to flooding and implement projects to reduce flooding
Year Initiated	2012
Applicable Jurisdiction	Town of Alban, Town of Carson, Town of Linwood, Eau Pleine, Hull, Grant Specifically
Lead Agency/Organization	Local Municipality
Supporting Agencies/Organizations	Portage County Emergency Management, and Planning and Zoning Department
Applicable Goal	1- Health and Safety 3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Culvert issues and flooding can close local roads. (New 2011) Create and maintain a database of bridges and culverts on all roads within the County to include the size of culverts and other valuable data. Find ways to identify which culverts and bridges are undersized or unable to handle expected floodwater flows

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Town of Grant Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Yetter	James	Town Supervisor	Town of Grant	715-213-2000	Diamondj@wctc.net

Community Profile and Description

Date of Incorporation: 1864

Current Population: The Town of Grant's population at the time of the 2010 Census was 1,906

Population Growth: Between the 2000 and 2010 Census, the Town of Grant's population decreased by 5.6%

Location and Description: The Town of Grant is the largest of the 17 Towns in Portage County in terms of geographic size, encompassing an area of approximately 45,618 acres, or 71.28 square miles. Grant is located in the southwest corner of Portage County about 12 miles southwest of Stevens Point and is bordered on the west by Wood County (Towns of Saratoga and Grand Rapids), the north by the Town of Plover, the east by Towns of Plover, Buena Vista and Pine Grove, and the south by Adams County (Town of Leola).

Brief History: The Town of Grant was formed from the southern half of the Town of Linwood on April 1, 1864, by a resolution of the Portage County Board of Supervisors. Kellner is the only community to develop within the Town of Grant. The unincorporated community grew because a passenger depot and freight car siding were constructed in 1901 when the Chicago & Northwestern Railway extended railroad tracks through the town. The tracks are now abandoned. In August 2014, the Town of Grant celebrated its sesquicentennial. A comprehensive history of the Town is outlined in a book entitled "From Where They Came to Where We Are" by Dorothy Raasch.

Climate: Along with the majority of Portage County, the Town of Grant has a humid continental climate with warm summers and cold winters. It has a subtype warm-summer (Köppen climate classification Dfb). Grant gets 32 inches of rain and 45 inches of snow, on average, per year. Grant gets some kind of precipitation, on average, 117 days per year. The July high is around 82 degrees, and the January low is around 7 degrees.

Public Services: There is no municipal sewer service available in the Town of Grant. Residents in the Town utilize private on-site wastewater treatment systems (POWTS), otherwise known as private septic systems, as regulated by the Portage County Private Sewage System Ordinance. The Portage County Planning & Zoning Department administers the permitting and management of POWTS on a County-wide basis.

Responsibility for stormwater management within the Town of Grant is split between Portage County and the Town. Management mainly consists of ditches along the road network. Portage County maintains the ditches along the portions of County highways within Grant, while the Town maintains any ditches along Town roads. Ditches along Town roads vary in size, ranging up to 4 feet in width.

The Town of Grant is currently served by the Portage County Sheriff's Office, which provides ongoing protective services through routine patrols and on a "call-out" basis. The Portage County Sheriff's Department provides an expanded community policing program and a school liaison program.

The Town is served by the Town of Grand Rapids and Village of Plainfield Volunteer Fire Departments. The Town of Grant is also part of a mutual aid agreement with all fire departments within the

surrounding municipalities for fire protection assistance. The Town contracts with Grand Rapids and Plainfield Fire Departments to provide vehicle extrication services when needed.

Governing Body Format: The Town of Grant is governed by Town Officers. These include a Chairperson, Supervisors, Town Clerk, and Treasurer.

Development Trends: Population growth continued through the 1990s, with an increase of nearly 70% for the thirty years. After this growth spurt, the population has experienced a slight decline (5%) in the last decade. This reflects similar patterns for Towns that abut large cities and villages in the area such as Stevens Point, Plover and Wisconsin Rapids but is far greater than those rural communities that surround the Town of Grant. Wisconsin Rapids will continue to be the major influence in population growth for Grant in the future. Based on the 2010-2014 American Community Survey, 94% of the Town's residents lived in the same house the previous year. This indicates that long-term residents comprise the great majority of the total population.

Hazard Considerations Specific to the Town of Grant:

- Tornado activity: Grant-area historical tornado activity is slightly above Wisconsin state average. It is 31% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 18.7 miles away from the Grant town center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/19/1957, a category F4 tornado 23.4 miles away from the town center killed one person and caused between $5000 and $50,000 in damages.
- Flood Risk: Town of Grant has a history of flooding, but does not have any mapped floodplains. See Map 5.5 for locations of surface water, wetlands, and watersheds.
- Natural disasters: The number of natural disasters in Portage County (9) is smaller than the US average (13).
- Major Disasters (Presidential) Declared: 7 Emergencies Declared: 2 Causes of natural disasters: Floods: 7, Storms: 6, Tornadoes: 2, Drought: 1, Hurricane: 1 (Note: some incidents may be assigned to more than one category).

Maps:

Maps utilized in this evaluation include the following maps from the Town of Grant Comprehensive Plan Document:

Map 4.1: Town of Grant Facilities
Map 5.5: Surface Water, Wetlands & Watersheds Map
Map 5.6: Shoreland Zoning Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Grant Adopted Comprehensive Plan Document
- BestPlaces.net
- townofgrantportageco.com

- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Repair Roads

Mitigation Action	Raise and repair the town roads that experience repeated flooding
Year Initiated	2019
Applicable Jurisdiction	Town of Grant
Lead Agency/Organization	Town Board
Supporting Agencies/Organizations	Portage County
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	Long Term
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	To raise and repair the town roads that every spring have repeated damage and to keep roads from flooding. The project would specifically focus on 100th, Deer Road, Griff Ave as the priority roads to raise and be repaired.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Home Flooding Prevention Plan and Create Runoff Culverts

Mitigation Action	Develop a Home Flooding Prevention Plan and Create Runoff Culverts
Year Initiated	2019
Applicable Jurisdiction	Town of Grant
Lead Agency/Organization	
Supporting Agencies/Organizations	DNR, Army Corp. of Engineers
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	2023
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Generate a plan to help mitigate flooding of homes along the 2 miles of the creek. Create a man-made culvert to retain water from flooding homes.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Identification of areas where residents can become land- locked

Mitigation Action	**Identification of areas where residents can become landlocked and develop evacuation strategies**
Year Initiated	2012
Applicable Jurisdiction	Town of Grant
Lead Agency/Organization	Emergency response agencies and Town of Grant EM
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety
Potential Funding Source	Local Budget
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Continue to identify ground water contamination issues that result from high ground water/ flooding

Mitigation Action	Continue to identify ground water contamination issues that result from high ground water/ flooding
Year Initiated	2012
Applicable Jurisdiction	Town of Grant, Town of Hull
Lead Agency/Organization	Town of Grant
Supporting Agencies/Organizations	Portage County Groundwater Specialist
Applicable Goal	3 - Property and Environment
Potential Funding Source	Local and State Grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
X	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Identify and create additional education efforts that local municipality fire departments can use for education

Mitigation Action	Identify and create additional education efforts that local municipality fire departments can use for education
Year Initiated	2012
Applicable Jurisdiction	Towns of Dewey, Alban, and Grant
Lead Agency/Organization	Portage County Emergency Management and WI DNR - Plover Ranger Station (formerly Whiting Ranger Station)
Supporting Agencies/Organizations	Local Municipalities and Fire Departments
Applicable Goal	2 - Public Education 5 - Intergovernmental Relationships
Potential Funding Source	Local and State Grants
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	TBD
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
X	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Work to identify roads prone to flooding

Mitigation Action	Work to identify roads prone to flooding and implement projects to reduce flooding
Year Initiated	2012
Applicable Jurisdiction	Town of Alban, Town of Carson, Town of Linwood, Eau Pleine, Hull, Grant Specifically
Lead Agency/Organization	Local Municipality
Supporting Agencies/Organizations	Portage County Emergency Management, and Planning and Zoning Department
Applicable Goal	1- Health and Safety 3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Culvert issues and flooding can close local roads. (New 2011) Create and maintain a database of bridges and culverts on all roads within the County to include the size of culverts and other valuable data. Find ways to identify which culverts and bridges are undersized or unable to handle expected floodwater flows

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Town of Hull Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	**First Name**	**Title/Position**	**Organization**	**Phone Number**	**E-mail**
Wolle	Janet	Town Clerk	Town of Hull	715-344-8280	JRW@tn.hull.wi.gov
Fritsche	Mark	Assistant Fire Chief	Fire Department	715-344-8280	None provided

Community Profile and Description

Date of Incorporation: 1858

Current Population: 5,346

Population Growth: Since the 200 Census, the population of Hull has decreased by 2.7%

Location and Description: The Town of Hull encompasses approximately 20,080 square acres in north-central Portage County. It is bordered on the south by the City of Stevens Point, on the east by the Towns of Sharon and Stockton, on the north by the Town of Dewey, and on the west by the Wisconsin River.

The Town of Hull has periodic stormwater runoff problems, related to a combination of natural conditions and manmade factors. Natural factors include the Town's flat surface topography, lack of natural drainage outlets in many low-lying areas, and siltation of marsh/wetland areas. Man-made factors involve the construction of homes, inadequate maintenance of ditches, driveways, and roads that block or divert natural drainage ways. Areas subject to stormwater runoff problems are not readily identifiable from existing data sources and typically require that specific engineering studies be conducted

Brief History: Since its inception, the town of Hull's boundaries have been as fluid as the waters of Jordan Pond, which forms a permanent border on the east end of the town. The city of Stevens Point and surrounding municipalities have mercilessly taken pieces and chunks of the town for more than 130 years of Hull's existence. The choice town of Hull land still is coveted by Stevens Point. Paring away at Hull's circumference hasn't stopped the town's growth or development, though. If before it was rural agriculture, now it is urbanized. There is a growth of subdivisions as opposed to rural living. Previous growth was spread along major roadways. Now people are clustering in subdivisions.

Climate: Along with the majority of Portage County, the Town of Hull has a humid continental climate with warm summers and cold winters. It has a subtype warm-summer (Köppen climate classification Dfb). Hull gets 33 inches of rain and 46 inches of snow, on average, per year. Hull gets some kind of precipitation, on average, 122 days per year. The July high is around 82 degrees, and the January low is about 7 degrees.

Public Services: The Town of Hull is currently served by the Portage County Sheriff's Department. The Sheriff's Department provides protective services through random patrols and on a "call-out" basis. The Portage County Sheriff's Department provides an expanded community policing program and a school liaison program. The Town currently has its fire department, located on Wojcik Memorial Drive, next to the Town Municipal Building. There are 28 volunteer members for the department. The equipment consists of 3 engines, one rescue unit, four tankers, and one utility squad, which is kept at the fire station. The Town has a fire protection (ISO Public Protection Classification) rating of 7, based on a 1-10 scale with one being the highest. The Town of Hull Fire Department participates in a Mutual Aid agreement with surrounding municipalities within the County. If one department cannot respond to an emergency, another department is called.

Governing Body Format: The Town of Hull is governed by a Town Board. The Board consists of a Chairperson, Supervisors, Clerk, a Treasurer, and non-elected officials.

Development Trends: The second half of the 20th century has seen the Town of Hull population grow to nearly four times its size in 1950. And while the beginning of the 21st century has seen population growth slow considerably (due in part to losing territory and people through annexation to the City of Stevens Point), Hull is still a desirable place to live. By the year 2025, a projected 6,100 people may live in the Town, an increase of over 11%, assuming that there are no large annexations to the City of Stevens Point in populated areas.

To accommodate this growth, tracts of land that are now vacant will need to be considered for development. If new development is not managed correctly, the Town may find itself facing unnecessarily inflated expenditures for the provision of its limited services to the new areas. A large portion of the Town also falls within the 3-mile extraterritorial area for the City of Stevens Point. This extraterritorial area is identified in the Wisconsin Statutes and is intended to provide incorporated places like Cities and Villages the opportunity to work with the surrounding unincorporated Towns toward mutually beneficial development patterns on the City/Village periphery. This Comprehensive Plan will analyze all of the lands within the Town of Hull corporate boundary, with a particular emphasis on meeting Town needs in a cooperative environment within the areas adjacent to the City of Stevens Point.

Hazard Considerations Specific to the Town of Hull:

- Tornado activity: Hull-area historical tornado activity is near Wisconsin state average. It is 22% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 19.3 miles away from the Hull town center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 6/4/1958, a category F4 tornado 35.5 miles away from the town center killed four people and injured three people and caused between $500,000 and $5,000,000 in damages.
- Flood Risk: Map 5.4 shows the Wetlands, Watersheds, and 100-year floodplains within the Town of Hull.
- Natural disasters: The number of natural disasters in Portage County (9) is smaller than the US average (13).
- Major Disasters (Presidential) Declared: 7 Emergencies Declared: 2 Causes of natural disasters: Floods: 7, Storms: 6, Tornadoes: 2, Drought: 1, Hurricane: 1 (Note: some incidents may be assigned to more than one category).

Maps:

Maps utilized in this evaluation include the following maps from the Town of Hull Comprehensive Plan Document:

Map 4.1: Town of Hull Facilities
Map 5.4: Wetlands, Watersheds, and Floodplains Map
Map 5.5: Groundwater Flow Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Hull Adopted Comprehensive Plan Document
- BestPlaces.net
- TownofHull.us
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	**Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances**
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire

	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Identify and perform cost analysis of removing homes/structures within the floodplain and floodway

Mitigation Action	**Identify and perform cost analysis of removing homes/structures within the floodplain and floodway**
Year Initiated	2007
Applicable Jurisdiction	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point
Lead Agency/Organization	Local EM, Portage County Emergency Management, and Planning and Zoning Department
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Work to identify roads prone to flooding

Mitigation Action	Work to identify roads prone to flooding and implement projects to reduce flooding
Year Initiated	2012
Applicable Jurisdiction	Town of Alban, Town of Carson, Town of Linwood, Eau Pleine, Hull, Grant Specifically
Lead Agency/Organization	Local Municipality
Supporting Agencies/Organizations	Portage County Emergency Management, and Planning and Zoning Department
Applicable Goal	1- Health and Safety 3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Culvert issues and flooding can close local roads. (New 2011) Create and maintain a database of bridges and culverts on all roads within the County to include the size of culverts and other valuable data. Find ways to identify which culverts and bridges are undersized or unable to handle expected floodwater flows

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Continue to identify ground water contamination issues that result from high ground water/ flooding

Mitigation Action	Continue to identify ground water contamination issues that result from high ground water/ flooding
Year Initiated	2012
Applicable Jurisdiction	Town of Grant, Town of Hull
Lead Agency/Organization	Town of Hull
Supporting Agencies/Organizations	Portage County Groundwater Specialist
Applicable Goal	3 - Property and Environment
Potential Funding Source	Local and State Grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
X	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Town of Lanark Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Leatherman	Cheryl	Town Clerk	Town of Lanark	715-256-9801	None provided
Pagel	Michael	Executive Board Member	Town of Lanark	715-824-5231	K9uw@wi-net.com

Community Profile and Description

Date of Incorporation:1851

Current Population: As of the 2010 census, the town had a population of 1,527.

Population Growth: The population increased by 5.4% between 2000 and 2010.

Location and Description: Lanark is the 15th largest town (out of 17 towns) in Portage County in terms of geographic size, encompassing an area of approximately 23,128 acres or 36.14 sq. miles. The Town of Lanark is located on the eastern edge of Portage County and is bordered on the north by the Town of Amherst, on the south by the Town of Belmont, on the east by Waupaca County, and on the west by the Town of Buena Vista.

Brief History: The Town of Lanark is entirely in the glaciated area of Portage County. It is therefore hilly with some flat areas, like the Town of Amherst of which it originally was a part. It was named after the City of Lanark in Scotland from where one of the first inhabitants came. The Tomorrow River or Waupaca River passes through the northeast corner, and there are several lakes and small streams. Originally it was covered with forest, but the best trees were logged, and part of the remaining area was cleared to be used as farmland. Among the pioneer settlers were a number of Irish families who formed St. Patrick Parish with a church of the same name. It used to have several rural schools and a number of post offices. There was never a village or a central place in the town. Only one place has a unique name, Little Chicago, a tavern at the junction of Highway 54 and County Rd A. It goes back to the prohibition era; moonshine is said to have been sold there, and the bootleggers were considered as people similar to the gangsters of Chicago.

Climate: Along with the majority of Portage County, the Town of Lanark has a humid continental climate with warm summers and cold winters. It has a subtype warm-summer (Köppen climate classification Dfb). Lanark gets 33 inches of rain and 45 inches of snow, on average, per year. Lanark gets some kind of precipitation, on average, 115 days per year. The July high is around 81 degrees, and the January low is about 7 degrees.

Public Services: Services provided by Town of Lanark include: Waste and Recycling, Animal Control and Dog Licensing, Building Inspections, and Planning and Zoning. The Town of Lanark is served by the Portage County Sheriff's Department. The Portage County Sheriff's Department provides protective services through random patrols and on a "call-out" basis. The Town of Lanark is currently served by the Amherst Fire Department and Waupaca Area Fire Department. The Lanark Town Board is satisfied with the services provided by both of these departments.

Governing Body Format: The Town of Lanark is governed by a Town Board. The Town Board consists of a Chairperson, Supervisors, Clerk, Treasurer, Assessor, and a Building Inspector.

Development Trends: Up until 1970, the Town of Lanark was a typical rural agriculture-based community with a steadily declining population, due mostly to the changes in the agricultural economy. However, during the 1970s, the population of the Town nearly doubled. Since that time the Town has continued to grow, but not at the rate witnessed during the '70s. This extended period of growth has

reversed a forty-year trend of declining population, and population projections for 2025 anticipate a continuing pattern of growth.

To accommodate this growth, tracts of land that are now undeveloped will see homes, hobby farms, and some small businesses. If new development is not managed correctly, the Town may find itself faced with unnecessarily inflated expenditures for the provision of its limited services to the new areas. This Comprehensive Plan will analyze all of the lands within the Town of Lanark corporate boundary and include the short and long-range recommendations for residential, commercial and industrial development, as well as the protection of important farmlands and other natural resources as determined by the residents of the Town of Lanark.

Hazard Considerations Specific to the Town of Lanark:

Tornado activity: Lanark-area historical tornado activity is slightly above Wisconsin state average. It is 34% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 2.6 miles away from the Lanark town center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/27/1984, a category F4 tornado 32.5 miles away from the town center killed one person and injured 19 people and caused between $500,000 and $5,000,000 in damages.

Flood Risk: Flood Risk: Map 5.5 shows the locations of the 100-year floodplain within the Town of Lanark.
Natural disasters: The number of natural disasters in Portage County (9) is smaller than the US average (13).
Major Disasters (Presidential) Declared: 7 Emergencies Declared: 2 Causes of natural disasters: Floods: 7, Storms: 6, Tornadoes: 2, Drought: 1, Hurricane: 1 (Note: some incidents may be assigned to more than one category).

Maps:

Maps utilized in this evaluation include the following maps from the Town of Lanark Comprehensive Plan Document:

Map 4.1: Town of Lanark Facilities
Map 5.4: Wetlands & Watersheds Map
Map 5.5: Floodplains Map
Map 5.6: Groundwater Flow Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Lanark Adopted Comprehensive Plan Document
- BestPlaces.net
- TownofLanark.org
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	**Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances**
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire

	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Research and implement ways to relieve flooding on roadways

Mitigation Action	Research and implement ways to relieve flooding on roadways
Year Initiated	2019
Applicable Jurisdiction	Town of Lanark
Lead Agency/Organization	Town of Lanark EM and Roads/Bridges Specialists
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Low
Benefits (loss avoided)	High
Projected Completion Date	Short Term
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Fix culverts to reduce flooding

Mitigation Action	Fix culverts to reduce flooding
Year Initiated	2019
Applicable Jurisdiction	Town of Lanark
Lead Agency/Organization	Town of Lanark EM and Roads/Bridges Specialists
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	Short Term
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Work to identify locations for "living" snow fence

Mitigation Action	Work to identify locations for "living" snow fence
Year Initiated	2012
Applicable Jurisdiction	Town of Lanark
Lead Agency/Organization	Town of Lanark EM and Planner
Supporting Agencies/Organizations	Local Farmers and Wind Shed Partners
Applicable Goal	3 - Property and Environment
Potential Funding Source	Grants - Local and State Funding
Estimated Cost	Low
Benefits (loss avoided)	Low
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
X	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Town of Linwood Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Krieski	Howard	Chairperson	Town of Linwood	715-344-2967	

Community Profile and Description

Date of Incorporation: 1998

Current Population: The population of Linwood in the 2010 Census was, 1,078

Population Growth: Between the 2000 and 2010 Census, the population has decreased by 0.1%

Location and Description: Linwood is a town in Portage County, Wisconsin, United States. The population was 1,111 at the 2000 census.

According to the United States Census Bureau, the town has a total area of 33.8 square miles (87.5 km²), of which, 31.9 square miles (82.7 km²) of it is land, and 1.8 square miles (4.8 km²) of it (5.45%) is water.

As of the census of 2000, there were 1,111 people, 388 households, and 316 families residing in the town. The population density was 34.8 people per square mile (13.4/km²). There were 411 housing units at an average density of 12.9 per square mile (5.0/km²). The racial makeup of the town was 98.83% White, 0.09% African American, 0.18% Native American, 0.36% Asian, and 0.54% from two or more races. Hispanic or Latino of any race were 0.18% of the population.

There were 388 households out of which 36.9% had children under the age of 18 living with them, 73.5% were married couples living together, 4.4% had a female householder with no husband present, and 18.3% were non-families. 15.2% of all households were made up of individuals, and 6.2% had someone living alone who was 65 years of age or older. The average household size was 2.86, and the average family size was 3.19.

In the town, the population was spread out with 27.7% under the age of 18, 7.5% from 18 to 24, 29.8% from 25 to 44, 24.2% from 45 to 64, and 10.8% who were 65 years of age or older. The median age was 37 years. For every 100 females, there were 103.1 males. For every 100 females age 18 and over, there were 105.4 males.

The median income for a household in the town was $55,972, and the median income for a family was $59,625. Males had a median income of $39,250 versus $27,411 for females. The per capita income for the town was $21,073. About 3.8% of families and 3.0% of the population were below the poverty line, including 2.1% of those under age 18 and 9.1% of those aged 65 or over.

Climate: The Town of Linwood, Wisconsin gets 32 inches of rain, on average, per year. The U.S. average is 38 inches of rain per year. Linwood averages 45 inches of snow per year. The U.S. average is 28 inches of snow per year. On average, there are 186 sunny days per year un Linwood. The U.S. average is 205 sunny days. Linwood gets some kind of precipitation, on average, 118 days per year. Precipitation is rain, snow, sleet, or hail that falls to the ground. In order for precipitation to be counted, you have to get at least .01 inches on the ground to measure.

Public Services: The town offers services to its residents, including garbage and recycling, town events, and road assistance during extreme weather.

Governing Body Format: The Town of Linwood is governed by a town board. The board includes a chairman and trustees.

Development Trends: Town development is dependent on the residence and their needs.

Hazard Considerations Specific to the Town of Linwood:

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Tornado: Linwood-area historical tornado activity is near Wisconsin state average. It is 24% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 20.1 miles away from the Linwood town center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/19/1957, a category F4 tornado 31.0 miles away from the town center killed one person and caused between $5000 and $50,000 in damages.

Flood Risk: The Portage County Comprehensive Plan- Town of Linwood Adopted Comprehensive Plan Document Map: Floodplain shows the 100-year floodplain within the Town of Linwood.

Natural disasters: The number of natural disasters in Portage County (9) is smaller than the US average (13).

Major Disasters (Presidential) Declared: 7 Emergencies Declared: 2 Causes of natural disasters: Floods: 7, Storms: 6, Tornadoes: 2, Drought: 1, Hurricane: 1 (Note: some incidents may be assigned to more than one category).

Maps:

Maps utilized in this evaluation include the following maps from the Town of Linwood Comprehensive Plan Document:

Map: Town of Linwood Facilities
Map: Surface Water/ Wetlands
Map: Floodplain
Map: Groundwater Flow
Map: Existing Land Use
Map: Future Land Use

Sources:

- Portage County Comprehensive Plan- Town of Linwood Adopted Comprehensive Plan Document
- BestPlaces.net
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Raise Roadway

Mitigation Action	Roadways to reduce flooding
Year Initiated	2019
Applicable Jurisdiction	Town of Linwood
Lead Agency/Organization	Department of Transportation
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	2023
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Raise Rocky Run spillway to keep from flooding the Town of Linwood and roadways.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Identification of areas where residents can become land- locked

Mitigation Action	**Identification of areas where residents can become landlocked and developing evacuation strategies**
Year Initiated	2012
Applicable Jurisdiction	Town of Linwood
Lead Agency/Organization	Emergency response agencies and Town of Linwood EM lead
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety
Potential Funding Source	Local Budget
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Identify and perform cost analysis of removing homes/structures within the floodplain and floodway

Mitigation Action	Identify and perform cost analysis of removing homes/structures within the floodplain and floodway
Year Initiated	2007
Applicable Jurisdiction	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point
Lead Agency/Organization	Town of Linwood EM lead and Portage County EM
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Work to identify roads prone to flooding

Mitigation Action	Work to identify roads prone to flooding and implement projects to reduce flooding
Year Initiated	2012
Applicable Jurisdiction	Town of Alban, Town of Carson, Town of Linwood, Eau Pleine, Hull, Grant Specifically
Lead Agency/Organization	Local Municipality
Supporting Agencies/Organizations	Local EM, Portage County Emergency Management, and Planning and Zoning Department
Applicable Goal	1- Health and Safety 3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Culvert issues and flooding can close local roads. (New 2011) Create and maintain a database of bridges and culverts on all roads within the County to include the size of culverts and other valuable data. Find ways to identify which culverts and bridges are undersized or unable to handle expected floodwater flows

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Town of New Hope Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Knepeel	Todd	Chairperson	Town of New Hope	715-824-3452	Tkneptel@yahoo.com

Community Profile and Description

Date of Incorporation: 1865

Current Population: The population of New Hope in the 2010 Census was 758

Population Growth: Between the 2000 and 2010 Census, the population has increased by 6.9%

Location and Description: New Hope is a town in Portage County, Wisconsin, United States. The population was 736 at the 2000 census. The unincorporated communities of New Hope and Peru are located in the town.

According to the United States Census Bureau, the town has a total area of 36.4 square miles (94.2 km²), of which, 35.9 square miles (92.9 km²) of it is land, and 0.5 square miles (1.3 km²) of it (1.38%) is water.

As of the census of 2000, there were 736 people, 278 households, and 219 families residing in the town. The population density was 20.5 people per square mile (7.9/km²). There were 365 housing units at an average density of 10.2 per square mile (3.9/km²). The racial makeup of the town was 99.05% White, 0.27% Native American, 0.14% from other races, and 0.54% from two or more races. Hispanic or Latino of any race were 0.82% of the population.

There were 278 households out of which 34.2% had children under the age of 18 living with them, 68.0% were married couples living together, 7.2% had a female householder with no husband present, and 21.2% were non-families. 16.5% of all households were made up of individuals, and 7.6% had someone living alone who was 65 years of age or older. The average household size was 2.65, and the average family size was 3.00.

In the town, the population was spread out with 25.7% under the age of 18, 5.4% from 18 to 24, 27.7% from 25 to 44, 26.4% from 45 to 64, and 14.8% who were 65 years of age or older. The median age was 41 years. For every 100 females, there were 107.3 males. For every 100 females age 18 and over, there were 100.4 males.

The median income for a household in the town was $46,538, and the median income for a family was $48,125. Males had a median income of $35,208 versus $27,375 for females. The per capita income for the town was $21,334. About 3.9% of families and 6.3% of the population were below the poverty line, including 5.2% of those under age 18 and none of those age 65 or over.

Brief History: New Hope is a town in Portage County, Wisconsin, United States. It was constituted in 1865. The Town's first inhabitants were almost all Norwegians.

The Town in its present limits has always remained rural. A few stores were established, post offices were open, a creamery functioned for some years and the places where these establishments were received names such as Benson Corners, Garfield, Peru, but none of them developed into a village.

New Hope lies completely on the terminal moraine of the last Wisconsin glaciation. It is therefore hilly with some kettles and a number of small lakes formed in the kettles. One of the most beautiful lakes and also the most popular lake is Sunset Lake.

Public Services: The Town of New Hope provides recycling services for its residences.

Governing Body Format: The Town of New Hope is governed by a town board. The board is comprised of a Town Chair, Supervisors, Clerk, Treasurer, and a Town Assessor.

Development Trends: The Town of New Hope is in the process of analyzing all of the lands within the Town of New Hope corporate boundary, and include the short and long-range recommendations for residential, commercial and industrial development, as well as the protection of important farmlands and other natural resources as determined by the residents of the Town of New Hope.

Hazard Considerations Specific to the Town of New Hope:

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Tornado: New Hope-area historical tornado activity is near Wisconsin state average. It is 22% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 15.1 miles away from the New Hope town center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/27/1984, a category F3 (max. wind speeds 158-206 mph) tornado 17.5 miles away from the town center caused between $500,000 and $5,000,000 in damages.

Flood Risk: Map 5.5 shows the locations of the 100-year floodplain within the Town of New Hope.

Natural disasters: The number of natural disasters in Portage County (9) is smaller than the US average (13).
Major Disasters (Presidential) Declared: 7 Emergencies Declared: 2 Causes of natural disasters: Floods: 7, Storms: 6, Tornadoes: 2, Drought: 1, Hurricane: 1 (Note: some incidents may be assigned to more than one category)

Maps:

Maps utilized in this evaluation include the following maps from the Town of New Hope Comprehensive Plan Document:

Map 4.1: Town of New Hope Facilities
Map 5.4: Wetlands and Watersheds Map
Map 5.5: Floodplains Map
Map 5.6: Groundwater Flow Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of New Hope Adopted Comprehensive Plan Document

- BestPlaces.net
- Town of New Hope.org
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Clean and Treat Roads During Winter Months

Mitigation Action	**Winter weather road cleaning to reduce snow build up/debris to reduce roadway hazards**
Year Initiated	2019
Applicable Jurisdiction	Town of New Hope
Lead Agency/Organization	Portage County
Supporting Agencies/Organizations	Town of New Hope
Applicable Goal	3 - Property and Environment
Potential Funding Source	Grant -seek local, state, and federal grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	Short Term
Actual Completion Date	2022
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	To protect the health and safety of New Hope residents by lessening the negative impacts of natural and technological hazards a route plan to clean/treat roads during winter events.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
X	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
X	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
X	Major Transportation Accident/Incident
	Utility Failure

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
X	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Town of Pine Grove Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	**First Name**	**Title/Position**	**Organization**	**Phone Number**	**E-mail**
Wilson	Jeanette	Chairperson	Town of Pine Grove	715-335-6581	Willycrocket2001@yahoo.com

Community Profile and Description

Date of Incorporation: 1856

Current Population: The population of Pine Grove in the 2010 Census was 926

Population Growth: Between the 2000 and 2010 Census, the population 2.4%

Location and Description: Pine Grove is a town in Portage County, Wisconsin, United States. The population was 904 at the 2000 census. The unincorporated communities of Bancroft and West Bancroft are located within the town.

According to the United States Census Bureau, the town has a total area of 37.7 square miles (97.6 km²), of which, 37.7 square miles (97.5 km²) of it is land, and 0.04 square miles (0.1 km²) of it (0.11%) is water.

As of the census of 2000, there were 904 people, 333 households, and 243 families residing in the town. The population density was 24.0 people per square mile (9.3/km²). There were 371 housing units at an average density of 9.9 per square mile (3.8/km²). The racial makeup of the town was 92.70% White, 0.11% African American, 0.22% Native American, 1.22% Asian, 0.11% Pacific Islander, 4.09% from other races, and 1.55% from two or more races. 10.29% of the population were Hispanic or Latino of any race.

There were 333 households out of which 37.2% had children under the age of 18 living with them, 59.5% were married couples living together, 8.7% had a female householder with no husband present, and 27.0% were non-families. 23.4% of all households were made up of individuals, and 8.7% had someone living alone who was 65 years of age or older. The average household size was 2.71, and the average family size was 3.21.

In the town, the population was spread out with 28.7% under the age of 18, 9.0% from 18 to 24, 29.1% from 25 to 44, 22.5% from 45 to 64, and 10.8% who were 65 years of age or older. The median age was 36 years. For every 100 females, there were 107.3 males. For every 100 females age 18 and over, there were 106.7 males.

The median income for a household in the town was $35,294, and the median income for a family was $38,824. Males had a median income of $32,273 versus $17,891 for females. The per capita income for the town was $18,257. 10.0% of the population and 6.6% of families were below the poverty line. Out of the total people living in poverty, 12.1% are under the age of 18, and 9.0% are 65 or older.

Brief History: The Town of Pine Grove was organized in 1856. According to Malcolm Rosholt in the publication “Our County, Our Story,” the Town apparently was named for a prominent pine grove located at its center. Nearly the entire town is made up of flat land or low-lying land. Some marshy areas were improved by work from the Portage County Drainage District. The most unusual physical feature of Pine Grove is what is known as the Mosquito Bluffs, which is considered the highest point in Portage County. Unincorporated Bancroft, which is located in the northeastern corner of the Town, is the only community within Pine Grove. According to “Our County, Our Story,” the community was named after the Rev. Warren G. Bancroft, a pioneer Methodist pastor. Ezekiel “Zeke” Bancroft reportedly operated a small mill south of the community of Bancroft in a location where the Chicago & Northwestern Railway tracks were later laid, according to Rosholt. The railroad, which passed within a

mile of Bancroft, was the main catalyst for Bancroft's growth. A train depot, two warehouses for potatoes and a stockyard were located near the train tracks. All are gone today. Edwin L. Rich was the first postmaster of Bancroft's post office, which was established in 1876. Bancroft once had a hotel and a general store. It also boasted a newspaper, which quit publication around 1909. The community was a large potato warehousing center from 1890-1930. Today the surrounding area is dominated by big potato and vegetable growers who truck their products out of the area. Long-time Bancroft residents remember when their community was struck by a tornado on April 3, 1956. The twister damaged several buildings and killed and injured a number of people.

Climate: Town of Pine Grove, Wisconsin gets 33 inches of rain, on average, per year. The U.S. average is 38 inches of rain per year. Pine Grove averages 46 inches of snow per year. The U.S. average is 28 inches of snow per year. On average, there are 186 sunny days per year in Pine Grove. The U.S. average is 205 sunny days. Pine Grove gets some kind of precipitation, on average, 117 days per year. Precipitation is rain, snow, sleet, or hail that falls to the ground. For precipitation to be counted, you have to get at least .01 inches on the ground to measure.

Public Services: The Town of Pine Grover provides services to its residents, including reactional services, trade skill training public library services.

Governing Body Format: The Town of Pine Grove is governed by a Town Board.

Development Trends: Provide the framework for guiding future community development activities in the Town of Pine Grove. A means of deriving goals and policies is through issue identification. Many of the issue statements in the various plan elements are framed as questions. This was purposefully done so that answering the questions would help Plan Commissioners form goal or policy statements. Goals are stated as desirable conditions to strive toward in the future. They are common ideals of the community that can be achieved through the actions of government leaders, private enterprises, and individuals. Objectives are general targets to be achieved along the path of satisfying community goals. Policies are more specific recommendations or methods of action to accomplish these stated objectives. Together these three pieces express the uniqueness of the community while providing guidance for desirable patterns of growth and development.

Hazard Considerations Specific to the Town of Pine Grover:

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Tornado Activity: Pine Grove-area historical tornado activity is slightly above Wisconsin state average. It is 37% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 12.1 miles away from the Pine Grove town center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/19/1957, a category F4 tornado 28.1 miles away from the town center killed one person and caused between $5000 and $50,000 in damages.

Natural Disasters: The number of natural disasters in Portage County (9) is smaller than the US average (13). Major Disasters (Presidential) Declared: 7 Emergencies Declared: 2 Causes of natural disasters:

Floods: 7, Storms: 6, Tornadoes: 2, Drought: 1, Hurricane: 1 (Note: some incidents may be assigned to more than one category).

Flood Risk: There are no floodplains within the Town of Pine Grove.

Maps:

Maps utilized in this evaluation include the following maps from the Town of New Hope Comprehensive Plan Document:

Map 4.1: Town of Pine Grove Facilities
Map 5.5: Wetlands and Watersheds Map
Map 5.6: Groundwater Flow Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Pine Grove Adopted Comprehensive Plan Document
- BestPlaces.net
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Raise Roads to Reduce Flooding

Mitigation Action	**Develop a listing of roads prone to flooding and design and implement flood reduction projects**
Year Initiated	2019
Applicable Jurisdiction	Town of Pine Grove
Lead Agency/Organization	Department of Transportation
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Raise roads ways to prevent roads from flooding and mitigate transportation accidents from occurring, providing the public with safer roadways.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Severe Weather Relocation Plan for Elderly and Vulnerable Communities

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	5
Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	5

Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	4
Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	5
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	5
Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund.	5
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	5
	Total Score:34

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Town of Plover Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	**First Name**	**Title/Position**	**Organization**	**Phone Number**	**E-mail**
Karcheski	Tim	Chairperson	Town of Plover	715-630-5493	Tim.karcheski@yahoo.com

Community Profile and Description

Date of Incorporation: 1970

Current Population: The population of Plover in the 2010 Census was 12,552

Population Growth: Between the 2000 and 2010 Census, the population has increased by 0.3%

Location and Description: Plover is a town in Portage County, Wisconsin, United States. The population was 2,415 at the 2000 census. The unincorporated community of Meehan is located in the town. The unincorporated community of Kellner is also located partially in the town.

According to the United States Census Bureau, the town has a total area of 43.6 square miles (113.0 km²), of which, 42.3 square miles (109.5 km²) of it is land, and 1.3 square miles (3.5 km²) of it (3.07%) is water.

As of the census [1] of 2000, there were 10,000 people, 861 households, and 699 families residing in the town. The population density was 57.1 people per square mile (22.0/km²). There were 916 housing units at an average density of 21.7 per square mile (8.4/km²). The racial makeup of the town was 96.98% White, 0.25% Black or African American, 0.25% Native American, 1.86% Asian, 0.08% from other races, and 0.58% from two or more races. 0.54% of the population were Hispanic or Latino of any race.

There were 861 households out of which 40.3% had children under the age of 18 living with them, 74.3% were married couples living together, 4.8% had a female householder with no husband present, and 18.7% were non-families. 14.5% of all households were made up of individuals, and 3.7% had someone living alone who was 65 years of age or older. The average household size was 2.80, and the average family size was 3.12.

In the town, the population was spread out with 27.7% under the age of 18, 7.2% from 18 to 24, 31.8% from 25 to 44, 25.6% from 45 to 64, and 7.7% who were 65 years of age or older. The median age was 36 years. For every 100 females, there were 106.8 males. For every 100 females age 18 and over, there were 103.1 males.

The median income for a household in the town was $49,313, and the median income for a family was $59,569. Males had a median income of $37,784 versus $27,000 for females. The per capita income for the town was $21,186. About 1.8% of families and 3.7% of the population were below the poverty line, including 6.8% of those under age 18 and 5.5% of those aged 65 or over.

Brief History: In 2000 a scattering of annexations was petitioned as property owners desired village utilities. In 1996 and again in 1997 two subdivisions were annexed to the City of Stevens Point; the related boundary agreement extended utilities to these two areas in the Town of Plover for ten years after which these areas moved into the tax base of the City of Stevens Point. In 2006 and again in 2007, population statistics reflect the impact of these two annexations to the City of Stevens Point. At about this time, a developer recognized the potential of the existing 27-hole Tree Acres Golf Course in the Town of Plover and convinced the Village of Plover to undertake a TIF district to finance the development of this large tract of land. There were plans for man-made lakes, water-ski competitions, a condominium complex built around an 18-hole golf course and more. Another 160 acres were annexed

at about the same time in anticipation of the needs this development would drive. Eisenhower Avenue, which had been a Town of Plover road now became County Road R; Village utilities were extended in anticipation of supporting this project but yet in 2012 nothing has materialized beyond that point. By 2010, the Town of Plover was now the 9th largest of the towns in Portage County in terms of geographic size, encompassing an area of approximately 26,300 acres or 41.1 square miles. It is also the 9th largest town in terms of population, with approximately 1710 residents.

Climate: Town of Plover, Wisconsin gets 32 inches of rain, on average, per year. The U.S. average is 38 inches of rain per year. Plover averages 46 inches of snow per year. The US average is 28 inches of snow per year. On average, there are 186 sunny days per year in Plover. The U.S. average is 205 sunny days. Plover gets some kind of precipitation, on average, 119 days per year. Precipitation is rain, snow, sleet, or hail that falls to the ground. For precipitation to be counted, you have to get at least .01 inches on the ground to measure.

Public Service: The town of Plover offers services to residents, including building assessments, curbside pickup, salt/sand pickup, dumpster services, elections, yard materials, and zoning in the town limits. The Town of Plover is currently served by the Portage County Sheriffs Department. The Portage County Sheriff's Department provides protective services through random patrols and on a "call- out" basis. The Town currently contracts with the Village of Plover for fire service. The fire station is located on Post Road in the Village of Plover and consists of a full-time Fire Chief, a full-time Fire Captain and forty-two "paid-on-call" firefighters.

Governing Body Format: The Town of Plover is governed by a Town Board. The Town Board is comprised of a Chairman and Supervisors.

Development Trends: Provide the framework for guiding future community development activities in the Town of Plover. A means of deriving goals and policies is through issue identification. Many of the issue statements in the various plan elements are framed as questions. This was purposefully done to help plan commissioners form goal or policy statements by answering the questions. Goals are stated as desirable conditions to strive toward in the future. They are common ideals of the community that can be achieved through the actions of government leaders, private enterprises, and individuals. Objectives are general targets to be achieved along the path of satisfying community goals. Policies are more specific recommendations or methods of action to accomplish these stated objectives. Together these three pieces express the uniqueness of the community while guiding desirable patterns of growth and development.

Hazard Considerations Specific to the Town of Plover:

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Tornado Activity: Plover-area historical tornado activity is slightly above Wisconsin state average. It is 26% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 15.3 miles away from the Plover village center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/19/1957, a category F4 tornado 33.5

miles away from the village center killed one person and caused between $5000 and $50,000 in damages.

Flood Risk: Map 5.6 shows the locations of the 100-year floodplain within the Town of Plover.

Maps:

Maps utilized in this evaluation include the following maps from the Town of Plover Comprehensive Plan Document:

Map 4.1: Town of Plover Facilities
Map 5.4: Wetlands & Watersheds Map
Map 5.5: Floodplains Map
Map 5.6: Groundwater Flow Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Plover Adopted Comprehensive Plan Document
- BestPlaces.net
- Town of Plover Website
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a listing of roads prone to flooding and design and implement flood reduction projects

Mitigation Action	**Develop a listing of roads prone to flooding and design and implement flood reduction projects**
Year Initiated	2019
Applicable Jurisdiction	Town of Plover
Lead Agency/Organization	Town of Plover
Supporting Agencies/Organizations	Department of Transportation
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Raise roadways to mitigation flooding and provide residents with safer modes of transportation.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	4
Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	2
Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	2
Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	4
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	4

Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund.	4
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	2
	Total Score: 22

Mitigated Hazards	
	All Hazards
X	Dam/Levee Failure
	Drought
	Earthquake
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
	Landslide
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Subsidence (Sinkhole)
	Tornado and High Winds
	Wildfire
	Civil Disorder/Riot
	Cyber Attack
	Fire Hazards
	Hazardous Materials Release
	Infrastructure Failure
	Major Transportation Accident/Incident
	Public Health Emergency
	Radiological
	Structural Failure
	Terrorism
	Utility Failure
	Violent Mass Casualty Incident

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Town of Sharon Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Check	Jeffrey	President	Town of Sharon	715-570-4261	
Gibbs	Bill	Supervisor	Town of Sharon	715-347-6519	billkimgibbs@hotmail.com

Community Profile and Description

Date of Incorporation: 1857

Current Population: The population of Sharon in the 2010 Census was 1,987

Population Growth: Between the 2000 and 2010 Census, the population has increased by 2.4%

Location and Description: Sharon is a town in Portage County, Wisconsin. The 2018 preliminary population estimate was 2032 population. This makes Sharon the county's 5th most populous community. The unincorporated communities of Ellis, North Star, and Polonia are located within the town. Sharon is the second largest town (out of 17 towns) in Portage County in terms of geographic size, encompassing an area of approximately 41,488 acres or 64.9 miles of which 64.3 square miles of it is land and .6 square miles (or 384 acres) is water.

The Town of Sharon is located on the northern edge of Portage County and is bordered on the north by Marathon County, on the south by the Town of Stockton, on the east by the Towns of New Hope and Alban, and on the west by the Towns of Hull and Dewey.

Up until 1960, the Town of Sharon was a typical rural agriculture-based community with a steadily declining population, due mostly to the changes in the agricultural economy. Thus, the decade of the 1960s marked the end of the Town of Sharon's declining population and the beginning of a growth period that continues today.

The region was first wooded and attracted lumbermen. When it was cleared of trees, it became farmland. Among the pioneer settlers were Irish and German Catholics, who set down roots where Ellis is today. In 1857, the first Polish family settled in this area, creating the first Polish rural settlement in the State and the second in the United States. Coming along with these Polish emigrants was their respect for the land, religion, family, and an ethic of hard work.

Polonia was named by a Polish priest when he established a new Catholic church east of Ellis. By the 1900s at least 10,000 people, more than one-third of the Portage County population were of Polish descent. Polish Americans continued the legacy given by their ancestors. This legacy is also evident by the dedication of Highway 66 as the Polish Heritage Highway.

Brief History: Sharon is a town in Portage County, Wisconsin. The 2018 preliminary population estimate was 2032 population. This makes Sharon the county's 5th most populous community. The unincorporated communities of Ellis, North Star, and Polonia are located within the town. Sharon is the second largest town (out of 17 towns) in Portage County in terms of geographic size, encompassing an area of approximately 41,488 acres or 64.9 miles of which 64.3 square miles of it is land and .6 square miles (or 384 acres) is water. The Town of Sharon is located on the northern edge of Portage County and is bordered on the north by Marathon County, on the south by the Town of Stockton, on the east by the Towns of New Hope and Alban, and on the west by the Towns of Hull and Dewey. Up until 1960, the Town of Sharon was a typical rural agriculture-based community with a steadily declining population, due mostly to the changes in the agricultural economy. Thus, the decade of the 1960s marked the end of the Town of Sharon's declining population and the beginning of a growth period that continues today. The region was first wooded and attracted lumbermen. When it was cleared of trees, it became

farmland. Among the pioneer settlers were Irish and German Catholics, who set down roots where Ellis is today. In 1857, the first Polish family settled in this area, creating the first Polish rural settlement in the State and the second in the United States. Coming along with these Polish emigrants was their respect for the land, religion, family, and an ethic of hard work. Polonia was named by a Polish priest when he established a new Catholic church east of Ellis. By the 1900s at least 10,000 people, more than one-third of the Portage County population were of Polish descent. Polish Americans continued the legacy given by their ancestors. This legacy is also evident by the dedication of Highway 66 as the Polish Heritage Highway.

Climate: Sharon, Wisconsin gets 33 inches of rain, on average, per year. The US average is 38 inches of rain per year. Sharon averages 52 inches of snow per year. The US average is 28 inches of snow per year. On average, there are 186 sunny days per year in Sharon. The US average is 205 sunny days. Sharon gets some kind of precipitation, on average, 119 days per year. Precipitation is rain, snow, sleet, or hail that falls to the ground. In order for precipitation to be counted, you have to get at least .01 inches on the ground to measure.

Public Services: The Town of Sharon offers services to residents including dog licensing, garbage, recycling, and burning, voter registration and liquor licensing. The Town of Sharon is served by the Portage County Sheriff's Department. The Town of Sharon shares in a fire district with the Village of Rosholt and the Town of Alban. A future fire substation may be needed in the Town as growth and development dictates. The Rosholt Fire District also has mutual aid agreements for fire protection with surrounding communities which are approved by the Town.

Governing Body Format: The Town of Sharon is governed by a Town Board. The Town Board is comprised of a Chairman, Supervisors, and a Clerk/Treasurer, Assessor and Building Inspector.

Development Trends: The Town of Sharon recognizes the important role that agricultural operations play in the economy and toward the preservation of a rural lifestyle and community character. Town residents wish to protect agricultural operations while allowing for future development needs. Town residents also recognize the importance that natural resources, such as the named and unnamed lakes in the Town of Sharon (MAP 042) and scenic vistas along the moraines that contribute toward the rural character. Recognition of these assets should be taken into consideration as growth and development occur over time. Goals, objectives, and policies provide the framework for guiding future community development activities in the Town of Sharon. A means of deriving goals and policies is through issue identification. Many of the issue statements in the various plan elements are framed as questions. This was purposefully done so that answering the questions would help plan commissioners form goal or policy statements. Goals are stated as desirable conditions to strive toward in the future. They are common ideals of the community that can be achieved through the actions of government leaders, private enterprises, and individuals. Objectives are general targets to be achieved along the path of satisfying community goals. Policies are more specific recommendations or methods of action to accomplish these stated objectives. Together these three pieces express the uniqueness of the community while providing guidance for desirable patterns of growth and development.

Hazard Considerations Specific to the Town of Sharon:

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Tornado: Town of Sharon area historical tornado activity is near Wisconsin state average. It is 22% greater than the overall U.S. average.

Flood Risk: Map 035 of the Portage County Comprehensive Plan- Town of Sharon Adopted Comprehensive Plan Document shows the floodplains within Town of Sharon.

Natural disasters: The number of natural disasters in Portage County (9) is smaller than the US average (13).

Major Disasters (Presidential) Declared: 7 Emergencies Declared: 2 Causes of natural disasters: Floods: 7, Storms: 6, Tornadoes: 2, Drought: 1, Hurricane: 1 (Note: some incidents may be assigned to more than one category)

Maps:

Map: Town of Sharon Facilities
Map: Wetlands and Watersheds Map
Map: Floodplains Map
Map: Groundwater Flow Map
Map: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Sharon Adopted Comprehensive Plan Document
- BestPlaces.net
- Town of Sharon .com
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

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- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	**Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances**
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire

	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	4
Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	5
Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	3

Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	4
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	4
Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund.	3
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	4
	Total Score:27

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Town of Stockton Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Novotny	Lauri	Clerk	Town of Stockton	715-592-4712	stockton@wi-net.com

Community Profile and Description

Date of Incorporation: 1869

Current Population: The population of Stockton in the 2010 Census was 2,917

Population Growth: Between the 2000 and 2010 Census, the population has increased

Location and Description: Stockton is a town in Portage County, Wisconsin, United States. The population was 2,896 at the 2000 census. The unincorporated communities of Arnott, Custer, Fancher, Esker, and Stockton are located in Stockton.

According to the United States Census Bureau, the town has a total area of 57.8 square miles (149.8 km²), of which, 57.7 square miles (149.4 km²) of it is land, and 0.1 square miles (0.4 km²) of it (0.24%) is water.

As of the census of 2000, there were 2,896 people, 984 households, and 820 families residing in the town. The population density was 50.2 people per square mile (19.4/km²). There were 1,025 housing units at an average density of 17.8 per square mile (6.9/km²). The racial makeup of the town was 97.86% White, 0.21% African American, 0.28% Native American, 0.52% Asian, 0.28% from other races, and 0.86% from two or more races. Hispanic or Latino of any race were 1.21% of the population.

There were 984 households out of which 40.1% had children under the age of 18 living with them, 73.0% were married couples living together, 5.8% had a female householder with no husband present, and 16.6% were non-families. 11.4% of all households were made up of individuals, and 3.8% had someone living alone who was 65 years of age or older. The average household size was 2.94, and the average family size was 3.20.

In the town, the population was spread out with 29.1% under the age of 18, 8.0% from 18 to 24, 30.3% from 25 to 44, 24.8% from 45 to 64, and 7.8% who were 65 years of age or older. The median age was 36 years. For every 100 females, there were 111.7 males. For every 100 females age 18 and over, there were 108.7 males.

The median income for a household in the town was $50,957, and the median income for a family was $57,096. Males had a median income of $37,234 versus $23,006 for females. The per capita income for the town was $19,886. About 1.2% of families and 2.8% of the population were below the poverty line, including 2.3% of those under age 18 and 3.9% of those aged 65 or over.

Brief History: The Town of Stockton has a rich and varied history. Fortunately, because of the efforts of people who thought forward enough to appreciate and record the past, we can catch a glimpse of what it must have been like to live here 100 or even 150 years ago. If you have pictures, stories, or documents you'd like to share on our site, please contact the Town Clerk. We would like to thank Sue Stremkowski and Malcolm Rosholt, as well as the many others who have been playing a role in recording and publishing our past.

Climate: The Town of Stockton, Wisconsin, gets 33 inches of rain, on average, per year. The U.S. average is 38 inches of rain per year. Stockton averages 48 inches of snow per year. The U.S. average is 28 inches

of snow per year. On average, there are 186 sunny days per year in Stockton. The U.S. average is 205 sunny days. Stockton gets some kind of precipitation, on average, 120 days per year. Precipitation is rain, snow, sleet, or hail that falls to the ground. For precipitation to be counted, one must get at least .01 inches on the ground to measure.

Public Services: The town provides the residents with several services to include a license to serve fermented malt beverages and intoxicating liquors, temporary class b license, dog licenses, excavating with the right-of-way of nay town road, building permit fee, plan commission request, zoning permits, and residential driveway request permits. The Town of Stockton is provided with police and fire services from Portage County Sheriff's Department.

Governing Body Format: The Town of Stockton is governed by a Town Board. The board is comprised of a Chairman, two Supervisors, a Clerk, and a Treasurer.

Development Trends: We envision that in 2030 most of Stockton will remain a rural community that strives to maintain a balance between growth pressures from the City of Stevens Point, and the Village of Plover. We realize that we are living in a time of economic and land use change in the Town of Stockton. We anticipate the changes that will occur over the next twenty years may alter the landscape and rural character of our Town. The Plan Commission believes that our Town has a future based on community values and we offer this statement: "Town Officials and residents will work to maintain the rural and agricultural character of the community as much as possible by trying to preserve, protect, and enhance the Town's natural resources and open spaces while maintaining a high quality of life in the Town of Stockton." Growth is anticipated but will be managed in a financially sound way which will not negatively impact the Town's ability to provide services. While agriculture continues to be the predominant land use and the cornerstone of our Town's economy, we continue to support well planned residential areas and small commercial development to maintain the tax base and annexations. Higher intensity uses are carefully planned to blend with our rural lifestyle and our neighboring municipalities.
Town of Stockton 2016 Comprehensive Plan: Issues & Opportunities Element, Adopted 9-13-16 Page - 8

The Town will continue to work with neighboring communities to resolve issues of extraterritorial rights and any other common problems to enhance the quality of life for present and future generations. To achieve this desired future, residents and community leaders recognize the necessity and importance of individual rights, landowner rights, and community interests encouraging citizen involvement and open communication.

Hazard Considerations Specific to the Town of Stockton:

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Stockton-area historical tornado activity is near Wisconsin state average. It is 25% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 12.5 miles away from the Stockton town center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/19/1957, a category F4 tornado 39.5 miles away from the town center killed one person and caused between $5000 and $50,000 in damages.

Earthquake activity: Stockton-area historical earthquake activity is slightly above Wisconsin state average. It is 90% smaller than the overall U.S. average. On 6/28/2004 at 06:10:52, a magnitude 4.2 (4.0 MB, 4.2 MW, Depth: 6.2 mi, Class: Light, Intensity: IV - V) earthquake occurred 211.2 miles away from the city center On 4/18/2008 at 09:36:59, a magnitude 5.4 (5.1 MB, 4.8 MS, 5.4 MW, 5.2 MW, Depth: 8.9 mi, Class: Moderate, Intensity: VI - VII) earthquake occurred 425.1 miles away from Stockton center On 6/10/1987 at 23:48:54, a magnitude 5.1 (4.9 MB, 4.4 MS, 4.6 MS, 5.1 LG) earthquake occurred 400.0 miles away from Stockton center On 7/9/1975 at 14:54:15, a magnitude 4.6 (4.6 MB) earthquake occurred 333.5 miles away from the city center On 9/2/1999 at 16:17:29, a magnitude 3.5 (3.5 LG, Depth: 3.1 mi, Class: Light, Intensity: II - III) earthquake occurred 191.5 miles away from the city center On 7/12/1986 at 08:19:37, a magnitude 4.5 (4.5 MB) earthquake occurred 375.3 miles away from the city center Magnitude types: regional Lg-wave magnitude (LG), body-wave magnitude (MB), surface-wave magnitude (MS), moment magnitude (MW)

Maps:

Maps utilized in this evaluation include the following maps from the Town of Stockton Comprehensive Plan Document:

Map 2.1: Vacant Residential Lots
Map 2.2: Residential Permits on 2 Acre Lots
Map 2.3: Residential Permits on 5 Acre Lots
Map 3.1: Transportation Network
Map 3.2: Highway 10 Preferred Route
Map 4.1: Utilities
Map 4.2: Community Facilities
Map 5.1: Productive Agricultural Soils Map
Map 5.2: Soil Associations
Map 5.3: Topographic Map
Map 5.4: Wetlands and Floodplains Map
Map 5.5: Wellhead Protection Areas
Map 5.6: Nitrate Nitrogen in Private Wells
Map 5.7: Atrazine Prohibition Area
Map 5.8: Nonmetallic Mining Operations & Sand/Gravel Deposits
Map 5.9: Forested Land
Map 8.1: Existing Land Use Map
Map 8.2: Development Constraints
Map 8.3: Future Land Use
Map 8.4: Stevens Point & Plover Extraterritorial Land Use Map: Town of Stockton Facilities
Map: Surface Water/ Wetlands
Map: Floodplain
Map: Groundwater Flow
Map: Existing Land Use
Map: Future Land Use

Source:

- Portage County Comprehensive Plan - Town of Stockton
- http://www.city-data.com/city/Stockton-Wisconsin
- https://townofstockton.com/

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

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- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	**Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances**
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire

	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Installation of Power Back-up Generator System

Mitigation Action	Procure, Install, and Update Generator / Warning Sires
Year Initiated	2019
Applicable Jurisdiction	Town of Stockton
Lead Agency/Organization	Town Board
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education
Potential Funding Source	Local funds and as needed, seek state or federal grant
Estimated Cost	Low - $2,000
Benefits (loss avoided)	High
Projected Completion Date	Fall 2019
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	This system would allow the functions of the Fire Department including the high capacity well, EMS, Public Works and Government Office to serve the residents in an emergency. During the storm event of July 20th, 2019, power was out for an extended period of time. Our Fire Department/EMS depends on access to emergency vehicles and supplies. A building-wide emergency power generator would allow FD/EMS to open the doors and power equipment as needed. Another crucial asset needed during an emergency situation is our high capacity well used to supply water for fighting fires. A backup generator system would allow this well to function as needed. During a recent storm, there would have been no way for us to pump water to fight fires that could have occurred during the storm. The emergency generator would also provide power for our Public Works Department, which would allow them access to repair equipment and infrastructure damaged during a storm event. An emergency power generator would also allow the Elected Officials to conduct business in the Town offices and the meeting area could be used as an emergency evacuation area if it was served by a backup power generator to provide water, hat and light to evacuees. Extended power outage hampers the ability of the Town to serve the residents of the Town.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)

	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Mitigate potential flooding in areas previously impacted by flooding through a culvert maintenance program

Mitigation Action	**Mitigate potential flooding in areas previously impacted by flooding through a culvert maintenance program**
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Town of Stockton EM and Public Works
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	Local budget
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Village of Almond Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Folan	Daniel	Fire Chief	Village of Almond	715-347-7181	folans@uniontel.net

Community Profile and Description

Date of Incorporation: 1905

Current Population: The estimated population in 2017 was 432.

Population Growth: The Village of Almond has experienced a decline in population of 3.5% since 2010.

Location and Description: The Village of Almond is located within the Town of Almond. The Town of Almond is located in the south-central part of Portage County and is bordered on the south by Waushara County, and by the Portage County Towns of Buena Vista on the north, Belmont on the east and Pine Grove on the west. the village has a total area of 1.01 square miles (2.62 km2), all of it land.

Brief History: The Village of Almond separated from the Town of Almond and was incorporated in 1905.

Climate: Along with the majority of Portage County, the Village of Almond has a humid continental climate with warm summers and cold winters. It has a subtype warm-summer (Köppen climate classification Dfb). Almond gets 33 inches of rain and 46 inches of snow, on average, per year. Almond gets some kind of precipitation, on average, 118 days per year. The July high is around 81 degrees, and the January low is around 6 degrees.

Public Services: The Village of Almond provides building permits, fire inspections, and sets ordinances for the Village. The Village of Almond Volunteer Fire Department and First Responders are limited in scope and are supplemented by Portage County resources. Law enforcement is provided by Portage County.

Governing Body Format: The Village of Almond's governing body is its Village Board. The Board consists of a President, Clerk, Treasurer, and six Trustees. There are also several committees, including Fire, Planning, Properties, and Public Works.

Development Trends: To accommodate the growth that may occur in the Village, tracts of land that are now void of development will see homes, farms, and businesses. If new development is not properly managed, the Village may find itself faced with unnecessarily inflated expenditure requirements for the provision of its limited services to the new areas.

Hazard Considerations Specific to the Village of Almond:

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Almond-area historical tornado activity is slightly above Wisconsin state average. It is 40% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 7.2 miles away from the Almond village center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/3/1956, a category F4 tornado 31.6 miles away from the village center killed seven people and injured 50 people and caused between $500,000 and $5,000,000 in damages.

Earthquake activity: Almond-area historical earthquake activity is slightly above Wisconsin state average. It is 89% smaller than the overall U.S. average. On 6/28/2004 at 06:10:52, a magnitude 4.2 (4.0 MB, 4.2 MW, Depth: 6.2 mi, Class: Light, Intensity: IV - V) earthquake occurred 195.5 miles away from Almond center On 4/18/2008 at 09:36:59, a magnitude 5.4 (5.1 MB, 4.8 MS, 5.4 MW, 5.2 MW, Depth: 8.9 mi, Class: Moderate, Intensity: VI - VII) earthquake occurred 409.5 miles away from the city center On 6/10/1987 at 23:48:54, a magnitude 5.1 (4.9 MB, 4.4 MS, 4.6 MS, 5.1 LG) earthquake occurred 384.5 miles away from the city center On 7/9/1975 at 14:54:15, a magnitude 4.6 (4.6 MB) earthquake occurred 338.7 miles away from Almond center On 9/2/1999 at 16:17:29, a magnitude 3.5 (3.5 LG, Depth: 3.1 mi, Class: Light, Intensity: II - III) earthquake occurred 175.7 miles away from Almond center On 4/18/2008 at 15:14:16, a magnitude 4.8 (4.5 MB, 4.8 MW, 4.6 MW, Depth: 6.2 mi) earthquake occurred 408.3 miles away from the city center Magnitude types: regional Lg-wave magnitude (LG), body-wave magnitude (MB), surface-wave magnitude (MS), moment magnitude (MW)

Flood Risk: There are no floodplains with in The Village of Almond.

Maps:

Maps utilized in this evaluation include the following maps from the Town of Almond Comprehensive Plan Document:

Map 4.1: Town of Almond Facilities
Map 5.4: Wetlands & Watersheds Map
Map 5.5: Groundwater Flow Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Almond Adopted Comprehensive Plan Document
- BestPlaces.net
- VillageofAlmond.com
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	**Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances**
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire

	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Village of Amherst Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	**First Name**	**Title/Position**	**Organization**	**Phone Number**	**E-mail**
Juris	Michael	President	Village of Amherst	715-824-3829	michaeljuris@hotmail.com

Community Profile and Description

Date of Incorporation: 1900

Current Population: The population as of the 2010 Census was 1,035. The 2015 State of Wisconsin Department of Administration population estimate for the Village of Amherst was 1,047, a 1.2% increase since the 2010 Census.

Population Growth: The Village of Amherst has seen a consistently positive growth rate over the last 40 years. According to decennial Census information, the population increased by 450 people, nearly doubling (77%) between 1970 and 2010.

Location and Description: The Village of Amherst is located on the Tomorrow River, 15 miles southeast of Stevens Point and 14 miles northwest of Waupaca, lying along what was once a Native American portage that stretched from the Wolf River to the Wisconsin River.

Brief History: The Village of Amherst was previously part of the Town of Amherst, to meet the changing needs of the settlement around the Upper Amherst Mill Pond, the residents voted to incorporate on December 28, 1900. The following spring, the 640-acre Village became fully incorporated and A. J. Smith was elected the first Village President. Today, the Village of Amherst occupies nearly 830 acres.

Climate: Along with the majority of Portage County, the Village of Amherst has a humid continental climate with warm summers and cold winters. It has a subtype warm-summer (Köppen climate classification Dfb). The Village of Amherst gets 33 inches of rain and 46 inches of snow, on average, per year. Amherst gets some kind of precipitation, on average, 115 days per year. The July high is around 81 degrees, and the January low is around 6 degrees.

Public Services: The Village of Amherst provides building inspections, zoning, and public works and utility services. Currently, the Village does not have its police department. The Portage County Sheriff's Department provides protective services through regular patrols and on a "call-out" basis. The Village of Amherst is part of the Amherst Fire and Safety District, located at 4585 Fairgrounds Road, Amherst. The Amherst Fire District (Map 4.4) protects approximately 6000 people living in a 90 square mile area including the Villages of Amherst, Amherst Junction, Nelsonville, and Town of Amherst. Portions of the Town of Lanark contracts for their fire protection service with the Amherst Fire District. The Town of New Hope utilizes First Responder services from the Amherst Fire District.

Governing Body Format: The Village of Amherst is governed by the Village Officials, including the Village President, six Trustees, and a Plan Commission.

Development Trends: The Village of Amherst is experiencing a sustained period of growth and change that could affect the nature of the community for years to come. By the year 2040, nearly 3,000 people may live in the Amherst area (Town of Amherst and Villages of Amherst, Amherst Junction, and Nelsonville), with nearly 1,200 people living within the Village. To accommodate this growth, the Village's current development pattern will change, and tracts of land (both in and outside the Village) that are now vacant will be developed. If not properly managed, these changes could result in unwise use of land resources and inefficient expenditures for municipal utilities and services.

Hazard Considerations Specific to the Village of Amherst:

Tornado activity: Amherst-area historical tornado activity is slightly above Wisconsin state average. It is 28% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 8.4 miles away from the Amherst village center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/27/1984, a category F4 tornado 36.9 miles away from the village center killed one person and injured 19 people and caused between $500,000 and $5,000,000 in damages.

High Winds Damage from winds and debris carried along by the wind would damage structures and pose risks for individuals exposed to it. Businesses and schools would close. May prove hazardous for trains passing through the village. May also impact the communications infrastructure restricting both emergency and non-emergency use.

Tornado Damage from winds and debris carried along by the wind would damage structures and pose risks for individuals exposed to it. May disable the water supply system or impair the operations of the WWTF. Businesses and schools would close. May prove hazardous for trains passing through the village. May also impact the communications infrastructure restricting both emergency and non-emergency use.

Flood Risk: Map 5.5 shows the locations of the 100-year floodplain within the Village of Amherst.

Natural disasters: The number of natural disasters in Portage County (9) is smaller than the US average (13).

Major Disasters (Presidential) Declared: 7 Emergencies Declared: 2 Causes of natural disasters: Floods: 7, Storms: 6, Tornadoes: 2, Drought: 1, Hurricane: 1 (Note: some incidents may be assigned to more than one category).

Extreme Cold Potential freezing of village's water supply tower, its water supply system, and the sanitary sewer system as well. Water & sewer laterals running from village mains to business or residences could freeze as well. May compromise the ability of some structures to maintain adequate heat levels for use, so residents may have to relocate to warming centers or other structures. Conditions may make the use of some motorized equipment impossible, and may impact the mechanical components of the wastewater treatment facility, the nitrate removal facility, or the wells. Ice jams from the Mill Pond and the Tomorrow River may be a hazard, and the impact of these conditions upon streets and sidewalks could be a concern. School and business closings would occur.

Severe Winter Weather/Heavy Snowfall/Ice Storm Travel hazards would develop on village streets and sidewalks. Potential freezing of village's water supply tower, its water supply system, and the sanitary sewer system as well. Water & sewer laterals running from village mains to business or residences could freeze as well. Structural failures of some building due to heavy snow or ice levels, leading to collapse for some. May compromise the ability of some structures to maintain adequate heat levels for use, so residents may have to relocate to warming centers or other structures. Conditions may make the use of some motorized equipment impossible, and may impact the mechanical components of the wastewater treatment facility, the nitrate removal facility, or the wells. Ice jams from the Mill Pond and the Tomorrow River may be a hazard, and the impact of these conditions upon streets and sidewalks could

be a concern. School and business closings would occur. May prove hazardous for trains passing through the village. May also impact the communications infrastructure restricting both emergency and non-emergency use.

Extreme Heat May compromise the ability of some structures to maintain adequate temperature levels for use, so residents may have to relocate to cooling centers or other structures. Conditions may make the use of some motorized equipment impossible, and may impact the mechanical components of the wastewater treatment facility, the nitrate removal facility, or the wells. Environmental impacts on the Mill Pond and the Tomorrow River may be a hazard, and the impact of these conditions upon streets and sidewalks could be a concern. School and business closings would occur.

Drought Village water supply from two active groundwater wells. Another well stands in reserve for fire protection use. Severe drop in water table would put village water system at risk. Effect of extremely low surface water levels upon the Amherst Mill Pond and the Tomorrow River would have health and environmental impacts as these runs through the center of the Village of Amherst.

Wildfire Damage from heat and smoke carried along by the wind would damage structures and pose health risks for individuals exposed to it. May disable the water supply system or impair the operations of the WWTF. Businesses and schools would close. May prove hazardous for trains passing through the village. May also impact the communications infrastructure restricting both emergency and non-emergency use.

Flood (Riverine) Structural damage due to erosion and debris to embankments, shorelines both above and below the dam, as well as the dam structure and hydroelectric generator building. Damage likely to various buildings and public parklands downstream. Concrete bridge adjacent to the dam recently rebuilt to withstand flood events, but still liable to damage. Another bridge downstream is much older and may suffer damage from water levels or debris as well. Some structures near the river may experience flooded basements or first floors. This may imperil village wells, and would certainly pose a risk for individuals exposed to the waters. May prove hazardous for trains passing through the village.

Flood (Urban/Flash Flooding) Flooding of drainage ditches, roadways, railroad underpasses, storm sewers would close some streets and create hazards for vehicles. Structural damage due to erosion and debris to embankments, shorelines both above and below the dam, as well as the dam structure and hydroelectric generator building. Damage likely to various buildings and public parklands downstream. Concrete bridge adjacent to the dam recently rebuilt to withstand flood events, but still liable to damage. Another bridge downstream is much older and may suffer damage from water levels or debris as well. Some structures near the river may experience flooded basements or first floors. This may imperil village wells and the WWTF, and would certainly pose a risk for individuals exposed to the waters. May prove hazardous for trains passing through the village. May also impact the communications infrastructure restricting both emergency and non-emergency use.

Hazardous Materials Release Impact of airborne, waterborne or soilborne contamination upon the health and safety of human inhabitants, wildlife and plant life may be of both immediate and long-term concerns. The threat to contaminate the village's water supply is of concern, as well as the threat of rendering areas uninhabitable.

Other Manmade Hazards Although 3 elevated train overpasses ease vehicle travel through the village, dozens of trains speed through the Village of Amherst every day, and the potential for a derailment of

any kind is a major concern. Derailed train cars transporting unknown quantities of both hazardous and non-hazardous materials would be a major catastrophe for the community. The concerns involving the evacuation of residents, fires, explosions, destruction of property, contamination of air, water and soil, emergency services, maintenance or restoration of communications services are inadequately addressed.

Maps:

Maps utilized in this evaluation include the following maps from the Village of Amherst Comprehensive Plan Document:

Map 4.1: Village of Amherst Facilities
Map 5.4: Wetlands Map
Map 5.5: Floodplains Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Village of Amherst Adopted Comprehensive Plan Document
- BestPlaces.net
- https://amherstwi.govoffice2.com/
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	**Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances**
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire

	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan

Mitigation Action	Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan
Year Initiated	2012
Applicable Jurisdiction	Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst
Lead Agency/Organization	Amherst Fire District, Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst
Supporting Agencies/Organizations	Portage County Emergency Management
Applicable Goal	4 - Plan Integration
Potential Funding Source	Local funds
Estimated Cost	Low
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Funding to complete flood shadow information on dams

Mitigation Action	Seek funding to complete flood shadow information on dams
Year Initiated	2012
Applicable Jurisdiction	Village of Amherst, Town of Dewey
Lead Agency/Organization	Portage County Emergency Management and Local EM
Supporting Agencies/Organizations	Impacted Jurisdictions
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	
Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	
Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	
Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	
Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund.	

Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	
	Total Score:

Mitigated Hazards	
	All Hazards
X	Dam/Levee Failure
	Drought
	Earthquake
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Landslide
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Subsidence (Sinkhole)
	Tornado and High Winds
	Wildfire
	Civil Disorder/Riot
	Cyber Attack
	Fire Hazards
	Hazardous Materials Release
	Infrastructure Failure
	Major Transportation Accident/Incident
	Public Health Emergency
	Radiological
	Structural Failure
	Terrorism
	Utility Failure
	Violent Mass Casualty Incident

Continued Compliance in NFIP

Mitigation Action	Continued Compliance in NFIP
Year Initiated	2012
Applicable Jurisdiction	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point and Portage County
Lead Agency/Organization	Local EM and Floodplain Specialist
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Low
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Village of Amherst Jct. Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Voss	Victor	Fire Chief	Village of Amherst Junction	715-340-3098	chiefvvoss@gmail.com

Community Profile and Description

Date of Incorporation: 1911

Current Population: The estimated population in 2017 was 378.

Population Growth: The population during the 2000 Census was 305. From 2000-2017, the population of Amherst Junction increased by 23%.

Location and Description: The Village of Amherst Junction is located on the East side of Emily Lake, 12 miles southeast of Stevens Point and 16 miles northwest of Waupaca. It is the second smallest village in the county concerning the number of residents

Brief History: Like many communities in Portage County, Amherst Junction was created when the railroad went through the County. And as the name implies, it was a junction between two railroads - the Wisconsin Central and the Green Bay and Lake Pepin railroads. Until 1875, the community was referred to as Groversburg, presumably after the Grover family that held considerable property in the area, wrote Malcolm Rosholt in his book "Our County Our Story." But when a post office was established in March 1875, it was called Amherst Junction. It wasn't until 1911 that the Village was incorporated. The long-term decline of the Village has been attributed to the accessibility and the growth of the automobile, which meant the decline of traveling by railroad and consequently of Amherst Junction. However, in recent years, the Village has seen great population growth.

Climate: Along with the majority of Portage County, Amherst Junction has a humid continental climate with warm summers and cold winters. It has a subtype warm-summer (Köppen climate classification Dfb). Amherst Junction gets 33 inches of rain and 46 inches of snow, on average, per year. Amherst Junction gets some kind of precipitation, on average, 115 days per year. The July high is around 81 degrees, and the January low is around 6 degrees.

Public Services: Currently, the Village does not have its police department. The Portage County Sheriff's Department provides protective services through random patrols and a "call-out" basis. The Village of Amherst Junction is part of the Amherst Fire District, located at 4585 Fairgrounds Road, Amherst. The Amherst Fire District protects approximately 6000 people living in a 90 square mile area including the Villages of Amherst, Amherst Junction, Nelsonville, and Towns of Amherst, and portions of the Towns of Lanark and Stockton contract for their fire protection service with the Amherst Fire District. The Town of New Hope utilizes First Responder service from the Amherst Fire Department. The department was reorganized in 1992, combining three smaller departments. A new fire station building was constructed in 1995. As of 2003, there are seven vehicles within a single fire station.

Governing Body Format: The Village is governed by a Village Board.

Development Trends: The Village of Amherst Junction contacted the Portage County Planning Department to assist them in preparing a Village Development Guide which would meet the statutory description of a Master Plan contained in Wisconsin State Statutes. The Village of Amherst Junction Development Guide was adopted in July 1980 and was used as the basis for updating the Zoning Ordinance and Subdivision Ordinance, and as a guideline for approving or disapproving actions affecting growth and development within the jurisdiction of the Village.

Jurisdiction-Specific Hazards and Impacts: Earthquake activity: Amherst Junction-area historical earthquake activity is slightly above Wisconsin state average. It is 90% smaller than the overall U.S. average. On 6/28/2004 at 06:10:52, a magnitude 4.2 (4.0 MB, 4.2 MW, Depth: 6.2 mi, Class: Light, Intensity: IV - V) earthquake occurred 209.2 miles away from Amherst Junction center On 4/18/2008 at 09:36:59, a magnitude 5.4 (5.1 MB, 4.8 MS, 5.4 MW, 5.2 MW, Depth: 8.9 mi, Class: Moderate, Intensity: VI - VII) earthquake occurred 422.8 miles away from Amherst Junction center On 6/10/1987 at 23:48:54, a magnitude 5.1 (4.9 MB, 4.4 MS, 4.6 MS, 5.1 LG) earthquake occurred 397.6 miles away from Amherst Junction center On 7/9/1975 at 14:54:15, a magnitude 4.6 (4.6 MB) earthquake occurred 338.7 miles away from the city center On 9/2/1999 at 16:17:29, a magnitude 3.5 (3.5 LG, Depth: 3.1 mi, Class: Light, Intensity: II - III) earthquake occurred 190.2 miles away from Amherst Junction center On 7/12/1986 at 08:19:37, a magnitude 4.5 (4.5 MB) earthquake occurred 370.8 miles away from the city center Magnitude types: regional Lg-wave magnitude (LG), body-wave magnitude (MB), surface-wave magnitude (MS), moment magnitude (MW)

Flood Risk: There are no floodplains within the Village of Amherst Junction.

Natural disasters: The number of natural disasters in Portage County (9) is smaller than the US average (13).

Major Disasters (Presidential) Declared: 7 Emergencies Declared: 2 Causes of natural disasters: Floods: 7, Storms: 6, Tornadoes: 2, Drought: 1, Hurricane: 1 (Note: some incidents may be assigned to more than one category).

Maps:

Maps utilized in this evaluation include the following maps from the Village of Amherst Junction Comprehensive Plan Document:

Map 4.1: Village of Amherst Junction Facilities
Map 5.3: Groundwater and Surface Water Flow Map
Map 5.4: Wetlands Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Village of Amherst Junction Adopted Comprehensive Plan Document
- BestPlaces.net
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	**Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances**
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire

	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Provide HAZMAT Awareness and Operations Level training to first responders

Mitigation Action	Provide HAZMAT Awareness and Operations Level training to first responders
Year Initiated	2019
Applicable Jurisdiction	Village of Amherst Junction
Lead Agency/Organization	Fire Department
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety
Potential Funding Source	Fire grant
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
X	Wildfire
X	Hazardous Materials Release
X	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan

Mitigation Action	Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan
Year Initiated	2012
Applicable Jurisdiction	Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst
Lead Agency/Organization	Amherst Fire District, Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst
Supporting Agencies/Organizations	Portage County Emergency Management
Applicable Goal	4 - Plan Integration
Potential Funding Source	Local Funds
Estimated Cost	Low
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Village of Junction City Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Spreda	John	Village Trustee	Village of Junction City	715-347-4071	Jctutilities@tds.net

Community Profile and Description

Date of Incorporation: 1911

Current Population: The population of Junction City in the 2010 Census was, 439

Population Growth: Between 1980 to 2010, the population has decreased by 16%

Location and Description: Junction City is a village in Portage County, Wisconsin, United States. The population was 439 at the 2010 census.

According to the United States Census Bureau, the village has a total area of 1.57 square miles (4.07 km2), of which, 1.56 square miles (4.04 km2) of it is land, and 0.01 square miles (0.03 km2) is water.

As of the census of 2010, there were 439 people, 169 households, and 115 families residing in the village. The population density was 281.4 inhabitants per square mile (108.6/km2). There were 211 housing units at an average density of 135.3 per square mile (52.2/km2). The racial makeup of the village was 92.5% White, 0.2% African American, 0.2% Native American, 4.1% Asian, 1.4% from other races, and 1.6% from two or more races. Hispanic or Latino of any race were 3.2% of the population.

There were 169 households of which 37.3% had children under the age of 18 living with them, 53.8% were married couples living together, 8.9% had a female householder with no husband present, 5.3% had a male householder with no wife present, and 32.0% were non-families. 27.8% of all households were made up of individuals, and 10.7% had someone living alone who was 65 years of age or older. The average household size was 2.60, and the average family size was 3.12.

The median age in the village was 31.6 years. 30.3% of residents were under the age of 18; 7.3% were between the ages of 18 and 24; 27.5% were from 25 to 44; 23.2% were from 45 to 64, and 11.6% were 65 years of age or older. The gender makeup of the village was 48.3% male and 51.7% female.

Brief History: Except for Junction City, communities west of the Wisconsin River in Portage County have become extinct. The communities of Mohawk, Runkel Mills, Webster Station and Meehan are no longer spots on the map, although Meehan bestowed its name on a settlement on the opposite side of the river from where it was founded. Mohawk was apparently the first community developed in the area, about two miles south of Junction City on Highway G at Mill Creek in the town of Carson. An 1858 issue of “The Pinery,” a frontier forerunner of the Stevens Point Journal, reported the community had about 150 residents and was the site of a post office and a mill. The post office was closed in 1860, apparently after the mill burned and the residents moved away, searching for a new livelihood. Runkel Mills was another of the “sawmill” towns in the western part of the county. The community was located in the town of Eau Pleine along the railroad tracks in Section 24 in the area of County Trunk H and Sandy Lane, about two miles north of Junction City. The settlement included a store, a boarding house, a blacksmith shop, and two or three private residences. The post office opened in 1876 but was discontinued in 1886, probably after a fire destroyed all the buildings. The Runkel Cemetery in the area bears witness to the old community. Webster Station was a community along the Wisconsin River in the area of north of Highway M where the Webster sawmill was situated, and a railroad siding was constructed. The settlement apparently had a sizeable population until the sawmill burned in 1863, after which many of

the residents moved away. Meehan enjoyed a longer life, although its population migrated south to where the Green Bay & Western Railroad tracks meet Highway F along Highway 54 in the town of Plover. Meehan actually started in the town of Linwood on the north shore of the Wisconsin River where the Meehan mill crossed the river at a site that is now flooded. A post office was created for the community in 1876 and was discontinued in 1907. The main community included a store and a boarding house and was located around the sawmill on the north side of the river, with a ferry providing service across the river to the railroad siding, where the new development outlasted the original community after dams flooded lower sections along the river.

Climate: The Village of Junction City, Wisconsin, gets 33 inches of rain, on average, per year. The U.S. average is 38 inches of rain per year. Junction City averages 47 inches of snow per year. The U.S. average is 28 inches of snow per year. On average, there are 186 sunny days per year in Junction City. The U.S. average is 205 sunny days. Junction City gets some kind of precipitation, on average, 123 days per year. Precipitation is rain, snow, sleet, or hail that falls to the ground. For precipitation to be counted, you have to get at least .01 inches on the ground to measure.

Public Services: Village of Junction City provides the following services to their residents, the Rudolph Volunteer Fire Department and First Responders, Junction City Lions, Stevens Point Elks Lodge 641 ,Junction City Golden Stars 4H Club, Girl Scout Troop at Kennedy Elementary School ,Boys and Girls Club of Portage County, Junction City Little League ,Senior Services Meals on Wheels and Meetings Held at the Park Lodge ,Vietnam Veterans of America ,Junction City Ice Company, Junction City Sundowners Snowmobile Club, Focal Point Camera Club of Central WI. Portage County provides Junction City with police and fire support.

Governing Body Format: The Village of Junction City is governed by a Village board. This board is comprised of a President, village Clerk, Treasurer, and village Trustees.

Development Trends: In the process of analyzing all of the lands within the Village of Junction City corporate boundary, and includes short and long-range recommendations for residential, commercial and industrial development, as well as the protection of important farmlands and other natural resources as determined by the residents of the Village of Junction City.

Hazard Considerations Specific to the Village of Junction City:

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Junction City-area historical tornado activity is near Wisconsin state average. It is 17% greater than the overall U.S. average. On 6/4/1958, a category F4 (max. wind speeds 207-260 mph) tornado 26.1 miles away from the Junction City village center killed four people and injured three people and caused between $500,000 and $5,000,000 in damages. On 9/26/1951, a category F4 tornado 29.2 miles away from the village center killed six people and injured three people and caused between $50,000 and $500,000 in damages.

Earthquake activity: Junction City-area historical earthquake activity is significantly below Wisconsin state average. It is 96% smaller than the overall U.S. average. On 6/28/2004 at 06:10:52, a magnitude

4.2 (4.0 MB, 4.2 MW, Depth: 6.2 mi, Class: Light, Intensity: IV - V) earthquake occurred 220.9 miles away from Junction City center On 7/9/1975 at 14:54:15, a magnitude 4.6 (4.6 MB) earthquake occurred 315.1 miles away from Junction City center On 9/2/1999 at 16:17:29, a magnitude 3.5 (3.5 LG, Depth: 3.1 mi, Class: Light, Intensity: II-III) earthquake occurred 199.2 miles away from the city center On 6/5/1993 at 01:24:53, a magnitude 4.1 (4.1 LG, Depth: 6.2 mi) earthquake occurred 327.1 miles away from the city center On 7/12/1986 at 08:19:37, a magnitude 4.5 (4.5 MB) earthquake occurred 392.4 miles away from the city center On 1/31/1986 at 16:46:43, a magnitude 5.0 (5.0 MB, Class: Moderate, Intensity: VI-VII) earthquake occurred 480.9 miles away from Junction City center Magnitude types: regional Lg-wave magnitude (LG), body-wave magnitude (MB), moment magnitude (MW)

Flood Risk: There are no floodplains with in Junction City

Maps:

Maps utilized in this evaluation include the following maps from the Village of Junction City Comprehensive Plan Document:

Map: Village of Junction City Facilities
Map: Surface Water/ Wetlands
Map: Groundwater Flow
Map: Existing Land Use
Map: Future Land Use

Sources:

- Portage County Comprehensive Plan - Village of Junction City
- https://www.junctioncitywi.com/
- http://www.city-data.com/city/Junction-City-Wisconsin.html
- http://www.pchswi.org/archives/communities/junctionc

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
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- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Designate an alternate building outside the village to be a shelter from the railroad.

Mitigation Action	**Designate an alternate building outside the village to be a shelter from the railroad.**
Year Initiated	2019
Applicable Jurisdiction	Village of Junction City
Lead Agency/Organization	Village of Junction City
Supporting Agencies/Organizations	
Applicable Goal	1 - Public Health and Safety 4 - Plan Integration
Potential Funding Source	Grant - seek local, state, and federal
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	Long Term
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Develop an alternate building plan/build/identify a building outside the village to be a shelter from the railroad.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
X	Major Transportation Accident/Incident
	Utility Failure

Procure and Install Waste Water Generators

Mitigation Action	Procure and install wastewater and village hall generators
Year Initiated	2019
Applicable Jurisdiction	Village of Junction City
Lead Agency/Organization	Village of Junction City
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety
Potential Funding Source	Grant - seek local, state, and federal
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	Short Term
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Purchase and install generators for wastewater and Village Hall.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Ongoing Mitigation Actions

Create a Village of Junction City Emergency Action Plan

Mitigation Action	**Create a Village of Junction City Emergency Action Plan**
Year Initiated	2012
Applicable Jurisdiction	Village of Junction City
Lead Agency/Organization	Village's Public Protection Committee
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety
Potential Funding Source	Grant - seek local, state, and federal
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Village of Nelsonville Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Voss	Victor	Fire Chief	Village of Nelsonville	715-340-3098	chiefvvoss@gmail.com

Community Profile and Description

Date of Incorporation: 1913

Current Population: The population of Nelsonville in the 2010 Census was 155

Population Growth: Between 2000 and 2010 there was a decrease of 14%

Location and Description: Nelsonville is a village in Portage County, Wisconsin, United States. The population was 155 at the 2010 census.

According to the United States Census Bureau, the village has a total area of 1.05 square miles (2.72 km2), of which, 1.03 square miles (2.67 km2) of it is land, and 0.02 square miles (0.05 km2) is water.

As of the census of 2010, there were 155 people, 61 households, and 39 families residing in the village. The population density was 150.5 inhabitants per square mile (58.1/km2). There were 67 housing units at an average density of 65.0 per square mile (25.1/km2). The racial makeup of the village was 96.8% White, 0.6% African American, 0.6% from other races, and 1.9% from two or more races. Hispanic or Latino of any race were 1.3% of the population.

There were 61 households of which 34.4% had children under the age of 18 living with them, 52.5% were married couples living together, 8.2% had a female householder with no husband present, 3.3% had a male householder with no wife present, and 36.1% were non-families. 26.2% of all households were made up of individuals, and 8.2% had someone living alone who was 65 years of age or older. The average household size was 2.54, and the average family size was 3.03.

The median age in the village was 42.5 years. 25.8% of residents were under the age of 18; 7.2% were between the ages of 18 and 24; 24.5% were from 25 to 44; 27.8% were from 45 to 64, and 14.8% were 65 years of age or older. The gender makeup of the village was 50.3% male and 49.7% female.

Brief History: The village was named after Jerome Nelson, an Englishman who started a sawmill along the Tomorrow River in 1855. It was incorporated in 1913, in part to remove saloons that the town of Amherst refused to outlaw.

Climate: The Village of Nelsonville, Wisconsin gets 33 inches of rain, on average, per year. The U.S. average is 38 inches of rain per year. Nelsonville averages 45 inches of snow per year. The U.S. average is 28 inches of snow per year. On average, there are 185 sunny days per year in Nelsonville. The U.S. average is 205 sunny days. Nelsonville gets some kind of precipitation, on average, 114 days per year. Precipitation is rain, snow, sleet, or hail that falls to the ground. To count precipitation, you have to get at least .01 inches on the ground to measure.

Public Services: The Village of Nelsonville offers services to residents for dog licensing. Portage County provides law enforcement, fire services, zoning, development, and all other municipal services to the Village of Nelsonville residents. Portage County supports the Village of Nelsonville with police and fire services.

Governing Body Format: A village board, comprised of a President and Trustees, governs the Village of Nelsonville.

Development Trends: Seek to maintain the desirable rural/small-town characteristics of the Village, while allowing for growth in the community. Encourage safe and attractive development; ensure that the development site is physically suited to the proposed use (e.g., soils suitable for on-site waste disposal); apply sound design and landscape principles in the planning, layout, and construction of new development.
Ensure that proposed uses are reasonably compatible with surrounding uses; consider the opinions of neighboring landowners and interests of the Village in general. Avoid leapfrog or sprawled development patterns to minimize public service costs. Ensure the fair consideration of all property owner rights. New development should be encouraged to protect and enhance the Village character.

Hazard Considerations Specific to the Village of Nelsonville:

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Maps:

Maps utilized in this evaluation include the following maps from the Village of Nelsonville Comprehensive Plan Document:

Map: Town of Linwood Facilities
Map: Surface Water/ Wetlands
Map: Floodplain
Map: Groundwater Flow
Map: Frosted Land
Map: Existing Land Use
Map: Future Land Use

Sources:

- Portage County Comprehensive Plan - Village of Nelsonville
- http://villageofnelsonville.com/
- http://www.bestplaces.net

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

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- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	**Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances**
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire

	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Continued Compliance in NFIP

Mitigation Action	Continued Compliance in NFIP
Year Initiated	2012
Applicable Jurisdiction	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point and Portage County
Lead Agency/Organization	Local EM and Floodplain Specialist
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Low
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan

Mitigation Action	Continue to review, update and practice the Greater Tomorrow Emergency Management District Plan
Year Initiated	2012
Applicable Jurisdiction	Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst
Lead Agency/Organization	Amherst Fire District, Village of Amherst, Amherst Junction, Nelsonville and Town of Amherst
Supporting Agencies/Organizations	Portage County Emergency Management
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Low
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Village of Park Ridge Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	**First Name**	**Title/Position**	**Organization**	**Phone Number**	**E-mail**
Lepper	Brian	Fire Chief	Village of Park Ridge	715-347-6152	Brilepper@yahoo.com
Bemowski	Kathy	Village Clerk/Treasurer		715-343-1590	Kbemowski@parkridge.com

Community Profile and Description

Date of Incorporation: 1938

Current Population: The population of Park Ridge in the 2010 Census was 491

Population Growth: Between 2000 and 2010 the population of Park Ridge has decreased by 2.05%

Location and Description: Park Ridge is a village in Portage County, Wisconsin, United States and is a suburb of Stevens Point. It is included in the Stevens Point Micropolitan Statistical Area. The population was 491 at the 2010 census.

According to the United States Census Bureau, the village has a total area of 0.22 square miles (0.57 km2), all of it land.

As of the census of 2010, there were 491 people, 217 households, and 137 families residing in the village. The population density was 2,231.8 inhabitants per square mile (861.7/km2). There were 228 housing units at an average density of 1,036.4 per square mile (400.2/km2). The racial makeup of the village was 91.4% White, 2.2% African American, 0.2% Native American, 4.9% Asian, and 1.2% from two or more races. Hispanic or Latino of any race were 0.4% of the population.

There were 217 households of which 23.5% had children under the age of 18 living with them, 55.3% were married couples living together, 5.1% had a female householder with no husband present, 2.8% had a male householder with no wife present, and 36.9% were non-families. 34.1% of all households were made up of individuals, and 22.6% had someone living alone who was 65 years of age or older. The average household size was 2.26, and the average family size was 2.92.

The median age in the village was 50.6 years. 23.4% of residents were under the age of 18; 3.3% were between the ages of 18 and 24; 16.2% were from 25 to 44; 29.8% were from 45 to 64, and 27.3% were 65 years of age or older. The gender makeup of the village was 46.4% male and 53.6% female.

Brief History: The new Village faltered in its early months, and a movement got underway to dissolve the incorporation and revert to the Town of Hull. This petition, dated July 14, 1938, was acted upon at a special meeting for the Village Board held July 19, 1938. On a motion made by George Lovejoy and seconded by Joe Johnson, the resolution was tabled. The reason given for this action was that the Village plan had not been given a fair trial. In 1939, the Village got help from the Federal Works Project Administration to improve its streets, and at a meeting held August 31, 1939, the board voted "to notify the City of Stevens Point to keep their two-ton trucks (when loaded) off the streets of Park Ridge after they have been oiled. "The income for the 1940 budget was established at $3,207.28, and the total valuation, according to the 1939 assessment roll, was $111,650, fixing the tax rate of $23 per $1000 assessed valuation. At the regular board meeting held on October 31, 1940, it was resolved that the plat of Plover Hills, a subdivision north of Hwy 10 in the NE1/4 of Section 34, be accepted, but no further action was taken to include this subdivision into Park Ridge. At the same meeting, the Village constable was authorized the purchase of a revolver and holster not to exceed $18 in cost. Action to build a new Village Hall was taken on December 1940 when a special assessment of two mills was established to cover the increased taxes. The attractive new hall, constructed of Ellis stone was completed the following year. The Village passed an ordinance on December 20, 1948 "governing the organization and

regulation of the volunteer fire department of the Village of Park Ridge." Piece by piece, the makings of a fire truck were purchased and assembled. By August 1950 the Village had a fire truck and volunteer fire department with an ordinance spelling out the powers and duties of the fire chief, fire inspector, and the authorities of the volunteer firemen. Today, Park Ridge occupies nearly 128 acres (0.2 square miles, Figure 1.1), and operates under a Village President/Trustee system of government.

Climate: The Village of Park Ridge, Wisconsin, gets 32 inches of rain, on average, per year. The U.S. average is 38 inches of rain per year. Park Ridge averages 45 inches of snow per year. The U.S. average is 28 inches of snow per year. On average, there are 190 sunny days per year in Park Ridge. The U.S. average is 205 sunny days. Park Ridge gets some kind of precipitation, on average, 118 days per year. Precipitation is rain, snow, sleet, or hail that falls to the ground. To count precipitation, you have to get at least .01 inches on the ground to measure.

Public Services: The Village of Park Ridge offers services to residents including liquor licensing, dog licensing and Liquor licensing. The Village of Park Ridge provides its residence with fire services and Portage County provides police services to the Village of Nelsonville.

Governing Body Format: The Village has a five-member Board of Trustees, which meets monthly to conduct the business of the Village. All board member terms are two years in length. Board meeting agendas and minutes are posted here on the Village web site and posting boards at Walgreens, the Village Hall, and outside the Community Industries Corporation building on Highway 66.

Development Trends: The Village of Park Ridge acknowledges that it has a limited amount of land available within the Village for new development, and is limited to expand the Village through annexation due to the surrounding City of Stevens Point. Goals, objectives and policies provide the framework for guiding future community development activities in the Village of Park Ridge. Goals are stated as desirable conditions to strive for in the future. They are common ideals of the community that can be achieved through the actions of government leaders, private enterprise, and individuals. Objectives are general targets to be achieved along the path of satisfying community goals. Policies are methods of action to accomplish these stated objectives. Together these three pieces express the uniqueness of the community while stating changes that will produce desirable patterns for growth and development.

Hazard Considerations Specific to the Village of Park Ridge:

The Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update Hazards addresses hazards that represent a county-wide risk. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Park Ridge-area historical tornado activity is near Wisconsin state average. It is 23% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 17.9 miles away from the Park Ridge village center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/19/1957, a category F4 tornado 35.8 miles away from the village center killed one person and caused between $5000 and $50,000 in damages.

Maps:

Maps utilized in this evaluation include the following maps from the Village of Nelsonville Comprehensive Plan Document:

Map: Town of Linwood Facilities
Map: Surface Water/ Wetlands
Map: Floodplain
Map: Groundwater Flow
Map: Soil
Map: Wetlands
Map: Existing Land Use
Map: Future Land Use

Sources:

- Portage County Comprehensive Plan - Village of Park Ridge
- http://www.city-data.com/city/Park-Ridge-Wisconsin.html
- https://park-ridge.us/about-us/
- https://www.bestplaces.net/

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	**Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances**
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire

	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Reconstruction of Streets

Mitigation Action	Reconstruct all village streets to include the addition of swales
Year Initiated	2019
Applicable Jurisdiction	Village of Park Ridge
Lead Agency/Organization	Village of Park Ridge
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Flood reduction is the primary goal.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Continued Compliance with NFIP

Mitigation Action	Continued Compliance with NFIP
Year Initiated	2012
Applicable Jurisdiction	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point
Lead Agency/Organization	Village of Park Ridge
Supporting Agencies/Organizations	Local EM and Floodplain Specialist
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Low
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	
Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	
Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	
Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	
Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action	

is cost-effective, as determined by a cost-benefit review, and is possible to fund.	
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	
	Total Score:

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Earthquake
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
	Landslide
X	Severe Thunderstorms
X	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Subsidence (Sinkhole)
	Tornado and High Winds
	Wildfire
	Civil Disorder/Riot
	Cyber Attack
	Fire Hazards
	Hazardous Materials Release
	Infrastructure Failure
	Major Transportation Accident/Incident
	Public Health Emergency
	Radiological
	Structural Failure
	Terrorism
	Utility Failure
	Violent Mass Casualty Incident

Village of Plover Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	**First Name**	**Title/Position**	**Organization**	**Phone Number**	**E-mail**
Kernosky	Ryan	Manager	Village of Plover Community Development	715-345-5250	Rkernosky@ploverwi.gov

Community Profile and Description

Date of Incorporation: 1836

Current Population: The population of Plover in 2017 was 12,772.

Population Growth: Since the 2010 Census, the population increased by 21.4%

Location and Description: Plover is a village in Portage County, Wisconsin, United States. A suburb of Stevens Point, it is part of the Stevens Point Micropolitan Statistical Area. The population was 12,123 at the 2010 census.

According to the United States Census Bureau, the village has a total area of 10.79 square miles (27.95 km2), of which, 10.35 square miles (26.81 km2) of it is land, and 0.44 square miles (1.14 km2) is water.

As of the census of 2010, there were 12,123 people, 4,948 households, and 3,242 families residing in the village. The population density was 1,171.3 inhabitants per square mile (452.2/km2). There were 5,188 housing units at an average density of 501.3 per square mile (193.6/km2). The racial makeup of the village was 92.8% White, 0.5% African American, 0.4% Native American, 3.8% Asian, 1.0% from other races, and 1.5% from two or more races. Hispanic or Latino of any race were 3.2% of the population.

There were 4,948 households of which 32.7% had children under the age of 18 living with them, 52.8% were married couples living together, 9.0% had a female householder with no husband present, 3.7% had a male householder with no wife present, and 34.5% were non-families. 26.4% of all households were made up of individuals, and 8.5% had someone living alone who was 65 years of age or older. The average household size was 2.44, and the average family size was 2.99.

The median age in the village was 35.9 years. 25.3% of residents were under the age of 18; 9% were between the ages of 18 and 24; 27.2% were from 25 to 44; 27.5% were from 45 to 64, and 11% were 65 years of age or older. The gender makeup of the village was 49.1% male and 50.9% female.

Brief History: The area that later became Plover was selected as the county seat of Portage in 1844. The election for the county seat only noted the general location of an unsettled area around present-day Plover. Until the area was settled, county business was conducted in the community of Rushville. The Plover area was platted in 1845, and received a post office at the same time under the name "Plover Portage." The name of the post office was changed to "Plover" in 1850.

In 1857, State Senator Luther Hanchett of Plover introduced a bill to incorporate the Village of Clayton in the community; he later amended the bill to make the name the Village of Algernon. That bill passed the Wisconsin Legislature, incorporating the Village of Algernon on March 6, 1857. (Algernon was probably named for Algernon B. Crosby, a postmaster in Portage County.) On May 4, 1858, the name of the village was again changed, this time to the Village of Stanton. And in 1864, the name of the village was finally changed to Plover.

In 1868, the county seat was moved to Stevens Point, following an energetic battle in newspapers and the state legislature. The village of Plover was dissolved. The government of the area fell to the Town of Plover.

Plover was again incorporated as a village on March 8, 1912, after area residents' approval in an election. This incorporation was not long-lived, as Plover was again dissolved on October 7, 1931, after another election. An attempt at re-incorporation failed in 1965.

Plover re-incorporated, for the third time, on September 28, 1971. The vote for incorporation was narrow: 311 for and 289 against. The population of the village at that time was 2618. It incorporated about 6.75 square miles (17 km2) of territory, and increased to about 7.25 square miles (19 km2) in 1981, after annexation. Annexations continued nearly every year until the present.

The village president is Tom Davies, who was first elected in 2015.

Climate: The Village of Plover, Wisconsin gets 32 inches of rain, on average, per year. The US average is 38 inches of rain per year. Plover averages 46 inches of snow per year. The U.S. average is 28 inches of snow per year. On average, there are 186 sunny days per year in Plover. The U.S. average is 205 sunny days. Plover gets some kind of precipitation, on average, 119 days per year. Precipitation is rain, snow, sleet, or hail that falls to the ground. To count precipitation, you have to get at least .01 inches on the ground to measure.

Public Services: The Village of Plover offers services to residents including Worzella Pines Rentals, Public Sports fields and league sports, village parks, snow removal services, street opening permits, recycling, and road maintenance. The Village of Plover provides it's residence with fire services and Portage County provides police services.

Governing Body Format: The Village of Plover is governed by a Village Board. The board is comprised of a President, Trustees and a second and third Ward.

Development Trends: The Community Development Department prepares, implements and updates current and long range Village plans, meets with the general public regarding proposed plans, and coordinates planning activities with other levels of government. This department provides staff assistance to the Plan Commission, which is responsible for orderly growth and development in the Village. This department also administers the Village's Community Development Revolving Loan Fund to promote economic and community development activities in the Village.

The department is also responsible for administering the Village's Zoning, Nuisance, Health, and Housing Ordinances for all properties. All requests for development or expansion of two-family, multi-family, commercial, and industrial properties, and changes in zoning must be reviewed by this department and recommendations for approval/disapproval presented to the Plan Commission.

Hazard Considerations Specific to the Village of Plover:

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Tornado Activity: Plover-area historical tornado activity is slightly above Wisconsin state average. It is 26% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 15.3 miles away from the Plover village center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/19/1957, a category F4 tornado 33.5 miles away from the village center killed one person and caused between $5000 and $50,000 in damages.

Flood Risk: Map 5.6 shows the locations of the 100-year floodplain within the Town of Plover.

Maps:

Maps utilized in this evaluation include the following maps from the Town of Plover Comprehensive Plan Document:

Map 4.1: Town of Plover Facilities
Map 5.4: Wetlands & Watersheds Map
Map 5.5: Floodplains Map
Map 5.6: Groundwater Flow Map
Map 8.1: Existing Land Use Map
Map 8.2: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Town of Plover Adopted Comprehensive Plan Document
- BestPlaces.net
- http://www.ploverwi.gov/
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Local Planning Flood Mitigation

Mitigation Action	**Local Flood Mitigation Planning and Project Development and Implementation**
Year Initiated	2019
Applicable Jurisdiction	Village of Plover
Lead Agency/Organization	Village of Plover and Portage County
Supporting Agencies/Organizations	Portage County
Applicable Goal	3 - Property and Environment 4 - Plan Integration
Potential Funding Source	Grant - seek local, state, and federal
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	Short Term
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Develop a local flood mitigation plan for the Village of Plover.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Update Sewer Stations

Mitigation Action	Upgrade the municipal sewer stations - upgrade the pumps, generators and electrical system
Year Initiated	2019
Applicable Jurisdiction	Village of Plover
Lead Agency/Organization	Village of Plover
Supporting Agencies/Organizations	Village of Plover
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Upgrade the municipal sewer stations - upgrade the pumps, generators and electrical system.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
X	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
X	Utility Failure

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Storm / Surface Water Plan

Mitigation Action	Develop a Storm / Surface Water Plan
Year Initiated	2019
Applicable Jurisdiction	Village of Plover and City of Stevens Point
Lead Agency/Organization	Village of Plover
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment 4 - Plan Integration
Potential Funding Source	Grant - seek local, state, and federal
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Engage in a regional storm/surface water planning effort with the county to prepare/prevent future issues similar to the March 2019 event.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Continue to review current coverage of outdoor sirens and prepare a schedule for new locations as development happens

Mitigation Action	**Continue to review current coverage of outdoor sirens and prepare a schedule for new locations as development happens**
Year Initiated	2007
Applicable Jurisdiction	Incorporated municipalities, Village of Plover
Lead Agency/Organization	Individual MCD
Supporting Agencies/Organizations	Portage County Emergency Management
Applicable Goal	1- Health and Safety
Potential Funding Source	Local budget
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Continued Compliance in NFIP

Mitigation Action	Continued Compliance in NFIP
Year Initiated	2012
Applicable Jurisdiction	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point
Lead Agency/Organization	Local EM and Floodplain Specialist
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Low
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Bury overhead power and utility lines

Mitigation Action	Bury overhead power and utility lines, where feasible, as a way to improve emergency response times, improve safety, and reduce power outages
Year Initiated	2007
Applicable Jurisdiction	Village of Plover, City of Stevens Point
Lead Agency/Organization	Utilities and Village of Plover EM
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	Grant -seek local, state, and federal grants
Estimated Cost	High
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	This mitigation action was identified in the 2012 plan as useful to all municipalities with Village of Plover and City of Stevens Point emphasized

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
X	Utility Failure

Village of Rosholt Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Hartvig	Theresa	Village Clerk/Treasurer	Village of Rosholt	715-677-4510	rosholtvillage@wi-net.com

Community Profile and Description

Date of Incorporation: 1907

Current Population: The population of the Village of Rosholt in the 2014 population the U.S. was 497

Population Growth: Between 1910 and 2014 the population has decreased by 0.45%

Location and Description: Rosholt is a village in Portage County, Wisconsin, United States. The population was 506 at the 2010 census.

According to the United States Census Bureau, the village has a total area of 1.10 square miles (2.85 km2), of which, 1.06 square miles (2.75 km2) of it is land, and 0.04 square miles (0.10 km2) is water.

As of the census of 2010, there were 506 people, 208 households, and 136 families residing in the village. The population density was 477.4 inhabitants per square mile (184.3/km2). There were 227 housing units at an average density of 214.2 per square mile (82.7/km2). The racial makeup of the village was 98.4% White, 1.4% Native American, and 0.2% from two or more races. Hispanic or Latino of any race were 3.2% of the population.

There were 208 households of which 36.1% had children under the age of 18 living with them, 46.2% were married couples living together, 13.0% had a female householder with no husband present, 6.3% had a male householder with no wife present, and 34.6% were non-families. 28.8% of all households were made up of individuals, and 10.1% had someone living alone who was 65 years of age or older. The average household size was 2.43, and the average family size was 3.02.

The median age in the village was 36.4 years. 27.5% of residents were under the age of 18; 6% were between the ages of 18 and 24; 30.6% were from 25 to 44; 23.6% were from 45 to 64, and 12.1% were 65 years of age or older. The gender makeup of the village was 50.8% male and 49.2% female.

Brief History: The person recorded as first owning the land on which Rosholt sits is Gottlieb Stanbly. Stanbly received four 40-acre (160,000 m2) parcels directly from the U.S. Government on May 10, 1858, because he was a veteran. Gottlieb Stanbly sold the land to Theodor Stanbly in 1861 for $430 when Gottlieb left the area to fight in the Civil War. Theodor sold the land to Jens Rasmussen in 1867 for $400. Rasmussen created a millpond by damming Flume Creek and built a water-driven feed mill sometime between 1867 and 1881. John Gilbert (J.G.) Rosholt built the first sawmill in town on the east end of the millpond in 1884, after making a deal to share water rights with Rasmussen. J.G. Rosholt's first mill burned in 1901, but it was rebuilt later that year and into 1902. The first survey and platting of Rosholt were done on June 1, 1903, at J.G. Rosholt's request. Rosholt was incorporated in 1907 and was named after J.G. Rosholt, who was elected the first village president on April 7, 1908.

Climate: The Village of Rosholt, Wisconsin gets 33 inches of rain, on average, per year. The U.S. average is 38 inches of rain per year. Rosholt averages 52 inches of snow per year. The US average is 28 inches of snow per year. On average, there are 189 sunny days per year in Rosholt. The U.S. average is 205 sunny days. Rosholt gets some kind of precipitation, on average, 118 days per year. Precipitation is rain, snow,

sleet, or hail that falls to the ground. To county precipitation, you have to get at least .01 inches on the ground to measure.

Public Service: The Village of Rosholt offers services to its residents, including maintenance to streets, sidewalks, buildings and parks, and public grounds. The Village of Rosholt is provided by police services by Portage County and fire services by the Rosholt Fire District.

Governing Body Format: A Village board, comprised of a Village President and board members, governs the Village of Rosholt.

Development Trends: The Village of Rosholt is always working towards better development to support the residence as the area grows.

Hazard Considerations Specific to the Village of Rosholt: Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Flood: The Village of Rosholt is impacted by flooding.

Maps:

Map: Location
Map: Natural Resources
Map: Transportation
Map: Utilities & Community Facilities
Map: Existing Land Use
Map: Future Land Use Plan

Sources:

- http://www.ncwrpc.org/counties/portage/rosholt/Final_Plan_OnWeb.pdf
- https://population.us/wi/rosholt/
- http://www.rosholtvillage.com/

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	**Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances**
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire

	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Village of Rosholt to review zoning of property located in flood shadow, to limit development

Mitigation Action	**Village of Rosholt to review zoning of property located in flood shadow to limit development**
Year Initiated	2012
Applicable Jurisdiction	Village of Rosholt
Lead Agency/Organization	Planning and Zoning
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Continued Compliance in NFIP

Mitigation Action	Continued Compliance in NFIP
Year Initiated	2012
Applicable Jurisdiction	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point
Lead Agency/Organization	Local EM and Floodplain Specialist
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Low
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Village of Whiting Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	First Name	Title/Position	Organization	Phone Number	E-mail
Schmesier	Nicholas	Director of Public Works	Village of Whiting	715-340-7582	nicschmesier@villageofwhiting.com

Community Profile and Description

Date of Incorporation: 1947

Current Population: The population of Whiting in 2017 Census was 1,701.

Population Growth: Between 2010 to 2017 the population decreased by 3.4%

Location and Description: Whiting is a village in Portage County, Wisconsin, United States and is a suburb of Stevens Point. It is included in the Stevens Point Micropolitan Statistical Area. The population was 1,724 at the 2010 census. According to the United States Census Bureau, the village has a total area of 2.16 square miles (5.59 km2), of which, 1.78 square miles (4.61 km2) of it is land, and 0.38 square miles (0.98 km2) is water. As of the census of 2010, there were 1,724 people, 750 households, and 436 families residing in the village. The population density was 968.5 inhabitants per square mile (373.9/km2). There were 811 housing units at an average density of 455.6 per square mile (175.9/km2). The racial makeup of the village was 95.5% White, 0.2% African American, 0.1% Native American, 2.0% Asian, 1.3% from other races, and 0.8% from two or more races. Hispanic or Latino of any race were 2.6% of the population. There were 750 households of which 20.3% had children under the age of 18 living with them, 48.7% were married couples living together, 6.7% had a female householder with no husband present, 2.8% had a male householder with no wife present, and 41.9% were non-families. 36.1% of all households were made up of individuals, and 19.5% had someone living alone who was 65 years of age or older. The average household size was 2.13, and the average family size was 2.77. The median age in the village was 50.5 years. 15.7% of residents were under the age of 18; 6.3% were between the ages of 18 and 24; 21.6% were from 25 to 44; 26% were from 45 to 64, and 30.5% were 65 years of age or older. The gender makeup of the village was 47.7% male and 52.3% female.

Brief History: Whiting is a village in Portage County, Wisconsin, United States and is a suburb of Stevens Point. It is included in the Stevens Point Micropolitan Statistical Area.

Climate: Whiting, Wisconsin gets 32 inches of rain, on average, per year. The US average is 38 inches of rain per year. Whiting averages 45 inches of snow per year. The US average is 28 inches of snow per year. On average, there are 187 sunny days per year in Whiting. The US average is 205 sunny days. Whiting gets some kind of precipitation, on average, 118 days per year. Precipitation is rain, snow, sleet, or hail that falls to the ground. For precipitation to be counted, you have to get at least .01 inches on the ground to measure.

Public Services: The Village of Whiting provides services for establishment of grades, removal of rubbish and dirt from sidewalks, construction and repair of sidewalks, curb and gutters, excavations of streets, alleys, public ways and grounds, obstruction and encroachments, street privilege permit, snow and ice removal, terrace acres, downspouts and eaves of buildings, sale or display of merchandise prohibited, request for improvements, drainage and driveways. The Village of Whiting is provided police and fire services by Portage County.

Governing Body Format: The Village of Whiting is governed by a village board. The Village Board is comprised of a President and Trustees.

Development Trends: On February 9, 1982, the Whiting Village Board adopted a Land Use Plan that built a land-use classification legend.

Hazard Considerations Specific to the Village of Whiting:

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Tornado Activity: Whiting-area historical tornado activity is near Wisconsin state average. It is 25% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 17.0 miles away from the Whiting village center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/19/1957, a category F4 tornado 33.8 miles away from the village center killed one person and caused between $5000 and $50,000 in damages.

Flood Risk: Map 5.5 shows the locations of the 100-year floodplain within the Village of Whiting.

Maps:

Maps utilized in this evaluation include the following maps from the Village of Whiting Comprehensive Plan Document:

Map 4.1: Village of Whiting Facilities
Map 5.4: Wetlands Map
Map 5.5: Floodplains Map
Map 8.1: Existing Land Use Map
Map 8.3: Future Land Use Map

Sources:

- Portage County Comprehensive Plan- Village of Whiting Adopted Comprehensive Plan Document
- BestPlaces.net
- https://villageofwhiting.org/
- CityData.com

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Purchases for Flood Response

Mitigation Action	**Purchase a trailer higher capacity water pump and associated hoses to remove localized flooding in areas by pumping to areas with storm sewer and/or bodies of water**
Year Initiated	2019
Applicable Jurisdiction	Village of Whiting
Lead Agency/Organization	Village of Whiting
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	Local funds and HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Purchase a trailer higher capacity water pump and associated hoses. Remove localized flooding in areas by pumping to areas with storm sewer and / or bodies of water.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Purchase a Mounted Generator

Mitigation Action	Purchase a trailer-mounted generator to service sewage lift stations and/or other remote sites to avoid potential basement backups and/or sanitary sewer overflows during a power outage
Year Initiated	2019
Applicable Jurisdiction	Village of Whiting
Lead Agency/Organization	Village of Whiting
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	Local funds and HMA, Public Assistance, other federal and state grants
Estimated Cost	High
Benefits (loss avoided)	High
Projected Completion Date	
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Purchase a trailer-mounted generator to service sewage lift stations and/or other remote sites. Avoid potential basement backups and/or sanitary sewer overflows.

Mitigation Action and Project Maintenance		
Year	Status	Comments
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
X	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
X	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Ongoing Mitigation Actions

Continued Compliance in NFIP

Mitigation Action	Continued Compliance in NFIP
Year Initiated	2012
Applicable Jurisdiction	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point
Lead Agency/Organization	Local EM and Floodplain Specialist
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Low
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

City of Stevens Point Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	**First Name**	**Title/Position**	**Organization**	**Phone Number**	**E-mail**
Southworth	Eric	Water Superintendent	Water Department	715-342-4846	Esouthworth@stevenspoint.com

Community Profile and Description

Date of Incorporation: 1858

Current Population: The population of Stevens Point in the 2017 Census is 26,293

Population Growth: Between 2000 and 2017 the population has increased by 7.0%

Location and Description: Stevens Point is the county seat of Portage County, Wisconsin, United States. According to the United States Census Bureau, the city encompasses 17.20 square miles (44.55 km2), including 15.96 square miles (41.3 km2) of land 1.24 square miles (3.2 km2) of water. Stevens Point is home to the University of Wisconsin–Stevens Point and a campus of Mid-State Technical College. The racial makeup of the city was 91.7% White, 0.9% African American, 0.4% Native American, 4.7% Asian, 0.7% from other races, and 1.5% from two or more races. Hispanic or Latino of any race was 2.6% of the population. Among households, 21.7% had children under the age of 18, 34.9% were married couples living together, 8.5% had a female householder with no husband present, 3.2% had a male householder with no wife present, and 53.3% were non-families. 34.9% of all households were made up of individuals and 11.2%had someone living alone who was 65 years of age or older. The average household size was 2.21, and the average family size was 2.87. The median age in the city was 26.5 years. 16% of residents were under the age of 18; 31.3% were between the ages of 18 and 24; 22.3% were from 25 to 44; 18.5% were from 45 to 64, and 12% were 65 years of age or older. The gender makeup of the city was 48.8% male and 51.2% female.

Brief History: Stevens Point is located in central Wisconsin along the Wisconsin River in Portage County. Two years after the Menominee Treaty of 1836, George Stevens traveled the Wisconsin River looking for opportunities in the growing lumber industry. Stevens used the Stevens Point area as a strategic stopping and storage place during his travels. Although he had no permanent connection to the place, Stevens' name was adopted for the city that was eventually established there. With no roads into the vast northern Wisconsin woods, the river system served as the primary means of transport and gave rise to Stevens Point as the "Gateway to the Pineries." The timber industry dominated the area for decades and made Stevens Point into a thriving city. Until the 1860s, most of the city's incoming immigrants were of British and Norwegian descent. After 1860, more than half of the immigrants coming to the area were Polish. Many of these immigrants became farmers, and potatoes were a favored cash crop. The bustling market square in the center of Stevens Point was a favored trading spot for farmers and other businessmen as well as a social gathering place for residents. Other prominent Stevens Point businesses include the Stevens Point Brewery, which opened its doors in 1857. In 1895, the Lullabye Furniture Corporation invented the self-rocking cradle. One year later, in 1896, Jack Frost began selling homemade fishing flies, a business that made Stevens Point into the "Fly-tackle Capital of the World." The University of Wisconsin-Stevens Point, opening as the Stevens Point Normal School in 1894, became the first university in the nation to offer a major in conservation. The school is still focused on the environment today, with courses in forestry, water, and wildlife sciences.

Climate: Stevens Point, Wisconsin gets 32 inches of rain, on average, per year. The U.S. average is 38 inches of rain per year. Stevens Point averages 45 inches of snow per year. The U.S. average is 28 inches of snow per year. On average, there are 187 sunny days per year in Stevens Point. The U.S. average is 205 sunny days. Stevens Point gets some kind of precipitation, on average, 118 days per year.

Precipitation is rain, snow, sleet, or hail that falls to the ground. In order for precipitation to be counted, you have to get at least .01 inches on the ground to measure.

Public Services: The City of Stevens Point offers services to its residents, including licensing, applications and permits, recycling and garbage, elections, and registration. The City of Stevens pint provides it's residence with police and fire services.

Governing Body Format: The City is governed by a City Board that is broken down into different committees to support the city best.

Development Trends: The city is always working towards better development to support the residents of the University as the city grows.

Hazard Considerations Specific to the City of Stevens Point:

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Stevens Point-area historical tornado activity is near Wisconsin state average. It is 23% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 18.5 miles away from the Stevens Point city center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/19/1957, a category F4 tornado 35.5 miles away from the city center killed one person and caused between $5000 and $50,000 in damages.

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Map 8.3: Future Land Use - 2025

Sources:

- http://www.city-data.com/city/Stevens-Point-Wisconsin.html
- BestPlaces.com
- https://stevenspoint.com/602/Comprehensive-Plan

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Develop a Stormwater Management Plan for the Municipality

Mitigation Action	Develop a Stormwater Management Plan for the Municipality
Year Initiated	2019
Applicable Jurisdiction	City of Stevens Point and Plover
Lead Agency/Organization	City of Stevens Point
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment 4 - Plan Integration
Potential Funding Source	Grant - seek local, state, and federal
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Engage in a regional storm/surface water planning effort with the county to prepare/prevent future issues similar to the March 2019 event.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances

Mitigation Action	Develop a Stormwater Management Plan and integrate with Community Plans, Zones, and Ordinances
Year Initiated	2019
Applicable Jurisdiction	All Portage County Municipalities
Lead Agency/Organization	Portage County Emergency Management, Floodplain Manager, and Municipality EM and Planner
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety 2 - Public Education 3 - Property and Environment 4 - Plan Integration 5 - Intergovernmental Relationships
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Medium
Benefits (loss avoided)	High
Projected Completion Date	2025
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Given the high risk and probability ranking and widespread impact of stormwater impact (flooding), the County will work with the municipalities to identify funding sources to develop a Stormwater Management Plan. Once the funding is identified, the County will work with at least one representative from each jurisdiction to develop a municipality specific annex on stormwater management.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident

	Utility Failure

Develop a Community Wildfire Protection Plan (CWPP)

Mitigation Action	Develop a Community Wildfire Protection Plan (CWPPs)
Year Initiated	2019
Applicable Jurisdiction	Town of Hull, Town of Lanark, Town of Alban, Town of Amherst, Town of Belmont, Town of Buena Vista, Town of Dewey, Town of Grant, Town of Linwood, Village of Nelsonville, Town of New Hope, Village of Plover, Village of Rosholt, Town of Sharon, City of Sevens Point, Town of Stockton, and Village of Whiting
Lead Agency/Organization	Portage County EM, Municipal EM, County and Local Fire Department (support - Wisconsin Department of Natural Resources and Planning and Zoning)
Supporting Agencies/Organizations	
Applicable Goal	1 - Health and Safety and 3 - Property and Environment
Potential Funding Source	Seek funding advice from the Wisconsin Department of Natural Resources
Estimated Cost	Medium
Benefits (loss avoided)	Medium
Projected Completion Date	2023
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Once funding is identified, the County will organize plan development with the jurisdictions given a 'high" to "very high" risk ranking for wildfires

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
x	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Ongoing Mitigation Actions

Maintain and keep sirens in working order

Mitigation Action	Maintain and keep warning sires in working order
Year Initiated	2012
Applicable Jurisdiction	City of Stevens Point
Lead Agency/Organization	City of Stevens Point EM
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety
Potential Funding Source	Local
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Identify and perform cost analysis of removing homes/structures within the floodplain and floodway

Mitigation Action	Identify and perform cost analysis of removing homes/structures within the floodplain and floodway
Year Initiated	2007
Applicable Jurisdiction	Towns of Linwood, Carson, Eau Pleine, Hull, City of Stevens Point
Lead Agency/Organization	City of Stevens Point and Portage County EM
Supporting Agencies/Organizations	
Applicable Goal	1- Health and Safety 3 - Property and Environment
Potential Funding Source	Grant - seek local, state, and federal grants
Estimated Cost	Low
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Medium

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Continued Compliance in NFIP

Mitigation Action	Continued Compliance in NFIP
Year Initiated	2012
Applicable Jurisdiction	Villages of Amherst, Nelsonville, Plover, Rosholt, Whiting, City of Stevens Point
Lead Agency/Organization	Local EM and Floodplain Specialist
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	HMA, Public Assistance, other federal and state grants
Estimated Cost	Low
Benefits (loss avoided)	High
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	High

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
X	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
	Utility Failure

Bury overhead power and utility lines

Mitigation Action	Bury overhead power and utility lines, where feasible, as a way to improve emergency response times, improve safety, and reduce power outages
Year Initiated	2007
Applicable Jurisdiction	City of Stevens Point
Lead Agency/Organization	City of Stevens Point EM and Utilities
Supporting Agencies/Organizations	
Applicable Goal	3 - Property and Environment
Potential Funding Source	Grant -seek local, state, and federal grants
Estimated Cost	High
Benefits (loss avoided)	Medium
Projected Completion Date	Ongoing
Actual Completion Date	
Priority	Low

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	This mitigation action was identified in the 2012 plan as useful to all municipalities with Village of Plover and City of Stevens Point emphasized

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019		
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Tornado and High Winds
	Wildfire
	Hazardous Materials Release
	Major Transportation Accident/Incident
X	Utility Failure

University of Wisconsin Stevens Point Mitigation Strategies and Actions

2019 Hazard Mitigation Plan Update: Local Mitigation Planning Team Representative(s) and Contact Information

Local Mitigation Planning Team					
Last Name	**First Name**	**Title/Position**	**Organization**	**Phone Number**	**E-mail**
Neeb	Corinna	Emergency Management Specialist	University of Wisconsin-Stevens Point	715-346-4464	Cneeb@uwsp.edu

Community Profile and Description

Founded: 1894

Current Population: 8,900

Location and Description: UW-Stevens Point has three welcoming campuses, located in the cities of Stevens Point, Marshfield and Wausau, Wisconsin. It also has three off-site field stations - Central Wisconsin Environmental Station at Amherst Junction, Treehaven near Tomahawk and the Northern Aquaculture Demonstration Facility at Bayfield, Wisconsin.

In 2019, the University of Wisconsin-Stevens Point (UW-Stevens Point) main campus is celebrating 125 years. Established in 1894 as a teacher's college, the University of Wisconsin-Stevens Point ranks among the best colleges in the nation when it comes to quality education and job placement. UW-Stevens Point ranked in the Top 15 public regional universities in the Midwest in U.S. News and World Report's Best Colleges 2018. The university was also the first university in Wisconsin to have 100 percent of electricity come from renewable sources and ranked 26th on the U.S. Environmental Protection Agency's (EPA's) Top 30 College and University list of largest green power users in the nation from the Green Power Partnership. The main campus is located in Central Wisconsin, midway between Milwaukee and Minneapolis, on the Wisconsin River. The 500-year floodplain of the Wisconsin River is just west of campus; no campus buildings are in the 500-year floodplain. The population of the city, where the university is located, has approximately 25,000 residents in the city, with an area population of 62,000 people. The main campus has 35 buildings located on 400 acres including the 280-acre Schmeeckle Nature Reserve renown for fishing, walking, biking, jogging, boating and wildlife watching and the Marshfield Clinic Health System Champions Hall which includes 54,000-square-foot Multi-Activity Center with climbing wall, track and tennis courts, Aquatic Center, 2 full-size gymnasiums, and Strength Fitness Center.

Currently, there are 7,725 students. The university offers more than 100 undergraduate programs and study abroad programs in over 25 countries. Students come from 40 different states and 35 countries. The campus has 13 residence halls that house 3,500 students. The campus has over 400 instructional staff members with a student-faculty ratio of 19:1.

The 114-acre UW-Stevens Point at Marshfield campus is in a quiet, residential area. The campus is just west of downtown Marshfield, Wisconsin. The city of Marshfield is named one of the nation's best small cities and is also home to Marshfield Clinic – one of the largest clinics in the U.S. - as well as the Marshfield Medical Research Foundation, National Farm Medicine Center and Ministry-Saint Joseph's Hospital.

UW-Stevens Point at Marshfield offers the foundation coursework for more than 200 majors, the Associate of Arts and Sciences degree as well as several collaborative bachelor degree programs.

UW-Stevens Point at Wausau is an urban campus located in Wausau, Wisconsin, adjacent to the 78-acre Marathon Park. The City of Wausau is two hours north of Madison and a four-hour drive from Chicago.

Emergency Management at The University of Wisconsin - Stevens Point

The University has an active emergency management program with an updated Emergency Operations Plan and Continuity of Operations (COOP) plans. The department runs various trainings and exercises during the year to ensure the campus is prepared and secure. The UW-Stevens Point Emergency Operations Plan provides guidelines for the preparation for, prevention of, response to, and recovery from campus emergencies. In addition, UW-Stevens Point is dedicated to mitigating against disasters. For example, the University of Wisconsin System initiated a comprehensive stormwater/flood study at all University of Wisconsin campuses in 2014. The purpose of the study was to identify current and past flood prone areas, develop appropriate models for mitigation, and recommend mitigation alternatives for campus. The report identified 18 areas of interest that have had minor property damage due to flooding. Some of these areas no longer experience flooding due to improvements made to stormwater conveyance systems and other stormwater diversion projects (such as landscaping).

UW-Stevens Point also works very closely with local responders. UW-Stevens Point Emergency Management meets regularly with the local response agencies to review the campus emergency procedures, train, and exercise the campus plan.

University of Wisconsin - Stevens Point has enhanced its emergency communication capabilities. The university utilizes Rave Alert, an emergency alert system capable of delivering messages to your UW-Stevens Point and personal email address, work cell phone and/or personal cell phone via text, campus residence halls over the intercom system (Main campus only) and campus computers through the Alertus (full-screen pop-up) program.

UW-Stevens Point has given the Rave system the following campus name - Pointer Alerts.

The system is designed to provide information about active emergencies that require immediate action. The philosophy behind Pointer Alerts is to send a consistent set of messages across all channels to reach as many members of the campus community as possible, in as short an amount of time as possible. Pointer Alerts is one of many emergency communication methods available to the university.

UW-Stevens Point has been a Weather-Ready Nation Ambassador since October 2016. This NOAA partnership aims to strengthen campus resilience against extreme weather. UW-Stevens Point emergency management provides information to students, faculty and staff members on how to stay safe and prepare for upcoming weather. In 2019, NOAA's National Weather Service recognized the University of Wisconsin-Stevens Point for earning the distinction of being StormReady®. UW-Stevens Point is the first university in the National Weather Service-Green Bay forecast area to earn this designation after meeting a set of rigorous warning criteria.

Brief History: After securing land and funding from the City of Stevens Point and Portage County and winning the right to host the new normal school, Stevens Point Normal School opened on September 17, 1894, with 201 students. In addition to teacher preparation, "domestic science" (home economics) and conservation education were offered; the latter formed the basis for the College of Natural Resources, nationally recognized for undergraduate and graduate training in natural resources.

In 1927, Stevens Point Normal School became Central State Teachers College and began offering four-year teaching degrees. When post-World War II enrollment became less centered on teacher training

and more focused on liberal arts education, the Wisconsin State Legislature intervened, changing the school's name to Wisconsin State College–Stevens Point with authority to grant bachelor's degrees in liberal arts.

Ever larger numbers of students in the 1950s and 1960s led to construction on campus throughout the 1960s and early 1970s. It was during this period, in 1964, that the college was elevated to university status as Wisconsin State University–Stevens Point and began offering graduate degrees. Seven years later, the Wisconsin State Universities merged into the University of Wisconsin System, and the school adopted its current name. UW-Stevens Point has more than 77,000 alumni. More than half of these alumni live in Wisconsin.

Climate: The University of Wisconsin Stevens Point gets 32 inches of rain, on average, per year. The U.S. average is 38 inches of rain per year. Stevens Point averages 45 inches of snow per year. The U.S. average is 28 inches of snow per year. On average, there are 187 sunny days per year in Stevens Point. The U.S. average is 205 sunny days. Stevens Point gets some kind of precipitation, on average, 118 days per year. Precipitation is rain, snow, sleet, or hail that falls to the ground. For precipitation to be counted, you have to get at least .01 inches on the ground to measure.

Governing Body Format: The university has a chancellor.

Hazard Considerations Specific to the University of Wisconsin - Stevens Point:

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Portage County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality.

Stevens Point-area historical tornado activity is near Wisconsin state average. It is 23% greater than the overall U.S. average. On 9/26/1951, a category F4 (max. wind speeds 207-260 mph) tornado 18.5 miles away from the Stevens Point city center killed six people and injured three people and caused between $50,000 and $500,000 in damages. On 4/19/1957, a category F4 tornado 35.5 miles away from the city center killed one person and caused between $5000 and $50,000 in damages.

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Sources:

- http://www.city-data.com/city/Stevens-Point-Wisconsin.html
- http://BestPlaces.com
- https://www.co.portage.wi.us/department/planning-zoning/planning-section/comprehensive-planning/portage-county
- https://studyabroad.uwsp.edu/
- https://www.uwsp.edu/marshfield/about/Pages/default.aspx
- https://www.uwsp.edu/wausau/about/Pages/default.aspx

Mitigation Strategies and Actions

Mitigation Strategy & Initiatives

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- **New Mitigation Actions** - New actions identified during this 2019 update process
- **Ongoing Mitigation Actions** - Ongoing actions with no definitive end. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- **Completed Mitigation Actions** - Completed actions since 2012
- **Removed Mitigation Actions** - Actions that were previously identified and during the 2019 update were identified as no longer being pursued.

New Mitigation Actions

Outdoor Giant-Voice Warning System – Treehaven

Mitigation Action	Outdoor Giant-Voice Warning System - Treehaven
Year Initiated	2019
Applicable Jurisdiction	University of Wisconsin Stevens Point
Lead Agency/Organization	
Supporting Agencies/Organizations	
Applicable Goal	
Potential Funding Source	
Estimated Cost	$30,000-$50,000
Benefits (loss avoided)	
Projected Completion Date	
Actual Completion Date	
Priority	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Treehaven's facilities rest on an ancient glacial ridge overlooking 1,400 acres of forest and wetland habitat. Facilities include a large classroom/conference center, two residential living centers that provide overnight accommodations for up to 125 people, and full food service capability. Eight permanent employees and over 20 affiliated staff - mostly teachers and educators - help Treehaven serve 25,000 user days per year of business (which averages 68 people per day for 365 days) with courses, seminars, workshops, school and youth programs, and business gatherings. Treehaven also offers miles of hiking trails and 6 miles of groomed cross-country ski and snowshoe trails. Treehaven staff rely on NOAA weather radios and weather apps to receive severe weather notifications. Treehaven employees are notified of tornado warnings via text, email through the campus emergency notification system. All Treehaven computers will display a popup with tornado warning information. There is no outdoor warning system. An omnidirectional siren that includes components for RF activation from county dispatch would provide emergency notification coverage for the Treehaven property. A giant-voice could also be used to make announcements using a microphone. System could be incorporated into the fire alarm system for an additional cost.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**

Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	5
Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	5
Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	3
Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	5
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	5
Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund.	3
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	5
	Total Score: 31

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Earthquake
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Landslide
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Subsidence (Sinkhole)
	Tornado and High Winds
	Wildfire
	Civil Disorder/Riot
	Cyber Attack
	Fire Hazards
	Hazardous Materials Release
	Infrastructure Failure
	Major Transportation Accident/Incident
	Public Health Emergency
	Radiological
	Structural Failure

	Terrorism
	Utility Failure
	Violent Mass Casualty Incident

Outdoor Giant-Voice Warning System – CWES

Mitigation Action	Outdoor Giant-Voice Warning System - CWES
Year Initiated	2019
Applicable Jurisdiction	
Lead Agency/Organization	
Supporting Agencies/Organizations	
Applicable Goal	
Potential Funding Source	
Estimated Cost	$30,000-$50,000
Benefits (loss avoided)	
Projected Completion Date	
Actual Completion Date	
Priority	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	The Central Wisconsin Environmental Station (CWES) is a year-round 200-acre teaching and learning center located 17 miles east of Stevens Point on glacial Sunset Lake. It is licensed by the State of Wisconsin to operate as a residential camp, satisfying state and county public health and safety requirements. CWES has eight-person log cabins, a 24-person lodge, and a dormitory lodge that sleeps 48. The property also is home to the Tomorrow River Community Charter School. CWES staff rely on NOAA weather radios and weather apps to receive severe weather notifications. CWES employees are notified of tornado warnings via text, email through the campus emergency notification system. All CWES computers will display a popup with tornado warning information. Radios are also utilized by camp personnel to talk to one another. To notify campers outside of severe weather or other emergency, the lunch bell is rung continuously for more than 30 seconds. There is no outdoor warning siren. An omnidirectional siren that includes components for RF activation from county dispatch would provide emergency notification coverage for the CWES property.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	5

Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	5
Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	3
Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	5
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	5
Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund.	3
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	5
	Total Score: 31

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Earthquake
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Landslide
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Subsidence (Sinkhole)
	Tornado and High Winds
	Wildfire
	Civil Disorder/Riot
	Cyber Attack
	Fire Hazards
	Hazardous Materials Release
	Infrastructure Failure
	Major Transportation Accident/Incident
	Public Health Emergency
	Radiological
	Structural Failure
	Terrorism
	Utility Failure
	Violent Mass Casualty Incident

Campus-wide Door Locks

Mitigation Action	Campus-wide Door Lock
Year Initiated	2019
Applicable Jurisdiction	
Lead Agency/Organization	University of Wisconsin - Stevens Point
Supporting Agencies/Organizations	
Applicable Goal	
Potential Funding Source	
Estimated Cost	
Benefits (loss avoided)	
Projected Completion Date	
Actual Completion Date	
Priority	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Due to the gradual addition of buildings across campus through its history, there are different types of door locks in each building. Many rely on a key to lock and unlock the door. In an active shooter incident, individuals must quickly locate their keys, get to the door and be able to quickly operate the hardware, while under enormous pressure. A thumb turn deadbolt locking mechanism would allow occupants of the room to quickly secure it without the use of a key. The project would be to install the thumb turn deadbolt locking mechanism on each door that does not already have a comparable locking mechanism in place.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	5
Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	5
Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	1
Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	5

Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	5
Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund.	3
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	5
	Total Score: 29

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Earthquake
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Landslide
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Subsidence (Sinkhole)
	Tornado and High Winds
	Wildfire
	Civil Disorder/Riot
	Cyber Attack
	Fire Hazards
	Hazardous Materials Release
	Infrastructure Failure
	Major Transportation Accident/Incident
	Public Health Emergency
	Radiological
	Structural Failure
	Terrorism
	Utility Failure
X	Violent Mass Casualty Incident

Ongoing Mitigation Actions

Emergency Information Webpage and Guidebooks

Mitigation Action	Emergency Information Webpage and Guidebooks
Year Initiated	?
Applicable Jurisdiction	
Lead Agency/Organization	
Supporting Agencies/Organizations	University of Wisconsin Stevens Point
Applicable Goal	
Potential Funding Source	
Estimated Cost	
Benefits (loss avoided)	Economic, Reputation, Injuries, Fatalities
Projected Completion Date	
Actual Completion Date	
Priority	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	UWSP has posted online the campus emergency procedures, the campus emergency operations plan Basic Plan. The online format allows easy access to this information by students, staff, and faculty. Printed guidebooks of select procedures were updated and distributed to campus in 2014 onward. Guidebooks are also available throughout the campus by each AED cabinet.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	Procedures are updated as needed and announced to campus
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	5
Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	5
Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	5

Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	5
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	5
Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund.	5
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	5
	Total Score: 35

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Earthquake
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Landslide
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Subsidence (Sinkhole)
	Tornado and High Winds
	Wildfire
	Civil Disorder/Riot
	Cyber Attack
	Fire Hazards
	Hazardous Materials Release
	Infrastructure Failure
	Major Transportation Accident/Incident
	Public Health Emergency
	Radiological
	Structural Failure
	Terrorism
	Utility Failure
	Violent Mass Casualty Incident

Continuity of Operations Plan

Mitigation Action	Continuity of Operations Plan
Year Initiated	2009
Applicable Jurisdiction	
Lead Agency/Organization	University of Wisconsin-Stevens Point
Supporting Agencies/Organizations	
Applicable Goal	
Potential Funding Source	
Estimated Cost	
Benefits (loss avoided)	Economic, Reputation
Projected Completion Date	On-going
Actual Completion Date	
Priority	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	UWSP has twenty-two continuity of operations plans for the main campus. Each branch campus, UWSP at Wausau and UWSP at Marshfield, has a continuity of operations plan also.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	Plans are regularly updated and exercised
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	5
Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	5
Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	5
Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	4
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	5

Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund.	5
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	5
	Total Score: 34

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Earthquake
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Landslide
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Subsidence (Sinkhole)
	Tornado and High Winds
	Wildfire
	Civil Disorder/Riot
	Cyber Attack
	Fire Hazards
	Hazardous Materials Release
	Infrastructure Failure
	Major Transportation Accident/Incident
	Public Health Emergency
	Radiological
	Structural Failure
	Terrorism
	Utility Failure
	Violent Mass Casualty Incident

Emergency Operations Plan

Mitigation Action	Emergency Operations Plan
Year Initiated	1990
Applicable Jurisdiction	
Lead Agency/Organization	University of Wisconsin - Stevens Point
Supporting Agencies/Organizations	
Applicable Goal	
Potential Funding Source	
Estimated Cost	
Benefits (loss avoided)	Economic, Reputation, Injuries, Fatalities
Projected Completion Date	
Actual Completion Date	
Priority	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	UWSP has a comprehensive all-hazards Emergency Operations Plan (EOP) for each campus.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	Plans update and exercised
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	5
Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	5
Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	5
Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	5
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	5

Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund.	5
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	5
	Total Score: 35

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Earthquake
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Landslide
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Subsidence (Sinkhole)
	Tornado and High Winds
	Wildfire
	Civil Disorder/Riot
	Cyber Attack
	Fire Hazards
	Hazardous Materials Release
	Infrastructure Failure
	Major Transportation Accident/Incident
	Public Health Emergency
	Radiological
	Structural Failure
	Terrorism
	Utility Failure
	Violent Mass Casualty Incident

StormReady Community

Mitigation Action	StormReady Community
Year Initiated	2015
Applicable Jurisdiction	
Lead Agency/Organization	University of Wisconsin - Stevens Point
Supporting Agencies/Organizations	
Applicable Goal	
Potential Funding Source	
Estimated Cost	
Benefits (loss avoided)	Economic, Reputation, Injuries, Fatalities
Projected Completion Date	07/09/19
Actual Completion Date	
Priority	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	UWSP (Main campus) has been designated a StormReady university by the National Weather Service. The storm ready designation means the campus met the national criteria set by the National Weather Service. To be officially StormReady, a university must: Establish a 24-hour warning point and emergency operations center Have more than one way to receive severe weather warnings and forecasts and to alert the public Create a system that monitors weather conditions locally Promote the importance of public readiness through community seminars Develop a formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises Recertification occurs every 3 years.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	Ongoing	Requirements must be continually met to maintain status
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	5
Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	5

Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	5
Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	5
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	5
Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund.	5
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	5
	Total Score: 35

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Earthquake
X	Extreme Cold
X	Extreme Heat
X	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Landslide
X	Severe Thunderstorms
X	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Subsidence (Sinkhole)
X	Tornado and High Winds
X	Wildfire
	Civil Disorder/Riot
	Cyber Attack
	Fire Hazards
	Hazardous Materials Release
	Infrastructure Failure
	Major Transportation Accident/Incident
	Public Health Emergency
	Radiological
	Structural Failure
	Terrorism
	Utility Failure
	Violent Mass Casualty Incident

New Camera System

Mitigation Action	New camera System
Year Initiated	2019
Applicable Jurisdiction	
Lead Agency/Organization	University of Wisconsin - Stevens Point
Supporting Agencies/Organizations	
Applicable Goal	
Potential Funding Source	
Estimated Cost	Years 1-5: $30,000/year Years 6 and onward: $25,000/year
Benefits (loss avoided)	
Projected Completion Date	July 2021
Actual Completion Date	
Priority	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	UW-Stevens Point Main campus maintains 172 camera lenses. We are looking at a new system for a couple of reasons, 1) many of the cameras are nearing their end of life and are failing, and 2) IT is running out of on prem storage space for the video footage. The university is required to store the imagery for a given amount of time per UW System policy. Switching to a new vendor will enable storage to the cloud, a more robust user interface and enable University Police to manage the system instead of IT. Improved camera imagery made available to the campus emergency operations center through a user-friendly interface will aid in situational awareness and more informed decision making.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	4

Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	5
Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	3
Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	5
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	5
Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund.	3
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	5
	Total Score: 30

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Earthquake
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Landslide
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Subsidence (Sinkhole)
	Tornado and High Winds
	Wildfire
	Civil Disorder/Riot
	Cyber Attack
	Fire Hazards
	Hazardous Materials Release
	Infrastructure Failure
	Major Transportation Accident/Incident
	Public Health Emergency
	Radiological
	Structural Failure
	Terrorism
	Utility Failure
	Violent Mass Casualty Incident

Drainage Study

Mitigation Action	Drainage Study
Year Initiated	2019
Applicable Jurisdiction	
Lead Agency/Organization	University of Wisconsin - Stevens Point
Supporting Agencies/Organizations	
Applicable Goal	
Potential Funding Source	
Estimated Cost	
Benefits (loss avoided)	
Projected Completion Date	
Actual Completion Date	
Priority	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Background: The University of Wisconsin-Stevens Point, UWSP, is located within the City of Stevens Point. The main campus is bordered by Division Street to the west, Illinois Avenue to the east, Main Street to the south, and the Schmeeckle Reserve to the north. The 500-year floodplain of the Wisconsin River is just west of campus; no campus buildings are located in the 500-year floodplain. University of Wisconsin-Stevens Point has suffered losses from flood and stormwater damage. A 2014 UW Property Loss Control Initiative Report identifies existing stormwater infrastructure and eighteen areas of historic flooding; with multiple areas having had minor property damage due to flooding. Areas of particular concern include the north and south sides of Marshfield Clinic Health Systems Champions Hall, northside of the College of Professional Studies, and the Albertson Hall ramp (water infiltration into the building jeopardizes server equipment that services campus, city and county agencies and some local businesses. Project: An additional study, as a follow up to the 2014 report, is needed to determine the capacity of existing stormwater systems and the flood protection level needed to protect many campus buildings from 100-year storm localized flooding events. This will help to identify flood prone areas on campus, develop appropriate models for mitigation, and recommend mitigation alternatives.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	5
Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	5
Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	3
Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	5
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	5
Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund.	3
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	5
	Total Score: 31

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Earthquake
	Extreme Cold
	Extreme Heat
X	Flood (Riverine)
X	Flood (Urban/Flash Flooding)
	Landslide
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Subsidence (Sinkhole)
	Tornado and High Winds
	Wildfire
	Civil Disorder/Riot
	Cyber Attack
	Fire Hazards
	Hazardous Materials Release
	Infrastructure Failure
	Major Transportation Accident/Incident
	Public Health Emergency

	Radiological
	Structural Failure
	Terrorism
	Utility Failure
	Violent Mass Casualty Incident

Interoperable Campus Radio System

Mitigation Action	Interoperable Campus Radio System
Year Initiated	2019
Applicable Jurisdiction	
Lead Agency/Organization	University of Wisconsin - Stevens Point
Supporting Agencies/Organizations	
Applicable Goal	
Potential Funding Source	
Estimated Cost	
Benefits (loss avoided)	
Projected Completion Date	
Actual Completion Date	
Priority	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Background: UW-Stevens Point Main campus has thirteen radio frequencies registered with the FCC – nine UHF and four VHF. Some radios are digital and others analog. There are four repeaters on campus, but none offer the capabilities needed for interoperable communication and the repeaters cannot be reprogrammed. For interoperability, if all frequencies were either UHF or VHF, then digital radios could be purchased and programmed with all campus radio frequencies. With our current system, university police do not have consistent radio reception in all campus buildings. Project: Purchase and install digital repeater(s) on a generator circuit and purchase the needed numbers of digital radios. Program radios with all campus frequencies. Benefit: Radios with common frequencies improve communication and efficiency in day-to- day campus operations. Improved radio interoperability will also greatly improve communication between responders and the Emergency Operations Center.

Mitigation Action and Project Maintenance		
Year	**Status**	**Comments**
2019	New	
2020		
2021		
2022		
2023		

STAPLEE Prioritization Table	
Item	**Score**
Social: Do you agree or disagree that the mitigation action is more likely to: be acceptable to the community; does not adversely affect a particular segment of the population; does not cause relocation of lower-income people, and is compatible with the community's social and cultural values.	4

Technical: Do you agree or disagree that the mitigation action is technically effective in providing a long-term reduction of losses and has minimal secondary adverse impacts.	5
Administrative: Do you agree that your jurisdiction/organization has the necessary staffing funding to carry-out this mitigation action.	3
Political: Do you agree or disagree that the mitigation action has the support of the public and stakeholders who have been offered an opportunity to participate in the planning process.	5
Legal: Do you agree or disagree that the jurisdiction or implementing agency has the legal authority to implement and enforce the mitigation action.	5
Economic: Budget constraints can significantly deter the implementation of mitigation actions. Do you agree or disagree that the mitigation action is cost-effective, as determined by a cost-benefit review, and is possible to fund.	4
Environmental: Do you agree or disagree that the mitigation action is sustainable and does not have an adverse effect on the environment, complies with federal, state, and local environmental regulations, and is consistent with the community's environmental goals.	5
	Total Score: 31

Mitigated Hazards	
X	**All Hazards**
	Dam/Levee Failure
	Drought
	Earthquake
	Extreme Cold
	Extreme Heat
	Flood (Riverine)
	Flood (Urban/Flash Flooding)
	Landslide
	Severe Thunderstorms
	Severe Winter Weather/Heavy Snowfall/Ice Storm
	Subsidence (Sinkhole)
	Tornado and High Winds
	Wildfire
	Civil Disorder/Riot
	Cyber Attack
	Fire Hazards
	Hazardous Materials Release
	Infrastructure Failure
	Major Transportation Accident/Incident
	Public Health Emergency
	Radiological
	Structural Failure
	Terrorism
	Utility Failure
	Violent Mass Casualty Incident

Appendix B. Meeting and Participation Documentation

Steering Committee Sign-in Sheets

- SIGN-IN SHEET: Hazard Mitigation Plan Update -

Hazard Mitigation Plan: Workshop and Public Meeting (5/14/2019)
Portage County, Wisconsin

Hazard Mitigation Planning Meeting – Workshop
Date: 5/14/2019

Name	Organization	Phone	E-mail
Angela Lochinger	Town of Dewey	715-254-5584	Townofdewey@yahoo.com
BRIAN LEPPER	Village of Park Ridge Town of Dewey	715-347-6152	brilepper@yahoo.com
Kathy Bemowski	Village of Park Ridge	715-343-1590	kbemowski@park-ridge.com
TODD KNEPFEL	Town of New Hope	715 824 3452	tknepfel@yahoo.com
Howard Kriesk	Town of Linwood	715-344-2967	
John Spreda	Village of Junction City	715 347 4072	Jct utilities@TDS.Net mallek@TDS.Net
Jeanette Wilson	Town of Pine Grove	715-335-6581	willycrockat2001@yahoo.com
Don SPIER WAS	TOWN OF AMHERST	715-340-1230	bigboot-1@hotmail.com
James Yetter	Town of Grant	715-215-2000	diamondj@wctc.net
Marj. Bachhuber	Town of Amherst	715-824-2938	N/A
MARK FRITSCHE	Town of Hull	715-344-8280	N/A
RYAN KERNOSKY	VILLAGE OF PLOVER	715-345-5250	rkernosky@plover.wi.gov
Tim Karchesk	Town of Plover	715-630-5493	tim.karcheskie@yahoo.com

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- *SIGN-IN SHEET:* Hazard Mitigation Plan Update -

Hazard Mitigation Plan: Workshop and Public Meeting (5/14/2019)
Portage County, Wisconsin

Hazard Mitigation Planning Meeting – Workshop
Date: 5/14/2019

Name	Organization	Phone	E-mail
MAURICE KING	TOWN OF DEWEY	715-572-1835	chairtownofdewey@yahoo.com
Germaine Stuczynski	Buena Vista	715-824-5419	townofbuenavista@gmail.com
Denise Hulce	Town of Linwood	715-345-9516	townoflinwood@gmail.com
Eric Southworth	City of St. Pt Utilities	715-342-4846	esouthworth@stevenspoint.com
Duane Clark	Buena vista	715-366-2331	

Mitigation Workshop Sign-in Sheets

- SIGN-IN SHEET: Hazard Mitigation Plan Update -

Hazard Mitigation Plan: Workshop and Public Meeting (5/14/2019)
Portage County, Wisconsin

Hazard Mitigation Planning Meeting – Workshop
Date: 5/14/2019

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BRIAN LEPPER	Village of Park Ridge Town of Dewey	715-347-6152	brilepper@yahoo.com
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John Spreda	Village of Junction City	715 347 4072	Jct utilities@TDS.net MALLEK@TDS.net
Jeanette Wilson	Town of Pine Grove	715-335-6581	willycrock at 2001@yahoo.com
Don SPLIERWAS	TOWN OF AMHERST	715-340-1230	bigboot-17@hotmail.com
James Yetter	Town of Grant	715-215-2000	diamondj@wctc.net
Marj. Bachhuber	Town of Amherst	715-824-2932	N/A
MARK FRITSCHE	Town of Hull	715-344-8280	N/A
RYAN KERNOSKY	VILLAGE OF PLOVER	715-345-5250	rkernosky@ploverwi.gov
Tim Karchesk	Town of Plover	715-630-5493	tim.karcheski@yahoo.com

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- *SIGN-IN SHEET:* Hazard Mitigation Plan Update -

Hazard Mitigation Plan: Workshop and Public Meeting (5/14/2019)
Portage County, Wisconsin

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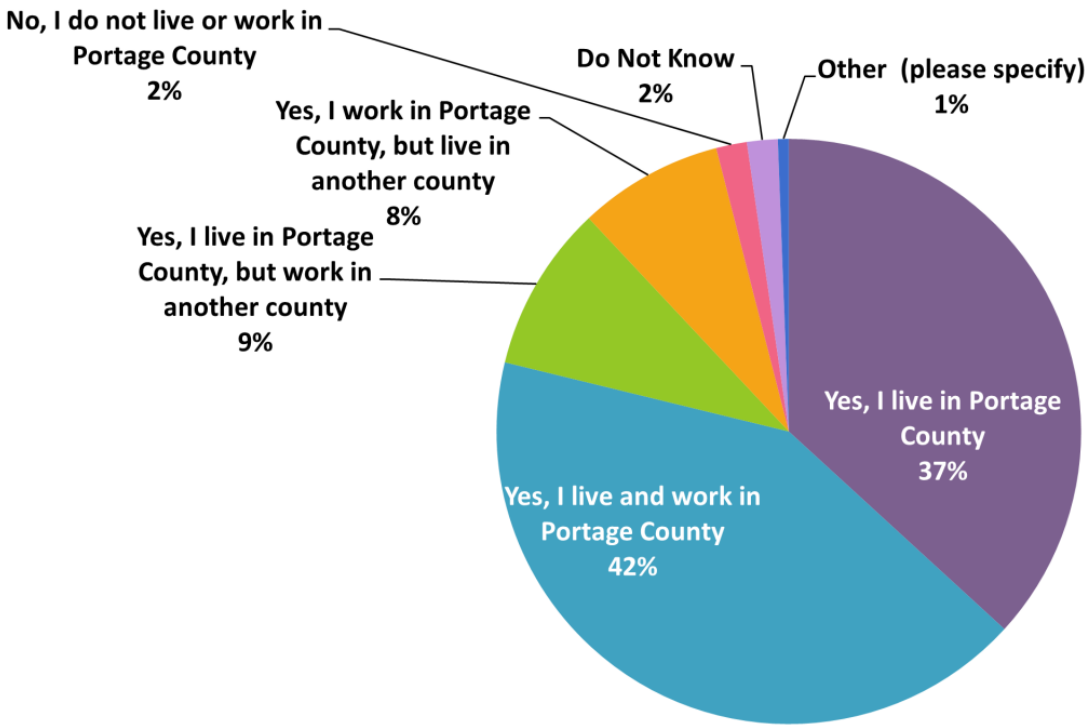
Denise Hulce	Town of Linwood	715-345-9516	townoflinwood@gmail.com
Eric Southworth	City of St. Pt Utilities	715-342-4846	esouthworth@stevenspoint.com
Duane Clark	Buena vista	715-366-2331	

Report for 2019 Portage County Community Preparedness Survey

2019 Portage County Community Preparedness Survey

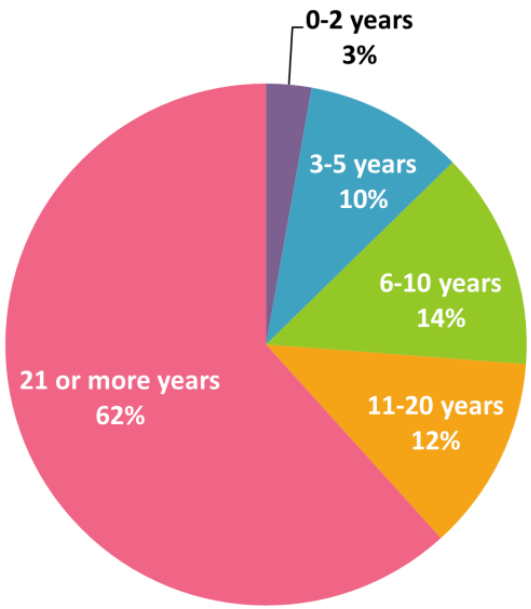
Do you live and/or work in Portage County? Please select the best answer that applies to your current situation.



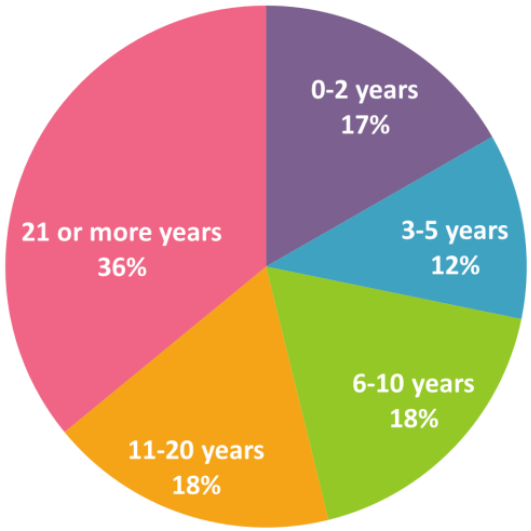
Do you live and/or work in Portage County? Please select the best answer that applies to your current situation.

Value		Percent	Count
Yes, I live in Portage County		36.8%	64
Yes, I live and work in Portage County		42.0%	73
Yes, I live in Portage County, but work in another county		9.2%	16
Yes, I work in Portage County, but live in another county		8.0%	14
No, I do not live or work in Portage County		1.7%	3
Do Not Know		1.7%	3
Other (please specify)		0.6%	1
Total			174

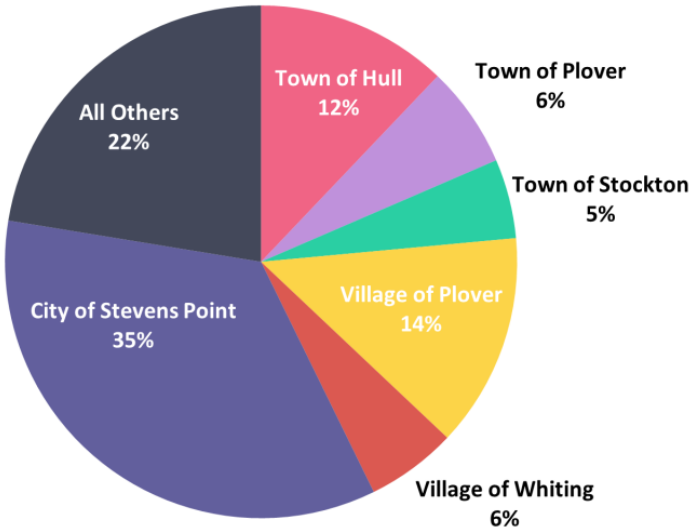
Approximately how many years have you lived in Portage County?



Approximately how many years have you worked in Portage County?



Please indicate which community in Portage County you live in.



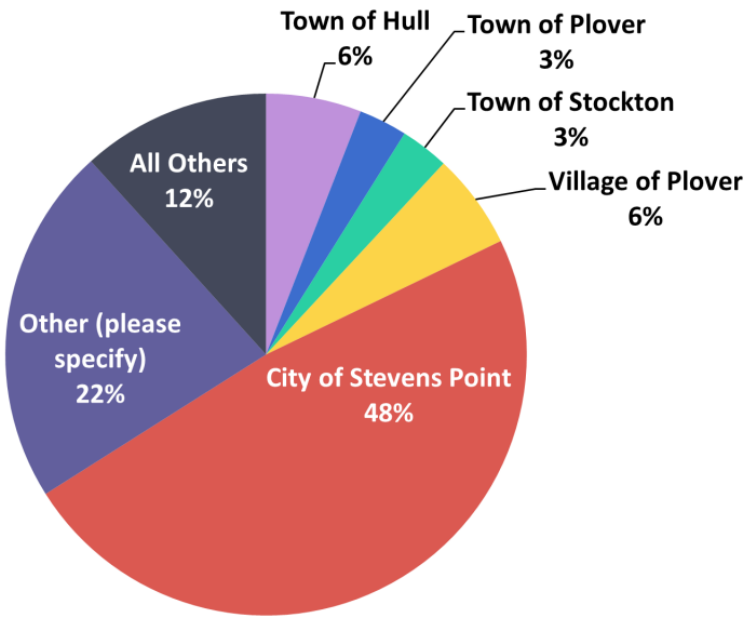
Please indicate which community in Portage County you live in.

Value		Percent	Count
Town of Alban		2.1%	3
Town of Almond		0.7%	1
Town of Amherst		0.7%	1
Town of Buena Vista		2.1%	3
Town of Carson		1.4%	2
Town of Eau Pleine		2.1%	3
Town of Grant		1.4%	2
Town of Hull		12.1%	17
Town of Lanark		0.7%	1
Town of Linwood		2.1%	3

Please indicate which community in Portage County you live in.

Value		Percent	Count
Town of Pine Grove		2.1%	3
Town of Plover		6.4%	9
Town of Stockton		5.0%	7
Village of Almond		0.7%	1
Village of Amherst		0.7%	1
Village of Amherst Jct.		2.8%	4
Village of Park Ridge		2.1%	3
Village of Plover		13.5%	19
Village of Rosholt		0.7%	1
Village of Whiting		5.7%	8
City of Stevens Point		34.8%	49
Total			141

Please indicate which community in Portage County you work in.



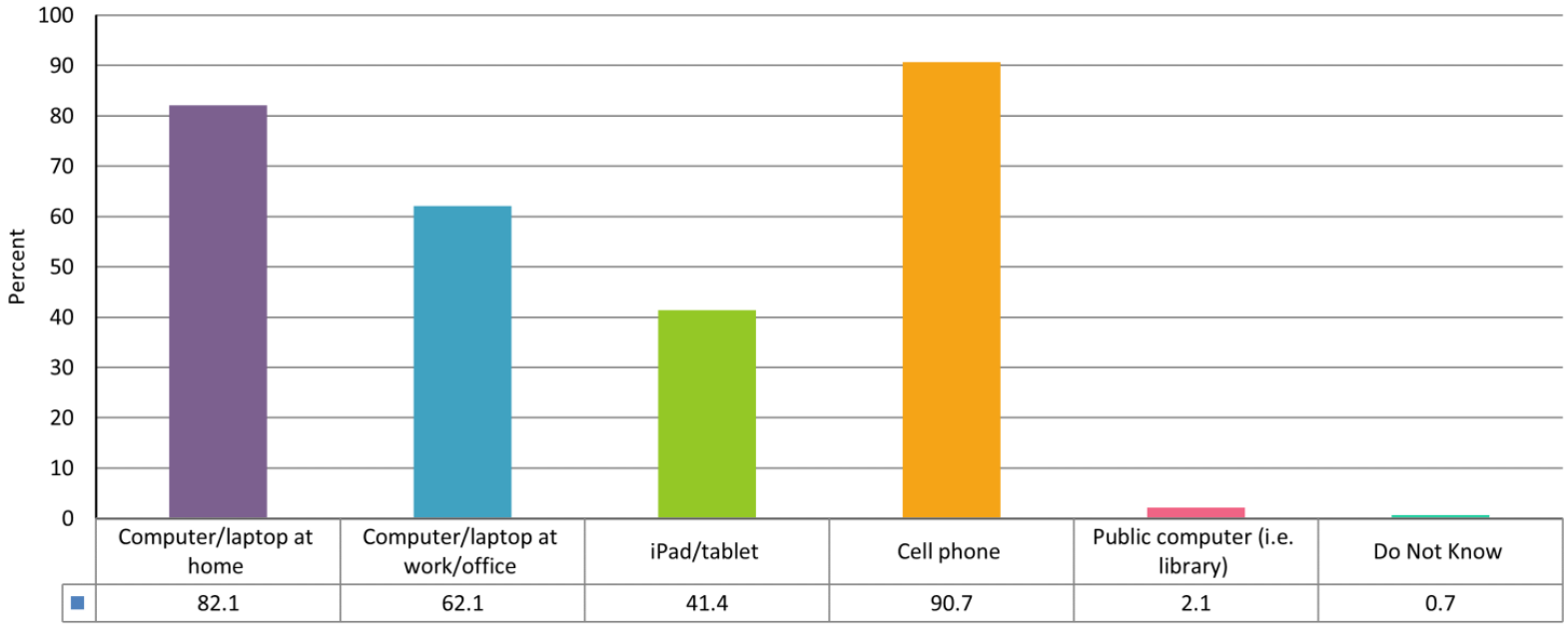
Please indicate which community in Portage County you work in.

Value		Percent	Count
Town of Alban		0.7%	1
Town of Buena Vista		1.5%	2
Town of Carson		0.7%	1
Town of Hull		5.9%	8
Town of Linwood		2.2%	3
Town of Plover		3.0%	4
Town of Stockton		3.0%	4
Village of Almond		1.5%	2
Village of Amherst		1.5%	2
Village of Nelsonville		0.7%	1

Please indicate which community in Portage County you work in.

Value		Percent	Count
Village of Park Ridge		0.7%	1
Village of Plover		5.9%	8
Village of Whiting		2.2%	3
City of Stevens Point		48.1%	65
Other (please specify)		22.2%	30
Total			135

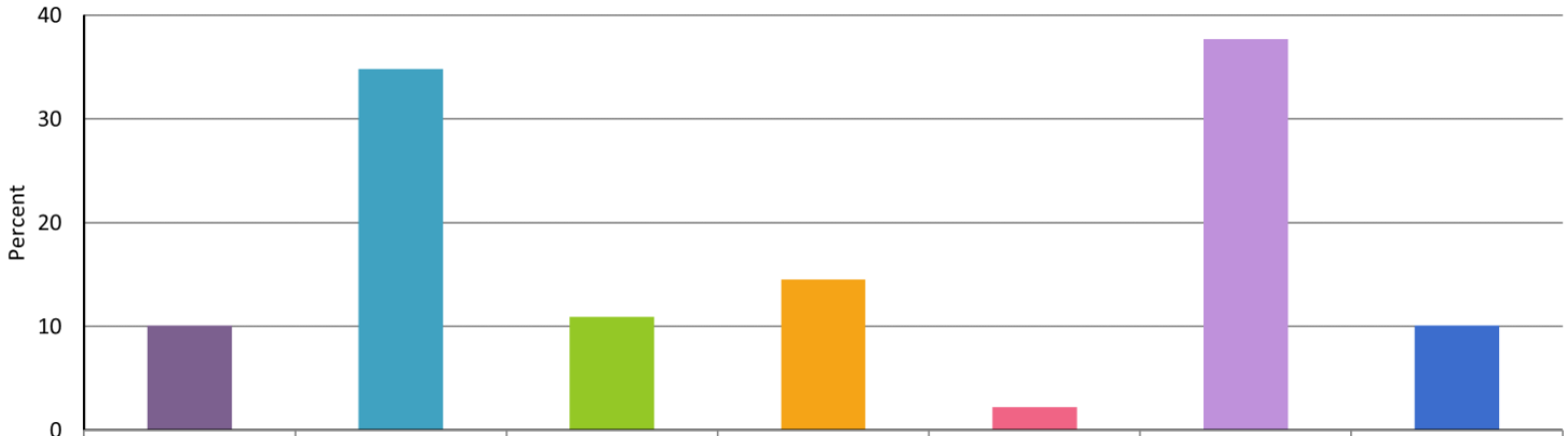
Please indicate what type of device(s) you use to access the internet. Select ALL that apply.



Please indicate those activities you have done to prepare for emergencies and disasters. Please select ALL that apply.
I have…

Value		Percent	Count
an emergency preparedness plan		22.9%	32
flood Insurance		2.1%	3
a 72 hour kit/Disaster supply kit		22.1%	31
visited local government web site(s) for emergency preparedness information		17.9%	25
an evacuation plan		20.0%	28
a weather radio		34.3%	48
signed up for emergency alerts for Portage County (from any source)		67.1%	94
done nothing		17.1%	24
Other (please specify)		5.0%	7

Have any of the reasons below prevented you from pursuing additional preparedness activities? Please select ALL that apply.



	I don't think it will make a difference.	I don't know what to do.	I don't have the time.	It costs too much.	I don't need to prepare because emergency responders (fire, police, etc.) will help	None of the above apply to me.	Other (please specify)
■	10.1	34.8	10.9	14.5	2.2	37.7	10.1

Please indicate where you go to obtain emergency and disaster preparedness related information? Please select ALL that apply.

Value		Percent	Count
Municipal government websites		35.3%	49
County government website		39.6%	55
State government website		21.6%	30
Federal government websites (example: www.fema.gov)		31.7%	44
Web search (example: bing.com, google.com)		56.1%	78
Social media (example: facebook, twitter, google+, etc.)		46.8%	65
Voluntary organizations (example: American Red Cross, Salvation Army, etc.)		17.3%	24
Religious Organization		1.4%	2
Local English-speaking television		25.9%	36
Local English-speaking radio		19.4%	27

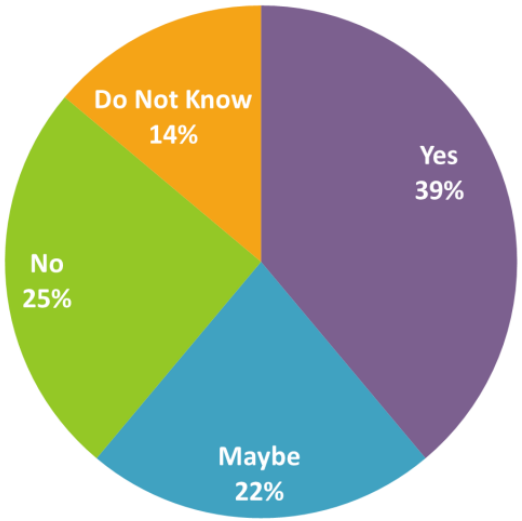
Please indicate where you go to obtain emergency and disaster preparedness related information? Please select ALL that apply.

Value		Percent	Count
National News (Radio and Television)		17.3%	24
Print Media - English (example: newspapers)		5.8%	8
Brochures and Newsletters		5.0%	7
Word of Mouth (example: friends, family, co-workers)		33.1%	46
Other (please specify)		3.6%	5
Do Not Know		3.6%	5
Not Applicable		3.6%	5

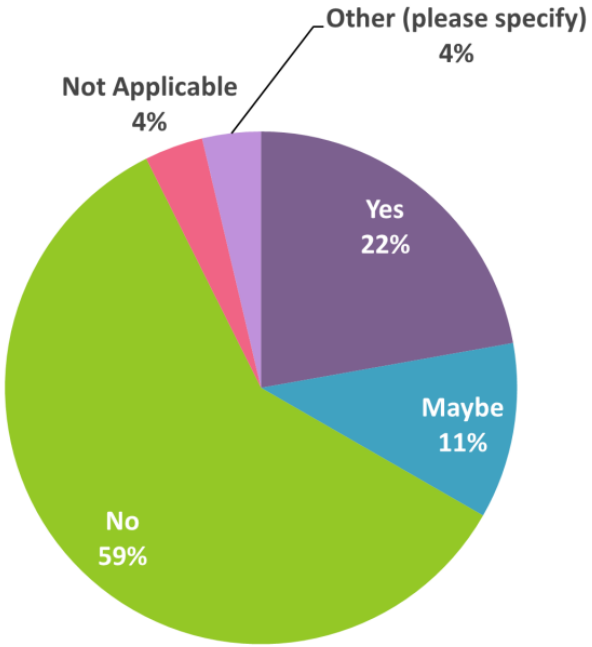
Please indicate how you expect to receive alerts and information during an emergency. Please select ALL that apply.

Value		Percent	Count
A weather radio		38.4%	53
Private Weather Phone Applications (ex. Weather Channel, Wunderground, Weather Bug, AccuWeather, etc.)		58.0%	80
Preparedness Phone Applications (ex. FEMA, Red Cross, etc.)		15.9%	22
Local Media Phone Applications		31.9%	44
Portage County Emergency Management website		36.2%	50
Local Television Media (ex. NewsChannel 7, WAOW 9, NewsWatch 12, FOX 55, etc.)		78.3%	108
Local Radio		63.8%	88
Social Media		60.1%	83
Word of Mouth		30.4%	42
Do Not Know		3.6%	5
Other (please specify)		4.3%	6

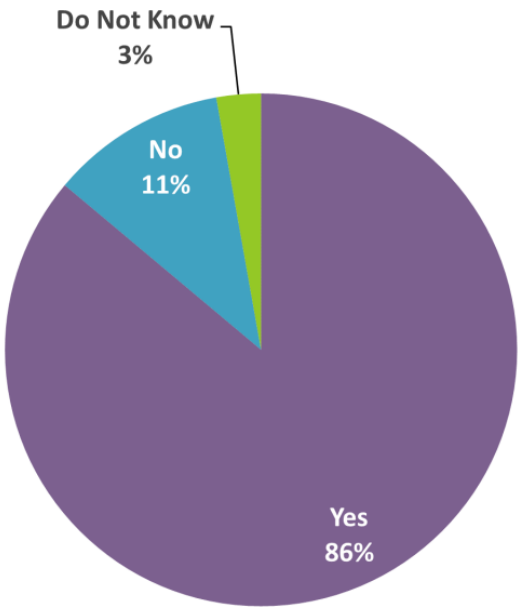
Do you have any concerns for chemicals transported by the railroad in or near Portage County?



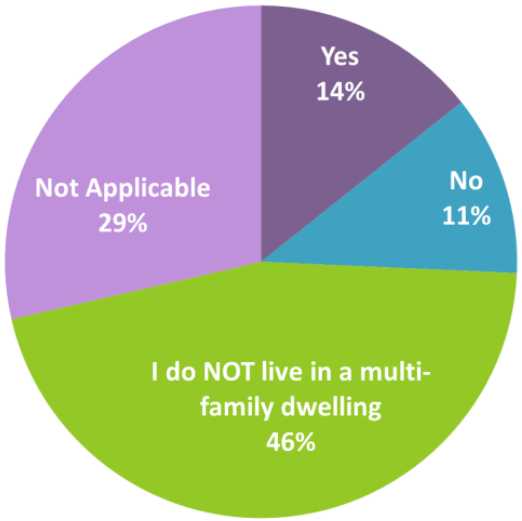
If you believe you might be affected by a train derailment and subsequent chemical release, do you have a plan in place for such an incident?



Do you have a basement, or a [well-built] tornado storm shelter?



If you live in a multi-family dwelling (i.e. apartment), do you have easy and quick access to a basement or tornado shelter?



Would you agree or disagree with the following statements?

	Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly Disagree		Do Not Know		Responses
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Portage County is providing the services necessary to prepare me for a disaster.	7	5.1%	49	35.5%	51	37.0%	12	8.7%	3	2.2%	16	11.6%	138
I am familiar with Portage County's website and can easily obtain information about emergencies and disasters.	14	10.1%	51	37.0%	30	21.7%	26	18.8%	9	6.5%	8	5.8%	138

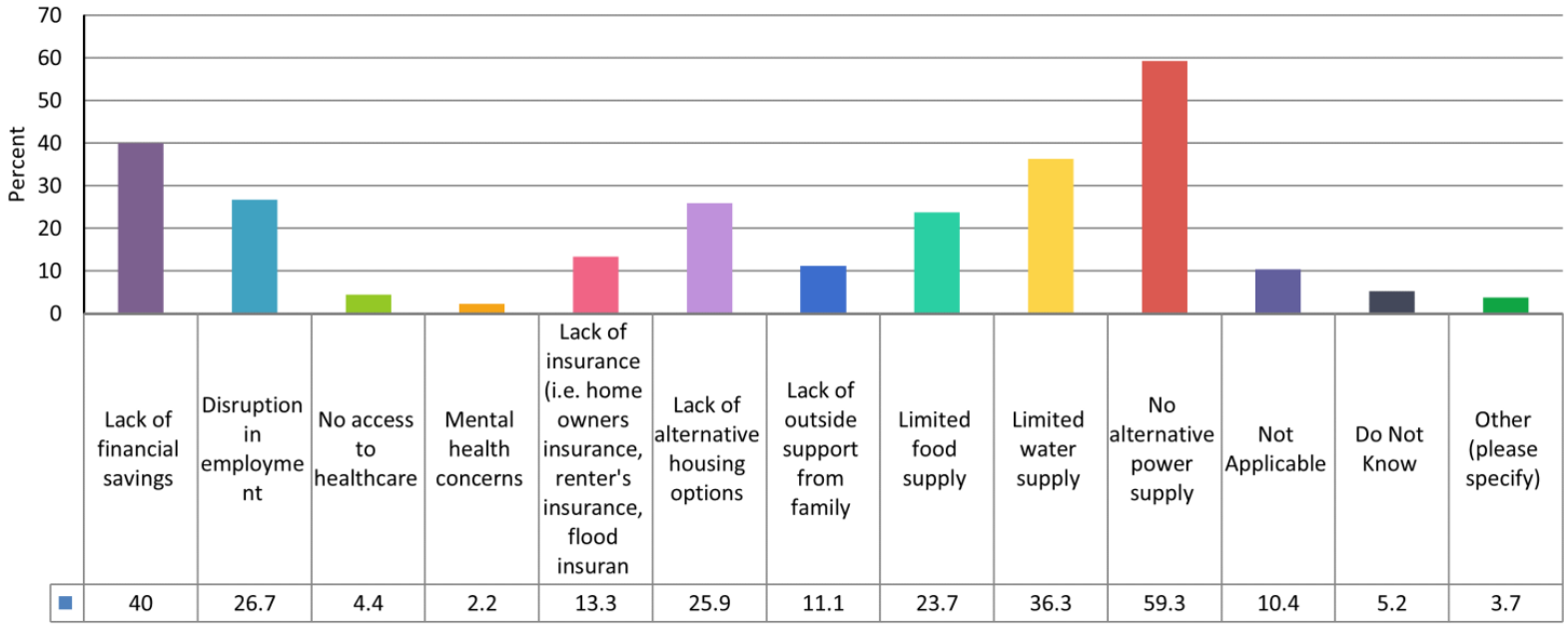
Would you agree or disagree with the following statements?

	Strongly Agree		Agree		Neither Agree nor Disagree		Disagree		Strongly Disagree		Do Not Know		Responses
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
During times of emergency, information is provided in a language and format I can understand.	59	42.8%	61	44.2%	10	7.2%	0	%	1	0.7%	7	5.1%	138
I can easily obtain emergency information in times of crisis.	23	16.7%	59	42.8%	40	29.0%	7	5.1%	1	0.7%	8	5.8%	138

If a disaster (i.e. snowstorm) impacted Portage County, knocking out electricity and running water, would your household be able to manage on its own for at least three (3) days?

Value		Percent	Count
Yes		50.4%	70
Maybe		34.5%	48
No		12.9%	18
Do Not Know		2.2%	3
Total			139

Which of the following may prevent you from recovering from a disaster? Please select ALL that apply.



Do you believe that your household and/or place of business might ever be threatened by the following hazards in regards to property damage? Please rate what hazards present the greatest risk.
Low Risk = Low impact on threat to life and property damage
Medium Risk = Medium impact on threat to life and property damage
High Risk = High impact on threat to life and property damage

	Low Risk		Medium Risk		High Risk		Not Applicable		Responses
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Civil Disorder/Riot	87	76.3%	19	16.7%	5	4.4%	3	2.6%	114
Crop Failure (Heat, Disease, Insects/Pests, etc.)	57	49.6%	36	31.3%	4	3.5%	18	15.7%	115
Cyber Security Threat	26	22.4%	52	44.8%	35	30.2%	3	2.6%	116
Dam Failure	66	57.9%	22	19.3%	13	11.4%	13	11.4%	114
Severe or Prolonged Drought	47	40.5%	49	42.2%	13	11.2%	7	6.0%	116
Extreme Cold Incident	18	15.7%	63	54.8%	33	28.7%	1	0.9%	115
Extreme Heat Incident	34	29.6%	64	55.7%	15	13.0%	2	1.7%	115
Flash Flooding/Overland Flooding	36	31.3%	57	49.6%	19	16.5%	3	2.6%	115
Riverine Flooding	58	51.3%	34	30.1%	9	8.0%	12	10.6%	113
Hail	32	27.8%	63	54.8%	19	16.5%	1	0.9%	115

	Low Risk		Medium Risk		High Risk		Not Applicable		Responses
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Hazardous Materials Release (example: Chemical Spill)	44	38.3%	51	44.3%	17	14.8%	3	2.6%	115
Infrastructure Failure (example: Bridge Collapse)	67	58.3%	35	30.4%	8	7.0%	5	4.3%	115
Lightning	30	25.9%	65	56.0%	20	17.2%	1	0.9%	116
Nuclear Event	79	69.3%	14	12.3%	12	10.5%	9	7.9%	114
Power Failure	14	12.2%	54	47.0%	45	39.1%	2	1.7%	115
Public Health Emergency (example: Pandemic)	45	39.1%	52	45.2%	16	13.9%	2	1.7%	115
Severe Winter Storm/Heavy Snowfall/Ice Storm	10	8.8%	53	46.5%	50	43.9%	1	0.9%	114
Straight Line Wind	26	22.6%	53	46.1%	33	28.7%	3	2.6%	115
Structural Fire	37	32.2%	50	43.5%	26	22.6%	2	1.7%	115
Terrorism Incident	80	69.6%	23	20.0%	9	7.8%	3	2.6%	115
Tornado and High Winds	16	13.8%	62	53.4%	36	31.0%	2	1.7%	116
Wildfires	66	57.9%	36	31.6%	7	6.1%	5	4.4%	114

Please select the answer that best describes your experience.

Value		Percent	Count
I have never experienced property damage or loss from a disaster(s)		24.1%	28
I have experienced minor property damage and loss from a disaster(s)		63.8%	74
I have experienced major property damage and loss from a disaster(s)		8.6%	10
I have experienced catastrophic property damage and loss from a disaster(s)		3.4%	4
Total			116

Please select the best answer. The risks associated with Portage County's most prevalent hazards are:

Value		Percent	Count
increasing quickly		7.9%	9
increasing slowly		28.9%	33
staying the same		35.1%	40
decreasing slowly		1.8%	2
Do Not Know		25.4%	29
Other (please specify)		0.9%	1
Total			114

Based on YOUR PERCEPTION of your jurisdiction's hazards, to what degree of emphasis would you expect your jurisdiction to mitigate the following hazards? Mitigation definition: The purpose of mitigation planning is to identify policies and actions that can be implemented over the long term to reduce risk and future losses. Mitigation forms the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage.

No Mitigation Needed = No mitigation on this hazard is expected or needed
Low Priority = This hazard should be mitigated, but is not a high priority compared to other hazards
Medium Priority = It is important to mitigate this hazard
High Priority = It is a high priority to emphasize mitigation for this hazard

	No Mitigation Needed		Low Priority		Medium Priority		High Priority		Responses
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Civil Disorder/Riot	24	21.8%	53	48.2%	21	19.1%	12	10.9%	110
Crop Failure (Heat, Disease, Insects/Pests, etc.)	17	15.3%	44	39.6%	44	39.6%	6	5.4%	111
Cyber Security Threat	11	9.9%	22	19.8%	46	41.4%	32	28.8%	111
Dam Failure	10	9.1%	42	38.2%	35	31.8%	23	20.9%	110
Severe or Prolonged Drought	16	14.4%	43	38.7%	42	37.8%	10	9.0%	111
Extreme Cold Incident	6	5.4%	21	18.9%	41	36.9%	43	38.7%	111
Extreme Heat Incident	6	5.4%	35	31.5%	45	40.5%	25	22.5%	111

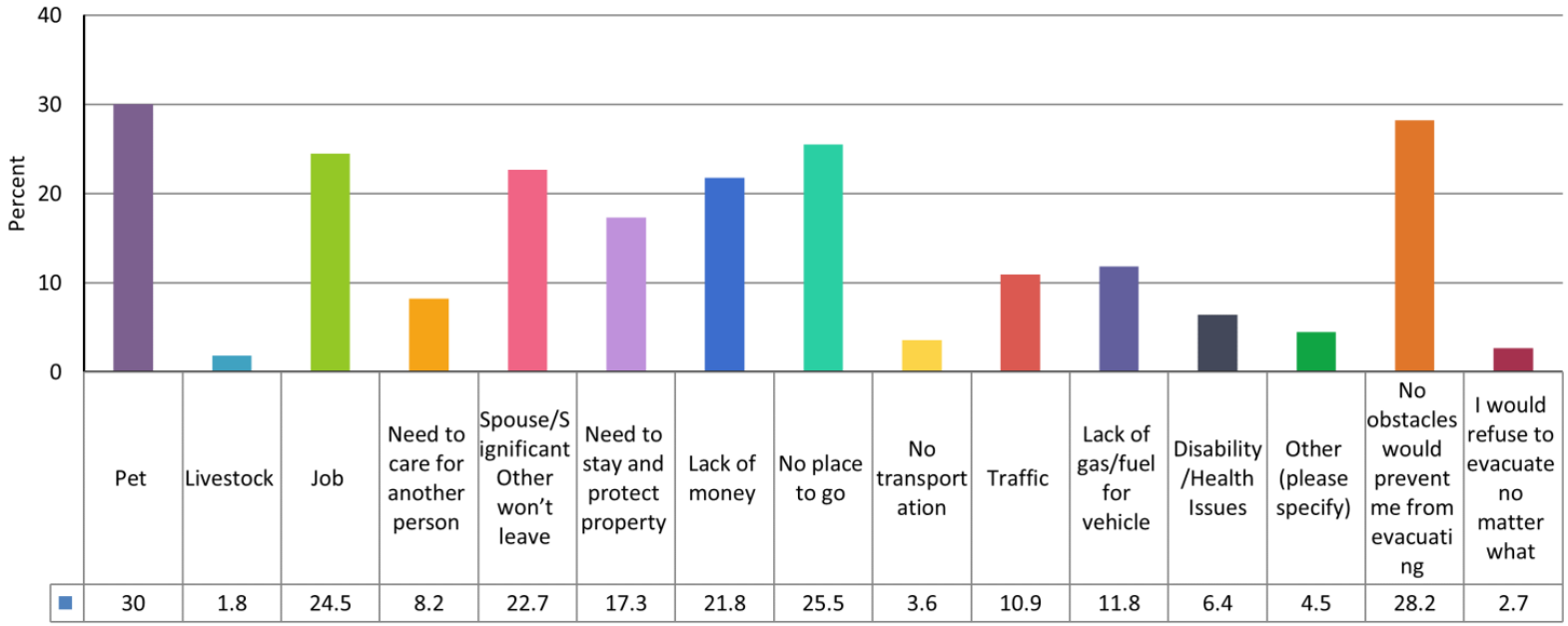
	No Mitigation Needed		Low Priority		Medium Priority		High Priority		Responses
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Flash Flooding/Overland Flooding	8	7.2%	14	12.6%	55	49.5%	34	30.6%	111
Riverine Flooding	17	15.6%	25	22.9%	51	46.8%	16	14.7%	109
Hail	20	18.0%	64	57.7%	23	20.7%	4	3.6%	111
Hazardous Materials Release (example: Chemical Spill)	8	7.3%	34	30.9%	36	32.7%	32	29.1%	110
Infrastructure Failure (example: Bridge Collapse)	12	10.9%	30	27.3%	35	31.8%	33	30.0%	110
Lightning	22	19.8%	60	54.1%	26	23.4%	3	2.7%	111
Nuclear Event	30	27.3%	48	43.6%	14	12.7%	18	16.4%	110
Power Failure	6	5.4%	14	12.6%	45	40.5%	46	41.4%	111
Public Health Emergency (example: Pandemic)	10	9.0%	29	26.1%	48	43.2%	24	21.6%	111

	No Mitigation Needed		Low Priority		Medium Priority		High Priority		Responses
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Severe Winter Storm/Heavy Snowfall/Ice Storm	7	6.3%	17	15.3%	38	34.2%	49	44.1%	111
Straight Line Wind	15	13.5%	36	32.4%	45	40.5%	15	13.5%	111
Structural Fire	17	15.3%	46	41.4%	33	29.7%	15	13.5%	111
Terrorism Incident	22	19.8%	49	44.1%	20	18.0%	20	18.0%	111
Tornado and High Winds	6	5.5%	20	18.2%	48	43.6%	36	32.7%	110
Wildfires	14	13.0%	45	41.7%	29	26.9%	20	18.5%	108

If an evacuation was requested for your area, please indicate how likely you would be to do the following.

	Very Likely		Somewhat Likely		Not Very Likely		Not Likely at All		Do Not Know		Not Applicable		Responses
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count
Immediately evacuate as instructed.	50	44.6%	46	41.1%	9	8.0%	4	3.6%	3	2.7%	0	%	112
I would first consult with family and friends outside my household before making a decision to evacuate.	33	30.0%	32	29.1%	27	24.5%	16	14.5%	2	1.8%	0	%	110
Wait and see how bad the situation is going to be before deciding to evacuate.	18	16.2%	46	41.4%	30	27.0%	15	13.5%	2	1.8%	0	%	111
Refuse to evacuate no matter what.	2	1.8%	6	5.5%	20	18.2%	78	70.9%	3	2.7%	1	0.9%	110

What might prevent you from leaving your place of residence if there was an evacuation request? Please select ALL that apply.



If you were to evacuate, where would you most likely stay? Please select the best answer.

Value		Percent	Count
Shelter/evacuation center		6.3%	7
Church or place of worship		1.8%	2
Workplace		1.8%	2
Home of a friend or relative		62.5%	70
Hotel/motel		12.5%	14
Do Not Know		14.3%	16
Other (please specify)		0.9%	1
Total			112

In an evacuation, would you or anyone in your household require special assistance?

Value		Percent	Count
Yes		5.4%	6
Maybe		9.9%	11
No		77.5%	86
Do Not Know		6.3%	7
Not applicable		0.9%	1
Total			111

If yes, would that assistance be provided by someone within your household, by an outside agency, or by a friend or relative outside your household?

Value		Percent	Count
Within household		47.1%	8
Friend/Relative (outside household)		23.5%	4
Do Not Know		29.4%	5
Total			17

What type of structure do you live in?

Value		Percent	Count
Detached single family home		75.7%	84
Duplex, triplex, quadruple home		7.2%	8
Multi-family building – 2 stories or more (apartment/condo)		9.0%	10
Mobile home		2.7%	3
Manufactured home		2.7%	3
Not Applicable		2.7%	3
Total			111

34.Do you own or rent your home/place of residence?

Value		Percent	Count
Own		78.4%	87
Rent		18.0%	20
Not Applicable		2.7%	3
Other (please specify)		0.9%	1
Total			111

(OPTIONAL): Would you like more information on how you can be more prepared?

Value		Percent	Count
Yes		44.4%	48
No		55.6%	60
Total			108

Appendix C. Public Participation Documentation

Community Preparedness & Mitigation Survey

2019 Portage County Community Preparedness Survey

Instructions

Residency

1) **Do you live and/or work in Portage County? Please select the best answer that applies to your current situation.***
( ) Yes, I live in Portage County
( ) Yes, I live and work in Portage County
( ) Yes, I live in Portage County, but work in another county
( ) Yes, I work in Portage County, but live in another county
( ) No, I do not live or work in Portage County
( ) Do Not Know
( ) Other (please specify): _____

Residency and Employment Information

2) **Approximately how many years have you <u>lived</u> in Portage County?**
( ) 0-2 years
( ) 3-5 years
( ) 6-10 years
( ) 11-20 years
( ) 21 or more years
( ) Not Applicable
( ) Do Not Know
( ) Other (please specify): _____

3) **Approximately how many years have you <u>worked</u> in Portage County?**
( ) 0-2 years
( ) 3-5 years
( ) 6-10 years
( ) 11-20 years
( ) 21 or more years
( ) Not Applicable
( ) Do Not Know

( ) Other (please specify): _____

4) **Please indicate which community in Portage County you live in.**
( ) Town of Alban
( ) Town of Almond
( ) Town of Amherst
( ) Town of Belmont
( ) Town of Buena Vista
( ) Town of Carson
( ) Town of Dewey
( ) Town of Eau Pleine
( ) Town of Grant
( ) Town of Hull
( ) Town of Lanark
( ) Town of Linwood
( ) Town of New Hope
( ) Town of Pine Grove
( ) Town of Plover
( ) Town of Sharon
( ) Town of Stockton
( ) Village of Almond
( ) Village of Amherst
( ) Village of Amherst Jct.
( ) Village of Junction City
( ) Village of Nelsonville
( ) Village of Park Ridge
( ) Village of Plover
( ) Village of Rosholt
( ) Village of Whiting
( ) City of Stevens Point
( ) Other (please specify): _____

5) **Please indicate which community in Portage County you work in.**
( ) Town of Alban
( ) Town of Almond
( ) Town of Amherst
( ) Town of Belmont
( ) Town of Buena Vista
( ) Town of Carson
( ) Town of Dewey
( ) Town of Grant
( ) Town of Hull
( ) Town of Lanark
( ) Town of Linwood
( ) Town of New Hope
( ) Town of Pine Grove
( ) Town of Plover
( ) Town of Sharon

( ) Town of Stockton
( ) Village of Almond
( ) Village of Amherst
( ) Village of Amherst Jct.
( ) Village of Junction City
( ) Village of Nelsonville
( ) Village of Park Ridge
( ) Village of Plover
( ) Village of Rosholt
( ) Village of Whiting
( ) City of Stevens Point
( ) Other (please specify): _____

General Preparedness

6) **Please indicate what type of device(s) you use to access the internet. Select ALL that apply.**
[ ] Computer/laptop at home
[ ] Computer/laptop at work/office
[ ] iPad/tablet
[ ] Cell phone
[ ] Public computer (i.e. library)
[ ] I do not have access to the Internet
[ ] Do Not Know
[ ] Other (please specify): _____

7) **Please indicate those activities you have done to prepare for emergencies and disasters. Please select ALL that apply.**
I have…
[ ] an emergency preparedness plan
[ ] flood Insurance
[ ] a 72 hour kit/Disaster supply kit
[ ] visited local government web site(s) for emergency preparedness information
[ ] an evacuation plan
[ ] a weather radio
[ ] signed up for emergency alerts for Portage County (from any source)
[ ] done nothing
[ ] Other (please specify): _____

8) **Have any of the reasons below prevented you from pursuing additional preparedness activities? Please select ALL that apply.**
[ ] I don't think it will make a difference.
[ ] I don't know what to do.
[ ] I don't have the time.
[ ] It costs too much.
[ ] I don't need to prepare because emergency responders (fire, police, etc.) will help me during an emergency.
[ ] None of the above apply to me.

[ ] Other (please specify): _____

9) **Please indicate where you go to obtain emergency and disaster preparedness related information? Please select ALL that apply.**
[ ] Municipal government websites
[ ] County government website
[ ] State government website
[ ] Federal government websites (example: www.fema.gov)
[ ] Web search (example: bing.com, google.com)
[ ] Social media (example: facebook, twitter, google , etc.)
[ ] Voluntary organizations (example: American Red Cross, Salvation Army, etc.)
[ ] Religious Organization
[ ] Local English-speaking television
[ ] Local English-speaking radio
[ ] Local Spanish-speaking radio
[ ] National News (Radio and Television)
[ ] Print Media - English (example: newspapers)
[ ] Brochures and Newsletters
[ ] Word of Mouth (example: friends, family, co-workers)
[ ] Other (please specify): _____
[ ] Do Not Know
[ ] Not Applicable

10) **Please indicate how you expect to receive alerts and information during an emergency. Please select ALL that apply.**
[ ] A weather radio
[ ] Private Weather Phone Applications (ex. Weather Channel, Wunderground, Weather Bug, AccuWeather, etc.)
[ ] Preparedness Phone Applications (ex. FEMA, Red Cross, etc.)
[ ] Local Media Phone Applications
[ ] Portage County Emergency Management website
[ ] Local Television Media (ex. NewsChannel 7, WAOW 9, NewsWatch 12, FOX 55, etc.)
[ ] Local Radio
[ ] Social Media
[ ] Word of Mouth
[ ] Do Not Know
[ ] Other (please specify): _____

11) **Do you have any concerns for chemicals transported by the railroad in or near Portage County?***
( ) Yes
( ) Maybe
( ) No
( ) Do Not Know
( ) Not Applicable
( ) Other (please specify): _____

12) **If you believe you might be affected by a train derailment and subsequent chemical release, do you have a plan in place for such an incident?**

( ) Yes
( ) Maybe
( ) No
( ) Do Not Know
( ) Not Applicable
( ) Other (please specify): _____

13) **Do you have a basement, or a [well-built] tornado storm shelter?***
( ) Yes
( ) No
( ) Do Not Know
( ) Not Applicable
( ) Other (please specify): _____

14) **If you live in a multi-family dwelling (i.e. apartment), do you have easy and quick access to a basement or tornado shelter?**
( ) Yes
( ) No
( ) I do NOT live in a multi-family dwelling
( ) Do Not Know
( ) Not Applicable
( ) Other (please specify): _____

15) **Would you agree or disagree with the following statements?**

	Strongly Agree	**Agree**	**Neither Agree nor Disagree**	**Disagree**	**Strongly Disagree**	**Do Not Know**
Portage County is providing the services necessary to prepare me for a disaster.	( )	( )	( )	( )	( )	( )
I am familiar with Portage County's website and can easily obtain information about emergencies and disasters.	( )	( )	( )	( )	( )	( )
During times of emergency, information is provided in a language and format I can understand.	( )	( )	( )	( )	( )	( )

I can easily obtain emergency information in times of crisis.	( )	( )	( )	( )	( )	( )

16) **Please indicate how Portage County can better assist you in preparing for emergencies and disasters (example: provide preparedness materials in my language).**

_____
_____
_____
_____

17) **If a disaster (i.e. snowstorm) impacted Portage County, knocking out electricity and running water, would your household be able to manage on its own for at least three (3) days?**
( ) Yes
( ) Maybe
( ) No
( ) Do Not Know

18) **Which of the following may prevent you from recovering from a disaster? Please select ALL that apply.**
[ ] Lack of financial savings
[ ] Disruption in employment
[ ] No access to healthcare
[ ] Mental health concerns
[ ] Lack of insurance (i.e. home owners insurance, renter's insurance, flood insurance, etc.)
[ ] Lack of alternative housing options
[ ] Lack of outside support from family
[ ] Limited food supply
[ ] Limited water supply
[ ] No alternative power supply
[ ] Not Applicable
[ ] Do Not Know
[ ] Other (please specify): _____

Hazards

19) **Do you believe that your household and/or place of business might ever be threatened by the following hazards in regards to property damage? Please rate what hazards present the greatest risk.**

Low Risk = Low impact on threat to life and property damage
Medium Risk = Medium impact on threat to life and property damage
High Risk = High impact on threat to life and property damage

	Low Risk	**Medium Risk**	**High Risk**	**Not Applicable**
Civil Disorder/Riot	( )	( )	( )	( )

Crop Failure (Heat, Disease, Insects/Pests, etc.)	( )	( )	( )	( )
Cyber Security Threat	( )	( )	( )	( )
Dam Failure	( )	( )	( )	( )
Severe or Prolonged Drought	( )	( )	( )	( )
Extreme Cold Incident	( )	( )	( )	( )
Extreme Heat Incident	( )	( )	( )	( )
Flash Flooding/Overland Flooding	( )	( )	( )	( )
Riverine Flooding	( )	( )	( )	( )
Hail	( )	( )	( )	( )
Hazardous Materials Release (example: Chemical Spill)	( )	( )	( )	( )
Infrastructure Failure (example: Bridge Collapse)	( )	( )	( )	( )
Lightning	( )	( )	( )	( )
Nuclear Event	( )	( )	( )	( )
Power Failure	( )	( )	( )	( )
Public Health Emergency (example: Pandemic)	( )	( )	( )	( )
Severe Winter Storm/Heavy Snowfall/Ice Storm	( )	( )	( )	( )
Straight Line Wind	( )	( )	( )	( )
Structural Fire	( )	( )	( )	( )
Terrorism Incident	( )	( )	( )	( )
Tornado and High Winds	( )	( )	( )	( )
Wildfires	( )	( )	( )	( )

20) **Please select the answer that best describes your experience.**
( ) I have never experienced property damage or loss from a disaster(s)
( ) I have experienced minor property damage and loss from a disaster(s)
( ) I have experienced major property damage and loss from a disaster(s)
( ) I have experienced catastrophic property damage and loss from a disaster(s)

21) **If you have experienced any damage(s) or injury(ies) from a disaster, please list the hazard(s) that caused the damages/losses and/or injuries (Example: flooding, wind, winter storm)**
_____

22) **If you have experienced any damage(s) or injury(ies) from a disaster, please indicate where this occurred (Example: my home, on a roadway or intersection, at work, on vacation, etc.)**
_____

23) **If you have experienced any damage(s) or injury(ies) from a disaster, please describe the damages and/or injuries. (Example: basement flooded, roof was damaged, vehicle was damaged, broken bones, lacerations, etc.)**
_____

24) **Please select the best answer. The risks associated with Portage County's most prevalent hazards are:**
( ) increasing quickly
( ) increasing slowly
( ) staying the same
( ) decreasing slowly
( ) decreasing quickly
( ) Do Not Know
( ) Not Applicable
( ) Other (please specify): _____

25) **Based on YOUR PERCEPTION of your jurisdiction's hazards, to what degree of emphasis would you expect your jurisdiction to mitigate the following hazards?** Mitigation definition: The purpose of mitigation planning is to identify policies and actions that can be implemented over the long term to reduce risk and future losses. Mitigation forms the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage.

·**No Mitigation Needed** = No mitigation on this hazard is expected or needed
·**Low Priority** = This hazard should be mitigated, but is not a high priority compared to other hazards
·**Medium Priority** = It is important to mitigate this hazard
·**High Priority** = It is a high priority to emphasize mitigation for this hazard

	No Mitigation Needed	**Low Priority**	**Medium Priority**	**High Priority**
Civil Disorder/Riot	( )	( )	( )	( )
Crop Failure (Heat, Disease, Insects/Pests, etc.)	( )	( )	( )	( )
Cyber Security Threat	( )	( )	( )	( )
Dam Failure	( )	( )	( )	( )
Severe or Prolonged Drought	( )	( )	( )	( )
Extreme Cold Incident	( )	( )	( )	( )
Extreme Heat Incident	( )	( )	( )	( )
Flash Flooding/Overland Flooding	( )	( )	( )	( )
Riverine Flooding	( )	( )	( )	( )
Hail	( )	( )	( )	( )
Hazardous Materials Release (example: Chemical Spill)	( )	( )	( )	( )
Infrastructure Failure (example: Bridge Collapse)	( )	( )	( )	( )
Lightning	( )	( )	( )	( )
Nuclear Event	( )	( )	( )	( )
Power Failure	( )	( )	( )	( )
Public Health Emergency (example: Pandemic)	( )	( )	( )	( )
Severe Winter Storm/Heavy Snowfall/Ice Storm	( )	( )	( )	( )
Straight Line Wind	( )	( )	( )	( )

Structural Fire	( )	( )	( )	( )
Terrorism Incident	( )	( )	( )	( )
Tornado and High Winds	( )	( )	( )	( )
Wildfires	( )	( )	( )	( )

Evacuation

26) **If an evacuation was requested for your area, please indicate how likely you would be to do the following.**

	Very Likely	Somewhat Likely	Not Very Likely	Not Likely at All	Do Not Know	Not Applicable
Immediately evacuate as instructed.	( )	( )	( )	( )	( )	( )
I would first consult with family and friends outside my household before making a decision to evacuate.	( )	( )	( )	( )	( )	( )
Wait and see how bad the situation is going to be before deciding to evacuate.	( )	( )	( )	( )	( )	( )
Refuse to evacuate no matter what.	( )	( )	( )	( )	( )	( )

27) **What might prevent you from leaving your place of residence if there was an evacuation request? Please select ALL that apply.**

[ ] Pet
[ ] Livestock
[ ] Job
[ ] Need to care for another person
[ ] Spouse/Significant Other won't leave
[ ] Need to stay and protect property
[ ] Lack of money
[ ] No place to go
[ ] No transportation
[ ] Traffic
[ ] Lack of gas/fuel for vehicle
[ ] Disability/Health Issues
[ ] Other (please specify): _____
[ ] No obstacles would prevent me from evacuating
[ ] I would refuse to evacuate no matter what

28) **If you were to evacuate, where would you most likely stay? Please select the best answer.**
( ) Shelter/evacuation center
( ) Church or place of worship
( ) Workplace
( ) Home of a friend or relative
( ) Hotel/motel
( ) Do Not Know
( ) Other (please specify): _____

29) **In an evacuation, would you or anyone in your household require special assistance?**
( ) Yes
( ) Maybe
( ) No
( ) Do Not Know
( ) Not applicable
( ) Other (please specify): _____

30) **If yes, would that assistance be provided by someone within your household, by an outside agency, or by a friend or relative outside your household?**
( ) Within household
( ) Friend/Relative (outside household)
( ) Outside Agency
( ) Do Not Know
( ) Not Applicable
( ) Other (please specify): _____

31) **If applicable, please indicate what kind of outside assistance your household may need during an evacuation (i.e. Transportation, Medical, etc.)**
_____

Demographic Questions

32) **What type of structure do you live in?**
( ) Detached single family home
( ) Duplex, triplex, quadruple home
( ) Multi-family building – 2 stories or more (apartment/condo)
( ) Mobile home
( ) Manufactured home
( ) Recreational vehicle (RV)
( ) Some other type of structure
( ) Do Not Know
( ) Not Applicable
( ) Other (please specify): _____

How many persons, including yourself, are currently living in your household?

	Number of people in household

Under age 5:	_____
Ages 6-10:	_____
Ages 11-19:	_____
Ages 20-44:	_____
Ages 45-64:	_____
Ages 65-79:	_____
Ages 80	_____

33) **Do you own or rent your home/place of residence?**
( ) Own
( ) Rent
( ) Do Not Know
( ) Not Applicable
( ) Other (please specify): _____

Contact

34) **(OPTIONAL): Would you like more information on how you can be more prepared?**
( ) Yes
( ) No

Thank You!

Draft Plan Shared to Public

County agencies and outlets encouraged public participation in the planning process through information sharing. The following provides documentation of the outreach efforts during the HMP Update process.

stevenspoint.news/2019/05/10/portage-county-to-update-all-hazard-mitigation-plan/

COMMENTARY SPORTS CRIME ARTS & ENTERTAINMENT OPINION OBITS CONTACT

AROUND THE COUNTY Home › Around the County › Portage County to update Hazard Mitigation Plan

Portage County to update Hazard Mitigation Plan

MAY 10, 2019 / 0

SHARE:

Portage Co. Sheriff's Office.

Portage Co. Sheriff's Office.

For the Gazette

PORTAGE COUNTY – Portage County Emergency Management Division will be hosting a public information and planning session to gather input from Portage County residents regarding potential emergencies and disasters that could impact the County. This session is a crucial step in updating Portage County's All-Hazard Mitigation Plan. The public meeting will be held on the following date and location:

• Tuesday, May 14, 2019 at 5:30 p.m. to 8:30 p.m. at the Portage County Annex Building, (1462 Strongs Avenue, Stevens Point, WI 54481) in Conference Rooms One and Two

The meeting will provide the public an opportunity to review the potential hazards that could occur within the County and will request input for the various mitigation measures intended to eliminate or reduce the negative impact of those hazards.

The U.S. Federal government requires local and state governments to have a FEMA-Approved Multi-Hazard Mitigation Plan as established by the Disaster Mitigation Act of 2000 in order to qualify for Pre-Disaster Mitigation (PDM) and Hazard Mitigation Grant Program (HMGP) project grant dollars. These programs are critical sources of Federal funding, especially for a community that wants to proactively initiate mitigation projects using PDM dollars, or for a community that needs HMGP funding following a presidentially declared disaster.

For more information about this plan and meeting, please contact Portage County Emergency Management Coordinator, weinertr@co.portage.wi.us or call 715-346-1437 .

wisctowns.com/events-calendar/2762/portage-county-unit-meeting/

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Event Details

Home | Events | Portage County Unit Meeting

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Portage County Unit Meeting

May 20th, 2019 | 7:00 pm - 9:00 pm
Event Location: Eron Event Barn | 3471 County Road C | Stevens Point, Wisconsin 54481 *Get Directions »*

Recognition of Ed Rutta's 46 years as Treasurer for the Town of Carson.
Todd Kuckkahn, Executive Director of the Portage County Business Council: Update on Portage County Prosperity.
Introduction of Sherri Galle-Teske, new Executive Director of the Portage County Humane Society.
Bob Weinert, Emergency Management Coordinator: Explanation of County-Wide Hazard Mitigation Plan.
Election of Officers.

co.portage.wi.us/Home/Components/News/News/3648/18

Portage County

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News List

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Portage County All Hazard Mitigation Plan Draft

The draft of the Portage County All Hazard Mitigation Plan is currently posted for review by the public, please feel free to review and provide feedback.

Post Date: 09/13/2019 12:30 AM

The Emergency Management Office is in the process of reviewing the Countywide All Hazard Mitigation Plan currently being updated by Integrated Solutions Consulting. This year we have asked the public to complete an online survey (thank you to our residents for your outstanding response!) and held a public meeting to make certain the plan reflects your concerns.

By clicking HERE, you will find a draft copy of the plan; please feel free to review it. If there are any corrections necessary, updates, changes or something you would like to add please email all information to Cassandra Wolff or Ed Wolff (cassandra.Wolff@i-s-consulting.com or ed.wolff@i-s-consulting.com).

We would like to thank you not only for your input but also your continued involvement in making this the best plan for everyone here in Portage County.

Return to full list >>

Free viewers are required for some of the attached documents.
They can be downloaded by clicking on the icons below.

1462 Strongs Avenue, Stevens Point, WI 54481

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(All Categories) (All Departments)

Archived News

Portage County All Hazard Mitigation Plan Draft
The draft of the Portage County All Hazard Mitigation Plan is currently posted for review by the public, please feel free to review and provide feedback.
09/13/2019 12:30 AM

Town of Lanark Comprehensive Plan Update and Zoning Map Update
08/13/2019

UPDATE ON BEACH POSTINGS FOR IVERSON PARK AND MEAD PARK Media Release July 25,2019
07/26/2019 9:18 AM

Portage County Declaration of Disaster July 25,2019 Update
07/26/2019 8:30 AM

Post-Storm Health and Safety Tips
07/24/2019 7:42 AM

Resources for food safety during a power outage
07/23/2019 1:12 PM

Facilities Management

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Services and Functions
The department's personnel maintains the building functionality ensuring the longevity of the building and grounds. The Facilities Director reports to the County Executive and the department is governed by the Space and Properties Committee. Currently, the Maintenance Department consists of 20 full-time and 5 seasonal employees, and is responsible for ten buildings which total over 350,000 square feet and $56 million in building and content assets. The mission of the Facilities Management Department is to meet the space and environmental needs of all county departments, while staying within the budget.

Office Hours
Monday - Friday
7:30 a.m. - 4:30 p.m.

Contact
Todd J. Neuenfeldt, Facilities Management Director
1462 Strongs Avenue
Stevens Point, WI 54481
Phone: 715-346-1598
E-Mail: FacilitiesManagement@co.portage.wi.us

NEWS

Portage County All Hazard Mitigation Plan Draft
The draft of the Portage County All Hazard Mitigation Plan is currently posted for review by the public, please feel free to review and provide feedback.
9/13/2019 12:30:00 AM

Town of Lanark Comprehensive Plan Update and Zoning Map Update
8/13/2019

UPDATE ON BEACH POSTINGS FOR IVERSON PARK AND MEAD PARK Media Release July 25,2019
7/26/2019 9:18:05 AM

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Portage County Sheriff's Office Boosters
September 13 at 3:39 PM

The Emergency Management Office is in the process of reviewing the Countywide All Hazard Mitigation Plan currently being updated by Integrated Solutions Consulting. This year we have asked the public to complete an online survey (thank you to our residents for your outstanding response!) and held a public meeting to make certain the plan reflects your concerns.

By clicking the link below, you will find a draft copy of the plan; please feel free to review it. If there are any corrections necessary, updates, changes or something you would like to add please email all information to Cassandra Wolff or Ed Wolff (cassandra.Wolff@i-s-consulting.com or ed.wolff@i-s-consulting.com).

We would like to thank you not only for your input but also your continued involvement in making this the best plan for everyone here in Portage County.

Link to a draft of the Plan:
https://www.co.portage.wi.us/home/showdocument?id=25896

8 1 Share

Appendix D. Participating Jurisdiction Plan Adoption

Adoption Resolutions

Insert municipality date and resolution approval upon FEMA's Approval Pending Adoption Notice.

Municipality	Date of Adoption
Town of Alban	
Town of Almond	
Town of Amherst	
Town of Belmont	
Town of Buena Vista	
Town of Carson	
Town of Dewey	
Town of Eau Pleine	
Town of Grant	
Town of Hull	
Town of Lanark	
Town of Linwood	
Town of New Hope	
Town bf Pine Grove	
Town of Plover	
Town of Sharon	
Town of Stockton	
Village of Almond	
Village of Amherst	
Village of Amherst Junction	
Village of Junction City	
Village of Nelsonville	
Village of Park Ridge	
Village of Plover	
Village of Rosholt	
Village of Whiting	
City of Stevens Point	
Portage County	
University of Wisconsin-Stevens Point	

Appendix E. Wisconsin Emergency Management (WEM) and FEMA Mitigation Program Standards

WEM Plan Review Tool

Element A: Planning Process

A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? 44 CFR 201.6(c)(1)

Involved in the process means ***engaged as participants*** and ***given the chance to provide input*** affecting the Plan's content; plan updates must include ***documentation of the current planning process***.

A1. Plan Component	Location in Plan
Schedule or timeframe of activities that made up the Plan's development	Schedule of Plan Development Activities, Chapter 2 - Planning Process, Planning Process Detail; Chapter 6 - Plan Maintenance, Implementation, and Adoption Process
List of individuals involved	Jurisdiction Participation; Steering Committee; Steering Committee Sign-in Sheets; Mitigation Workshop Sign-in Sheets
List of participating jurisdictions	Jurisdiction Participation; Stakeholders, Subject Matter Experts, & Neighboring Communities
List of representatives from each jurisdiction (person's position/title and agency)	Jurisdiction Participation; Steering Committee
How each jurisdiction was involved	Appendix B. Meeting and Participation Documentation; Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies

Recommended documentation: narrative description, meeting agendas and sign-in sheets, meeting minutes, newspaper articles, copies of letters or surveys distributed.

A1. Required Revisions, Reviewers Comments
Excellent work in this section overall - mentioned to Cassandra Wolf the idea of taking content within the descriptive titles of New and Ongoing Mitigation Actions, by the communities, and using to inform additional writing within the table of Mitigation Actions that sits in these sections (the 'how' of what will be done to accomplish these actions/goals). More on this in Element C.

A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? 44 CFR 201.6(b)(2)

Opportunity to be involved in the planning process means that stakeholders are ***engaged or invited as participants*** and ***given the chance to provide input*** affecting the Plan's content.

A2. Plan Component	Location in Plan

List of stakeholders: local and regional agencies that take part in hazard mitigation activities	Stakeholders, Subject Matter Experts, & Neighboring Communities; Plan Participation
List of stakeholders: agencies that have the authority to regulate development	Stakeholders, Subject Matter Experts, & Neighboring Communities
List of stakeholders: neighboring communities	Stakeholders, Subject Matter Experts, & Neighboring Communities
List of representatives for each stakeholder involved (person's position/title and agency or organization)	Stakeholders, Subject Matter Experts, & Neighboring Communities
How each stakeholder was involved	Stakeholders, Subject Matter Experts, & Neighboring Communities

Recommended documentation: narrative description, meeting agendas and sign-in sheets, meeting minutes, newspaper articles, copies of letters or surveys distributed.

Examples of stakeholders: public works and zoning departments, emergency management, local floodplain administrators, special districts, GIS departments, planning and community development departments, building officials, planning commissions, other elected officials, adjacent counties and municipalities, business, academia, and other private and non-profit interests.

A2. Required Revisions, Reviewers Comments
Again, well done and my compliments on being able to gather as many stakeholders and as much input as you did!

A3. Does the Plan document how the public was involved in the planning process during the drafting stage? 44 CFR 201.6(b)(1) and (c)(1)

A.3 Plan Component	Location in Plan
How the public was given the opportunity to be involved (**must be prior to final approval/adoption**)	Public Involvement & Participation; Portage County Community Preparedness and Mitigation Survey; Draft Plan Shared to Public
How public feedback was incorporated into the Plan	Community Preparedness Survey (Under Hazard Analysis)

Recommended documentation: narrative description, meeting agendas and sign-in sheets, meeting minutes, public announcements and notices, copies of questionnaires or surveys, interactive websites, and evidence of booths at community events.

A3. Required Revisions, Reviewers Comments
Happy to see the team leveraging social media and other digital communication for this section. Looks like survey respondents gave usable data and you were able to incorporate into your overall ranking/emphasis of hazards.

A4. Does the Plan document the review and incorporation of existing plans, studies, reports, and technical information? 44 CFR 201.6(b)(3)

A4. Plan Component	Location in Plan
List of existing plans, studies, reports, and technical information that were reviewed	Existing Plans, Community Capability Assessment, Plans and Ordinances
How relevant information was incorporated into the Plan	County Plan Integration Strategy, Municipality Plan Integration Strategies, NFIP Mitigation Actions, Infrastructure Mitigation Actions, Implementation and Integration through Existing Plans and Programs, Existing Plans, Community Capability Assessment, Plans and Ordinances

Examples: State Hazard Mitigation Plan, local comprehensive plans, hazard-specific reports, and flood insurance studies.

A4 Required Revisions, Reviewers Comments
Excellent – clear inclusion of applicable information, where it is, who is responsible for it and some direction on how it will be incorporated into this and other community planning mechanisms.

A5. Is there discussion on how the community/-ies will continue public participation in the plan maintenance process? 44 CFR 201.6(c)(4)(iii)

Participation means ***being engaged and being given the chance to provide feedback***.

A5. Plan Component	Location in Plan
How the jurisdiction(s) will continue to seek public participation after plan approval and during plan implementation, monitoring, and evaluation	Continued Public Involvement

Examples: periodic presentations on the Plan's progress to elected officials, schools, or other community groups, annual questionnaires or surveys, public meetings, postings on social media and interactive websites.

A5. Required Revisions, Reviewers Comments
Good overall – recommend testing use of social media to drive public input if meeting attendance is less than desired once the plan update cycle is in process. This is likely less expensive than newspaper notices, but might need to be utilized and seen to meet desired ROI before it could supplant that practice.

A6. Is there a description of the method and schedule for keeping the Plan current (monitoring, evaluating, and updating the mitigation plan within a 5-year cycle)? 44 CFR 201.6(c)(4)(i)

A6. Plan Component	Location in Plan
How the Plan will be monitored (**monitoring** means tracking the implementation of mitigation actions over time)	Monitoring, Evaluating, and Updating the Plan; Formal Review Process; The Five-Year Action Plan; Annual Mitigation Steering Committee Meetings
When the Plan will be monitored	Monitoring, Evaluating, and Updating the Plan; Formal Review Process; The Five-Year Action Plan; Annual Mitigation Steering Committee Meetings

By whom the Plan will be monitored (title of individual or name of department or agency)	Monitoring, Evaluating, and Updating the Plan; Formal Review Process; The Five-Year Action Plan; Annual Mitigation Steering Committee Meetings
How the Plan will be evaluated (**evaluating** means assessing the effectiveness of the Plan at achieving its stated purpose and goals)	Monitoring, Evaluating, and Updating the Plan; Formal Review Process; The Five-Year Action Plan; Annual Mitigation Steering Committee Meetings
When the Plan will be evaluated	The Five-Year Action Plan; Annual Mitigation Steering Committee Meetings
By whom the Plan will be evaluated (title of individual or name of department or agency)	Monitoring, Evaluating, and Updating the Plan; Formal Review Process; The Five-Year Action Plan; Annual Mitigation Steering Committee Meetings
How the Plan will be updated (**updating** means reviewing and revising the plan at least once every five years)	The Five-Year Action Plan; Annual Mitigation Steering Committee Meetings
When the Plan will be updated	The Five-Year Action Plan; Annual Mitigation Steering Committee Meetings
By whom the Plan will be updated (title of individual or name of department or agency)	Monitoring, Evaluating, and Updating the Plan; Formal Review Process; The Five-Year Action Plan; Annual Mitigation Steering Committee Meetings

Monitoring and evaluating should be ongoing processes, done throughout the five-year update cycle, not just once every five years.

A6. Required Revisions, Reviewers Comments
Excellent work and happy to see a lot of the ongoing efforts resting with your Planning Team and Steering Committee, rather than solely the Emergency Management Director. Also, happy to see how built-in public participation is and the year-by-year timeline you have in 1.8.3 'The Five-Year Action Plan.'

Element B: Hazard Identification and Risk Assessment

(see the end of this element for a checklist to use in reviewing each hazard section)

B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction? 44 CFR 201.6(c)(2)(i) and (iii)

B1. Plan Component	Location in Plan
Description of natural hazards[1] that affect jurisdictions in the planning area	See hazard matrix; Section B - Hazard Assessment (under Nature of Hazard and Analysis section under each Hazard)
Rationale for any omitted natural hazards that affect jurisdictions in the planning area	Chapter 2 - Planning Process
Location (geographic areas in planning area) of each hazard; **for multi-jurisdictional plans:** description of hazards for participating jurisdictions that are unique or varied from those affecting the overall planning area (flooding, dam failure, wildfire)	See hazard matrix; Section B - Hazard Assessment (under History and Probability and Impact section under each Hazard); Population Vulnerability
Extent (strength or magnitude) of each hazard	See hazard matrix; Section B - Hazard Assessment (under Catastrophic Scenario and Analysis section of each Hazard)

B1. Required Revisions, Reviewers Comments
Excellent overall – recommend consideration of addition of four items: Active Shooter Incidents, Cybersecurity Incidents, Dense Fog and Pandemic Flu. While not required, I think they are relevant, and it may be that information needed to develop background/planning is already active in existing plans within the larger jurisdictional umbrella. E.G. Pandemic Flu impacts/procedures may be something County or Local health officials already have documentation on, and Local/Campus law enforcement likely has documentation on Cyber/Active Shooter.

B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? 44 CFR 201.6(c)(2)(i)

B2. Plan Component	Location in Plan
History of previous hazard events for each identified hazard; **for plan updates:** include hazard events that have occurred since the previous plan was developed	See hazard matrix; Section B - Hazard Assessment (under History section of each Hazard); Probability of Occurrence (Definition and parameters of Probability); Section A - Hazard Analysis
Probability of future events for each identified hazard	See hazard matrix; Probability of Occurrence; Section B - Hazard Assessment (under Analysis section for each Hazard)

Probability: the likelihood of the hazard occurring; may be defined in terms of general descriptors (**if used, these must be defined in the Plan**), historical frequencies, statistical probabilities, and/or hazard probability maps.

B2. Required Revisions, Reviewers Comments

Well done.

B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? 44 CFR 201.6(c)(2)(ii)

B3. Plan Component	Location in Plan
Potential impacts of each identified hazard for each participating jurisdiction	See hazard matrix; Section B - Hazard Assessment; Impact; Population Vulnerability
Vulnerability of each participating jurisdiction to the identified hazards	See hazard matrix; Section B - Hazard Assessment (Analysis section for each hazard); Population Vulnerability

Impact: ***consequence or effect of the hazard*** on the community and its assets; assets may include people, structures, facilities, systems, capabilities, and/or activities that have value to the community; ***impacts can be described by referencing historical disaster impacts or estimating future potential losses***, for example.

Vulnerability: ***identify types and numbers of existing and future*** buildings, infrastructure, critical facilities, systems, populations, and other assets located in the identified hazard areas; ***estimate potential dollar losses*** to vulnerable assets; provide a general ***description of land uses and development trends*** in a community so mitigation can be considered in future land use decisions.

B3. Required Revisions, Reviewers Comments
Again, well done. Really appreciate your concise tables at the bottom of each sub-section 'Probability and Impacts.'

B4. Does the Plan address NFIP-insured structures within each jurisdiction that have been repetitively damaged by floods? (Contact Wisconsin Emergency Management to obtain this information for your jurisdiction.) 44 CFR 201.6(c)(2)(ii)

This information is subject to The Privacy Act of 1974, as amended. No information may be included in the Plan that identifies specific properties or property owners. Information describing general areas where claims have been paid can be made public. Please contact Wisconsin Emergency Management if you have questions.

B4. Plan Component	Location in Plan
Estimate of the numbers of repetitive loss properties located in identified flood hazard areas	NFIP Participation; Probability and Impacts (Flooding)
Description of the types (residential, commercial, industrial, etc.) of repetitive loss properties identified above	NFIP Participation; Probability and Impacts (Flooding)

B4. Required Revisions, Reviewers Comments
Excellent - and congratulations on having an especially low # to deal with here.

[1] A **natural hazard** is a source of harm or difficulty created by a meteorological, environmental, or geological event. Manmade or human-caused hazards may be included in the document, but are not required and will not be reviewed to meet the requirements for natural hazards.

Hazard Matrix

Fill in the hazards addressed in the plan in the left column. Then enter page numbers or section references in each column for each hazard. Add or delete rows as needed.

Hazard	Description	Location (if the risk is not equal for the entire jurisdiction)	Extent (strength or magnitude)	History (including events since previous plan)	Future Probability	Impacts to Each Jurisdiction	Vulnerability of each Jurisdiction
Severe Weather (Including Tornadoes, High Winds, Hail, and Lightning)	Nature of the Hazard	Probability and Impacts Population Vulnerability	Catastrophic Scenario Analysis	History Section A - Hazard Analysis	Analysis Probability of Occurrence	Population Vulnerability Analysis Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)	Population Vulnerability Analysis Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)
Flooding (Including Dam Failure)	Nature of the Hazard	Probability and Impacts Population Vulnerability NFIP Participation	Catastrophic Scenario Analysis	History Section A - Hazard Analysis	Analysis Probability of Occurrence	Population Vulnerability Analysis Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)	Population Vulnerability Analysis Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)
Wildfire	Nature of the Hazard	Probability and Impacts	Catastrophic Scenario	History	Probability of Occurrence	Population Vulnerability	Population Vulnerability

		Population Vulnerability	Analysis	Section A - Hazard Analysis		Analysis Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)	Analysis Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)
Drought and Extreme Heat	Nature of the Hazard	Probability and Impacts Population Vulnerability	Catastrophic Scenario Analysis	History Section A - Hazard Analysis	Probability of Occurrence	Population Vulnerability Analysis Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)	Population Vulnerability Analysis Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)
Winter Storms and Extreme Cold	Nature of the Hazard	Probability and Impacts Population Vulnerability	Catastrophic Scenario Analysis	History Section A - Hazard Analysis	Probability of Occurrence	Population Vulnerability Analysis Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)	Population Vulnerability Analysis Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)
Hazardous Materials	Nature of the Hazard	Probability and Impacts Population Vulnerability	Catastrophic Scenario Analysis	History Section A - Hazard Analysis	Probability of Occurrence	Population Vulnerability Analysis Appendix A. 2019 Portage County &	Population Vulnerability Analysis Appendix A. 2019 Portage County &

						Municipal Hazards & Mitigation Strategies (see community profile)	Municipal Hazards & Mitigation Strategies (see community profile)
Utility (Power) Failure	Nature of the Hazard	Probability and Impacts Population Vulnerability	Catastrophic Scenario Analysis	History Section A - Hazard Analysis	Probability of Occurrence	Population Vulnerability Analysis Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)	Population Vulnerability Analysis Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)
Major Transportation (Railroad) Incident	Nature of the Hazard	Probability and Impacts Population Vulnerability	Catastrophic Scenario Analysis	History Section A - Hazard Analysis	Probability of Occurrence	Population Vulnerability Analysis Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)	Population Vulnerability Analysis Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)

Element C: Mitigation Strategy

C1. Does the Plan document each jurisdiction's existing authorities, policies, programs, and resources, and its ability to expand on and improve these existing policies and programs? 44 CFR 201.6(c)(3)

C1. Plan Component	Location in Plan
Description of each jurisdiction's existing authorities, policies, programs, and resources available to accomplish hazard mitigation	Community Capability Assessment; Plans and Ordinances; Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies

Examples: staff involved in local planning activities, public works, and emergency management; funding through taxing authority and annual budgets; regulatory authorities for comprehensive planning, building codes, and ordinances (include local floodplain regulations).

C1. Required Revisions, Reviewers Comments
Well done.

C2. Does the Plan address each jurisdiction's participation in the National Flood Insurance Program (NFIP) and continued compliance with NFIP requirements as appropriate? 44 CFR 201.6(c)(3)(ii)

C2. Plan Component	Location in Plan
List of jurisdictions and their NFIP participation status (participating, not participating, not mapped)	NFIP Participation
Description of floodplain management programs/activities that contribute to continued compliance for each NFIP-participating jurisdiction	Plans and Ordinances; Community Capability Assessment; Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies
Reasons for non-participation for any jurisdictions that do not participate in the NFIP	NFIP Participation

Examples of floodplain management activities: adoption and enforcement of floodplain management requirements (including regulating new construction in Special Flood Hazard Areas); floodplain identification and mapping; community assistance visits and monitoring activities.

C2. Required Revisions, Reviewers Comments
List of jurisdictions and status of participation – yes. Description of floodplain management programs/activities – yes. Reasons for non-participation for any jurisdictions that do not participate in the NFIP – **not found** (saying they are 'exploring the benefits' is not an explanation of why they aren't participating given how long this program has been running – too expensive, too time-consuming/staff constraints, etc. would all work here, even if it isn't in-depth). Understand, the goal with this component is to help FEMA and other support agencies understand the Why of communities struggles with NFIP – this is an excellent opportunity to critique it's applicability, affordability etc. Be honest! Update: Reason for non-participation by jurisdictions not involved in NFIP is due to fiscal/financial limitations. Plan developers are updating this information in the plan. This addresses my concern described above.

C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? 44 CFR 201.6(c)(3)(I)

C3. Plan Component	Location in Plan
General hazard mitigation goals (broad policy statements) that are consistent with the hazards identified in the Plan	Mitigation Goals

C3. Required Revisions, Reviewers Comments
Excellent.

C4. Does the Plan identify and analyze a ***comprehensive range*** of specific mitigation actions and projects[2] for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? 44 CFR 201.6(c)(3)(ii) and (iv)

C4. Plan Component	Location in Plan
Analysis of actions/projects considered to reduce the impacts of hazards identified in the risk assessment	County Mitigation Strategies and Projects; Jurisdiction Mitigation Strategies and Projects
Identification of actions/projects that the jurisdiction intends to implement	County Mitigation Strategies and Projects; Jurisdiction Mitigation Strategies and Projects
Actions/projects specific to each participating jurisdiction	Jurisdiction Mitigation Strategies and Projects
Actions/projects that reduce risk to existing buildings/infrastructure and limit risk to new development	County Mitigation Strategies and Projects; Jurisdiction Mitigation Strategies and Projects

C4. Required Revisions, Reviewers Comments
Well done - – as time permits, consider taking some of the fleshed out titles you have for these projects in Sections 1.7.3 and 1.7.4, as well as Section 2 and using that detail to create additional action items/next steps in the Mitigation Action tables within the Subsections of Section 2. Some of the projects/activities in Section 2 have these individual actions listed out, while others, often Ongoing projects, lack this additional documentation. I appreciate that it will take additional time, but it should help moderate work-load long-term as these projects are re-prioritized and get off the ground. To be clear – this is **not** something you need to do Before you receive Meets Requirements.

C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost-benefit review), implemented, and administered by each jurisdiction? 44 CFR 201.6(c)(3)(iii) and (iv)

C5. Plan Component	Location in Plan
Criteria for prioritizing the implementation of actions	Mitigation Methodology

Demonstration that benefits versus costs of each actions were considered (summary of economic considerations, complete benefit-cost analysis not required); qualitative benefits may be included	County Mitigation Strategies and Projects; Jurisdiction Mitigation Strategies and Projects
Position, office, department, or agency responsible for implementing each action (for each jurisdiction)	County Mitigation Strategies and Projects; Jurisdiction Mitigation Strategies and Projects
Potential funding sources for each action	County Mitigation Strategies and Projects; Jurisdiction Mitigation Strategies and Projects
Expected timeframe for completion of each action	County Mitigation Strategies and Projects; Jurisdiction Mitigation Strategies and Projects

C5. Required Revisions, Reviewers Comments
Well done overall - especially appreciative of the way you broke things out in 1.7.2 (Mitigation Methodology). Don't forget about programs like LESO or the Federal Surplus Program, which can help provide equipment/materials if applicable to a project (procure a backup generator, for example). If you have questions about those programs, feel free to ask.

C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? 44CFR 201.6 (c)(4)(ii)

C6. Plan Component	Location in Plan
Description of the community's process for integrating data from the hazard mitigation plan into other planning mechanisms (for each participating jurisdiction)	County Plan Integration Strategy; Municipality Plan Integration Strategies
Identification of local planning mechanisms where hazard mitigation information may be incorporated	County Plan Integration Strategy; Municipality Plan Integration Strategies; Implementation and Integration through Existing Plans and Programs
For plan updates: explanation of how the jurisdiction(s) incorporated the previous mitigation plan, when appropriate, into other planning mechanisms	County Emergency Preparedness and Communication Activities/Plans
For plan updates: description of how the mitigation strategy will continue to be incorporated into other planning mechanisms	Implementation and Integration through Existing Plans and Programs

Planning mechanisms: governance structures that are used to manage local land use development and community decision-making, such as comprehensive plans, capital improvement plans, sustainability plans, and other long-range plans.

C6. Required Revisions, Reviewers Comments
Again, excellent work here - glad you're leveraging the Steering Committee to help accomplish some of the integration goals that haven't been handled yet. I understand it's an extra lift but believe that it will make for

lighter work down the road as a variety of plans continue to synergize and support each other and your communities.

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[2] Non-mitigation actions may be included, but will not be accepted as mitigation actions

Element D: Plan Review, Evaluation, and Implementation (UPDATES ONLY)

D1. Was the Plan revised to reflect changes in development? 44 CFR 201.6(d)(3)

D1. Plan Component	Location in Plan
Changes in development in hazard prone areas that increased or decreased the vulnerability of each jurisdiction	See hazard matrix; Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile); Section B - Hazard Assessment (Analysis section for each hazard)
If no changes in development impacted the jurisdiction's vulnerability, validate the information in the previous plan	See hazard matrix; Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile), Section B - Hazard Assessment (Analysis section for each hazard)

D1. Required Revisions, Reviewers Comments
Very impressed with the attention to detail here from the Jurisdictions as it relates to the Community Profiles content, excellent work!

D2. Was the Plan revised to reflect progress in local mitigation efforts? 44 CFR 201.6(d)(3)

D2. Plan Component	Location in Plan
Identification of completed and not-completed mitigation actions from the previous plan	Removed Actions; County Mitigation Strategies and Projects; Jurisdiction Mitigation Strategies and Projects
For actions not completed and not included in the updated plan, description of why the action is no longer relevant	Removed Actions

D2. Required Revisions, Reviewers Comments
Again, excellent work and attention to detail - appreciate your candor as it relates to those actions removed from the plan.

D3. Was the Plan revised to reflect changes in priorities? 44 CFR 201.6(d)(3)

D3. Plan Component	Location in Plan
Description of whether and how priorities have changed since the previous plan	Planning Area Risk Ranking; Removed Actions; County Mitigation Strategies and Projects; Jurisdiction Mitigation Strategies and Projects
If priorities have not changed, validate the information in the previous plan	Planning Area Risk Ranking; Removed Actions; County Mitigation Strategies and Projects; Jurisdiction Mitigation Strategies and Projects

D3. Required Revisions, Reviewers Comments
Well done.

Element E: Plan Adoption (After WEM and FEMA Review)

After FEMA issues their "meets requirements" letter, each participating jurisdiction must adopt the Plan within one year and submit an adoption resolution to WEM and FEMA for final plan approval.

Jurisdictional Participation Checklist

Jurisdiction Mitigation Strategies and Projects Fill in the participating jurisdictions (county, city, village, tribe; towns are covered under the county's participation) in the plan in the left column. Mark whether each jurisdiction has fulfilled each requirement in the subsequent columns. Include page numbers if desired. Add or delete rows as needed.

Jurisdiction	Contact name and/or title	Description of participation in planning process	NFIP status, including reason for any non-participation	Action item specific to jurisdiction	Plan Adoption
Portage County	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions County Mitigation Strategies and Projects	
Town of Alban	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Town of Almond	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Town of Amherst	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Town of Belmont	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	

Town of Buena Vista	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Town of Carson	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Town of Dewey	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Town of Eau Pleine	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Town of Grant	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Town of Hull	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Town of Lanark	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	

Town of Linwood	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Town of New Hope	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Town of Pine Grove	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Town of Plover	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Town of Sharon	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Town of Stockton	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Village of Almond	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	

Village of Amherst	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Village of Amherst Junction	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Village of Junction City	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions	
Village of Nelsonville	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Village of Park Ridge	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Village of Plover	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
Village of Rosholt	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	

Village of Whiting	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
City of Steven's Point	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	
University of Wisconsin Steven's Point	Jurisdiction Participation	Schedule of Plan Development Activities Appendix B. Meeting and Participation Documentation	NFIP Participation	Mitigation Strategies and Actions Jurisdiction Mitigation Strategies and Projects	

FEMA Local Mitigation Plan Review Tool

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA's evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan's strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

Jurisdiction: Portage County, WI	**Title of Plan:** Portage County 2019 Hazard Mitigation Plan	**Date of Plan:** 9/30/2019
Local Point of Contact: Bob Weinert	**Address:** Portage County Sheriff's Office Emergency Management Division 1462 Strongs Avenue Stevens Point, WI 54481	
Title: Emergency Management Coordinator		
Agency: Portage County Emergency Management Division		
Phone Number: 715-346-1437	**E-Mail:** weinertr@co.portage.wi.us	

State Reviewer:	**Title:**	**Date:**

FEMA Reviewer:	**Title:**	**Date:**
Date Received in FEMA Region *(insert #)*		
Plan Not Approved		
Plan Approvable Pending Adoption		
Plan Approved		

Section 1: Regulation Checklist

INSTRUCTIONS: The Regulation Checklist must be completed by FEMA. The purpose of the Checklist is to identify the location of relevant or applicable content in the Plan by Element/sub-element and to determine if each requirement has been 'Met' or 'Not Met.' The 'Required Revisions' summary at the bottom of each Element must be completed by FEMA to provide a clear explanation of the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is 'Not Met.' Sub-elements should be referenced in each summary by using the appropriate numbers (A1, B3, etc.), where applicable. Requirements for each Element and sub-element are described in detail in this Regulation Checklist.

1. REGULATION CHECKLIST Regulation (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or page number)	Met	Not Met
ELEMENT A. PLANNING PROCESS			
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1)	Schedule of Plan Development Activities, Jurisdiction Participation Steering Committee Stakeholders, Subject Matter Experts, & Neighboring Communities Appendix B. Meeting and Participation Documentation	X	
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))	Stakeholders, Subject Matter Experts, & Neighboring Communities	X	
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	Public Involvement & Participation Portage County Community Preparedness and Mitigation Survey; Draft Plan Shared to Public Community Preparedness Survey (Under Hazard Analysis)	X	
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))	County Plan Integration Strategy, Municipality Plan Integration Strategies, NFIP Mitigation Actions, Infrastructure Mitigation Actions, Implementation and Integration through Existing Plans and Programs, Existing	X	

	Plans, Community Capability Assessment, Plans and Ordinances		
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))	Continued Public Involvement	X	
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))	Monitoring, Evaluating and Updating the Plan The Five-Year Action Plan Annual Mitigation Steering Committee Meetings Formal Review Process	X	
ELEMENT A: REQUIRED REVISIONS Excellent			
ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT			
B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))	See hazard matrix Section B - Hazard Assessment Chapter 2 - Planning Process	X	
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))	See hazard matrix Section B - Hazard Assessment Probability of Occurrence (Definition and parameters of Probability)	X	
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))	See hazard matrix Section B - Hazard Assessment (Analysis section for each hazard) Impact	X	
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))	NFIP Participation Probability and Impacts (Flooding)	X	
ELEMENT B: REQUIRED REVISIONS Excellent - recommended consideration of addition of four items: Active Shooter Incidents, Cybersecurity Incidents, Dense Fog and Pandemic Flu. While not required, I think they are relevant, and it may be that information needed to develop background/planning is already active in existing plans within the larger jurisdictional umbrella. E.G. Pandemic Flu impacts/procedures may be something County or Local health officials already have documentation on, and Local/Campus law enforcement likely has documentation on Cyber/Active Shooter.			

ELEMENT C. MITIGATION STRATEGY			
C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))	Community Capability Assessment Plans and Ordinances	X	
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))	NFIP Participation Plans and Ordinances	X	
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	Mitigation Goals	X	
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))	County Mitigation Strategies and Projects Jurisdiction Mitigation Strategies and Projects	X	
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))	Mitigation Methodology County Mitigation Strategies and Projects Jurisdiction Mitigation Strategies and Projects	X	
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))	County Plan Integration Strategy Municipality Plan Integration Strategies Implementation and Integration through Existing Plans and Programs County Emergency Preparedness and Communication Activities/Plans	X	
ELEMENT C: REQUIRED REVISIONS Excellent - had some concern about communities not participating in NFIP without any explanation of why. This has been clarified within the plan and non-participating communities are in that state due to fiscal constraints.			
ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION (applicable to plan updates only)			
D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))	See hazard matrix Appendix A. 2019 Portage County & Municipal Hazards & Mitigation Strategies (see community profile)	X	

	Section B - Hazard Assessment (Analysis section for each hazard)		
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	Completed and Removed Mitigation Actions County Mitigation Strategies and Projects Jurisdiction Mitigation Strategies and Projects	X	
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))	Completed and Removed Mitigation Actions County Mitigation Strategies and Projects Jurisdiction Mitigation Strategies and Projects	X	
ELEMENT D: REQUIRED REVISIONS Excellent			
ELEMENT E. PLAN ADOPTION			
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))	Plan Adoption		
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))	Appendix D. Participating Jurisdiction Plan Adoption		
ELEMENT E: REQUIRED REVISIONS			
ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL FOR STATE REVIEWERS ONLY; NOT TO BE COMPLETED BY FEMA)			
F1.			
F2.			
ELEMENT F: REQUIRED REVISIONS			

Section 2: Plan Assessment

INSTRUCTIONS: The purpose of the Plan Assessment is to offer the local community more comprehensive feedback to the community on the quality and utility of the plan in a narrative format. The audience for the Plan Assessment is not only the plan developer/local community planner, but also elected officials, local departments and agencies, and others involved in implementing the Local Mitigation Plan. The Plan Assessment must be completed by FEMA. The Assessment is an opportunity for FEMA to provide feedback and information to the community on: 1) suggested improvements to the Plan; 2) specific sections in the Plan where the community has gone above and beyond minimum requirements; 3) recommendations for plan implementation; and 4) ongoing partnership(s) and information on other FEMA programs, specifically RiskMAP and Hazard Mitigation Assistance programs. The Plan Assessment is divided into two sections:

A. Plan Strengths and Opportunities for Improvement
B. Resources for Implementing Your Approved Plan

Plan Strengths and Opportunities for Improvement is organized according to the plan Elements listed in the Regulation Checklist. Each Element includes a series of italicized bulleted items that are suggested topics for consideration while evaluating plans, but it is not intended to be a comprehensive list. FEMA Mitigation Planners are not required to answer each bullet item, and should use them as a guide to paraphrase their own written assessment (2-3 sentences) of each Element.

The Plan Assessment must not reiterate the required revisions from the Regulation Checklist or be regulatory in nature, and should be open-ended and to provide the community with suggestions for improvements or recommended revisions. The recommended revisions are suggestions for improvement and are not required to be made for the Plan to meet Federal regulatory requirements. The italicized text should be deleted once FEMA has added comments regarding strengths of the plan and potential improvements for future plan revisions. It is recommended that the Plan Assessment be a short synopsis of the overall strengths and weaknesses of the Plan (no longer than two pages), rather than a complete recap section by section.

Resources for Implementing Your Approved Plan provides a place for FEMA to offer information, data sources and general suggestions on the overall plan implementation and maintenance process. Information on other possible sources of assistance including, but not limited to, existing publications, grant funding or training opportunities, can be provided. States may add state and local resources, if available.

A. Plan Strengths and Opportunities for Improvement

This section provides a discussion of the strengths of the plan document and identifies areas where these could be improved beyond minimum requirements.

Element A: Planning Process

How does the Plan go above and beyond minimum requirements to document the planning process with respect to: *- Involvement of stakeholders (elected officials/decision makers, plan implementers, business owners, academic institutions, utility companies, water/sanitation districts, etc.);* *- Involvement of Planning, Emergency Management, Public Works Departments or other planning agencies (i.e., regional planning councils);* *- Diverse methods of participation (meetings, surveys, online, etc.); and* *- Reflective of an open and inclusive public involvement process.*
Comments:

Element B: Hazard Identification and Risk Assessment

In addition to the requirements listed in the Regulation Checklist, 44 CFR 201.6 Local Mitigation Plans identifies additional elements that should be included as part of a plan's risk assessment. The plan should describe vulnerability in terms of:

1) A general description of land uses and future development trends within the community so that mitigation options can be considered in future land use decisions;

2) The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas; and

3) A description of potential dollar losses to vulnerable structures, and a description of the methodology used to prepare the estimate.

- How does the Plan go above and beyond minimum requirements to document the Hazard Identification and Risk Assessment with respect to:

- Use of best available data (flood maps, HAZUS, flood studies) to describe significant hazards;

- Communication of risk on people, property, and infrastructure to the public (through tables, charts, maps, photos, etc.);

- Incorporation of techniques and methodologies to estimate dollar losses to vulnerable structures;

- Incorporation of Risk MAP products (i.e., depth grids, Flood Risk Report, Changes Since Last FIRM, Areas of Mitigation Interest, etc.); and

- Identification of any data gaps that can be filled as new data became available.

Comments:

Element C: Mitigation Strategy

How does the Plan go above and beyond minimum requirements to document the Mitigation Strategy with respect to: *- Key problems identified in, and linkages to, the vulnerability assessment;* *- Serving as a blueprint for reducing potential losses identified in the Hazard Identification and Risk Assessment;* *- Plan content flow from the risk assessment (problem identification) to goal setting to mitigation action development;* *- An understanding of mitigation principles (diversity of actions that include structural projects, preventative measures, outreach activities, property protection measures, post-disaster actions, etc);* *- Specific mitigation actions for each participating jurisdiction that reflects their unique risks and capabilities;* *- Integration of mitigation actions with existing local authorities, policies, programs, and resources; and* *- Discussion of existing programs (including the NFIP), plans, and policies that could be used to implement mitigation, as well as document past projects.*
Comments:

Element D: Plan Update, Evaluation, and Implementation

How does the Plan go above and beyond minimum requirements to document the 5-year Evaluation and Implementation measures with respect to: *- Status of previously recommended mitigation actions;* *- Identification of barriers or obstacles to successful implementation or completion of mitigation actions, along with possible solutions for overcoming risk;* *- Documentation of annual reviews and committee involvement;* *- Identification of a lead person to take ownership of, and champion the Plan;* *- Reducing risks from natural hazards and serving as a guide for decisions makers as they commit resources to reducing the effects of natural hazards;* *- An approach to evaluating future conditions (i.e. socio-economic, environmental, demographic, change in built environment etc.);* *- Discussion of how changing conditions and opportunities could impact community resilience in the long term; and* *- Discussion of how the mitigation goals and actions support the long-term community vision for increased resilience.*
Comments:

B. Resources for Implementing Your Approved Plan

Ideas may be offered on moving the mitigation plan forward and continuing the relationship with key mitigation stakeholders such as the following: *- What FEMA assistance (funding) programs are available (for example, Hazard Mitigation Assistance (HMA)) to the jurisdiction(s) to assist with implementing the mitigation actions?* *- What other Federal programs (National Flood Insurance Program (NFIP), Community Rating System (CRS), Risk MAP, etc.) may provide assistance for mitigation activities?* *- What publications, technical guidance or other resources are available to the jurisdiction(s) relevant to the identified mitigation actions?* *- Are there upcoming trainings/workshops (Benefit-Cost Analysis (BCA), HMA, etc.) to assist the jurisdictions(s)?* *- What mitigation actions can be funded by other Federal agencies (for example, U.S. Forest Service, National Oceanic and Atmospheric Administration (NOAA), Environmental Protection Agency (EPA) Smart Growth, Housing and Urban Development (HUD) Sustainable Communities, etc.) and/or state and local agencies?*
Comments:

Multi-Jurisdiction Summary Sheet (Optional)

INSTRUCTIONS: For multi-jurisdictional plans, a Multi-jurisdiction Summary Spreadsheet may be completed by listing each participating jurisdiction, which required Elements for each jurisdiction were 'Met' or 'Not Met,' and when the adoption resolutions were received. This Summary Sheet does not imply that a mini-plan be developed for each jurisdiction; it should be used as an optional worksheet to ensure that each jurisdiction participating in the Plan has been documented and has met the requirements for those Elements (A through E).

MULTI-JURISDICTION SUMMARY SHEET												
#	**Jurisdiction Name**	**Jurisdiction Type (city/borough/ township/ village, etc.)**	**Plan POC**	**Mailing Address**	**Email**	**Phone**	**Requirements Met (Y/N)**					
							A. Planning Process	**B. Hazard Identification & Risk Assessment**	**C. Mitigation Strategy**	**D. Plan Review, Evaluation & Implementation**	**E. Plan Adoption**	**F. State Requi re-ments**
1	Portage County	County	Bob Weinert	1462 Strongs Avenue Stevens Point, WI 54481	weinertr@co.portage.wi.us	(715) 346-1437						
2	Town of Alban	Town	Raymond Okstyua	P.O. Box 303 Rosholt, WI 54473	ray.oksuita@gmail.com	715-581-7208						
3	Town of Almond	Town	Roger Hetzel	None Provided	None Provided	715-366-2586						
4	Town of Amherst	Town	Don Spierings	4023 County Q PO Box	townofamherst@wi-net.com	715-340-1230						

				5 Amherst Junction, WI 54407								
5	Town of Belmont	Town	David Walkowicz	None Provided	belmont@uniontell.net	None Provided						
6	Town of Buena Vista	Town	Duane Clark	None Provided	townofbuenavista@gmail.com	715-366-2331						
7	Town of Carson	Town	Wallace Zywicki	Portage County Town of Carson 3756 County Hwy. M Stevens Point, WI 54481	wzywicki@tds.net	715-341-1190						
8	Town of Dewey	Town	Maurice King	430 Dewey Drive, Stevens Point, WI 54482	Chairtownofdewey@gmail.com	715-572-1835						
9	Town of Eau Pleine	Town	Roy Anderson	3191 Highway 34 Junction City, WI 54443	daxx53@gmail.com	312-961-2284						

10	Town of Grant	Town	James Yetter	9011 County Road WW Wisconsin Rapids WI 54494	Diamondj@wctc.net	715-213-2000						
11	Town of Hull	Town	Mark Fritsche	4550 Wojcik Memorial Drive Stevens Point, Wisconsin 54482	None Provided	715-344-8280						
12	Town of Lanark	Town	Mike Pagel	7174 County Road TT Amherst, WI 54406	K9uw@wi-net.com	715-256-9801						
13	Town of Linwood	Town	Howard Krieski	None Provided	None Provided	715-344-2967						
14	Town of New Hope	Town	Todd Knepeel	9041 County Road OO Rosholt, WI 54473	Tkneptel@yahoo.com	715-824-3452						
15	Town of Pine Grove	Town	Jeanette Wilson	None Provided	Willycrocket2001@yahoo.com	715-335-6581						

16	Town of Plover	Town	Tim Karcheski	5081 Hoover Avenue - South Plover, WI 54467	Tim.karcheski@yahoo.com	715-630-5493						
17	Town of Sharon	Town	Bill Gibbs	7565 Twin Lakes Dr Custer, WI 54423	billkimgibbs@hotmail.com	715-347-6519						
18	Town of Stockton	Town	Lauri Novotny	7252 6th Street Custer, WI 54423	stockton@wi-net.com	715-592-4712						
19	Village of Almond	Village	Daniel Folan	122 Main St., Almond, WI	folans@uniontel.net	715-347-7181						
20	Village of Amherst	Village	Michael Juris	160 Mill Street, PO Box 36, Amherst, WI 54406	michaeljuris@hotmail.com	715-824-3829						
21	Village of Amherst Junction	Village	Victor Voss	None Provided	chiefvvoss@gmail.com	715-340-3098						

22	Village of Junction City	Village	John Spreda	PO Box 93 Junction City WI., 54443	Jctutilities@tds.net	715-347-4071						
23	Village of Nelsonville	Village	Victor Voss	9500 County Rd SS, Nelsonville, WI 54458	chiefvvoss@gmail.com	715-340-3098						
24	Village of Park Ridge	Village	Brian Lepper	24 Crestwood Drive Stevens Point, WI 54481	Brilepper@yahoo.com	715-347-6152						
25	Village of Plover	Village	Ryan Kernosky	P.O. Box 37 Plover, WI 54467	Rkernosky@ploverwi.gov	715-345-5250						
26	Village of Rosholt	Village	Theresa Hartvig	None Provided	rosholtvillage@wi-net.com	715-677-4510						
27	Village of Whiting	Village	Nicholas Schmesier	3600 Water Street Stevens Point, Wisconsin	nicschmesier@villageofwhiting.com	715-340-7582						
28	City of Steven's Point	City	Eric Southworth	1515 Strongs Ave. Stevens Point,	Esouthworth@stevenspoint.com	715-342-4846						

				WI 54481								
29	University of Wisconsin Steven's Point	University	Corinna Neeb	2100 Main Street Stevens Point, WI 54481-3897	Cneeb@uwsp.edu	715-346-4464						